APPENDIX P SPECIES CONSULTATION

Species Consultation

United States Fish and Wildlife Service

- o Consultation Letter February 2021
- o Agency Response March 2021
- Additional Consultation July 2021
- o Agency Response July 2021

Ohio Department of Natural Resources

- o Consultation Letter February 2021
- o Agency Response May 2021
- o Additional Consultation July 2021
- o Agency Response July 2021



HALEY & ALDRICH, INC. 200 Town Centre Drive Suite 2 Rochester, NY 14623 585.359.9000

25 February 2021 File No. 135392-002

United States Fish and Wildlife Service Ohio Field Office 4625 Morse Road, Suite 104 Columbus, Ohio 43230-8355

Subject: Request for Species Review - Sunset Ridge Solar

To Whom it May Concern:

Haley & Aldrich, Inc. is requesting information from the United States Fish and Wildlife Service regarding the potential presence of threatened or endangered species on or near the proposed location of a solar energy facility known as Sunset Ridge Solar (the Project). A generalized Area of Interest (AOI) for the Project is shown on Figures 1 and 2. The Project will require an application before the Ohio Power Siting Board; it is not yet known whether impacts to wetlands would require a state or federal permit.

The AOI is located entirely within Hancock County, Ohio, and is generally bounded to the south and east by Township Road 261, just over two miles southwest of Fostoria. To the southwest, the southernmost portion of the AOI is located on the outskirts of Arcadia. The AOI is generally bounded to the west by Township Road 249. A GoogleEarth file is provided with this request; the center of the AOI is approximately 41° 8′ 0.68″N, 83° 29′51.33″W.

The AOI consists primarily of agricultural land interspersed with small areas of trees. Although no layout is yet available, the goal will be to limit the need for tree clearing.

We would appreciate it if you could review your files and provide any available information to indicate whether additional studies are required to determine the potential for protected species impacts.

If you have any questions or require additional information, please do not hesitate to contact me (585-321-4218; jgbruce@haleyaldrich.com). Thank you in advance for your assistance.

Sincerely yours,

HALEY & ALDRICH, INC.

Jacqueline G. Bruce

Project Manager

Lynn Gresock

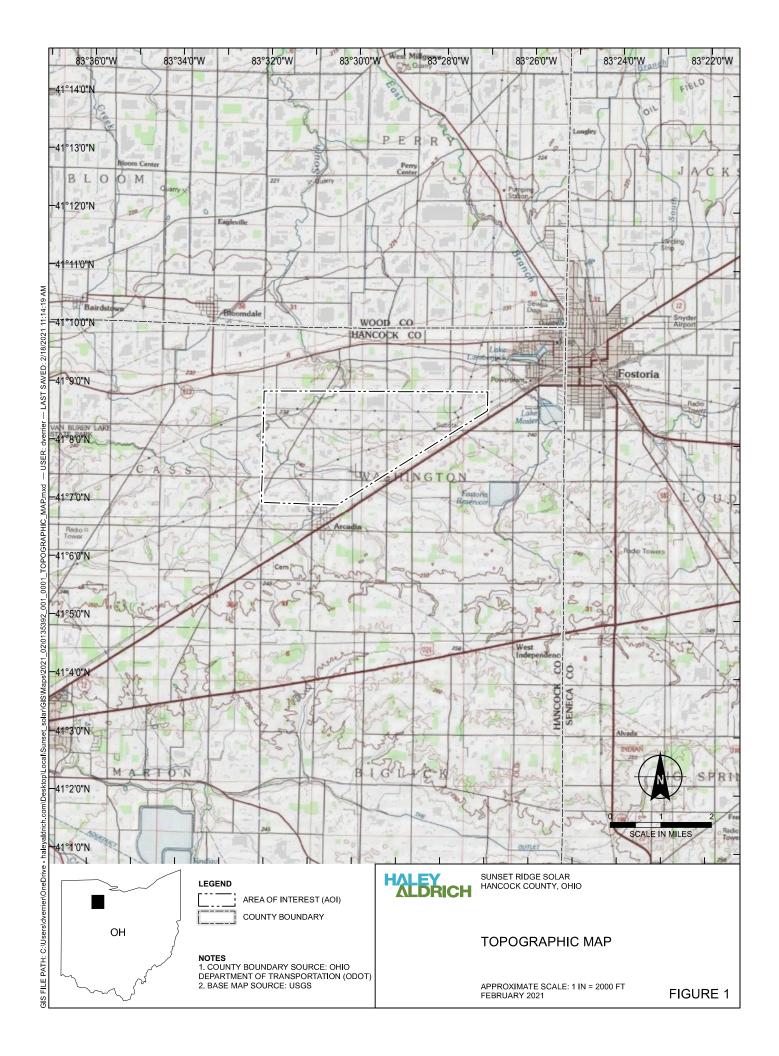
Principal Consultant

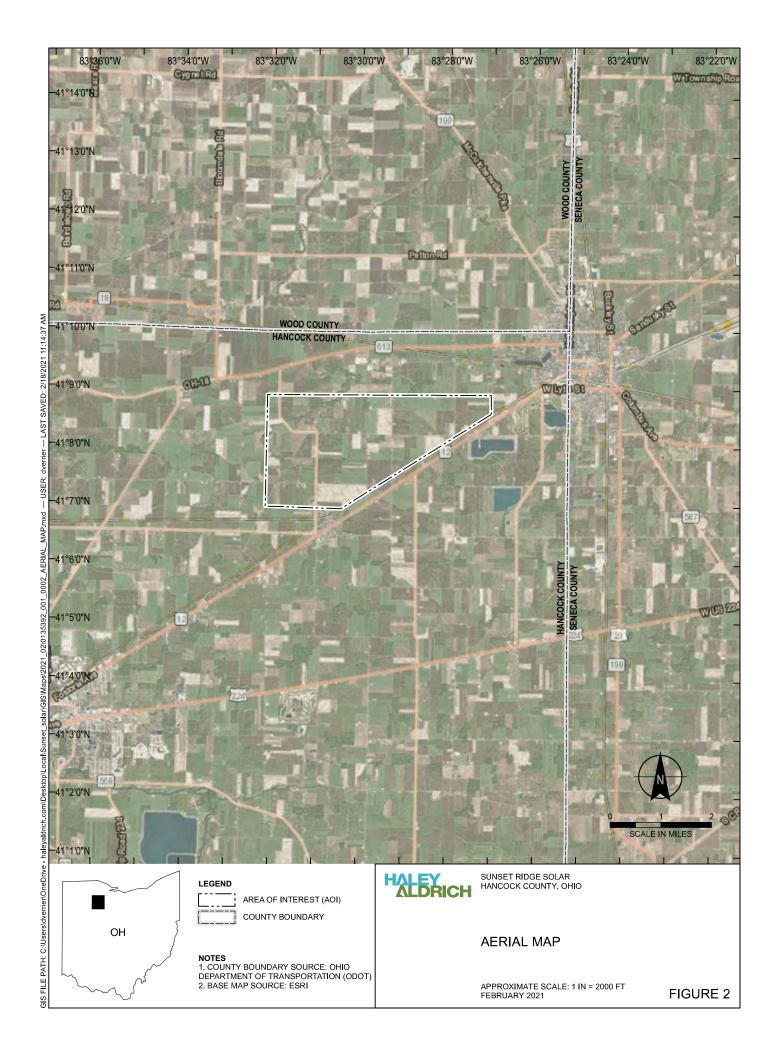
Lynn gresock

Attachments: Figures 1 and 2 and GoogleEarth file—Area of Interest

cc: Leeward Renewable Energy Development, LLC, Attn: Robert Kalbouss

\haleyaldrich.com\share\CF\Projects\135392\T&E Species\2021_0225_Sunset Ridge_USFWS Request for Review.docx





From: Ohio, FW3

To: Bruce, Jacqueline; Gresock, Lynn; Rob Kalbouss
Cc: nathan.reardon@dnr.state.oh.us; Parsons, Kate

Subject: Haley & Aldrich, Sunset Ridge Solar Project, Hancock County, Ohio

Date: Tuesday, March 2, 2021 12:06:30 PM

Attachments: pastedImagebase640.png

pastedImagebase641.png

CAUTION: External Email



UNITED STATES DEPARTMENT OF THE INTERIOR U.S. Fish and Wildlife Service Ecological Services Office 4625 Morse Road, Suite 104 Columbus, Ohio 43230 (614) 416-8993 / Fax (614) 416-8994



TAILS# 03E15000-2021-TA-0887

Dear Ms. Bruce,

The U.S Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (Myotis sodalis) and threatened northern long-eared bat (Myotis septentrionalis) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

We recommend minimizing tree clearing to the maximum extent possible and avoiding clearing of any woodlots and we appreciate your commitment to preserving forested areas where possible and to clearing unavoidable trees only between October 1 and March 31. However, at this time we are unable to fully assess the potential impact of the project on federally listed bats. Therefore, we recommend additional coordination with this office regarding project siting in order for us to provide project-specific conservation recommendations for federally listed bats.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

Patrice Ashfield Field Office Supervisor cc: Nathan Reardon, ODNR-DOW Kate Parsons, ODNR-DOW





July 15, 2021

Patrice Ashfield, Field Office Supervisor United States Fish and Wildlife Service Ecological Services Office 4625 Morse Road, Suite 104 Columbus, OH 43230

Subject: South Branch Solar (formerly Sunset Ridge Solar), TAILS# 03E15000-2021-TA-0887

Dear Ms. Ashfield:

Thank you for your correspondence of March 2, 2021 identifying that no federal species other than the Indiana bat and northern long-eared bat, which occur throughout the State of Ohio, are expected to occur within the vicinity of the South Branch Solar project (formerly known as Sunset Ridge Solar) in Washington Township, Hancock County, Ohio. The correspondence recommends minimizing tree clearing and committing to clearing unavoidable trees (≥3 inches diameter at breast height) only between October 1 and March 31. Additional coordination is recommended to fully assess the potential impact of the South Branch Solar project on federally listed bats.

The South Branch Solar property is generally open active agricultural fields, and the proposed layout has minimized the need for tree clearing. Figure 1 shows the areas where limited tree clearing will be necessary in order to accommodate the layout and function of the South Branch Solar project. A total of approximately 4 acres of tree clearing is proposed. Clearing will be restricted to occur only between October 1 and March 31.

With this additional information, we request that you confirm whether these measures will be sufficiently protective of the federally listed species for which potential exists to occur in the area. Please let me know if any additional information would be helpful to support your review. Thank you.

Sincerely yours,

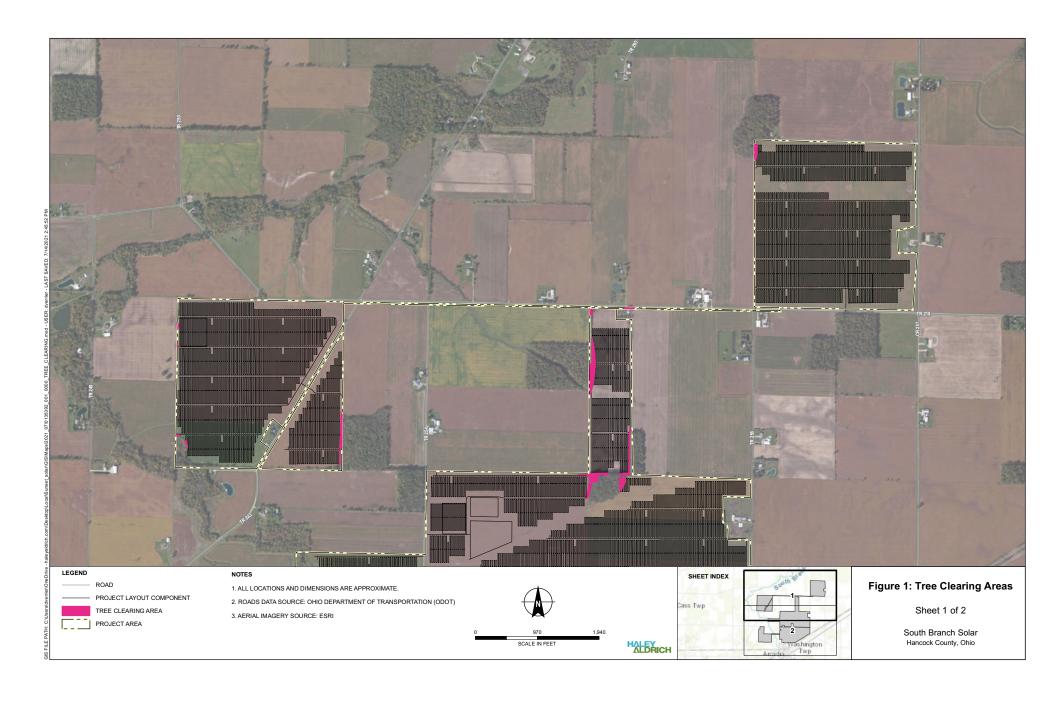
HALEY & ALDRICH, INC.

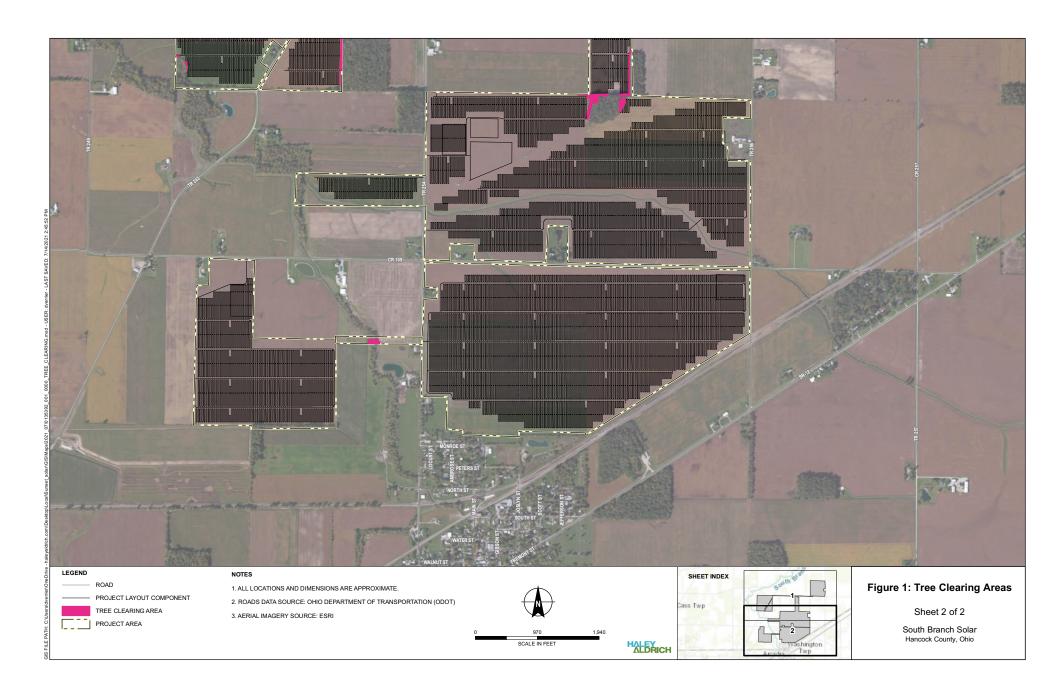
Lynn Gresock

Lynn Gresock

Principal Consultant

\haleyaldrich.com\share\CF\Projects\135392\T&E Species\USFWS\South Branch Solar_USFWS Follow-Up_7-15-21.docx





From: Seymour, Megan
To: Gresock, Lynn

Subject: Re: [EXTERNAL] South Branch Solar (formerly Sunset Ridge) Consultation Follow-Up, TAILS # 03E15000-2021-

TA-0887

Date: Friday, July 16, 2021 4:14:44 PM

CAUTION: External Email

Lynn,

Thank you for the additional information. We appreciate your commitment to clear trees during the season when listed bats would not be using this habitat. If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. If there is no Federal nexus, then no additional coordination is necessary.

Best,

Megan

Megan Seymour

Wildlife Biologist U.S. Fish and Wildlife Service Ohio Ecological Services Field Office 4625 Morse Rd., Suite 104 Columbus, OH 43230

614-416-8993 ext. 116 (office)

614-542-7502 (cell)

From: Ohio, FW3 <ohio@fws.gov>

Sent: Thursday, July 15, 2021 11:22 AM

To: Seymour, Megan <megan_seymour@fws.gov>

Subject: Fw: [EXTERNAL] South Branch Solar (formerly Sunset Ridge) Consultation Follow-Up, TAILS #

03E15000-2021-TA-0887

Lynn has sent confirmation of tree clearing

Thanks

From: Gresock, Lynn <LGresock@haleyaldrich.com>

Sent: Thursday, July 15, 2021 10:29 AM

To: Ohio, FW3 <ohio@fws.gov>

Subject: [EXTERNAL] South Branch Solar (formerly Sunset Ridge) Consultation Follow-Up, TAILS #

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Thank you in advance for your review of the additional project information reflected in the attached.

Lynn Gresock

Principal Consultant

Haley & Aldrich, Inc.

3 Bedford Farms Drive|Suite 301 Bedford, New Hampshire 03110

T: (603) 391.3325 C: (978) 302.7833

www.haleyaldrich.com



HALEY & ALDRICH, INC. 200 Town Centre Drive Suite 2 Rochester, NY 14623 585.359.9000

25 February 2021 File No. 135392-002

Ohio Department of Natural Resources 2045 Morse Road, Building E-2 Columbus, Ohio 43229-6693

Attention: Sarah Tebbe, Environmental Specialist

Subject: Request for Species Review - Sunset Ridge Solar

Dear Ms. Tebbe:

Haley & Aldrich, Inc. is requesting information from the Ohio Department of Natural Resources regarding the potential presence of threatened or endangered species on or near the proposed location of a solar energy facility known as Sunset Ridge Solar (the Project). A generalized Area of Interest (AOI) for the Project is shown on Figures 1 and 2. The Project will require an application before the Ohio Power Siting Board; it is not yet known whether impacts to wetlands would require a state or federal permit.

The AOI is located entirely within Hancock County, Ohio, and is generally bounded to the south and east by Township Road 261, just over two miles southwest of Fostoria. To the southwest, the southernmost portion of the AOI is located on the outskirts of Arcadia. The AOI is generally bounded to the west by Township Road 249. A GoogleEarth file is provided with this request; the center of the AOI is approximately 41° 8′ 0.68″N, 83° 29 ′51.33″W.

The AOI consists primarily of agricultural land interspersed with small areas of trees. Although no layout is yet available, the goal will be to limit the need for tree clearing.

We would appreciate if you could review your files and provide any available information to indicate whether additional studies are required to determine the potential for protected species impacts.

If you have any questions or require additional information, please do not hesitate to contact me (585-321-4218; jgbruce@haleyaldrich.com). Thank you in advance for your assistance.

Sincerely yours,

HALEY & ALDRICH, INC.

Jacqueline G. Bruce

Project Manager

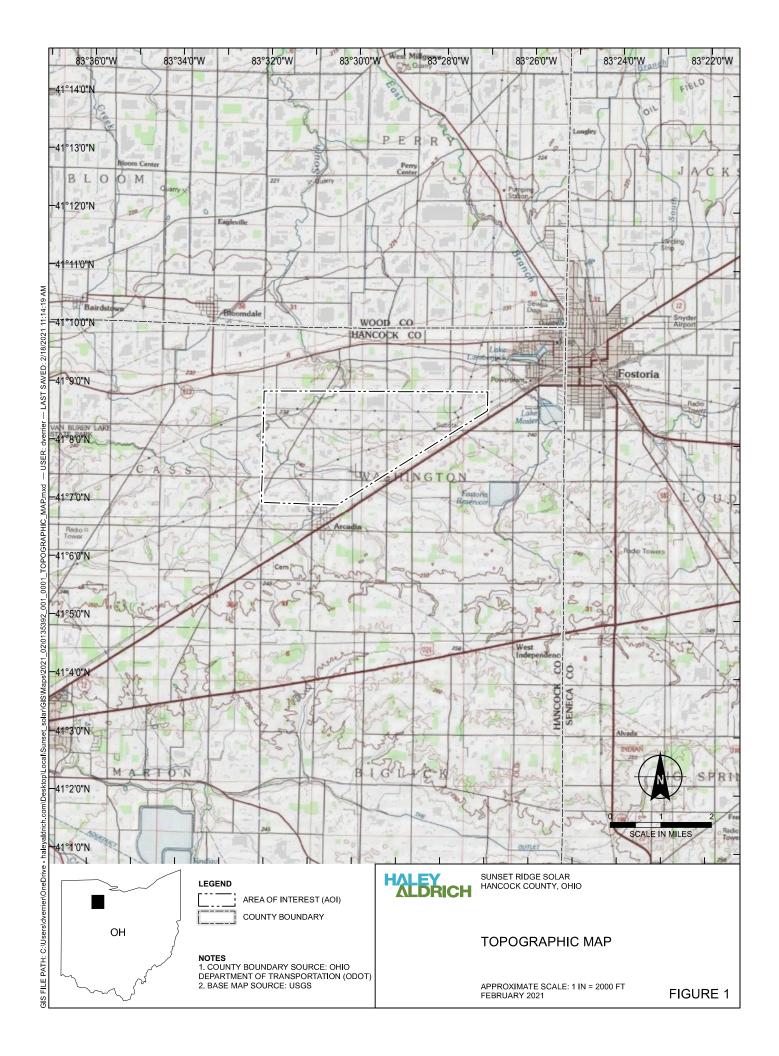
Lynn Gresock

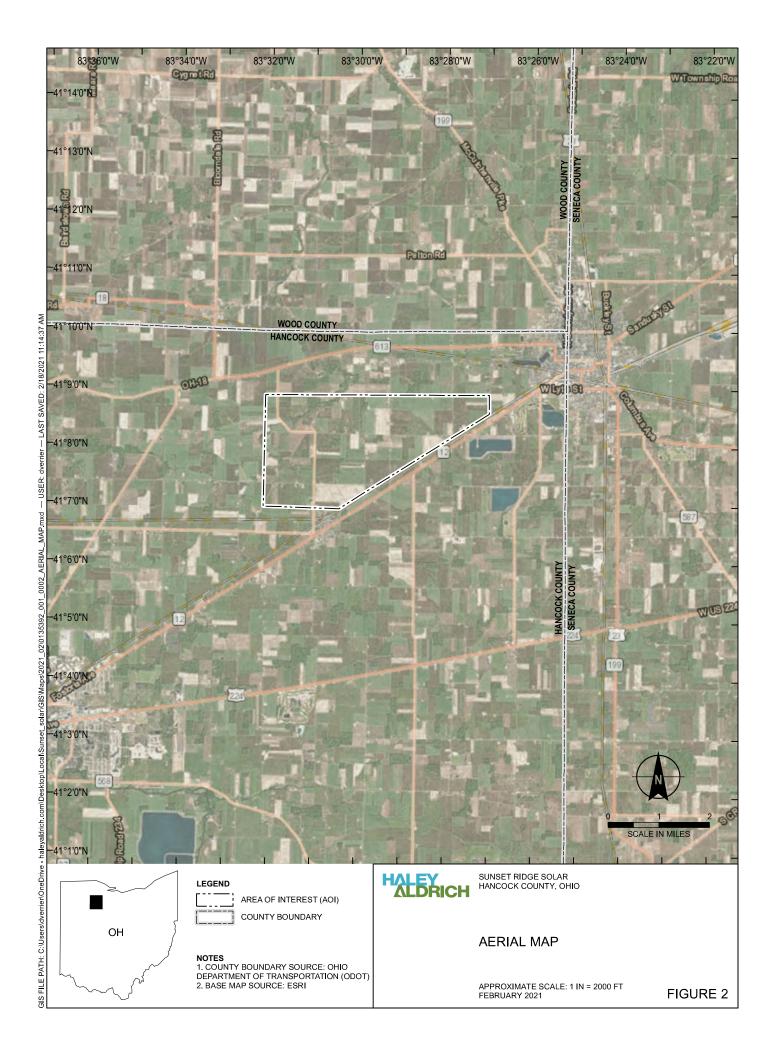
Lynn Gresock

Principal Consultant

Attachments: Figures 1 and 2 and Google Earth file – Area of Interest

cc: Leeward Renewable Energy Development, LLC, Attn: Robert Kalbouss







Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate
John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

May 7, 2021

Jackie Bruce Haley & Aldrich, Inc. 200 Town Centre Drive, Suite 2 Rochester, New York 14623

Re: 21-0249; Sunset Ridge Solar, Hancock County

Project: The proposed project involves the construction of a solar energy facility.

Location: The proposed project is located in Washington Township, Hancock County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no other records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The Division of Wildlife is working closely with our partners at Ohio Pollinator Habitat Initiative (OPHI) to create and enhance pollinator habitat at solar power installations. The OPHI Solar Pollinator Program Advisory Team has developed the Ohio Solar Site Pollinator Habitat Planning and Assessment Form and is available for your use. The form can be found at the following: http://nebula.wsimg.com/7cf0240c398d5819e3e6ff011f0ba456?AccessKeyId=570E4FC7FCD2E D2F0C1A&disposition=0&alloworigin=1. We recommend that the areas between and around the solar panels be planted with legumes and wildflowers (i.e. forbs) that are beneficial to pollinators and other wildlife and reduce use of non-native grass and gravel. The recommended legumes and forbs listed below are low-growing so as not to cast shadows on the solar panels and would only require one to two mowings a year for maintenance, which should minimize maintenance costs. For other areas of the installation where vegetation does not have to be low-growing, alternative pollinator mixes are available with a more diverse array of flowering plants. This perennial vegetation will provide beneficial foraging habitat to songbirds and pollinators while reducing storm water runoff, standing water, and erosion. Please contact the Ohio Pollinator Habitat Initiative http://www.ophi.info/, and specifically Mike Retterer mretterer@pheasantsforever.org for further information on solar power facility pollinator plantings.

Recommended low-growing grasses and forbs may include:

Little Bluestem	Schizachyrium scoparium
Sideoats Grama	Bouteloua curtipendula
Alfalfa	Medicago spp.
Alsike Clover	Trifolium hybridum
Brown-eyed Susan	Rudbeckia triloba
Butterfly Milkweed	Asclepias tuberosa
Lanceleaf Coreopsis	Coreopsis lanceolata
Partridge Pea	Chamaecrista fasciculata
Timothy	Phleum pratense
Orchardgrass	Dactylis glomerata
Crimson Clover	Trifolium incarnatum
Ladino or White Clover	Trifolium repens

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH \geq 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting.

Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING". https://ohiodnr.gov/static/documents/wildlife/wildlife-management/Bat+Survey+Guidelines.pdf

If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31, however, limited summer tree cutting may be acceptable after consultation with DOW (contact Sarah Stankavich, sarah.stankavich@dnr.state.oh.us).

The DOW also recommends that a desktop habitat assessment, followed by a field assessment if needed, is conducted to determine if there are potential hibernaculum(a) present within the project area. Information about how to conduct habitat assessments can be found in the current USFWS "Range-wide Indiana Bat Survey Guidelines." If a habitat assessment finds that potential hibernacula are present within 0.25 miles of the project area, please send this information to Sarah Stankavich, sarah.stankavich@dnr.state.oh.us for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species:

<u>Federally Endangered</u> clubshell (*Pleurobema clava*) rayed bean (*Villosa fabalis*)

<u>State Endangered</u> purple lilliput (*Toxolasma lividum*)

<u>State Threatened</u> pondhorn (*Uniomerus tetralasmus*) black sandshell (*Ligumia recta*)

This project must not have an impact on freshwater native mussels at the project site. This applies to both listed and non-listed species. Per the Ohio Mussel Survey Protocol (2020), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. This is further explained within the Ohio Mussel Survey Protocol. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, as a last resort, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. The Ohio Mussel Survey Protocol (2020) can be found at: http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/licenses%20&%20permits/OH%20Mussel%20Su rvey%20Protocol.pdf

The project is within the range of the western banded killifish (*Fundulus diaphanus menona*), a state endangered fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet meadows and other wetlands. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the black-crowned night-heron (*Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round. Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

Geological Survey: The Division of Geological Survey has the following comment.

Physiographic Region

The proposed project area is in Washington Township, Hancock County. This area is in the Fostoria Lake-Plain Shoals physiographic region. This region is characterized by low relief hillocks and shallow closed depressions of the Defiance Moraine that has been lightly eroded by Lake Maumee. Sandy areas are common (Ohio Department of Natural Resources, Division of Geological Survey, 1998).

Surficial/Glacial Geology

The project area lies within the glaciated margin of the state and includes several Wisconsinanage glacial features. The majority of the project area is covered by the lake-planed moraine within the Lake Maumee Basin. Thin sand deposits overlie some of the lake-planed moraine and represent minor, overlying thin beach or dune deposits. The far southwestern portion of project area is covered by the hummocky till of the Defiance Moraine (Pavey et al, 1999). Glacial drift throughout most of the study area is between 17 and 66 feet thick. Drift is thinnest along stream valleys and thickest beneath the moraine in the southern portion of the study area (Powers and Swinford, 2004).

Bedrock Geology

The uppermost bedrock unit in the project area is the Silurian-age Greenfield Dolomite. This unit is characterized by olive gray to yellowish brown dolomite. There is an absence of shale laminae compared to overlying units. It may contain sedimentary breccia zones. The Greenfield dolomite is found only in the far south-eastern portion of the project area. Underlying the Greenfield Dolomite is the Lockport Dolomite. This unit is Silurian-age and consists of bluish gray to gray dolomite with minor interbedding of limestone, chert and shale. Fossils and planar to irregular bedding are common. This unit makes up a majority of the project area. It should be noted that bedrock is not exposed at the surface within the boundaries of the project area due to significant glacial drift (Slucher et al, 2006).

Oil, Gas and Mining

ODNR has record of 76 oil and gas wells within one mile of the proposed project area. Most of these wells are listed as historical production wells. These wells are part of the Findlay Consolidated Oil and Gas Field. Wells in this area produce out of the Trenton Formation (Ohio Department of Natural Resources, Division of Oil and Gas, Ohio Oil and Gas Wells Locator).

ODNR does not have record of any mining operations within the project area. The nearest mine is the active Gerken Materials, Inc. limestone quarry located 6.3 miles to the north of the project area (Ohio Department of Natural Resources, Division of Mineral Resources, Mines of Ohio).

Seismic Activity

Several small earthquakes have historically been recorded near the site. The three events closest to the site are listed in the chart below (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Earthquake Epicenters):

Date	Magnitude	Distance to Site Boundary	County	Township
February 25, 2010	2.9	2.3 miles	Seneca	Loudon
June 4, 1990	2.3	2.5 miles	Hancock	Washington
September 29, 1974	3.0	4.3 miles	Wood	Perry

Karst

Karst features usually form in areas that are covered by thin or no glacial drift and the bedrock is limestone or dolomite. There are no sinkholes within the bounds of the project area. A significant thickness of glacial drift limits the formation of sinkholes. However, the underlying Lockport and Greenfield Dolomite are composed of carbonate bedrock which can be prone to the development of karst features. The nearest verified sink hole to the project area is 7.6 miles to the northeast. (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Karst).

Soils

According to the USDA Web Soil Survey, the project area consists primarily of soils derived from glacial till and loess. Pewamo, Glynwood and Blount are the most common soil series found

within the boundaries of the project area. Together these soils cover over 93% of the project area and have a clay loam soil texture (USDA Web Soil Survey).

There is a moderate risk of shrink-swell potential in these soils. Slope is variable, with slope exceeding a 6% grade. Steepest slopes are along stream valleys (Robbins et al., 2006 and USDA Web Soil Survey).

Groundwater

Groundwater resources are plentiful throughout the project area. Wells developed in bedrock are likely to yield 25 to 100 gallons per minute. Limestone and dolomite aquifers provide substantial groundwater yields throughout the project area (Schmidt, 1981 and Ohio Department of Natural Resources, Division of Water, Bedrock Aquifer Map, 2000). Wells developed in glacial material are likely to yield up to 25 gallons per minute. The lowest unconsolidated aquifer yields are on the wave planed till plain in the northern portion of the project area. Higher yields are found within the Defiance Moraine. Higher groundwater yields typically reflect larger diameter, properly developed and screened wells (Ohio Department of Natural Resources, Division of Water, Statewide Unconsolidated Aquifer Map, 2000).

ODNR has record of 203 water wells drilled within one mile of the project area. These wells range in depth from 50 to 214 feet deep, with an average depth of 87 feet. The most common aquifer listed is limestone. Of the 203 water wells 192 of the wells are completed in limestone bedrock. Two wells are completed in shale bedrock. The remaining wells are completed in sand and gravel or clay and rock. A sustainable yield of 5 to 100 gallons per minute is expected from wells drilled in this area based on well log records. The average sustainable yield from these records within one mile was 25 gallons per minute. This is based on records from 37 wells within one mile of the project area that contain sustainable yield data (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Water Wells).

Water Resources: The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List 8 16.pdf

ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at Sarah.Tebbe@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew Environmental Services Administrator (Acting)

References

- Ohio Department of Natural Resources, Division of Geological Survey, *Ohio Earthquake Epicenters*, online interactive map, https://gis.ohiodnr.gov/MapViewer/?config=earthquakes
- Ohio Department of Natural Resources, Division of Geological Survey, *Ohio Karst*, online interactive map, https://gis.ohiodnr.gov/website/dgs/karst_interactivemap/
 - Ohio Department of Natural Resources, Division of Geological Survey, (1998). *Physiographic Regions of Ohio*. Ohio Department of Natural Resources, Ohio Department of Natural Resources, Division of Geological Survey, map with text, 2 p., scale 1:2,100,000.
- Ohio Department of Natural Resources, Division of Geological Survey, (In progress). *Statewide Surficial Geology Map.* GIS coverage.
- Ohio Department of Natural Resources, Division of Water, *Ohio Water Wells*, online interactive map, https://gis.ohiodnr.gov/MapViewer/?config=waterwells.
- Ohio Department of Natural Resources, Division of Water, (2000). *Statewide Bedrock Aquifer Map*, GIS coverage.
- Ohio Department of Natural Resources, Division of Water, (2000). Statewide Unconsolidated Aquifer Map, GIS coverage.
- Slucher, E., Swinford, E., Larsen, G., Schumacher, G., Shrake, D., Rice, C., Caudill, M., Rea, R. and Powers, D. (2006). *Bedrock Geologic Map of Ohio*, Ohio Department of Natural Resources, Division of Geological Survey, map, scale 1:500,000.
- USDA Web Soil Survey, (Last modified 2019). *Web Soil Survey Interactive Map*, United States Department of Agriculture, National Resources Conservation Service, online interactive map, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.
- Schmidt, J. (1991). *Groundwater Resources Map of Greene County*, Ohio Department of Natural Resources, Division of Geological Survey, map.





July 15, 2021

Nathan Reardon Ohio Department of Natural Resources 2045 Morse Road Columbus, OH 43229

Subject: South Branch Solar (formerly Sunset Ridge Solar), 21-0249

Dear Mr. Reardon:

On May 7, 2021, we received correspondence from the Ohio Department of Natural Resources (ODNR) Office of Real Estate reviewing a range of information associated with the proposed location of the South Branch Solar project (the Project) (formerly Sunset Ridge Solar). In this letter, we are providing additional information with regard to issues specifically identified by the ODNR Division of Wildlife in order to clarify the need for special protective measures in association with the various identified species with the potential to occur in the area.

In addition to specific species, the Division of Wildlife recommended minimizing wetland and stream impacts and implementing best management practices to minimize erosion and sedimentation, as well as incorporating pollinator species into the vegetation of the solar facility. As can be seen on Figure 1, very few wetland and stream resources are located within the Project site. The layout has prioritized avoidance of wetlands and streams; at this time, one stream crossing is proposed for access and no wetland impacts are anticipated. Best management practices, in accordance with ODNR's stormwater management guidance, will be implemented during construction to minimize erosion and sedimentation. Pollinator species will be among those used for vegetation of the Project site.

The following species were identified with the potential to occur within the Project area:

- State-listed bats: Indiana bat, northern long-eared bat, little brown bat, and tricolored bat (all of which have the potential to occur throughout the state);
- State and federally listed mussels: clubshell, rayed bean, purple lilliput, pondhorn, and black sandshell (which have the potential to be located in streams of a certain size);
- The western banded killifish, which can be present in certain perennial streams;
- The black-crowned night-heron, which forages in wetlands and other shallow aquatic habitats;
- The least bittern, which also prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass, or other semi-aquatic vegetation interspersed with woody vegetation and open water; and
- The northern harrier, a migrant species that hunts and nests in grasslands.

Although the Kirtland's snake was noted, the correspondence concluded that the Project is not likely to impact this species due to the location, the type of habitat present, and the type of work proposed.

Page 2 South Branch Solar

Information regarding the Project's potential to impact each of the species bulleted above is provided below.

State-Listed Bats

The ODNR correspondence requested that a desktop habitat assessment be conducted in accordance with the United States Fish and Wildlife Service's (USFWS) *Range-wide Indiana Bat Survey Guidelines* (most recently issued in March 2020), followed by a field assessment as needed, to determine if there are potential hibernaculum present within the Project area (as a 0.25-mile buffer is typically beneficial around such areas).

We are currently unaware of any known or potential hibernacula within 0.25-mile of the Project site. As outlined in the USFWS guidance, the first step was consultation with that agency. The USFWS maintains information regarding hibernacula locations in Ohio; however, this information is not publicly available (https://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html). We have initiated coordination with the USFWS and in their response (dated March 2, 2021) they did not indicate the presence of a known hibernacula within 0.25-mile of the Project site (as would be expected if one were present).

We have also completed additional desktop evaluations to review the potential for hibernacula in the vicinity of the Project, including a review of aerial photography and topographic mapping within 3 miles of the Project footprint. We have reviewed ODNR mapping of known mine openings and the nearest mapped mine opening is located approximately 4.5 miles northwest of the Project site near Bairdstown, Ohio (https://gis.ohiodnr.gov/MapViewer/?config=OhioMines). We also reviewed ODNR's Karst Interactive Map for field verified or suspected karst locations in the vicinity. The nearest field-verified or suspected karst point is located approximately 9 miles south-southeast of the Project site near Vanlue, Ohio (https://gis.ohiodnr.gov/website/dgs/karst_interactivemap/). In the ODNR letter of May 7, 2021, the Ohio Division of Geological Survey indicated the nearest sinkhole was located 7.6 miles northeast of the Project site. No significant forests or caves are known to exist within 3 miles of the Project footprint. No previous species survey reports were readily available for review within the area, nor did desktop habitat review indicate additional research would identify materially different results.

During field investigations associated with wetland and stream delineations as well as habitat observations, no cave openings were observed. As a result, it appears unlikely that any hibernacula are present within 0.25-mile of the Project site and further field surveys for hibernacula do not appear warranted.

The Project property is generally open active agricultural fields, and the proposed layout has minimized the need for tree clearing. Figure 1 shows the areas where limited tree clearing will be necessary in order to accommodate the layout and function of the Project. A total of approximately 4 acres of tree clearing is proposed. Clearing of trees ≥3 inches diameter at breast height will be restricted to occur only between October 1 and March 31.



State and Federally Listed Mussels

Streams within the Project site consist of several segments of the South Branch Portage River, one additional perennial unnamed stream, and an intermittent stream. The intermittent stream is not anticipated to be suitable for mussel habitat. The United States Geological Survey (USGS) indicates that the unnamed stream transitions from perennial to intermittent within the Project site. Both the segments of the South Branch Portage River (top right) and the unnamed perennial stream (bottom right) have been channelized and degraded in association with the surrounding agricultural use (i.e., row crops). Neither perennial stream is listed in Appendix A of the Ohio Mussel Survey Protocol.

According to StreamStats (results attached) the South Branch Portage River in the vicinity of the Project site has a drainage area of approximately 7.17 square miles, while the drainage area for the unnamed stream ranges from 3.88 in the western portion of the Project site to 3.21 in the eastern portion of the Project site. A road crossing and potential collector line crossings are proposed through the perennial unnamed stream; however, based on the criteria provided by ODNR, it is our understanding that no mussel surveys would be required for in-water work proposed within the perennial unnamed stream.





Although the South Branch Portage River does have a calculated watershed greater than 5 square miles, its degraded nature may not result in suitable mussel habitat. It is expected that a below-ground collector line will be installed across this segment of the South Branch Portage River. As long as this installation does not involve in-water work, it is our understanding that a mussel survey would not be required. If in-water work were proposed, the need for a mussel survey would potentially need to be considered.

Western Banded Killifish

As noted above, the portions of the South Branch Portage River and the unnamed perennial stream that extend through the Project site have been substantially degraded by agricultural practices (including channelization, removal of canopy, siltation, and agricultural runoff). Western banded killifish prefer low-gradient streams with clear water, abundant aquatic vegetation, and substrates of sand, marl, or organic debris free of silt. Furthermore, the stream is a very small perennial stream (as shown in the photograph to the right). As a result, we do not anticipate impacts to the western banded killifish.



Page 4
South Branch Solar

Black-Crowned Night-Heron

Wetlands and waterbodies delineated on-site are relatively small (as can be seen on Figure 1) and appear unlikely to provide adequate nesting habitat for this species. The minor amounts of tree clearing proposed for Project construction will occur in narrow strips along the edges of active agricultural fields. As a result, we do not anticipate any impacts to nesting black-crowned night-herons.

Least Bittern

As noted in ODNR's May 7, 2021 response, this species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. No such habitat is present within the Project site (as can be seen on Figure 1) and the largely agricultural land use is not suitable for this species. As a result, we do not anticipate any impacts to least bitterns.

Northern Harrier

As noted in ODNR's May 7, 2021 response, this species is a common migrant and winter species but rare nester in the region, preferring to nest in large marshes and grasslands. On-site investigations indicate no large marshes or grasslands/pastures are present within the Project site. As a result, we do not anticipate any impacts to nesting northern harriers.

With this additional information, we request that you confirm whether you are in agreement that only the summer-roosting bats require seasonal clearing restrictions for species protection and that, if in-water work was to occur for the South Branch Portage River, a mussel survey would potentially need to be considered. Please let me know if any additional information would be helpful to support your review. Thank you.

Sincerely yours,

HALEY & ALDRICH, INC.

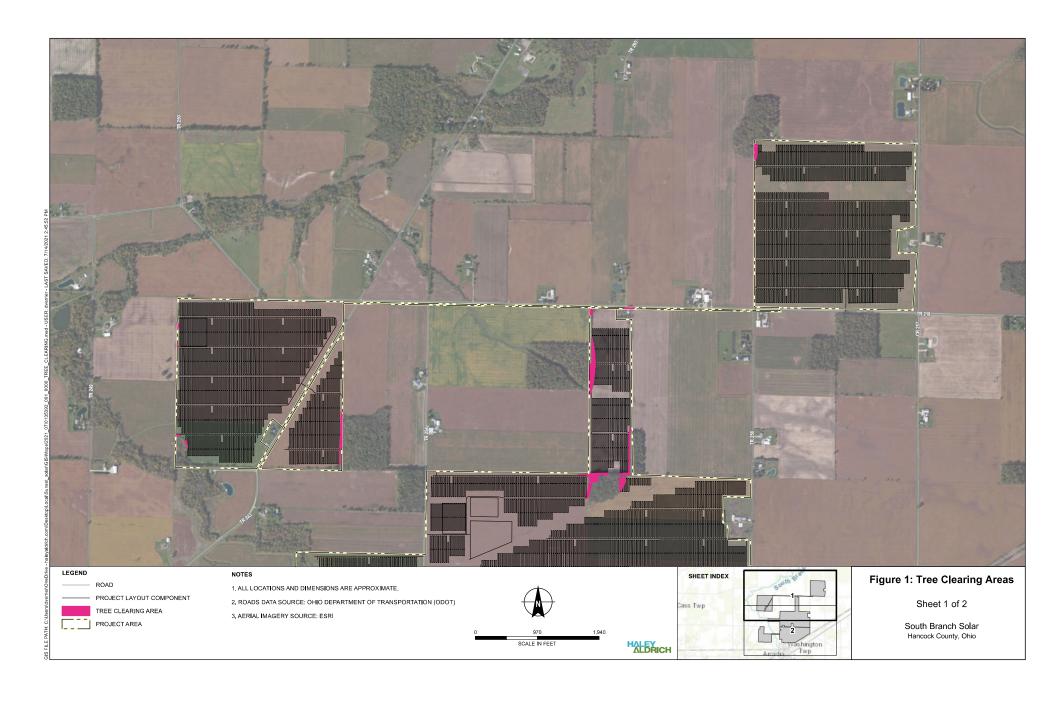
Lynn Gresock

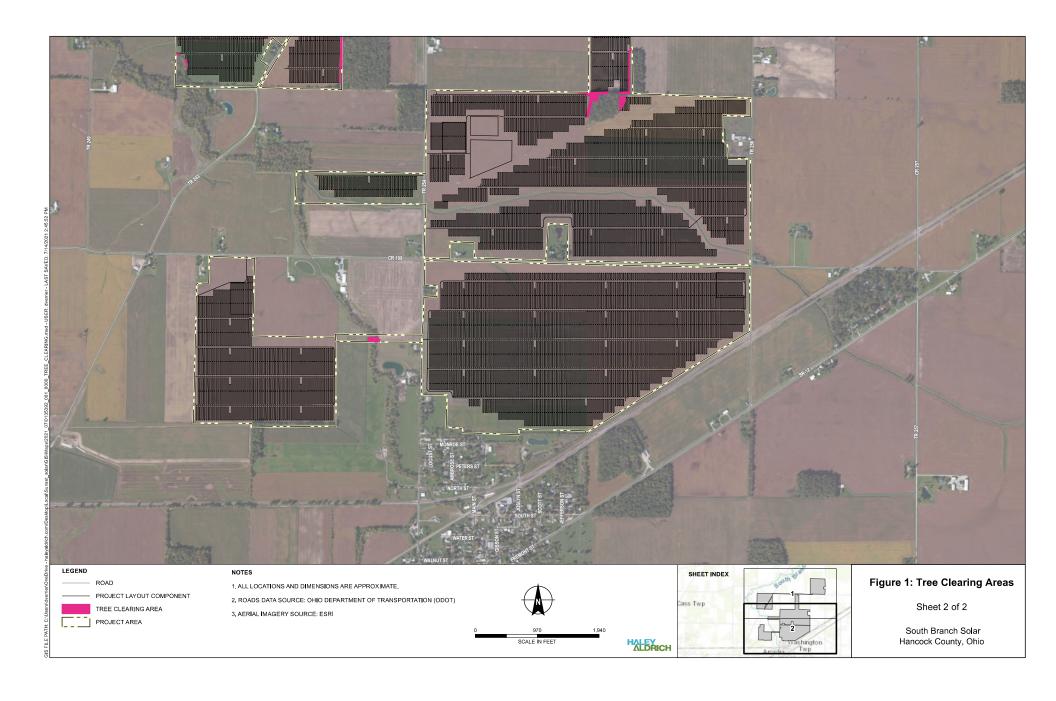
Lynn Gresock

Principal Consultant

 $\label{thm:comshare} $$ \aligned Solar_ODNR Follow-Up_7-15-21.docx $$ \aligned Solar_ODNR Follow-Up_7-15-21.docx$







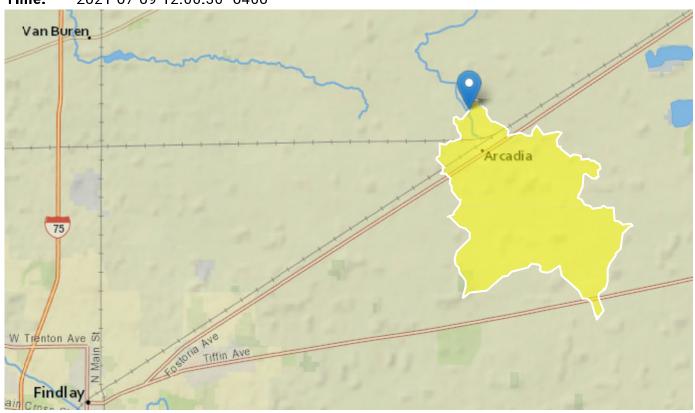
StreamStats Report

Region ID: OH

Workspace ID: OH20210709160608694000

Clicked Point (Latitude, Longitude): 41.11958, -83.51913

Time: 2021-07-09 12:06:30 -0400



South Branch Portage River (H&A ID MM3)

Basin Characteristics			
Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	7.17	square miles

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.6.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.1.2

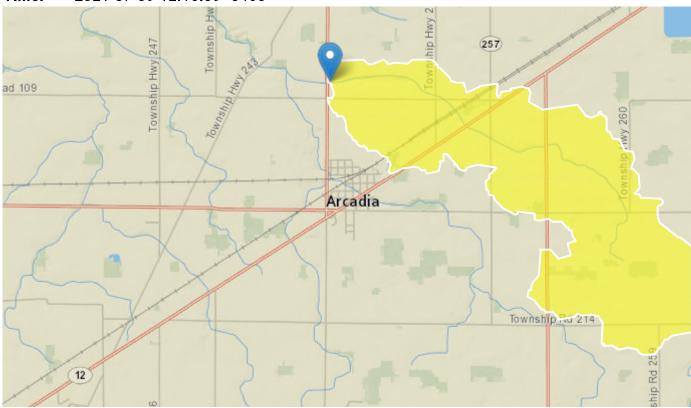
StreamStats Report

Region ID: OH

Workspace ID: OH20210709161023795000

Clicked Point (Latitude, Longitude): 41.12488, -83.51573

Time: 2021-07-09 12:10:39 -0400



Unnamed stream - western crossing (H&A ID MM2)

Basin Characteristics			
Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	3.88	square miles

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.6.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.1.2

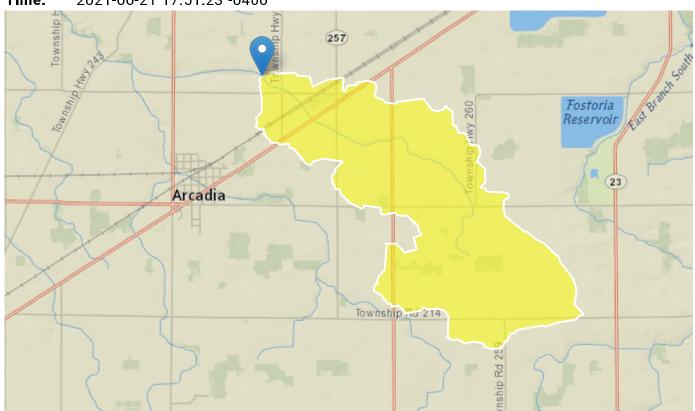
StreamStats Report

Region ID: OH

Workspace ID: 0H20210621215106385000

Clicked Point (Latitude, Longitude): 41.12482, -83.50100

Time: 2021-06-21 17:51:23 -0400



South Branch Solar proposed road crossing.

Basin Characteristics			
Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	3.21	square miles

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.5.3

StreamStats Services Version: 1.2.22

NSS Services Version: 2.1.2

From: <u>Nathan.Reardon@dnr.ohio.gov</u>

To: Gresock, Lynn

Subject: RE: South Branch Solar (formerly Sunset Ridge) Species Follow-Up, 21-0249

Date: Tuesday, July 20, 2021 8:57:28 AM

Attachments: <u>image002.png</u>

CAUTION: External Email

Hi Lynn,

I have addressed each species below.

State-Listed Bats Clearing of trees ≥3 inches diameter at breast height will be restricted to

occur only between October 1 and March 31. The DOW concurs that by

following this guidance, impacts to state listed bats are not likely.

Mussels If there is no in-water work proposed in a stream with a watershed of 5

square miles or larger, there is no need for a mussel survey. If work becomes necessary, a mussel reconnaissance should be conducted in

accordance with the Ohio Mussel Survey Protocol.

Western Banded Killifish It is unlikely that this species would be present in the streams

within the project area. However, any perennial stream would be subject to the in-water work restriction period of March 15 through

June 30. A waiver of this restriction can be applied for.

Black-Crowned Night-Heron It is unlikely that this species would be present within the project

area. The DOW concurs that impacts to this species are not likely.

Least Bittern It is unlikely that this species would be present within the project

area. The DOW concurs that impacts to this species are not likely.

Northern Harrier It is unlikely that this species would be present within the project

area. The DOW concurs that impacts to this species are not likely.

If I missed anything, or you have questions, please let me know.

Thank you, Nathan

Nathan Reardon

Compliance Coordinator ODNR Division of Wildlife 2045 Morse Road Columbus, OH 43229 Phone: 614-265-6741

Email: nathan.reardon@dnr.ohio.gov

Support Ohio's wildlife. Buy a license or stamp at wildohio.gov.

This message is intended solely for the addressee(s). Should you receive this message by mistake, we would be grateful if you informed us that the message has been sent to you in error. In this case, we also ask that you delete this message and any attachments from your mailbox, and do not forward it or any part of it to anyone else. Thank you for your cooperation and understanding.

Please consider the environment before printing this email.

From: Gresock, Lynn <LGresock@haleyaldrich.com>

Sent: Thursday, July 15, 2021 10:26 AM

To: Reardon, Nathan < Nathan.Reardon@dnr.ohio.gov>

Subject: South Branch Solar (formerly Sunset Ridge) Species Follow-Up, 21-0249

Thanks in advance for your review of the attached project information.

Lynn Gresock

Principal Consultant

Haley & Aldrich, Inc.

3 Bedford Farms Drive|Suite 301 Bedford, New Hampshire 03110

T: (603) 391.3325 C: (978) 302.7833

www.haleyaldrich.com

CAUTION: This is an external email and may not be safe. If the email looks suspicious, please do not click links or open attachments and forward the email to csc@ohio.gov or click the Phish Alert Button if available.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

7/22/2021 12:58:43 PM

in

Case No(s). 21-0669-EL-BGN

Summary: Application Appendix P - Species Consultations electronically filed by Ms. Megan Zemke on behalf of Borchers, Dylan F