



# HEARTWOOD SOLAR II

Environmental Impact Assessment  
Fayette Township, Hillsdale County, Michigan

**Prepared for:**

**Heartwood Solar II, LLC**  
320 N. Sangamon Street  
Suite 1025  
Chicago, IL 60607

**Prepared by:**

**Atwell, LLC**  
Two Towne Square  
Suite 700  
Southfield, MI 48076

March 16, 2026



# MEMORANDUM

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**To:** Brady Friss &  
Sean Harris  
Heartwood Solar II, LLC

**From:** Brittany Zachariahs  
Ernest Schenk  
Atwell LLC

**Date:** November 19, 2025, UPDATED: March 16, 2026

**Re:** **Impact Assessment for the Heartwood Solar II Project, Fayette Township, Hillsdale County, Michigan**

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## Introduction

On behalf of Heartwood Solar II, LLC (Heartwood Solar II, or the Applicant), Atwell, LLC (Atwell) completed this Impact Assessment for the proposed construction and operation of a 140-megawatt (MW) solar farm (the Project). The Project is proposed to be sited on approximately 1,015 acres of land within Fayette Township in Hillsdale County, Michigan. Because the Project design is not yet final, Atwell analyzed a larger area of approximately 1,388 acres (hereafter referred to as the Study Area). In accordance with Section 14.02 of the Fayette Township Zoning Ordinance and the draft compatible renewable energy ordinance (CREO) provided in February 2026, the purpose of this Impact Assessment is to analyze the potential impacts of the construction and operation of the Project on natural features, stormwater management, surrounding land uses, public facilities and services, public utilities, and traffic. Natural features analyzed in this Impact Assessment include natural vegetation, native plant communities, soils, surface waters, wetlands, and threatened and endangered species (TES).

Prior to preparation of this Impact Assessment, Atwell and other consultants completed desktop and field due diligence efforts in the spring and fall of 2024 and summer of 2025. These included a wetland and watercourse delineation, TES habitat assessment, cultural resource reconnaissance survey, Phase I Environmental Site Assessment, and landmark tree survey. In addition, Atwell and the Applicant have coordinated with regulatory agencies to discuss the Project. To date, the Applicant and/or Atwell has corresponded with the U.S. Fish and Wildlife Service (USFWS), the Michigan Department of Natural Resources (MDNR) through the Michigan Natural Features Inventory (MNFI) database, the Michigan Department of Environment, Great Lakes, and Energy (EGLE), the Jonesville Fire Department, and with the Fayette Township Zoning Administrator regarding the Project. Coordination with many of these agencies is ongoing. Results from the completed field studies and information obtained from coordination with these agencies are incorporated into this impact assessment.

Based on the results of these desktop reviews, field studies, and agency coordination efforts, significant impacts to natural features, stormwater management, surrounding land uses, public facilities and services, public utilities, and traffic will be avoided. The Project will be planted with pollinator-friendly vegetation, which would increase the biodiversity of the area from its current use, as well as reduce the potential for runoff and allow nutrients and groundwater to recharge. As such,

impacts to native vegetation, soils, and stormwater will be avoided. In addition, the Project will attempt to avoid delineated surface waters, wetlands, and floodplains. The Project has also been sited so as to avoid potential impacts to TES, in coordination with the USFWS. The Project's sound and glare modeling studies found that potential impacts to neighboring properties are insignificant. The Applicant has also coordinated with the Jonesville Fire Department to discuss the Project. In addition, because the Project's operation and maintenance (O&M) facility will require 3-5 onsite staff, existing public facilities, utilities, and roadways are expected to adequately support Project operation. Thus, impacts to public facilities and services, utilities, and traffic are expected to be negligible.

## 1. Natural Features

### 1.1. Natural Vegetation and Native Plant Communities

During the field studies conducted in spring and fall of 2024 and summer of 2025, Atwell scientists observed that the 1,396-acre Study Area primarily comprises active agricultural lands interspersed with wooded hedgerows, wetlands, undeveloped woodlots, and low-density rural residences. Agricultural fields were observed to contain evidence of the previous year's soybeans (*Glycine max*) and corn (*Zea mays*), and alfalfa (*Medicago sativa*). In addition, Atwell conducted a wetland and watercourse delineation in spring and fall of 2024 and summer of 2025. During the delineation, Atwell scientists delineated a total of four watercourses and 23 wetlands within the Study Area. Vegetation recorded within the Study Area during this survey are described below. Additional detail regarding the aquatic features identified within the Study Area are included in Section 1.3 and 1.4, respectively.

Species observed within pastures, field margins, fallow areas, and upland ditches included stinging nettle (*Urtica dioica*), reed canary grass (*Phalaris arundinacea*), Virginia creeper (*Parthenocissus quinquefolia*), common hackberry (*Celtis occidentalis*), autumn olive (*Elaeagnus umbellata*), Queen Anne's lace (*Daucus carota*), common dandelion (*Taraxacum officinale*), chickory (*Cichorium intybus*), orchard grass (*Dactylis glomerata*), white clover (*Trifolium repens*), tall goldenrod (*Solidago altissima*), Canadian horseweed (*Erigeron canadensis*), Japanese honeysuckle (*Lonicera japonica*), Kentucky bluegrass (*Poa pratensis*), and field pansy (*Viola bicolor*).

Species observed within upland woodlots and tree rows included European buckthorn (*Rhamnus cathartica*), American elm (*Ulmus americana*), black walnut (*Juglans nigra*), sugar maple (*Acer saccharum*), northern red oak (*Quercus rubra*), American basswood (*Tilia americana*), white oak (*Quercus alba*), black cherry (*Prunus serotina*), shagbark hickory (*Carya ovata*), and white mulberry (*Morus alba*).

Dominant vegetation observed within emergent wetland communities included reed canary grass (*Phalaris arundinacea*), devil's-pitchfork (*Bidens frondosa*), spotted jewelweed (*Impatiens capensis*), common milkweed (*Asclepias syriaca*), and sensitive fern (*Onoclea sensibilis*). Tree species observed to be dominant within forested wetland communities within the Study Area included sugar maple, American elm, green ash (*Fraxinus pennsylvanica*), eastern cottonwood (*Populus deltoides*), and black willow (*Salix nigra*). In general, the sapling/shrub layer within these forested wetland communities was observed to be fairly sparse and, in some cases entirely absent. Where present, wetland shrub and sapling species recorded included box elder (*Acer negundo*), peachleaf willow (*Salix amygdaloides*), and gray dogwood (*Cornus racemosa*). Similarly, herbaceous wetland species were relatively sparse or absent from forested wetland communities and most commonly included reed canary grass. Other herbaceous-layer species observed to be dominant within forested wetland communities included devil's-pitchfork, narrowleaf cattail (*Typha angustifolia*), and sensitive fern.

Once constructed, the Project will be planted with pollinator-friendly seed mixes appropriate for the Study Area, including for areas around solar arrays and for underneath arrays. Heartwood Solar II will procure seed mixes that meet the specifications of "Michigan Department of Rural Development's Policy for Allowing Commercial Solar Panel Development on P.A. 116 Lands". Furthermore, Heartwood Solar II has voluntarily elected to install all areas being disturbed with seed mixes meeting these specifications, regardless of enrollment in Michigan's Farmland Preservation Program (P.A. 116). Because the majority of the Study Area is currently used as agricultural land, planting the entirety of disturbed areas with

pollinator-friendly species, the majority of which will be native species, would result in an increase in vegetative biodiversity from its current use.

## 1.2. Soils

Soils within the Study Area are summarized in **Table 1**, below. Soils are characterized by map unit, soil type, drainage class, and hydric soil rating<sup>1</sup>.

Table 1. Soil Classifications within the Study Area				
Soil Map Unit	Soil Type	Drainage Class	Hydric Soil Rating	% within Study Area
10B	Hillsdale-Riddles complex, 2 to 6 percent slopes	Well drained	No	30.37%
16B	Fox sandy loam, till plain, 2 to 6 percent slopes	Well drained	No	29.15%
16C2	Fox sandy loam, Huron Lobe, 6 to 12 percent, eroded	Well drained	No	10.64%
10C2	Hillsdale-Riddles complex 6 to 12 percent slopes, eroded	Well drained	No	9.54%
15B	Boyer loamy sand, 1 to 6 percent slopes	Well drained	No	3.05%
16E	Fox gravelly sandy loam, 18 to 35 percent slopes	Well drained	No	2.14%
HgtahA	Houghton muck, 0 to 1 percent slopes	Very poorly drained	Yes	1.96%
42B	Riddles sandy loam, 1 to 6 percent slopes	Well drained	No	1.72%
16D2	Fox gravelly sandy loam, 12 to 18 percent slopes, eroded	Well drained	No	1.63%
10D2	Hillsdale-Riddles complex, 12 to 18 percent slopes, eroded	Well drained	No	1.47%
13B	Conover loam, 1 to 4 percent slopes	Somewhat poorly drained	No	1.29%
40A	Locke fine sandy loam, 0 to 3 percent slopes	Somewhat poorly drained	No	1.16%
39	Gilford fine sandy loam, till plain, 0 to 2 percent slopes	Poorly drained	Yes	1.01%
42C2	Riddles sandy loam, 6 to 12 percent slopes	Well drained	No	1.00%
15C	Boyer loamy sand, 6 to 12 percent slopes	Well drained	No	0.89%
51	Glendora mucky loamy sand, frequently flooded	Very poorly drained	Yes	0.87%
35	Palms muck	Very poorly drained	Yes	0.83%
10E	Hillsdale-Riddles sandy loams, 18 to 30 percent slopes	Well drained	No	0.40%
14	Wolcott silt loam	Very poorly drained	Yes	0.36%
24D	Spinks loamy sand, 12 to 18 percent slopes	Well drained	No	0.17%
15D2	Boyer gravelly loamy sand, 12 to 18 percent slopes	Well drained	No	0.12%
43	Histosols and Aquents, ponded	Very poorly drained	Yes	0.09%
37A	Matherton loam, 0 to 3 percent slopes	Somewhat poorly drained	No	0.06%
24C	Spinks loamy sand, 6 to 12 percent slopes	Well drained	No	0.05%
W	Water	N/A	Unranked	0.02%
55	Pits, gravel	N/A	Unranked	0.01%
<b>Total:</b>				100%

Use of the Study Area as a solar farm will not result in the permanent conversion of the existing farmland soils beneath the majority of Project infrastructure. At the end of the Project's operational life, the majority of the Study Area can be returned to its current use as agricultural land. Allowing soils to "rest" from yearly agricultural use will also help to restore

<sup>1</sup> USDA [U.S. Department of Agriculture]. 2022. Web soil survey. Nat Resour Conserv Serv. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

nutrients into soils. Furthermore, the Project will be planted with a mix of pollinator-friendly vegetation, which have deep root systems that would reduce erosion, and add nutrients to the soil. Increased pollinator habitat has also been shown to increase crop production for pollinator-dependent crops when compared to other agricultural crops, such as soybeans<sup>2</sup>.

In addition, because the majority of the Study Area consists of relatively level terrain, grading activities required for Project construction are anticipated to be minimal. Where required, no soil is anticipated to be removed from the Study Area. Topsoil would first be stripped and stockpiled, subgrade would be shaped to meet grading needs, then topsoil would be replaced. Following construction, soils will be fully stabilized and vegetated with a pollinator-friendly seed mix, as described above. The deep root systems of pollinator-friendly plant species will also help to reduce stormwater runoff. Stormwater management is discussed in Section 2, below.

### **1.3. Surface Waters and Floodplains**

A review of FEMA Flood Insurance Rate Maps (FIRMs) (Firm Panels #26059C0159D & 26059C0178D) indicates that approximately 1% of the Study Area is designated as a Zone A floodplain (an area inundated by 1% annual chance flooding, for which no base flood elevations have been determined) associated with the Beebe Creek, and approximately 99% of the Study Area is designated as Zone X (an area of minimal flood hazard). Atwell performed a preliminary desktop drainage review to determine if watercourses with an upstream drainage area of greater than two square miles are present within the Study Area. Based on this review, one of the watercourses delineated within the Study Area, Beebe Creek, has an upstream drainage area of greater than two square miles, confirming what was noted by FEMA. As such, state-regulated floodplains associated with this feature are likely present within the Study Area.

During the wetland and waterbody delineation conducted by Atwell in spring and fall of 2024 and summer of 2025, Atwell delineated four watercourses within the Study Area. Two of these were observed to be perennial features, one identified as intermittent, and one identified as ephemeral. These watercourses are not mapped by the Hillsdale County Drain Commission as regulated County Drains.

The results of the field and desktop studies completed by Atwell were used to inform Project design and, as currently sited, Project infrastructure will avoid impacts to surface waters, to the extent practicable. Underground collection lines will likely be bored underneath the identified surface water features (including four wetland crossings and two stream crossings), thus avoiding direct impacts, and the Applicant is pursuing applicable EGLE permits to conduct this work.

### **1.4. Wetlands**

During the wetland and waterbody delineation conducted in spring and fall of 2024 and summer of 2025, Atwell scientists delineated 23 wetlands within the Study Area. Of the wetlands delineated within the Study Area, three were identified as palustrine emergent (PEM) communities with an additional ten containing PEM components. PEM wetlands were generally observed as depressional features within agricultural fields and were typically dominated by species such as reed canary grass and cattails. In addition, Atwell scientists delineated seven palustrine forested (PFO) wetland communities and nine wetlands containing PFO components. These communities typically comprised disturbed forested depressions. Wetlands that supported PFO components were in mixed depressions that have partially disturbed by previous activities and contained forested edges. Atwell scientists delineated one palustrine scrub-shrub (PSS) wetland community and six wetlands containing PSS components. Wetlands that supported PSS components were herbaceous depressions located adjacent or nearby previously disturbed areas. Atwell also identified one open water (OW) wetland community. This wetland was located in a heavily disturbed depression and was likely previously used as a cow pond. Of the 23 wetlands identified within the Study Area, Atwell identified 14 that are likely to meet the requirements of Part 303, Wetlands

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<sup>2</sup> Milfont, MO, Rocha, EEM, Lima, AON, Freitas, BM. 2013. Higher soybean production using wild honeybee and wild pollinators, a sustainable alternative to pesticides and autopollination. *Environmental Chemistry Letters*. 11.4: 335-341

Protection, of the Natural Resources and Environmental Protection Act (NREPA), as amended. The remaining nine wetlands were identified as unlikely to fall under EGLE jurisdiction.

The results of Atwell’s field delineation were used to inform Project design and the Applicant is in coordination with EGLE to obtain concurrence with the findings of Atwell’s delineation and confirm jurisdiction of the features identified. As currently sited, the Project will likely avoid impacts to all wetlands identified as likely to fall under EGLE jurisdiction. In addition, the majority of features identified as unlikely to be regulated by EGLE will likely also be avoided, to the extent practicable. If disturbance of unregulated features occurs, it would be limited to small, isolated, wetlands that are located within existing agricultural fields and are likely consistently disturbed by ongoing agricultural activities.

### 1.5. Threatened and Endangered Species

In accordance with Part 365, Endangered Species, of the NREPA and Section 7 of the Endangered Species Act of 1973 (ESA), Atwell completed a desktop review to determine the presence of potentially suitable TES habitat in the vicinity of the Study Area. Atwell reviewed the USFWS Information for Planning and Consultation (IPaC) System list regarding ESA-listed TES and other resources, such as critical habitat, for the Study Area and its surroundings. IPaC identified five TES species with potential to occur within or near the Study Area. No critical habitat has been designated within or adjacent to the Study Area<sup>3</sup>. It should be noted that the bald eagle (*Haliaeetus leucocephalus*), a species that has been delisted under ESA but is still federally protected under the Bald and Golden Eagle Protection Act (BGEPA), was documented by the IPaC search as possible to occur within the Project Area or its vicinity. This species has been included in this assessment because of the federal protection under BGEPA. Atwell also reviewed the MNFI database for state-listed TES and species of special concern, rare natural plant communities, and other unique natural features for records within the sections overlapped by the Study Area. The MNFI database did not contain records of state-listed or federally listed species.

**Table 2** includes TES species identified by the USFWS IPaC and MNFI databases, their habitat requirements, and their potential based on Atwell’s review to occur within the Study Area. Based on this review and habitat observed within the Study Area during site visits, Atwell identified two federally listed TES bat species, Indiana bat (*Myotis sodalis*) and northern long-eared bat with potential to occur within the vicinity of the Study Area. Additional detail is provided below and in **Table 2**.

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<sup>3</sup> USFWS [U.S. Fish and Wildlife Service]. 2026. IPaC - information for planning and consultation. Environ Conserv Online Syst ECOS. <https://ecos.fws.gov/ipac/>.

Table 2. Federal- and State-Listed Threatened and Endangered Species			
Species	Status*	Habitat Requirements	Potential to Occur within Study Area
<b>Birds</b>			
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	BGEPA	Bald eagles are typically found in a wide variety of habitats close to open water, such as riparian/stream corridors, lakes, or extensive wetland complexes with a prominent open water component. Bald eagles are known for their ability to catch fish, although they are opportunistic and will consume mammals, birds, and small game as well. Nests can be found in snags or large live trees as well as on manmade structures such as platforms or utility poles.	Low-Moderate Potential. No bald eagles or nests were observed within the Project Area during habitat assessments. As recommended by the USFWS, any bald eagle nest observed before or during construction will be buffered by at least 660' to avoid take.
<b>Mammals</b>			
Indiana bat ( <i>Myotis sodalis</i> )	FE, SE	May roost in a variety of forested habitats, typically preferring wooded riparian corridors and woodlots in the vicinity of medium-sized rivers and streams. Roosts are almost always found under loose, peeling bark of dead or dying trees, or under the exfoliating bark of live trees such as shagbark hickory.	High Potential. Based on correspondence with USFWS, known roost trees are present near Study Area. Several woodlots within the Study Area were observed to contain high-quality potential habitat for this species.
Northern long-eared bat ( <i>Myotis septentrionalis</i> )	FT, SC	May roost in a variety of forested habitats in proximity to wooded or emergent wetlands or riparian corridors. May roost in in trees with a diameter at breast height (DBH) of at least three inches, within holes or cracks, or under exfoliating bark.	High Potential. Based on correspondence with USFWS, known roost trees are present near Study Area. Several woodlots within the Study Area were observed to contain high-quality potential habitat for this species.
<b>Reptiles</b>			
Copperbelly water snake ( <i>Nerodia erythrogaster neglecta</i> )	FT, SE	Found in a variety of wetland habitats including emergent wetland communities, forested swamps, and wet meadows. Prefers shallow, warm, slow-moving wetlands and waters, especially those adjacent to shallow lakes and ponds or slow-moving rivers.	Low-Moderate Potential. Wetlands observed within the Study Area could provide potentially suitable habitat, but are not the preferred habitat of this species. Recent (2017) records of this species exist within Hillsdale County, but it has not been recorded in sections overlapping the Study Area.
Eastern massasauga rattlesnake ( <i>Sistrurus catenatus catenatus</i> )	FT, SC	In southern Michigan, typically occurs in open, shallow wetlands, particularly within prairie fens. May also occur in bogs, shrub swamps, wet meadows, marshes, moist grasslands, wet prairies, and floodplain forests. May also utilize adjacent upland areas including grasslands, fallow fields, or forest clearings during summer months.	Low-Moderate Potential. Wetlands observed within the Study Area could provide potentially suitable habitat, but are not the preferred habitat of this species. The Study Area is over 9 miles from USFWS-mapped Tier 1 and 6 miles from Tier 2 habitat for this species. According to the MNFI database, this species has been recently (2020) recorded within Hillsdale County, but no occurrence records exist within the sections overlapped by the Study Area.
<b>Plants</b>			

Table 2. Federal- and State-Listed Threatened and Endangered Species			
Species	Status*	Habitat Requirements	Potential to Occur within Study Area
Eastern prairie fringed orchid ( <i>Platantera leucophaea</i> )	FT, SE	Commonly found in bogs, wet to wet-mesic prairies, and degraded prairie remnants. This species can colonize artificially disturbed habitats that provide a moist mineral surface, including ditches and fallow agricultural fields. Requires full sunlight in order to persist and is limited to herbaceous habitats with little shrub presence.	Low Potential. Herbaceous areas within the Study Area could provide potentially suitable habitat, but are not preferred habitat of this species. According to the MNFI database, this species has not been recorded within Hillsdale County.
*FE = Federally endangered, FT = Federally threatened, BGEPA = Bald and Golden Eagle Protection Act, SE = State-endangered, SC = State species of special concern			

Based on the desktop review and field surveys, the eastern prairie fringed orchid was determined to have low potential to occur within the Study Area. As such, impacts to these species are not anticipated as a result of the Project. In addition, the bald eagle, eastern Massasauga rattlesnake, and copperbelly water snake were determined to have low-to-moderate potential to occur within the Study Area. These species utilize various wetland habitats. As discussed in Section 1.3 and 1.4, the Project has been designed so as to attempt to avoid direct impacts to all watercourses, to all wetlands likely to fall under EGLE jurisdiction, and to the majority of wetlands identified as likely to be unregulated by EGLE. If unregulated wetlands will be impacted by Project activities, these impacts would likely be limited to small, isolated, low-quality features that have been consistently disturbed by existing agricultural activities. In addition, the Project will follow USFWS species specific recommended BMPs during construction. As such, Project-related impacts to the eastern Massasauga rattlesnake or copperbelly water snake are not anticipated. This has been confirmed with USFWS Lansing Field Office.

During the site visit in spring and fall of 2024 and summer of 2025, Atwell scientists identified several woodlots as moderate- and high-quality potential roosting habitat for Indiana bat and northern long-eared bat. In addition, based on correspondence with the USFWS Lansing Field Office, known roosts have previously been identified in proximity to the Study Area. However, the USFWS Lansing Field Office has reviewed the proposed Project and believes that based on potential tree clearing locations and extent of impacts to suitable and modeled habitat within each, the high percent forest cover within and surrounding the Study Area, and Ranger Power's commitment to cutting trees during the inactive season of October 1 through April 14, they do not expect that the Project is reasonably certain to result in take of Indiana or northern long-eared bats.

Lastly, the clubshell mussel (*Pleurobema clava*) was flagged by the Township as a species of concern. The clubshell mussel is federally and state endangered, with the most recent siting in Hillsdale County in 2022. The species was not identified on project specific IPaC or MNFI results. Coordination with USFWS confirmed that there were no records of clubshell for the area and it is not likely to be found within the Project Area or its vicinity. Based on a review of the habitat assessment and the aforementioned coordination, Atwell does not believe there is suitable habitat for the clubshell mussel within the Project Area.

## 2. Stormwater Management

The Project will comply with all applicable federal, state, and Hillsdale County regulations related to stormwater management. As discussed in the sections above, as currently designed, the Project will attempt to avoid direct impacts to all identified surface waters, mapped 100-year floodplains, and regulated wetlands, to the extent practicable. Because an area greater than five acres will be disturbed, the Project will obtain Notice of Coverage (NOC) permits in accordance with the National Pollutant Discharge Elimination System (NPDES). The Project will adhere to the requirements of Part 91, Soil Erosion and Sedimentation Control, of the NREPA, as implemented by the Hillsdale County Building Inspection and Environmental Services Department, including implementation of appropriate erosion and sedimentation control best management practices (BMPs). Measures that may be implemented include but are not limited to installation and

preservation of existing vegetation in areas that do not need to be disturbed, installation of silt fencing, straw wattles, sediment traps, storm drain inlet protection, riprap at construction entrances, and use of temporary seeding for stabilization of stockpiled soils. Erosion and sediment control BMPs will be used as appropriate, on a location- and resource-specific basis.

Following construction, The Project will be seeded with a pollinator-friendly mix of vegetation to achieve final soil stabilization. It should be noted that the Applicant has voluntarily committed to seeding all disturbed areas with pollinator-friendly a seed mix, not just those enrolled in the state P.A. 116 program. Use of pollinator-friendly species will benefit stormwater management in several ways. The deep root systems of pollinator-friendly species filter and store more water, thereby decreasing runoff and increasing groundwater recharge<sup>4</sup>. In addition, established pollinator-friendly vegetation do not require use of chemical fertilizers or herbicides, thus decreasing pollutants entering surface waters and groundwater<sup>5</sup>. As such, the Study Area, when fully vegetated will likely ultimately reduce the potential for pollutant-laden stormwater runoff, especially in comparison to existing agricultural uses comprising the majority of the Study Area.

### **3. Surrounding Land Uses**

Land surrounding the Study Area is predominantly used for agricultural production. Lands adjacent to the Study Area in the City of Jonesville are used for single-family residential development, Jonesville High School and Williams Elementary School, and light industrial uses.

The Project has been designed and sited so as to minimize impacts to all surrounding land uses. According to the Project's Real Estate Property Value Impact Report (included with the permit application package), solar facilities of similar size located in similar rural areas in Michigan and across the Midwest, have consistently been shown to have no measurable impact on property values in the surrounding area. Direct impacts to surrounding land uses are also not anticipated as a result of the Project. The Project will include landscape buffering along all adjacent, non-participating parcels containing a residence, if requested by the parcel owner to provide privacy screening and to maintain the essential rural character of the area. The rural character of the landscape will be further preserved through use of wooden post woven fiber perimeter fencing, as opposed to standard chain-link fencing.

The Project will not generate smoke, fumes, or odors that could affect neighboring properties. According to the Project Sound Modeling Study (included in permit application package), under the highest decibel circumstances, sound modeled at the receptor locations analyzed was predicted as ranging from 30 to 48 A-weighted decibels (dBA). As a comparison, a soft whisper heard from three feet away would register at just over 40 dBA and the sound of a dishwasher running in the next room may register at 50 dBA. Furthermore, the Project has been designed so that inverters and the Project substation, which are the components capable of making sound, are centrally located away from non-participating properties. As currently designed, the nearest an inverter is sited from any residence is approximately 600 feet away. The Project substation is approximately 420 feet away from the nearest residence. Thus, the Project is not predicted to result in adverse impacts to neighboring residences or other land uses.

The Project will also not result in glint/glare that would impact neighboring properties. Using an anti-glare reflective panel, the Project Glare Study did identify the potential for green glare to be reflected on ten (10) residences and four (4) roadways for short periods across an entire year. However, green glare is considered a minor visual disturbance and not hazardous. Using an anti-glare reflective panel, which the Project intends to use, there are no instances of yellow or red glare on any residences or roadways around the Project. Using the model without anti-reflective coating, one receptor

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<sup>4</sup> Walston, LJ, Li, Y, Hartmann, HM, Macknick, J, Hanson, A, Nootenboom, C, Lonsdorf, E, Hellmann, J. 2021. Modeling the ecosystem services of native vegetation management practices at solar energy facilities in the Midwestern United States. Ecosystem Services. 47. 101227.

<sup>5</sup> MPCA [Minnesota Pollution Control Agency]. 2022. Minnesota Stormwater Manual: Top 10 reasons to plant pollinator friendly vegetation at your solar site.

[https://stormwater.pca.state.mn.us/index.php/Top\\_10\\_reasons\\_to\\_plant\\_pollinator\\_friendly\\_vegetation\\_at\\_your\\_solar\\_site](https://stormwater.pca.state.mn.us/index.php/Top_10_reasons_to_plant_pollinator_friendly_vegetation_at_your_solar_site)

predicted yellow glare lasting for 17 minutes over the course of a year, which was found to be negligible. The Project Glare Study is included with the special land use permit application package. Finally, the majority of Project components will not require exterior lighting. The Project will include one overhead, downward-facing light associated with the Project substation and Operations and Maintenance Building for the purposes of security, maintenance, and emergency services. Exterior lighting will comply with the requirements set forth in Section 2.18 of the Fayette Township Zoning Ordinance and is not anticipated to adversely impact adjacent properties or vehicular traffic.

#### **4. Public Facilities and Services**

The existing public streets and highways will adequately serve the Project throughout its construction, operation, and decommissioning. Transportation and installation of Project components will not require special accommodations of the existing infrastructure. Workforce and component delivery routes will follow the routes designated in the Project Haul Route Plan, which is included with the Final Site Plan package. Likewise, during operation, the Project will require a staff of 3-5 onsite personnel, and no special accommodations will be required of existing infrastructure.

The Project will comply with all applicable regulations of the Hillsdale County Drain Commission and existing stormwater drainage patterns within and around the Study Area will remain generally unchanged. In addition, the Applicant met with the Jonesville Fire Department on October 6, 2025, to discuss the project area, project timeline, and training and equipment needs. During this meeting, the Jonesville Fire Department did not make any requests regarding Project design. The Applicant will notify the Jonesville Fire Department prior to construction so they can visit during construction to obtain an on-the-ground understanding of the Project and emergency access points. In addition, impacts to local police protection services are also not anticipated as a result of Project development or operation.

In accordance with federal regulations, a perimeter fence will be installed surrounding the Project, which will limit potential safety or security issues. Furthermore, access roads will be designed so as to provide safe and efficient ingress and egress for maintenance staff and emergency services, should an emergency arise. As such, the Project will not create any additional impacts to drainage, fire, or police, beyond its existing use as primarily agricultural land.

#### **5. Public Utilities**

The Project will not result in impacts to public utilities. The Project has completed a desktop review of title and existing utilities. Results have been incorporated into the design of the Project to ensure that Project components do not affect existing utility easements. Updates to the Project layout may be necessary following the completion of an ALTA survey. In addition, no adverse impacts to the power grid will occur as a result of the Project. The Applicant has not yet executed an offtake agreement for the purchase of the power generated by the Project. The Applicant is actively marketing the sale of its power generation and expects to enter into an offtake agreement prior to construction. During operation, the Project will require 3-5 onsite personnel. Thus, energy, water, and sewage and refuse disposal needs during Project operation are not anticipated to exceed those of an average single-family household. Additionally, the Project will obtain all building, electrical, plumbing, and other permits required by the Hillsdale County Building Inspection and Environmental Services Department. As such, no adverse impacts to public utilities are anticipated as a result of the proposed Project.

#### **6. Traffic**

As discussed in Section 4, above, existing public streets and highways will adequately serve the Project throughout its construction, operation, and decommissioning. During Project construction, transportation of Project components and the construction workforce will not require special accommodations be made to existing infrastructure and deliveries will follow the Project's Haul Route Plan, which is included with the Final Site Plan package. Thus, although a minor increase to local traffic is expected to occur during the construction phase, this increase would not be expected to significantly impact local or regional traffic patterns. Once constructed, the Project will require a staff of 3-5 onsite personnel, and no

special accommodations will be required for Project operations or maintenance needs. Furthermore, solar panels will be setback at least 50 feet from all public road right-of-way (ROW). Thus, impacts to traffic patterns during Project operation are expected to be negligible.