



Summit Repower Siting Process - Update to August 23, 2016 report

November 10, 2016

Introduction

This document addresses the siting work that was outstanding in the August 23, 2016 siting report.

Since the August report, extensive civil design work of the project has been completed by DK Consulting, a civil engineering and surveying company. The road alignment changes due to the civil design work has resulted in an expansion of the environmental survey areas. The road alignment changes were necessary to design roads with suitable grades and turning radii to transport the modern turbines throughout the project. The changes were also made to avoid impacts to wetlands, cultural, and biological resources.

CH2M Hill, an environmental consulting firm, has been contracted to provide environmental and permitting work for the project. CH2M has done additional wetland, cultural, and biological surveys of the expanded environmental survey areas. They have also added botanical surveys for rare plants, and surveyed and mapped the Fairy shrimp habitat throughout the project. See CH2M's attached, [Resource Investigation Summary for the Summit Wind Repower Project](#).

Mr. Shawn Smallwood, an avian expert with many years' experience in the Altamont, is in the process of an avian risk siting analysis for the project. The report from Mr. Smallwood's 2014 siting analysis is attached. The completed siting analysis and any resulting "micro siting" of the turbines will be submitted immediately upon completion.

Final shadow flicker, sound, and blade throw analyses are turbine specific and will be redone once the final turbine is selected. Altamont Winds is in the final stages of negotiation with two turbine manufacturers.

Avian resources

In 2014, Shawn Smallwood was hired to provide a turbine siting analysis for the project. As a result of his analysis, the locations of several turbine were relocated to reduce avian risk. Mr. Smallwood's report is attached. See, [Smallwood 081114 Avian report](#).

In October, 2016 Mr. Smallwood was contracted by Altamont Winds to complete his avian siting analysis. The work comprises the following:

Relate fatality data collected since 1998 and behavior data collected since 2012 to terrain measurements developed by Smallwood and Lee Neher using GIS, and wind

data collected during the behavior surveys. After relationships are identified, develop map-based predictive models of flight activity performed by golden eagle, red-tailed hawk, American kestrel and burrowing owl. These models will be used to support “micro-siting” of the new wind turbines, or in some or all cases to validate the proposed locations, depending on predicted hazard zones.

Altamont Winds intends to follow the recommendations of Mr. Smallwood siting analysis and move or adjust the turbines in an effort to reduce avian risk. Also, Mr. Smallwood will have input into the final grading plans of the project road and turbine pads in an effort to reduce avian terrain related risks.

Mr. Smallwood’s siting analysis will be submitted as soon as it is complete.

Wetland resources

Wetland and other waters investigations were conducted within the study area at the Project site to determine the presence of potential waters of the United States, including wetlands. Power Engineers conducted a wetland and other waters investigation on March 25 and 26, 2014, and on January 16, 2015, the United States Army Corps of Engineers (USACE) issued a preliminary jurisdictional determination for the Project in response to findings from the 2014 investigation.

Because of the expanded environmental survey area due to road alignment changes within the project boundary, on September 8, 2016, CH2M conducted a supplemental wetland delineation survey. A site verification by USACE of the revised permit area survey results is in process. As before, none of the 27 proposed turbine sites are located within a potentially jurisdictional wetland or waterbody.

See the attached, [Resource Investigation Summary for the Summit Wind Repower Project](#), and the, [Supplemental Delineation of Potential Waters of the United States for the Summit Wind Repower Project](#), both prepared by CH2M Hill.

Cultural resources

Cultural resource investigations were conducted to determine the potential for presence of cultural resources within the Project site. On August 10 through 12, 2015, Power Engineers conducted a Phase 1 cultural resources survey. CH2M conducted a supplemental cultural resource pedestrian survey from September 27, 2016 through October 5, 2016 in the expanded environmental area.

Several cultural resources were detected during the 2015 investigation. Based on the preliminary design of the project, Power Engineers concluded all sites could be avoided. Preliminary results from the CH2M survey identified additional cultural resources within the survey area of; however these sites can be avoided and therefore no impacts to the turbine sites are expected as a result of Project implementation.

The CH2M cultural resource survey report is in preparation and will be submitted to applicable agencies when available. Consultation with all requisite agencies is currently in process. See the attached, [Resource Investigation Summary for the Summit Wind Repower Project](#), prepared by CH2M Hill.

Biological resources

Rare Plants

On September 26 through 30 and October 3, 2016, Sycamore Environmental Consulting (a subcontractor to CH2M) conducted protocol-level fall botanical surveys to determine if any special status plants or their habitat occurs in the Project area. Spring surveys are planned for 2017 and will be scheduled to coincide with the blooming periods of the targeted rare plant species known from the region.

No fall-blooming special-status botanical species were observed at any of the 27 turbine sites or supporting facilities within the survey area. See Appendix E, [Letter Report for Fall Botanical Survey](#), prepared by Sycamore Environmental Consulting, of the attached, [Summit Wind Repower Project Biological Assessment](#), prepared by CH2M Hill.

Terrestrial and Aquatic Species

Biological resource surveys were conducted at the Project site to determine the potential for presence of listed species including the San Joaquin kit fox, California tiger salamander, California red-legged frog, and listed branchiopods (Longhorn fairy shrimp and Vernal pool fairy shrimp). On March 24 and 25, 2014, Power Engineers conducted a biological resources habitat assessment and on September 8 and 15, 2016, CH2M conducted a vernal pool branchiopod habitat assessment.

Suitable upland habitat for San Joaquin kit fox, California tiger salamander, and California red-legged frog was observed throughout the Project area including at all 27 turbine sites and supporting facilities. Suitable vernal pool habitat for listed branchiopods was observed within 250 feet of the Project area, including 10 of the 27 turbine sites (Turbines 1, 5, 9, 10, 14, 15, 17, 20, 32, and 33). See the attached, [Summit Wind Repower Project Biological Assessment](#), prepared by CH2M Hill.

Altamont Winds is inferring presence of listed species and plans to implement mitigation measures as required by the Biological Opinion issued by USFWS and Incidental Take Permit issued by the CDFW to mitigate impacts to listed species.

Blade throw, Shadow flicker and Sound analysis

Blade throw, Shadow flicker, and sound impacts are turbine specific and will be redone when a final turbine is selected. However, as previously described in the August siting report:

All infrastructure, roads, and residences are well beyond the blade throw distances of the turbines.

Shadow flicker impacts are only likely from one turbine (11) and only impacts one receptor which is on property included in the project and the landowner will provide the necessary waiver.

No sound impacts are likely as those turbines located nearest receptors (while still below CUP thresholds) were removed from the project.

Federal Aviation Administration (FAA) review

All project turbine sites received Determination of No Hazards from the FAA on September 15, 2016, for a total height of up to 499 feet Above Ground Level (AGL). The final turbine selected, at the highest, will have an AGL of 476 feet.

See the attached, [FAA 091516 Approvals](#).

Attached References

[Resource Investigation Summary for the Summit Wind Repower Project](#), Prepared by CH2M Hill, November 10, 2016.

[Smallwood 081114 Avian report](#), Prepared by Shawn Smallwood, August 11, 2014.

[Supplemental Delineation of Potential Waters of the United States for the Summit Wind Repower Project](#), Prepared by CH2M Hill, September 27, 2016.

[Summit Wind Repower Project Biological Assessment](#), Prepared by CH2M Hill, October, 2016.

[FAA 091516 Approvals](#), September 15, 2016.