

# **Appendix G**

## **Summary of Agency and Tribal Feedback for Jeffers Petroglyphs Site and Red Rock Ridge**

## Jeffers Petroglyphs and Red Rock Ridge

### Big Bend Wind Project – Summary of Feedback

This document is intended to summarize the various requests, concerns, and actionable feedback received by the Big Bend Wind project regarding the proximity of the proposed wind farm to a culturally and historically sensitive site, known as the Jeffers Petroglyphs, and the surrounding formation known as Red Rock Ridge. This feedback was actively solicited by Big Bend Wind through a stakeholder input process that included numerous Native American tribes, local scholars and archaeologists, local elected officials, and state agencies including staff from MN Historical Society and SHPO. Big Bend Wind voluntarily developed this input process in order to actively generate feedback from all interested parties throughout the development of the wind project planned to be located in Cottonwood and Watonwan Counties, Minnesota, near the Jeffers Petroglyphs Historical Site.

This index also presents the current plan for Big Bend Wind to address the requests and feedback received, including mitigation of potential project impacts where possible. For ease of reference, feedback has been color-coded to denote comments relating to specific aspects of project development.

This is a living document which is updated frequently to provide additional detail and recent feedback. This version is current as of September 29<sup>th</sup>, 2020.

FEEDBACK TOPIC KEY: ■ Visual and auditory impacts ■ Project area and boundary ■ Survey process ■ Other

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
<b>November 2017:</b> Initial meeting with State Historical Preservation Office (SHPO) staff held on November 17. SHPO recommends that Big Bend contact specific tribes known to have ties to the Red Rock Ridge and Tom Sanders, head of Red Rock Ridge Research Group (RRRRG) and former site manager of Jeffers Petroglyphs Historical Site.				1
<b>February – March 2018:</b> Initial meetings with Cottonwood County Commissioners and staff are held to share project proposal and gather feedback. Initial meeting with Tom Sanders to share project proposal and gather initial feedback.				2

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
<b>May 2018:</b> Letters sent to initial list of 10 tribes known to have ties to the Red Rock Ridge area. (Attached, Exhibit A) This letter shared basic project information and notified tribes that while no federal nexus is expected for this project, Apex Clean Energy expects to complete cultural resource surveys in coordination with SHPO, and wishes to work closely with tribal partners to better understand this culturally sensitive area. <ul style="list-style-type: none"> <li>- Iowa Tribe of Kansas and Nebraska</li> <li>- Lower Sioux Indian Community</li> <li>- Mandan, Hidatsa, and Arikara Nation (Three Affiliated Tribes)</li> <li>- Northern Cheyenne Tribe</li> <li>- Prairie Island Indian Community</li> <li>- Santee Sioux Nation</li> <li>- Shakopee Mdewakanton Sioux Community</li> <li>- Sisseton-Wahpeton Oyate</li> <li>- Upper Sioux Indian Community</li> <li>- Yankton Sioux Tribe</li> </ul>				3
<b>June 2018:</b> Tom Sanders of RRRRG suggested that any tribes with affiliation to Pipestone National Monument be included in this process. Copy of letter (Exhibit A) sent to three additional tribes: <ul style="list-style-type: none"> <li>- Ponca Tribe of Nebraska</li> <li>- Otoe-Missouria Tribe</li> <li>- Omaha Tribe of Nebraska</li> </ul>				4
<b>July 2018:</b> Invitations sent to 13 above tribes for meeting to be held on September 13, 2018 via both postal mail and e-mail. (Attached, Exhibit B)				5
<b>August 2018:</b> Meeting held on August 23 with RRRRG members to gather initial feedback on project proposal. Phone calls were made to above tribes to follow up on the meeting invitation.				6
Minnesota Historical Society	8/23/2018	Shadow Flicker on the Jeffers Petroglyphs site should be avoided if at all possible.	Big Bend has factored this into siting models to avoid shadow flicker on the Jeffers Petroglyphs site.	7
<b>September 2018:</b> Meeting held on September 13 with RRRRG, Jeffers Petroglyphs site staff, staff from Quality Services Inc. (QSI), and Samantha Odegard of Upper Sioux Indian Community to share project proposal details and gather initial feedback. Contact information was provided for 18 additional tribes with cultural ties to the Red Rock Ridge area. <ul style="list-style-type: none"> <li>- Cheyenne River Sioux Tribe</li> </ul>				8

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
<ul style="list-style-type: none"> <li>- Crow Creek Sioux Tribe</li> <li>- Flandreau Santee Sioux Tribe</li> <li>- Fort Belknap Indian Community</li> <li>- Fort Peck Assiniboine and Sioux Tribes</li> <li>- Winnebago Tribe of Nebraska</li> <li>- The Ho-Chunk Nation</li> <li>- Lower Brule Sioux Tribe</li> <li>- Menominee Indian Tribe of Wisconsin</li> <li>- Mille Lacs Band of Ojibwe</li> <li>- Northern Arapaho Tribe</li> <li>- Oglala Sioux Tribe</li> <li>- Ponca Tribe of Oklahoma</li> <li>- Red Lake Band of Chippewa Indians</li> <li>- Rosebud Sioux Tribe</li> <li>- Spirit Lake Sioux Tribe of Ft. Totten</li> <li>- Standing Rock Sioux Tribe</li> <li>- Turtle Mountain Band of Chippewa</li> </ul>				
Upper Sioux Indian Community	9/13/2018	The ridge is still in use for sacred ceremonies by tribal members, and it is culturally and spiritually important to have silence during certain ceremonies.	Wind facilities are planned to be located at sufficient distance to the site such that they should not be audible over ambient noise levels.	9
Red Rock Ridge Research Group (RRRRG)	9/13/2018	Radar-based lighting systems would be preferable to synchronized red strobe lights, to mitigate the visual impacts on the night sky from this site.	If available and approved by all appropriate state and federal agencies, Big Bend expects to use ADLS.	10
RRRRG	9/13/18	Concern that the viewshed from specific observatories will be negatively impacted, especially at summer and winter solstices.	The visual simulation shared on 7/17/19 demonstrated that under the preliminary layout shared, turbines are not expected to be visible from the observatories. It was mentioned that if a turbine model with a tip height above 570 feet is selected,	11



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			there are possible turbine locations where the tips of turbine blades could be visible from the observatories. In the most current layout, turbines are not expected to be visible from the observatories.	
RRRRG	9/13/2018	The project boundary should not include the MNHS Jeffers Petroglyphs site.	The project boundary was shifted south to avoid this site in Fall of 2018.	12
RRRRG, Upper Sioux Community	9/13/2018	Seeing a proposed layout of the wind project would help inform future stakeholder input.	Big Bend developed a turbine layout to share with stakeholders in early 2019, and has held meetings to share each subsequent iteration of the project layout. These layouts have also been shared via email with stakeholders unable to attend group meetings.	13
RRRRG, Upper Sioux	9/13/2018	Cultural Resource Probability models are insufficient to create a field survey plan.	Numerous types of data were included in the development of the field survey plan, including any relevant information generated by the Oral History study of participating tribal elders. ( <i>See Oral History Study, below</i> ).	14
RRRRG, Upper Sioux	9/13/2018	There is interest in participating in cultural field surveys, schedules permitting.	Big Bend developed a field survey plan to include all tribes that have indicated interest in participating. To date, seven tribes have sent representatives to participate in field surveys.	15
RRRRG	9/13/2018	There are petroglyphs on the Ridge that are buried beneath soil.	Big Bend Wind and Quality Services, Inc. (QSI) have implemented and will continue to implement inventory methods suggested by RRRRG, including subsurface testing.	16

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
<b>October 2018:</b> On October 2, a meeting summary of the September 13 meeting was sent to all 13 tribes that were invited to the meeting, and separately to the 18 additional tribes recommended by Upper Sioux. (Attached, Exhibit C). Phone conversation with Fort Peck Assiniboine and Sioux THPO on October 2 to share additional project information. Phone or email contacts with tribes who indicated their desire to be involved in future meetings and feedback opportunities: <ul style="list-style-type: none"> <li>• Ft. Belknap Indian Community</li> <li>• Iowa Tribe of KS and NE</li> <li>• Lower Sioux Community</li> <li>• Sisseton-Wahpeton Oyate</li> <li>• Shakopee Mdewakanton Sioux Community</li> <li>• Standing Rock Sioux</li> <li>• Prairie Island Indian Community</li> </ul>				17
<b>March 2019:</b> Email conversation with Upper Sioux Community regarding timeline for cultural resource surveys on March 6. In-person meeting with Prairie Island Indian Community on March 23 to share project information and gather initial feedback.				18
Prairie Island Indian Community (PIIC)	3/20/19	Request for information on the decommissioning plan, to ensure turbines will be removed and land restored when project lifespan ends	Big Bend shared detailed information on decommissioning at the 7/17/19 meeting and in the summary sent to stakeholders on 8/1/19. Big Bend will submit decommissioning plans to the MN PUC, and these documents will be publicly available to tribes and other stakeholders.	19
<b>April 2019:</b> Meeting with Jeffers Petroglyphs site staff on April 4 to meet new site manager, David Briese, introduce project, and learn more about MNHS site. Phone conversation with Prairie Island Indian Community on April 22 to gather additional feedback and suggestions.				20
PIIC	4/22/2019	Tribal elders with knowledge of the site and landscape should be consulted.	Big Bend contracted QSI to conduct an Oral History Study involving all tribal elders willing to participate. This study took place via interviews throughout the fall of 2019.	21

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
PIIC	4/22/2019	Concern that the viewshed from the Jeffers Petroglyphs site and Ridge will be negatively impacted.	Big Bend conducted a visual simulation based on the preliminary layout which was shared on 7/17/19 to generate more specific feedback on visual impacts.	22
<b>May 2019:</b> Invitation to July 17th meeting sent via postal mail to 31 tribes. (Exhibit D)				23
<b>June 2019:</b> Invitation to July 17th meeting sent via e-mail to 31 tribes. Quality Services, Inc. (QSI) contracted by Big Bend Wind as tribal liaisons for the project. Invitation phone calls made by QSI to 31 tribes. Pictures are taken for photo simulations.				24
RRRRG	6/26/2019	RRRRG participated in photo survey for visual simulations and gave input on locations of importance that should be used for visual modeling of the project.	n/a	25
<b>July 2019:</b> Meeting held with representatives of 10 tribes in-person and via video conference on July 17. At this meeting and in subsequent conversations, Big Bend Wind requested that tribes share additional project feedback and confirm their interest in participating in cultural resource surveys by September 2, 2019. Follow-up phone calls and emails from QSI to 31 tribes asking for participation in our field survey process and Oral History Study.				26
Flandreau Santee Sioux Tribe (SST)	7/17/2019	Red lights at night will be a major visual impact on constellations and visual to the moon.	See ADLS, above	27
Upper Sioux	7/17/2019	This site should be registered as a World Heritage Site and is comparable in significance to other sites with that designation. This site should therefore have a minimum 5-mile buffer for any turbine construction to preserve the viewshed.	Big Bend has shifted the project to move all turbines further than 5 miles from the Jeffers Petroglyphs site.	28

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
Sisseton Wahpeton Oyate (SWO)	7/17/2019	The Lakota and Dakota names for places and features are not the same as English names, oral history is critical in understanding areas of importance.	<i>See Oral History Study, above</i>	29
Sisseton Wahpeton Oyate (SWO)	7/17/2019	Predictive modeling for field surveys is not sufficient.	Predictive models will serve only as a starting point, and additional types of data will be included in the development of the field survey plan.	30
Winnebago Tribe, Mille Lacs Band of Ojibwe, Spirit Lake Tribe	7/17/2019	Disturbed or plowed land should still be surveyed – sites and artifacts have been found under plowed fields before.	Apex is conducting an inventory of all areas that will be used for construction within the project footprint. An Unanticipated Discoveries Plan is being developed in coordination with SHPO and tribes.	31
Flandreau SST	7/17/2019	The 15m transects required by SHPO are far too spaced apart, smaller transects should be used.	A variety of inventory methods will be used based on the input we receive and transects may vary between 4 meters to 15 meters.	32
Flandreau SST	7/17/2019	Drones should be utilized for aerial photos or heat sensing, and/or ground penetrating radar, or magnetometry if needed to attempt to identify burials, buried boulders, or other cultural resources.	QSI offered to coordinate this activity using technology provide by Flandreau.	33
SWO, Upper Sioux, Mille Lacs, Three Affiliated Tribes (MHA)	7/17/2019	Tribal monitors or tribal representatives should be included in the survey process.	Big Bend and QSI developed a field survey plan to include all tribes that have indicated interest in participating, also including input from RRRRG and MNHS local staff. Seven tribes sent representatives to participate in field surveys in fall 2019.	34

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
SWO, Upper Sioux, Cheyenne River Sioux	7/17/2019	TCP data should be controlled by THPOs.	QSI is following this suggestion and is recording only TCP boundaries and basic information necessary for avoidance and protection.	35
SWO, Upper Sioux	7/17/2019	Tribal representatives should be subcontracted to conduct a TCP study.	This was done as part of fall 2019 and spring 2020 surveys and will be continued in fall 2020 survey work.	36
Upper Sioux	7/30/2019	The ridge has seen continued use over generations for spiritual practices; development activities shouldn't interfere with continued ceremonial use of the area.	Big Bend has sought a better understanding of spiritual and ceremonial practices in this area through the Oral History Study and from that learned about historical tribal connections to the area, but received very little information related to current spiritual or ceremonial uses in the area that could inform project siting. Big Bend signed agreements with tribal elders prior to conducting interviews which limit the sharing of this information, so direct documentation of interviews will not be included within permit applications. <i>See Oral History Study, below.</i>	37

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
<b>August 2019:</b> Meeting summary (Exhibit E) and copy of Big Bend Wind's meeting presentation (Exhibit F) sent to 31 tribes on August 1. Oral History Study with tribal elders begins, conducted by QSI tribal liaison and Dakota translator. Tribes participating include: <ul style="list-style-type: none"> <li>• Spirit Lake Sioux Tribe</li> <li>• Turtle Mountain Band of Chippewa</li> <li>• Three Affiliated Tribes (Mandan, Hidatsa, and Arikara Nation)</li> <li>• Sisseton-Wahpeton Oyate</li> <li>• Flandreau Santee Sioux Tribe</li> <li>• Northern Cheyenne Tribe</li> </ul> Additional feedback is solicited through conversations with RRRRG, numerous tribes, and state agencies via phone, email, and in-person meetings.				38
Upper Sioux	8/1/2019	Correction from original meeting summary: at the 7/17 meeting, Samantha Odegard referenced seeing wind turbines located just north of Granite Falls. The notes incorrectly stated that she had referenced water towers visible at that distance.	Max Jabrixio of Big Bend Wind sent a corrected copy of the meeting notes to all THPOs in an email noting the mistake and correction (sent on 8/1 – Exhibit E is the second, corrected version).	39
Mille Lacs Band of Ojibwe	8/5/2019	Support the request of other tribes for a 5-mile buffer	Big Bend has shifted all proposed project turbines to a distance of at least 5 miles from the Jeffers Petroglyphs site.	40
Lower Sioux	8/6/2019	Tribal Monitors/Specialists should be on-site during field work and a Tribal Monitor schedule should be drafted.	QSI has had tribal monitors/specialists on all inventory crews to date and plans to continue this practice	41
RRRRG	8/7/2019	No turbines should be sited north of Highway 30. <i>*See maps submitted, below</i>	Big Bend has shifted the project boundary to avoid siting wind facilities north of this highway.	42

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
RRRRG	8/7/2019	RRRRG would also support the request for a 5-mile buffer, primarily due to concern over visual impacts.	<i>See 5-mile buffer, above.</i>	43
Lower Sioux	8/7/2019	Lower Sioux supports the request for a 5-mile buffer	<i>See 5-mile buffer, above.</i>	44
RRRRG	8/17/2019	Maps received showing sites and outcrops on Red Rock Ridge; these sites should be avoided when siting turbines.	Big Bend has mapped this information through a GIS system, in order to include this in project layout modeling and has avoided siting of any proposed facilities on these areas.	45
Mille Lacs Band of Ojibwe	8/20/2019	The Oral History Study needs to be more clearly organized and interviews need to be scheduled further in advance.	Interviews of tribal elders were scheduled in coordination with THPOs and QSI extended the deadline to participate into September in order to create greater flexibility with scheduling. All elders interviewed signed an authorization to allow the use of their information for this study, which indicated that they retain all rights to the information which cannot be used for any purposes unrelated to this study.	46
Mille Lacs Band of Ojibwe	8/20/2019	The overall survey process and methods have not been explained properly.	Big Bend and QSI created a more detailed survey plan which was shared with all tribes participating in the survey process on 9/27/19, and held a pre-survey meeting to review processes and methodology on 10/08/19.	47
<b>September 2019:</b> Letter sent to tribes (Exhibit G) via email and postal mail on September 5 confirming the participation of 12 tribes in field surveys and outlining next steps following the September 2, 2019 deadline for requested feedback. Letters received from MN Historical Society (MNHS) and Upper Sioux with additional feedback. Phone conversations with RRRRG and MN Indian Affairs Council (MIAC). Meeting held with MNHS, State Historical Preservation Office (SHPO), and Department of Commerce (DOC) staff on September 17 to discuss cultural survey plans. (See meeting summary with PPT and survey plans - Exhibit H)				48

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
Survey plan and dates sent to tribes on September 27 (Exhibit I)				
Minnesota Historical Society (MNHS)	9/5/2019	The 2-mile distance presented at the 7/17 meeting is insufficient; additional viewshed analysis should be conducted based on a buffer of 8 miles.	<i>See 5-mile buffer, above.</i>	49
Upper Sioux	9/5/2019	The visual simulations conducted for the 7/17 meeting were inadequate; additional simulations should be prepared using other locations along the ridge, including high points along the ridge and areas along the edges.	Big Bend Wind performed additional visual simulations, including evaluation of distances greater than those presented at the 7/17 meeting. These visual simulations were presented to THPOs and MNHS staff on 1/28/20.	50
Upper Sioux	9/5/2019	Clarification that the suggestion of a 5 mile protective buffer was intended as a minimum distance; 8 miles would be preferable. The project should look for additional land farther from Red Rock Ridge or move the project entirely.	<i>See 5-mile buffer, above.</i>	51
RRRRG	9/6/2019	RRRRG provided additional suggestions on survey methodology, transect distances, glacial kames, and lichen removal from rocks on the ridge.	These suggestions will inform the survey plan to be discussed with SHPO and MNHS on 9/17/19.	52



Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
Iowa Tribe of KS and NE – THPO Lance Foster	9/16/2019	Provided information regarding tribal historical connections to areas in SW Minnesota, including Jeffers Petroglyphs. Discussion of how site is sacred and connected to Pipestone and Blue Mounds. Expressed concerns relating to impacts to birds.	Big Bend is completing all required bird and bat surveys in consultation with USFWS and Minnesota DNR, and will take appropriate steps to avoid and minimize potential impacts to wildlife habitats or migratory bird flight paths.	53
Iowa Tribe of KS and NE – THPO Lance Foster	9/16/2019	Expressed the belief that in the context of this sacred site, “when the blades turn, they create a vibration in the earth that travels as an infrasound that disturbs the land.” Expressed additional concerns relating to visual impacts. Expressed that turbines should be built “out of the sight and hearing of this ancient Holy Place.”	Wind facilities are planned to be located at sufficient distance to the site such that they should not be audible over ambient noise levels. Big Bend Wind is taking steps to reduce visual impact through turbine siting, but complete elimination of visual impacts is not expected to be feasible. There is no evidence that infrasound from wind turbines has any impacts on human health, nor are we aware of any evidence that infrasound from wind turbines has negative impacts on plant or animal life. However, Big Bend acknowledges that scientific evidence may not directly address a concern or belief that is spiritual in nature.	54
State Historical Preservation Office (SHPO), MNHS	9/17/2019	The survey plan presented by Apex and QSI appears thorough and departments agree these methods are appropriate.	Big Bend Wind and QSI began survey work on 10/08/19 according to the plan described in Exhibit H.	55
MNHS	9/17/2019	The department considers the visual simulations presented to be a direct adverse impact to the Jeffers site, and requests additional simulations and viewshed analysis	Big Bend Wind prepared additional visual simulations, including from locations specifically requested by MNHS staff, and a visual impact analysis using Federal Highway Administration (FHWA) methodology. Visual simulations based on the final	56

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
		be conducted. The department does not have a preferred methodology for the analysis.	project layout were provided to department staff in a meeting on 7/29/20, and the visual impact analysis is included in permit application materials.	
Lower Sioux	9/23/2019	Key information regarding field surveys has not been communicated to THPOs for the upcoming field session. A planning meeting should be coordinated with interested Tribal parties prior to the beginning of field work.	QSI sent detailed information on survey plans and methodology on September 27, including an initial meeting to discuss methodology prior to the first of day field work (on 10/8/19).	57
Lower Sioux	9/23/2019	Information regarding the proposed oral history project has not been sufficiently clear on how the information will be used or who will have access to it. Further, tribes have not been afforded appropriate input on methodology.	QSI drafted a memorandum of understanding outlining the purpose of the oral history study, and clarifying that any dissemination of information would be controlled by THPOs. This memorandum was offered to requesting THPOs to be signed by all parties prior to elder interviews being conducted.	58
<b>October 2019:</b> Notes and follow-up from September 17 meeting are sent to MNHS, SHPO, and DOC on October 7. Field work begins on the Cultural Resources Inventory with participation from seven tribes (Lower Sioux, Upper Sioux, Sisseton, Turtle Mountain, Rosebud, Oglala, and Otoe-Missouria), MNHS staff, and RRRRG. Initial meeting to discuss methodology and processes is held on October 8, and field work begins October 9.				59
Lower Sioux	10/7/2019	Agreed with other tribes that TCP data should be controlled by tribes and minimal information recorded by QSI.	QSI is following this suggestion and is recording only TCP boundaries and basic information necessary for avoidance and protection.	60

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
Otoe-Missouria Tribe	10/14/2019	Request for a bi-weekly memo or report on TCS' work during field sessions.	QSI provided some reports during fall 2019 field work, and will provide more frequent reports during fall 2020 field work per this request. QSI provided a detailed report at the end of the fall 2019 field session and the end of the spring 2020 field session.	61
Cheyenne River Sioux	10/22/2019	Tribal representatives on site should be able to visit an existing turbine in the area to see firsthand the visual and auditory impacts at distances within 5 miles.	QSI plans to facilitate such a visit during the fall 2020 surveys.	62
Upper Sioux	10/25/2019	Visual simulations should include the farthest north, south, east, and west locations where petroglyphs have been discovered. Shared GPS coordinates for specific locations to be used, agreed that closest public access point could be used where necessary.	Apex conducted these additional visual simulations using a redesigned project layout, including simulations of Red Rock Solar. These simulations were shared with tribal representatives at 1/28/20 THPO meeting, and an updated version was shown again using the final proposed layout on 6/18/20.	63
<b>November 2019:</b> Fall field work on Cultural Resources Inventory continues - last date in the field is November 5. Photographs are taken for second round of visual simulations, using coordinates given by Upper Sioux and with MNHS staff helping identify locations.				64
Lower Sioux	11/1/2019	Request for weekly reports on field work to keep Lower Sioux and other tribes informed on sites that are located.	QSI provided some reports during fall 2019 field work, and will provide more frequent reports during fall 2020 field work per this request. QSI provided a detailed report at the end of the fall 2019 field session and the end of the spring 2020 field session.	65
<b>December 2019:</b> Final report (Exhibit J) from fall cultural resources inventory is sent to THPOs, MNHS staff, and MIAC on December 17, outlining findings and the timeline for remaining survey work to be completed in Spring 2020.				66

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
Lower Sioux	12/2/2019	A group meeting to review survey work from the fall and discuss spring survey work and timelines would very helpful to tribes.	Big Bend held a meeting to discuss this work and shared the latest project layout and visual simulations on 1/28/20.	67
<b>January 2020:</b> Invitations are sent on January 7 to THPOs, local Jeffers site staff for January 28 meeting (Exhibit K). Meeting held with Lower Sioux Tribal Council on January 20. Meeting held with representatives of 7 tribes and MNHS staff on January 28.				68
Lower Sioux	1/9/2020	Request for periodic reports to be sent to Lower Sioux and other THPOs to allow for correlation of TCS data.	<i>See frequency of field reports, above.</i>	69
Lower Sioux – President Robert Larsen	1/20/2020	The 12 turbines in the Northwest corner of the project area are the most concerning from a visual standpoint.	Big Bend was able to shift 9 of the 12 turbines closest to the Ridge, reaching a distance of 5+ miles from the Jeffers Petroglyphs site.	70
Lower Sioux – Councilmember Kevin O’Keefe	1/20/2020	It is unclear why Big Bend cannot simply move turbines to various locations shown on the map that appear to be unoccupied.	Big Bend produced a map showing buildable area remaining after setback restrictions are observed to more transparently demonstrate the factors affecting project design and turbine placement (included in 1/28 slides, Ex. L).	71
Lower Sioux – THPO Cheyenne St. John	1/20/2020	Communication about the project is still lacking; concerns remain with QSI’s communication regarding the project.	Big Bend staff began sending monthly project updates to THPOs in March 2020. Big Bend continues to collect feedback on all aspects of the project, including the work of third-party consultants, and will continue to take active steps to improve communication and otherwise address feedback.	72

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
Lower Sioux – Councilmember Kevin O’Keefe	1/28/2020	It is the position of Lower Sioux Indian Community that turbines should be a minimum of 8 miles away for visual reasons.	Big Bend shared in detail at meetings on 1/28/20 and 6/18/20 why various siting restrictions, airspace constraints, economic factors, and impacts to the local community and landowners make an 8 mile buffer infeasible for the project.	73
Rosebud Sioux Tribe	1/28/2020	A map of all disturbed ground within the project area should be provided to THPOs.	QSI will produce and share a map with this information.	74
Upper Sioux, RST, FSST	1/28/2020	A meeting should be held after completion of spring surveys to discuss site evaluations; THPOs should be involved in site evaluation.	No sites were recorded in spring surveys. A detailed report was provided and spring survey findings were discussed with THPOs on 6/18/20.	75
Upper Sioux	1/28/2020	Elders may need to be consulted in site evaluation, and tribes may choose not to share information from site evaluations or elder discussions with Big Bend and QSI.	QSI will coordinate with THPOs regarding elder participation in site evaluations.	76
Lower Sioux	1/28/2020	Reporting on Tribal Cultural Properties (TCPs) should follow SHPO guidelines, with the minimum required information being reported to SHPO. THPOs should have the opportunity to review draft reports before they are sent to SHPO.	QSI will provide draft reports to THPOs before submitting to SHPO (with reasonable time limits to provide feedback).	77

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
Upper Sioux	1/28/2020	TCP information should not be shared with private landowners, due to concerns that TCPs could be disturbed or destroyed.	Big Bend takes concerns with protection of sensitive information very seriously, and will work closely with state agencies to ensure appropriate treatment of this data throughout the collection and submission process.	78
Rosebud Sioux	1/28/2020	The process for handling unanticipated cultural resource discoveries is of great importance, and THPOs should be involved in the development of that process and plan.	QSI solicited input before beginning creation of an Unanticipated Discovery Plan (UDP), and has drafted this document based on a framework provided by THPOs. QSI sent a draft to THPOs for additional input on 5/1/20. <i>See Exhibit M for detailed feedback specific to this process.</i> Reminders to provide input were sent in summer monthly THPO emails, and the deadline to provide feedback was set for September 11.	79
Flandreau SST	1/28/2020	Tribes should be able to see the plan for decommissioning turbines.	Big Bend will produce this plan as part of the project's Site Permit application and will share this with THPOs when it is finalized. THPOs will have the opportunity to comment on the decommissioning plan during the permitting process.	80
Upper Sioux	1/28/2020	Upper Sioux's position remains that turbines should be no closer than 5 miles from Red Rock Ridge. The definition of Red Rock Ridge should include all documented petroglyphs, including any newly discovered through the project's survey process.	Big Bend has been able to shift the project to a distance of 5+ miles from the Jeffers Petroglyphs. A setback of 5 miles from all points on the Red Rock Ridge was evaluated and would not allow for a feasible project, but the entire northern boundary of the project was shifted approximately 1 mile south to further mitigate visual impacts from Red Rock Ridge.	81

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
Rosebud Sioux	1/28/2020	The solar component should be expanded and the number of turbines reduced in order to move wind facilities farther from the ridge.	Big Bend Wind and Red Rock Solar are being marketed as a hybrid project. Red Rock Solar is dependent on the wind project for transmission facilities, and the amount of solar generation facilities constructed will ultimately depend on the financial viability of that project component. The maximum possible nameplate capacity for Red Rock Solar is 60 MW.	82
Rosebud Sioux	1/28/2020	An engineer should be present at the next meeting to give more detailed answers to THPO questions regarding turbine placement.	Big Bend had team members present at the 6/18/20 THPO meeting with expertise in energy analysis and engineering to help provide detailed answers to design questions.	83
<b>February 2020:</b> Meeting summary and Big Bend PowerPoint slides (Exhibits L, N) from 1/28 meeting are sent to THPOs on February 4. Drafting begins on Unanticipated Discovery Plan (UDP) process document with input from Lower Sioux, Upper Sioux, Ponca Tribe of Nebraska, and Sisseton Wahpeton Oyate (Flandreau SST and Rosebud Sioux also expressed interest in this process and were looped in to the first round of input, but have not yet provided suggestions). See Exhibit M for detailed feedback on UDP process.				84
Lower Sioux	2/27/2020	Provided framework for UDP process draft and requested to review draft before it is submitted to state agencies.	QSI drafted the UDP based on this framework and sent to THPOs for review on 5/1/20. <i>See UDP above for more detail.</i>	85
<b>March 2020:</b> First monthly project update is sent to THPOs on March 6 (Exhibit O).				86
<b>April 2020:</b> Monthly update 2 sent to THPOs (Ex. P). THPOs are informed that due to COVID-19, we do not expect to proceed with spring surveys as previously planned. In late April, individual outreach to tribes who previously participated in survey work to check availability for a more limited scope of surveys on the revised Red Rock Solar boundary.				87
<b>May 2020:</b> Draft UDP is sent to THPOs on May 1. Monthly project update 3 is sent to THPOs on May 1 (Exhibit Q). Cultural Resources Inventory is completed for new Red Rock Solar area from May 6-8 with participation of Upper Sioux and Otoe-Missouria Tribe.				88

Input received from:	Date of input:	Nature of request/concern:	Current plan to address:	Row (reference)
<b>June 2020:</b> Monthly project update 4 is sent to THPOs on June 3 (Exhibit R). Project update meeting with THPOs and Jeffers Site Staff is held via Zoom on June 18 (to allow for remote participation while observing precautions related to COVID-19). Meeting notes and presentation slides are sent out following the meeting on June 26 (Exhibits S, T).				89
Lower Sioux	6/18/2020	Scheduling of spring surveys happened with short notice (acknowledged role of COVID-19 in this). More advance notice should be given for Fall 2020 surveys, at a minimum 2 weeks.	QSI will provide expected survey dates to THPOs based on projected weather and field conditions at least two weeks in advance.	90
Lower Sioux	6/18/20	Reiterated request on receiving reports before they are provided to SHPO.	See draft reports, above.	91
<b>July 2020:</b> Meeting held with state agencies (SHPO, MNHS, EERA, MN Indian Affairs Council) to share updated layout, visual simulations, and preview of visual impacts assessment report which will be included in permit application on July 29.				92
Upper Sioux	7/1/20	Request for turbines to be labeled from various distances for specific KOPs in latest round of visual simulations.	Apex produced the requested labeled visual simulations and sent to Upper Sioux on 8/5/20.	93
<b>August 2020:</b> Meeting presentation from July 29 is sent to MNHS as follow-up on August 4 (Exhibit U). Monthly project update 5 is sent to THPOs on August 12 (Exhibit V).				94
<b>September 2020:</b> Monthly update 6 sent to THPOs on September 17 (Exhibit W).				95



## EXHIBIT A



Date

Dear [TRIBAL LEADER NAME],

I am writing to inform you and the [NAME] Tribe that Apex Clean Energy (Apex) is developing a wind farm, Big Bend Wind, on private land in Cottonwood County, Minnesota. The project is in an early stage of development and we believe it is an appropriate time to contact you to ensure you are aware of our development activities and are provided the opportunity to coordinate with us as it relates to protection of potentially sensitive tribal cultural resources.

Because this project is not expected to have a federal nexus, the requirements of Section 106 of the National Historic Preservation Act do not apply. However, Apex will complete cultural resource surveys in coordination with the Minnesota State Historic Preservation Office (SHPO), as required to obtain a Large Wind Energy Conversion System Site Permit issued by the Minnesota Public Utilities Commission. Apex and the State also have obligations under the Minnesota Historic Sites Act (MS 138.661-669) that directs state agencies to consult with the SHPO if projects they undertake or fund will impact properties listed in the National Register of Historic Places and/or in the State Register of Historic Places.

Beyond the permit requirements, it is important to Apex that the cultural significance of the Jeffers Petroglyphs and other nearby culturally sensitive areas are respected. Our hope is to work with the appropriate members of your tribe to identify Native American cultural sites warranting consideration in our siting decisions to ensure these sites are protected to the extent possible. Likewise, we want to be careful not to impede on your ability to continue traditional customs and religious practices in this area, so we would appreciate your time to help Apex understand the cultural sensitivities in and near the areas we are proposing for development.

Apex has a strong history of developing wind projects in a manner that furthers a stable energy market, a clean and safe energy supply, and healthy communities. In addition, we are pleased to share that after many discussions with wind energy companies across North America, the inter-tribal Oceti Šakowin Power Authority (OSPA) selected Apex Clean Energy as its partner in the development of several sites in South Dakota. Please see more about this work on our website: <https://www.apexcleanenergy.com/siouxnation>. Additionally, at two other South Dakota wind projects near Watertown, South Dakota, Apex is working closely with the Sisseton Wahpeton Oyate to ensure responsible development with no adverse impacts to important tribal resources.

c/o Apex Clean Energy, Inc.

8665 Hudson Blvd North, Suite 110 | Lake Elmo, MN 55042

T 612.260.6614 | F 434.220.3712

[apexcleanenergy.com](https://www.apexcleanenergy.com)

Our experience working with tribal partners has taught us a lot about the unique interests that tribes have in renewable energy projects; therefore, as we move forward, we hope to work closely with the [NAME] Tribe and would like to have a face-to-face meeting in the near term to begin coordination. We believe that by developing a productive relationship to ensure your interests are considered and addressed during development, our project will be one of which we can both be proud.

Sincerely,

Dave Phillips  
Vice President of Environmental  
Apex Clean Energy  
434-906-9127  
[Dave.Phillips@apexcleanenergy.com](mailto:Dave.Phillips@apexcleanenergy.com)

CC:  
[THPO]  
[Tribal Attorney]

## EXHIBIT B



Date \_\_\_\_\_

Dear \_\_\_\_\_,

This is to serve as a follow-up to the letter you received from Apex Clean Energy and Big Bend Wind earlier this summer. As we move forward with the development process of the wind farm on private land in Cottonwood County, Minnesota, it is important to coordinate a conversation with your tribe as it relates to the protection of potentially sensitive tribal cultural resources.

You're invited to a meeting to discuss the cultural significance of this area with representatives of other tribal entities with ties to the Jeffers Petroglyphs, area historical leaders, and the Big Bend Wind team from Apex Clean Energy. This will serve as an introduction to Big Bend Wind, provide a time for each tribe to speak on their connection to the petroglyphs and group discussion on how to move forward. The meeting will take place on Thursday, September 13<sup>th</sup> from 11:30 AM - 2:30 PM at our office located at 306 10<sup>th</sup> street, Mountain Lake, MN 56159. Please note the meeting may go longer if the group decides the conversation needs additional time.

Lunch will be provided. Please RSVP to Jaci Friedley the project Public Affairs Manager (jaci.friedley@apexcleanenergy.com) at your earliest convenience or no later than Monday September 3, 2018. In your RSVP please note any food allergies or requests.

We look forward to meeting you or a representative of [Tribe]





## EXHIBIT C

### Big Bend Wind Project, Jeffers Petroglyphs

September 13, 2018 Meeting Summary

#### Meeting Attendees:

- Bob Larsen, Elder with the Lower Sioux Tribe and member of the Red Rock Ridge Research Group
- Samantha Odegard, THPO Officer for the Upper Sioux Tribe
- Tom Sanders, former director of the Jeffers Petroglyph site for the Minnesota Historical Society and member of the Red Rock Ridge Research Group
- Charles Broste, archeologist at the Jeffers Petroglyph site and member of the Red Rock Ridge Research Group
- Brenna Gunderson, Apex Clean Energy, Big Bend Wind
- Jennie Geiger, Apex Clean Energy, Big Bend Wind
- Dylan Ikkala, Apex Clean Energy, Big Bend Wind
- Jaci Friedley, Apex Clean Energy, Big Bend Wind
- Bipin Thapa, Apex Clean Energy, Big Bend Wind
- Lance Rom, Quality Services Incorporated
- Jana Morehouse, Quality Services Incorporated

Notes Prepared by: Apex Clean Energy

Date: October 2, 2018

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On September 13, 2018, Apex Clean Energy (“Apex”) met with members of the Upper Sioux Tribe, Quality Services Incorporated (“QSI”), and professionals involved with the Red Rock Ridge Research Group (“RRRRG”) to discuss the Big Bend Wind Project (“project”) and further understand the cultural, spiritual, and historical significance of the Jeffers Petroglyphs and the Red Rock Ridge area to tribes with connections to the area. Thirteen tribes were invited to attend the meeting by an invitation that was sent via mail on August 10 and follow up calls were made to tribes that didn’t respond to the initial invitation a few weeks later.

The meeting began with a prayer by Mr. Larson, and a meal provided by a local café.

## EXHIBIT C

Apex presented an overview of the proposed project and information on progress of signing private landowners to participate within the proposed project area. In addition, environmental and cultural plans, general information on wind farm construction and operational parameters of wind turbines, and the Minnesota Public Utilities Commission (“PUC”) permitting process were discussed. Finally, an interactive map was shared, and the group discussed in detail the project area with various project overlays including participating parcels and current setbacks (e.g., regulatory setbacks, known cultural resources, wetlands, etc.).

Apex indicated that cultural field surveys would be completed in spring 2019. Attached is the PowerPoint (“PPT”) presentation from the discussion.

The following is a summary of the main points of discussion from the meeting:

- Tribal members and RRRRG representatives shared their connection to the area and their reason for attending this meeting.
- All acknowledged that there is support for wind energy among the group present.
- It was acknowledged that preservation and protection of known and unknown sites on and in proximity to Red Rock Ridge is very important.
- Future generations must be taken into consideration.
- Concern was expressed with cultural resource probability models, but acknowledgement was made that they provide a key first step;
  - QSI stated that the probability models for the project are only a tool for helping develop a fieldwork plan, not the only data to use.
- Information was shared regarding the probable historical use and importance of the area: Native People have traveled to the site for trade opportunities and spiritual guidance for thousands of years.
- Summer and Winter Solstice stone alignments that are present within the proposed project were discussed, including the importance of silence for certain sacred ceremonies;
  - The minimal noise emitted by a turbine compared to other ambient/human-made noises was discussed (see slide 13 of the attached PPT presentation); however, Apex indicated that turbines have the capability of being turned off during significant spiritual times.
- There are petroglyphs on the Red Rock Ridge that are buried beneath soil.
- Dakota Access Pipeline and the decimation of burials in Minnetonka, MN, were both discussed as examples of projects that did not provide positive outcomes, and all parties in the meeting agreed that collaboration from the beginning is key.
- There is interest in participating in the cultural field surveys, as schedules allow.
- It was discussed that there are currently no federal permitting nexuses anticipated for this

## EXHIBIT C

project as it will be built solely upon private land, and that any cultural work is voluntary.

- It was asked if radar-based lighting systems, instead of synchronized red strobe lights, would be used at this site. Neighboring states are either requiring or recommending the use of radar lights. Apex may consider using this type of lighting system if they are proven reliable, cost effective and approved by the Federal Aviation Administration.
- Apex asked for help understanding line-of-sight restrictions and it was acknowledged that accommodations may need to be made on a turbine-by-turbine basis that will be determined once a layout is provided. It was acknowledged that the sun and moon are each approximately 0.5 degrees in width when rising over the horizon. It seems possible to site turbines in a way that will not interfere with the use of the sun/moon at the two observatories discussed during the meeting.
- Seeing a layout would assist further discussion.
- Apex is interested in exploring ideas that would allow both Apex and the tribes to achieve benefits from the project.

### Action items:

- The Apex point of contact will be Dylan Ikkala, Apex Clean Energy Development Manager: [dylan.ikkala@apexcleanenergy.com](mailto:dylan.ikkala@apexcleanenergy.com); (484) 364-9298.
- Apex will design a preliminary layout for turbine placement that may be available to share with the tribes in early 2019.
- Cultural field surveys will be completed in the spring of 2019 within areas of the initial layout deemed as high probability for cultural resources. Apex offered to work with the tribes and the RRRRG to complete the surveys, and both entities expressed their willingness to do so. Tribes interested in offering input in the process should let Dylan Ikkala know by February 1, 2019.



## EXHIBIT D

Thursday, May 23<sup>rd</sup>, 2019

Dear President Robert L. Larsen,

I am writing to follow up on our previous communications regarding the development process of a wind farm, Big Bend Wind, which will be located entirely on private land in Cottonwood County, Minnesota. As we move forward with the project, we are continuing to seek your input as it relates to the protection of potentially sensitive tribal cultural resources.

As we previously shared, we held our first meeting on this subject on September 13, 2018, and mailed a summary of the meeting on October 4, 2018, to those who were unable to attend. As we have continued our work to develop the wind project, we have made efforts to take into account the feedback we received after this initial meeting. We are pleased to invite you to meet with us so we can share important updates on our progress, including an initial proposed layout for the siting of wind turbines in Cottonwood County.

This next meeting will be held on Wednesday, July 17<sup>th</sup>, from 12:00 p.m. to 3:00 p.m. at our Mountain Lake office (306 10th Street, Mountain Lake, MN 56159); lunch will be provided. In addition to the preliminary layout, we will share our expected timeline for the project, including our projected dates to perform cultural field surveys in the high-probability areas across the project site. You can also expect to see visual simulations of what the wind project would look like from different vantage points around the county. We greatly appreciate your input in helping us better understand the area's cultural sensitivities.

To make attendance as easy as possible, Apex is pleased to reimburse travel and lodging expenses incurred by the THPO representative who is present at this meeting. If you or a delegate plans to attend, please respond to us no later than Friday, July 5, 2019, so we can assist in making travel arrangements. Please note any food allergies or requests in your reply.

We look forward to meeting you or a representative of the Lower Sioux Tribe.

Sincerely,  
Reuben Weston – Tribal Liaison, Quality Services Inc.  
Lance Rom – President, Quality Services Inc.  
Brenna Gunderson – Director of Project Development, Apex Clean Energy

**Contact:** Office: 605-388-5309 Cell: 605-407-1220 [rweston@qualityservices.us.com](mailto:rweston@qualityservices.us.com)

CC:  
Tribal Attorney Lenor Scheffler  
THPO Officer Cheyanne St. John





## EXHIBIT E

### **Big Bend Wind Project, Jeffers Petroglyphs**

July 17, 2019 Meeting Summary

#### **Meeting Attendees:**

- Samantha Odegard, Upper Sioux Tribe THPO
- Dianne Desrosiers, Sisseton-Wahpeton Oyate THPO
- Pete Coffey, Mandan, Hidatsa, and Arikara Nation Acting THPO
- Garrie Kills a Hundred, Flandreau Santee Sioux THPO
- Dr. Erich Longie, Spirit Lake Sioux Tribe THPO
- Monte Lovejoy, Flandreau Santee Sioux Tribe
- John Reynolds, Mille Lacs Band of Ojibwe
- Terry Kemper, Mille Lacs Band of Ojibwe Asst. THPO
- Drew Brockman, Upper Sioux Tribe
- Charles Broste, archeologist at Jeffers Petroglyph site, member of Red Rock Ridge Research Group
- David Briese, MN Historical Society On-Site Manager, Jeffers Petroglyphs
- Brenna Gunderson, Apex Clean Energy, Big Bend Wind
- Jennie Geiger, Apex Clean Energy, Big Bend Wind
- Dylan Ikkala, Apex Clean Energy, Big Bend Wind
- Max Jay-Dixon, Apex Clean Energy, Big Bend Wind
- Goni Iskali, Apex Clean Energy, Big Bend Wind
- Bipin Thapa, Apex Clean Energy, Big Bend Wind
- Alex Ingulsrud, Apex Clean Energy, Big Bend Wind
- Lance Rom, Quality Services Incorporated
- Jana Morehouse, Quality Services Incorporated
- Warren Buck Elk, Quality Services Incorporated
- Reuben Weston, Quality Services Incorporated
- Mark Greenig, Jacobs Engineering Group

#### **Video Conference attendees:**

- Leonard Wabasha, Shakopee Mdewakanton Sioux Community Director of Cultural Resources
- Elsie Whitehorn, Otoe-Missouria Tribe THPO
- Randy Teboe, Winnebago Tribe of Nebraska Cultural Preservation Director

# EXHIBIT E

Notes Prepared by: Apex Clean Energy

Date: *July 31, 2019*

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On July 17, 2019, Apex Clean Energy (“Apex”) met with representatives of 10 tribes, along with tribal liaisons and archaeologists from Quality Services Incorporated (“QSI”), and professionals from the Minnesota Historical Society (MNHS) and Jeffers Petroglyphs Historic Site (Jeffers) to discuss the Big Bend Wind and Red Rock Solar Projects (“project”) and further understand the cultural, spiritual, and historical significance of the Jeffers Petroglyphs and the Red Rock Ridge area to tribes with connections to the area. Thirty-one tribes were invited to attend the meeting by an invitation that was sent via mail on May 31<sup>st</sup>, with follow up invitation calls made by Warren Buck Elk of QSI a few weeks later.

## Meeting Summary

The meeting began with a prayer by Dr. Erich Longie.

Attendees introduced themselves, and briefly shared their backgrounds. Brenna Gunderson (Apex) then shared goals for the meeting, including hearing tribal stories and connections to this area so they can be incorporated into project design. Brenna reiterated the importance of continued communication throughout the process. The following is a summary of information presented by Apex, QSI, and Jacobs about the project.

Dylan Ikkala (Apex) shared additional information about the project, including:

- Confirmation that the project will be located entirely upon private land (there is no federal nexus). In response to feedback received at our first meeting on Sept. 13, 2018, the site boundary was re-designed to avoid known culturally sensitive areas such as the Jeffers Petroglyphs site and Red Rock Prairie Observatory.
- Goal of minimizing impacts to tribally sensitive areas, and learning from tribal representatives about those areas.
- Providing an overview of the construction process, as well as the decommissioning process, confirming that land will be restored to its previous condition at the end of the project lifespan
- Discussed noise – the wind turbines are not expected to be audible at the ridgeline. Estimated sound from the wind turbines at that distance will be approximately 15 dBa, which is quieter than ambient noise such as leaves falling (30 dBa), and much quieter than noise from the nearby quarry and roads (40+ dBa). (See attached meeting slide on sound for details)
- A map of the project area and preliminary layout of possible turbine locations

A brief break was taken for lunch provided by a local café. During lunch, Mark Greenig (Jacobs) presented a visual simulation of what the turbines could look like from various points along the ridgeline. As illustrated through the simulation, turbines are not expected to be visible from the two observatories, however, Mark indicated there is a small possibility that the tips of turbine blades could be seen depending on the height of the turbine used, and final siting decisions. From two other areas along the ridge, including public areas at Jeffers Petroglyphs, upwards of 30 turbines

## EXHIBIT E

could be visible at varying distances between 1.5 miles and 12 miles away. David Brieze (Jeffers) indicated that he can currently see turbines from the ridge that are over 20 miles away.

Lance Rom and Reuben Weston of QSI, who will be conducting the cultural surveys for the projects, gave a short presentation regarding the plans for cultural surveys within the project area.

- Discussed communication to date with MN State Historic Preservation Office (SHPO)
- Current plan for surveys:
  - Surveys will occur September to November of 2019
  - There is no set plan yet for the surveys, we're still taking input on exact process.
  - Separate tribal Traditional Cultural Property (TCP) surveys are not planned, however tribal representatives are invited to participate in the surveys to assist in identifying tribally significant sites. It may be possible to include tribal cultural staff in the archeological field survey crews as sub-contractors to QSI.
    - Several tribes expressed interest in this.
    - Brenna Gunderson said that Apex would welcome tribal participation and appreciates additional perspectives in the surveys, and stated that there may need to be a financial and practical limit to how many tribes can participate as sub-contractors but we welcome others' thoughts and ideas.
    - Tribes interested in participating in the surveys need to let QSI know by September 2, 2019.
  - An Ethnography/Oral History Study is planned for August 2019, to be completed prior to field surveys.
    - Warren Buck Elk and Reuben Weston will conduct elder interviews and oral history collection visits in August with elders/THPO's who wish to participate.
    - The purpose of this Oral History Study is to identify potential impacts the project could have on TCPs, and gain a better understanding of Native American perspectives of the spiritual significance of this area.
    - The confidentiality and dissemination of this report will be controlled by the THPOs.

An open discussion of questions and concerns occurred throughout the presentation. *This list cannot capture every comment that was made or thought that was expressed, but is intended to provide a summary of as many key points as possible.*

Dr. Erich Longie (Spirit Lake THPO) spoke of micro-siting on various other projects and the benefits and challenges of that methodology. He expressed skepticism as to the methodology of QSI's cultural surveys and possibly the tribal cultural resource specialists working with them at the same time.

- Dr. Longie raised the concern that his goal in attending was to protect tribal sites and if this meeting does not help accomplish that, it is not a good use of time.
  - Lance Rom (QSI) responded that his experience working with Apex on previous projects with tribal cultural resources specialists was one that provided positive outcomes.
- It can be cost-saving to micro-site, but you can miss the overall picture.
- Erich was under the impression that there would not be a TCP study conducted.
  - Lance (QSI) interjected and said the TCP study would occur during the Phase I cultural resource inventory.

## EXHIBIT E

- Erich stated that the Spirit Lake tribe would not participate in the field surveys. He is satisfied if there are tribes closer that take the lead.

Diane Desrosiers (Sisseton Wahpeton THPO) spoke of the benefits of having a Level III cultural resource inventory conducted at the same time as a TCP survey.

- Importance of Oral History as the names of places and features have been labeled something else. The Dakota names are not the same as English names for places.
  - Pete Coffey (MHA Acting THPO) said we need to do cultural surveys to figure this out.
- Said that there are lots of benefits she has seen to working together with QSI and Apex at the same time for surveys; for example, engineers may be present to view the cultural resources and assist in changes to avoid cultural resources
- QSI does good work
- Sites are identified, both archeological and TCPs when working together
  - Jana Morehouse (QSI) mentioned that they will include those with local knowledge in the surveys, including members of the RRRRG
- Is interested to see if a tribe can be subcontracted
- They do not agree with predictive modeling
- Visual and audible impacts are not less important than direct impacts

Randy Teboe (Winnebago THPO)

- Were cultural surveys done in the past?
  - Lance (QSI) answered that the record search shows that they were done on a limited scale, not for the Big Bend Wind project.
- Previously disturbed, plowed field does not mean there is no cultural material present. We have previously found artifacts 10 feet below the surface on disturbed land.
  - Jennie Geiger (Apex) responded that she will be writing an unanticipated discoveries plan (UDP).
    - Our goal is avoidance of tribally significant sites. We will avoid natural prairie, calcareous fens, and significant biodiversity sites as discussed and agreed upon with U.S. Fish and Wildlife Service and MN Department of Natural Resources.
- Interested in Oral History and having his tribe represented. How are they chosen?
  - Reuben (QSI) told him that QSI would be contacting tribes to see if they have interest.

Garrie Kills a Hundred (Flandreau SST THPO)

- His desire is to see a TCP survey conducted.
- He asked if there would be an avoidance buffer placed around any sites located?
  - Lance (QSI) answered there would be protection measures put in place (e.g., fencing) during construction to ensure the sites would not be impacted
- He inquired if GPR LiDar would be utilized.
  - Lance (QSI) answered if there was a particular reason those methodologies were needed, they could be used, but that's not currently planned.
- He inquired on the methodology QSI would use during the inventory?
  - Lance answered that on-the-ground inventories would be completed using 15 m transects per SHPO standards.
- How are constellations and the visual to the moon going to be affected by the turbines? Red lights at night will be a major visual impact

## EXHIBIT E

- Brenna (Apex) responded that if FAA approves new ADLS technology, lights will only turn on at select times when aircraft are approaching. The Minnesota PUC is also beginning to expect this as part of their permitting process, and Apex expects that they will use this technology for the project (as long as it's approved and available).
- What studies are being conducted to protect birds and wildlife?
  - Jennie (Apex) answered that raptor nest surveys were completed in spring 2018 and 2019, Avian/eagle use surveys are underway and continue through March 2020. Apex is working with MN Dept. of Natural Resources and US Fish & Wildlife Services to minimize/avoid potential impacts to wildlife (e.g., a 1.6 mile setback from any eagle nests)
- Would like contact information for people involved in environmental survey from federal standpoint

Samantha Odegard (Upper Sioux THPO) was concerned with visual effects of the proposed turbine locations. She said there will be visual impacts to known sites.

- Samantha suggests a five-mile buffer from Red Rock Ridge and Jeffers Petroglyphs
- She suggests that Apex obtain a list of tribes that are interested in Pipestone Natl. Monument and use that list to see if any of those tribes have interest in oral history
  - QSI stated that they will include these tribes in invitations to participate.
- Samantha has been to the site. From there you can see wind turbines that are located just north of Granite Falls from the town of Watson, which is about 20 miles away
- Visual may be the biggest effect and is main concern to focus on
- She is aware of elders that currently use the area for ceremony

Terry Kemper (Mille Lacs Asst. THPO)

- Only the tribes have the knowledge on TCPs and oral history. Agrees with conducting oral history but also warns that not all knowledge can be shared.
  - Reuben (QSI) responded – we will maintain confidentiality and THPOs will have final say over what can be shared from elder interviews and oral history.
- Archeology fails in looking at specific sites.
  - Archeological sites are spiritual sites and have connections to the universe.
  - Stated that Native Americans look at the spiritual whole area, not at specific sites.
  - We are unique. Let us come on the ground to help understand what our culture is about. Connections to stars, wind.
  - Wants tribes to do cultural surveys of their own.
  - Tribes are on their 4<sup>th</sup> journey across the continent. All sites are interconnected. Graves can be connected to others 100s of miles away. On the ground it's a learning process for us all
  - Wind farm will cause cultural damage. When we get on the ground we will preserve whatever damage you do.
- Stated that money should not be brought up in relation to this project, because the tribes know that money is a limiting factor, but this site and protecting it is more important than money
- Agrees with Erich and Randy sites can and do still exist within plowed fields.

Monte Lovejoy (Flandreau SST)

- Asked if bees/insects were considered in studies, specifically in terms of impacts from turbine vibrations

## EXHIBIT E

- Jennie (Apex) responded that these were not a concern of the agencies for this site (DNR or USFWS), does not know of any evidence that bees/insects are negatively impacted by vibrations from wind farms
- Said 15m transects was far too spaced apart to see anything
- How will 70 to 140 lights affect night skies?

Chuck Broste (Jeffers)

- Working at Jeffers for 11 years changes perception of what it is as a site and a landscape – it is a special sacred place
- Dakota Elders visited the site and discussed with them names for the location, realized one name could have been ‘quarry’, Chuck and Tom then found a quarry site
- Stated that Bob Larsen (member of Lower Sioux Tribe and Red Rock Ridge Research Group) discussed with Chuck that they just know the tip of the iceberg

Brenna Gunderson and Max Jay-Dixon (Apex) thanked attendees for their engagement and valuable input, and discussed timeline and next steps going forward.

- Brenna mentioned that this meeting is very encouraging, and a big challenge going forward is how to involve all of the tribes – we need to work together to make this process work.
- Apex will send out a meeting summary with the slide presented during this meeting (this document)
- Apex plans to file application documents with the Minnesota PUC in December 2019.
  - This permitting process will involve an EIS in mid-2020
- Cultural surveys will take place immediately after the fall harvest (expected October). It was reiterated that tribes interested in participating in the field surveys need to let QSI know by September 2, 2019.
- Reuben Weston and Warren Buck Elk will contact tribes regarding elder interviews
- Additional comments and feedback that were not shared at this meeting should be sent by September 2<sup>nd</sup>, 2019 to ensure Apex has this prior to fall field surveys.

Warren Buck Elk offered a closing prayer, and the meeting was adjourned.

For more information, please contact:

Warren Buck Elk (Tribal Liaison, QSI) (605) 858-9668 | [wbuckelk@qualityservices.us.com](mailto:wbuckelk@qualityservices.us.com)

Reuben Weston (Tribal Liaison, QSI) (605) 407-1220 | [rweston@qualityservices.us.com](mailto:rweston@qualityservices.us.com)

Dylan Ikkala (Project Mgr.) (484) 364-9298 | [dylan.ikkala@apexcleanenergy.com](mailto:dylan.ikkala@apexcleanenergy.com)

Jennie Geiger (Envir. Perm.) (720) 320-9450 | [jennie.geiger@apexcleanenergy.com](mailto:jennie.geiger@apexcleanenergy.com)

Brenna Gunderson (Director) (434) 326-2929 | [brenna.gunderson@apexcleanenergy.com](mailto:brenna.gunderson@apexcleanenergy.com)

### Contact information for state agencies relating to this project

Minnesota Dept. of Natural Resources: Cynthia Warzecha, [Cynthia.warzecha@state.mn.us](mailto:Cynthia.warzecha@state.mn.us)

US Fish and Wildlife Services: Mags Rheude, [Margaret.Rheude@fws.gov](mailto:Margaret.Rheude@fws.gov)

State Historic Preservation Office: Kelly Gragg-Johnson, [Kelly.graggjohnson@mnhs.org](mailto:Kelly.graggjohnson@mnhs.org)



## **Big Bend Wind and Red Rock Solar**

**July 17, 2019**





## Agenda

- **Opening Prayers by Spiritual Leaders or Elders**
- **Introductions**
- **Project overview**
- **Development status**
- **General wind farm information**
- **Preliminary layout**
- **Lunch Break**
- **Visual simulation of preliminary layout**
- **Other discussion topics**
  - Section 106
  - Archeological/TCP survey
  - Architectural survey
  - Open discussion from tribal members
- **Closing discussions**
  - Summary of take-away thoughts and ideas, what we've heard
  - Information on next steps
- **Questions/comments**
- **Closing Prayers by Spiritual Leaders or Elders**

## Goals

- **Receive feedback from Tribal leaders on preliminary layout to inform future changes to the Big Bend layout.**



# Company Overview

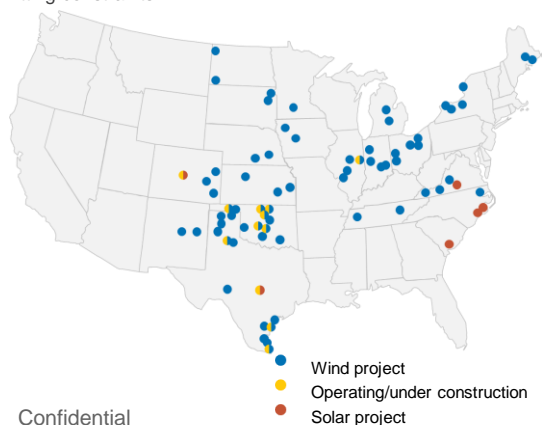
## Development Experience

Apex Clean Energy was formed in 2009 by an experienced team of wind energy development and financial professionals. Apex's management has collectively developed, financed, constructed, and managed more than \$10 billion in operating renewable energy facilities. Our team has a proven track record working with communities and landowners to develop state-of-the-art facilities that produce jobs, income for landowners, revenue for local government, and clean sources of domestic energy.

## Project Portfolio

Apex is developing a diversified portfolio of projects capable of supporting over 12,000 MW of onshore wind energy capacity. Projects are located throughout the country, including the PJM, SPP, MISO, ISONE, WECC, SERC, and ERCOT energy markets. The development of these projects focuses on identifying risk and potential fatal flaws early in the development cycle and on mitigating this risk in a cost-effective manner. Apex has assembled the largest wind development pipeline of projects in the country and was the leading wind development company with respect to capacity brought online in 2015.

Apex's wind energy projects are generally rated between 50 and 500 MW and can involve hundreds of landowners. Our project locations are selected carefully in order to optimize wind resource, ensure access to scarce transmission, and mitigate potential permitting constraints.



## Operating Projects



Canadian Hills Wind,  
Oklahoma



Hoopeston Wind,  
Illinois



Balko Wind, Oklahoma  
300 MW, 2015



Cameron Wind, Texas  
165 MW, 2015



Kay Wind, Oklahoma  
300 MW, 2015



Kingfisher Wind,  
Oklahoma  
298 MW, 2016



Grant Wind, Oklahoma  
152 MW, 2016



Grant Plains Wind,  
Oklahoma  
147 MW, 2016



Cotton Plains Wind / Old  
Settler Wind / Phantom Solar,  
Texas  
202 MW, 2017



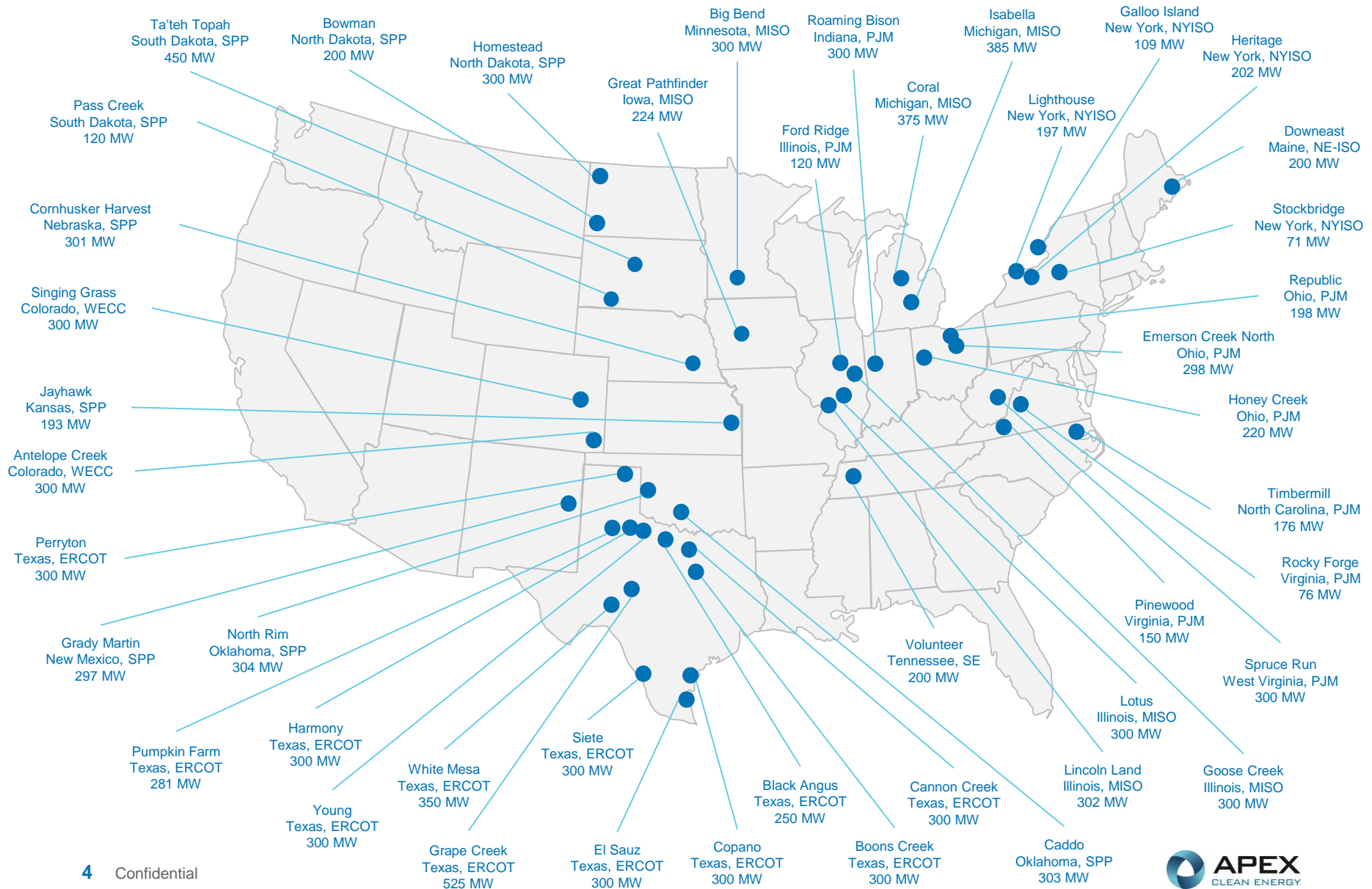
Chapman Ranch Wind,  
Texas  
249 MW, 2017

## Apex Team

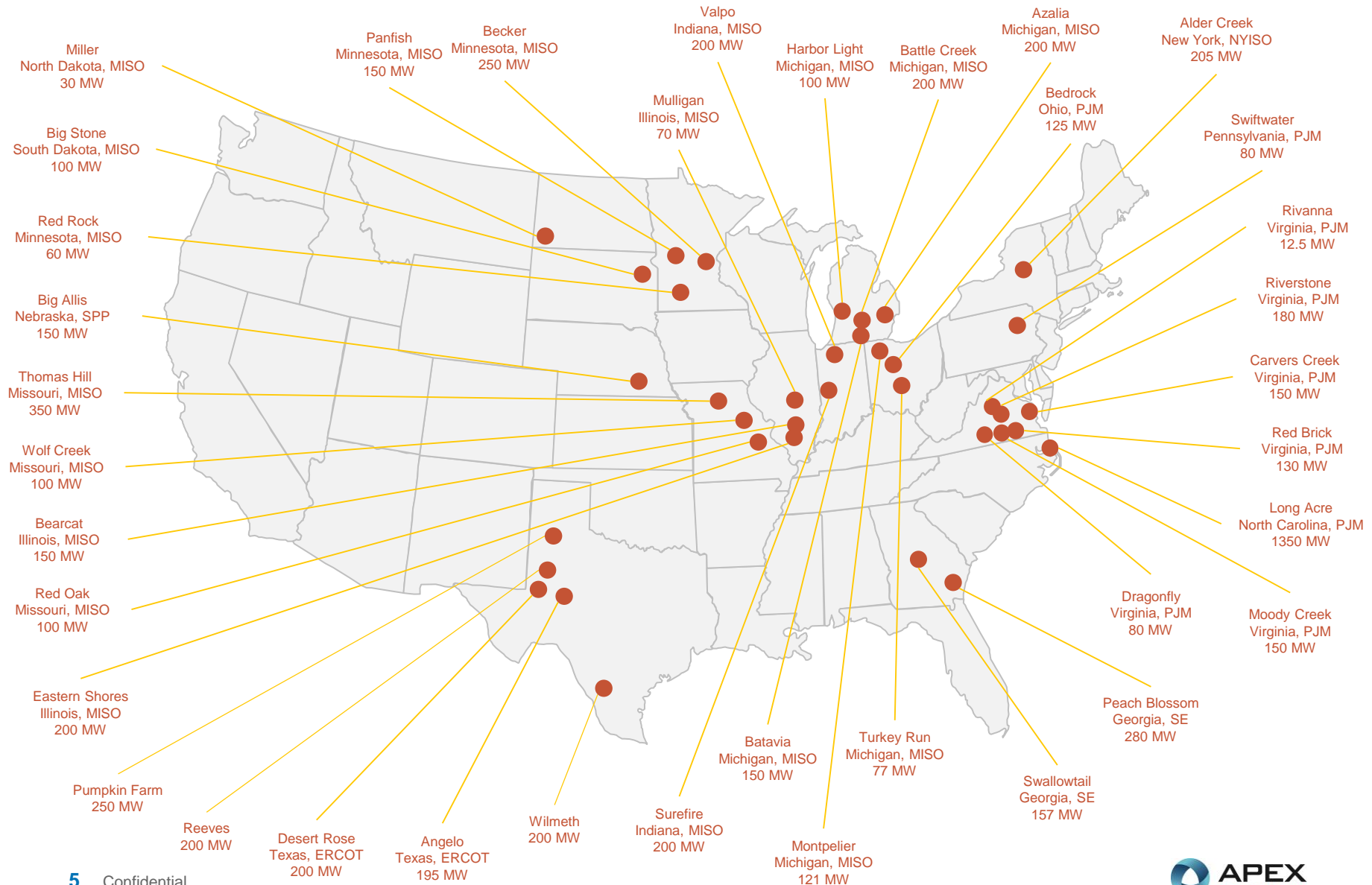
The Apex team of over 200 professionals is organized into experienced internal departments, including geographic information systems, wind resource assessment, land management, transmission and interconnection, public affairs, turbine procurement, financial modeling, project finance, construction and engineering, and legal counsel. This gives Apex the capability to manage renewable energy development from site selection and resource analysis through financing and construction. These departments work together to identify projects with strong fundamentals and carry them through to commercial operation.



# Apex Wind Development Projects



# Apex Solar Development Projects



# Big Bend Wind: Overview

**Big Bend will generate clean electricity and local economic benefits and support the local farming community.**

## Project Drivers

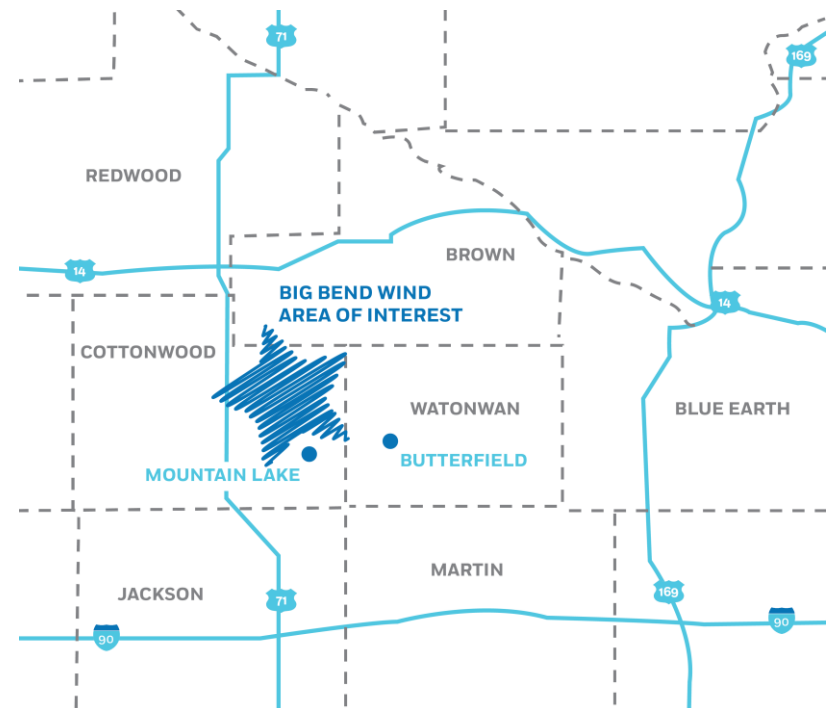
- Demand for clean energy
- Verified wind resource
- Strong community support
- Existing highways and transmission lines

## Project Summary

- Considering a maximum of 335 MW (powering over 100,000 homes annually)
- Projected to be 70 to 140 wind turbines. This range is from geographical constraints, price of technology, and siting restrictions.
- Developed across 30,000 acres of private farmland

## Project Schedule

- 2019: Complete environmental studies, begin permitting
- 2021: Start construction and operations



# Red Rock Solar: Overview

## Project Drivers

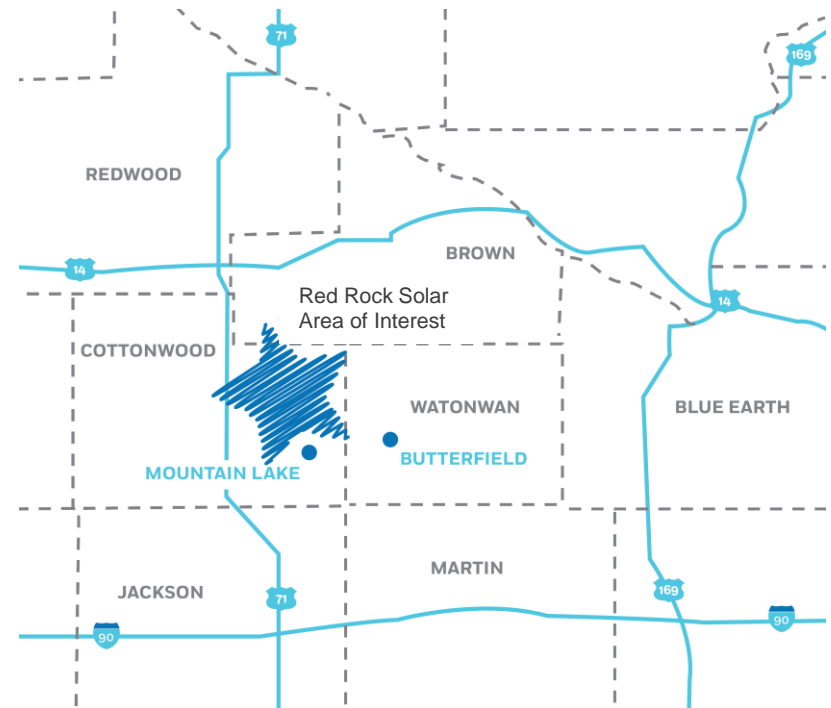
- Demand for clean energy
- Verified solar resource
- Strong community support
- There is a large market for selling the solar energy
- Existing highways and transmission lines

## Project Summary

- Considering a maximum of 80 MW
- Will require ~800 acres of buildable area for solar panel array
- Will not be a stand-alone project since it will share facilities with Big Bend Wind

## Project Schedule

- 2019: Complete environmental studies, begin permitting for solar
- 2021: Start construction and operations





# What's Happening Now?

- **Leasing Effort:** 100% site control needed for project including wind leases, underground collection easements, and good neighbor agreements. Main focus is to secure easements for overhead transmission line.
- **Preliminary Layout:** Working with wind resource to put together a legitimate preliminary layout. Looking for tribal feedback on layout for future changes.
- **Stakeholder Input:** Listen to landowners, community leaders, tribal members, and the public and respond to their questions/concerns.
- **Permitting:** Beginning to prepare for MN PUC permitting process. Goal is to file the applications at the end of 2019. Big Bend and Red Rock will be seeking their own permits.
- **Environmental Surveys:** Continuing avian and bat surveys, cultural surveys, and wetland surveys to inform siting.
- **Power Marketing:** Secure a purchaser for the power.



# Big Bend and Stakeholder Goals

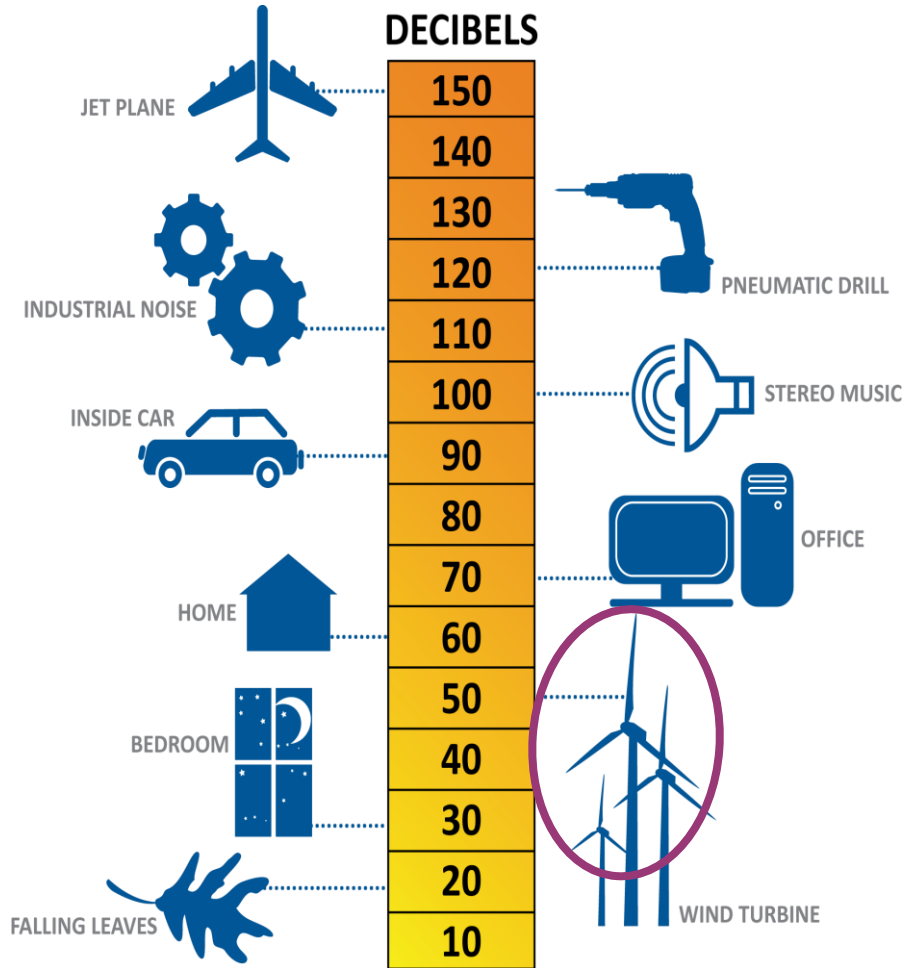
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- Apex's goal is to build a project that benefits the community and the environment, while minimizing impacts to various site characteristics.
- Apex is reaching out to all stakeholders, including interested tribes, to understand and address potential concerns with the development of this project.
- Apex has an obligation to landowners who have voluntarily decided to participate in the project.

***NOTE: Big Bend Wind will be built solely upon private land and no federal nexuses are anticipated.***

- Apex is voluntarily seeking input from tribes with ties to the project area to identify sites/areas that are tribally important and warrant consideration in our siting decisions to ensure they are considered in project design.

# Turbine and Solar Panel Sound Levels



- Modern wind turbines do produce some audible and inaudible sound, but this sound is emitted at levels so low that it should not impact nearby residents in any way.
- The sound produced by properly functioning turbines comes from the motion of their blades cutting through the air, not the mechanical components of the turbine generator box.
- Evidence demonstrates that when turbines are sited according to Apex's internal standards, the audible sound they generate is no louder than a refrigerator.
- At the Jeffer's Petroglyphs site, turbines will be quieter than ambient noise, especially the noise of the nearby quarry and road.
- Solar panels have no moving parts, so they do not produce any sound on their own. The inverters generate a low decibel "hum" during daytime operations. Sound becomes completely inaudible at 50-150 feet away.



# Construction

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## Time Frame

Construction of a typical wind farm takes 6 to 9 months from start to finish.

Solar will take 10 months.

## Roads

Project access roads and local road improvements are made before turbine components arrive, then are maintained and repaired as needed. Haul roads are designated and agreed upon by the county to allow for the heavy machinery and equipment to enter the wind farm site.

## Site Plan Review

Apex meets with individual landowners prior to construction to go over the facilities being sited on their property. This is an opportunity for the landowner to provide feedback and inform siting.

## Cultural Surveys

After completion of the cultural surveys, stakes or fences are placed around areas of cultural significance to prevent impacts during the construction process.



# Operations

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## **Project Life**

Wind turbines are certified to operate for 25 years before requiring repowering which can extend the life another 25 years. Solar panels are certified to operate for 40 years.

## **Local Project Representative**

A local operations & maintenance building provides access to project management for the life of the project.

## **Local Maintenance and Crew**

A crew of technicians (6 to 8 per 100 MW) will routinely inspect and conduct maintenance on the wind turbines. Solar facilities do not require as much maintenance and generally contract the work out to maintain the site.

## **Turbine and Solar Panel Cleaning**

Wind turbines and solar panels are routinely cleaned to maintain appearance and efficiency of the technology.

## **Road Repair**

Project access roads and local roads are repaired of any damage caused during construction or operations.



# Decommissioning

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- **Project decommissioning construction practices**

- Wind turbines, first 4 ft of foundations, electrical components, roads, and associated facilities will be removed.
- The Project substation will be completely decommissioned.
- Decommissioning will start soon after the end of Project operating life.
- Decommissioning work is performed in generally conducive weather conditions.
- After all material and debris have been removed, the site will be regraded to preconstruction conditions and natural drainage patterns.
- Salvaged sub-soil will be replaced and capped with topsoil and salvaged organic material will be added in required areas.
- Impacted land will be restored to preconstruction vegetation and soil conditions.
- Input of landowners will be considered as to the extent of decommissioning that will be undertaken on their land.

# Preliminary Layout

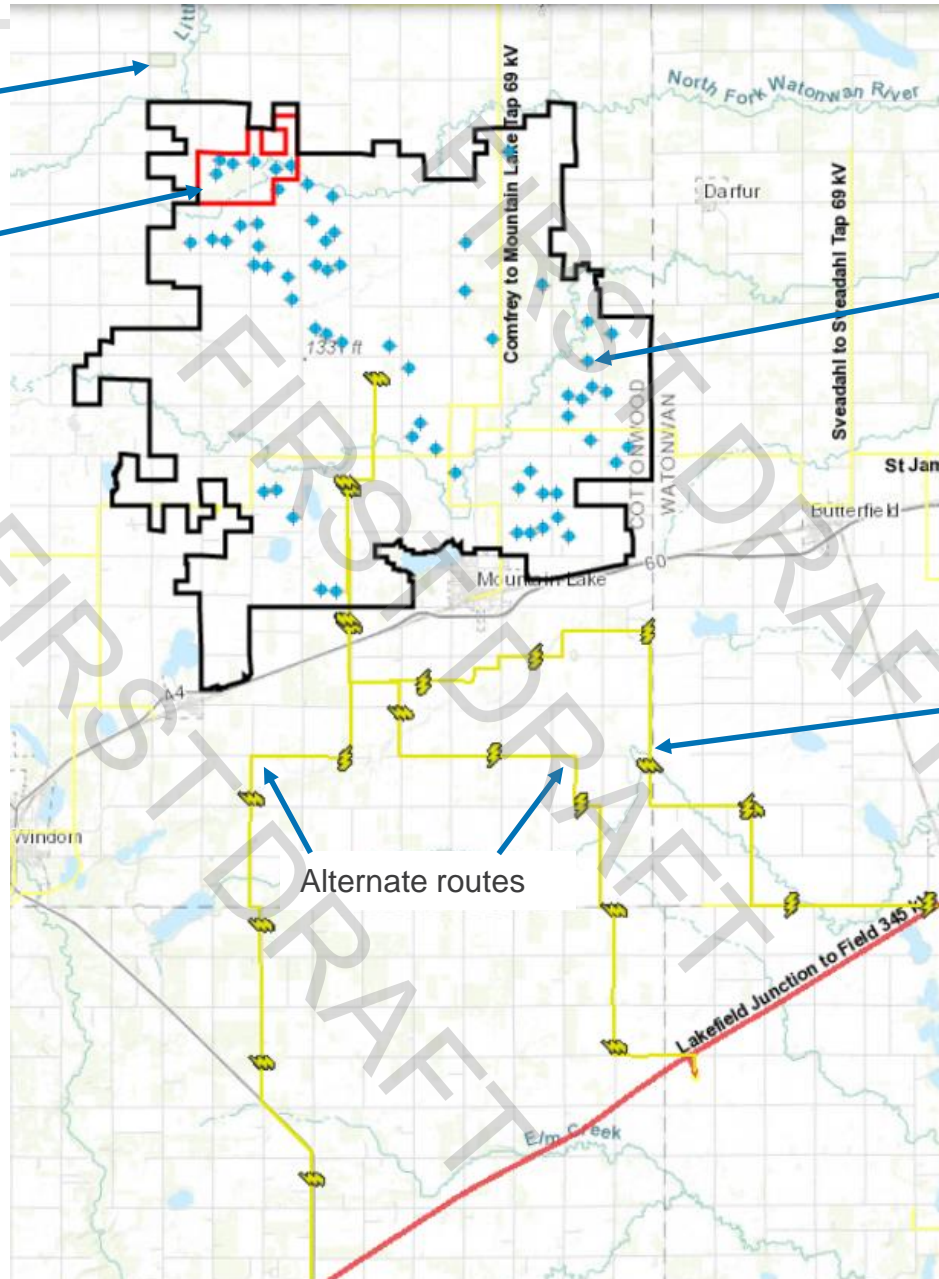
Jeffer's  
Petroglyphs  
State Historic  
Site

Red Rock Solar

Potential turbine  
location

Primary  
Overhead  
Transmission  
Route

**Note:** This is just a first draft of the layout and we are looking to receive feedback from Tribal leaders on preliminary layout to inform future changes to the Big Bend layout.






**Lunch Break**

# **VISIBILITY OF THE PROPOSED BIG BEND WIND PROJECT IN THE VICINITY OF RED ROCK RIDGE AND JEFFERS PETROGLYPHS**

**Mark Greenig  
Jacobs  
July 17, 2019**

# 1. WHAT IS DETERMINED IN A VISIBILITY ASSESSMENT?

- ▶ Identify specific sensitive viewing locations (where people have concern related to changes in a viewed landscape).
  - ▶ Determine where a proposed project would be seen (the viewshed).
  - ▶ Develop accurate photo-simulations of a proposed project.
  - ▶ For this presentation we focused on areas along Red Rock Ridge in the vicinity of Jeffers Petroglyphs.
- 
- A series of white diagonal lines of varying lengths and thicknesses are positioned in the bottom right corner of the slide, creating a modern, abstract graphic element.



## 2. IDENTIFY SPECIFIC SENSITIVE VIEWING LOCATIONS

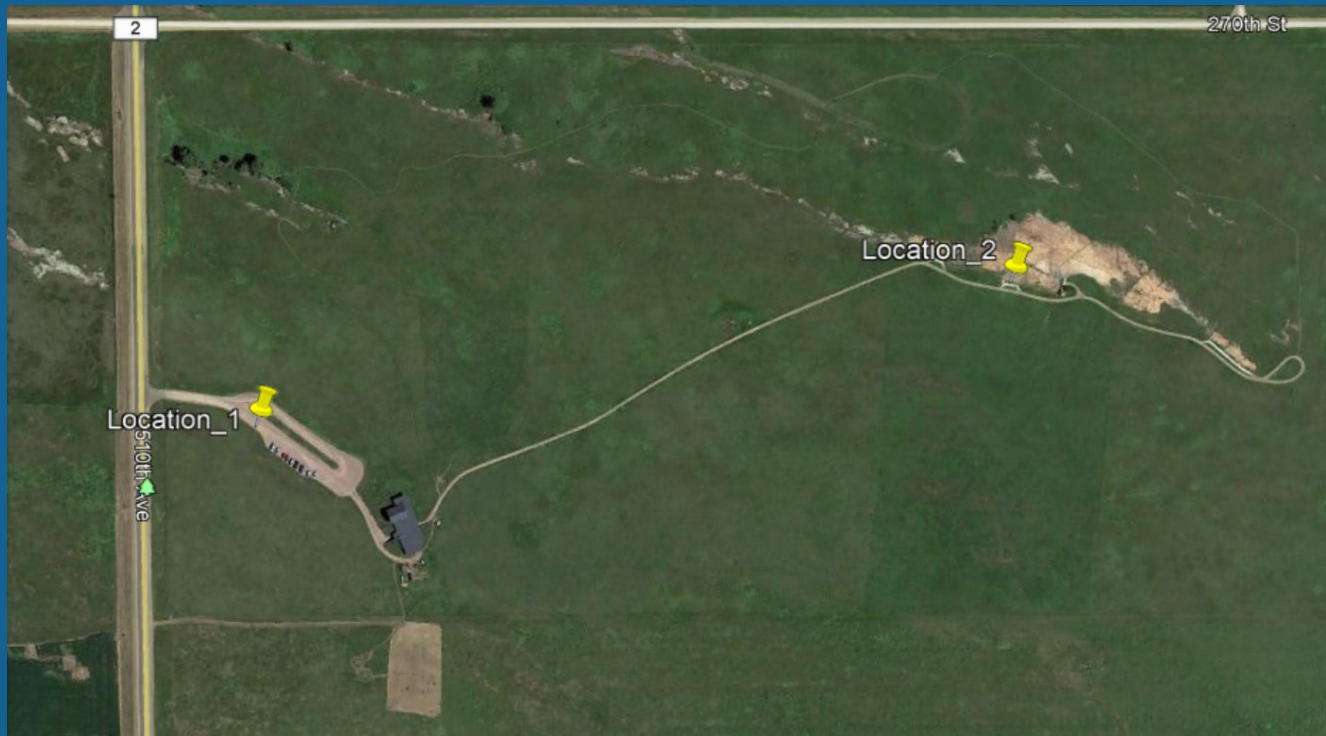
WE IDENTIFIED 3 LOCATIONS AND 2 SENSITIVE CULTURAL AREAS IN THE RED ROCK RIDGE AREA TO VISIT AND USE TO EVALUATE THE PRELIMINARY PROJECT WIND TURBINE LAYOUT





## 2. IDENTIFY SENSITIVE VIEWING LOCATIONS

### LOCATIONS 1 AND 2: JEFFERS PETROGLYPHS



## 2. IDENTIFY SENSITIVE VIEWING LOCATIONS

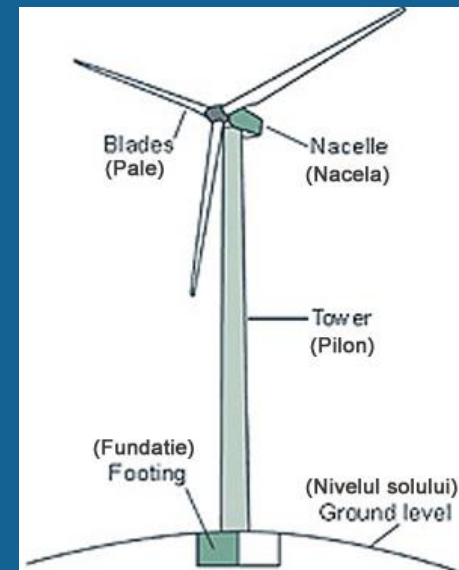
**LOCATION 3:** NATURE CONSERVANCY PROPERTY RIDGETOP EAST OF JEFFERS  
PETROGLYPHS



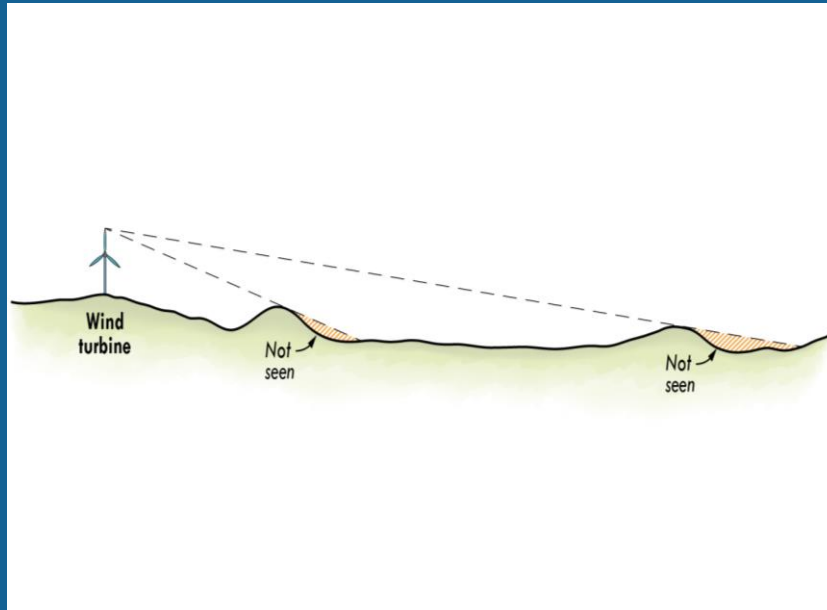
### 3. DETERMINING AREAS WHERE WIND TURBINES WOULD BE POTENTIALLY SEEN

We use geographic information system (GIS) staff to establish where a project would be potentially visible from.

For the preliminary project wind turbine layout we assumed that the height from the ground to the top of the wind turbine blade would be 570 feet.

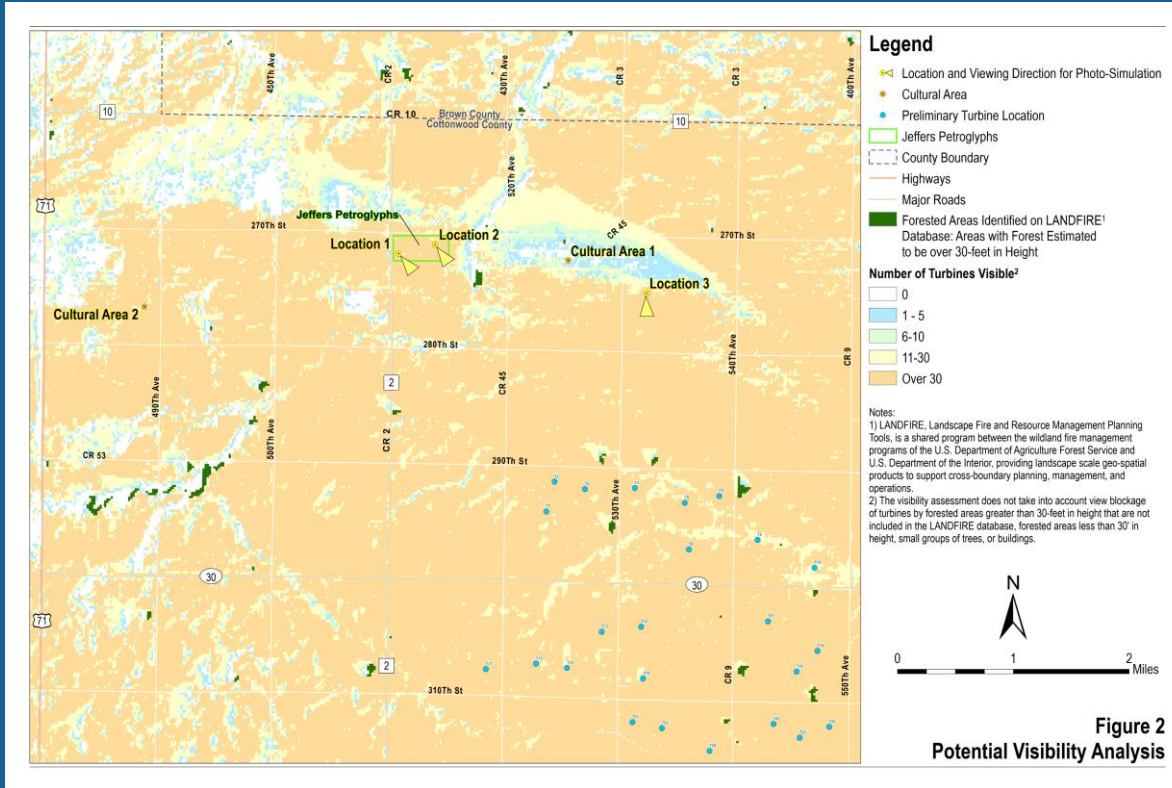


### 3. DETERMINING AREAS WHERE WIND TURBINES WOULD BE POTENTIALLY SEEN

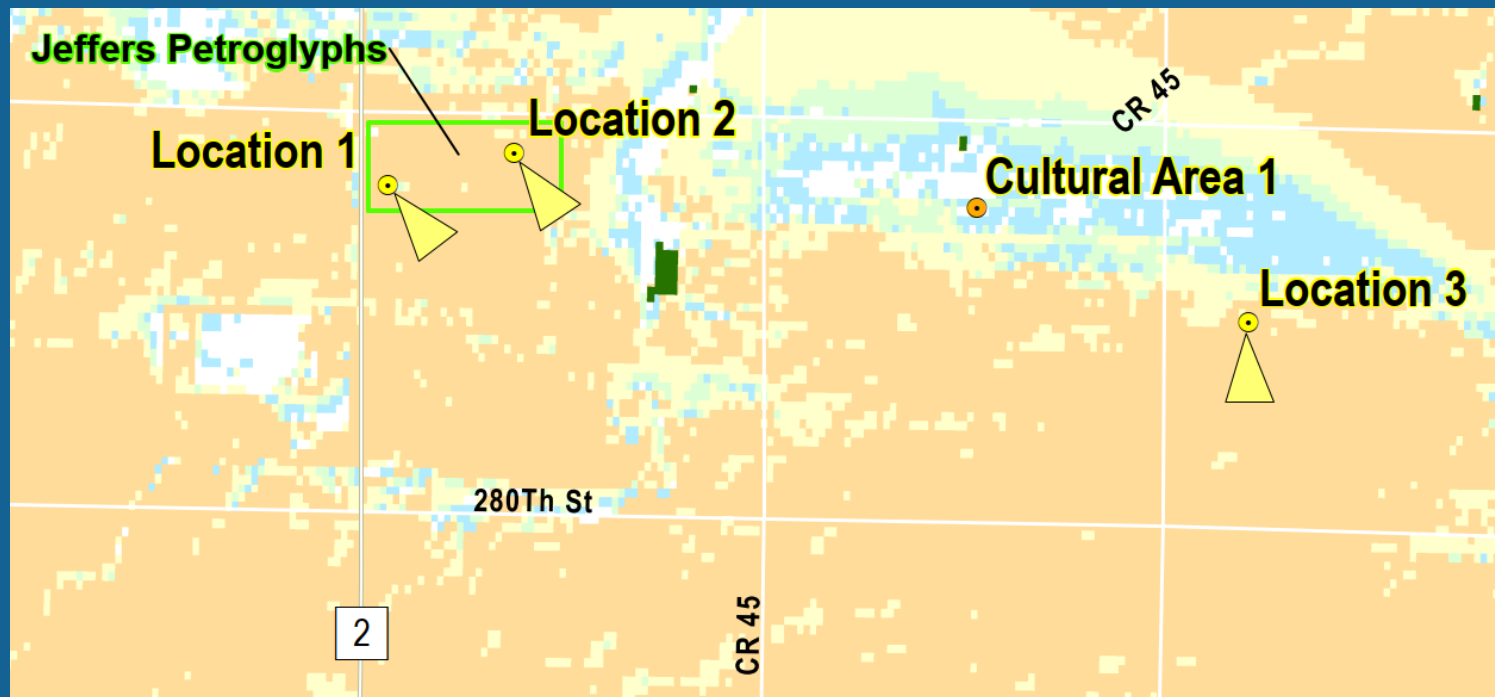


- ▶ The visibility assessment used a line-of-sight model based on topography.
- ▶ Visibility was measured from the top of the turbine blade at maximum rotation.
- ▶ View blockage by most vegetation and structures was not considered, nor were atmospheric conditions.

### 3. DETERMINING AREAS WHERE WIND TURBINES OF THE PRELIMINARY PROJECT LAYOUT WOULD BE POTENTIALLY SEEN

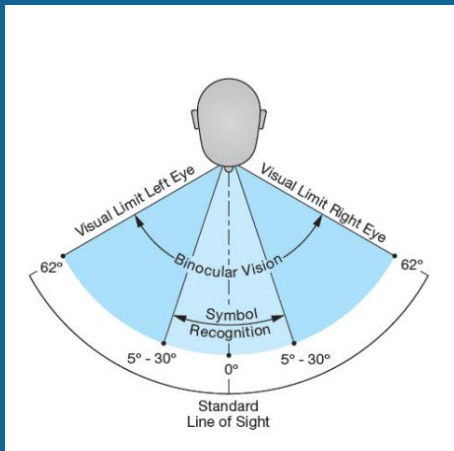


### 3. DETERMINING AREAS WHERE WIND TURBINES OF THE PRELIMINARY PROJECT LAYOUT WOULD POTENTIALLY BE SEEN



## 4. DEVELOPING ACCURATE PHOTO-SIMULATIONS

- ▶ Starts with taking photographs from which to develop the photo-simulations that represent what the human eye sees in a landscape.
- ▶ Use 35 mm cameras with 50mm lens calibrated to match the view cone (about 60 degrees) or field of view of the human eye (the width seen by the human eye).







## **EXAMPLE PROJECT**

### **STEP 1 OF 6**

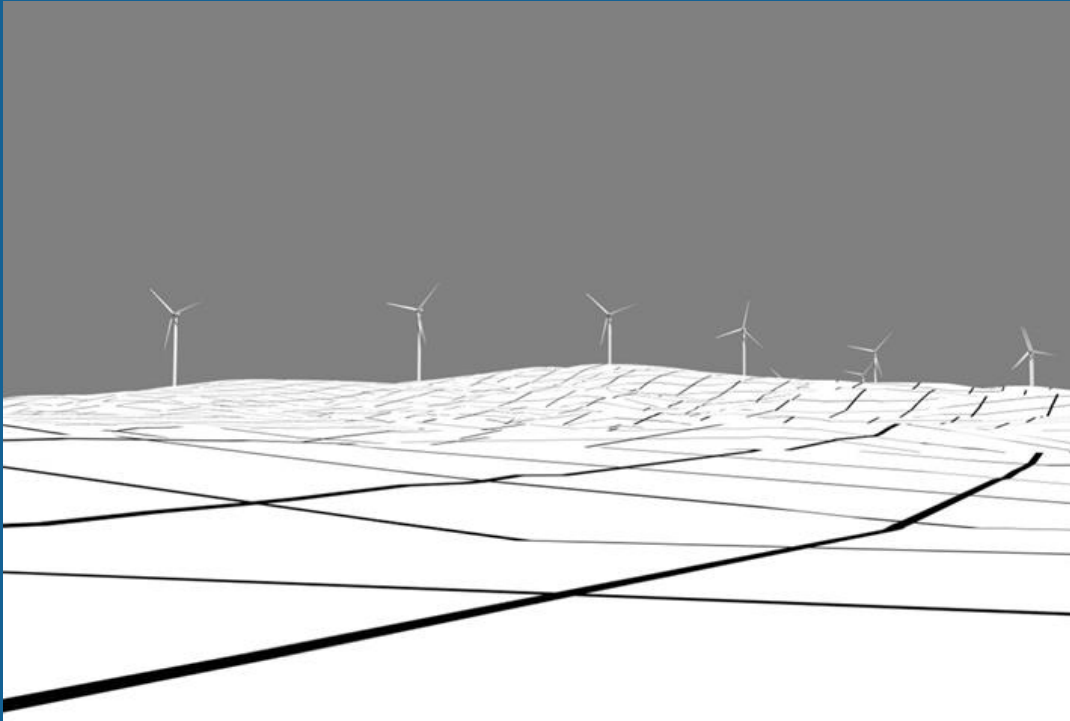
- Photograph is taken using a digital single-lens reflex 35-millimeter (mm) camera set to take photos with a focal length equivalent to a 50-mm lens.
- This setting is the generally accepted setting for visual assessment in that it captures views in a way that closely resembles what the human eye sees in a landscape.





## STEP 2

- Location of the photograph and view angle are located as geographic information system (GIS) data (shown here on an aerial photograph).
- Turbine location information and topographical contour data for the area of the Proposed Action are extracted from GIS.



### STEP 3

- With the digital location of the photograph identified including correct elevation, the topographical features from the GIS data are used to align with the photograph following landforms of the data identical to what is visible in the photograph.
- In this example, the topographical features of the landforms are displayed as wireframe contour lines.



## STEP 4

- 3-D representations of turbines developed per model specifications and are located on the locations identified in the GIS data for each turbine (which includes correct base and top elevations of turbines).
- Once they are placed in correct geographical position, they are referenced to the camera viewing angle.



## STEP 5

- Turbines are rendered in shaded display using Photoshop or similar program
- This step includes the application of material characteristics for color as well as shadowing effects from sunlight direction.



## STEP 6

- The portions of turbines that would be screened by the ridgeline in the photograph are graphically edited out.
- This results in a final image representing an accurate photo-simulation.

## **5. PHOTO-SIMULATIONS OF WIND TURBINES OF THE PRELIMINARY PROJECT LAYOUT**





**LOCATION 1: PARKING LOT/ENTRANCE TO JEFFERS  
PETROGLYPHS VISITORS CENTER - EXISTING VIEW**



**LOCATION 1: PARKING LOT/ENTRANCE TO JEFFERS  
PETROGLYPHS VISITORS CENTER – PHOTO-SIMULATION**  
(CLOSEST TURBINE 2.4 MILES AWAY)





**LOCATION 2: BOARDWALK AT JEFFERS PETROGLYPHS -**  
**EXISTING VIEW**



**LOCATION 2: BOARDWALK AT JEFFERS PETROGLYPHS -**  
**PHOTO-SIMULATION** - (CLOSEST TURBINE 2.3 MILES AWAY)



**LOCATION 3: NATURE CONSERVANCY PROPERTY RIDGETOP  
EAST OF JEFFERS PETROGLYPHS – EXISTING VIEW**



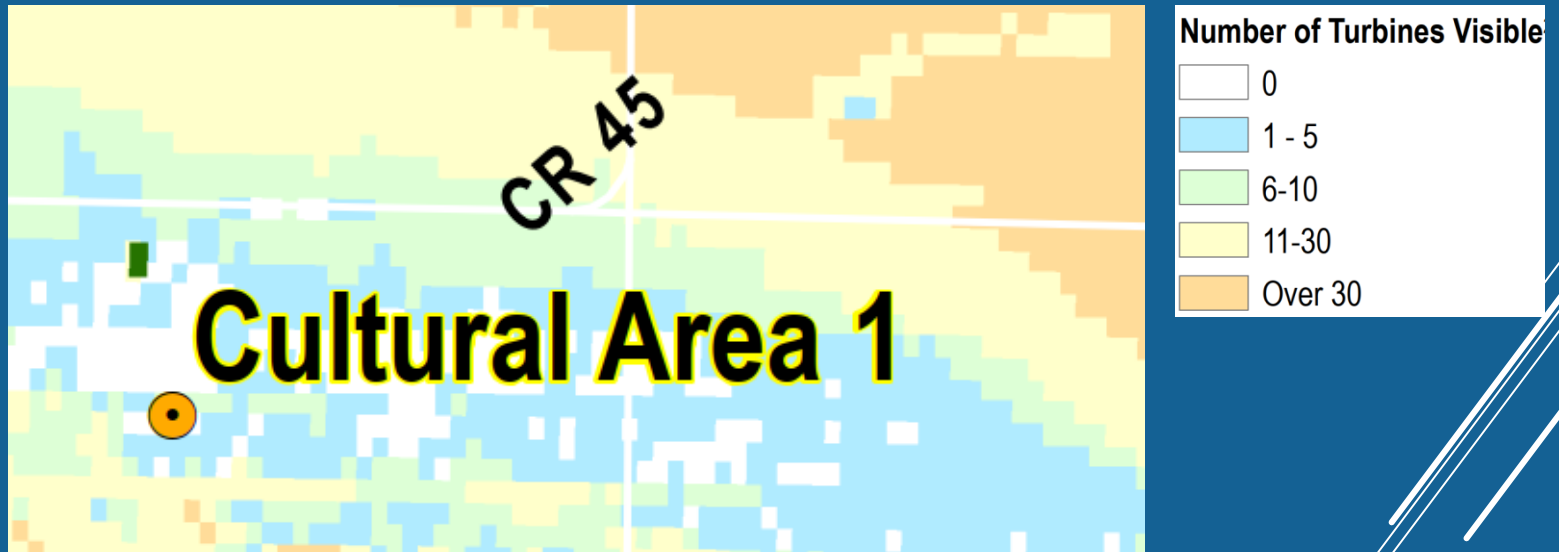


**LOCATION 3: NATURE CONSERVANCY PROPERTY RIDGETOP  
EAST OF JEFFERS PETROGLYPHS – PHOTO-SIMULATION** (CLOSEST  
TURBINE 1.6 MILES AWAY)



# POTENTIAL WIND TURBINE VISIBILITY FROM CULTURAL AREA 1

VISIBILITY MAP



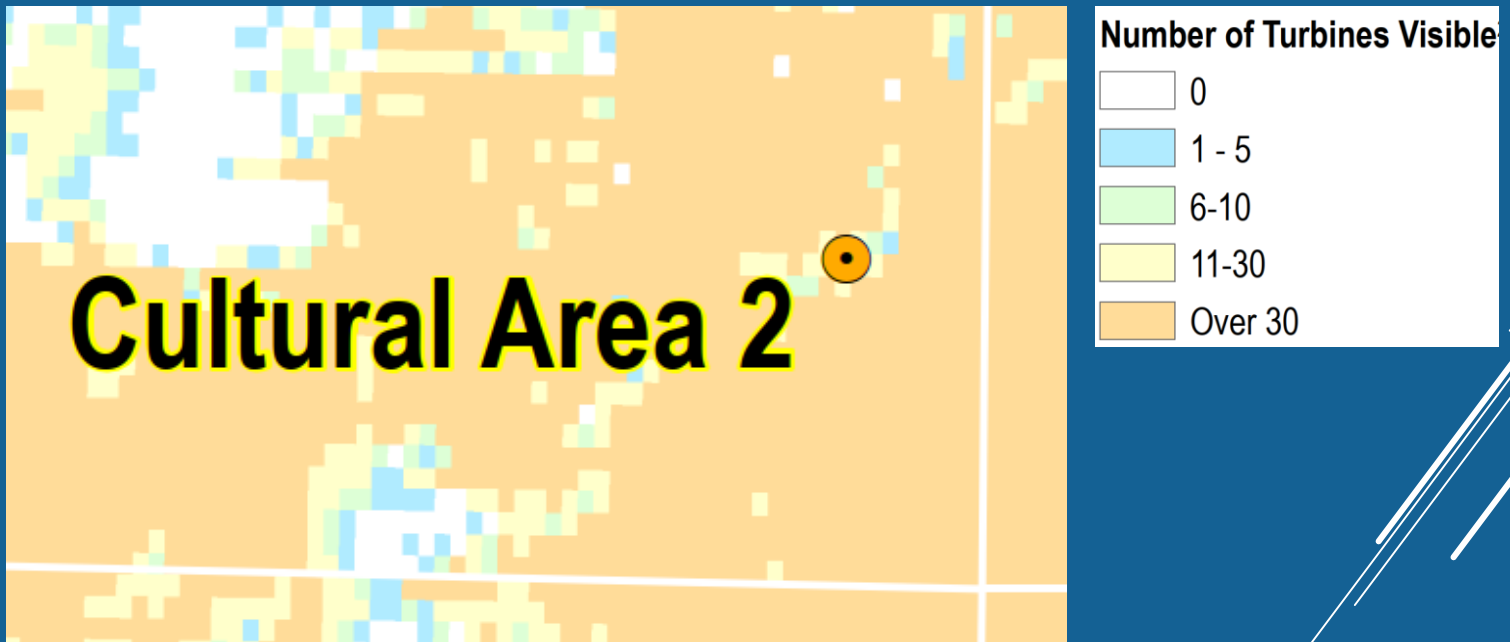
# POTENTIAL WIND TURBINE VISIBILITY FROM CULTURAL AREA 1

LOOKING SOUTH AND UP AT RIDGE BEHIND AREA



# POTENTIAL WIND TURBINE VISIBILITY FROM CULTURAL AREA 2

VISIBILITY MAP



# **POTENTIAL WIND TURBINE VISIBILITY FROM CULTURAL AREA 2**

LOOKING SOUTHEAST AND UP AT RIDGE BEHIND AREA





# Other Discussion Topics

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- Section 106
  - Project will be built entirely upon private land and no federal nexuses are anticipated.
  - Big Bend project is not being reviewed under NHPA Section 106.
  - Consultation with SHPO and MNSHS required as part of the Large Wind Energy Conversion System permit.
- Archeological/TCP survey
  - Phase 1A cultural resource records review completed in 2018-2019.
  - Field surveys are planned for September-November 2019.
  - Separate tribal TCP surveys are not planned, however it may be possible to include tribal cultural staff in the archeological field survey crews.
  - Cultural field surveys will be led by QSI in fall 2019 within areas of the initial layout deemed as high probability for cultural resources. Tribes interested in offering input in the process should let QSI know by September 2<sup>nd</sup>, 2019.

# Other Discussion Topics Continued

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- Ethnography/Oral History Study is planned for September to November 2019
  - Elder interviews by Warren Buck Elk and Reuben Weston
  - Oral history collection visits to elders/THPOs wishing to participate
  - Native language translators available to participate
  - Attempts to link TCP areas to oral history
  - Identify potential impact project could have on TCPs.
  - Gain better understanding of Native American perspective of spiritual significance of this area.
  - Data/Report confidentiality/dissemination to be controlled by THPOs

# Closing Discussion

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- Summary of take-away thoughts and ideas, what we've heard
- Information on next steps:
  - Additional feedback is needed by September 2<sup>nd</sup>, 2019.
  - Warren and Reuben will reach out to gather input and conduct interviews with tribal elders who are interested in participating.
  - Meeting summary will be sent to all tribes in the upcoming weeks.

# Thank You

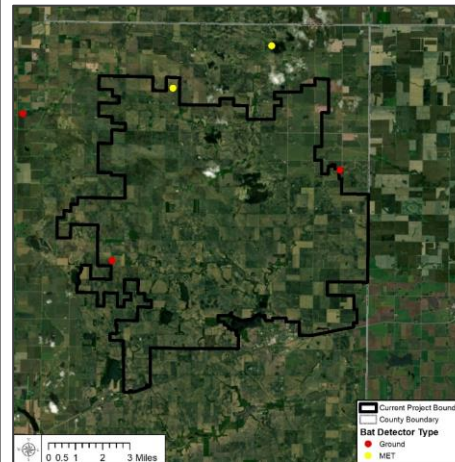
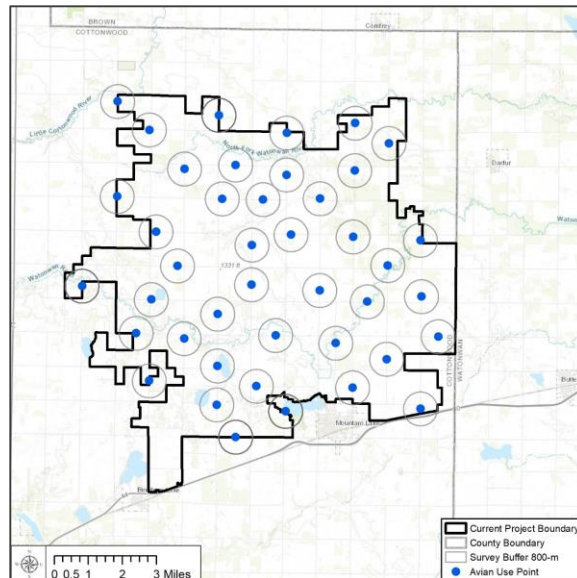
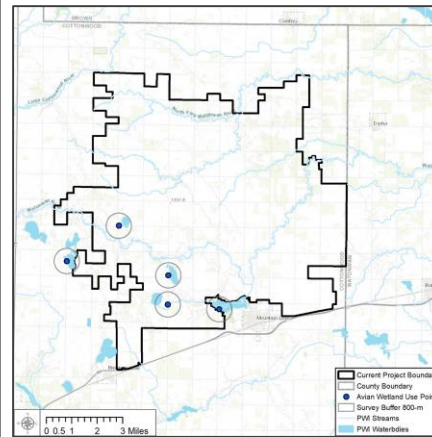
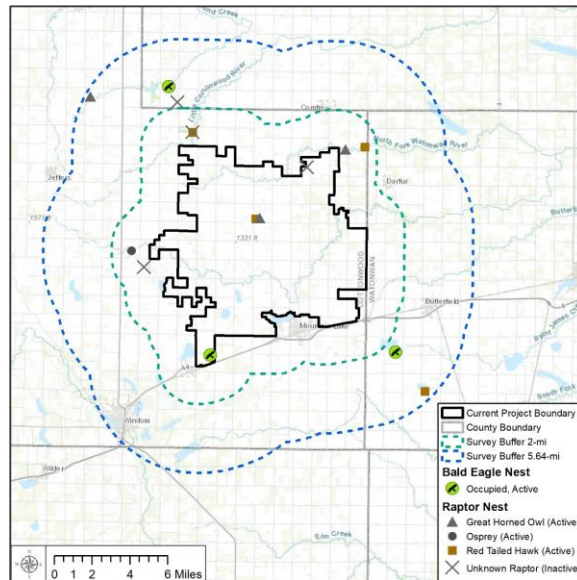


Please contact us for more information.



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Jennie Geiger (Envir. Perm.) (720) 320-9450 | [jennie.geiger@apexcleanenergy.com](mailto:jennie.geiger@apexcleanenergy.com)  
Brenna Gunderson (Director) (434) 326-2929 | [brenna.gunderson@apexcleanenergy.com](mailto:brenna.gunderson@apexcleanenergy.com)  
Bipin Thapa (507) 469-3379 | [bipin.thapa@apexcleanenergy.com](mailto:bipin.thapa@apexcleanenergy.com)

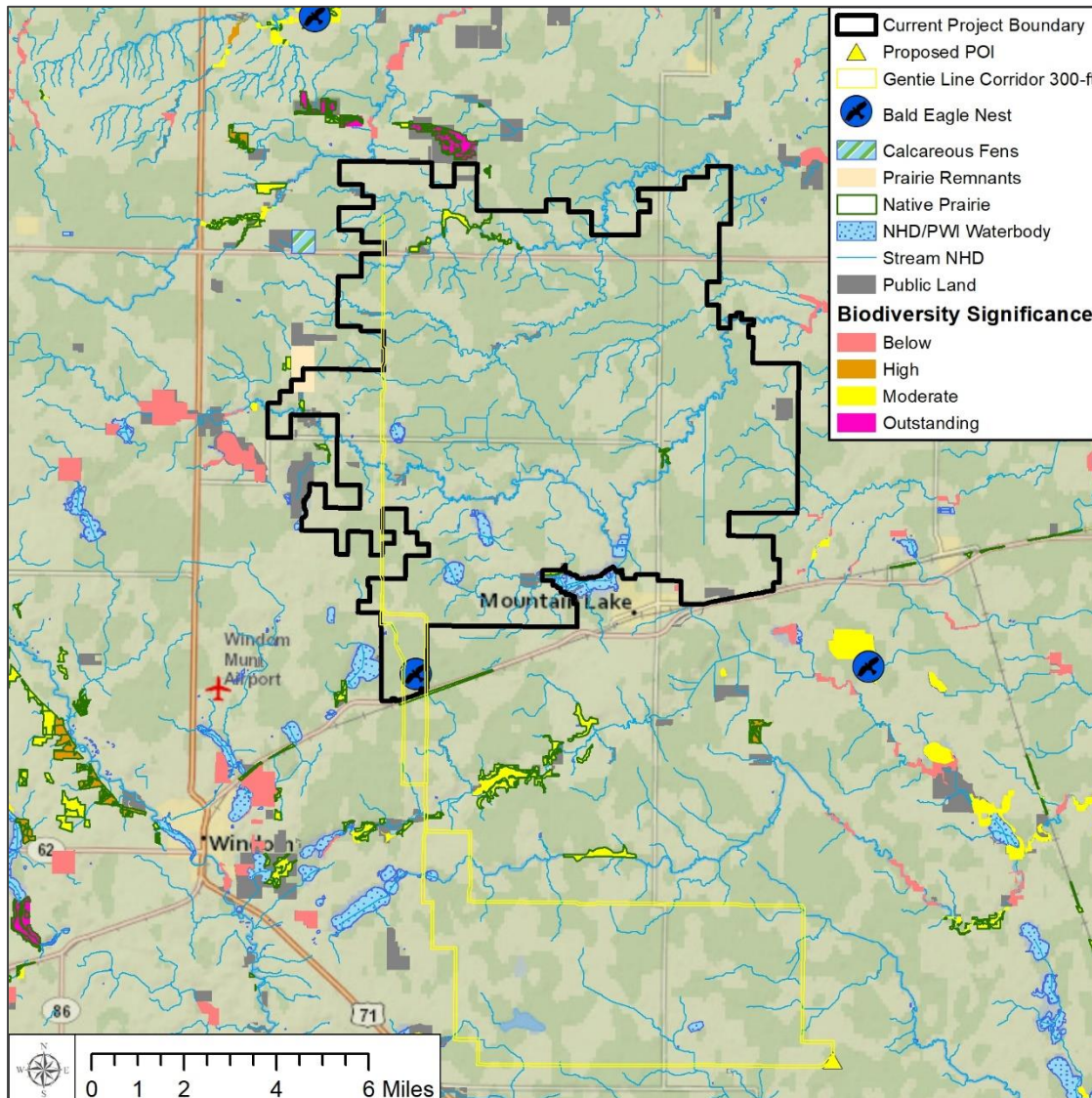
# Environmental Surveys



- Raptor nest surveys completed in March – April 2018 and 2019
  - Additional eagle nest monitoring surveys completed at nests located within the Project boundary
- Avian/eagle use surveys initiated in November 2017 and ongoing through March 2020
- Avian wetland use surveys completed March – June 2018
- Bat acoustic surveys completed April – October 2018
- Transmission Line Avian Risk Assessment Ongoing
- Wetland delineations ongoing



# Environmental Setbacks/Compliance



- Project designed in response to USFWS / MNDNR recommendations and to ensure regulatory compliance
  - Avoid BAEA nests
  - Known calcareous fens avoided
  - All areas of biological significance avoided
  - Known native prairie avoided
  - Avoid wetlands/ waterbodies with turbines
- Operational monitoring planned to evaluate impacts
  - Protocol to be developed in coordination with USFWS and MNDNR

## EXHIBIT G

Hello, and thank you for your participation and input thus far regarding the Big Bend Wind project being proposed in Cottonwood County, MN. As we have previously discussed, the project is on a strict timeline to complete Minnesota's lengthy permitting process, and that timeline requires that clear deadlines be set for each step in the process. A deadline of September 2 was set and communicated for the collection of your feedback regarding the project's design and survey plans.

Now that the September 2 input deadline has passed, we will be working diligently to review the feedback we have received to inform our survey plans and project design moving forward. Although this particular window for providing feedback has now closed, there will be opportunities for additional feedback in the future. In the meantime, the activities that will be taking place in the coming weeks and months are as follows:

- **September 2–15:** Informed by the feedback that has been received, Quality Services Inc. (QSI) will be augmenting the SHPO-approved plan for field survey work to take place this fall.
  - The following tribes have formally confirmed their interest in being included in the field survey process:
    - Cheyenne River Sioux Tribe
    - Flandreau Santee Sioux Tribe
    - Lower Sioux Indian Community
    - Mille Lacs Band of Ojibwe
    - Oglala Sioux Tribe
    - Omaha Tribe of Nebraska
    - Otoe-Missouri Tribe
    - Rosebud Sioux Tribe
    - Sisseton-Wahpeton Oyate
    - Turtle Mountain Band of Chippewa
    - Upper Sioux Indian Community
    - Winnebago Tribe of Nebraska
- **September 2–30:** QSI has already begun working with the tribes who have asked to be included in the survey process (listed above) to coordinate their participation in upcoming fieldwork.
- **On September 17:** Apex and QSI will meet with SHPO and MNHS to provide information about our process to date, share initial plans for our field survey process, and learn more about how these state agencies will be involved in the permitting process moving forward.
- **October 1:** Survey work begins with confirmed tribes who are able to participate.
- **November (or until snow covers ground):** Initial field survey work completed.
- **December:** Apex expects to submit state permit applications, which will include summaries of all tribal feedback received and whether related action was taken with the relevant state agencies. Copies of our applications will be distributed upon request. NOTE: Apex will maintain strict confidentiality of oral history interviews, per the verbal or written obligations that were made with the participating tribes.
- **Spring 2020:** Additional survey work to be completed, as necessary, for any portions of the facility footprint that were not previously surveyed.

Once again, we sincerely appreciate your time and input as we strive to make this project a positive one for all parties involved. We look forward to continuing to work with you on this important process.

## EXHIBIT G

Best,  
The Apex Team

### Contacts:

Max Jabrixio – Public Engagement Manager, Apex Clean Energy. Office (612) 260-6610 Cell (612) 568-8527 [max.jabrixio@apexcleanenergy.com](mailto:max.jabrixio@apexcleanenergy.com)

Reuben Weston – Tribal Liaison, Quality Services Inc. Office: 605-388-5309 Cell: 605-407-1220 [rweston@qualityservices.us.com](mailto:rweston@qualityservices.us.com)

Lance Rom – President, Quality Services Inc. Office: 605-388-5309 [lrom@qualityservices.us.com](mailto:lrom@qualityservices.us.com)





## EXHIBIT H

September 17, 2019

Staff from the MN Department of Commerce hosted a meeting of stakeholders regarding the proposed Big Bend Wind and Red Rock Solar projects in Cottonwood County, Minnesota.

### **Meeting Attendees:**

- Brenna Gunderson, Apex Clean Energy
- Dylan Ikkala, Apex Clean Energy
- Ryan Henning, Apex Clean Energy
- Max Jabrixio, Apex Clean Energy
- Chris Kunkle, Apex Clean Energy
- John Wachtler, Department of Commerce
- Louise Miltich, Department of Commerce
- Christina Brusven, Fredrikson & Byron
- David Brieze, Jeffers Petroglyphs
- David Kelliher, Minnesota Historical Society
- Ben Leonard, Minnesota Historical Society
- Amanda Gronhovd, State Archaeologist
- Sarah Beimers, State Historical Preservation Office
- Kelly Gragg-Johnson, State Historical Preservation Office
- David Mather, State Historical Preservation Office
- Lance Rom, Quality Services Inc.
- Jana Morehouse, Quality Services Inc.

### **Remote attendees (via Video Conference):**

- Jennie Geiger, Apex Clean Energy
- Dahvi Wilson, Apex Clean Energy
- Rich Davis, Department of Commerce

The meeting began with introductions, and a suggested agenda from Apex Clean Energy (Apex). Apex staff presented detailed information about the proposed wind and solar projects, including an extended discussion of the team's stakeholder engagement process and the feedback received from various parties, including tribal representatives, throughout various stages of project development.

## EXHIBIT H

Apex also shared information on the accommodations and project design changes made to date in response to the feedback received.

Apex and Quality Services, Inc. (QSI) presented details on the survey methodology that the team proposes to use, incorporating suggestions from tribal representatives and local stakeholders. State Historical Preservation Office (SHPO) staff clarified SHPO's role in reviewing survey plans, noting that SHPO did not 'approve' survey plans or the predictive model framework, but that SHPO did agree that the model was appropriate. Both SHPO and Minnesota Historical Society (MNHS) staff agreed that the proposed survey methodology presented by QSI appeared to be appropriate for this site, although they were reviewing the methodology for the first time.

An open discussion of the project and various concerns followed. For ease of reference, comments are summarized according to the stakeholder group from which they originated.

### SHPO

- The Jeffers Petroglyphs are under consideration for National Historic Landmark Status, and SHPO will be using those standards as a guideline in this process.
- A recent federal district court decision found that impacts to the viewshed of a National Landmark are a "direct effect." Direct effects on the viewshed of the Jeffers Petroglyphs will be an important consideration.
- The Department of Commerce (DoC) and Minnesota Indian Affairs Council (MIAC) should both consult directly with tribes. It is appreciated that Apex has done voluntary coordination, but state agencies need to conduct additional consultation.
- SHPO believes that EO 19-24, related to tribal consultation, fundamentally changes the role of individual state agencies in coordinating with tribal governments.

### DOC

- DOC has also reviewed EO 19-24, and there was some discussion regarding its future impacts.
- Mary Otto, tribal liaison for the Department of Commerce, will need to be engaged in this process.
- If a viewshed analysis is conducted, it should be easily understandable; analyses have been confusing for other projects in the past and that is not helpful.

### MNHS

- The proposed survey methodology is very good.
- MNHS has serious concerns over the visual impacts. MNHS is seeing the visual simulations presented by Apex for the first time.
  - MNHS acknowledges that there are existing, operating turbines currently visible from the site, and does not expect that turbines will not be visible at all. MNHS thinks they should be considerably further than they are in the visual simulations that were shown.
  - MNHS sent a letter to Big Bend prior to the meeting requesting that visual simulations be conducted based on a buffer of 8 miles from the Jeffers Petroglyphs

## EXHIBIT H

site. MNHS reiterated that request here and would like to see simulations at both 5 and 8 miles.

- MNHS further believes a 'viewshed analysis' should be conducted. MNHS does not have internal expertise on viewshed analysis or a suggested methodology for this analysis. MNHS requests that Apex, as the applicant, propose one.
- Alternative scenarios for possible turbine layouts would also be helpful to see.
- MNHS believes they have a duty to protect the historical character of the Jeffers Petroglyphs site.
- Some stakeholders would prefer that turbines not be visible from the site at all; the 5 miles or 8 miles already feels like a compromise.

### Apex

- Apex reiterated that through stakeholder input over the past 18 months, the project boundary has been shifted multiple times. The current distance represents significant compromise on this front.
- Apex confirmed that a setback of 5 or 8 miles from the Jeffers Petroglyph site would make the Big Bend Wind project infeasible.
- Apex asked for additional clarification of the expected role of departmental tribal liaisons in the pre-permitting process.

### Action Items:

- Apex will send a summary of meeting to all participants and invitees (*this document*).
- Apex will investigate possible methodologies for viewshed analysis.
- DOC staff that were in attendance will discuss engagement in the process with Mary Otto.
- Apex will initiate field survey work in fall 2019, as proposed.



## **Big Bend Wind and Red Rock Solar**

Apex/SHPO/MNHS/MIAC/COMM

September 17, 2019



## Introductions

# Agenda

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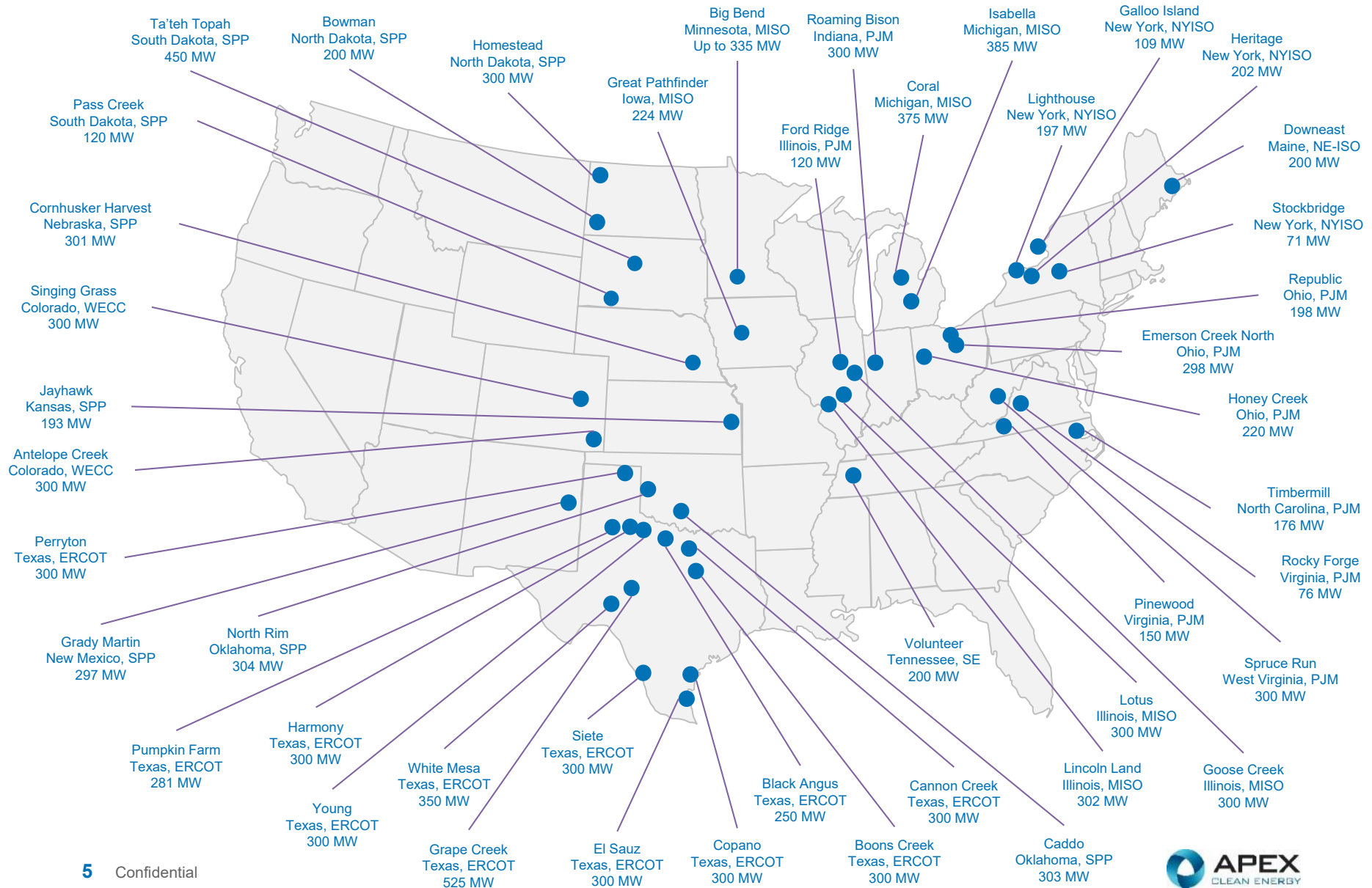
- Company Overview
- PART ONE: Project Overviews
  - Development status
  - Regulatory requirements
  - Cultural resources desktop review and Phase I predictive model survey plan update
- PART TWO: Stakeholder Coordination Update
  - Stakeholder coordination goals
  - Stakeholder engagement to date
  - Integration of stakeholder feedback
  - GOAL: Confirmation of supplemental cultural resource survey plan
- Next Steps

# Company Overview

- Apex Clean Energy was formed in 2009.
- Apex's management has collectively developed, financed, constructed, and managed more than \$10 billion in operating renewable energy facilities.
- Apex is developing a diversified portfolio of projects capable of supporting over 17,000 MW of onshore wind and solar energy capacity.
- The Apex team of over 200 professionals is organized into experienced internal departments.

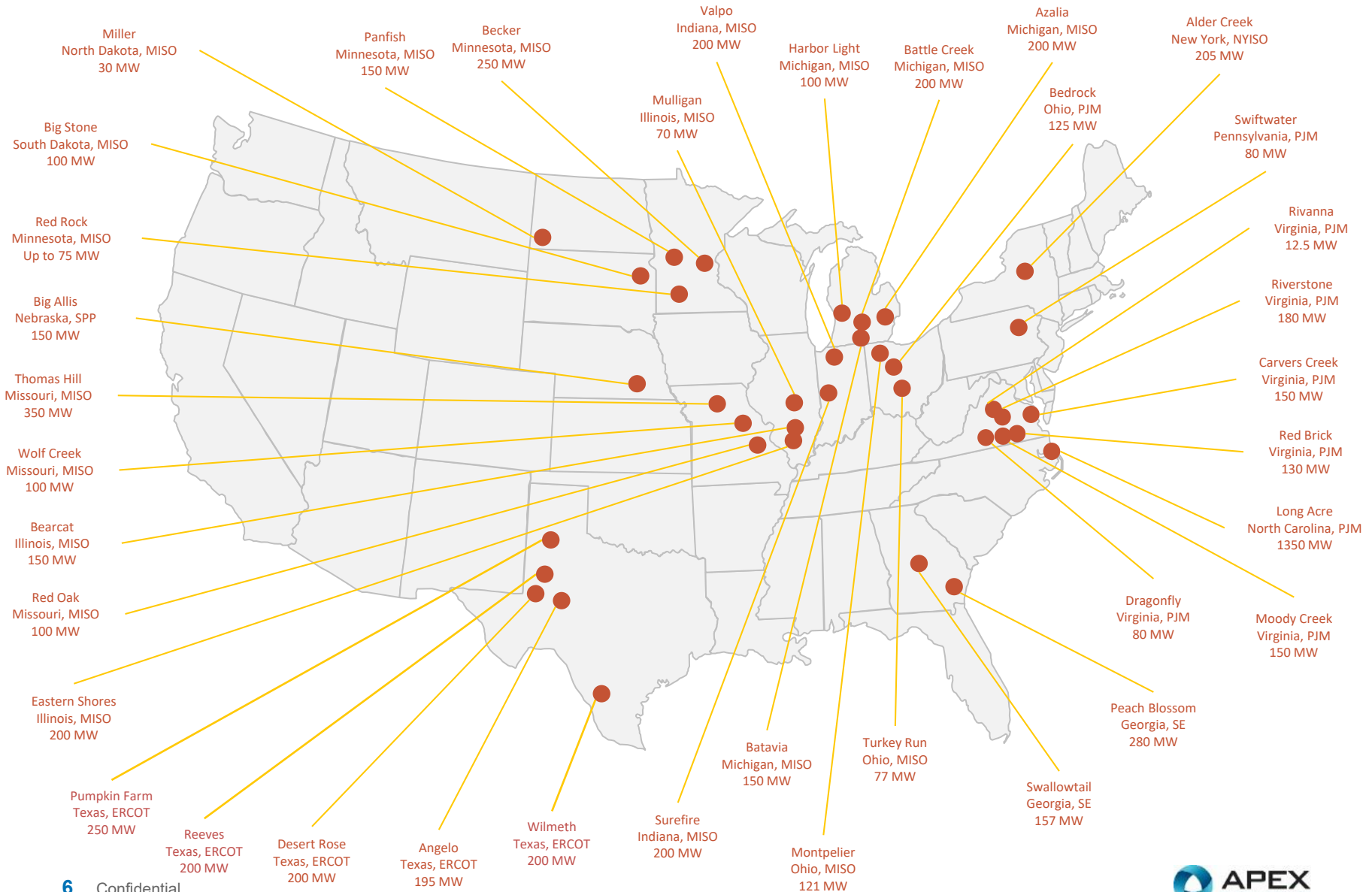


# Apex Wind Development Projects





# Apex Solar Development Projects



# Big Bend Wind: Overview

**Big Bend will generate clean electricity and local economic benefits and support the local farming community.**

## Project Drivers

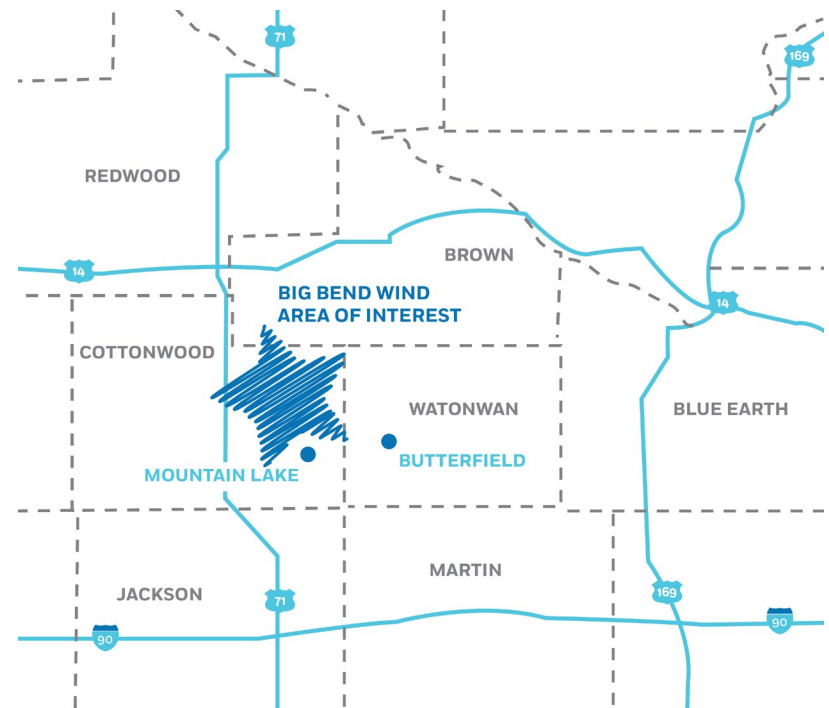
- Demand for clean energy
- Verified wind resource
- Strong community support
- Existing highways and transmission lines

## Project Summary

- Considering a maximum of 335 MW (powering over 100,000 homes annually)
- Projected to be 50 to 120 wind turbines. This range is from geographical constraints, price of technology, and siting restrictions.
- Developed across 30,000 acres of private farmland

## Project Schedule

- 2019: Complete environmental studies, begin permitting
- 2021: Start construction and operations



# Red Rock Solar: Overview

## Project Drivers

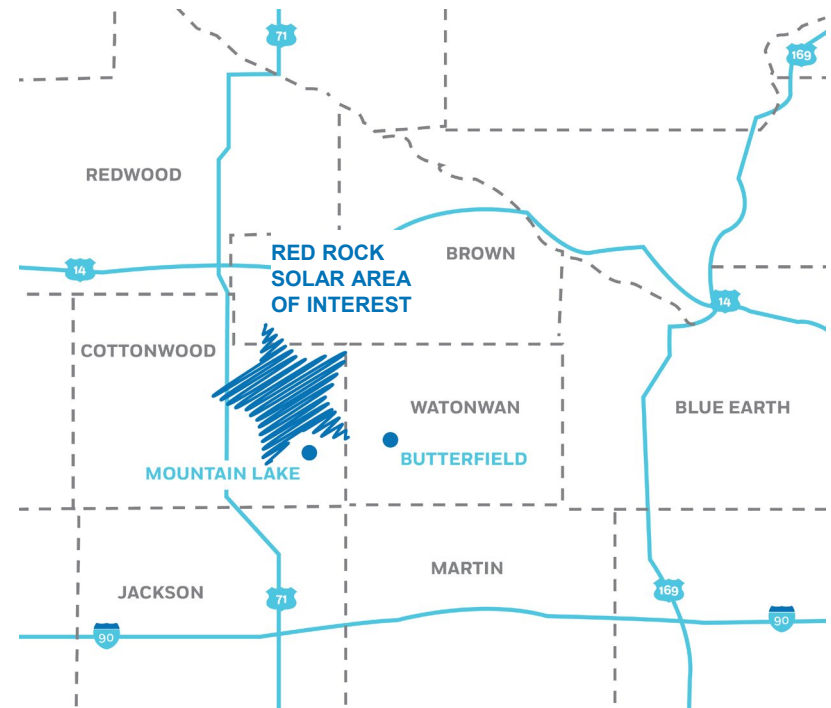
- Demand for clean energy
- Verified solar resource
- Strong community support
- There is a large market for selling the solar energy
- Existing highways and transmission lines

## Project Summary

- Considering a maximum of 75 MW
- Will require ~800 acres of buildable area for solar panel array
- Will not be a stand-alone project since it will share facilities with Big Bend Wind

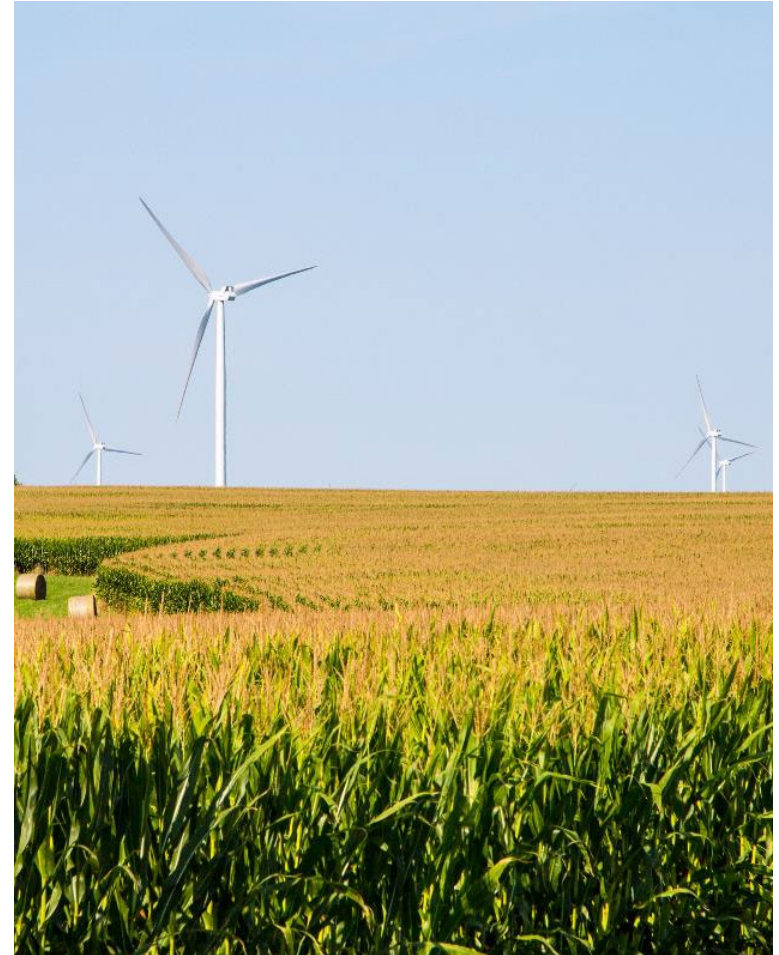
## Project Schedule

- 2019: Complete environmental studies, begin permitting for solar
- 2021: Start construction and operations



# Development Status: What's Happening Now?

- **Leasing Effort:** Site control complete for wind leases, underground collection easements, and good neighbor agreements. Main focus now is to secure easements for overhead transmission line.
- **Preliminary Layout:** Working with wind resource to put together a preliminary layout. Looking for stakeholder feedback on layout for future changes.
- **Stakeholder Input:** Listening to landowners, community leaders, tribal members, and the public and respond to their questions/concerns.
- **Permitting:** Beginning to prepare for MN PUC permitting process. Goal is to file the applications at the end of 2019. Big Bend and Red Rock will be seeking separate permits.
- **Environmental Surveys:** Continuing avian and bat surveys, cultural surveys, and wetland surveys to inform siting.
- **Power Marketing:** Begin working to secure a purchaser for the power.



# Regulatory Requirements

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## State:

- Large Wind Energy Conversion System (LWECS) Site Permit issued by Minnesota Public Utilities Commission (PUC) is required (governed by **Minnesota Statutes Chapter 216F** and **Minnesota Rules Chapter 7854**).

7854.0500, Subp 7: Environmental Impacts: *“An applicant for a site permit shall include with the application an analysis of the potential impacts of the project, proposed mitigative measures, and any adverse environmental effects that cannot be avoided [as related to] cultural and archaeological resources.”*

- No state lands or funding involved

## Federal:

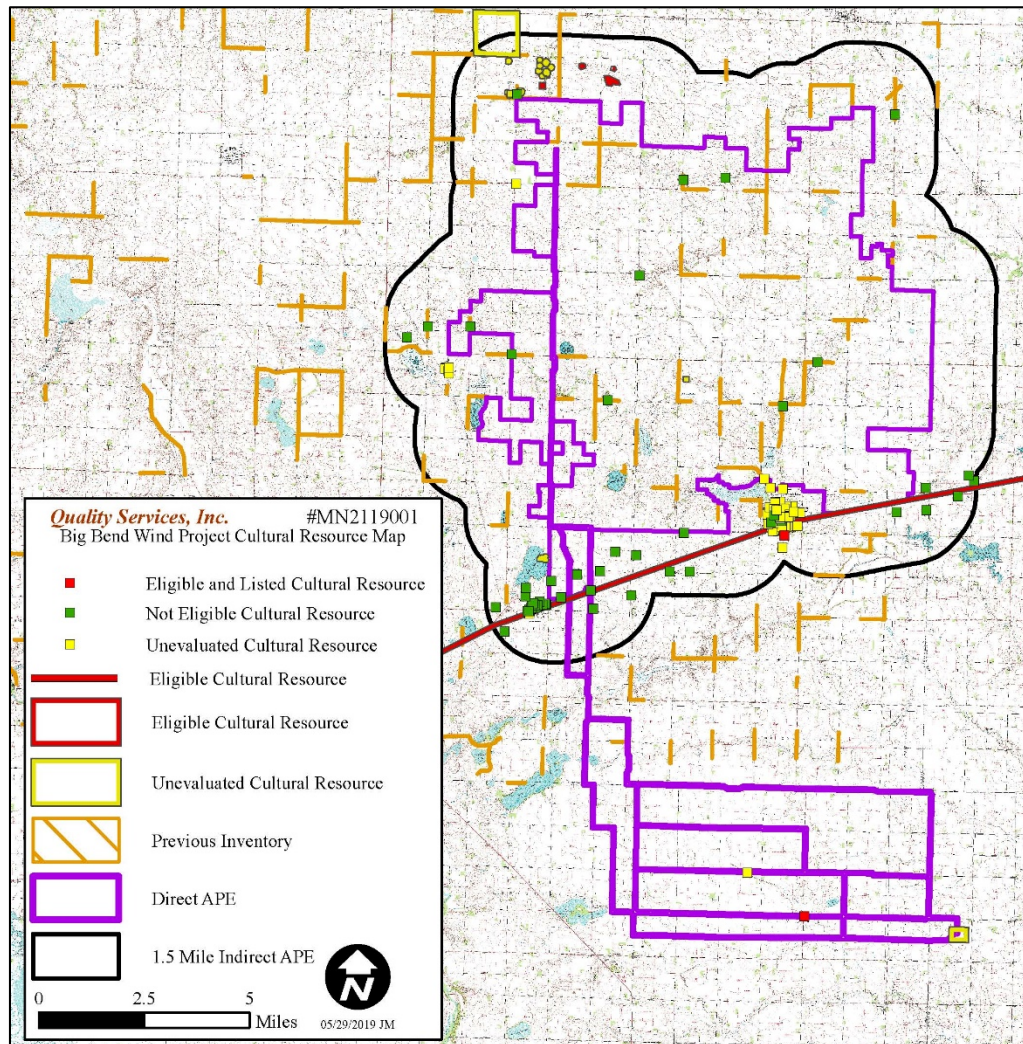
- No federal lands, funding, or permitting involved or anticipated
- Thus no applicability of NHPA or Section 106

# Site Permit Application Guidelines

Cultural and Archaeological Resource Guideline	Apex Response
<p>1. Consult with the MN State Historic Preservation Office to determine the extent and type of archaeological and cultural resources within the project area and a 0.5 mile buffer of the project boundary.</p>	<ul style="list-style-type: none"> <li>• Consultation with MN State Historic Preservation Office (SHPO) initiated November 30, 2017.</li> <li>• Official review initiated May 23, 2019.</li> <li>• Further coordination planned as development progresses.</li> </ul>
<p>2. Provide a list of all historic and archeological sites potentially affected by the proposed project.</p>	<ul style="list-style-type: none"> <li>• Desktop assessment completed by Quality Services, Inc. (QSI) for current project boundary and 1.5 mi buffer on June 5, 2019.</li> <li>• Submitted to SHPO with May 23, 2019 review request.</li> </ul>
<p>3. Describe how the proposed project would affect any identified historic and archaeological resources and how the project could be modified to reduce or eliminate potential affects.</p>	<ul style="list-style-type: none"> <li>• Apex plans to avoid direct impact to protected resources (NRHP or SRHP eligible).</li> <li>• If complete avoidance is not practicable, Apex will coordinate with SHPO to ensure regulatory compliance.</li> <li>• Apex is working with relevant stakeholders to minimize impacts to culturally sensitive areas to the extent practicable.</li> </ul>

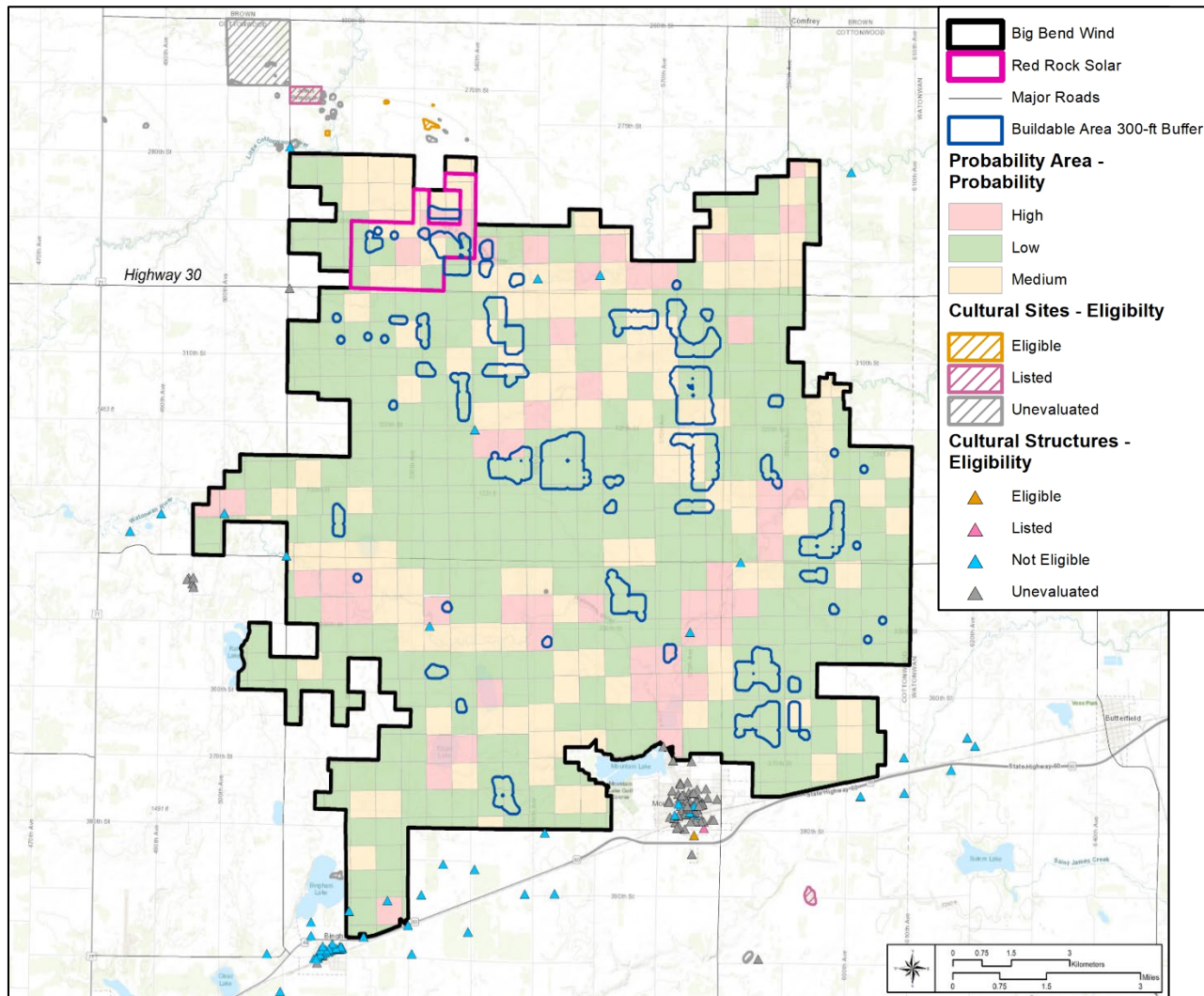


# Cultural Resources Desktop Review



- SHPO record search conducted in May 2019 for project area +1.5 mile buffer and proposed T-line options
- 178 previously recorded cultural resources identified within direct and indirect APEs
- No NRHP-listed and two NRHP-eligible resources within direct APE
- Desktop review of revised transmission line options will be completed in Sept 2019 and amendment to report developed
- Direct impacts to eligible/listed cultural resources will be avoided.

# Phase I Survey Plan Based on Predictive Model



- Predictive model developed based on desktop cultural resources review, local research, published history research, historic maps, and various environmental factors
- Model approach approved by SHPO on July 24, 2019
- Phase 1 reconnaissance survey will be completed in accordance with OSA Manual For Archeological Projects in Minnesota (MAPM)



# Phase I Survey Plan Based on Predictive Model

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- **Areas of potential disturbance in high or medium probability units and a 10% random sample of low probability units will be inventoried:**
  - Turbine buildable area and surrounding 300 ft. radius;
  - Roads and connector lines in a 200 ft. wide corridor;
  - Transmission lines within a 250 ft. corridor; and
  - All other facilities such as substations or operations and maintenance areas, in actual planned disturbance areas or land parcels.
- **Areas of low surface visibility will be identified for subsurface testing and completed as follows:**
  - In high probability units: 10 m intervals along transects spaced 15 m apart.
  - In medium probability units: 15 m intervals along transects spaced 15 m apart.
  - In low probability units: 30 m intervals on transects spaced 15 m apart.
  - As per the OSA MAPM auger tests used in any probability unit will be conducted at 10 m intervals in 15 m transects with a rotating post-hole auger.
  - All soil will be screened.
  - Diagnostic artifacts will be photographed in the field.
  - No artifacts will be collected.



## **PART ONE: Conclusions**



## **Stakeholder Coordination Update**

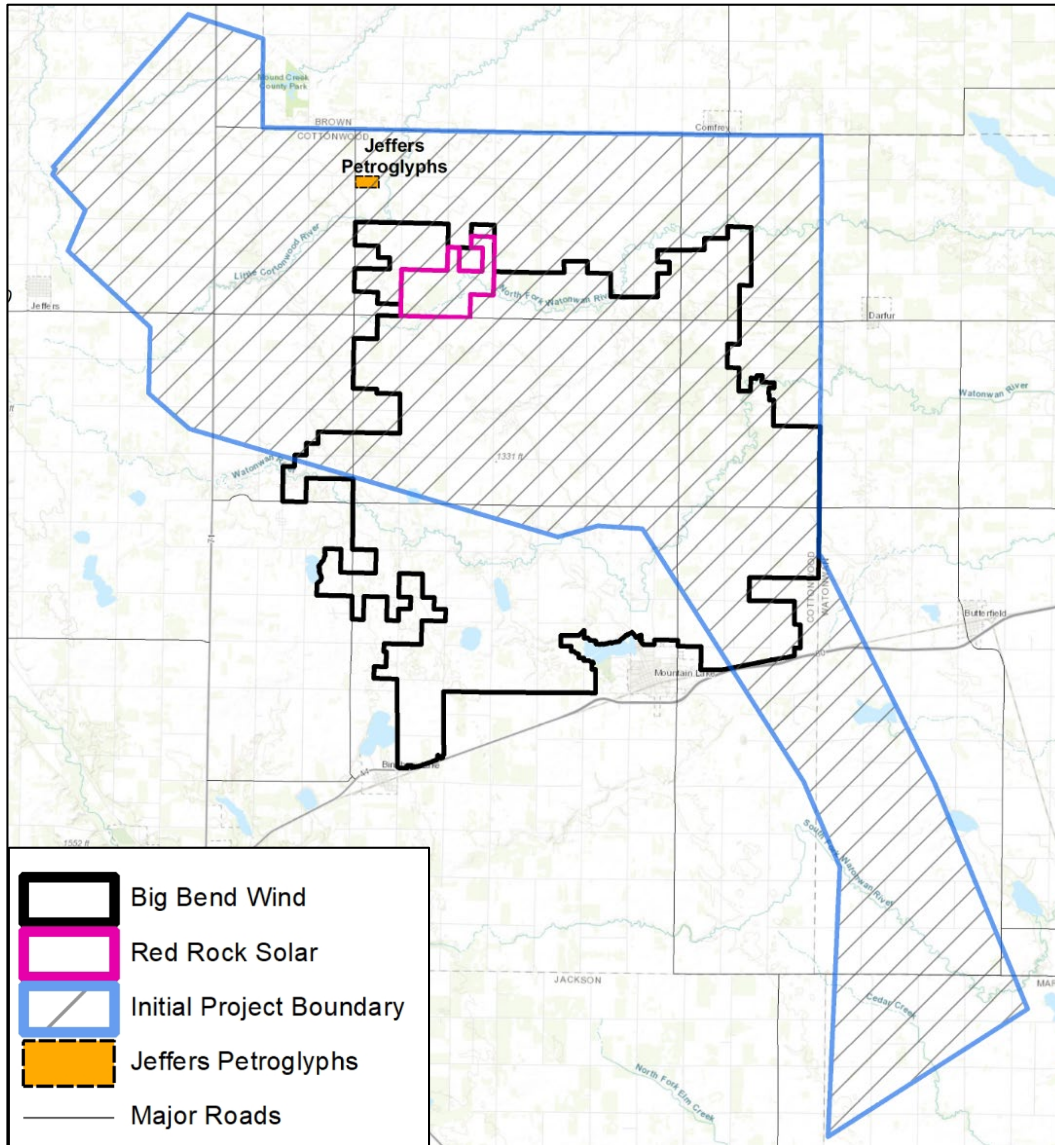
# Stakeholder Coordination Goals

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- Apex's goal is to build a project that benefits the community and the environment, while minimizing impacts to various site characteristics.
- Apex has been, and continues to, reach out to all stakeholders, including interested tribes, to understand and address potential concerns with the development of this project.
  - Sites/areas that are considered important and warrant consideration in our siting decisions are being incorporated into project design where possible.
  - Review “Summary of Feedback” handout.
- Project has received broad public support from private landowners who are interested in participating in the project.

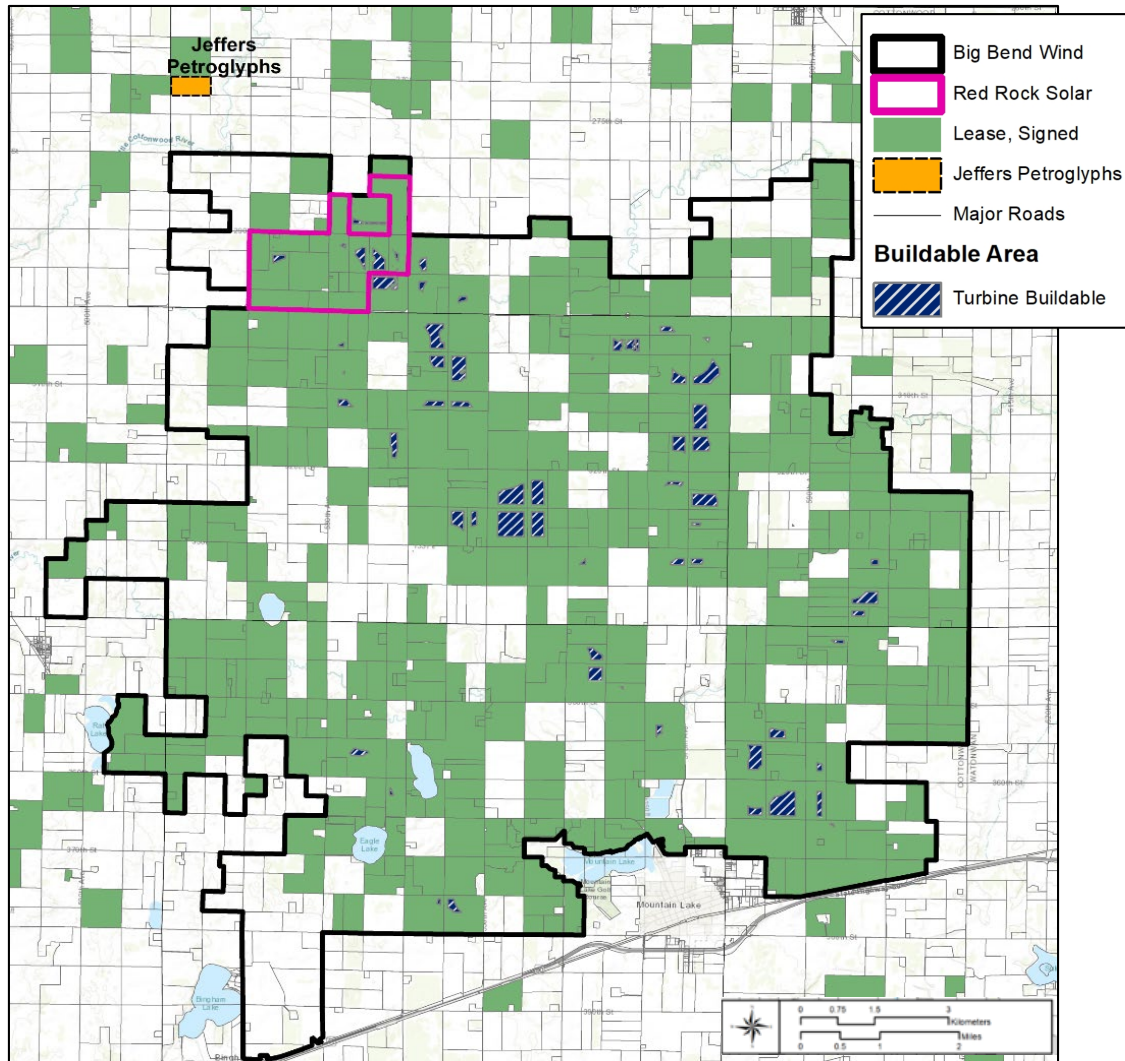
*NOTE: Big Bend Wind will be built solely upon private land and no federal nexuses are anticipated.*

# Incorporating Feedback: Revising Project Boundary



- Boundary has been revised to avoid Jeffers Petroglyphs
- Current project area is >0.5 miles from Jeffers Petroglyph site
- As currently planned, the nearest turbine will be 2.3 mi from SE corner of Jeffers Petroglyphs

# Incorporating Feedback: Buildable Area

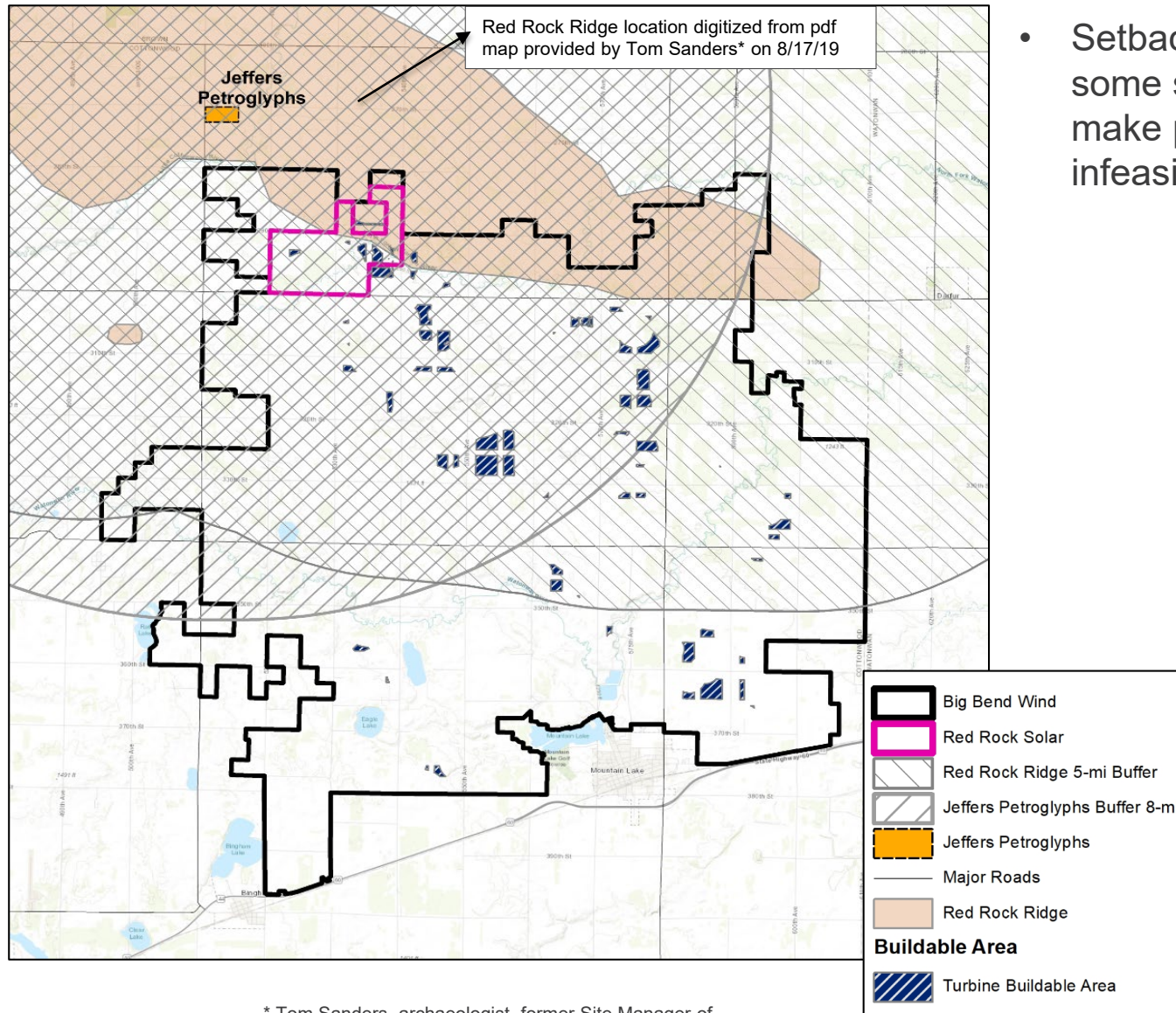


- Significant landowner interest in project; sufficient land leased for viable project
- Local, state, and federal setbacks severely limit buildable area
- Remaining buildable area is critical to ensure project feasibility



# Incorporating Feedback: Additional Setbacks

- Setbacks proposed by some stakeholders make project infeasible.



\* Tom Sanders, archaeologist, former Site Manager of the Jeffers Petroglyph site, and a member of Red Rock Ridge Research Group (RRRG)



# Incorporating Feedback: Phase I Survey Plan

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## THREE TYPES OF SUPPLEMENTAL SURVEYS UNDER CONSIDERATION:

**TYPE 1:** *Invite interested tribes to send 1 to 2 people each to participate in surveys of project disturbance areas*

- QSI staff will assist tribal participants in recording TCPs if they prefer, or will only record the outside boundaries of the TCPs for avoidance.
- Provide time & assistance to conduct ceremonies & record TCP sites they locate.
- Tribal traditional cultural specialists do not need to participate in the subsurface testing to locate buried cultural resources if they do not want to.

**TYPE 2:** *Red Rock Ridge*

- Invite participation of Red Rock Research Group in these areas.
- In undisturbed grasslands use transects 4 meters apart with 1 meter excavation units every 5 meters along the length of bedrock outcrops.
- May need lichen removal from rock (7 month process w/ rubber roof membrane).

**TYPE 3:** *Glacial kames with upland grassy areas which may have boulders/ petroglyphs*

- Invite participation of Red Rock Research Group in these areas.
- 4 meter transects with 40 cm wide subsurface tests every 10 meters near petroglyphs.

# Incorporating Feedback: Phase I Survey Plan

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## Tentative Schedule

### *Fall 2019: Red Rock Solar, Big Bend Buildable Areas*

- Inventory based on SHPO approved predictive model or up to 100% survey of buildable areas depending on progress and weather.
- Implement Glacial Kame or Red Rock Ridge methods as appropriate.
- Historic architecture inventory of project area and 1-1/2 mile buffer.

### *Spring 2020: Other facilities and location revisions, Transmission Line*

- Inventory remaining facilities based on predictive model or up to 100% survey.
- Non-linear facilities will have footprint land parcel inventoried.

### *If Appropriate:*

Utilize drones for aerial photos or heat sensing, and/or ground penetrating radar, or magnetometry if deemed appropriate to identify TCPs, burials, buried boulders, or other cultural resources.