



400 West Summit Hill Drive, Knoxville, Tennessee 37902

April 12, 2022

Mr. Lee Andrews  
U.S. Fish and Wildlife Service  
Kentucky Ecological Services Field Office  
J C Watts Federal Building  
330 West Broadway, Room 265  
Frankfort, Kentucky 40601-8670

Dear Mr. Andrews:

TENNESSEE VALLEY AUTHORITY (TVA) – LOGAN COUNTY SOLAR – REQUEST FOR CONCURRENCE

TVA entered into a Power Purchase Agreement (PPA) with Russellville Solar LLC (Russellville Solar), a wholly owned subsidiary of Silicon Ranch Corporation (SRC), on January 8, 2021, to purchase the electric power generated by a proposed solar photovoltaic (PV) facility in Logan County, Kentucky. The proposed solar facility, known as Logan County Solar, would be owned by SRC, operated by Russellville Solar, and would have an installed capacity of 173 megawatts. The solar facility would consist of arrays of either crystalline silicon or thin-film PV panels attached to ground-mounted single-axis trackers, central inverters, transformers, a substation and battery energy storage system, a switching station, an operations and maintenance building, access roads, and all associated cabling and safety equipment. The solar facility would connect to TVA's adjacent existing Springfield-Logan Aluminum 161-kiloVolt Transmission Line (TL). TVA would also install fiber-optic overhead ground wire along 2,500 feet of the existing TL mentioned above. The solar facility and associated Electrical Interconnection are herein referred to as the "Project Site". Under the terms of the PPA, TVA would purchase the electric output from the solar facility for an initial term of 20 years, subject to satisfactory completion of all applicable environmental reviews.

The proposed solar PV facility would occupy approximately 1,088 acres of a 1,569-acre Project Site. Approximately 89% (1,394) acres of the Project Site are agricultural fields, pastures, or otherwise cleared, open land, while approximately 11% (188 acres) of the Project Site are forested. Approximately 93 acres of forest is proposed for removal. No jurisdictional streams or wetlands would be impacted. More details about the scope and potential impacts of this project can be found in the draft Environmental Assessment available online <https://www.tva.com/environment/environmental-stewardship/environmental-reviews/nepa-detail/logan-county-solar-project>. See attached SRC\_Russellville Solar\_Logan County Solar\_Bio Report\_20220216 for habitat assessment, figures, and wildlife survey results.

A review of the TVA Regional Natural Heritage database, Office of Kentucky Nature Preserves, and the U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC) website identified eight species listed as federally endangered, threatened, candidate for listing, or delisted and monitored under the Endangered Species Act that have the potential to occur within the Project Site in Logan County, Kentucky. These species include four mussels (snuffbox mussel, little-wing pearlymussel, smooth rabbitsfoot, slabside pearlymussel), one insect (monarch butterfly), and three mammals (gray bat, Indiana bat, and northern long-eared bat (NLEB)) that have the potential to occur within Logan County based on historic range, proximity to known occurrence records, biological characteristics, and/or physiographic characteristics. No federally designated critical habitats for these species are present within or adjacent to the Project Site, therefore no adverse modification of critical habitats would occur.

Field surveys were conducted by biologists from HDR in May 2021 and October 2021 to determine whether suitable habitat for federally listed species occurs within the Project Site. On site surveys identified 17 forested stands, 12 buildings, five sinkhole fissures/karst features, 12 wetlands, two intermittent streams, 15 ponds, and nine ephemeral streams. No construction, grading, or fill would occur in jurisdictional wetlands or within a 100-foot buffer around the five karst features. The proposed construction of one road crossing using culverts would impact approximately 16 linear feet of one non-jurisdictional intermittent stream and approximately 0.01 acre of one non-jurisdictional emergent linear wetland. Best management practices including a 50-foot buffer zone would be used surrounding intermittent streams and wetlands to reduce indirect impacts from construction activities.

The snuffbox mussel, little-wing pearlymussel, smooth rabbitsfoot, and slabside pearlymussel occupy specialized habitat within perennial streams. No perennial streams occur within the proposed Project Site. Additionally, the little-wing and slabside pearlymussel are historic records for Logan County and are not listed on the ECOS IPAC range shapefile. The snuffbox mussel, little-wing pearlymussel, smooth rabbitsfoot, and slabside pearlymussel would not be affected by the proposed actions.

Suitable roosting habitat for Indiana bat and NLEB exists within the 17 forested stands, five karst features, and 12 buildings in the Project Site. Of the 188 forested acres in the Project Site, approximately 93 acres of forest is proposed for removal. All 12 buildings have the potential to be demolished and removed from the Project Area. Tree removal is proposed to occur at any time after project construction initiation. Approximately 72 of the 93 acres proposed for tree removal offer moderate- and high-quality bat foraging and roosting habitat, consisting of large stands of mixed deciduous forests, trees with exfoliating bark, and/or good water sources. The remaining 21 acres of forested areas proposed for removal were identified as low-quality bat habitat. These consisted largely of small, young, mixed deciduous forests or hedgerows that lacked trees with exfoliating bark and/or good water sources. Foraging habitat for gray bat, Indiana bat, and NLEB exists over ponds, wetlands, and streams in the Project Site.

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The closest known gray bat roost is Potato Cave, approximately 6.2 miles away from the Project Site in Logan County. The closest known Indiana bat record is a summer record approximately 3.7 miles away. Both gray bat and Indiana bat records are historical. There are no known records of NLEB within Logan County. Karst features within the Project Site are small and all but one does not appear suitable for bat use. The one small pit that does have a suitable opening may be suitable for state-listed species but not for federally listed species due to its small size and shape. No known hibernacula for Indiana bat occur within ten miles of the Project Site. No known hibernacula or maternity roosts for NLEB occur within five miles of the Project Site.

Mist net surveys of the Project Site were conducted by Jackson Group biologists in May and June 2021 using the 2020 Range-Wide Indiana Bat Summer Survey Guidelines for determining presence/absence of Indiana bat and NLEB. Mist net surveys were conducted in the forested stands identified as moderate- or high-quality habitat over streams or forested corridors. No threatened or endangered bat species were captured over 18 net nights of survey effort. See attached SRC\_Russellville Solar\_Bat Survey Report\_20210701.pdf for full mist net survey effort details, photos, and results.

No federally listed bats were captured during mist nets surveys of the Project Site. Up to 93 acres of suitable summer roosting habitat and foraging habitat for Indiana bat and NLEBs may be removed. Tree removal is proposed to occur at any time after project construction initiation. Construction Best management practices would be used around bodies of water, minimizing sedimentation and changes to hydrology. No construction would occur within 100-feet around the five karst features. Due to the lack of impacts to potential hibernacula, distance from known records, and no captures of federally listed bat species during presence/absence surveys, TVA has determined that proposed actions may affect but are not likely to adversely affect (NLAA) gray bat, Indiana bat, and northern long-eared bat.

While there are no Section 7 requirements for monarch butterfly as a candidate species, it is identified in IPaC as a species that could occur within the Project Site. Monarch butterflies were noted during field surveys completed by HDR biologists in May 2021. Approximately 87% of the Project Site consists of agricultural fields used for corn and wheat, <1% pasture and hayfield, and <1% residential lawns. Milkweed were not a dominant species observed or recorded within the Project Site. Due to the small amount of potentially suitable habitat that currently occurs on site, proposed actions would not jeopardize the continued existence of monarch butterfly.

Following construction, disturbed portions within the Project Site would be seeded with native grasses and/or noninvasive vegetation which may provide more flowering plants than previously occurred on-site. Proposed actions may ultimately benefit this species by providing suitable host plants and foraging habitat.

We respectfully request concurrence with our determination. Should you have any questions or

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wish to discuss the project in more detail, please contact Elizabeth Hamrick by email,  
[ecburton@tva.gov](mailto:ecburton@tva.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "W. Douglas White", with a long horizontal flourish extending to the right.

W. Douglas White  
Manager  
Biological Compliance

EBH:ABM  
Enclosures