

# **REQUEST FOR WAIVER OF PERMIT FOR THE UINTA COUNTY WIND FARM**

*Prepared for*

**Wyoming Department of Environmental Quality  
Industrial Siting Division**  
Cheyenne, Wyoming

*Prepared by*

**Uinta County Wind Farm LLC**  
Oakland, California

and

**TRC Mariah Associates Inc.**  
Laramie, Wyoming

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MAI Project 31548**

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## **EXECUTIVE SUMMARY**

### **Project Location and Description**

The Uinta County Wind Farm (Project) is a 144-megawatt (MW) electric generation facility that will contain approximately 80 1.8-MW wind turbines. The Project will be located in western Uinta County in southwest Wyoming, approximately 10 mi east of Evanston, and will be constructed, operated, and owned by Uinta County Wind Farm LLC.

The Project includes foundations, tubular steel towers, wind turbine electric generators, a fiberglass nacelle (an enclosed shelter for the generator), and three 135-ft long fiberglass blades per wind turbine. Approximately 42 mi of unpaved existing and new roads will be used to access the wind turbines. In addition, the Project includes a power collection system for the collection, control, and transmission of electricity generated by the wind turbines. The power system includes approximately 42 mi of aboveground and underground 34.5-kV collection and transmission power lines and a 1-acre electric substation with a 34.5/138-kV transformer to interconnect the Project to PacifiCorp's existing 138-kV transmission line.

### **Schedule and Cost**

Construction of the Project is expected to commence on or about August 1, 2003, and will be complete by the end of December 2003. The Uinta County Wind Farm will cost approximately \$143 million.

### **Workforce Requirements**

The construction workforce is expected to average 175 workers throughout the 5-month period of construction, and the operations workforce is expected to be approximately 10 to 14 workers. There will be some fluctuation in the number of construction workers employed at the Project. It is estimated that there will be 120 construction workers in August, 185 workers in September,

220 workers in October, 170 workers in November, and 90 workers in December. It is also conservatively estimated that approximately 25% of the temporary and some of the permanent workers to be hired will come from the Evanston area.

### **Socioeconomic Impacts**

As detailed in the permit application, there will be no adverse socioeconomic impacts to communities or local government entities as a result of the project.

As mentioned above, it is estimated that 25% of the construction workers for the Project are expected to come from the Evanston area. The remaining temporary construction workers (estimated 131) will come from outside the immediate area and are not expected to permanently relocate their families to Evanston. While the population of Evanston could increase by up to 2.0% in the short term, there will be no adverse effect on the local population.

Approximately 10-14 full-time employees will be hired for the operations phase of the project. While some, if not all, of these employees will be from the Evanston area, if it is assumed that seven additional families will move into the area and that the average family in Evanston is 3.3 individuals, then the long-term population could increase by approximately 23 persons (0.2% increase for Evanston and 0.1% increase for Uinta County). The long-term increase in population will be minimal and there will be no adverse effect on the community.

Based on information gathered and presented in this application, adequate housing in Evanston exists for all temporary and permanent workers that will work on the Project. The renting of housing units, hotel/motel rooms, and campground spaces will utilize currently vacant housing and will have the beneficial effect of injecting funds into the local economy, as well as the state economy, as a result of lodging taxes. In addition, the Project is expected to have no or only minimal impacts on public services, non-public utility services, education, health and human services, crime, and transportation facilities.

Retail trade will receive additional business for the duration of the construction phase of the Project, which may also result in increased secondary employment of local workers. The Project may also result in a subsequent increase in tax revenues collected by local merchants from both local workers and non-local workers and for Project-related equipment and supplies that are purchased locally.

It is estimated that approximately \$6 million of the Project will be subject to state and local sales and use taxation. No additional sales taxes will be generated by the Project due to the exemption for equipment used to generate electricity from renewable resources (i.e., wind) in accordance with W.S. 35-15-105(a)(viii)(N). In addition, it is estimated that approximately \$140 million of the cost of components will be subject to ad valorem taxation. Wyoming, Uinta County, and the City of Evanston governments will financially benefit from the Project with no adverse socioeconomic impacts.

### **Environmental Impacts**

Based on this analysis, the Project will have no or only minimal environmental impacts and no cumulative impacts on all of the environmental resources in the Project area. Uinta County Wind Farm LLC will implement numerous mitigation measures to avoid, reduce, or eliminate potential environmental impacts due to the Project. The following permit application addresses potential Project and cumulative impacts to air quality and noise, cultural resources, geologic resources, land use and recreation, mineral resources, soil resources, surface water and groundwater resources, threatened and endangered species, vegetation, visual resources, wetland resources, and wildlife resources.

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**ACRONYM LIST**

AUM	Animal unit month
BEA	Bureau of Economic Analysis
BLM	Bureau of Land Management
C.F.R.	<i>Code of Federal Regulations</i>
CO	Carbon monoxide
dBA	A-weighted decibels
EWCC	Evanston Wyoming Chamber of Commerce
I-80	Interstate 80
kV	Kilovolt
MW	Megawatt
NO <sub>x</sub>	Nitrogen oxide
O <sub>3</sub>	Ozone
ORV	Off-road vehicle
PM <sub>10</sub>	Particulate matter less than 10 microns
Project	Uinta County Wind Farm
ROW	Right-of-Way
SO <sub>2</sub>	Sulphur dioxide
UCWF	Uinta County Wind Farm LLC
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile organic compounds
W.S.	<i>Wyoming Statute</i>
WDAI	Wyoming Department of Administration and Information
WGFD	Wyoming Game and Fish Department
WYDOT	Wyoming Department of Transportation

**1.0 NAME, ADDRESS, AND PRIMARY CONTACT FOR APPLICANT**

Project Name: Uinta County Wind Farm  
Applicant: Uinta County Wind Farm LLC  
Address: 1611 Telegraph Avenue, Suite 1515  
Oakland, CA 94612  
Email Address: rbuckley@orion-energy.com  
Telephone: (510) 267-9323  
Primary Contact: Reid Buckley

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## **2.0 DESCRIPTION OF THE LOCATION OF PROPOSED FACILITY**

The proposed Uinta County Wind Farm (Project) is a 144-megawatt (MW) electric generation facility that will contain approximately 80 1.8-MW wind turbines, at an estimated cost of \$143 million. The Project will be located in western Uinta County in southwest Wyoming, approximately 10 mi east of Evanston, and will be constructed, operated, and owned by Uinta County Wind Farm LLC (UCWF). The Project area is bounded on the south by Interstate 80 (I-80), on the east by Wyoming State Highway 189, on the north by the northern boundary of Township 16 North, and on the west by western boundary of Range 119 West (Figure 2.1). Facilities for the Project will require only a small portion of land within the general Project area. Less than 300 acres will be disturbed will be permanently disturbed over the life of the project. In addition, a limited amount of land will be temporarily disturbed during construction but it will be reclaimed upon completion of construction activities.

The Project is located on land owned or administered by private landowners, the State of Wyoming, and the Bureau of Land Management (BLM). The surface ownership pattern within and adjacent to the Project area is checkerboard, typically with even-numbered sections owned by the federal government, odd-numbered sections privately owned, and select even-numbered sections owned by the State of Wyoming (Figure 2.2). UCWF has secured access rights from all affected landowners for the Project.

UCWF has obtained approval for all required local, state, and federal premits/approvals for the Project including: a conditional use permit from Uinta County; lease for use of state lands from Wyoming Office of State Lands and Investment; and rights-of-way grant for use of BLM-administered land.

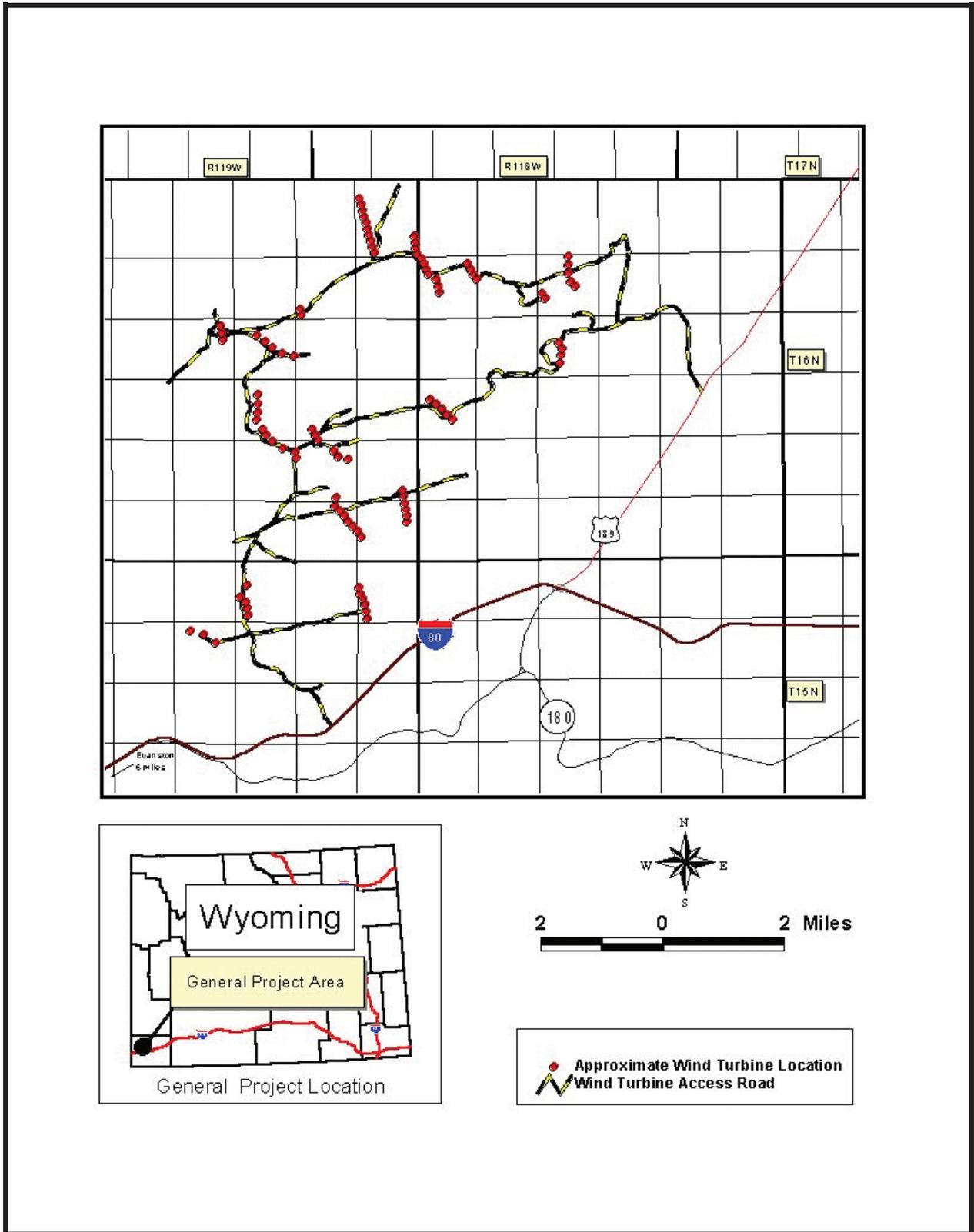


Figure 2.1 Project Area.

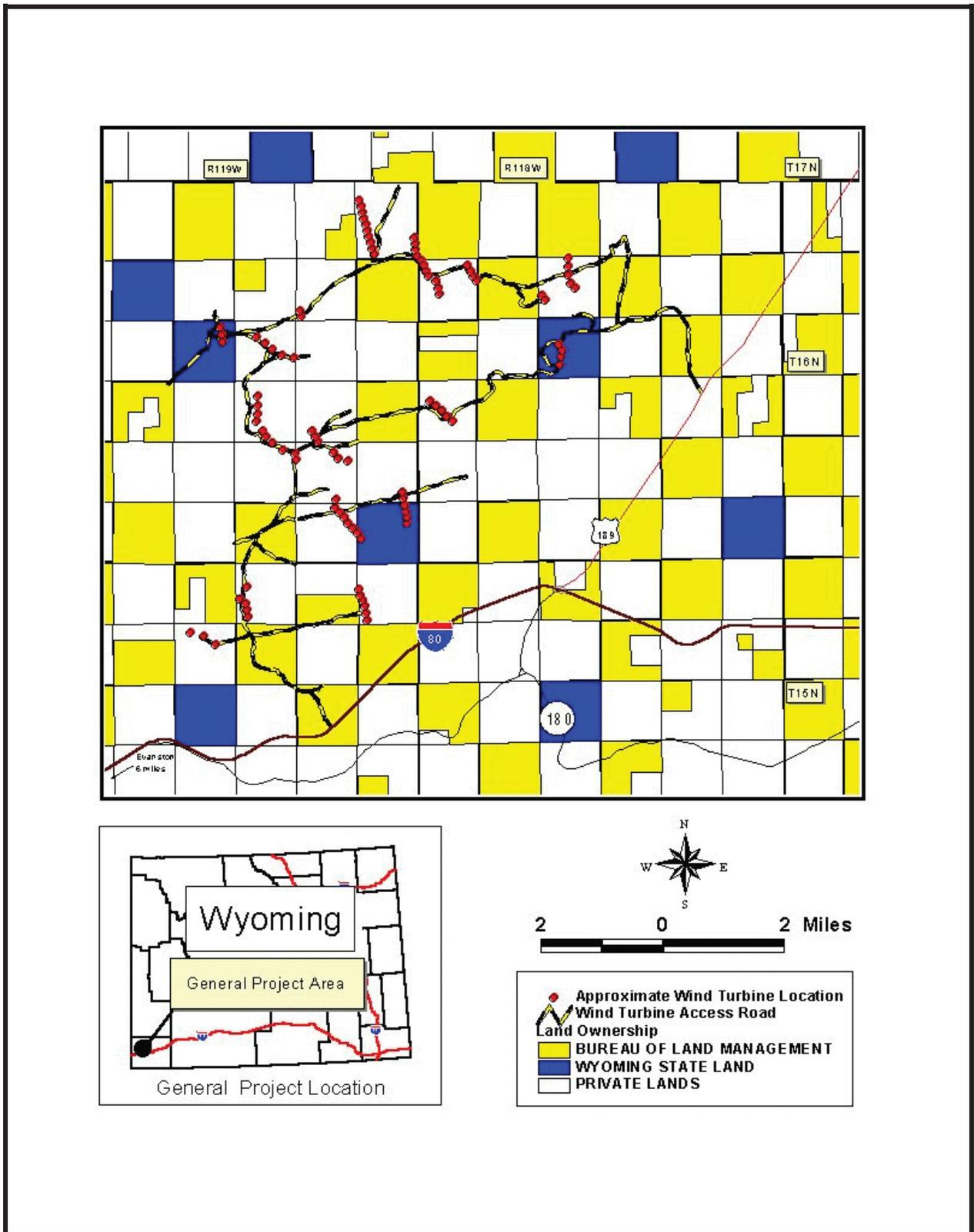


Figure 2.2 Surface Ownership.

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### 3.0 DESCRIPTION OF MAJOR COMPONENTS OF PROPOSED FACILITY

The major components include concrete and rebar for the foundations, tubular steel towers, wind turbine electric generators (including the generator), a fiberglass nacelle (an enclosed shelter for the generator), and three 135-ft long fiberglass blades per wind turbine. Approximately 42 mi of unpaved existing and new roads will be used to provide access to the wind turbines.

In addition, the Project includes a power collection system for the collection, control, and transmission of electricity generated by the wind turbines. The power system includes approximately 42 mi of aboveground and underground 34.5-kV collection and transmission power lines and a 1-acre electric substation with a 34.5/138-kV transformer to interconnect the Project to PacifiCorp's existing 138-kV transmission line. All portions of the 34.5-kV power line will be constructed in accordance with *National Electrical Safety Code*, and all aboveground portions of the power line system will be constructed in accordance with *Suggested Practices for Raptor Protection on Power Line: The State of the Art in 1996* (Avian Power Line Interaction Committee 1996). In accordance with the *Wyoming Industrial Development Information and Siting Act* [Wyoming Statute (W.S.) 35-12-119(c)(i)], power lines with a capacity of less than 500 kV are exempt from the informational and permitting requirements of this act, and power lines associated with the Project have a capacity of less than this regulatory threshold limit and are therefore not addressed further in this application.

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#### **4.0 OPERATING NATURE OF PROPOSED FACILITY**

The Project has a design life of 25-30 years. There are no raw materials required for operation except for the petroleum-based fuels that will be used during construction, the materials used in the construction of the wind turbines and associated equipment, and the basic construction materials used (e.g., concrete and rebar) in the foundation for each wind turbine. Once operational, the only fuel required for the Project (except for gasoline for maintenance vehicles) is the the natural occurring and renewable wind. The wind turbines will generate electricity when wind speeds are between approximately 7 and 60 mi per hour.

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**5.0 COMMENCEMENT OF CONSTRUCTION**

Construction of the Project is expected to commence on or around August 1, 2003.

## **6.0 TIME PERIOD REQUIRED FOR CONSTRUCTION**

Construction operations are expected to take a maximum of 5 months to complete. Depending on weather conditions, it is estimated that the Project will be 90% complete by November 15, 2003. This estimate is based on previous construction experience by UCWF.

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## **7.0 AREA OF PROJECT INFLUENCE; LOCAL GOVERNMENTS PRIMARILY AFFECTED BY PROPOSED FACILITY**

As detailed in this permit application, there will be no socioeconomic impacts to any communities or local government entities as a result of the Project. The Project is located near the city of Evanston in western Uinta County. Table 7.1 provides the approximate distance from the Project to the communities in project area.

For the purpose of this application, the area of Project influence is described as an area within 10 mi from the Project and includes a portion of western Uinta County and City of Evanston. The communities of Kemmerer, Fort Bridger, Lyman, Mountain View, Milburne, and Granger are not expected to be adversely impacted by the Project. These communities were not included in the area of Project influence for the following reasons.

1. Given the number of available workers in Evanston, the population of Evanston (relative to the rest of Uinta County), and its proximity to the Project area, it is likely that most of the local construction workers will come from Evanston. Therefore, the Project will have minimal employment impacts on the surrounding communities. While most of the

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Table 7.1 Distance from the Project to Communities.

Community	Approximate Distance (mi)
Evanston	10
Fort Bridger	25
Lyman	30
Milburne	30
Mountain View	30
Kemmerer	37
Granger	58

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local construction workers are expected to come from Evanston, residents of the surrounding communities will certainly not be excluded from employment opportunities during either construction or operation of the Project.

2. It is also possible some of the non-local construction workers may decide to temporarily live in some of these surrounding communities. However, given the number and type of available temporary housing options (e.g., apartments, houses, mobile home lots, motel rooms) available in Evanston, it is likely that many of the non-local construction workers will reside in Evanston (which is also closer to the Project area than any of the surrounding communities). Therefore, the Project will have minimal potential social impacts on surrounding communities.
3. As described in this permit application, the Project will have no environmental impacts on the surrounding communities.

Therefore, there are no immediately adjoining local government entities that should be included in this application. The following local government entities will be affected by the Project.

Uinta County  
225 9th Street  
Evanston, WY 82930

City of Evanston  
1200 Main Street  
Evanston, WY 82930

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## **8.0 EMPLOYMENT INFORMATION**

### **8.1 ESTIMATED NUMBER OF EMPLOYEES NEEDED TO COMPLETE CONSTRUCTION AND OPERATION**

The construction workforce is expected to average 175 workers throughout the 5-month period of construction, and the operations workforce is expected to be approximately 10 to 14 workers. There will be some fluctuation in the number of construction workers employed at the Project. It is estimated that there will be 120 construction workers in August, 185 workers in September, 220 workers in October, 170 workers in November, and 90 workers in December. It is also conservatively estimated that approximately 25% of the temporary and some of the permanent workers to be hired will come from the Evanston area.

### **8.2 ANNUAL PAYROLL FOR CONSTRUCTION AND OPERATIONS**

It is estimated that each temporary construction worker will earn approximately \$2,450 per week for a 60-hour work week. Full-time operations personnel are expected to earn approximately \$40,000 per year plus benefits that are estimated at approximately 40% of the base salary.

### **8.3 DESCRIPTION OF EMPLOYEE BENEFITS**

For temporary construction workers, benefits will depend upon the individual subcontractor that will be utilized, and these benefits cannot be accurately estimated at this time. However, they are expected to be commensurate with standard benefits for transient construction workers in the intermountain region. The 10 to 14 full-time employees working directly for UCWF during construction phase of the Project will receive a 401K plan, a pension plan, full medical and disability coverage, along with other standard benefits such as vacation and sick time, etc. The 10 to 14 full-time employees working directly for UCWF during the operational phase of the Project will receive a 401K plan, a pension plan, and full medical and disability coverage, along with other standard benefits such as vacation and sick time, etc.

To the extent possible, UCWF will utilize local workers during the construction and operation of the Project. To accomplish this, UCWF will work with its contractors and encourage them to employ local workers and subcontractors where they meet the technical and scheduling requirements and financial constraints of the Project. Some technically skilled workers will not be available from the local labor pool and these positions will be filled by workers from beyond southwest Wyoming. Contractors will be encouraged to work directly with the Wyoming Department of Workforce Services, the Evanston Employment Center, and the Wyoming Job Network to assist in the posting of available positions and the identification and evaluation of qualified workers.

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## **9.0 SOCIOECONOMIC CONDITIONS WITHIN THE AREA OF PROJECT INFLUENCE**

### **9.1 INTRODUCTION**

Socioeconomic information was obtained from the U.S. Census Bureau, the Bureau of Economic Analysis (BEA), documents compiled by the University of Wyoming Department of Agricultural and Applied Economics, Laramie; the Wyoming Business Council, Interactive Business Center; Wyoming Department of Administration and Information; the Wyoming Department of Employment; the Wyoming Office of State Lands and Investments; the Uinta County website; and the Project proponent.

### **9.2 LAND USE**

Principal land uses within the area of Project influence are livestock grazing (and grazing-related activities); wildlife habitat; utility corridors (e.g., power lines and pipelines); oil and gas collection and processing; and recreation (e.g., big game hunting and off-road vehicle use) (BLM 2002).

### **9.3 DESCRIPTION OF THE LOCAL POPULATION**

The current population in Wyoming, in Uinta County, and in the area of Project influence (Evanston) is summarized in Table 9.1. The proposed Project will be constructed in Uinta County, Wyoming. Demographic conditions are rural, with a relatively low county population density of 9.5 people/mi<sup>2</sup>.

In 2000, the population of Evanston was 11,507 (92.3% white; 0.2% black; 1.0% Native American; 0.4% Asian; 0.1% Native Hawaiian/Pacific Islander; 6.0% other/mixed race). The population is up 5.2% from 1990 (10,903), which exhibits a growth rate consistent with that of Uinta County, which increased from 18,705 in 1990 to 19,742 in 2000 (5.3%), and that of the entire state of Wyoming, which increased from 453,588 in 1990 to 493,782 in 2000 (8.1%) (U.S.

Table 9.1 Local Socioeconomic Data.

Location	Population				
	1990 <sup>1</sup>	2000 <sup>1</sup>	Change (1990-2000)	Projected (2010) <sup>2</sup>	Below Poverty Level (2000) <sup>3</sup>
Wyoming	453,588	493,782	8.9%	513,930	11.4%
Uinta County	18,705	19,742	5.3%	19,650	9.9%
Evanston	10,903	11,507	5.2%	11,453	11.7%

Location	Land Area (acres) / Persons/mi <sup>2</sup>	Median Household Income (2000) <sup>3</sup>	Personal Per Capita Income (2000) <sup>3</sup>	Unemployment Rate <sup>4,5</sup>
Wyoming	97,100/5.1	\$37,892	\$19,134	4.2%
Uinta County	2,082/9.5	\$44,544	\$16,994	5.7%
Evanston	--	\$42,019	\$16,725	NR

<sup>1</sup> U.S. Bureau of the Census (2003a, 2003b).

<sup>2</sup> Wyoming Department of Administration and Information (2002).

<sup>3</sup> U.S. Bureau of the Census (2003b).

<sup>4</sup> Preliminary rates, not seasonally adjusted. Wyoming Department of Employment (2003).

<sup>5</sup> NR = not reported.

Census Bureau 2003a, 2003b). Projections indicate that both Evanston and Uinta County will see a decrease in population, reaching approximately 11,450 (-0.5%) and 19,650 (-0.5%), respectively, by 2010 (Wyoming Department of Administration and Information [WDAI] 2002). Of the total Uinta County population (19,742), approximately 57.6% (11,365 persons) live within the Evanston urban cluster, 0.9% (193) live in other urban clusters, and 41.5% (8,184) live in rural areas (U.S. Bureau of Census 2003b).

In 2000, Uinta County had a higher median household income (\$44,544) than the state median (\$37,892), although personal per capita income (\$16,994) was less than the state median (\$19,134) (see Table 9.1). The unemployment rate (5.7%) was above that for the state of Wyoming (4.2%); however, the percent of population below the poverty level (9.9%) was below the state average (11.4%). Income statistics for Evanston are similar to those for Uinta County.

Conservatively, 25% of the construction workers for the Project are expected to come from the Evanston area. The remaining construction workers (estimated 131) are not expected to

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permanently relocate to Evanston. While the population of Evanston will increase by up to 2.0% in the short term, there will be no adverse effect on the community.

Approximately 10 to 14 full-time employees will be hired for the operations phase of the project. While some, if not all, of these employees will be from the Evanston area, if it is assumed that seven additional families will move into the area and that the average family in Evanston is 3.3 individuals (U.S. Census Bureau 2003a), then the long-term population could increase by approximately 23 persons (0.2% increase for Evanston and 0.1% increase for Uinta County). The long-term increase in population will be minimal and will not adversely effect the community.

No adverse short- or long-term changes are expected to occur to the populations of Evanston or Uinta County as a result of the proposed Project; therefore, population is not discussed further.

#### **9.4 DESCRIPTION OF THE LOCAL ECONOMY**

A summary of industry employment and income is provided in Table 9.2. Information for the services and mining sectors in 2000 were not available at the time of this analysis; therefore, jobs and income in those sectors were estimated based on an extrapolation of the proportional share of all jobs/income provided by those sectors in 1990.

Services provided nearly a quarter (23%) of all jobs (9,880) in Uinta County in 1990 and 2000 (estimated 23%), with an estimated 10-year growth rate of 11%. Construction experienced the most growth from 1990 to 2000 (41%), followed closely by manufacturing (40%) and wholesale trade (34%). Federal and civilian government jobs decreased (-5%) during the same 10-year period.

Table 9.2 Employment and Income by Industry, Uinta County.<sup>1</sup>

Item	1990		2000	
	Number of Jobs	Income (thousands)	Number of Jobs	Income (thousands)
<b>Employment/Earnings by Place of Work</b>				
Wage, salary, and other labor (full- and part-time)	9,880	172,144	11,424	244,233
Proprietors <sup>2</sup>	2,024	20,291	2,537	35,355
Farm proprietor	282	2,274	332	-1,909
Nonfarm proprietor	1,742	18,017	2,205	37,264
<b>Income/Employment by Industry</b>				
Farm	373	3,269	423	-570
Nonfarm	9,507	189,166	11,001	280,158
Private	7,433	140,279	8,838	218,973
Agricultural services, forestry, fishing, and other	99	705	121	1,426
Mining	1,078	38,340	1,196 <sup>3</sup>	54,432 <sup>3</sup>
Construction	615	14,641	869	26,148
Manufacturing	331	8,322	462	13,226
Transportation and public utilities	582	18,733	676	32,063
Wholesale trade	151	3,683	203	6,768
Retail trade	1,830	17,782	2,216	30,563
Finance, insurance, and real estate	431	4,183	525	8,115
Services	2,316	33,890	2,570 <sup>3</sup>	47,231 <sup>3</sup>
Government and government enterprises	2,074	48,887	2,163	61,185
Federal, civilian	88	2,925	84	4,125
Military	110	1,033	113	1,587
State and local	1,876	44,929	1,966	55,473
State government	549	13,380	562	16,747
Local government	1,327	31,549	1,404	38,726

<sup>1</sup> BEA (2003).<sup>2</sup> Proprietors income includes the inventory valuation adjustment and capital consumption adjustment.<sup>3</sup> Extrapolated based on proportional share in 1990. Actual information not available from the BEA.

The leading industry in terms of income in 1990 and 2000 was mining, which provided an estimated 20% of industry income to Uinta County in 1990, and 19% in 2000 while experiencing an income growth of approximately 39%. Services followed closely, providing 18% and an estimated 17% of industry income in 1990 and 2000, respectively. Services also experienced an estimated 39% income growth during that 10-year period. Due to severe drought in the area, farming experienced a negative (-0.2%) industry income in the county in 2000, as compared to a positive 1.7% in 1990.

It is expected that current industry trends will continue with or without the Project, although services and retail will experience some additional short-term growth for the duration of the Project. Farming will continue to suffer losses until the drought is alleviated. The ongoing drought will likely result in more agriculture workers moving into other industry areas or leaving the Evanston area altogether.

Table 9.3 shows the representative age estimates for the Evanston, Uinta County, and Wyoming populations. About 60% of the population in Evanston, Uinta County, and Wyoming is of working age (18 to 64 years). The working age population is comprised almost equally of male and female. There is no unemployment rate reported for the city of Evanston; however, Evanston residents comprise the bulk of the Uinta County workforce. Based on the number of working-age persons and the reported unemployment rates (see Tables 9.1 and 9.3), approximately 670 persons (338 male and 332 female) are available for employment in Uinta County.

Hourly wages in Wyoming are comparable to wages in Utah, allowing Evanston businesses to compete with larger cities in the region (Table 9.4). In fact, hourly wage rates in Wyoming actually exceed Utah's rates in the following fields: science, healthcare practitioners, protective services, construction, installation, production, and transportation (Evanston Wyoming Chamber of Commerce [EWCC] 2002). The average weekly wage for covered employees in 2000 was \$475 (WDAI 2002). The median wage ranges from \$66,271 for an actuary (Associate II) to \$13,432 for a general cashier (Wyoming Business Council 2002) (Table 9.4).

Table 9.3 Age of Population.<sup>1</sup>

Population Age	Evanston		Uinta County		Wyoming	
	Male	Female	Male	Female	Male	Female
Under 5 years	509	491	845	776	15,893	15,047
5 to 9 years	515	459	856	789	17,524	16,603
10 to 14 years	602	545	1,044	955	19,732	18,644
15 to 17 years	379	340	730	610	13,087	12,343
18 and 19 years	208	178	357	318	8,674	7,799
20 years	82	65	129	99	3,976	3,657
21 years	80	87	124	124	3,587	3,377
22 to 24 years	167	210	291	329	9,951	8,907
25 to 29 years	369	360	577	602	15,614	14,470
30 to 34 years	362	366	587	588	15,185	14,585
35 to 39 years	425	495	707	795	18,032	18,450
40 to 44 years	554	534	970	934	21,210	21,073
45 to 49 years	473	445	872	810	20,651	20,050
50 to 54 years	330	300	638	550	17,299	16,079
55 to 59 years	228	219	430	396	12,711	12,224
60 and 61 years	54	78	119	136	4,233	4,070
62 to 64 years	82	90	134	143	5,638	5,714
65 and 66 years	37	43	84	73	3,315	3,549
67 to 69 years	64	83	119	126	4,694	5,040
70 to 74 years	115	121	195	200	7,010	7,735
75 to 79 years	74	89	126	143	5,225	6,583
80 to 84 years	45	72	73	110	3,116	4,691
85 years and over	34	49	47	82	2,017	4,718
Total Number of Persons	5,788	5,719	10,054	9,688	248,374	245,408
Percentage of Total Population by Sex	50.3%	49.7%	50.9%	49.1%	50.3%	49.7%
Number of Persons of Working Age (18-64)	3,414	3,427	5,935	5,824	156,761	150,455
Percentage of Total Population of Workforce Age	29.67%	29.78%	30.06%	29.50%	31.75%	30.47%
Number of Available Workers <sup>2</sup>	--	--	338	332	6,584	6,319

<sup>1</sup> U.S. Bureau of Census (2003a).<sup>2</sup> Based on number of persons of working age and unemployment rate (not reported for Evanston; 5.7% for Uinta County; 4.2% for Wyoming) (assumes that the unemployment rate is the same for male and female) (see Table 9.1).

Table 9.4 Salaries in Uinta County, 2001.<sup>1</sup>

Position	Wage in 25th Percentile <sup>2</sup>	Median Wage <sup>2</sup>	Wage in 75th Percentile <sup>2</sup>
<b>Professional</b>			
Accountant II	\$33,692	\$37,163	\$41,355
Accounts Payable Manager	\$39,629	\$46,723	\$54,042
Accounts Payable Supervisor II	\$33,761	\$38,681	\$44,962
Actuary (Associate) II	\$60,742	\$66,271	\$71,056
Aerospace Engineer II	\$40,108	\$43,911	\$50,978
Biochemist III	\$39,127	\$42,349	\$47,929
Biologist II	\$38,059	\$42,199	\$48,047
Budget Analyst II	\$42,064	\$47,785	\$53,845
Chemist II	\$38,824	\$43,069	\$48,328
Civil Engineer II	\$41,215	\$46,963	\$52,872
Claims Examiner	\$23,279	\$26,058	\$30,344
Clinical Research Associate II	\$41,461	\$48,532	\$52,384
Electrical Engineer II	\$45,261	\$49,019	\$55,815
Employment Manager	\$48,030	\$56,185	\$66,161
Executive Secretary	\$28,596	\$32,052	\$35,843
Financial Analyst II	\$44,727	\$49,434	\$55,753
Graphic Design Specialist	\$28,946	\$32,249	\$36,267
HR Manager	\$49,526	\$56,512	\$65,232
Industrial Engineer II	\$38,804	\$43,650	\$48,256
Logistics Analyst II	\$45,520	\$50,092	\$54,403
Market Research Analyst I	\$32,846	\$37,320	\$41,515
Materials Manager	\$47,248	\$55,184	\$66,045
Nurse Practitioner	\$50,244	\$53,674	\$58,730
Payroll Administrator	\$35,028	\$39,162	\$44,054
Pharmacist	\$53,106	\$55,798	\$59,463
Production Control Manager	\$45,201	\$52,032	\$60,573
Purchasing Agent	\$48,489	\$54,431	\$61,583
Recruiter II	\$34,696	\$38,525	\$44,280
Supervisor Customer Service	\$28,986	\$34,002	\$39,426
Underwriter (Life) II	\$35,860	\$36,300	\$37,261
Underwriter (P/C) II	\$34,301	\$36,622	\$41,208

Table 9.4 (Continued)

Position	Wage in 25th Percentile <sup>2</sup>	Median Wage <sup>2</sup>	Wage in 75th Percentile <sup>2</sup>
<b>Clerical</b>			
Account Representative	\$16,923	\$20,934	\$25,392
Accounting Clerk II	\$19,911	\$22,093	\$24,479
Billing Clerk	\$20,273	\$23,076	\$26,596
Cashier, General	\$11,402	\$13,432	\$16,528
Counter and Rental Clerk	\$17,306	\$21,082	\$26,012
Credit and Collections Clerk	\$20,092	\$22,684	\$25,522
Customer Service Representative II	\$22,567	\$25,135	\$28,341
Data Entry Clerk II	\$17,894	\$20,395	\$24,241
Payroll Clerk II	\$25,408	\$27,925	\$31,349
Procurement Clerk	\$20,572	\$23,181	\$26,746
Receptionist	\$17,432	\$19,253	\$21,444
Secretary II	\$21,304	\$23,543	\$26,081
Shipping and Receiving Clerk	\$17,657	\$19,708	\$22,364
Stock Clerk	\$17,090	\$18,989	\$22,241
Telemarketer	\$17,815	\$22,383	\$27,000
Travel Clerk	\$26,860	\$30,257	\$36,264
<b>Technical</b>			
Electric/Electronics Technician II	\$28,982	\$32,176	\$35,289
Electrician I	\$22,559	\$26,203	\$31,210
Electromedical and Biomedical Equipment Repairer	\$26,065	\$32,139	\$38,969
Engineering Aide II	\$27,222	\$31,164	\$35,164
LAN Support II	\$34,876	\$39,591	\$43,520
Medical Laboratory Technician	\$22,766	\$25,253	\$28,244
PC Maintenance Technician II	\$31,174	\$35,533	\$40,071
Telecommunications Technician II	\$32,445	\$38,979	\$44,666
<b>Information Technology</b>			
Data Warehouse Specialist	\$44,105	\$51,617	\$58,616
Database Administrator	\$51,742	\$59,917	\$69,205
Electronic Data Interchange Specialist	\$36,735	\$43,652	\$52,210
Mainframe Programmer II	\$42,268	\$47,372	\$52,662

Table 9.4 (Continued)

Position	Wage in 25th Percentile <sup>2</sup>	Median Wage <sup>2</sup>	Wage in 75th Percentile <sup>2</sup>
<b>Information Technology (cont.)</b>			
Network Control Technician II	\$34,041	\$38,741	\$44,999
Network Planning Analyst II	\$45,004	\$50,919	\$56,350
Programmer I	\$33,196	\$36,923	\$42,188
Software Engineer II	\$48,210	\$52,880	\$60,214
Telecommunications Analyst II	\$40,817	\$46,650	\$52,555
Webmaster	\$39,282	\$47,071	\$58,117
<b>Skilled</b>			
Assembly Supervisor	\$33,351	\$41,426	\$46,282
CAD Drafter	\$23,309	\$26,946	\$30,857
Calibration Technician II	\$26,763	\$30,097	\$32,552
Crane/Tower Operator	\$23,028	\$28,635	\$34,911
General Maintenance Worker III	\$26,883	\$29,691	\$33,432
Instrument Technician II	\$27,063	\$32,573	\$36,326
Machinist II	\$26,241	\$31,045	\$36,393
Mechanic Technician II	\$25,934	\$29,679	\$33,125
Production Scheduler	\$41,094	\$44,199	\$48,188
Tool and Die Maker II	\$31,633	\$34,578	\$37,316
Truck Driver - Light	\$17,572	\$20,254	\$25,384
Welder II	\$25,073	\$28,930	\$33,424
<b>Semi-Skilled</b>			
Buffing and Polishing Set-Up Operator	\$18,577	\$20,982	\$24,825
Coating, Painting, and Spraying Machine Operator	\$17,112	\$21,355	\$26,487
Crushing, Grinding, and Mixing Machine Operator	\$16,514	\$19,824	\$24,322
Grinding and Polishing Worker, Hand	\$17,086	\$20,510	\$24,656
Heavy Assembler II	\$20,458	\$22,237	\$25,070
Hoist and Winch Operator	\$21,567	\$26,945	\$32,499
Letterpress Setter and Set-Up Operator	\$20,810	\$25,325	\$30,589
Machine Operator I	\$17,518	\$19,471	\$22,048
Machine Tool Cutting Operator/Tender	\$17,465	\$21,302	\$26,408
Millwright	\$27,350	\$33,785	\$41,047

Table 9.4 (Continued)

Position	Wage in 25th Percentile <sup>2</sup>	Median Wage <sup>2</sup>	Wage in 75th Percentile <sup>2</sup>
<b>Semi-Skilled (cont.)</b>			
Packaging and Filling Machine Operator/Tender	\$16,284	\$18,853	\$23,516
Punch Press Operator	\$21,748	\$24,123	\$26,184
Security Guard	\$18,438	\$21,881	\$24,898
Sheetmetal Mechanic II	\$24,196	\$26,866	\$31,055
Wood Machine Operator	\$14,136	\$18,847	\$23,559
<b>Unskilled</b>			
Crater/Packer II	\$16,930	\$18,486	\$21,895
Cutter/Trimmer, Hand	\$20,401	\$22,052	\$24,078
General Laborer	\$16,956	\$18,784	\$21,568
Light Assembler II	\$17,374	\$19,588	\$22,063
Machine Feeder and Offbearer	\$15,141	\$18,222	\$21,883
Material Handler II	\$18,926	\$21,191	\$23,963
Packer/Packager, Hand	\$16,029	\$17,306	\$19,869
Solderer	\$17,971	\$19,496	\$26,373
Tool Crib Attendant I	\$18,729	\$21,811	\$25,993

<sup>1</sup> Wyoming Business Council (2002).

<sup>2</sup> As defined by the Wyoming Business Council, half of the people in this job are expected to earn between the 25th and 75th percentiles.

Evanston, Uinta County, and the Evanston Chamber of Commerce collaborate in aggressive recruitment efforts to fill local job vacancies. Workforce training and employee retention are priorities in Evanston's commitment to workforce readiness. Educational programs and technical skills workshops are frequently planned in order to enhance employee knowledge. Evanston employees may also earn their bachelors or masters degree through university extension services. The investment Evanston has made in its employees has resulted in a dedicated workforce and low employee turnover (EWCC 2002).

Workforce requirements for the Project are presented in Table 9.5. In the short-term and long-term the Uinta County workforce will benefit from increased employment opportunities. Therefore, there will be no adverse effects to the Uinta County workforce due to the Project.

## 9.5 DESCRIPTION OF LOCAL HOUSING

The most current housing data available was obtained from the U.S. Census Bureau for the year 2000 (U.S. Census Bureau 2003b). There are 8,011 total housing units in Uinta County, and 1,188 (15%) of these were vacant, including 607 units (51% of those vacant) in Evanston; 363 of the vacant units in the county are for rent only, and 294 (81% of vacant county units) of these are in Evanston. There are 191 housing units for sale in the county, and 103 (54%) of these are in Evanston. An additional 77 unoccupied units are for rent or sale in the county with 33 (43%) of these in Evanston (U.S. Census Bureau 2003a, 2003b). The home ownership rate is 75% in Uinta County (WDAI 2002).

The average rental rates in Uinta County during the fourth quarter of 2002 are as follows: two-bedroom, unfurnished apartment, excluding gas and electric, \$374 (up 9% from fourth quarter of 2001); single-wide mobile home lot, including water, \$150 (no change); two or three-bedroom, single-family house, excluding gas and electric, \$486 (up 1% from 2001); mobile home total monthly rental expense including lot rent \$357 (down 5% from 2001) (WDAI 2003).

Table 9.5 Workforce Requirements.

Assignment	Worker Days
Wind farm construction (175 workers/22 weeks for 60 hours/week)	28,875
Operations and Maintenance (10 to 14 [average 12 workers]/30years)	93,600
Total	122,475

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Evanston's housing stock is a mix of new and historic multi- and single-family units. Historic properties dating back to the late 1800s have been refurbished into apartment complexes and remodeled to suit the needs of the modern single-family use. There is a wide variety of multi-family units in close proximity to Evanston's schools and commercial districts, as well as town-home, condominium, duplex, and apartment complexes that are available to accommodate the housing needs of singles, young families, and senior citizens (EWCC 2002).

Due to the age of the census data and variability in the housing market, telephone interviews were conducted comprised by TRC Mariah Associates Inc. in May 2003 with real estate agents, apartment managers, and recreational vehicle (RV)/mobile home park managers to determine available housing and to assess the current demand resulting from Exxon Mobile Corporation's (Exxon's) LaBarge Project, Shute Creek Facility. Only one of the 18 people interviewed was aware of Exxon's project while the majority were aware of the UCWF's Project. One agent strongly expressed the community's desire for economic development in the Evanston area (personal communication, May 30, 2003, with Barry Coster, Real Estate Headquarters, Evanston, Wyoming). With the exception of one individual, all interviewees concurred that there had been no demand in Evanston as a result of Exxon's Shute Creek project. The one exception was an RV park owner who had three spaces temporarily occupied until spaces closer to the Exxon project site (i.e., Kemmerer) could be located. Additionally, several apartment and mobile park managers expressed a willingness to work directly with UCWF to prescreen applicants (personal communication, May 30, 2003, with Jack Jarose, Manager, Evanston Estates) and to arrange for additional units or increase the number of available spaces if they were given enough lead time (personal communication, May 30, 2003, with Barb Merrick, Yellow Creek Mobile Home Park).

The number of RV spaces available was quadrupled in Evanston within the last year to accommodate demand from a previous pipeline project (personal communication, May 30, 2003, with Barb Merrick, Yellow Creek Mobile Home Park). Currently more than 220 RV spaces (with full utility and trash service) (50-80% vacant) and at least 400 mobile home spaces (50% vacant) exist in the area. Approximately 200 of the mobile home spaces are currently vacant.

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Approximately 161 RV spaces are expected to be available by the August 1, 2003, start-date of the Project. Therefore, a total of 361 long-term RV/mobile home spaces will be available for UCWF construction workers, with that number expected to increase during August.

There are also 11 hotels/motels in Evanston, with approximately 800 rooms. Based on phone interviews, these businesses generally have an average 60% occupancy rate (personal communications, May 29, 2003). The 40% of unoccupied rooms translates into an average of approximately 320 rooms available every night. In addition, there is a private campground with 56 trailer spaces and they typically have a 60% occupancy rate, which leaves approximately 22 spaces available each night. In addition, the construction period for the Project will occur at the end of the summer tourist season when there is less demand for hotel/motel rooms and campground spaces and when more temporary housing is typically available.

Additionally, a minimum of 30 three-bedroom apartments would be available from several complexes with more than 458 units (personal communication, May 30, 2003, with Jack Jarose, Manager, Evanston Estates; Cristi [Manager], South Valley Estates; and Denise [Manager], Wheeler Enterprises). Nine rental units are listed in the real estate multi-list (personal communication, Chris Elsen, RE/MAX Results Realty, Inc.). Assuming one person per bedroom, 39 units could provide housing for approximately 117 construction workers. It should also be noted that some of the temporary construction workers will likely come from the immediate Evanston area. Therefore, additional housing for the local construction workers will not be necessary.

Eleven housing units (i.e., homes, mobile homes) were listed for sale in the Uinta County Herald as of May 29, 2003, and 60 homes were listed for sale on that date in the real estate multi-list (personal communication, Chris Elsen, RE/MAX Results Realty, Inc.), that could accommodate the 10 to 14 permanent full-time employees in the Evanston community. It should also be noted that some of the permanent full-time employees will likely come from the immediate Evanston area.

Therefore, it appears that the housing for the temporary workers constructing the Project will not result in any short-term housing shortage in Evanston. The short-term impact of the Project will be the utilization of typically unoccupied apartments, mobile homes, rental houses, mobile home/RV lots, and motel rooms in Evanston. With the surplus of available permanent housing in Evanston, the operational phase of the Project (for 10 to 14 permanent workers) will not result in any long-term housing shortage in Evanston. It should also be noted that some of the permanent full-time employees will likely come from the immediate Evanston area.

## **9.6 DESCRIPTION OF LOCAL TRANSPORTATION FACILITIES**

I-80 bisects Evanston, offering businesses the opportunity to transport products to customers throughout the western and midwestern U.S. Connections to I-84 and I-15 provide convenient access to cities such as Boise, Idaho, and Las Vegas, Nevada. Well-maintained state highways and local roadways ensure expeditious delivery of products throughout Wyoming (EWCC 2002).

National and international trucking companies provide broad motor freight trucking services for Evanston's distributors. Current shipping rates for full-box trailers are affordable, ranging from \$1.10 to \$1.25/mi (EWCC 2002).

Star West Aviation is the Fixed Base Operator at the Evanston Municipal Airport. This airport has pilot-operated high-intensity runway lights and VHF Omnidirectional Radio Range/Distance Measuring Equipment for navigation. The Evanston Municipal Airport recently installed an Instrument Landing System to upgrade this facility to a C-II aviation facility, capable of accommodating most corporate aircraft (EWCC 2002).

Public transportation in Evanston is provided for senior and special-needs citizens upon request, and taxi service is available. Greyhound Bus Line provides long-distance travel service to Evanston. In addition, a regular shuttle service is available to the Salt Lake International Airport (EWCC 2002).

Evanston is located on the Union Pacific Corporation's east/west main rail line and has been a major railroad hub in the western U.S. for decades. No passenger rail service is currently provided; however, rail spurs with the capacity to connect to major industrial and commercial parks are available (EWCC 2002).

The Project is located approximately 10 mi east of Evanston. Existing primary and secondary roads (I-80 and Wyoming State Highway 189) will be used to access the Project area. Plans/permits for upgrades to existing two-track roads have been obtained from the BLM for road segments on federal land. Contractors will comply with existing federal, state, and county requirements and restrictions to protect road networks and the traveling public. If necessary, special arrangements will be made with WYDOT to transport oversized loads to the Project area. Otherwise, load limits will be observed at all times to prevent damage to existing paved road surfaces.

Construction of the Project will occur from August 1 to December 2003, utilizing numerous vehicles for multiple tasks. A maximum of 400 daily vehicle trips (200 round trips) to and from the site may occur; however, the actual number of vehicles working on-site may range from 200 to 400. Once the Project is operational, there will be 20 daily vehicle trips (10 round trips) to and from the site.

At the discretion of the industrial contractor, workers will likely be transported in multiperson vehicles traveling along I-80 from Evanston and/or Wyoming State Highway 189 and then on unpaved access roads to the Project site. The average daily traffic for the stretch of I-80 between Evanston and the Junction of Wyoming State Highway 189 (24-hr/day, 365 days/year) in 2001 was 12,340 vehicles, 5,460 of which were trucks (personal communication, May 29, 2003, with Mike Sandage, Wyoming Department of Transportation [WYDOT]). WYDOT estimates the annual projected increase to be about 3% per year; thus, average daily traffic in 2003 will be expected to be 13,092 vehicles. In the worst case scenario, all 175 workers will drive a personal vehicle to and from the construction site each day. Adding an additional 350 daily vehicle trips (175 round trips) per day would increase the average daily traffic by

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approximately 3% ( $350 \div 13,092 \times 100$ ) for the construction period. Therefore, the Project will have minimal impacts on transportation facilities in the area.

## **9.7 DESCRIPTION OF LOCAL PUBLIC NON-TRANSPORTATION FACILITIES**

### **9.7.1 Non-Public Utility Services**

Electric power, natural gas, telephone, and cable services are readily available in Evanston. Evanston's average monthly utility rates are lower than surrounding areas in each category (EWCC 2002).

Private firms in Evanston also have developed a high-speed information infrastructure. T1 lines are accessible throughout the city, and an expanding DSL service is readily available in business districts. Businesses also have the opportunity to choose from technology providers such as Qwest, AT&T, Allwest Communications, and Adelphia. Internet services can be combined with digital cable and multiple-line telephone networks (EWCC 2002).

There may be a limited increase in demand for utility services in the short term. However, Evanston has sufficient capacity to supply this increased demand. Therefore, minimal adverse effects are expected to occur to the utility system in the short term. With only 10 to 14 permanent jobs created by the Project, there will be no adverse long-term effects on utilities in the Evanston area.

### **9.7.2 Public Services**

Evanston maintains police and fire departments for the protection of the community and maintains the roads, water and sewer systems, and other necessary utilities to support current needs (EWCC 2002). Emergency services in Uinta County are made up of several agencies. Fire protection and hazardous materials response is provided by the Uinta County Fire District with a fire chief in Evanston, Lyman, Mountain View, and Fort Bridger. The Uinta County

Ambulance Service provides ambulance service throughout the county. The Uinta County Sheriff's Department has 10 officers covering the county and provides dispatch communications for all the agencies in the county. Evanston has a total of 28 sworn police officers, including four detectives, three school resource officers, and two K-9 units. Lyman and Mountain View also have their own police departments. Uinta County Emergency Management is responsible for planning and preparing for natural and man-made disasters and to coordinate and provide resources for emergency response to disasters (Uinta County 2003).

Recently, the City of Evanston invested in a \$9.6 million addition to its water treatment facility. This addition gives Evanston the ability to supply 18 million gallons of water per day. Water from the Bear River Watershed is acceptable for culinary, potable, and industrial uses (EWCC 2002). There may be some insignificant increased demand on city services during the short-term construction period; however, Evanston has sufficient resources to handle any additional demand. No long-term adverse effects to public services are expected to occur as a result of 10 to 14 permanent jobs associate with the Project.

### **9.7.3 Education**

There are three school districts and 15 schools in Uinta County. The 1999 fall enrollment was 4,946, with an expected graduating class of 338. There are 350 certified teachers, 62 certified staff, and 296 classified staff. The student to teacher ratio is 14:1. Buses transport 2,055 students to Uinta County schools daily (WDAI 2002).

The school district offers a full range of academic courses and extra-curricular activities including 4-A sports, music and band programs, and college prep and special education classes, as well as clubs, sporting activities, and theater (EWCC 2002).

Educational facilities in the county are now valued at \$61 million. Beginning teacher salaries for the 2000-2001 school year were \$22,600 per year plus employee benefits valued at an additional 35% of the established salary range (EWCC 2002).

According to standardized test results, Evanston public K-12 education is superior to its counterparts on both a local and regional scale. Compared to nearby districts in both Wyoming and Utah, Evanston rates higher in all departments and specifically in the core subjects of reading, language, and math. SAT scores in Evanston School District are consistently strong and continue to rise. Recent 2001 scores have improved by 14% from last year's results. These increases were found in all tested grade levels, with the strongest results coming in both language and math (EWCC 2002).

The Lifelong Learning Center, in partnership with Western Wyoming Community College of Rock Springs, provides academic, certificate, and non-credit community education. The Lifelong Learning Center is a Microsoft Authorized Academic Training Provider and an authorized Prometric Testing Center, and it currently facilitates technical training programs, including the Business Skills Institute and Industrial Safety Training. Both programs meet specific industry needs and are accepted by agencies such as Occupational Safety and Health Administration, Mine Safety Health Administration, and the Wyoming Safety Council (EWCC 2002). Over 30 bachelor and master degree programs are available from the University of Wyoming and Utah State University through distance learning via satellite. In addition, the Lifelong Learning Center offers adult enrichment classes, computer and Internet courses, a paralegal certificate program, nursing and business management courses (EWCC 2002).

Advanced education is available within less than 2 hours travel at the University of Utah, Brigham Young University, Weber State University, Utah State University, and Idaho State University. In addition, a few hours to the east is the University of Wyoming at Laramie (EWCC 2002).

Most construction workers are not expected to move their families into the area. Assuming a conservative estimate that approximately 25% of the construction workers will come from the Evanston area, there will be no effect to the education infrastructure as a result of the Project. Furthermore, 10 to 14 additional families with school-age children (less than 10 to 14 families

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including local hires) associated with the Project will not result in any long-term adverse impacts to the education infrastructure.

#### **9.7.4 Health and Human Services**

Uinta County has two hospitals with 160 beds, and nine physicians/dentists are employed by the hospitals (Wyoming Business Council 2002).

The Evanston Regional Hospital is the most specialized and well-equipped in the area. Services include acute medical care with a staff of nearly 200 professionals, including 18 active physicians. Two family practice clinics are associated with the hospital. Medical services include orthopedics, emergency medicine, OB/GYN, pediatrics, dental care, ophthalmology, podiatry, pathology, radiology, otolaryngology, cardiology, urology, internal medicine, dermatology, and surgery. This hospital is also working to create a telecommunications medical network that connects them directly to University of Utah Medical and Research Centers (EWCC 2002).

The Uinta Senior Citizens operate a community center that provides a variety of social, physical, and educational activities for Evanston seniors. The center offers home health care, adult day care, meals, and transportation services (EWCC 2002).

Uinta County Human Services Department sponsors an array of quality community health programs including family services, teen parenting support, drug use prevention, two 24-hour crisis hotlines, WIC, and a youth alternative home. Evanston Child Development Center and Lincoln-Uinta County Child Development Association provide licensed quality childcare (EWCC 2002).

There are three mental health services and several agencies that support people with disabilities, including the Wyoming Division of Vocational Rehabilitation, Western Wyoming Center for Independent Living, The ARC, the Evanston Business Leadership Network, and the Evanston Housing Authority (EWCC 2002).

The Project may result in some limited increase in the demand for local health services while construction workers are in the area; however, this increased demand will be minimal. Furthermore, there will be very limited, if any, long-term impact to local health and human services due to the 10 to 14 additional jobs created by the Project.

#### **9.7.5 Cost of Living**

The overall cost of living in Uinta County is 4% lower than the state average, according to the WDAI (2003). This figure includes food (2% below average), housing (9% below average), apparel (2% below average), transportation (1% above average), medical (14% above average), and recreation and personal care (4% below average).

The proposed Project will have no effect on the short- or long-term cost of living in Uinta County or Evanston.

#### **9.7.6 Crime**

The crime indexes are "100" based, meaning that a value of 100 for a particular level of geography is the average national value. For example, a value of 150 indicates that the area has one and a half times the average risk level. A value of 50 indicates that the area is at half the average risk level.

The categories used in determining the crime index are used by the Federal Bureau of Investigation in its Uniform Crime Report. Aggregated indexes have been prepared for personal and property crimes separately, as well as a total index. These provide the relative "overall" crime rate in an area. However, the indexes are unweighted, meaning that a murder is weighted no more heavily than a purse snatching. This must be taken into account in the interpretation of the data.

Table 9.6 details the crime index statistics for Uinta County (Wyoming Business Council 2002). Overall, crimes against people are relatively low (44) against the national average of 100, with a robbery index of only 6. Crimes against property (72) is closer to the national average, with larceny being 121, 21% higher than the national average. The total crime index for Uinta County is 59. Throughout Wyoming, the murder index is lower (53) and the rape index is significantly higher (80). The remaining crime index statistics are similar to those for the county.

Total Evanston crime has been steadily decreasing over the last several years. Crime in Evanston has decreased in most categories, with significant change in rape (-500.0%), assault (-97.6%), burglary (-90.4%), and theft (-64.9%) (EWCC 2002) (Table 9.7).

There will be no long-term changes in crime due to the Project.

## **9.8 FISCAL ANALYSIS OF IMPACTS TO LOCAL GOVERNMENTS**

Under the provisions of W.S. 39-15-111(c) and 39-16-111(d), local government entities potentially affected by an industrial facility are entitled to receive Impacts Assistance Payment (IAPs), provided that the county in which the facility is located has adopted one of the two local optional sales and use taxes that are available under state statute. Uinta County has adopted both the optional 1% sales and use taxes. IAPs are based on increases in the local share of state sales and use tax revenues above the base period amounts. Base period amounts are defined as the average monthly sales and use tax distributions to a county for the 12 months prior to commencement of construction of an industrial facility under the jurisdiction of the Wyoming Industrial Siting Council. The Wyoming Industrial Siting Council determines eligibility for

Table 9.6 Crime Index (Average for Last 8 Years) for Uinta County and Wyoming.

Crime	Uinta County Index	Wyoming Index
<b>Crimes against people</b>		
Murder index	67	53
Rape index	53	80
Robbery index	6	9
Assault index	53	54
Total personal crime risk index	44	49
<b>Crimes against property</b>		
Burglary index	69	70
Larceny index	121	115
Motor vehicle theft index	26	27
Total property crime risk index	72	71
Total crime risk index	59	60

Table 9.7 Evanston Crime Statistics, 1995-2000.<sup>1</sup>

Crime	Year						% Change 1995-2000
	1995	1996	1997	1998	1999	2000	
Homicide	0	0	0	0	0	0	NC
Rape	5	5	3	4	7	0	-500.0
Robbery	4	3	2	4	0	2	-50.0
Assault	171	254	197	165	14	4	-97.6
Burglary	167	154	131	114	53	16	-90.4
Theft	1,312	1,123	1,115	1,115	476	460	-64.9
Motor Vehicle Theft	46	47	45	21	18	17	-63.0
Total year total	1,705	1,586	1,493	1,423	568	499	-70.7

<sup>1</sup> Evanston Wyoming Chamber of Commerce (2002).

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IAPs and establishes a distribution formula based on the estimated impacts to local governments in the area of site influence of an industrial facility.

**9.8.1 Estimated Cost of the Facility Subject to Sales and Use Taxes**

It is estimated that approximately \$6 million of the Project will be subject to state and local sales and use taxation. No additional sales taxes will be generated by the Project due to the exemption for equipment used to generate electricity from renewable resources (i.e., wind) in accordance with W.S. 35-15-105(a)(viii)(N).

**9.8.2 Estimated Cost of the Components for Ad Valorem Taxes**

It is estimated that approximately \$140 million of the cost of components will be subject to ad valorem taxation.

**9.8.3 Any Other Information on State and Local Taxes Generated**

No additional taxes, except for those generated as a result of direct employee wages, are expected to be generated by the Project.

**9.9 SOCIOLOGICAL ANALYSIS OF IMPACTS**

The Project will employ an average of approximately 175 workers (ranging from 90 to 220, depending on the month of construction) for five months from August 2003 to December 2003. The workforce for the operations phase of the Project is expected to be approximately 10 to 14 workers.

It is assumed that approximately 25% (44) of the short-term construction workers are expected to be furnished by the local workforce. Approximately 670 persons are available for employment in Uinta County. The Project will have a beneficial impact on the local economy by providing

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additional secondary jobs that will reduce unemployment, increase the tax base, and stimulate the local economy. Local business will also benefit from the sale of goods and services during construction and operation of the Project.

The remaining 131 workers needed for windplant construction will be migrant labor with specialized skills. Some workers would rent mobile homes, apartments, or houses for the construction period. Currently, there are approximately 1,188 vacant housing units in Uinta County, including 607 units in Evanston. Of these vacant units, 363 are available for rent only, and 294 of those are in Evanston. Others workers will stay in hotels/motels or other lodging for the duration of the construction Project, and some will choose to park camping trailers in a campground or at another permissible facility that allows long-term camping. For these workers, 11 hotels/motels and two campgrounds will provide adequate facilities. Temporary construction workers are generally not expected to relocate or to bring their families with them during the construction period; thus, there would be no unreasonable short-term demands for housing. The renting of housing units, hotel/motel rooms, and campground spaces will have the beneficial effect of injecting funds into the local economy, as well as the state economy, as a result of lodging taxes. In addition, the Project is expected to have no or only minimal impacts on public services, non-public utility services, education, health and human services, crime, and transportation facilities.

Retail trade will receive additional business for the duration of the construction Project, which may also result in increased secondary employment of local workers and subsequent increased tax revenues collected by local merchants from both local workers and migrant workers and for Project-related locally purchased equipment and supplies.

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## **10.0 POTENTIAL ENVIRONMENTAL IMPACTS**

### **10.1 PROJECT IMPACTS**

#### **10.1.1 Introduction**

Potential environmental impacts due to construction, operation, and maintenance of the Project are discussed below for each potentially affected resource. Discussions of impacts that can be reasonably expected from Project implementation are included. Mitigation measures, presented in Section 11.1, have already been incorporated into the Project, and impact analyses assume that these mitigation measures will be effectively implemented. Potential environmental impacts are expected to be minimal as a result of the project.

#### **10.1.2 Air Quality Resources and Noise**

Emissions from facility construction and road improvement/construction will include dust, sulfur dioxide (SO<sub>2</sub>), nitrogen oxide (NO<sub>x</sub>), particulate matter <10 microns in diameter (PM<sub>10</sub>), carbon monoxide (CO), and volatile organic compounds (VOCs) and ozone [O<sub>3</sub>] from vehicle traffic and engine exhaust during construction and operation. Adverse impacts to air quality resources will be minimal and will not require the issuance of a permit from the Wyoming Department of Environmental Quality, Air Quality Division. In addition, the impacts will be temporary during construction and will be minimized by the mitigation measures included in Section 11.1.

The Project will generate a limited amount of noise through turbine and road construction, traffic, reclamation, and operations. Construction activities will generate maximum noise levels ranging from 85 to 88 A-weighted decibels (dBA) at a distance of 50 ft from construction equipment (Table 10.1). Construction activities will be temporary and will be generated by increased traffic on area roadways and the operation of construction equipment.

Table 10.1 Typical Construction Equipment Noise.<sup>1</sup>

Type of Equipment	Maximum Level, dBA at 50 ft
Bulldozer	87
Heavy truck	88
Backhoe	85
Pneumatic tool	85

<sup>1</sup> Cunniff (1977).

Ranchers who are on-site and wildlife may be affected by construction noise, but the noise will be localized and temporary, so impacts will not be significant. All motorized equipment required for Project activities will be properly muffled and maintained. To further minimize noise impacts, UCWF will limit traffic to that which is only necessary for construction.

When the wind is blowing and the turbines are operating, the turbine and blade will generate some noise, but it dissipates quickly and will be limited to the immediate area around each wind turbine (BLM 1995). Other human activity in the general Project area will consist primarily of pick-up truck traffic associated with ranching activities and utility maintenance, but the noise associated with this traffic will be sporadic and temporary. Besides ranchers and wildlife resources, there are no other noise-sensitive receptors in the general Project area. Potential noise impacts on wildlife resources are discussed below.

### **10.1.3 Cultural Resources**

There should be no impacts to National Register of Historic Places-eligible cultural properties as a result of construction-related or operational activities. As described in Section 11.1, UCWF has conducted a Class III inventory of the Project area and has obtained approval from the BLM. No known Native American religious, traditional, or culturally important sites are known to occur within the Project area.

**10.1.4 Geologic Hazards**

The Project will not contribute to increased risks of seismic events, subsidence, or flooding. No turbines are proposed for construction in landslide areas. Preconstruction geotechnical investigation and post-construction reclamation will ensure that the chance of landslides will not be increased.

**10.1.5 Land Use and Recreation**

Livestock grazing will continue unaltered on areas not directly utilized for the Project (e.g., turbine locations and access roads). Assuming an average of 6.5 acres/animal unit month (AUM), expected surface disturbance of less than 289 acres will result in the removal of less than 50 AUMs from the Project area. This amount comprises less than 0.1% of the acreage within the 67,188 acres included in the four allotments that cover the Project area and thus is an insignificant loss of forage. The Project will not result in the need to modify grazing allotments and will not prevent the realization of grazing goals.

Hunting will likely be curtailed near wind turbines both by the hunters themselves and by UCWF due to safety concerns and to avoid damage to turbines. It is likely that hunters avoid, to some degree, the other aboveground developments in the general Project area. Therefore, the land available to hunters will be reduced by an amount somewhat larger than the actual disturbance area. UCWF will also discourage off-road vehicle (ORV) use near turbines, but again, ORV recreation is currently and will continue to be controlled to a large degree by the private landowners. ORV users will have improved access to the area and use of federal lands, but ORV use will continue to be limited to designated roads and trails. Gates controlling access to the Project area currently exist and will continue to be utilized. Construction and operations personnel will discourage unauthorized ORV use of the Project area.

**10.1.6 Mineral Resources**

The construction and operation of the Project will not preclude access to, exploration of, or development of any mineral resources in the general Project area, primarily because no such developments are currently proposed.

**10.1.7 Soil Resources**

The Project will primarily utilize a network of existing local roads that, when upgraded, will provide adequate access to the wind turbines and associated equipment.

With the implementation of mitigation measures (discussed in Section 11.1) to conserve soil, prevent erosion, and expeditiously reclaim disturbed areas, impacts to soils will be minor. Special mitigation measures will be taken in problem areas--steep slopes, shallow soils, alkaline or saline soils, etc.--where these areas cannot be avoided.

**10.1.8 Surface and Ground Water Resources**

No surface or ground waters will be used for the Project. Surface water will not be adversely impacted because of the applicant-committed practices described in Section 11.1 and prompt reclamation of all disturbed areas. UCWF will also prepare and implement a storm water pollution prevention plan, in accordance with state and federal law, to minimize potential impacts of the Project. The small amount of water used for turbine and road improvement/ construction and dust control will not affect downstream users. No ground water resources will be impacted by the project.

**10.1.9 Threatened, Endangered, Proposed, and Candidate Species**

The U.S. Fish and Wildlife Service identified the following threatened, endangered, proposed, and candidate species as potentially occurring in the Project area: black-footed ferret, bald eagle, yellow-billed cuckoo, mountain plover, whooping crane, and Ute ladies' tresses.

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Black-footed ferret surveys were conducted and no black-footed ferrets were found. Therefore, based on this fact and with the implementation of mitigation measures, Project impacts to black-footed ferrets are unlikely. Bald eagles and yellow-billed cuckoo are likely rare visitors to the area; therefore, Project impacts are unlikely. Potential impacts to mountain plover (if they exist in the Project area) will include mortality from collisions with vehicles, rare collisions with turbines, loss of habitat, and displacement from habitat due to human activity. Development in the general Project area will create new mountain plover habitat, which may increase the risk of direct mortality but offsets the loss of and displacement from native habitat. If construction activities occur between April 10 and July 10, UCWF will also implement surveys in suitable habitat for nesting mountain plovers. The two whooping cranes that may occasionally fly through the Project area were not considered a viable population, and, for the purposes of the *Endangered Species Act*, were considered experimental/nonessential individuals. Therefore, whooping crane would not be impacted. No habitat for Ute ladies' tresses occur in the Project area so this species would not be impacted.

#### **10.1.10 Vegetation Resources (Including Invasive Non-native Species)**

Reclamation potential within the sagebrush, sagebrush/juniper, shortgrass prairie, and irrigated hay meadow communities is good to excellent, limited in specific areas by shallow soils, steep slopes, and other adverse conditions. Impacts to plant communities will include vegetation removal, temporary changes in vegetation types (e.g., shrubland to grassland conversions during reclamation), and invasive non-native species (weed) infestations. Impacts to vegetation will be limited due to the implementation of a post-construction reclamation and revegetation plan.

Invasive non-native species (weeds) will not become established because mitigation measures will be implemented by UCWF. These include washing of vehicles before they enter the Project area, timely reclamation, and revegetation with native invasive species.

### **10.1.11 Visual Resources**

Visual impacts will include temporary impacts from construction equipment on-site and life-of-project impacts from the turbines/access roads. Wind turbines may be visible for miles, depending on location, weather, and topography of a general area. Some individual turbines and turbine strings will likely be visible to travelers along some portions of I-80.

### **10.1.12 Wetland Resources**

No wetlands will be impacted by the Project.

### **10.1.13 Wildlife Resources**

Impacts to big game may include mortality from vehicle collisions and poaching. However, by implementing mitigation measures including placing speed limits on access roads, educating employees and contractors on wildlife protection laws, and prohibiting the possession of firearms by UCWF employees and designated contractors, direct mortality to big game will be low. Other potential effects will include habitat loss due to vegetation removal and disturbance and/or displacement due to human activity associated with construction, operations, and maintenance. Less than 300 acres of forage will be disturbed.

Approximately 2.7 mi (33 acres) of road improvement/construction will occur in pronghorn crucial winter range. The BLM's winter range protection stipulation will mitigate impacts to wintering pronghorn by limiting disturbance during construction. The remaining disturbance is in pronghorn spring-summer-fall range. All Project-related disturbance is located in areas designated as elk spring-summer-fall range, mule deer winter/year-long range, and moose year-long range or unsuitable habitat.

No crucial winter range for elk, deer, or moose occurs within the general Project area.

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The area from which big game animals may be disturbed or displaced due to human activity associated with construction, operation, and maintenance will be larger than the reported acreage of surface disturbance. However, only a small piece of crucial winter range (pronghorn only) will be affected, and the total area disturbed will be a small proportion of habitat available for the four herd units involved.

Monitoring data from the Foote Creek Rim wind farm suggest that big game (primarily pronghorn, as mule deer and elk were rare visitors to the rim) distribution patterns did not change as a result of wind farm operation (Johnson et al. 2000). It is anticipated that pronghorn and mule deer will habituate to development in the area, and thus, effects of displacement will not be significant. Elk may be more susceptible to displacement due to human activity, but elk use of the Project area is limited, so impacts are expected to be minimal.

Direct mortality of other mammals due to collision with vehicles may occur infrequently, if at all, so impacts on other mammals will be minimal.

Impacts to raptors will include the potential for raptor mortality due to collisions with wind turbines and vehicles. Breeding and nesting birds may be adversely affected by noise and human activity associated with construction, operations, and maintenance if it causes adults to abandon nests or young. These effects will be partially mitigated by implementation of the raptor nest protection stipulations: between February 1 and July 31, construction will not occur within 1.0 mi of any occupied nests of ferruginous hawk or bald eagle (not known to nest but may occur in the Project area) or within 0.5 mi of any other occupied raptor nest unless a written exception is granted by BLM (note that there are no plans to construct during this time period). Impacts to raptors from operations and maintenance will include the possibility of raptor collisions with wind turbines or vehicles.

Wind farm operation may result in some bird mortality, although at much lower numbers than many of the other hazards to avifauna in the U.S. (Table 10.2), and with the current state-of-the-art mitigation to reduce avian collisions with wind turbines, the risk of collision has

Table 10.2 Avifauna Mortality Throughout the U.S.<sup>1</sup>

Location	Turbines in Operation During Study	No. of Birds (Including Raptors) Per Turbine Per Year	No. Raptors Per Turbine Per Year
<b>Wind Farm Mortality Outside California</b>			
Buffalo Ridge, Minnesota	≈400	2.834	0.002
Foote Creek Rim, Wyoming	69	1.750	0.036
Green Mountain, Searsburg, Vermont	11	0.000	0.000
IDWGP, Algona, Iowa	3	0.000	0.000
Ponnequin, Colorado	29	n/a	0.000
Somerset County, Pennsylvania	8	0.000	0.000
Vansycle, Oregon	38	0.630	0.000
Wisconsin	31	n/a	0.000
Subtotal	589	1.825	0.006
<b>Within California</b>			
Altamont, California	7,300	n/a	0.048
Montezuma Hills, California	600	n/a	0.048
San Geronio, California	2,947	2.307	0.010
Subtotal	10,847	2.307	0.106
Total	11,106	2.19	0.033
<b>Other Mortality</b>			
Bird-vehicle collision mortalities		80 million	
Building and window collision mortalities		3.5-976 million	
High-tension line collision mortality		130-174 million	
Communication tower collision mortality		4-50 million	

<sup>1</sup> Erickson et al. (2001).

been much reduced over the levels observed at some wind farms developed in California in the 1970s and 1980s (Erickson et al. 2001).

UCWF will use state-of-the-art technologies to minimize the potential for collision-related bird mortality within the wind farm including the following:

1. unguyed and tubular towers will be used;
2. no potential perches (e.g., ladders, catwalks) will be attached to towers and nacelles; turbines will utilize upwind, fixed-speed rotors (i.e., the rotor always faces upwind and turns at a constant speed);
3. power lines will be installed underground, where practical;
4. unguyed meteorological towers will be used; and
5. anti-perching devices will be used on all aboveground power lines within the wind farm.

No known migration corridors or avian concentration areas occur within the general Project area (personal communication, November 2001, with Paul Kerlinger, Curry and Kerlinger). By using the technologies and mitigations described above, avian mortality is expected to be low, as at other wind farms located outside of California (Table 10.2), and so impacts are expected to be minimal.

Other impacts to raptors may include habitat loss and a reduction in available prey due to prey habitat loss. The amount of habitat lost will vary depending on species. The previously disturbed portions of the Project area may provide good foraging habitat because shrubs have, to some extent, been cleared and thus prey are easier to see.

There is potential for impacts (e.g., mortality, habitat displacement) on greater sage-grouse due to the Project. Impacts may include collision-related mortality, and other impact impacts may include habitat loss, displacement from areas associated with construction, operation, and maintenance, increased predation by raptors using Project facilities as perches, and disruption during the breeding and nesting season.

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Greater sage-grouse mortality due to collisions with wind turbines or vehicles is unlikely. Surface-disturbing activities during the breeding and nesting season will be limited as described in Section 11.1. Operations and maintenance will lead to an increase in human activity on-site, particularly pick-up truck traffic on roads, which may occur year-round. Leks located immediately adjacent to turbines or roads may experience some disturbance from increased traffic and human activity. The amount of habitat lost will only minimally affect greater sage-grouse, and all disturbed areas will be reclaimed either immediately after construction or upon Project completion.

Collision-related mortality of other birds (e.g., songbirds, waterfowl, shorebirds, waders) may constitute a direct impact. Vehicle-bird collisions are very common throughout the U.S.; current estimates suggest that about 80 million avifauna mortalities due to collisions with vehicles occur each year, a majority of which are songbirds (Erickson et al. 2001); however, given the low volume of traffic expected, this Project will contribute minimally to this annual mortality rate. Construction activities may also affect ground-nesting birds. Other impacts due to habitat loss will be minor because of the relatively small area to be disturbed and the abundance of adjacent habitats.

Amphibians and reptiles may be directly affected via vehicle-animal collisions or burial in power line trenches, but these effects will be negligible. Indirect effects may include habitat loss and displacement from construction areas and from permanent facilities, but these effects will be minor due to the availability of adjacent habitats.

Wildlife monitoring data from the Foote Creek Rim wind farm, located in Carbon County Wyoming, suggests that wildlife distribution patterns were not affected by wind farm operation (Johnson et al. 2000); thus, wildlife will likely habituate to noise generated by the Project. With standard mitigation measures (described in Section 11.1 of this report), impacts to raptors and greater sage-grouse during the breeding and nesting season will be minimized, and these species will not be significantly affected by Project-related noise. No construction will occur in

pronghorn crucial winter range during critical winter periods unless specifically authorized by BLM, so wintering pronghorn will not be significantly affected by noise.

## **10.2 CUMULATIVE IMPACTS**

### **10.2.1 Introduction**

Cumulative impacts result from the incremental impacts of the Project added to past, present, and reasonably foreseeable future actions. The area of impact associated with the Project will be limited to disturbance along linear corridors (i.e., turbine corridors and roads), so cumulative impacts to most resources will occur within the Project area plus a 3-mi buffer--this combined area is referred to as the general Project area (refer to Figure 10.1).

The general Project area is crossed by numerous pipelines and connecting lateral pipelines used for the transportation of petroleum products and natural gas. Oil and gas facilities associated with the Painter Reservoir and Ryckman Creek oil and gas fields occur along the western border of the general Project area. A least one telecommunications line, several small power lines, and PacifiCorp's existing 138-kV transmission line also occur in the general Project area. These are the only known existing industrial or commercial developments within 3 mi of the Project area and are listed in Table 10.3. The general Project area is also crossed by numerous gravel and two-track roads and is bordered by Wyoming State Highway 189 and I-80. Developments associated with ranching in the area (in addition to roads) include cabins, corrals, dams and impoundments, and irrigated hay meadows.

Potential cumulative environmental impacts due to construction, operation, and maintenance of the Project are discussed below for each potentially affected resource. There will be no cumulative impacts to mineral resources or geologic hazards due to the Project and so they are not discussed below.

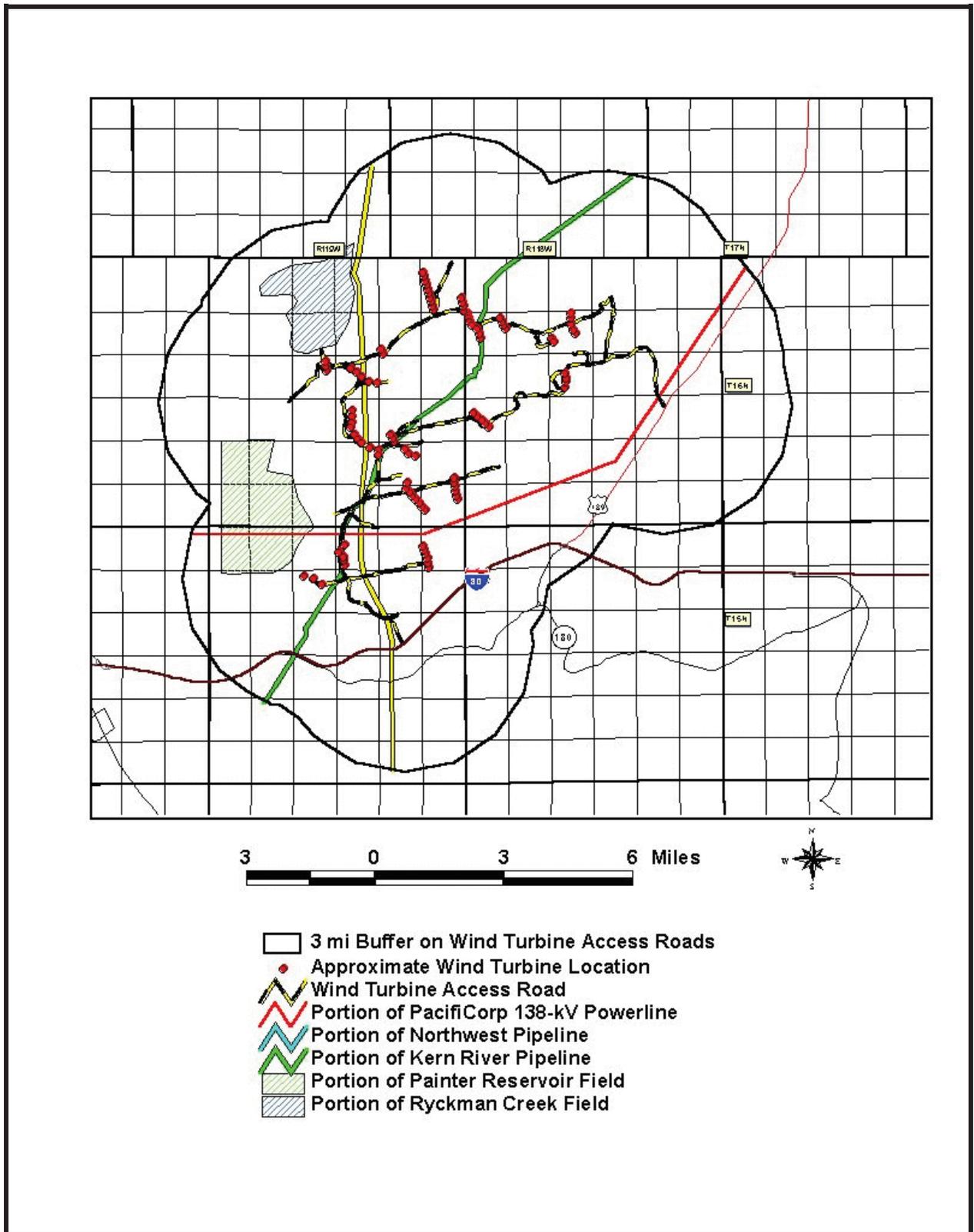


Figure 10.1 General Project Area and Major Facilities.

Table 10.3 Industrial or Commercial Development Within 3 Mi of the Project Area.

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Company or Agency, Type of Development
Amoco/Chevron, Painter Reservoir/Ryckman Creek Field facilities and associated gas pipelines
BP Amoco, pipeline
Williams Company, Kern River Pipeline
MidAmerica Pipeline, Painter Lateral
Williams Company, Northwest Pipeline
Questar, pipeline
U.S. West, telecommunications cable
PacifiCorp, existing 138-kV transmission line

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### **10.2.2 Air Quality Resources and Noise**

The general Project area has good air quality and low levels of man-made noise. Industrial activities within the general Project area--specifically those associated with oil and gas collection, processing, and transmission operations--are in compliance within appropriate air quality regulatory programs. Traffic from ranching and ORV traffic has caused and will continue to cause a limited increases in particulate and engine exhaust emissions. The long-term presence of the Project in addition to the other area facilities will result in only minimal cumulative impacts to air quality resources and noise levels.

### **10.2.3 Cultural Resources**

Cultural resource surveys within the Project area have been completed and approved by BLM and mitigation measures regarding undiscovered resources are specified in Section 11.0 of this application. In addition, previous developments on federally administered land have complied with applicable federal laws and regulations. Therefore, cumulative impacts to cultural resources will be minimal.

**10.2.4 Land Use and Recreation**

Cumulative disturbance due to development in the general Project area will result in the loss of forage for livestock grazing, but wind turbines and access roads will contribute minimally to this loss. Existing aboveground facilities are widely scattered and wind turbines will be scattered throughout the Project area, leaving large tracts of land on which to hunt. Also, much of the area is controlled by private landowners, and so the presence of oil and gas developments, transmission lines, and wind turbines and related facilities will probably only slightly reduce the number of hunters that choose to and are permitted (by private landowners) to hunt in the area. The presence of oil and gas facilities and wind farm development and operation may result in some reduced ORV use. Therefore, the Project will have minimal cumulative impacts on land use and recreation.

**10.2.5 Soil Resources**

Disturbance to soil resources due to human-related activities in the general Project has been minimal. Much of the existing disturbance has stabilized, except perhaps for the recently completed Kern River pipeline expansion that runs through a portion of the general Project area. With the implementation of prompt reclamation and revegetation operations, the Project will result in minimal cumulative impacts to soil resources.

**10.2.6 Surface and Ground Water Resources**

The general Project area is dissected by numerous drainages that generally flow east or west out of the area. The east-flowing drainages flow eventually drain into the Blacks Fork River approximately 25 mi north east of the general Project area and then into the Green River. The west-flowing drainages flow into the Bear River approximately 7 mi west of the general Project area. Surface water within these watersheds is primarily affected by road, highway, and railroad construction, operation, and maintenance; urban and rural development; and widespread livestock grazing and ranching, all of which contribute somewhat to increased sediments in

surface runoff. Mitigation measures such as those described in Section 11.1 of this report will minimize surface water impacts. Because the Project has been developed to minimize construction-related sediments in streams and is designed to maintain existing surface runoff patterns, the Project will have minimal cumulative impacts on surface water quality or quantity. Ground water resources will not be utilized or impacted by the project; therefore, there will be no cumulative impacts on ground water quality or quantity.

#### **10.2.7 Threatened, Endangered, Proposed, and Candidate Species**

Black-footed ferret searches have been conducted and no black-footed ferrets have been found. Therefore, no cumulative impacts to black-footed ferrets are anticipated. Since bald eagles are likely rare visitors to the general Project area, potential cumulative impacts will also be minimal. Cumulative impacts to mountain plover will continue to include potential for mountain plover mortality from collisions with vehicles, rare collisions with turbines, loss of habitat, and displacement from habitat due to human activity. Development in the general Project area may also have and will create new mountain plover habitat, which may increase the risk of direct mortality but somewhat offset the loss of and displacement from native habitat. Any projects with BLM involvement will require mountain plover surveys and the implementation of other appropriate mitigation measures, so cumulative impacts on mountain plovers will be minimal.

#### **10.2.8 Vegetation Resources (Including Invasive Non-native Species)**

Past development activities within the general Project area have resulted in limited disturbance to native plant communities; the Project will contribute to this limited cumulative disturbance. However, by limiting vegetation removal to that which is necessary for construction, by protecting soils from erosion, and by the prompt implementation of reclamation and revegetation activities, there will be minimal cumulative impacts to vegetation in the general Project area due to the Project.

Cumulative impacts from invasive non-native species will be similar to those described for the Project. Control of invasive non-native species will be implemented during construction, operation, and maintenance of the Project. UCWF is committed to controlling invasive non-native species on all lands disturbed by Project-related activities, so cumulative impacts from invasive non-native species will be minimal.

#### **10.2.9 Visual Resources**

Commercial developments within the general Project area include PacifiCorp's existing 138-kV transmission line, roads, numerous oil and gas production facilities, and pipelines, etc.; these are common elements in the existing landscape. The Project will add to the man-made visual intrusions in the general Project area but the degree of impacts will depend on the individual viewer's perception.

#### **10.2.10 Wetland Resources**

No wetlands will be impacted by the Project.

#### **10.2.11 Wildlife Resources**

Big game have been and will continue to be affected by human activity and development in the general Project area and throughout the herd unit areas. Cumulative impacts may include collision-related mortality and poaching. Other impacts may include habitat loss and displacement from habitat due to human activity. Habitat loss will vary depending on species. Big game animals may be displaced from and/or disturbed by initial construction and related activities; however, monitoring data from various oil, gas, coal, and wind developments suggest that pronghorn and mule deer habituate to human activity associated with these types of developments (Deblinger 1988; Easterly et al. n.d.; Irby et al. 1988; Reed 1981; Reeve 1984).

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The 33 acres of pronghorn crucial winter range to be disturbed by the Project represent 0.02% of the 185,536 acres of crucial winter range in the Carter Lease Herd Unit. However, the fence along Wyoming State Highway 189 effectively precludes the Carter Lease pronghorn from using the eastern portion of this crucial winter range (personal communication, January 2002, with Andy Pils, BLM), so the 33 acres to be disturbed represent 0.05% of the 60,995 acres of crucial winter range that is actually available to these pronghorn. No other big game crucial winter range occurs in the general Project area. Cumulative impacts to pronghorn crucial winter range within the herd unit area includes roads, highway, railroads, oil and gas development, pipelines, transmission lines, livestock grazing and other ranching-related disturbances, recreational vehicles, and hunting. Because disturbance in crucial winter range due to the Project is small compared with the amount of crucial winter range available, cumulative impacts to pronghorn crucial winter range will be minimal.

Cumulative impacts to other mammals, amphibians, and reptiles have been and may continue to include mortality from collisions with vehicles or inadvertent burial during backfilling (e.g., in pipeline and power line trenches, reserve pits) and indirect mortality due to habitat loss. Habitat has been/will be lost due to all development in the general Project area. Given the large amounts of undeveloped land adjacent to the general Project area, cumulative impacts to other mammals, amphibians, and reptiles will be minimal.

Cumulative impacts to birds may include mortality due to collisions with various development facilities (including wind turbines) and rare collisions with vehicles. Breeding and nesting birds have been and will continue to be adversely affected by human activity associated with the various developments in the general Project area. Other impacts to birds may include the loss of potential foraging, breeding, and/or nesting habitat, and again the amount lost will vary with species. These impacts will be minor because disturbances are widely scattered and additional suitable habitat is available within and adjacent to the general Project area.

## **11.0 PROCEDURES FOR AVOIDING IMPACTS**

The following mitigation measures and monitoring programs are designed to avoid public nuisance to or endangering the health and safety of humans, animals, or plants, as well as not affecting property or recreation facilities with the Project area.

### **11.1 MITIGATION MEASURES**

#### **11.1.1 Introduction**

UCWF will implement the following mitigation measures to avoid, reduce, or eliminate environmental and socioeconomic impacts due to the Project. These mitigation measures were included in the environmental assessment prepared by the BLM in 2002 and may be modified or waived on a case-by-case basis when deemed appropriate by the BLM (BLM 2002).

#### **11.1.2 Air Quality and Noise**

All vehicles and construction equipment will be maintained to minimize exhaust emissions and will be properly muffled to minimize noise. Disturbed areas will be watered as necessary to suppress dust. Noise from construction activities will be of short duration at any given location.

#### **11.1.3 Cultural Materials**

Class III inventories have been completed on federal, state, and private land proposed for surface disturbance. UCWF and its contractors will train their employees on relevant federal regulation protecting cultural resources. Any cultural resource (historic or prehistoric site or object) discovered by UCWF or any person working on its behalf on public or federal land will be immediately reported to the BLM. UCWF will suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the BLM. An evaluation of the discovery will be made by the BLM to determine appropriate actions to prevent the loss of

significant cultural or scientific values. UCWF will be responsible for the cost of evaluation, and any decision as to proper mitigation measures will be made by the BLM after consulting with UCWF.

#### **11.1.4 Existing Utilities**

UCWF has secured a BLM-approved ROW for BLM-administered land and will notify other authorized ROW users of any crossings or overlaps. Care will be used, including hand/shovel excavation where appropriate, for all construction work that parallels or crosses existing subsurface ROWs (e.g., pipelines, cables).

#### **11.1.5 Fire Control**

UCWF will notify the BLM of any fires observed during construction and will comply with all rules and regulations administered by the BLM concerning the use, prevention, and suppression of fires on federal lands.

In the event of a fire, UCWF or its contractors will initiate fire suppression actions in the work area. Suppression will continue until the fire is out or until the crew is relieved by an authorized representative of the agency or landowner on whose land the fire occurred. Heavy equipment will not be used for fire suppression outside the Project area without prior approval of the BLM or landowner unless there is imminent danger to life or property. UCWF or its contractors will be responsible for all costs associated with the suppression of fires and the rehabilitation of fire damage resulting from its operations.

UCWF will designate a representative to be in charge of fire control during Project construction. The fire representative will ensure that each construction crew has appropriate types and amounts of fire fighting tools and equipment, such as extinguishers, shovels, and axes, available at all times. UCWF will, at all times during construction and operation, require that satisfactory spark arresters be maintained on internal combustion engines.

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### **11.1.6 Miscellaneous**

Ditches and Culverts. All irrigation, overflow, and roadway ditches; lead-offs from culverts or cut sections; and lead-in ditches crossed by the Project will be cleared of any material that may obstruct water flow. Work will be accomplished so that reasonable conformance to the previous line, grade, and cross section is achieved. If any culverts clog due to Project activities, the culvert will be cleaned to provide an unobstructed flow to and through the culvert. Any loose material on the backslope adjacent to the entrance of the culverts will be removed.

Stormwater Pollution Prevention Plan. A stormwater pollution prevention plan will be prepared for the Project to ensure that erosion is minimized due to precipitation events at all construction sites.

Traffic and Public Safety. Construction and operation are not expected to cause safety hazards or to inconvenience motorists or other adjacent users because UCWF will implement the following measures to mitigation impacts to traffic.

- Improvement/construction-related traffic will be restricted to routes approved by BLM or private landowners. Temporary use permits for access to federal, state, and county roads will be obtained prior to construction.
- Construction equipment will be restricted to the BLM-approved roads.

### **11.1.7 Sanitation/Waste**

Construction sites will be maintained in a sanitary condition at all times. Waste materials--human waste, trash, garbage, litter, refuse, etc.--will be disposed of promptly at an appropriate waste disposal site. UCWF and its contractors will prohibit littering in any Project-related areas. Construction vehicles will be equipped with appropriate litter disposal containers. Contractors will be informed that any littering within the Project area may result in their immediate dismissal. Disposal of garbage and other refuse will be at authorized disposal sites or landfills.

### **11.1.8 Soils**

The following measures will be implemented to minimize impacts to soils.

- No construction or routine maintenance activities will be conducted when soil is too wet to adequately support construction equipment (i.e., if such equipment creates ruts in excess of 4 inches deep).
- Certified weed-free straw mulches, certified weed-free hay bale barriers, silt fences, and water bars will be used to control soil erosion.
- Soil erosion control measures will be monitored, especially after storms, and will be repaired or replaced if needed.
- Disturbance will be limited to that which is necessary for safe and efficient road and power line construction.
- All disturbed areas will be restored to the approximate original contour and reclaimed as described in the BLM-approved reclamation plan.
- Areas with high erosion potential and/or rugged topography (i.e., steep slopes, unstable soils) will be avoided, where possible.

### **11.1.9 Wetlands**

UCWF will comply with all federal regulations concerning the crossing of waters of the U.S., including wetlands, as listed in Title 33 C.F.R. Part 323. The Project meets the criteria for coverage under a U.S. Army Corps of Engineers Nationwide 14 permit for compliance with the *Clean Water Act*. The use of heavy equipment and other construction activities within 500 ft of surface waters will be required where roads and power lines cross streams and channels; these activities will be authorized by BLM with the following stipulations.

- Stream banks to be disturbed will be stabilized to prevent slumping and erosion.
- Refueling and staging will occur at least 300 ft from the edge of a stream or stream bank at all stream channels.
- Sediment control measures will be utilized, as needed, at all stream crossings.

- Stabilizing vegetation will not be removed unless absolutely necessary, and any vegetation removed will be re-established immediately following completion of the crossing.
- Drainages will be crossed at right angles to the channel when possible to minimize disturbance.

#### **11.1.10 Survey Monuments**

UCWF will protect all survey monuments, bench marks, witness corners, reference monuments, and bearing trees within the BLM-approved ROW from disturbance during construction, operation, maintenance, and reclamation. If any monument, corner, or accessory is destroyed, obliterated, or damaged, UCWF will arrange for a registered land surveyor to restore the disturbed monument, mark, corner, or accessory in accordance with the *Manual of Surveying Instruction for the Survey of Public Lands of the United States* (BLM 1973). UCWF will record the survey in Uinta County and send a copy to the BLM Kemmerer Field Office.

#### **11.1.11 Threatened, Endangered, Proposed, and Candidate Species**

The following mitigation measures will be implemented to minimize impacts to threatened, endangered, proposed, and candidate species.

##### **Black-footed Ferret**

- UCWF and its contractors will be shown how to identify black-footed ferret and their sign and will be provided with information about its habitat requirements, natural history, status, threats, possible impacts of road/power line development activities, and ways to minimize these impacts.
- In the event a black-footed ferret or its sign is found, the BLM will require UCWF to stop all construction and will initiate Section 7 review with the

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USFWS. The USFWS Biological Opinion will specify when and under what conditions and/or prudent measures the construction could proceed.

- UCWF and its and contractors will prohibit employees from having dogs in the Project area.
- All suspected observations of black-footed ferrets, their sign, or carcasses in the general Project area and the location of the suspected observation, however obtained, will be reported within 24 hours to:

Wildlife Biologist, BLM  
(307) 828-4500  
Kemmerer Field Office  
312 Highway 189 North  
Kemmerer, WY 83101; and

Field Supervisor or Designee, USFWS  
(307) 772-2374  
Wyoming Field Office  
4000 Airport Parkway  
Cheyenne, WY 82001.

Observations will include a description including what was seen, time, date, exact location, and observer's name, address, and telephone number. Carcasses or other suspected ferret remains will be collected by the BLM or USFWS employees and deposited with the USFWS, Wyoming Field Office.

#### Mountain Plover

- UCWF and its contractors will be shown how to identify mountain plover and will be provided information about its habitat requirements, natural history, status, threats, and possible impacts of development activities. Incidental observations of mountain plovers will be solicited from all field personnel.

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- If disturbance in potential mountain plover habitat is to occur during the period of April 10-July 10, mountain plover surveys will be conducted by the BLM or an UCWF-financed BLM-approved biologist in accordance with existing or revised USFWS guidelines (USFWS 2002).
  - If an active nest and/or mountain plover are found within 0.25 mi of proposed construction, informal conferencing will occur with the USFWS.
  - If an active nest is found in the survey area, surface-disturbing activities will be prohibited within 0.25 mi of the nest for 37 days, or 1 week post-hatching, or if a brood of flightless chicks is observed, activities will be delayed at least 7 days.
  - Where Project-related areas have been disturbed prior to the mountain plover nesting season (April 10 - July 10) and use of these areas has not been initiated for development actions prior to April 10, a BLM-approved biologist will conduct surveys of these disturbed areas prior to use to determine whether mountain plover are present. In the event mountain plover nest are found, UCWF will delay development activities until nesting is complete.
  - If mountain plover nesting habitat is disturbed, these disturbed areas will be reclaimed to approximate original conditions (topography, vegetation, hydrology, etc.) after completion of activities in the area, in part to ensure suitable mountain plover breeding habitats are present on the reclaimed landscape. Seed mixes and application rates for reclamation will produce stands of vegetation suitable for plover nesting in suitable mountain plover habitat, while meeting the BLM's requirements for stabilizing soil and controlling weeds. Where appropriate, seed mixes and application rates for revegetation will be designed to produce stands of sparse low-growing vegetation suitable for mountain plover nesting habitat. Revegetation will attempt to return the plant community to the pre-existing condition as soon as possible.

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- To minimize destruction of nests and disturbance to breeding mountain plovers from construction and reclamation activities, grading, seeding, or other ground-disturbing activities will not occur from April 10 to July 10 unless surveys within 0.25 mi of disturbance consistent with USFWS-approved methods find that no mountain plovers are nesting in the area.
  - Because adults and broods of mountain plovers may forage along roads used for operations and maintenance, particularly at night (0.5 hour after sunset to 0.5 hour before sunrise), traffic speed and volume will be limited during the breeding season (April 10 - July 10) in identified mountain plover habitat.
  - All suspected observations of mountain plover adults, eggs, chicks, or carcasses in the general Project area, however obtained, will be reported within 24 hours to:

Wildlife Biologist, BLM  
(307) 828-4500  
Kemmerer Field Office  
312 Highway 189 North  
Kemmerer, WY 83101; and

Field Supervisor or Designee, USFWS  
(307) 772-2374  
Wyoming Field Office  
4000 Airport Parkway  
Cheyenne, WY 82001.

Observations will include a description including what was seen, time, date, exact location, and observer's name, address, and telephone number. Carcasses or other suspected mountain plover remains will be collected by the BLM or USFWS employees and deposited with the USFWS, Wyoming Field Office.

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**11.1.12 Vegetation (Including Invasive Non-native Species)**

The following measures will be implemented to minimize impacts to vegetation.

- Disturbance will be limited to that which is necessary for safe and efficient construction.
- All disturbed areas will be restored to the approximate original contour and reclaimed.
- Removal or disturbance of vegetation will be minimized through improvement/ construction site management (e.g., by utilizing previously disturbed areas, designating limited equipment/materials storage yards and staging areas, scalping) and implementing the approved reclamation plan.

Invasive non-native species (weeds) will be mechanically controlled in all disturbed areas. If herbicides are needed to control weeds, BLM will be consulted and herbicides applied by a licensed contractor. Equipment will be washed at a commercial facility prior to any entering the Project area and during construction operations if weeds are encountered in the previous Project areas. UCWF is committed to controlling invasive non-native species on all lands disturbed by Project-related activities, with landowner approval.

**11.1.13 Wildlife**

The following measures will be implemented to minimize impacts to wildlife.

- UCWF or its designated contractor(s) will prohibit hunting, fishing, dogs, or possession of firearms by its employees within the Project area and other Project-required areas during construction and maintenance and on all other adjacent areas during work hours.

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- Disturbance will be minimized in areas of high wildlife value (e.g., prairie dog colonies, cushion plant communities, wetlands, and riparian areas).
  - UCWF will advise Project personnel regarding appropriate speed limits on roads to minimize wildlife mortality due to vehicle collisions. Potential increases in poaching will be minimized through employee and contractor education regarding wildlife laws. If violations are discovered, the offending employee or contractor will be disciplined and may be dismissed by UCWF and/or prosecuted by the Wyoming Game and Fish Department (WGFD).
  - Any data collected during wildlife surveys completed for this Project will be provided to BLM.
  - To protect plant populations and wildlife habitat, Project-related travel will be restricted to designated roads; no off-road travel will be allowed, except in emergencies.

#### Raptors

- BLM consultation and coordination with USFWS and the WGFD will be conducted for all mitigation activities related to raptors and threatened, endangered, proposed, and candidate species and their habitats, and all permits required for relocation, removal, and/or establishment of raptor nests will be obtained.
- Raptor nest surveys will be conducted within a 1.0-mi radius of proposed construction areas if construction occurs during the raptor nesting season (February 1 through July 31).

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- All surface-disturbing activities on federal land will be prohibited between February 1 and July 31 within 0.5 mi of all occupied raptor nests and within 1.0 mi of all nests occupied by ferruginous hawks and bald eagles, unless an exception is granted in writing by BLM. The buffer distance and restriction dates may vary on a case-by-case basis as determined by BLM, depending on such factors as the activity status of the nest, species involved, natural topographic barriers, line-of-sight distances, and other conflicting issues such as cultural values.
  - Additional mitigation for raptors will be designed on a site-specific basis, as necessary, in consultation with the BLM, USFWS, and WGFD. UCWF will notify BLM immediately if raptors are found nesting on Project facilities on federal land and will assist BLM as necessary to erect artificial nesting structures.
  - Power line construction will follow the recommendations of the Avian Power Line Interaction Committee (1996) to avoid electrocution of raptors and other avifauna.

#### Greater Sage-grouse

- No surface disturbance will occur on federal land within 0.25 mi of all known occupied greater sage-grouse lek centers from March 15 through May 31, unless an exception is granted in writing by BLM.
- Between February 1 and July 31, all proposed construction areas within 2.0 mi of an occupied lek will be searched for nests; construction will cease within 0.25 mi of all occupied nests.

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- Written approval will be obtained from the BLM for any exceptions to these stipulations. Power poles located within 2.0 mi of greater sage-grouse leks will be equipped with raptor anti-perching devices.
  - Nest searches will be conducted using pointing dogs (e.g., English pointers, short-haired pointers). Transects along the proposed disturbance corridor will be searched as directed by the dog handlers. Any birds that are pointed will be confirmed by the handlers, and nest locations will be mapped.

#### Big Game Crucial Winter Range

- UCWF will comply with seasonal big game stipulations that prohibit construction activities in big game crucial winter range between November 15 and April 30 unless an exception is granted in writing by BLM.

## **11.2 MONITORING**

The following monitoring activity were specified in the BLM-approved environmental assessment and will be conducted by UCWF during the construction and operation of the Project (BLM 2002).

- During construction and operation of the Project, soil erosion control measures will be monitored, especially after storms, and will be repaired or replaced if needed.

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