



## Conditional Use Permit Application for Latigo Wind Park

June 29, 2012

Wasatch Wind Intermountain (WWI) is pleased to provide this application for a Conditional Use Permit for the Latigo Wind Park wind energy generating facility. The wind energy generating facility is proposed to be located in San Juan County, approximately one mile northwest of the city of Monticello, UT on land in the Monticello Cemetery District zoned A-1, Agriculture. In the County's Zoning Ordinance (Amended September 2011), Wind Turbines are considered a Conditional Use in the Agricultural District, requiring a permit.

- I. **Location of Proposed Latigo Wind Park:** The Latigo Wind Park is proposed to be located entirely on privately-owned lands. The southernmost turbine is proposed to be located in the NE 1/4 of Section 27 T33S R23E. The proposed wind farm stretches north approximately two miles to S15 T33S R23E. The easternmost turbine is proposed to be located in the SE 1/4 of the SW 1/4 of S24 T33S R23E and the westernmost turbine would be approximately 3.25 miles to the west in the SW 1/4 of SW 1/4 of S21 T33S R23E. Refer to the site plan provided in Exhibit A (attached), which depicts the location and design of the proposed project. Note that the wind turbine layout shown in Exhibit A is subject to minor changes as more information is gathered from continuing wind resource analysis, wind turbine availability and pricing, environmental studies, and community feedback.

The wind project will be connected to the electrical grid at the Pinto substation, located on the eastern edge of Monticello and south of Highway 491 in S32 T33S R24E. An overhead transmission line will run eastward from the project substation across Highway 191 for approximately 1.3 miles and then turn south, paralleling an existing 69 kV transmission line for approximately 2.1 miles to the Pinto substation.

- II. **Size, Nature and Timing of Proposed Latigo Wind Park (Please refer to Exhibit A - Site Layout, when reviewing this Section):** The proposed Latigo Wind Park would have an energy generating capacity of approximately 60 MW. At full output, a 60 MW wind farm can provide enough energy to meet the consumption of 18,000 average homes per year. WWI is currently working to sell the power output



# Wasatch Wind

of the Latigo Wind Park. We believe the likely power purchaser would be Rocky Mountain Power who serves Utah and Wyoming electricity customers. However, this is still to be determined.

Depending on the type of turbine selected, the Latigo Wind Park will consist of between 20 and 27 turbines. For this permit application we have assumed that the project would have 27 turbines, which would most likely be the maximum number of turbines possible for the Latigo Wind Park and therefore the largest project footprint.

The wind facility would also include a set of underground collector lines that collect the power from each turbine and carry it to a project substation, also located within the project area. These collector lines would follow the path of the turbine access roads, described below. Once at the project substation, the power is transformed from 34.5 kV to 138 kV and routed to an overhead transmission line that would extend eastward from the project substation across Highway 191 and then heads south along the east side and parallel to an existing 69 kV line terminating at Rocky Mountain Power's Pinto substation, south of Highway 491. The transmission line towers would stand approximately 75' - 90' tall and will resemble the existing transmission lines currently found in the area .

The wind facility would also include turbine access roads, which lead to each turbine. These roads would be used first during construction and then during operations of the wind farm for access to turbines for regular maintenance or repairs. Turbine access roads are dirt roads and will be approximately 32 feet wide during construction and reclaimed to 16 feet wide for operations.

An operations and maintenance (O&M) building will be needed for the permanent employees of the wind facility. We have included a potential site for the O&M building within the project area as noted in the attached site plan, although we would also explore the potential of leasing/purchasing office space within the City of Monticello. The wind facility would also include a temporary concrete batch plant and staging/laydown area, as suggested by the attached site layout. Although a portion of the staging/laydown area could be converted to a storage yard for the O&M building, most of this area along with the batch plant would be removed, regraded, and revegetated following completion of project construction, per the standards in our wind leases. The O&M building and the project substation would need to receive power from the grid when the turbines are not operating. This power would come from the local utility, Empire, and would require an overhead distribution



# Wasatch Wind

transmission line to those facilities. This second overhead line is not represented on the Site Map enclosed because we are unsure yet which direction the line would come from.

We anticipate that Latigo would be in operation between June and December 2014 and that construction would start prior to the end of 2013.

III. **Turbine Type and Size:** WWI is currently assessing the feasibility of several turbine sizes and manufacturers. We are reviewing turbines with either a 262.5' (80m) or 328' (100m) hub height and turbine blade diameters of up to 384' (117m). Therefore, the total turbine size could range from approximately 400 to 500 feet tall with the blade at its apex.

IV. **Land and Road Access:** WWI has negotiated and signed lease agreements with private landowners to house the turbines and related project infrastructure. Currently, WWI has leased approximately 3,616 acres (See note at end of this section) of private land to house the wind facility. As depicted in Exhibit A, the facility would cover a portion but not all of this area. We continue to conduct wind and environmental studies and collect feedback from the community to determine the most suitable locations for the turbines and other infrastructure. Copies of the lease memos and/or pages from leases, demonstrating access to the lands where the wind facility is proposed to be located, are included here in Exhibit B – Wind Lease Agreements.

*Note: At the time of submittal of the CUP application, Redd Enterprises representing 1,080 acres, has not signed the lease agreement to allow turbines to be placed on its land. However, WWI expects that this lease agreement will be signed prior to the CUP hearing on July 5.*

WWI has also negotiated and signed easement agreements with private landowners to accommodate the transmission line that will connect the project substation to the Pinto substation and the power grid. The easement agreements include annual payments to compensate landowners for the presence of the overhead transmission line. Copies of the transmission line easement agreements can be found in Exhibit C – Wind Transmission Easement Option Agreements. *Note: One of the properties crossed by the potential transmission line is currently in probate (J. Ward Palmer). The family has stated it will sign the easement once out of probate. Additionally, a 3/4 of a mile stretch of transmission line is not signed. We anticipate this will be resolved prior to the hearing on July 5.*





# Wasatch Wind

Latigo Wind Park will also obtain encroachment permits from the Utah Department of Transportation (UDOT) for crossing Highway 191 and Highway 491 with the overhead transmission line. We also understand that the southern portion of the transmission line will pass through land considered within Monticello City limits and that a building permit from the city must be sought.

The Latigo Wind Park would need to transport turbine infrastructure and supplies to the project area via Highway 191 and an access road into the project area. We propose that County Road 196 serve as the main access road into the project area because it is an existing road that cuts through the middle of our leased lands. We anticipate that some upgrades to the County Road 196 would be needed to allow transport of the wind turbine components. Latigo Wind Park would collaborate with San Juan County on the design for the improvements to County Road 196 to ensure that we comply with County standards and regulations. Latigo Wind Park would also work with UDOT to obtain a permit to make appropriate modifications to the intersection of CR 196 and Highway 191 to accommodate large truck traffic.

- V. **Current Land Use and Compliance with Zoning District:** The Latigo Wind Park is proposed to be located on privately owned land currently zoned Agriculture by San Juan County. According to page 38 of the San Juan County Zoning Ordinance, the purpose of Agricultural Land is:

*To promote and preserve, in appropriate areas, conditions favorable to agriculture and to maintain greenbelt open spaces. Such districts are intended to include activities normally and necessarily related to the conduct of agricultural production and to provide protection from the intrusion of uses adverse to the continuance of agricultural activity.*

Currently, the land where the Latigo Wind Park is proposed to be located is greenbelt land primarily used for grazing cattle. The majority of the project area is also part of the Spring Creek/Dodge Cooperative Wildlife Management Unit and is used for big game hunting. Hunting may be restricted during the temporary construction period but our leases do not restrict hunting once the project is operational. No improved structures or residences are located on any of the lands where the wind farm is proposed to be located. The landowners who hold title to these lands do not reside within the project area.



# Wasatch Wind

Once constructed, the base of one turbine and its surrounding gravel apron would occupy approximately one acre of land. Agriculture and ranching practices as well as hunting can continue up to the base of this apron. At wind farms across the country, cattle can be observed close to wind turbines and may even use them for shade.

The revenue provided to the private landowner for use of his/her land for wind turbines provides a diversification of income that may be helpful in allowing that landowner to maintain the large tracts of land as open space and greenbelt, thereby avoiding the need to earn revenue through other activities that may not be as compatible with agricultural practices.

- VI. **Economic Impacts:** The Latigo Wind Park project would bring economic benefits to the area during the construction and operation of the wind energy facility. These benefits would be in the form of ongoing property taxes that benefit the County including the San Juan School District among other entities; construction jobs and work for local subcontracting companies during construction; a boost to local businesses during construction; and several permanent, well-paying jobs. Latigo Wind Park is interested in bringing benefits to the local community and will work to use as many local contractors and materials as possible during the construction and operation phases of the facility.

**a. Property Tax**

The Latigo Wind Park facility would assume the responsibility of paying the property taxes for the wind energy infrastructure where the wind facility would be located. Property taxes are assessed by San Juan County using the “installed cost” method. The assessment approach results in higher property tax payments in the early years, but as the wind facility depreciates in value over time the property taxes decrease as well. Generally, a wind facility is presumed to have a 20-year economic life (the length of a typical Power Purchase Agreement). Using this “installed cost” method and based on San Juan County Tax Rates for 2011, Latigo Wind Park’s estimated property tax payments to San Juan County total more than \$10 million over a 20 year period—including almost \$6 million for San Juan County



schools and over \$2 million for San Juan County's General Operations, as well as other entities and Districts.<sup>1</sup>

WWI and San Juan County have been in discussions about other ways to levy the property tax that would make it more consistent over time. If the project is permitted and proceeds, WWI is happy to continue dialogue with the County about this issue to ensure the tax revenue structure is favorable for all parties.

**b. Construction Jobs and Boost to Local Economy**

Construction of the Latigo Wind Park would entail a combination of tasks requiring a variety of skilled construction workers, including cement/concrete finishers; electricians; welders; turbine assembly technicians; heavy equipment operators; mechanics; truck drivers; iron workers; millwrights; and administrative personnel; among others. A substantial number of general laborers will also be required. The Latigo Wind Park will direct its Engineering, Procurement and Construction (EPC) contractor to hire qualified and cost competitive local subcontractors and laborers whenever possible. Some specialized construction labor will come from outside the area and will utilize the City of Monticello's accommodations, restaurants and other businesses during the construction period, generating an economic boost to the area. WWI, in collaboration with a potential EPC company for the Latigo project, estimates that between 50 to 100 laborers from the local area would be hired during the construction of the wind farm. A total payroll of \$200,000 to \$400,000 per month would be expected to be paid to the group of 50-100 local non-union workers, depending on hours worked per week and the type/ratio of craft labor utilized. To attract local labor, the EPC contractor would host a job fair and advertise available jobs in the local newspaper and to local workforce agencies. An example of the average monthly compensation for construction workers employed on the project is expected to be in the range of \$3,600 per month for general laborers.

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<sup>1</sup> *These estimates are derived using assumptions that may or may not be accurate at the time of assessing the taxes, such as the cost of materials, labor and wind turbine components. These tax estimates are based on the best information we have today and represent an educated estimate. These tax estimates therefore are subject to change.*



# Wasatch Wind

Several types of local contractors would be used during construction of the wind project, including fabrication shops; consumable materials suppliers; automotive repair and maintenance shops; trucking and freight firms; fuel supply and site security; and aggregate suppliers. The estimate for payments to these local subcontractors is \$4.3 million over the duration of construction of the project.

As mentioned above, the erection, installation and commissioning of wind turbines requires specialized skills and contractors that are less common among the local labor force. These workers would likely come from outside the local area and would mobilize into the local area for the duration of their specific task, utilizing Monticello hotels and accommodations, restaurants and businesses. Non-local EPC and subcontractor workers would receive housing, per diem and travel allowances. It is expected that Monticello businesses would see approximately \$48,000 in revenue for lodging, restaurants, and groceries over the duration of the construction period. In addition, money would be spent for construction consumables and general conditions, for example signage, printing, and tools that would equate to an additional approximately \$45,000 over the construction duration.

EPC companies work hard to be members of the communities where and when they construct wind farms, and it's common for these companies to support local charities and food pantries by donating their time and resources during construction. Latigo Wind Park along with the EPC company will be diligent in communicating and coordinating with emergency service agencies during construction, including the local police, fire and EMT services. Community relations and safety incentive spending would contribute another \$25,000 to Monticello and the surrounding area.

c. *Payments to Local Landowners for Leased Land and Transmission Easements*

Local landowners who host the wind turbines and/or transmission line would benefit from the wind farm. Latigo Wind Park would pay turbine and wind facility landowner hosts a royalty based on energy generation and the number of wind turbines on the land. Latigo has also offered annual payments, rather than a one-time payment, to landowners hosting the transmission lines. While annual payments are not typical for transmission easements in any energy generation industry, Latigo Wind Park believes that without the transmission



# Wasatch Wind

easements there would be no wind farm and therefore the transmission easement holders should benefit annually like those who host wind turbines. In total, the amount of money that would be paid out to all transmission and wind turbine hosts is expected to be approximately \$217,000 annually at a minimum, and more than \$4.34 million over the 20-year life of the wind farm.

d. Careers during Operations

The Latigo project would require approximately four full time employees to operate and maintain the wind facility. The team most likely would consist of one supervisor and wind technicians. The average annual salary for these positions is \$70,000. Typically employees are offered full benefits including paid vacation, paid holidays, comprehensive medical insurance (including family members), dental insurance, vision care insurance, disability insurance, life insurance, flexible benefit account (medical savings account), disability insurance and a bonus program.

VII. Potential impacts to the health, safety and general welfare of persons working or residing in the area and property or improvements in the vicinity.

As with any new development, whether a new subdivision, energy facility or commercial space, there will be impacts to the local community and there will be residents who view the impacts as positive, those that see them as negative, and those who are completely neutral to the new development. In this application we attempt to address known and potential impacts to the area's residents and to property or improvements in the vicinity. After studying the area and the potential wind facility, WWI believes that the project will not be detrimental to the health, safety or general welfare of persons residing or working in the vicinity. We believe that the project will not impact any of the existing improvements in the vicinity. However, the project may affect opportunities for future improvements on adjacent lands. For these adjacent properties, WWI is contemplating mitigation measures.

a. Economic Impacts

As stated earlier, development of the Latigo Wind Park would result in positive economic impacts by boosting the local economy during construction; contributing more than \$10





# Wasatch Wind

million in property taxes to San Juan County over 20 years; and by providing revenue to local landowners, helping to allow them to maintain the current use of their land.

**b. Visual impacts**

Residents, visitors and employees in the area will be able to see the wind farm from various vantage points around the area and the City of Monticello. The wind turbines are tall and sit at an elevation above the City of Monticello. For many residents within the City of Monticello, trees, buildings and other obstructions will block the view of the wind farm from their homes and places of business. For others who live or work on higher ground or who have views of the open area northwest of the City, the wind farm will be visible.

**c. Sound**

WWI recently hired J.C. Brennan and Associates to visit the proposed project site, measure existing ambient noise levels from several locations in the area, and provide an acoustical analysis of the impacts of sound at various receptors in the vicinity of the project. J.C. Brennan & Associates is a full service acoustical consulting firm with more than 20-years of experience preparing wind turbine noise studies.<sup>2</sup> The noise was modeled<sup>3</sup> using a Siemens 2.3 MW turbine, which begins to spin at wind speeds of approximately 6.7 mph. Sound power level data was provided by the turbine manufacturer and represents the maximum sound output which would occur under wind speeds of 18mph (typical average wind speeds at the Latigo project however are more in the range of 15.5 mph).<sup>4</sup>

Because neither San Juan County nor Utah has a noise ordinance to follow, the sound expert used published sources<sup>5</sup> to create a recommendation for noise limits at Latigo Wind Park. See Figure 1 below.

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<sup>2</sup> For more information visit: [www.jcbrennanassoc.com/about-us](http://www.jcbrennanassoc.com/about-us)

<sup>3</sup> The firm utilized the CadnaA Noise Prediction Model. The Cadna A sound propagation model made by Datakustik GmbH was used to model sound levels from the proposed project. CadnaA uses ISO 9613 for calculating outdoor sound propagation. Inputs to the CadnaA model included ground topography and type, turbine locations, turbine heights, receiver locations, and turbine sound power levels.

<sup>4</sup> Noise level data for the turbines was based upon the International Standard IEC 61400-11 "Wind turbine generator systems - part 11: Acoustic noise measurement techniques."

<sup>5</sup> *Wind Turbine Health Impact Study: Report of Independent Expert Panel*. Massachusetts Department of Environmental Protection. January 2012. Online: [www.mass.gov/dep/energy/wind/turbine\\_impact\\_study.pdf](http://www.mass.gov/dep/energy/wind/turbine_impact_study.pdf)



Recommended Sound Limit from Wind Farm during day/people are awake	Recommended Sound Limit from Wind Farm at residential area during night/sleep	Recommended Sound Limit from Wind Farm at rural area during night/sleep
47 dBA	37 dBA	42 dBA

Figure 1 – J.C. Brennan and Associates recommended sound levels at Latigo

For context, 40 dBA will create a subjective response that falls between quiet and faint and 50 dBA is similar to trees rustling in a light wind, insect noise at night, distant traffic or farm equipment. See Exhibit D - Common Sounds and Associated Sound Pressure Levels.

In order to determine whether sound from a wind farm will impact an area, the area’s ambient noise levels must be examined. In other words – does the area have existing ambient noise that is greater than the wind farm, or is the area very quiet and ambient noise is not noticeable? Rather than set a noise limit for wind energy, some states have based sound limitations on the existing ambient noise level in the area. New York and California, for example, limit noise from a wind farm to a maximum of 5 dBA over ambient<sup>6</sup> because it’s at 5 dBA that additional noise is typically noticeable. Typically 3 dBA over ambient is not noticeable (J.C. Brennan). To understand whether the Latigo Wind Park would create sound impacts in the area, J.C. Brennan and Associates took ambient sound measurements from five different receptors in the area around Latigo Wind Park during the day and during the night.

After modeling the sound that would be generated by a Siemens 2.3MW turbine at maximum wind speeds expected for the Latigo Wind Park, and reviewing the ambient sound measurements taken from the project area, J.C. Brennan & Associates believes that the proposed wind facility is predicted to generate noise levels in compliance with the recommendations stated above. See Figure 2 below.

<sup>6</sup> Recommended noise level design goals and limits at residential receptors for wind turbine developments in the United States, David M. Hessler and George F. Hessler Jr.b (Received: 2 April 2010; Revised: 21 June 2010; Accepted: 21 June 2010)



# Wasatch Wind

	County Road 196 approx .5 miles from Hwy 191	Adjacent to LDS Temple corner of 4th North and North 200 West	Oak Crest Drive	Discovery Center (assumed to be similar to County Rd 196 receptor)	Monticello City Building	N. Creek/County Road 101 several miles east of City of Monticello
<b>Day time Ambient</b>	40 dBA (at 4.8mph wind)	45 dBA (at 6mph wind speed)	47 dBA (9.4mph wind)	40 dBA (at 4.8mph wind)	50 dBA (at 3.4 mph wind)	36 dBA (at 2.2 mph wind)
<b>Night time Ambient</b>	37 dBA (at 3.4 mph)	39 dBA (at 5.6 mph wind speed)	38 dBA (3.4mph)	37 dBA (at 3.4 mph)	48 dBA (at 4.5 mph wind)	28 dBA (at 4.5 mph wind)
<b>Predicted Noise Level from Wind Farm at max wind speeds</b>	39 dBA (at 18mph max wind speed)	35 dBA (at 18mph max wind speed)	35 dBA (at 18mph max wind speed)	46 dBA (at 18mph max wind speed)	Outside sound range	34.7 dBA
<b>Predicted Impacts</b>	Turbines would most likely not run the day we measured, at 4.8 or 3.4 mph wind speeds. At 18mph wind, ambient expected around 42 dBA during day and 39 dBA at night– therefore within recommended Best Practices and unlikely to result in substantial annoyance	Less than ambient – unlikely to result in substantial annoyance	Less than ambient – unlikely to result in substantial annoyance	Turbines would most likely not run the day we measured, at 4.8 or 3.4 mph wind speeds. At 18mph wind, ambient expected around 42 dBA during day and 39 dBA at night. Since the school will not have sleeping quarters. J. C. Brennan recommends that noise levels from wind turbines do not exceed 47 dBA. Additionally, the wind project is predicted to be approx 4 dBA more than ambient during day. Therefore within recommended Best Practices and unlikely to result in substantial annoyance	Unlikely to result in substantial annoyance	At max wind speeds we can expect a higher daytime and nighttime ambient than what was measured – more in the range of 38 and 30 dBA for day and night, respectively. The predicted noise level is within J.C. Brennan’s recommended Best Practices level of 42 dBA and is expected to be less than 5 dBA’s over ambient at max wind speeds which is unlikely to result in substantial annoyance

**Figure 2** – This chart shows ambient measurements at several receptors in the area around the Latigo Wind Park and compares them to the predicted noise levels from the wind farm. Note however, that the ambient readings and the predicted noise levels are not apple-to-apple comparisons. The predicted noise levels are provided at maximum anticipated wind speeds at Latigo of 18mph. Therefore the predicted noise levels from the wind farm are worst-case-scenario noise levels. The ambient noise readings however were taken during times of very low wind speeds, and in some cases the turbines would not even be operating during these wind speeds. Ambient noise levels can be expected to be 1-2 dBA higher as the wind blows harder. These factors must be taken into consideration when reading Figure 2.

The conclusion from Figure 2 is that at all but two receptors (Discovery Center and County Road 1010), the wind farm noise will most likely be less than ambient noise levels and within the



recommended noise levels predicted by J.C. Brennan and Associates. Because the Discovery Center does not have sleeping quarters, the noise level generated by the wind farm would be within the recommended limit by J.C. Brennan. However, according to the analysis, the wind farm is predicted to generate noise at the Discovery Center and County Road 101 approximately 4 dBA above ambient noise levels. This is less than 5 dBA over ambient sound, which as stated above, is generally what is needed for the sound to be noticeable. Therefore, the project is unlikely to result in substantial annoyance at the Discovery Center and along County Road 101. WWI is currently working to move the turbine closest to the Discovery Center to further eliminate any risk of sound impacts there.

The J.C. Brennan & Associates acoustical analysis and corresponding maps are available upon request and will be available at the permit hearing on July 5, 2012.

d. Flicker or Shadow

WWI hired DNV Kema<sup>7</sup> to analyze the potential for shadow effects known as "flicker" to occur at the Latigo project area. Shadow flicker caused by wind turbines is defined as alternating changes in light intensity due to the moving blade shadows cast on the ground and objects (referred to as receptors), including windows at residences. Shadow flicker typically occurs when a receptor is in a position where the wind turbine blades interfere with low-angle sunlight (i.e., the turbine blades pass through the path between the sun and the receptor). The shadows cast by wind turbines will vary with several factors including season, time of day, surrounding terrain and obstacles, cloud cover, distance from the turbine(s), turbine size, and wind speed and direction. Shadow flicker associated with wind turbines can cause disturbances to residents if the orientation of the home and the turbine are such that the residence experiences significant periods of shadow flicker. While annoyance from these shadows is very subjective, the few shadow flicker regulations that exist across the country reference maximum 30 minutes per day, 30 hours per year.

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<sup>7</sup> DNV KEMA Energy & Sustainability is a global, leading authority in business and technical consultancy, testing, inspections & certification, risk management, and verification, along the energy value-chain. For more information visit: <http://www.kema.com>





# Wasatch Wind

DNV Kema modeled potential flicker caused by the Latigo Wind Park at ten receptors using worst case scenario assumptions that windows of homes in the area would be facing the wind turbines and no obstructions including trees exist).

Results showed residential areas within the City of Monticello would not be affected by flicker. Three residential receptors located close to Highway 191 that were evaluated could possibly be affected (depending on whether window faced the turbines and depending on interference of trees or other obstructions) approximately 20 hours per year with a realistic average of nine to eleven minutes per day. The flicker could occur in approximately six or seven months per year.

One receptor, the Discovery Center, would experience the greatest potential impact from flicker. Realistically, at the Discovery Center, flicker could occur approximately 90 hours per year with an average of 26 minutes per day. Although most people at the Discovery Center will be visitors and for them the flicker would not be a repetitive occurrence and therefore is less likely to cause annoyance, WWI recognizes that this flicker could impact employees of the Discovery Center and would not be harmonious with the planned use of the Discovery Center. Therefore, WWI is looking to move the turbine located furthest east in the site plan to another location. According to DNV Kema, moving this turbine would be a significant improvement on the potential for flicker at the Discovery Center.

e. Construction Traffic

WWI has not yet determined the route that the turbine transport vehicles would take to access the wind project. However, any use of state highways and transportation routes would be coordinated with UDOT as necessary. In addition, turbine transport and construction traffic is expected to access the project using existing County Road 196 and any improvements or use of that road would be coordinated with San Juan County in accordance with a County road permit. The selected EPC company in coordination with the turbine manufacturer would be responsible for traffic control in the area during construction and transport of the turbine components. These companies are highly trained in safety practices for wind turbine transport and in managing traffic in small towns and



rural areas. Further communication about traffic and traffic control will be conducted once a turbine manufacturer is selected and the origin of the turbine components is known.

***f. Decommissioning and Reclamation***

Latigo Wind Park anticipates entering into a 20-year agreement with a power purchaser for the power output from the wind facility. It is anticipated that once the 20-year power contract has expired, Latigo Wind Park would renew the power contract. The Latigo Wind Park is legally bound by its wind leases to provide a removal or decommissioning bond for the wind farm on or before the 20th anniversary of the Commercial Operation Date. This bond will cover the estimated removal costs associated with the Wind Turbines and other above-ground improvements to a depth of three feet below grade and to restore the surface of the Property to the approximate original condition that existed before any Wind Turbines or other above-ground improvements were installed on the Property, all at Latigo Wind Park's cost and expense. The security shall be reasonably acceptable to the landowner.

***g. Impacts upon potential uses of adjacent lands***

WWI understands that there may be land adjacent to the wind farm upon which current landowners intend to build cabin sites with views of the mountains, may be obstructed by the potential wind farm. We understand that the proposed project therefore conflicts with the intended future use of these adjacent properties. WWI has been working to contact these adjacent landowners to address their concerns and look for possible solutions.

***h. Temporary Disruption to Hunting in project area during construction***

The majority of the project area is also part of the Spring Creek/Dodge Cooperative Wildlife Management Unit and is used for big game hunting. Hunting may be restricted during the temporary construction period but hunting can resume if permitted by the private landowner, once construction is completed. In other words, our leases allow the landowner to choose to allow hunting if he/she chooses to do so – Latigo Wind Park does not restrict hunting access. Additionally, hunting occurs at many wind farms around the country.



## VIII. Environmental Impacts

The proposed wind energy facility is located entirely on private land and Latigo Wind Park, LLC (LWP) does not anticipate that development of the site will result in a federal nexus that would require compliance with the National Environmental Policy Act or the National Historic Preservation Act. Similarly, it is expected that development of the site will not result in impacts to wetlands or other waters of the United States that would exceed the pre-construction notification threshold of Nationwide Permit 12 under Section 404 of the Clean Water Act.

Nevertheless, LWP has contracted with four different environmental consulting firms to conduct various analyses related to assessing the environmental impacts of developing this project. These analyses have included a desktop environmental analysis and a variety of vegetation and wildlife surveys at the site. The desktop analysis was completed in May 2012. The field survey efforts will continue through the spring of 2013. The following vegetation and wildlife surveys have been undertaken to date:

- A habitat characterization was conducted in spring 2011
- Two avian point-count and raptor-monitoring surveys were conducted in spring of 2011. These surveys were resumed in May 2012 and are being conducted on a bi-weekly basis during spring and fall migration and on a monthly basis during summer and winter
- Two mobile acoustic monitoring units (AnaBat units) designed to assess the level of bat activity on the site were deployed in spring 2011. Met tower based AnaBat units were deployed in June 2012. These units are recording bat echolocation calls on the site and these data will be used to generate indices of activity and assess the number of bat species currently present on the site.
- An aerial raptor nest survey was conducted via helicopter on May 7 and 8, 2012.

Results of habitat characterization indicate that roughly 34 percent of the project area is comprised of sagebrush shrubland and sagebrush steppe habitats, 30 percent is Rocky Mountain Gambel Oak – Mixed Montane shrubland, 23 percent is former cropland that has been converted to Conservation Reserve Program (CRP) land, and 13 percent is pinyon-juniper woodland. The majority of turbines and related project impacts would occur in sagebrush communities.



# Wasatch Wind

Avian surveys completed to date have not identified any federally listed threatened or endangered or any candidates for federal listing on the project site. While there is potential for the Gunnison Sage-Grouse (a federal candidate species) to occur on the site, Latigo Wind Park is outside the area mapped as "occupied habitat" by the Utah Division of Wildlife Resources.

To date, there have only been two observations of Golden Eagles recorded during systematic raptor surveys on the site. Given that the May 2012 helicopter survey found the nearest active Golden Eagle nests to be six miles south and eight miles north from the project area, Golden Eagle use of the site is expected to be relatively low and potential project-related impacts to this species minimal. This conclusion is generally supported by the USFWS who stated in a letter dated May 31, 2012, "Golden eagle activity within the project footprint is low" but may increase outside of the project boundary.

AnaBat data from the site has not yet been analyzed. A list of bat species recorded on the site and an assessment of bat activity in relation to habitat, wind speed and direction, temperature, and height above ground will be completed prior to project construction.