

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-23563

Request Received: March 17, 2021

Requestor: Tetra Tech Inc
Adam Holven
2001 Killebrew Drive, Suite 141
Bloomington, MN 55425

Project: Construction of a 2400 acre solar farm, generally between Mt. Vernon and Evansville;
Posey Solar, LLC

County/Site info: Posey

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: This proposal may require the formal approval(s) of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody which has a drainage area greater than one square mile. Please submit more detailed plans to the Division of Water's Technical Services Section if you are unsure whether or not a permit will be required.

Natural Heritage Database: The Natural Heritage Program's data have been checked. The state endangered Copperbelly water snake (*Nerodia erythrogaster neglecta*) and Loggerhead Shrike (*Lanius ludovicianus*) have been documented within 1/2 mile of the project area.

Fish & Wildlife Comments: Loggerhead Shrikes are no longer found in this portion of the state; therefore, we do not foresee any impacts to this bird species as a result of this project.

Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Copperbelly Water Snake:

Most land in the area is agriculture; however, some swamp land is present to the south and Copperbellies will travel overland. To mitigate potential impacts to this snake species, erosion control/exclusion fencing should be installed around the southern portions of the project area to prevent this species from entering the work areas.

2) Forest & Riparian Habitat:

Due to the preponderance of previously-cleared farm fields making up the 8,300 acre study area, tree clearing in what are few and scattered wooded areas (the largest of which is about 50 acres) should be avoided. Building roads in or across wooded areas should be avoided when possible. Woody vegetation impacts should be minimized where they cannot be avoided and limited to a 20' wide cut through the wooded area that cannot be avoided.

We recommend a mitigation plan be developed (and submitted with the permit application, if required) for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation Guidelines (and plant lists) can be found online at:

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<http://iac.iga.in.gov/iac/20200527-IR-312200284NRA.xml.pdf>

Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in an urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however.

The mitigation site should be located in the floodway, downstream of the one (1) square mile drainage area of that stream (or another stream within the 8-digit HUC, preferably as close to the impact site as possible) and adjacent to existing forested riparian habitat.

3) Crossing Structures:

If any roads need to cross a stream, the recommendations below should be implemented in the design and construction to facilitate fish and wildlife passage. The Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the OHWM width); maintain the natural stream substrate within the structure; have a minimum openness ratio (height x width / length) of 0.25; and have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel.

The new structure and associated materials (such as slope armoring) should not create conditions that are less favorable for fish and wildlife passage under the structure compared to current conditions. From the perspective of aquatic habitat, upstream fish passage, and wildlife movement, silt/bedload accumulation within the structure is beneficial. Implement stream simulation techniques to create a stable, natural substrate within the structure with stream gradient, riffles, runs and pools, and stream substrate (sand/gravel/cobble mix) reflecting the adjacent stream segment. Additional information is available in Publication No. FHWA-HIF-11-008, Federal Highway Administration, Culvert Design for Aquatic Organism Passage, October 2010 (<http://www.fhwa.dot.gov/engineering/hydraulics/pubs/11008/hif11008.pdf>). Natural cobble and boulders (or other materials as appropriate in that stream) should be placed within the structure (anchored if necessary) to protect the structure itself, provide flow diversity and roughness/energy dissipation, and to accelerate streambed formation within the crossing. Culvert width and gradient should be appropriate for the site conditions so that flows do not scour out material from the culvert.

Riprap aprons or energy dissipators should be placed flush with the structure floor. Mix smaller stone and fines in with the riprap so streamflow stays at the surface instead of percolating down and leaving a dry bed. To facilitate aquatic organism passage through the structure the riprap layer's slope at the outlet should be 20:1 while it should be 5:1

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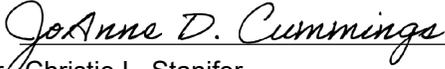
on the inlet end.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas with a mixture of native grasses, sedges, wildflowers, and also native hardwood trees and shrubs if any woody plants are disturbed during construction as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants, including prohibited invasive species (see 312 IAC 18-3-25).
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Do not excavate in the low flow area except for the placement of riprap.
6. Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction.
7. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
8. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.


for Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

Date: May 15, 2021

Division of Historic Preservation & Archaeology 402 W. Washington Street, W274 Indianapolis, IN 46204-2739
Phone 317-232-1646 Fax 317-232-0693 dhpa@dnr.IN.gov



April 13, 2021

Adam Holven
Tetra Tech, Inc
2001 Killebrew Drive, Suite 141
Bloomington, MN 55425

Federal Agency: Unknown

Re: Request for comment on a proposed Posey Solar Project (DHPA #27216)

Dear Mr. Holven:

Pursuant to Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer (“Indiana SHPO”) has conducted an analysis of the materials dated and received on March 17, 2021 for the above indicated project in Posey County, Indiana.

The Indiana SHPO is unable to determine from the information provided if there is any federal funding, permitting, licensing, or other approval required for this project. If this project invokes any of these activities by a federal agency and/or includes involvement by the State of Indiana, the following information is required to facilitate a review by our office:

- 1) Provide a letter or copy of a letter from the Federal indicating the authorized representatives who may act on behalf of the Federal agency.
- 2) Give the name and address of the Federal agency, including the identified contact person that has responsibility for the project, activity, or program, and, if applicable, the name of the program.
- 3) Provide an overall description of the project and its location.
 - Include address, city, township, and county.
 - Detail any construction, demolition, and earthmoving activities.
- 4) Define the area of potential effects¹ and provide a map or a good quality photocopy of a map containing the following:
 - The boundaries of the area of potential effects and the precise location of the project area within those boundaries clearly outlined in dark ink on a copy of the relevant portion of a town, city, county, or U.S. Geological Survey quadrangle map.
 - The names of nearby landmarks clearly labeled (e.g., major streets, roads, highways, railroads, rivers, lakes).

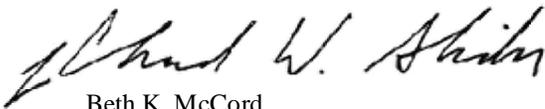
¹ Area of potential effects means the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (see 36 C.F.R § 800. 16[d]).

- 5) Give the precise location of any buildings, structures, and objects *within the area of potential effects* (e.g., addresses and a site map with properties keyed to it).
- 6) Give the known or approximate date of construction for buildings, structures, objects, and districts *within the area of potential effects*.
- 7) Submit historical documentation for buildings, structures, objects, and districts *within the area of potential effects*.
- 8) List all sources checked for your historical research of the *area of potential effects*.
- 9) Provide clear, recent photographs or good quality computer-generated images (not photocopies or aerial photographs), keyed to a site plan, showing any buildings, structures, objects, or land *that could be affected in any way by the project*. These photographs should be of the project area and the defined area of potential effect.
- 10) Describe the current and past land uses within the project area; in particular, state whether or not the ground is known to have been disturbed by construction, excavation, grading, or filling, and, if so, indicate the part or parts of the project area that have been disturbed and the nature of the disturbance; agricultural tilling generally does not have a serious enough impact on archaeological sites to constitute a disturbance of the ground for this purpose.
- 11) In abundant number of archaeological sites have been recorded within the over 8,000 acre study area. This region has an extensive pre-contact history. Plus, several historic cemeteries have been recorded within the study area. Please be advised that even without any federal involvement, significant archaeological resources and cemeteries have protective regulations under state statute. We can continue to work with you on areas that would need to be avoided by any ground disturbance or subjected to further archaeological investigations. It may be more feasible to also consult with a professional contract archaeologist to do a records review of the area.

Once the indicated information is received, the Indiana SHPO will resume identification and evaluation procedures for this project. Please keep in mind that additional information may be requested in the future.

The 36 C.F.R. Part 800 regulations governing the Section 106 review process may be found at www.achp.gov. If you have questions about archaeological issues please contact Cathy Draeger-Williams at (317) 234-3791 or cdraeger-williams@dnr.IN.gov. If you have questions about buildings or structures please contact Miriam Burkett at (317) 233-3883 or mburkett@dnr.IN.gov. Additionally, in all future correspondence regarding the above indicated project, please refer to DHPA #27216.

Very truly yours,



Beth K. McCord
Deputy State Historic Preservation Officer

BKM:MLB:CDW:cdw

From: DNR Environmental Review <environmentalreview@dnr.IN.gov>

Sent on: Friday, March 19, 2021 2:58:39 PM

To: Holven, Adam <adam.holven@tetrattech.com>

Subject: RE: Posey Solar Project Request for Comments - [ER-23563]

⚠ **CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments. ⚠

Dear Adam,

This is a standard informational email in response to your request for an Environmental Review. We would like you to know that the review is in process and a formal response will be forthcoming. Please refer to the ER number in the subject line on all future correspondence regarding this project.

If you have any questions, Christie Stanifer, Environmental Coordinator, and I can be reached at this email address. Or we can be reached at cstanifer@dnr.in.gov or jcummings@dnr.in.gov.

Sincerely,

JoAnne Cummings

Assistant Environmental Biologist
Indiana Department of Natural Resources
Division of Fish & Wildlife
402 West Washington St, Room W273
Indianapolis, IN 46204
www.dnr.in.gov



** Please let us know about the quality of our service by taking this [brief customer survey](#).*

****All environmental review requests should be submitted electronically to Christie Stanifer at: environmentalreview@dnr.in.gov. This is only FYI if you are not already doing so.**

From: Holven, Adam <adam.holven@tetrattech.com>
Sent: Wednesday, March 17, 2021 5:06 PM
To: Stanifer, Christie <cstanifer@dnr.IN.gov>
Cc: Joshua Chavez <JChavez@arevonenergy.com>; Finocchiaro, Joseph <jfinocchiaro@TENASKA.com>
Subject: Posey Solar Project Request for Comments

Dear Christie Stanifer,

Tetra Tech Inc., on behalf of Posey Solar LLC, is gathering information and requesting comments for the proposed Posey Solar Project in Posey County, Indiana. Please see the attached letter and map for additional information. Please direct all questions and comments to:

Adam Holven, Project Manager

Tetra Tech Inc.
2001 Killebrew Drive, Suite 141
Bloomington, MN 55425
adam.holven@tetrattech.com
612-643-2237

Thank you!

Adam C. Holven | Senior Archaeologist/Project Manager
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adam.holven@tetrattech.com

Tetra Tech
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