Appendix A
Agency Correspondence

May 20, 2020

[Address Block]

RE: Requesting Comments on an up to 60-megawatt Solar Project in Cottonwood County, Minnesota

Dear [Name],

Big Bend Wind, LLC ("Big Bend") and Red Rock Solar, LLC ("Red Rock"), are indirect wholly-owned subsidiaries of Apex Clean Energy Holdings, LLC ("Apex"), and are proposing to construct up to 335 megawatts ("MW") of new renewable energy generation in Cottonwood and Watonwan Counties, Minnesota. As proposed, the renewable generation could consist of up to 320 MWs of wind (the "Wind Farm"), or a combination of wind and up to 60 MWs of solar (the "Solar Project"). In addition, Big Bend is proposing to construct a 161 kilovolt ("kV") transmission line and associated facilities ("Transmission Line") to support the Wind Farm and Solar Project.

Red Rock will be submitting a Site Permit Application to the Minnesota Public Utilities Commission ("Commission").

The planned nameplate energy capacity for the project is up to 60 megawatts of nameplate solar energy capacity. The Solar Project's facilities will include:

- Solar panels/modules;
- Gravel access roads;
- Inverters;
- Underground collection lines;
- Security fence;
- An operations and maintenance building (one building for the Solar Project and Wind Farm);
- A project substation facility (separate project substations for the Solar Project and Wind Farm that will be collocated); and
- An associated 161 kV gen-tie transmission line.

The configuration of the Project within the Solar Project Area has not been finalized at this time. The Solar Project Area includes Sections 1, 2, 11, and 12 in Midway Township (T106N R34W). Underground collection lines connecting the Solar Project Area to the proposed Solar Project Substation in Section 22 of Midway Township include portions of Sections 11, 12, 14, and 23, also in Midway Township.

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

The enclosed Solar Project Area map depicts the area within which solar facilities may be proposed. Red Rock must obtain two approvals from the Commission to construct the proposed Solar Project: a Certificate of Need and a Site Permit. In the Certificate of Need proceeding, the Commission determines whether a proposed solar project is needed and the appropriate size, configuration, and timing. If the Commission determines that the Solar Project is needed, the Commission will then determine the area for the Solar Project.

This request for comment letter is specific to the Solar Project; you will be receiving similar letters specific to the Wind Farm and Transmission Line. To facilitate your review, we have enclosed a map of that depicts the area within which solar facilities may be proposed. We welcome any comments your agency may have at this time and throughout the permit application process. Any written agency comments provided in response to this letter will be incorporated into the PUC's review process.

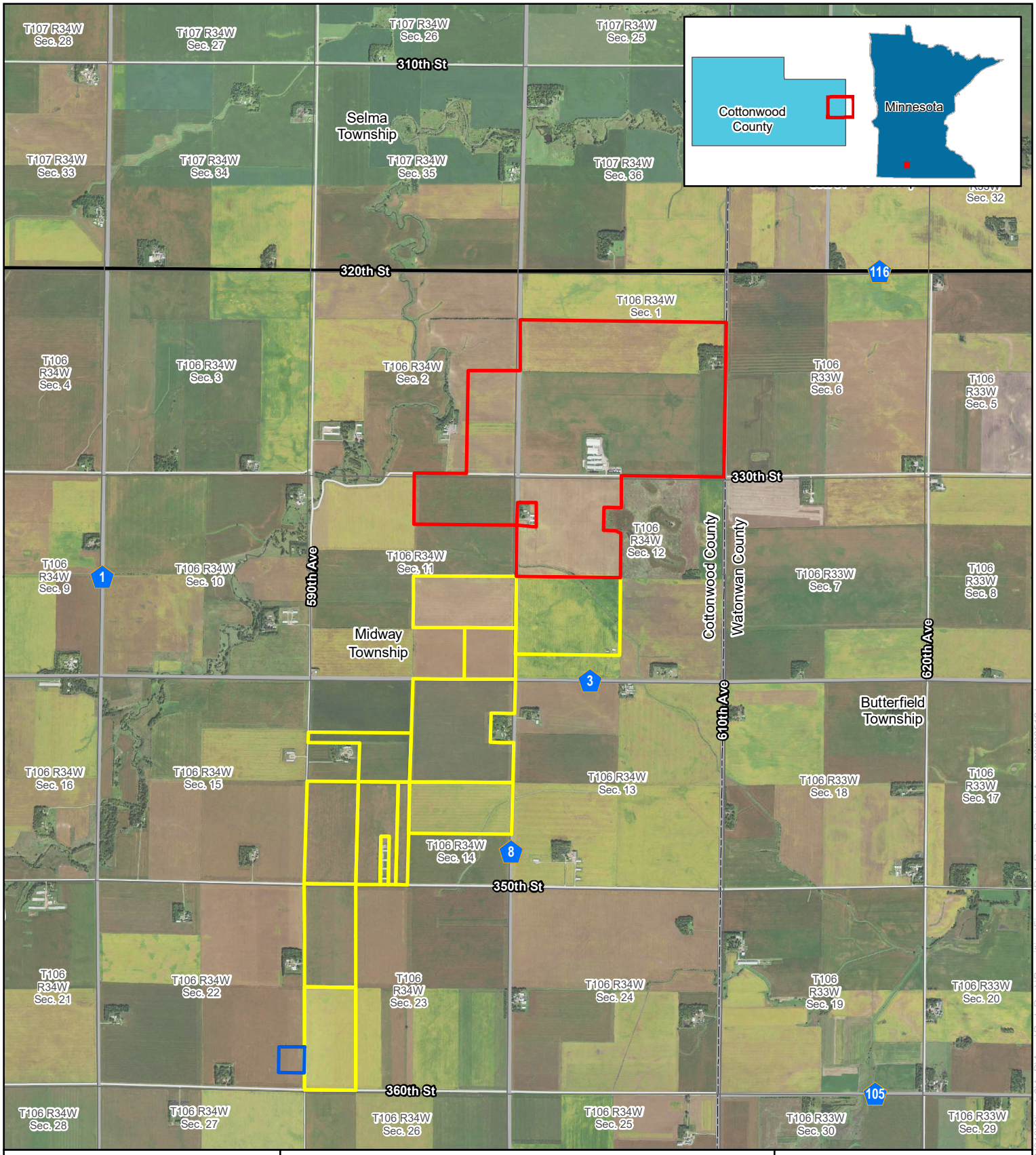
If you require further information or have questions regarding this matter, please contact me at (484) 364-9298 or Dylan.ikkala@apexcleanenergy.com.

Sincerely,

Dylan Ikkala
Development Manager
Apex Clean Energy

Enc. Solar Project Area Map

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



RED ROCK SOLAR

N

0 0.25 0.5 0.75 Miles

1:40,000

merjent

For Environmental Review Purposes Only

Project Location
Red Rock Solar
Cottonwood County, Minnesota

- Solar Project Boundary
- Solar Project Substation
- Solar Collection Parcels
- Civil Township
- County Boundary
- PLSS Section
- County Road
- Local Road

Source: \\MJNTSRV010\Clients$\A_DApex\Red_Rock\Permitting\Figures\Red_Rock_Project_Area_20200518.mxd

Date: (5/18/2020)

Dylan Ikkala

From: Marquardt, Shauna R <Shauna_Marquardt@fws.gov>
Sent: Thursday, October 1, 2020 1:46 PM
To: Dylan Ikkala
Subject: RE: [EXTERNAL] RE: Transmission Line in Cottonwood, Watonwan, and Martin Counties
Attachments: Fig01_BB_Project_Location.pdf; Big Bend Wind Farm Project Notification Letters_05082020.docx; Red_Rock_Project_Area_20200518.pdf; Red Rock Solar Project Notification Letters_05192020.docx

Hi Dylan,

Because of current workload management, we are not able to provide the level of initial technical assessment that you are requesting for the three parts of this project. We now rely on available web-based tools to provide initial technical assistance. You can access the information you're looking for regarding federally listed species that could occur in your project area through our Information for Planning and Consultation (IPaC) system (https://ecos.fws.gov/ipac/). Through IPaC, you will be able to enter geographic and activity details for your project to generate an Official Species List that provides a list of federally listed species and designated critical habitat that may be impacted by your project. The species list will also include any species proposed for listing and any areas proposed as critical habitat that overlap with the project area. You then can refer to our Section 7 website for guidance and technical assistance, including step-by-step instructions for making effects determinations for each species that might be present. If there is no habitat for the species that IPaC indicates, then the appropriate determination is No Effect. You do not need to consult further with us for No Effect determinations, simply document the logic and conclusion for your files.

Should you determine that listed species or other federal trust resources could occur in your project area and would like to coordinate on a path forward under for ESA consultation and permitting under section 7 or section 10, you can contact me for additional assistance.

Shauna Marquardt (she/her/hers)
Assistant Field Supervisor
U.S. Fish and Wildlife Service
Minnesota-Wisconsin Ecological Services Field Office
573-239-3293

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

LOGIN.GOV SIGN IN MIGRATION

In mid-to-late December 2020, IPaC will change its sign-in process to use Login.gov. At that time, you will need an account with Login.gov with the same email address you are currently using to log into IPaC. This change includes Google login users.

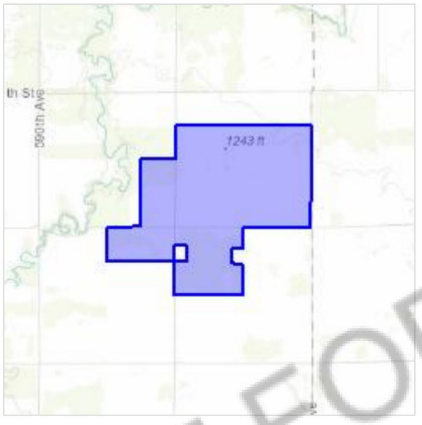
ECOS applications other than IPaC have already switched to Login.gov. Until IPaC moves to Login.gov in December, you will need to sign in to both platforms separately.

This report is ar ollectively referred to as *t* known or expected to be s that occur outside of the p e project area. However, deter ally requires gathering addit e and timing of proposed activi

Below is a sum ffice(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Cottonwood and Watonwan counties, Minnesota



Local office

Minnesota-Wisconsin Ecological Services Field Office

(952) 252-0092
(952) 646-2873

MAILING ADDRESS
4101 American Blvd E
Bloomington, MN 55425-1665

PHYSICAL ADDRESS
4101 American Blvd E
-
Bloomington, MN 55425-1665

http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Flowering Plants

NAME	STATUS
Prairie Bush-clover Lespedeza leptostachya No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4458	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

THERE ARE NO MIGRATORY BIRDS OF CONSERVATION CONCERN EXPECTED TO OCCUR AT THIS LOCATION.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

COMMERCE DEPARTMENT

July 21, 2020

Brenna Gunderson
Director of Development
Red Rock Solar, LLC
8665 Hudson Blvd. N., Ste. 110
Lake Elmo, MN 55402

Dear Ms. Gunderson:

Thank you for submitting the Solar Size Determination request for Apex Clean Energy's proposed 60 MW Red Rock Solar project in Cottonwood County.

The Department is responsible for reviewing these applications to determine "whether a combination of solar energy generating systems meets the definition of large electric power generating plant and is subject to the commission's siting authority jurisdiction" (Minn. Statute 216E.021, Subd. a).

Based on information provided by the Applicant, and based on criteria established in the statute, the Department has determined that the Red Rock Solar project is not associated with any other current or planned solar projects in Minnesota. Given that the project on its own is over 50 MW, the Department determines that Red Rock Solar is subject to the Public Utilities Commission's siting authority and must submit an application for a site permit under the Power Plant Siting Act (Minn. Statute 216E).

I am available to answer any questions you might have.

Sincerely,

/s/ Louise Miltich
Energy Environmental Review and Analysis

cc: Bret Eknes, Public Utilities Commission
Christina Brusven, Fredrikson & Byron

Jennie Geiger

From: Boettcher, Joanne (DNR) <Joanne.Boettcher@state.mn.us>
Sent: Tuesday, July 7, 2020 2:37 PM
To: Dylan Ikkala
Cc: Jennie Geiger; Warzecha, Cynthia (DNR); Gieseke, Tim (DNR); david.briese@mnhs.org
Subject: DNR comments on Big Bend Wind and Red Rock Solar Projects
Attachments: Erosion_InvasiveSpecies_StandardGuidance_20200707.pdf

Hi Dylan,

Thank you for the opportunity to continue early coordination work with Apex Energy in the review of Big Bend Wind Energy project and the nested Red Rock Solar Energy project. The DNR appreciates that changes have already been made to the proposed project in response to our concerns. As mentioned when we spoke on May 26th, I replaced Kevin Mixon after his retirement. Any previous guidance that Kevin supplied is still valid and should be incorporated.

Our current comments regarding Big Bend Wind project are itemized below:

- The ***DNR Guidance for Commercial Wind Energy Projects*** and ***Avian and Bat Survey Protocols For Wind Energy*** contain standard commercial wind recommendations. Both guidance documents are located at the following web link: https://www.dnr.state.mn.us/eco/ereview/additional_resources.html
- An updated NHIS is required for multiple reasons: the project footprint has changed, the specific location of turbines has been identified, and the previous review is greater than one year old.
- Because a known calcareous fen is located within 5 miles of the project, we ask that you review/survey areas within the disturbance zone (planned areas of disturbance with an added 500 foot buffer; e.g. turbine construction areas, access roads, crane paths, collector lines, equipment staging areas, transmission lines, etc.) using the MNDNR Calcareous Fen Field Assessment Procedures by an experienced contractor familiar with the ecology of calcareous fen communities. If calcareous fens are identified within the disturbance zone, additional coordination with the DNR is needed. If work is planned within 500 feet of a calcareous fen, a Calcareous Fen Management Plan may be required.
- During development of the turbine layout, we recommend that at least 4-5 alternate turbine locations be included. The alternate turbine locations provide an opportunity to avoid or minimize potential impacts to natural resources and to work around other issues that arise during project development.
- Some of the turbines (e.g. T49) are very close to streams/rivers within the Watonwan River watershed. As Kevin previously communicated, habitat for bats and birds is common along waterways, and we recommend siting turbines sufficiently away from these areas to minimize bat/bird mortality.
- The project footprint contains NWI wetlands, and at least one turbine appears to be sited within a NWI wetland. WCA requirements must be fulfilled – contact the local WCA authority or BWSR to ensure WCA requirements are met. We generally recommend that projects avoid any wetland type areas as these soils do not generally support project components and construction delays/difficulties are common.
- Use wildlife-friendly erosion control products to minimize entrapment and death of small animals (additional details attached). We also recommend mulches free from plastics, particularly when used near waterbodies.
- Use invasive species prevention best management practices, which include inspecting and cleaning equipment at a site before moving to another site (additional details attached).

Comments regarding the Red Rock Solar project:

- An NHIS review is required. Please submit the NHIS data request form (form at link of the NHIS webpage).

- The project footprint contains NWI wetlands. WCA requirements must be fulfilled – contact the WCA authority to check that. We generally recommend that projects avoid any wetland type areas as these soils do not generally support project components and construction delays/difficulties are common.
- Please follow the Commercial Solar Siting Guidance: http://files.dnr.state.mn.us/publications/ewr/commercial_solar_siting_guidance.pdf
- Please follow the Prairie Establishment & Maintenance Technical Guidance for Solar Projects: http://files.dnr.state.mn.us/publications/ewr/prairie_solar_tech_guidance.pdf
- Use wildlife friendly erosion control and invasive species prevention BMPs (details attached).

Please note that this review is based on the turbine locations and project boundaries you supplied via a May 28th email. If additional changes to the project footprint, turbines, or other resource concerns are identified, additional review may be necessary. Also as a note, no access roads, transmission lines, or other infrastructure was supplied or reviewed; likewise, no water appropriation, steam crossing, or other potential impacts to water bodies were discussed or reviewed. If additional changes are made to the project, please contact us with those changes at your soonest convenience. This review should not be construed as a full environmental review of the project impacts.

We understand that the Upper Sioux community, the Lower Sioux community, and the Minnesota Historical Society have expressed concerns about visual impacts to Red Rock Ridge and Jeffers Petroglyphs. According to DNR's commercial wind guidance, "A viewshed analysis may be recommended by the DNR to determine if potential impacts would occur to state parks, Scientific and Natural Areas, National Historic Districts, or National Historic Landmark Districts". Although the DNR is not recommending a viewshed analysis, we acknowledge that any measures to minimize visual impacts to Red Rock Ridge and Jeffers Petroglyphs would benefit the recreational experiences of visitors to Rock Ridge Prairie Scientific Natural Area. Furthermore, we encourage Apex to continue working with the Lower Sioux community and the Upper Sioux community to avoid impacts and concerns regarding cultural resources.

Please let me know if you need more information.

Thanks,

Joanne Boettcher
Regional Environmental Assessment Ecologist
MNDNR – Mankato
(507) 389-8813

DEPARTMENT OF NATURAL RESOURCES

Standard Erosion Control and Invasive Species Prevention Best Practices

Take precautions when working near waterbodies to prevent sedimentation and erosion:

- Erodible surfaces should not be left exposed for greater than one day. For example, work should not commence late in the week if it will be left unfinished over a weekend.
- Work should not commence if rain is predicted.
- All wheeled or tracked construction equipment should be restricted to work areas above the stream bank.
- Fill material should not be stockpiled in the floodplain.
- Backfill placed below Ordinary High Water (OHW) should consist of clean granular material free of fines, silts, soils, and mud.
- Use Best Practices for DNR General Public Waters Work Permit GP 2004-0001: Species Protection. Refer to pages: 3, 11, 14, 16, 25, 33, and 34 as relevant to a particular project.
- Vegetative "grout" should be incorporated with any installed rip rap (see page 33 of above link).
- Native species planting/seeding should be used.
- DNR Public Waters Work Permit may be required. Permit requirements must be followed.

Use wildlife friendly erosion control:

- Biodegradable netting should be used, preferably natural materials with short degradation periods.
- Erosion control blankets should be limited to bio-netting or natural netting types due to the risk of entanglement and death of small animals. 2018 MnDOT Standards Specifications for Construction identify acceptable materials in Category 3N or 4N mulches.
- Do not use products that require UV-light to degrade (also called "photodegradable"), as they do not degrade properly when covered/shaded.
- Do not use products containing plastic mesh netting or other plastic components.
- Do not use mulch products that contain synthetic (plastic) fiber additives near waterbodies.
- See Wildlife Friendly Erosion Control for more information.

Take active steps to prevent invasive species introduction and spread:

- Clean all equipment (including but not limited to: vehicles, clothing, and gear) at a site prior to moving to another site. All soil, aggregate material, mulch, vegetation, seeds, animals, etc. need to be removed using a hand tool, brush, compressed air, pressure washer, or otherwise.
- If equipment is not cleaned before arriving to a work site, then clean the equipment in the parking or staging area, ensuring no material is deposited at the new site. Material cleaned from equipment should be disposed of legally.
- All equipment (including but not limited to: waders, tracked vehicles, barges, boats, turbidity curtain, sheet pile, and pumps) used for work in an "infested water" must be adequately decontaminated. See Watercraft Decontamination Manual for more information.
- See Come Clean, Leave Clean for more detailed guidance. This guidance is required for those working on DNR lands as part of grant or contract or are working under a permit, your grant, contract, or permit.

Referenced Links

https://files.dnr.state.mn.us/waters/watermgmt_section/pwpermits/gp_2004_0001_chapter1.pdf
https://bwsr.state.mn.us/seed-mixes
https://files.dnr.state.mn.us/eco/nongame/wildlife-friendly-erosion-control.pdf
http://www.dot.state.mn.us/pre-letting/spec/2018/2018-spec-book-final.pdf
https://www.dnr.state.mn.us/invasives/dnrlands.html
https://www.dnr.state.mn.us/invasives/dnrlands.html
https://files.dnr.state.mn.us/natural_resources/invasives/mndnr_ais_decontamination_handbook.pdf