

## **Nestlewood Solar – Response to Data Requests Received April 8, 2019**

- 1. The Application stated that there would be no in-water work. However, GIS provided by the Applicant shows an access road crossing stream D. How does the applicant propose to avoid impacts associated with the proposed access road?***

The streams located throughout the Project Area intermittently carry water. Ideally, the Project will be able to schedule the single proposed culvert installations during the dry season. An updated layout drawing (provided as Attachment 1) illustrates the location where a culvert will be necessary. Typical culvert details are shown in Attachment 2. Impacts within the stream channel associated with culvert placement are expected to be approximately 1,700 square feet, considerably less than the 0.1-acre that would require a Pre-Construction Notice from the U. S. Army Corps of Engineers. The culvert will be designed to allow for carrying capacity of excess water during heavy rainfall events.

- 2. GIS provided by the Applicant shows panels overlapping with stream A. Staff would recommend that no panels be located within streams. Please explain if the applicant would not find this recommendation to be reasonable or would otherwise dispute it. If no impacts are proposed to this stream, please explain how they would be avoided.***

The proposed layout included in the OPSB Application was illustrated as intentionally broad to allow for design optimization. No panels will be located within streams, as reflected in the updated layout provided as Attachment 1.

- 3. GIS provided by the Applicant shows panels overlapping with wetlands w-9 and w-10. Wetlands located within the proposed array area make up less than one acre. Staff would recommend that no panels be located within wetlands. Please explain if the applicant would not find this recommendation to be reasonable or would otherwise dispute it.***

No panels will be located in wetlands, as reflected in the updated layout provided as Attachment 1.

- 4. Staff would recommend that installation collection lines through perennial streams be accomplished using HDD. Please explain if the applicant would not find this recommendation to be reasonable or would otherwise dispute it. Is the applicant willing to commit to installing collection lines through streams using HDD?***

Should water be flowing in on-site streams, the Applicant will commit to using boring techniques for installation of collection lines. In locations where no water flow is occurring, it is likely that trenching would result in the least impact installation.

- 5. Does Poplar Creek provide suitable mussel habitat? Why or why not?***

The portion of Poplar Creek located within the Project Area is in the upper portion of the watershed and does not contain water flow year-round. Therefore, use by mussels in this Group 1 stream is considered unlikely. However, prior to Project construction that would affect the creek, observations will be made to confirm that no mussels are visible.

6. ***GIS provided by the Applicant shows panels overlapping drainage/erosion features throughout the project area. Does the applicant intend to allow these features to stay intact, or would they be developed or graded? If these features were to be altered, how does the applicant intend to assure that off-site drainage issues do not occur.***

Stormwater management is a key consideration for the Project Area, for which local residents have indicated some concern under existing conditions. The Applicant finds that replacing active cropland with stabilized and consistent vegetation frequently improves runoff conditions and decreases drainage concerns. A detailed strategy for stormwater management will be developed that may avoid the existing drainage features but may adjust their location and/or design to most effectively control stormwater and avoid impacts to off-site properties or on-site wetland resources.

7. ***GIS provided by the Applicant shows collection line crossings of four wetlands, an access road crossing of one wetland, and potential panels located within two wetlands. Further the application states that tree clearing in wooded wetlands would be avoided, however, GIS data provided by the applicant shows tree clearing in wetlands w-3, w-6, w-7, and w-8. These impacts are generally along the edges of wetlands and seem that they could be avoided through slight adjustments. Are these adjustments reasonable and could these adjustments be accomplished without increasing other impacts? If yes, please supplement the application to reflect these adjustments. If no, please explain why. If any collection line adjustments cannot be made to avoid these impacts is HDD a feasible option to avoid tree clearing and open cut impacts within wetlands? If no, please explain why.***

As reflected in the updated layout, presented as Attachment 1, the Project reflects one access road crossing of a stream, three collection line crossings of streams, and one collection line crossing of a wetland. Panels will be adjusted to avoid the wetlands. Wooded wetlands will not be cleared, and the Applicant has committed to maintaining a minimum 15-foot buffer surrounding wooded wetlands that will not be cleared.

Boring techniques can be used to traverse wooded wetland areas and avoid the need for clearing in those locations. However, as more detailed consideration of shading reduction needs has occurred, tree clearing has been increased by approximately 10 acres (from the 35.5 acres reflected in the Application to approximately 40.4 acres). An updated graphic reflecting proposed tree clearing is provided as Attachment 3, although the incremental change is not readily apparent at this scale. Note that no tree clearing is proposed within 15 feet of a delineated wetland.

8. ***GIS provided by the Applicant shows that two ponds would be filled, but application states that one pond was delineated and that it is jurisdictional. Is this pond jurisdictional to the USACE or OEPA? Is the other pond non-jurisdictional?***

The delineated pond is considered to be federally jurisdictional. Impacts to this manmade feature will be avoided, particularly due to its identification as potential Kirkland's snake habitat. The second "pond" is actually an old foundation that holds water and is not considered to be either a federal or state jurisdictional water feature.

9. ***Since filing the application are there any updates on the surveys associated with the Kirkland's snake?***

No further studies have been conducted. Two areas were identified as having potential habitat value for the Kirkland's snake, and both areas will be avoided by the Project.

**10. Please provide a list of each vegetative community type in the project area and the proposed acreage of impacts to each.**

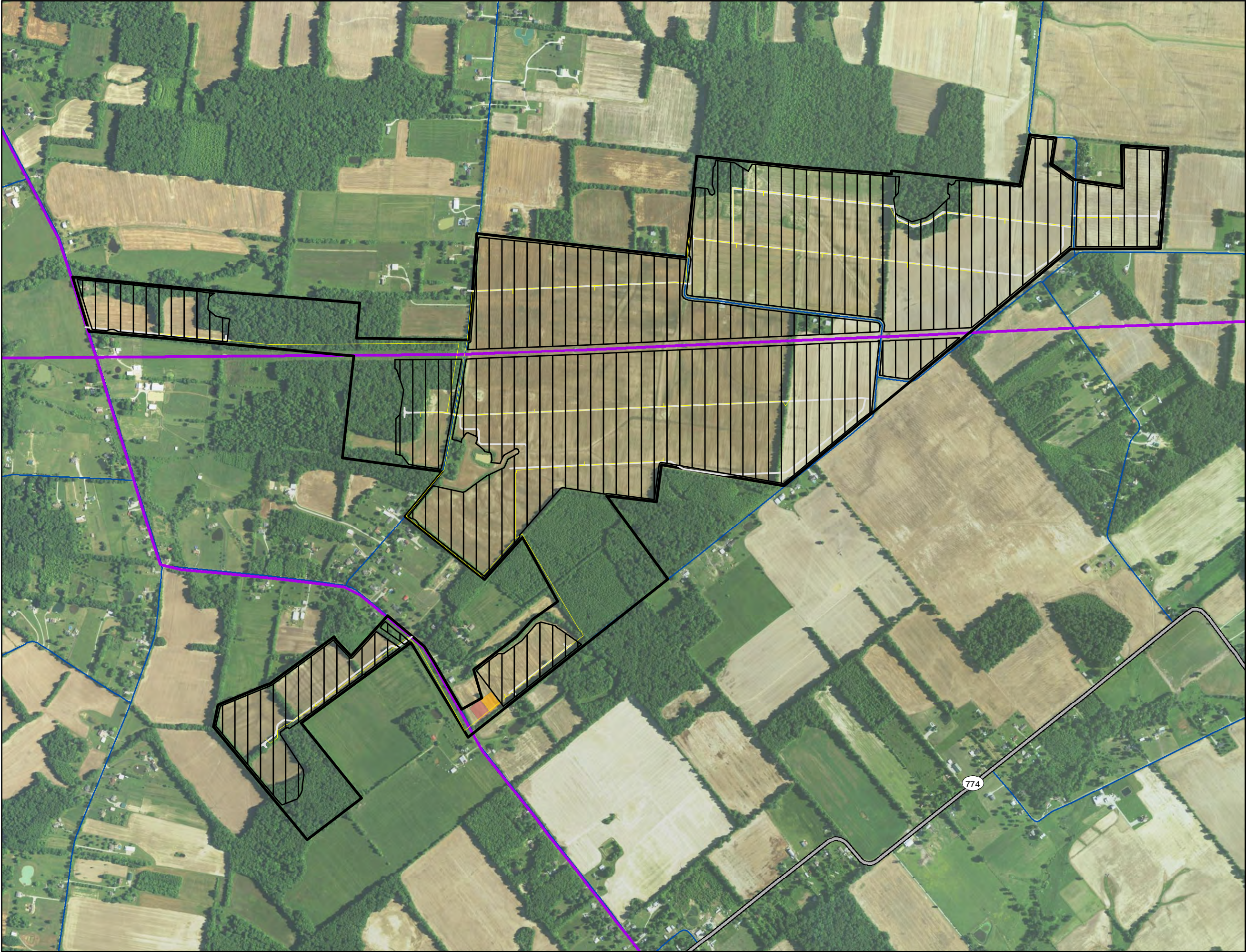
Vegetative community types were provided in the OPSB Application on Figure 08-9. Based upon the updated layout, the following reflects the approximate acreage of impact to each habitat type:

| <b>Ecological Community</b>  | <b>Approximate Acreage in Project Area</b> | <b>Approximate Acres of Impact</b> |
|------------------------------|--|------------------------------------|
| Agricultural                 | 460.5                                      | 422.6                              |
| Developed                    | 11.5                                       | 3.2                                |
| Forested                     | 75.1                                       | 38.1                               |
| Wetland: Open Water          | 0.36                                       | 0.0                                |
| Wetland: Emergent Wetland    | 0.72                                       | 0.0                                |
| Wetland: Forested Wetland    | 38.23                                      | 0.0                                |
| Wetland: Scrub/Shrub Wetland | 23.01                                      | 0.5                                |

As can be seen, only minimal activity is proposed within wetland communities (less than 1% of the wetland communities present within the Project Area). Primary placement of potential solar arrays occurs in agricultural community (91.2% of the available agricultural land within the Project Area is identified for potential use). A small amount of developed land (27.8% of the developed land within the Project Area) will be potentially used. Of the forested areas located within the Project Area, 50.7% would be cleared or topped for installation of Project elements.










**Attachment 1.**  
**Updated OPSB Application Figure 03-3 – Project Layout**

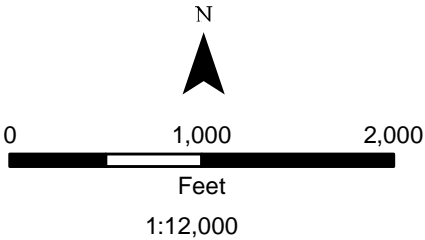




**Updated Figure 03-3  
Project Layout**

Nestlewood Solar  
Brown and Clermont Counties, Ohio

-  Project Area
-  Potential Solar Arrays
-  Project Substation
-  Utility-Owned Switchyard
-  Potential Collection Line
-  Potential Gravel Road
-  Existing Transmission Line
-  Highway
-  Existing Roads

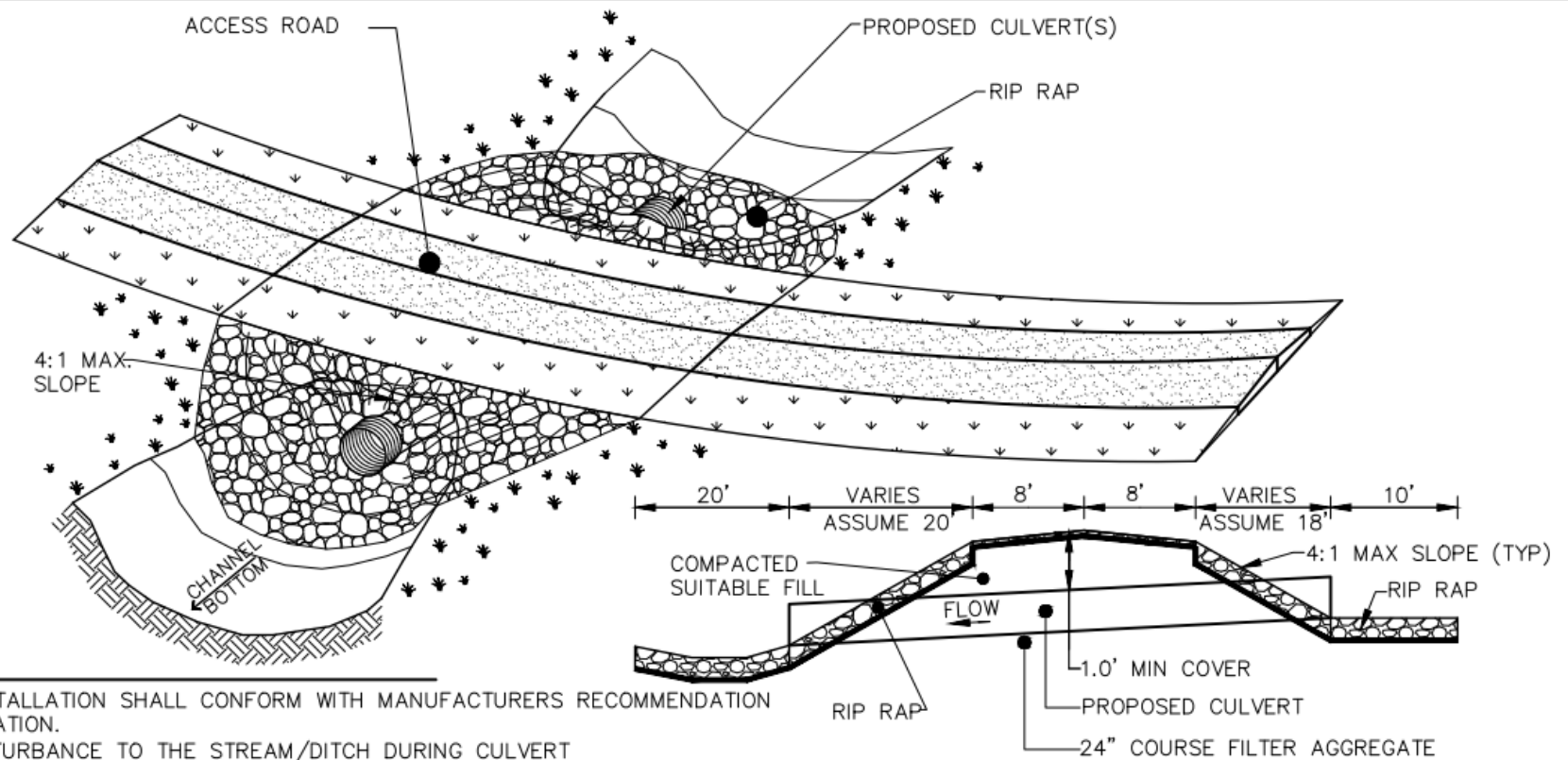


Source: ESRI (2016), NAIP (2017)





**Attachment 2.**  
**Typical Culvert Detail**



**NOTE:**

1. CULVERT INSTALLATION SHALL CONFORM WITH MANUFACTURERS RECOMMENDATION FOR INSTALLATION.
2. MINIMIZE DISTURBANCE TO THE STREAM/DITCH DURING CULVERT INSTALLATION/REMOVAL.
3. RESTORE DISTURBED AREA TO NATIVE CONDITIONS IN ACCORDANCE WITH THE SWPPP.

Westwood

TYPICAL ACCESS ROAD STREAM CROSSING

LAST REVISED:  
04/08/09

RD12

**Attachment 3.**  
**Updated OPSB Application Figure 08-8 – Ecological Impact**

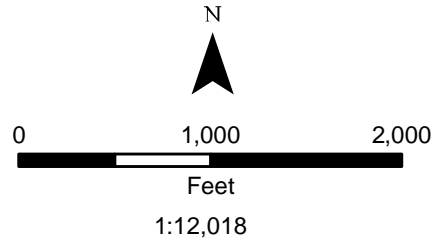


Updated Figure 08-8  
Ecological Impact

Nestlewood Solar  
Brown and Clermont Counties, Ohio

- Project Area
- Potential Solar Arrays
- Project Substation
- Utility-Owned Switchyard
- Potential Collection Line
- Potential Gravel Road
- Culverted Crossing\*
- Highway
- Tree Clearing
- Delineated Features
  - Stream
  - Wetland

\* See attached detailed drawing.



Source: NAIP (2017)





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Summary: Reply to data request electronically filed by Adam Bargar on behalf of PUCO Staff