

# AGRICULTURAL IMPACT STATEMENT



DATCP File Photo

**DATCP  
#4419**

**Howards Grove-Erdman  
Transmission Line Project  
Sheboygan County  
PSC Docket ID 137-CE-195**



**WISCONSIN DEPARTMENT OF AGRICULTURE,  
TRADE AND CONSUMER PROTECTION**  
*PUBLISHED DECEMBER 8, 2021*

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DATCP #4419

Howards Grove-Erdman Transmission Line Project

Sheboygan County

## WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION

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# MISSION STATEMENT

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Dear Reader,

In the 1970's, Wisconsin farmers and many local governments located between Green Bay and Milwaukee overwhelmingly opposed the planned creation of Interstate 43 (I-43). As originally planned, the I-43 project would run about 2 miles west of and parallel to STH-57 and be constructed primarily on farmland, as opposed to utilizing the existing STH-57 right of way. These farmers organized and staged protest rallies on the Wisconsin State Capitol grounds, including bringing cows to graze on the capital lawn. The strong opposition these farmers and local governments demonstrated prompted a compromise that would relocate the interstate to run along the US 141 corridor between Milwaukee and Manitowoc. This same opposition also prompted the Wisconsin legislature in 1978 to establish the Agricultural Impact Statement (AIS) statute, Wis. Stat. § 32.035, as part of Wisconsin's Eminent Domain law.

Holding onto the spirit and purpose of the farmer led protests of the 1970's, the mission of the AIS program is ***to provide agricultural landowners and operators an opportunity to be heard in matters that impact their lands and an opportunity to voice for alternatives in order to preserve farmland under the framework of Wis. Stat. § 32.035***. Through the AIS program, agricultural landowners have the opportunity to provide feedback, document impacts, and advocate for alternative solutions any time agricultural lands are significantly affected by an entity with the potential powers of eminent domain. The AIS program also provides affected landowners the time to gather information in order to make well informed decisions before the potential project begins. Lastly, the AIS program makes suggestions and recommendations to project initiators to promote project alternatives and management practices that would reduce the potential impacts to agricultural lands and operations.

The AIS program has responsibilities to both the impacted landowners and the project initiator. The AIS program serves as an advocate to the affected agricultural landowners and will contact each affected landowner and operator in order to listen, learn and document the impacts the project poses to their agricultural lands and operations. Based on this feedback, the program will also identify and recommend project alternatives, best management & oversight practices and remediation practices to the project initiator, landowner(s) and operator(s) to reduce potential agricultural impacts. The AIS program serves the needs of the project initiator by conducting the AIS analysis and publishing the statement within a timely manner as required by Wis. Stat. § 32.035. In addition, the AIS program provides a continuing presence throughout project development and oversight processes in order to advocate for agricultural landowners and support the statewide priority to preserve prime farmland.

The Agricultural Impact Statement program and the WI Department of Agriculture, Trade and Consumer Protection are honored to provide this essential state service to the agricultural landowners and operators of the state.

Thank you

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# ACRONYMS

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AEA	Agricultural Enterprise Area
AIN	Agricultural Impact Notification
AIS	Agricultural Impact Statement
ATC	American Transmission Company
CPCN	Certificate of Public Convenience and Necessity
CREP	Conservation Reserve and Enhancement Program
CRP	Conservation Reserve Program
CSA	Core Statistical Areas
CTH	County Trunk Highway
DATCP	Department of Agriculture, Trade, and Consumer Protection
EA	Environmental Assessment
EIS	Environmental Impact Statement
FP	Farmland Preservation Program
FSA	Farm Service Agency
IAM	Independent Agricultural Monitor
IEM	Independent Environmental Monitor
kV	Kilovolt
MFL	Managed Forest Law
MSA	Metropolitan Statistical Areas
NEV	Neutral to Earth Voltage
PSC	Public Service Commission of Wisconsin
ROW	Right-of-Way
STH	State Trunk Highway
USDA	U.S. Department of Agriculture
WisDNR	Wisconsin Department of Natural Resources
WisDOA	Wisconsin Department of Administration
WisDOR	Wisconsin Department of Revenue

# TERMS

CIRCUIT	A continuous electrical path along which electricity can flow from a source, like a power plant, to where it is used, like a home. A typical transmission circuit consists of three phases, with each phase on a separate set of conductors.
CONDUCTOR	A wire composed of multiple aluminum strands wrapped around a steel core that together carry electricity. A transmission line is constructed with three conductors, one for each phase of the circuit generated by a power plant.
DOUBLE-CIRCUIT	Electric lines with two sets of three conductors, totaling six conductors on one structure. These two circuits are independent of one another.
DISTRIBUTION LINE	An interconnected group of lines and equipment for the delivery of low voltage electricity between the transmission network and end users (i.e. home/business)
KILOVOLT (kV)	A unit of electricity equal to 1,000 volts.
LAYDOWN YARD	Temporary equipment staging and storage areas.
SHIELD WIRE	A wire connected to the top of the structure to protect the conductors from lightning strikes, minimizing the risk of power outages.
SINGLE-CIRCUIT	Electric lines with one set of three conductors.
SUBSTATION	A facility that monitors and controls electrical power flows, uses high voltage circuit breakers to protect power lines, and transforms voltage levels for safe and reliable delivery of electricity.
TRANSMISSION LINE	An interconnected group of lines and equipment for transporting electric energy on a high voltage power line between power plants and substations.
TRIPLE-CIRCUIT	Electric lines with three sets of three conductors, totaling nine conductors on one structure. These three circuits are independent of one another.
UNDERBUILD	To place lower voltage distribution circuits underneath a higher voltage transmission circuit, thereby using a single structure for both transmission and distribution lines.

# SUMMARY OF AGRICULTURAL IMPACT STATEMENT

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The Wisconsin Department of Agriculture, Trade and Consumer Protection (the Department) has prepared Agricultural Impact Statement (AIS) #4419 for the construction of a new 138 kV electric transmission line between the Village of Howards Grove and the unincorporated community of Erdman in Sheboygan County, WI (the Project) by the American Transmission Company (ATC) (Figure 1). ATC has indicated the primary reason for the Project is to maintain voltage stability in the Sheboygan area (DATCP, 2021a; ATC, 2021a). Concerns for voltage stability in this area stem from the retirement of the 400MW Edgewater #5 generating unit, the escalating imbalance between load - generation - transmission capacity in the area, and the increasing risk of voltage instability and potential loss of electrical load i.e. black out (ATC, 2021a).

To resolve these concerns, ATC has proposed two route alternatives for the Project, a preferred route and an alternative route. Both route alternatives generally follow existing roadway or utility Right-of-Ways (ROW) from the Village of Howards Grove to another existing substation in the unincorporated community of Erdman, both in Sheboygan County (Figure 1). Despite efforts to reduce new ROW acquisitions, ATC proposes to impact up to 45.2 acres of agricultural lands from up to 36 agricultural landowners, depending on the selected alternative.

The Public Service Commission of Wisconsin (PSC) has authority over the Project and ATC must obtain a Certificate of Public Convenience and Necessity (CPCN) to obtain the right to proceed with the Project. Through the issuance of a CPCN, the PSC would select the project route and other project criteria ATC shall follow. As of December 8, 2021, ATC has submitted a CPCN application for the Project to the PSC under PSC Docket ID: 137-CE-195 and is awaiting a ruling from the PSC. The Department will provide the PSC with AIS #4419 as evidence to aid in determining the outcome of ATC's CPCN application.

In accordance with [Wis. Stat. §32.035\(3\)](#), ATC has provided the Department with the necessary information and materials to conduct an AIS. The Department has also contacted the agricultural property owners and operators impacted by the alternative routes. In accordance with [Wis. Stat. §32.035\(4\)\(b\)](#), the Department has reviewed and analyzed ATC's materials and the comments obtained by the Department from the affected agricultural property owners and operators to assess the agricultural impacts of the proposed project. Through the AIS analysis, the Department offers a set of recommendations and conclusions to the PSC, ATC and the agricultural landowners and operators to help mitigate current and future impacts on agricultural lands and agricultural operations along the selected route.

The set of recommendations are located within the AIS Recommendation Section beginning on page 7. The AIS analysis begins on page 12 with information on the project located in Section 2. Information and conclusions on the agricultural setting of Sheboygan County and impacted areas can be found in Section 3. The agricultural impacts of the project on the impacted land, landowners

and operators can be found in Section 4. Appendices for AIS #4419 contain the following information: additional project figures and tables from ATC (Appendix A), information on the appraisal and compensation process (Appendix B), a complete record of comments submitted to the Department from agricultural landowners & operators (Appendix C), a copy of Wisconsin’s agricultural impact statement statute (Appendix D), various additional sources of related information for agricultural landowners and operators (Appendix E) and a copy of the Department’s agricultural monitoring form for transmission line projects.

If ATC deviates from the proposed route segments, alternatives or the selected sites, ATC shall re-notify the Department. The Department shall review the re-notification for new potential impacts to agricultural lands and may generate an addendum to this AIS, if warranted.

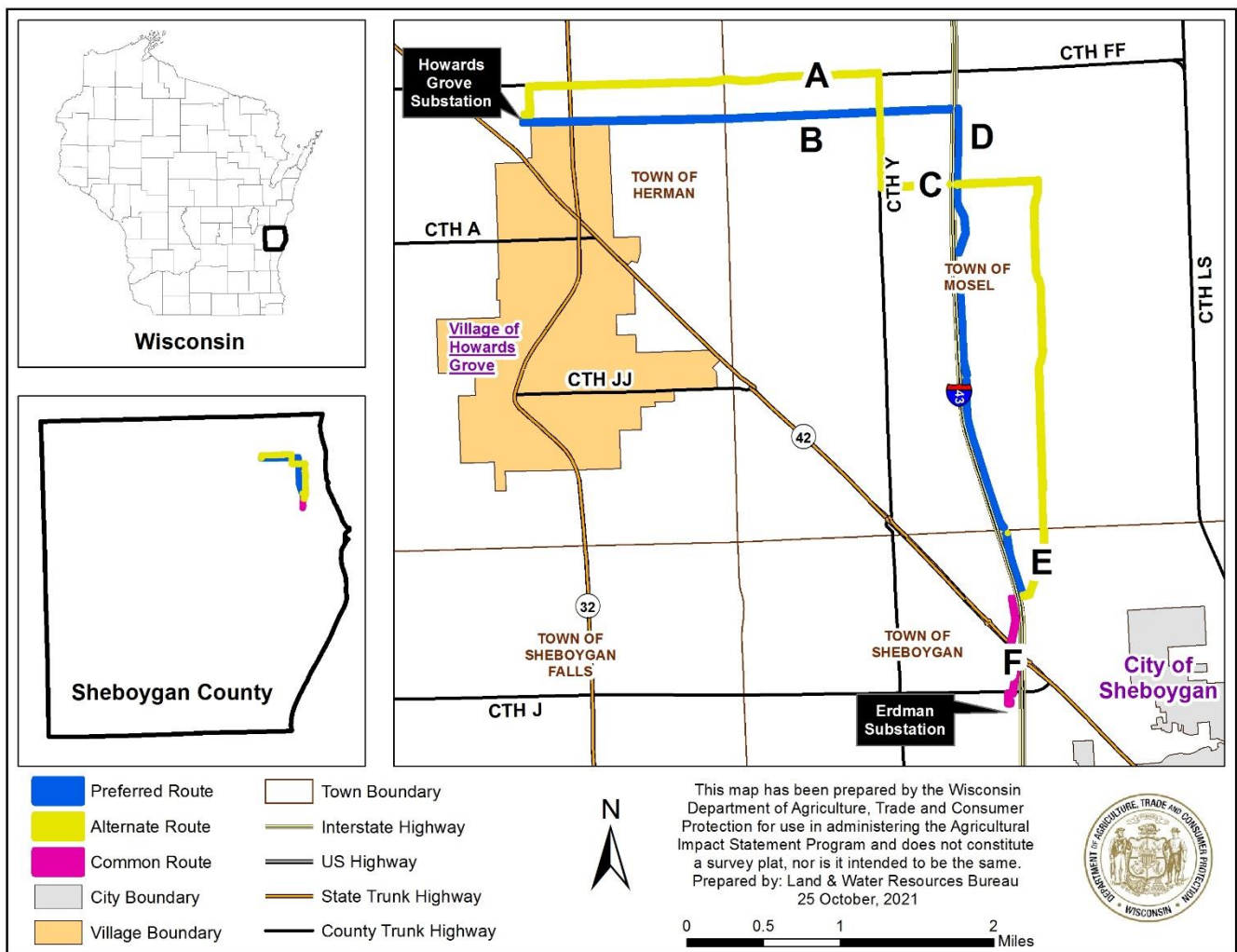


Figure 1: Location of preferred (segments B, D, F) and alternative (segments A, C, E, F) routes for the proposed Howards Grove to Erdman transmission line project in Sheboygan County, WI (DATCP, 2021a; ATC, 2021a). Segment F is shared between the route alternatives and is denoted as the Common Route.

# AGRICULTURAL IMPACT STATEMENT RECOMMENDATIONS

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The Wisconsin Department of Agriculture, Trade and Consumer Protection (the Department) has reviewed and analyzed the materials provided by ATC and comments from the affected agricultural property owners and operators regarding the proposed Howards Grove to Erdman transmission line project. Should the PSC approve the Project, the Department provides the following recommendations, in accordance with [Wis. Stat. §32.035\(4\)\(b\)](#), to the PSC, ATC and agricultural landowners and operators to help mitigate impacts on agricultural lands and agricultural operations.

## Recommendations to the Public Service Commission

- 1) The PSC should consider requiring ATC to follow the Department's recommendations.
- 2) Should the PSC select the Plymouth-Erdman 138 kV Circuit system alternative, the PSC should require ATC to conduct public outreach, which could include mailings, digital content and virtual or in-person meetings to inform landowners impacted by the system alternative or require proof public outreach has already occurred relative to the impacted landowners.
- 3) The PSC should select a route that utilizes as much pre-existing ROW including roadway, transmission line and railway corridors to reduce the overall impacts to agricultural lands and operations.
- 4) When selecting the final route, the PSC should consider exchanging route segments or fractions of route segments from one route to another to lessen impacts to prime farmland and agricultural soils.
- 5) When selecting the final route, the PSC should consider creating a new route by combining fractions of segments A and B with segments D and F as shown in Figure 5. This route as proposed by the Department would maximize shared roadway ROW, eliminate impacts to Managed Forest Law (MFL) lands, reduce the potential creation of uneconomic remnants and lessen impacts to prime farmland and other important soils.
- 6) When selecting the final route, the PSC should avoid fragmenting large continuous blocks of forest and prioritize the preservation of windbreaks and MFL lands.
- 7) Should the PSC decide to require an Independent Environmental Monitor (IEM) or an Independent Agricultural Monitor (IAM) for the Project, the IEM/IAM should be hired in consultation with and the approval of the PSC, DATCP, and WisDNR and all reports generated by IEM/IAM should be shared with the PSC, DATCP, and WisDNR. However, the Department believes the Project does not require an IEM/IAM.

- 8) Should an IEM/IAM be hired, the PSC should require ATC to reimburse the Department for time required to select & hire the IEM/IAM, review environmental inspection reports and associated matters related to the Department's involvement with the IEM/IAM.

### **Recommendations to ATC**

- 1) The Department recommends ATC follow all the recommended mitigation efforts described in Section 5.5.1 through Section 5.5.16 to mitigate Project impacts to or regarding: topsoil, soil compaction, drainage, de-watering, irrigation, erosion, temporary access roads, managed forest lands, fencing, weed control, construction debris, crop rotation & dairy operations, organic farms & other areas with certifications, biosecurity, construction noise, and stray voltage.
- 2) ATC should continue to monitor the Project ROW for soil erosion and maintain erosion control practices until there is sufficient vegetative growth in the ROW to mitigate soil erosion.
- 3) ATC should provide agricultural landowners and operators advanced notice of acquisition and construction schedules so agricultural activities can be adjusted accordingly.
- 4) ATC should provide landowners with direct phone numbers and email addresses to ATC project staff and project contractors that are able to respond to a range of topics including but not limited to: environmental & agricultural impacts, land acquisition & ROW, project schedule, access limitations, compensation for release of lands from conservation programming and project complaints.
- 5) If there is adequate growing season for a crop to mature and be harvested after ATC acquires the impacted lands, but before construction along the Project corridor begins, ATC should allow the current agricultural operators to harvest a crop for that season.
- 6) Prior to finalizing project design, ATC should consult with the Sheboygan County Conservationist to assess whether planned land restoration and planting of the landscape within the restored Project ROW minimizes drainage problems, soil erosion and soil compaction on the remaining remnant agricultural lands as well as adjacent properties.
- 7) ATC should monitor for the presence of underground drainage tiles within the construction ROW. If an active drainage tile is damaged or broken as a result of construction activities, ATC shall repair or replace the damaged or broken section.

- 8) Where construction activities have altered existing drainage patterns or the natural stratification of soils resulting in new wet areas or decreased productivity, ATC should work with landowners to determine a means to return the agricultural land either in the ROW or adjoining lands to pre-construction function. New drainage tiles or ditching, de-compaction, regrading, or additional fill may be required to correct problems that arise after construction is complete.
- 9) ATC should consult with the affected agricultural landowners and operators to ensure any relocated, temporary or newly established agricultural land access points are located in areas that provide safe and efficient access to remnant agricultural properties.
- 10) ATC should provide appropriate compensation to all landowners with land enrolled in a conservation easement or farm program if the landowner must reimburse the administering agency for the land's removal or alteration. These conservation or farm programs could include, but are not limited to, Conservation Reserve Program (CRP), Conservation Reserve and Enhancement Program (CREP), Farmland Preservation Program (FP), or MFL.
- 11) ATC should implement training for all construction supervisors, inspectors, and crews to ensure that they understand the steps needed to protect the integrity of agricultural lands and operations during project construction and restoration.
- 12) Should the PSC select the Plymouth-Erdman 138 kV Circuit system alternative, ATC shall re-notify the Department of the Plymouth-Erdman 138 kV Circuit in accordance with [Wis. Stat. §32.035](#).

### **Recommendations to Agricultural Landowners and Operators**

- 1) Agricultural landowners and operators should review [Wis. Stat. §182.017](#) (i.e. the Landowner Bill of Rights) seen in Appendix D (V) to understand their rights prior to the start of easement negotiations.
- 2) Landowners should review the recommended mitigation efforts described in Section 5.5.1 through Section 5.5.16 to mitigate project impacts to or regarding: topsoil, soil compaction, drainage, de-watering, irrigation, erosion, temporary access roads, managed forest lands, fencing, weed control, construction debris, crop rotation & dairy operations, organic farms & other areas with certifications, biosecurity, construction noise, and stray voltage.
- 3) Agricultural landowners have the authority under [Wis. Stat. § 182.017\(7\)\(d\)](#) to allow or deny herbicide applications within the ROW they own and agricultural landowners should provide written consent or written lack of consent to ATC regarding herbicide applications.

- 4) Landowners with conservation easements within the ROW should consult with the conservation program provider to determine if any effects will occur due to the land's alteration or removal from the contract. If the landowner is charged a fee for removing or altering the land within the conservation easement, the landowners should contact the ATC staff member, as designated by ATC, responsible for handling compensation for release of lands from conservation programs.
- 5) Landowners concerned about potential impacts to their agricultural land should keep records of the conditions of the ROW before, during, and after construction, including field moisture conditions, historic presence/absence of ponded water prior to the start of construction for post-construction comparisons, crop yield records and photographs taken every season.
- 6) Landowners should inform ATC about the existence and location of drainage systems or planned drainage systems that could be affected by the Project.
- 7) Landowners with organic certification or other certifications should contact ATC and report the range and type of substances that are and are not permitted according to their certifications.
- 8) Agricultural landowners and beekeepers should consider using the free online [DriftWatch](#)<sup>™</sup> and [BeeCheck](#)<sup>™</sup> registries, operated by [FieldWatch](#)<sup>™</sup> to communicate areas containing specialty crops or beehives with pesticide applicators, in order to minimize the risk of accidental exposure. For more information on DriftWatch, please visit the [DATCP DriftWatch website](#) at the provided link or at <https://wi.driftwatch.org/>.
- 9) Landowners who wish to farm within the deforested area should discuss tree stump removal with ATC during the easement negotiation process.
- 10) Landowners should inform ATC if they use aerial planting or aerial spraying.
- 11) Livestock owners & operators within the Project ROW who are concerned about the noise potential for the Project should inform ATC or their representatives during the easement negotiation process.
- 12) Confined animal feeding operations or any operation with livestock facilities in the vicinity of the proposed power line should request pre- and post-transmission line energization NEV testing from ATC, the PSC, or their utility provider.
- 13) Landowners should fully describe and discuss property improvements and agricultural operations with appraisers so the appropriate value of the affected property is established.



- 14) Prior to the start of construction, landowners should identify for ATC where construction activities may interfere with farm operations, farm building/facilities or farming infrastructure including but not limited to drain tiles, wells, watering systems, drainage ditches, drainage tile, culverts, fencing, farm access roads, or grain bins.
- 15) Affected farmland owners should inform the tenant agricultural operators if ATC has made a jurisdictional offer, under the power of eminent domain.
- 16) After construction is complete, landowners and ATC should monitor for drainage problems. If problems are observed that can be attributed to construction, the landowner and ATC should work together to develop a mutually agreeable solution.

# AGRICULTURAL IMPACT STATEMENT

---

## 1. INTRODUCTION

The Wisconsin Department of Agriculture, Trade and Consumer Protection (the Department) has prepared Agricultural Impact Statement (AIS) #4419 in accordance with [Wis. Stat. §32.035](#) for the proposed construction of a high voltage electric transmission line Sheboygan County, WI (Figure 1) by the American Transmission Company (ATC). Through the Howards Grove to Erdman transmission line project (the Project); ATC proposes to construct a single-circuit 138 kV transmission line along one of two potential alternative routes between the Village of Howards Grove and the unincorporated community of Erdman in Sheboygan County, WI.

According to [Wis. Stat. §32.035](#), the AIS is designed to be an informational and advisory document that describes and analyzes the potential effects of a proposed project on agricultural operations and agricultural resources, but it cannot stop a project. The Department is required to prepare an AIS when the actual or potential exercise of eminent domain powers involves an acquisition of any interest in more than five acres of land from any agricultural operation. The term agricultural operation includes all owned and rented parcels of land, buildings, equipment, livestock, and personnel used by an individual, partnership, or corporation under single management to produce agricultural commodities.

The AIS reflects the general objectives of the Department in its recognition of the importance of conserving vital agricultural resources and maintaining a healthy rural economy. The Department is not involved in determining whether or not eminent domain powers will be used or the amount of compensation to be paid for the acquisition of any property.

ATC has submitted a Certificate of Public Convenience and Necessity (CPCN) to the Public Service Commission of Wisconsin (PSC) ([REF#: 414784](#)) to obtain approval to construct the Project (ATC, 2021a). The PSC has assigned the Project PSC Docket ID: [137-CE-195](#), which can be followed within the PSC [Electronic Records Filing System](#). The PSC will analyze the need for the project and the potential environmental and community impacts in an Environmental Assessment (EA). In addition, the PSC will receive testimony and hold hearings to further assess the impacts of this project. Afterwards, the PSC will approve, modify, or deny ATC's proposed project. Construction on the project cannot begin before ATC receives a CPCN from the PSC, as well as permits and approvals from other regulatory entities.

As established under [Wis. Stat. §32.035\(4\)\(d\)](#), if ATC intends to actualize its powers of condemnation at any point during the project through a jurisdictional offer(s), ATC may not negotiate with an owner or make a jurisdictional offer until 30 days after the AIS has been published. If ATC deviates from the selected alternative or the selected sites, ATC shall re-notify

the Department. The Department shall review the re-notification for new potential impacts to agricultural lands and may determine to generate an addendum to this AIS.

The full text of [Wis. Stat. §32.035](#) is included in Appendix D. Additional references to statutes that govern eminent domain and condemnation processes and other sources of information are also included in Appendices B, E, and F.

## **2. PROJECT DESCRIPTION**

### **2.1. Project Summary**

ATC has provided the Department with an agricultural impact notification (AIN) and requested spatial materials for analysis for the proposed project (DATCP, 2021a). The AIN, requested materials from ATC and ATC's CPCN application to the PSC serve as the main reference documents for the Project. The proposed project route alternatives presented here do not represent the final project route, which requires PSC approval.

ATC is proposing to construct a new 138 kV electric transmission line from an existing substation in the Village of Howards Grove to another existing substation in the unincorporated community of Erdman, both in Sheboygan County (Figure 1). ATC's primary reason for the proposed Howards Grove to Erdman transmission line project (the Project) is to maintain voltage stability in the Sheboygan area (DATCP, 2021a; ATC, 2021a). Concerns for the voltage stability of this area stem from three factors: 1) the planned retirement of the 400MW Edgewater #5 generating unit in 2022, 2) the escalating imbalance between load - generation - transmission capacity in the area and 3) the increasing risk of voltage instability and potential for lost electrical load (i.e. black outs).

As the acquisition of agricultural lands or property rights are a pre-requirement to conduct an AIS, this analysis will only analyze and evaluate the aspects of the Project that acquire new ROW's from agricultural lands. The proposed Project, depending on the selected route will impact up to 36 agricultural landowners and approximately 45.2 acres of agricultural lands. A full list of the impacted acres for each agricultural landowner is provided in Table 6 (Section 4.2: *Agricultural Impact*).

### **2.2. Public Service Commission of Wisconsin (PSC)**

The PSC is an independent regulatory agency that regulates public electric, natural gas, water and sewer utilities in Wisconsin. Through PSC regulations, public utilities must obtain PSC approval before setting new utility rates and undertaking major construction projects, such as electric transmission lines or substations. Prior to gaining approval, PSC staff review the utilities application and prepare either an Environmental Impact Statement (EIS) or an Environmental Assessment

(EA) to evaluate the need, alternatives, cost, and environmental and social impacts of the proposed project.

Approval from the PSC is obtained by the issuance of a CPCN or a Certificate of Authority (CA), both of which grant the utility the right to proceed with the project as described within the CPCN or CA. Issuance of a CPCN or CA determined by a three-member PSC Commission. PSC Commissioners are full-time staff, appointed by the Governor, tasked with reviewing the project case file (documents, reports, testimony) and ultimately deciding whether to approve, modify, or deny a project. If the PSC determines that the project is needed and feasible, the utility must adhere to the PSC ruling and project alternatives/route selected by the Commission. PSC approval is not constrained by the utilities' "preferred" or "alternate" route designations mentioned within this AIS and the Commission may choose any combination of route segments described in the application.

ATC submitted an application for a CPCN for the Project to the PSC on June 30, 2021 under PSC Docket ID: [137-CE-195](#) (ATC, 2021a). The PSC deemed ATC's application complete on July 30, 2021 (Day, 2021) and issued the need for an EA on August 17, 2021 in accordance with requirements for "Type II Actions" under [Wis. Admin. Code § PSC 4.10\(2\)](#) (Craft, 2021). DATCP expects the PSC to utilize the information contained within this AIS, the EA, the CPCN application, and testimony from the public to determine the degree of impacts each route alternative will have on the agricultural landscape and economy, prior to issuing a ruling.

### **2.3. Project Design and Purpose**

ATC is proposing to construct a new 138 kV electric transmission line from an existing substation in the Village of Howards Grove to another existing substation in the unincorporated community of Erdman in the Town of Sheboygan, both in Sheboygan County. According to the CPCN ([REF#: 414784](#)), ATC has proposed a preferred system alternative, known as the Howards Grove-Erdman 138 kV Circuit, and offered the PSC two different route alternatives (a preferred route and an alternative route) to achieve the preferred system alternative. The CPCN also specified a system alternative, known as the Plymouth-Erdman 138 kV Circuit seen in Appendix A Figure 1, which ATC did not disclose in the AIN to the Department (DATCP, 2021a).

Through the Department's review of the Project's CPCN, Appendix D ([REF#: 418267](#)) was found to contain information on the system alternative and the system alternative comparative analysis performed by ATC (Lunde, 2021). Through the comparative analysis of reliability and voltage, ATC determined the system alternatives performed identically, however, the system alternative was more expensive (Lunde, 2021). Based on the ATC analysis, cost appears to be the leading rationale for ATC's selection of the Howards Grove-Erdman 138 kV Circuit as the preferred system alternative. The Department also broadly compared potential agricultural impacts of the two system alternatives, within the restraints of the information provided, and found the system

alternative (Plymouth-Erdman 138 kV Circuit) to rely more on new corridors through agricultural lands and less on existing utility, highway, railroad and trail corridors. The Department is unable to fully analyze the agricultural impacts of the Plymouth-Erdman 138 kV Circuit as ATC did not fully disclose this system alternative to the Department.

Should the PSC select the Plymouth-Erdman 138 kV Circuit system alternative, the Department recommends that the PSC require ATC to conduct public information outreach, which could include mailings, digital content and virtual or in-person meetings to inform landowners impacted by the system alternative or proof that public outreach for the impacted landowners has already occurred. Furthermore, should the PSC select the Plymouth-Erdman 138 kV Circuit system alternative, ATC shall re-notify the Department of the Plymouth-Erdman 138 kV Circuit in accordance with [Wis. Stat. §32.035](#). Absent information on the Plymouth-Erdman 138 kV Circuit system alternative, the Department's analysis will only focus on the preferred system alternative (i.e. Howards Grove-Erdman 138 kV Circuit).

The Howards Grove-Erdman 138 kV Circuit preferred system alternative (the Project), contains two route alternatives (Figure 1). Each route alternative is comprised of multiple different route segments as seen in Figure 1. If the preferred system alternative is approved, the PSC may decide to exchange segments or relocate certain parts of a segment when setting the final route, so long as the route remains contiguous. As part of the Project, ATC is also proposing modifications to the existing substations known as Howards Grove, Erdman, Forest Junction and Lodestar substations, which are all located in Sheboygan County.

*NOTE: Definitions of commonly used terms within this document such as "single circuit" are included within the TERM SECTION on page 4.*

### **2.3.1. Project Location**

The proposed preferred and alternative routes for the Project occur within Sheboygan County, WI (Figure 1). The proposed route segments (A, B, C, D, E, and F) that comprise the routes, span from the Town of Herman, through the Town of Mosel and into the Town of Sheboygan. Route segment B, of the preferred route, also borders the Village of Howards Grove. Should the preferred laydown yards not be obtained in Sheboygan County, ATC proposes an alternative laydown yard in the Town of Schleswig in Manitowoc County, WI.

### **2.3.2. Preferred Project System with Preferred Route Description**

According to the AIN submitted to the Department (DATCP, 2021a) and the CPCN ([REF#: 414784](#)) submitted to the PSC under Docket ID 137-CE-195 (ATC, 2021a), ATC's preferred route alternative for the Project is to build a 6.9 mile 138 kV single circuit transmission line from the Village of Howards Grove to the unincorporated community of Erdman in Sheboygan County, WI. The Erdman substation would be altered to include a 138 kV bus switch and 138kV line position, while

modifications to the Howards Grove substation would include the expansion of the 138 kV straight bus into a 4-position ring bus. Transmission line structures will consist of self-supporting steel monopoles spaced between 400 – 680 ft apart depending on segment. Foundations for transmission line structures will consist of either direct-embedded steel or reinforced concrete drilled piers. The line will be an aluminum conductor steel reinforced conductor with one shield wire to protect against lightning strikes. The preferred route alternative would navigate from Howards Grove to Erdman utilizing route segments B, D and F as follows:

- From the Howards Grove substation, follow route segment B heading east approximately 2.8 miles on existing utility easements until reaching the Interstate Highway 43 (I-43) ROW (Figure 1).
- From the I-43 northbound ROW, follow route segment D heading south approximately 3.3 miles on I-43 ROW until reaching Green Valley Lane (Figure 1).
- At Green Valley Lane, cross I-43 to the southbound I-43 ROW and follow route segment F heading south approximately 0.8 miles until reaching the Erdman substation in the Town of Sheboygan (Figure 1).

### **2.3.3. *Alternative Route Description***

ATC proposed one alternative route for the preferred system design. The alternative route would span approximately 7.8 miles and would use the same system design as described above in Section 2.3.1, but utilize route segments A, C, E and F as described below. If approved, the PSC may choose to select the alternative route, combinations of different route segments or alter a proposed route segment when setting the final route.

- From the Howards Grove substation, follow route segment A heading north approximately 0.2 miles, sharing existing roadway ROW and new easements, until reaching County Trunk Highway FF (CTH-FF) (Figure 1).
- From CTH-FF, follow route segment A heading east approximately 2.2 miles, sharing existing roadway ROW and new easements, until reaching CTH-Y (Union Road) (Figure 1).
- From CTH-Y, follow route segment A heading south approximately 0.8 miles, sharing existing roadway ROW and new easements (Figure 1).
- 0.75 miles south of the intersection of CTH-FF & CTH Y, follow route segment C approximately 1.0 miles to the east on existing utility easements until reaching Dairyland Drive.
- From Dairyland Drive, follow route segment E heading south approximately 2.8 miles, sharing existing roadway ROW and new easements until reaching Green Valley Lane (Figure 1).

- Following Green Valley Lane, cross I-43 to the southbound I-43 ROW and follow route segment F heading south approximately 0.8 miles until reaching the Erdman substation in the Town of Sheboygan (Figure 1).

#### **2.3.4. *Off-ROW Access Roads***

According to the AIN and the CPCN application, ATC--where possible--will access the Project from the project ROW or by public roads that intersect or parallel the Project ROW (DATCP, 2021a; ATC, 2021a). Based on a desktop and a field review of the Project corridor, ATC has also identified locations outside the Project ROW where they have proposed various off-ROW access roads as shown in Appendix A, Figure 2. ATC plans to obtain permissions/agreements for the temporary off-ROW access roads through direct negotiation between the construction contractor and the landowner on a case-by-case basis rather than by formal easement or purchase. If additional off-ROW access roads are identified, ATC stated they will complete an environmental review of the newly identified access roads and submit the necessary information to the PSC prior to establishing the access road. Once construction has concluded, ATC plans to restore the Project's off-ROW access roads to pre-construction conditions and has no plans for long-term or permanent off-ROW access road improvements at this time (DATCP, 2021a; ATC, 2021a).

#### **2.3.5. *Laydown Yards***

ATC identified five construction laydown areas seen in Appendix A – Figure 3 for the Project (DATCP, 2021a; ATC, 2021a). Landowners impacted by the proposed laydown yards and the acreage of impacts are shown in Table 1. ATC selected the locations based on the proximity to both the preferred and alternate routes, with preference for locations where either existing asphalt parking lots were present, or where active/inactive quarries and gravel pits had the necessary capacity to store equipment and personnel during various construction phases. ATC also conveyed that four of these sites would require no further expansion or ground disturbances to meet the Project's needs, with only the laydown yard #4 adjacent requiring additional preparation for the expansion of the Howards Grove Substation. Lastly, ATC stated that if additional staging areas or temporary workspaces are required, ATC will notify the Commission of these new construction locations and will submit the necessary information to the PSC prior to establishing new laydown yards (ATC, 2021a).

Table 1: ATC’s proposed laydown yards for the proposed Howards Grove-Erdman Transmission Line Project (DATCP, 2021a).

Laydown Yard #	Parcel Owner	Township, Range, Section	County	Size of Laydown Yard (acres)
1	Sam's Real Estate Business Trust	T15N R23E s8	Sheboygan	9.7
2	Kiel Sand & Gravel	T17N R21E s34	Manitowoc	4.4
3	Gloria Walczak Etal	T15N R23E s5	Sheboygan	0.1
3	Con-Way Transportation Services Inc	T15N R23E s5	Sheboygan	2.9
4	Wisconsin Power & Light Company	T16N R22E s 23	Sheboygan	2.2
5	Excavating Acquisition, LLC	T16N R23E s 33	Sheboygan	3.0
<b>Total</b>				<b>22.3</b>

**2.3.6. Project Need**

ATC has indicated the primary reason for the proposed Howards Grove to Erdman transmission line project (the Project) is to maintain voltage stability in the Sheboygan area. According to the AIN and the CPCN (REF#: 414784), ATC stated the Sheboygan area is susceptible to unacceptably low voltages and the potential for loss of electrical load (i.e. black outs). The transmission network for the Sheboygan area also shares a common point of failure, as two of the three transmission lines in the area share common towers across seven miles. The planned retirement of the 400MW Edgewater #5 generating unit, which is the only significant generation unit in the area, in 2022 by Alliant Energy is the largest factor increasing the risk for loss of electrical load. In addition, the retirement of Edgewater #5 will escalate the existing load - generation - transmission capacity imbalance and therefore raises the risk of voltage instability and increases the amount of load potential lost during an outage. ATC cites this imbalance as the driving factor to install the proposed 138 kV transmission line between the existing Howards Grove and Erdman substations (DATCP, 2021a; ATC, 2021a)

**2.3.7. Existing Transmission Lines**

The Project as proposed will construct a new 138 kV transmission line between the Village of Howards Grove and the unincorporated community of Erdman. Existing structures near the Erdman Substation will be replaced with new structures designed to support the existing circuit and the new 138 kV circuit. Where the Project routes parallel existing distribution circuits, ATC plans to relocate and bury the distribution line within the proposed Project ROW and add a single phase buried circuit.



### 2.3.8. *Project Routing and Siting*

Wisconsin's energy policy [Wis. Stats. § 1.12\(6\)](#) prioritizes the siting of electric transmission corridors to certain types of corridor according to the following ranking 1<sup>st</sup>) existing corridor, 2<sup>nd</sup>) highway and railroad corridor, 3<sup>rd</sup>) recreational trails (to the extent that the facilities may be constructed below ground and that the facilities do not significantly impact environmentally sensitive areas) and 4<sup>th</sup>) new corridor. Within their CPCN application, ATC stated they established potential route corridors using the multi-stage process seen below, that involved consultation with the PSC, the WisDNR and WisDOT and following transmission line siting priorities (ATC, 2021a).

- 1) Identification of potential route corridors in accordance with the site priority ranking established by Wis. Stats. § 1.12(6) (ATC, 2021a).
  - a. Existing utility corridors
  - b. Highway and railroad corridors
  - c. Recreational trails, to the extent the facilities may be constructed below ground and that the facilities do not significantly impact environmentally sensitive areas.
  - d. New corridors
- 2) Identified routes are screened against criteria specified in Wis. Stat. § 196.491(3)(d) and other internal criteria to determine the proposed route alternatives. These criteria include, but are not limited to the following (ATC, 2021a):
  - Location of existing linear infrastructure
  - Use of existing ROWs to minimize the need for additional facility ROW
  - Locations of cemeteries, schools, day care facilities, and hospitals
  - County and state road expansion plans
  - Community and landowner impacts
  - Ability to minimize impacts to environmental and natural resource features
  - Archeological, tribal, and historic resources
  - Location of airports and airstrips
  - Avoiding high-density residential areas
  - Conformance with existing and proposed land use patterns
  - Design modifications or construction practices to overcome challenges
  - Maintaining compatibility with local agricultural practices

- 3) Perform a multidisciplinary review and evaluation of each identified route considering and balancing the factors discussed above, in addition to the design, engineering, economic, and operational considerations.

Through this multi-stage evaluation process ATC has proposed route segments (A, B, C, D, E, and F), which comprise the two routes between the Village of Howards Grove and the unincorporated community of Erdman in Sheboygan County, WI. Additional information on route alternatives and ATC’s analysis can be found within the Project application for a CPCN to PSC, under PSC Docket ID: [137-CE-195](#) (ATC, 2021a).

### 2.3.9. Project Schedule

According to the AIN and the CPCN application, pending approval by the PSC and obtaining all state agency permits, ATC plans on following the schedule shown in Table 2 for the proposed project (DATCP, 2021a; ATC, 2021a).

Table 2: The anticipated construction timeline for the proposed Howards Grove to Erdman transmission line project, pending approval by the PSC and obtaining all state permits (DATCP, 2021a; ATC, 2021a).

<b>Project Activity</b>	<b>Preliminary Date</b>
Anticipated PSC Order	January 2022
Anticipated WisDNR Utility Permit Issuance	February 2022
Start Substation Construction	February 2022
Start Transmission Line Construction	May 2022
Substation In-Service Date	September 2022
Transmission Line In-Service Date	December 2022

### 2.4. Project Right-of-Way (ROW)

Throughout the proposed system alternative corridor, the six proposed route segments (A, B, C, D, E, and F) will generally require an 80 ft wide ROW (ATC, 2021a; ATC, 2021d). According to the CPCN application, to reduce the width and overall amount of new ROW required, ATC proposes to co-locate Project transmission facilities and share existing ROWs with other infrastructure such as roadways or existing transmission line ROWs (ATC, 2021a). Through co-locating the Project within existing ROWs, some portions of the proposed route segments would be completely contained within existing transmission line ROW, while other portions of proposed ROW overlap with interstate, highway or other roads. Overall, the proposed ROW for ATC’s preferred route (segments B, D and F) utilize 28% of shared ROW, whereas the alternative route (segments A, C, E and F) utilize 42% shared ROW (ATC, 2021d).

ATC also reviewed the existing electric transmission line ROWs it proposed to co-locate facilities on and found them to be insufficient to accommodate the proposed Project. Limitations within the existing transmission line ROWs include, but are not limited to, insufficient allowances on the quantity of transmission line towers, inadequate minimum line-to-ground clearance and an easement centerline that does not reflect the Project's centerline (ATC, 2021a). For the aforementioned reasons, ATC plans to acquire new high voltage easements for the Project, regardless of whether or not the Project ROW overlaps an existing transmission line ROW. ATC also plans to evaluate whether existing transmission line easements are retained or released, based on the specific provisions of each easement, once the Project is complete (ATC, 2021a).

### **3. AGRICULTURAL SETTING**

The agricultural setting of a county has the potential to broadly impact agricultural land valuations. For example, counties with productive lands and/or urban counties with increased developmental pressures are generally known to result in higher sale prices for agricultural lands (Borchers *et al.*, 2014; Nantel, 2020). As the impacted agricultural lands for the Howards Grove to Erdman transmission line project (the Project) reside within Sheboygan County, the urban development pressures and agricultural policies of Sheboygan County will be analyzed to provide baseline information to assess the valuation and stability of agricultural lands within the County. Section 4, *Agricultural Impacts* will analyze and discuss the potential impacts of the Project on impacted agricultural lands.

#### **3.1. Urban Pressures on Agriculture**

##### ***3.1.1. Urbanized Populations***

Sheboygan County, with an estimated population in 2021 of 118,495 residents (WisDOA, 2021a) is classified as a Central Metropolitan Statistical Area (MSA), but is not part of a multi-county Combined Statistical Area (WisDOA, 2013a). Metropolitan Statistical Areas (MSA) are generally defined as areas that contain central urbanized population area(s) of at least 50,000 people as well as the adjacent counties that are socially and economically integrated with a large population cluster (Standards, 2010). Denotation as a "Central" MSA indicates that Sheboygan County is associated with the largest urbanized area or urban cluster that accounts for the population within the core statistical area (CSA) (Standards, 2010). The City of Sheboygan constitutes the County's only urbanized area (WisDOA, 2021b), which is defined as a population of at least 50,000 people (Standards, 2010). Sheboygan County does not have any urban clusters (WisDOA, 2021b) which are defined as population clusters of at least 10,000 people, but less than 50,000 (Standards, 2010).

### 3.1.2. Urban Development Pressures

Urban development pressures on agricultural lands are known to increase the rate of farmland conversion and increase agricultural land sale values (Azadi *et al.*, 2010; Borchers *et al.*, 2014, Brorsen *et al.*, 2015). The following analysis will identify if agricultural lands within Sheboygan County are demonstrating signs of resistance to potential urban development pressures.

Based on the most recent available data from the U.S. Department of Agriculture (USDA), in 2017 Sheboygan County had 195,938 acres of land in farms or 59.8% of the county, which is significantly higher than the statewide average of 41.3% (USDA, 2017a). Between 1997 and 2017 Sheboygan County converted -7.4% of their agricultural lands out of agricultural use (Table 3). The negative conversion number reported in Sheboygan County indicates that 13,478 acres of agriculture was added within the County over this period. When compared to the statewide average rate of 3.9% for agricultural land conversion, Sheboygan County is in stark contrast with its significant net gain; a net gain of agricultural lands signifies that Sheboygan county is part of a minority of counties (19 counties or 26%) gaining agricultural lands in Wisconsin. However, during this same time-period (1997 – 2017) Sheboygan County lost 10 farming operations (1.0% decrease), which is relatively equal to the 1.2% average loss experienced across all counties in Wisconsin (Table 4) (USDA, 2017a).

Table 3: Agricultural land in production within Sheboygan County and Wisconsin (USDA, 1997; USDA, 2017a).

Location	Acres of Agricultural Land (acres)		Agricultural Land Converted (%)
	1997	2017	
Sheboygan County	182,460	195,938	-7.4%
Wisconsin	14,900,205	14,318,630	3.9%

Table 4: Change in the number of farms between 1997 and 2017 within Sheboygan County and Wisconsin (USDA, 1997; USDA, 2017a).

Location	Number of Farming Operations		Change in Farming Operations	Percent Change (%)
	1997	2017		
Sheboygan County	968	958	-10	-1.0%
Wisconsin	65,602	64,793	-809	-1.2%

#### 3.1.2.1. Sheboygan County

The increase in agricultural acreage between 1997 – 2017 within Sheboygan County may suggest that agricultural lands in Sheboygan County are resilient to the pressures of urban development (Table 3). Though, the USDA data does not separate the means by which agricultural lands are added and Sheboygan County’s increase may be, in part, attributed to the conversion of forests, wetlands or other non-agricultural lands to agriculture. The 1.0% loss in the number of farming

operations over the same 20 year period in Sheboygan County is similar to the statewide averaged loss (-1.2%) of operations and could provide additional evidence of resiliency (Table 4). Based on the most recent available data from the USDA, between 2012 – 2017 the growth in the number of farming operations in Sheboygan County appears to favor growth within large farm (500+ acre) agricultural operations while very small (1-49 acre) mid-sized (180-499) acre and especially small (50-179 acre) agricultural operation sizes were shown to decrease (USDA, 2017a). This growth pattern may be indicative of the consolidation of agricultural operations in Sheboygan County.

The pressures of urban development and urban population growth on farmland conversion are not readily apparent across Sheboygan County as a whole; however, the County is still facing local, county and regional developmental pressures. At the county level the Wisconsin Department of Administration (WisDOA) predicts that Sheboygan County, as compared to the population estimate for 2020, will see a 4.5% population increase (5,270 persons) by 2040, which ranks 23<sup>rd</sup> for growth by population within the state (WisDOA, 2013b). However, as Sheboygan County is a Central MSA there is still the potential for the pressures of urban development and urban population growth within Sheboygan County. The county's only qualifying urbanized area, the City of Sheboygan, is not likely to be the main driving force behind urban developmental pressures as the city is expected to see a population decline by 2040 (WisDOA, 2013b). Instead, developmental pressures in Sheboygan County may come from a host of other cities and villages predicted to have large population increases by 2040 such as the City of Sheboygan Falls, the Village of Howards Grove and the Village of Oostburg (WisDOA, 2013c). Agricultural lands within the boundaries of these incorporated municipalities and nearest the City of Sheboygan would be at the highest risk of future farmland conversion in Sheboygan County, which is all the more evident by the location of this project between the Village of Howards Grove and the City of Sheboygan.

#### 3.1.2.2. Regional Pressures

Regional pressures from the neighboring Milwaukee-Racine-Waukesha, Appleton, Oshkosh-Neenah, and Fond du Lac MSAs may also influence urban development in Sheboygan County. These MSA's represent Wisconsin's 1<sup>st</sup>, 4<sup>th</sup>, 6<sup>th</sup>, and 12<sup>th</sup> largest MSAs and is home to an estimated combined 2,088,463 residents or 35.9% of the state's total population in 2019 (WisDOR, 2021). These MSAs possess strong regional urban development pressures and urban population growth potential and may influence farmland conversion in Sheboygan County. Agricultural lands nearest municipalities within these regional MSAs (Guiling et al., 2009) or lands along transportation corridors such as interstate or state highways (Mothorpe et al., 2013) linking the Sheboygan County MSA to these regional MSAs would be at the highest risk of future farmland conversion.

## 3.2. Agricultural Land Valuation

The valuation of agricultural lands is a key component of a county's agricultural setting. This valuation broadly serves as an indicator for the demand of agricultural land as well as its market value. Circumstances that impact the land such as agricultural productivity, urban development

pressures and the intended future use of the land also factor into agricultural land valuation. Nonetheless, market conditions for agricultural land sales may vary from year to year and may not be apparent at the local scale.

The analysis of agricultural land value performed here encompassed agricultural land sales reported to the USDA for both continued agricultural use and agricultural land diverted to other land uses, at the county scale over a three year time-period (USDA, 2018; USDA, 2019a; USDA, 2020). This analysis is not a sales comparison of any parcel. Premium agricultural land sale prices for sub-acre land sales are generally not reflected in this analysis. The results of the agricultural land sale value analysis are shown in Table 5. The average (\$ /acre) sale price for agricultural land sold for continued agricultural use between 2017 – 2019 in Sheboygan County was \$6,291. In comparison to the statewide averages, agricultural land sold for agricultural uses in Sheboygan County sold on average for 119% of the statewide average sale price.

Across the state, agricultural lands sold and diverted for development to non-agricultural uses averaged sale values of \$10,005 per acre. In 2017, the average sale price for agricultural land sales for development to non-agricultural uses in Sheboygan County was \$4,851 per acre or 48.5% of the statewide average that year. However, Sheboygan County did not report sale prices for agricultural land sales for development to non-agricultural uses in 2018 and 2019; This may indicate a strong desire among agricultural landowners within Sheboygan County to resist the demands to sell agricultural land for non-agricultural uses or this may also be reflective of potentially weak urban development pressures in the county.

### ***3.2.1. Sheboygan County Agricultural Land Valuation***

The average sale price for agricultural lands sold for continued agricultural use in Sheboygan County is almost 20% more than the statewide average price (Table 5). This data suggests a stronger level of demand for agricultural land sold for continued agricultural use in Sheboygan County. The 2017 record of agricultural lands diverted to non-agricultural uses seen in Table 5 represents one sale totaling only 77 acres and does not provide sufficient data here for analysis. However, the data may suggest agricultural lands diverted to non-agricultural uses in Sheboygan County may be below the statewide average price (Table 5) and possibly indicates a lower level of demand for development. Though, the negative average rate of agricultural land conversions in Sheboygan County, as shown in Table 3, provides evidence that Sheboygan County agricultural landowners may be looking to convert non-agricultural land to agricultural uses as well. The above average agricultural land prices in Sheboygan County may be an additional factor driving any potential conversion of non-agricultural lands to agricultural lands.

Given the mix of cropland and MFL agricultural operations in the impacted project area, impacted lands may or may not be able to continue their agricultural use after the Project is complete. Therefore, this analysis will provide an estimate of agricultural land valuation in Sheboygan County for land sold for continued agricultural use and land sold for development. The estimate of land

sold for continued agricultural use is based on the 2017-2019 Sheboygan County averaged sale price of land sold for continued agricultural use (Table 5). The estimate for land sold for development is based on the 2017-2019 statewide average sale price for agricultural lands sold for development, as Sheboygan County did not contain sufficient records of agricultural land sales diverted from agricultural use for the analysis.

This analysis has established an average valuation of \$6,291 per acre for agricultural lands sold for continued agricultural use and an average valuation of \$10,005 per acre for agricultural land sold for development in this area. The estimated valuation proposed within this analysis is not a valuation of any particular agricultural land or property and is only intended to establish an estimated average valuation for agricultural lands sold for continued agricultural use or diverted to non-agricultural uses within Sheboygan County, WI. As the county and statewide data used within the analysis is an average over the 2017 – 2019 time period, it is likely the averaged sale valuation for agricultural lands in 2021 for Sheboygan County is different than the estimates presented here. Furthermore, the premium price theory that establishes exceedingly higher prices for small or sub-acre agricultural parcels or for agricultural parcels nearest to urban areas (Brosen et al., 2015) is not reflected within this analysis.

Table 5: Agricultural land sales from 2017 – 2019 in Sheboygan County and the Wisconsin State average (USDA, 2018; USDA, 2019a; USDA, 2020).

Location	Agricultural Land Sale* (\$ / acre)					
	2017		2018		2019	
	Sold for Ag <sup>ϕ</sup>	Diverted <sup>‡</sup>	Sold for Ag <sup>ϕ</sup>	Diverted <sup>‡</sup>	Sold for Ag <sup>ϕ</sup>	Diverted <sup>‡</sup>
Sheboygan County	6,588	4,851	6,018	-	6,267	-
Wisconsin Average	4,960	10,794	5,587	13,280	5,269	5,942

### 3.3. Farmland Preservation

Wisconsin’s farmland preservation (FP) program provides local governments and landowners with tools to aid in protecting agricultural land for continued agricultural use and to promote activities that support the larger agricultural economy. Lands that are planned for farmland preservation by the county and included in a certified zoning district or located within an Agricultural Enterprise Area (AEA) are afforded land use protections intended to support agriculture, and are eligible for the farmland preservation tax credit.

Through this program, counties adopt a state-certified farmland preservation plan that maps areas identified as important for farmland preservation and agricultural development based upon reasonable and objective criteria. Based on the plan, local governments may choose to adopt a FP zoning ordinance or designate AEAs to achieve further land protections and ensure that farmland covered by the plan is eligible for farmland preservation tax credits. Such ordinances and AEAs must also be certified or designation by the Department. Landowners who are eligible in either or

both AEA and FP zoning areas and claim the tax credit are required to follow the state soil and water conservation standards to protect water quality and soil health.

### ***3.3.1. Farmland Preservation Planning***

The Department certified Sheboygan County's current FP plan in 2013 for a ten year period ending in 2023 (Sheboygan County, 2013). The criteria for land planned for FP in Sheboygan County includes soils that are suitable for agricultural production; land historically used for agricultural use or agriculture-related use; land in close proximity to agricultural infrastructure; land that is in undeveloped natural resource or open space areas that connect other farmland parcels to create a large, uninterrupted block of preserved area; and land that may be under some development pressure but not located in an area the county plans for development in the next 15 years (Sheboygan County, 2013). All towns in Sheboygan County have lands that are planned for FP as part of Sheboygan County's FP Plan.

### ***3.3.2. Farmland Preservation Zoning***

Establishing FP zoning strengthens farmland protections beyond what an FP plan affords. A review of the Department's FP program participation map shows that several towns in Sheboygan County have adopted FP zoning administered under town zoning authority (DATCP, 2021b). The jurisdictions impacted by the proposed project include the Towns of Sheboygan, Mosel, and Herman; of said towns, Mosel and Herman both contain lands with certified FP zoning. ATC has applied for a CPCN under [Wis. Stat. § 196.491](#) from the PSC. If such certificate is issued the project will be a permitted use in the FP zoned area under [Wis. Stat. § 91.44\(f\)](#). If a CPCN is not issued, the project will be subject to conditional use regulations in the FP zoned area under [Wis. Stat. § 91.46\(4\)](#) and must meet the requirements listed under [Wis. Stat. § 91.46\(4\)\(a\)-\(4\)\(e\)](#).

### ***3.3.3. Agricultural Enterprise Areas***

AEAs are community-led efforts to establish designated areas important to Wisconsin's agricultural future. This designation highlights the importance of the area for local agriculture and further supports local farmland preservation and agricultural development goals. Designation as an AEA also enables eligible landowners to enter into FP agreements. Through an FP agreement, a landowner agrees to voluntarily restrict the use of his/her land to agriculture for fifteen years in exchange for eligibility for the farmland preservation tax credit. A review of the Department's AEA program shows that Sheboygan County does not contain any designated AEAs (DATCP, 2021c).

### ***3.3.4. Managed Forest Law***

The MFL program is a voluntary sustainable forestry program administered by WisDNR under [subch. III of ch. NR 46](#). In exchange for reduced property taxes, eligible landowners commit to a 25-50 year sustainable forest management plan on their privately owned woodlands. Sustainable forestry practices such as harvesting mature timber according to sound forest management practices, reforestation and afforestation of the land, are required in enrolled landowner's



management plans. Potential enrollees must also show their parcel complies with size and density requirements under [Wis. Stat. § 77.82\(1\)\(a\)2](#), which states that at least 80% of the parcel must be producing or capable of producing a minimum of 20 cubic feet of merchantable timber per acre per year. Land with buildings or improvements associated with buildings are not eligible for MFL. Exceptions such as utility ROWs are permitted such that the project and its ROW will not interfere with future or current MFL eligibility (WisDNR, 2017).

A review of WisDNR's MFL Program database indicates that the Project, regardless of route alternative, will impact a total of approximately 0.9 acres of MFL enrolled land. The impacts of the alternative route to parcel ID 59014183450 may remove enough land that the parcel is no longer eligible to stay enrolled within the MFL program. Impacted landowners should visit the WisDNR Forestry Assistance Locator website [www.dnr.wi.gov/fal/](http://www.dnr.wi.gov/fal/) to find their local DNR Tax Law Forestry Specialist and discuss the implication of the route to their MFL enrolled lands. Impacted landowners and ATC should review Recommendation #4, contained within the *Recommendations to Agricultural Landowners and Operators* Section, during contract negotiations to ensure adequate compensation for project impacts to MFL parcels.

### ***3.3.5. Purchase of Agricultural Conservation Easement Programs (PACE)***

The 2009 - 2011 State of Wisconsin budget authorized the state Purchase of Agricultural Conservation Easement (PACE) Program under [Wis. Stats. § 93.73](#), which is intended to provide matching funds to assist local governments and non-profits with the purchase of permanent agricultural conservation easements. The intent of the PACE program is to preserve agricultural land of significance at risk of development and to provide an additional layer of permanent protection to certified FP planned areas and designated AEAs. Post PACE acquisition, the partnering local entity and the Department co-hold the agricultural conservation easement voluntarily purchased from landowners. At the time of this analysis, the state's PACE Program is not currently funded or accepting new applications. However, the state holds 17 PACE easements. A review of the Department's PACE Program shows the Project would not impact any state held PACE easements.

Counties and private non-governmental organization such as land trusts may also hold agricultural conservation easements. Based on a review of publicly available online resources, the Department could not find any record of a county held or non-governmental organization held agricultural conservation easement that would be impacted by the Project (Land Trust, 2021; GLC, 2021).

## **3.4. Drainage Districts**

Drainage districts are local governmental entities governed under Wis. Stat. Ch. 88 and organized under a county drainage board for the primary purpose of draining of lands for agricultural use (DATCP, 2019a). Landowners who benefit from drainage pay assessments to cover the cost to construct, maintain, and repairing the district's drains. According to the Department, approximately

190 active districts exist within 27 of Wisconsin's 72 counties. A review of the Department's Drainage Program database indicates that Sheboygan County has one drainage district shared with Ozaukee County. However, the Belgium Holland Drainage District is located in the southern half of Sheboygan County and the Project is located in the northern half of the County, so this drainage district will not be impacted by the Project.

### **3.5. Conservation Programs**

Voluntary conservation programs such as the USDA Conservation Reserve Enhancement Program (CREP) and the USDA Conservation Reserve Program (CRP) are financial incentive programs to help agricultural landowners meet their conservation goals. The USDA and the Department jointly administer the CREP program in Wisconsin.

#### ***3.5.1. Conservation Reserve Enhancement Program***

CREP pays eligible agricultural landowners enrolled within the program to install filter strips along waterways or to return continually flooded fields to wetlands while leaving the remainder of the adjacent land in agricultural production. To be eligible for CREP payments, a recipient must have agricultural lands in crop production that are within 150 ft of a stream or water body or 1,000 ft from a grassland project area (DATCP, 2019b). A review of the Department's CREP records indicated that the proposed Project would not impact any current CREP fields.

#### ***3.5.2. Conservation Reserve Program (CRP)***

CRP is a land conservation program administered by the Farm Service Agency of the USDA. In exchange for a yearly rental payment, eligible agricultural landowners enrolled in the program agree to remove highly erodible land from agricultural production and plant resource-conserving plant species such as grasses or trees that will improve environmental health and quality (USDA, 2019b). Eligible agricultural landowners must possess lands with the potential for long-term improvements to water quality, prevent soil erosion or establish beneficial wildlife habitats according to the USDA Environmental Benefits Index (USDA, 2019b). CRP enrollment information is privileged to the USDA and CRP program participants. The Department is therefore unable to determine if any of the impacted agricultural parcels are enrolled within the CRP program.

## **4. AGRICULTURAL IMPACTS**

In addition to being a key component of [Wis. Stat. §32.035](#), documenting the agricultural impacts of a project provides the project initiator and the agricultural landowner the opportunity to better understand the project in its own right as well as learn how the project will impact agriculture. Furthermore, the documentation of agricultural impacts by agricultural landowners and operators creates the opportunity for them to advocate for alternatives that may reduce impacts to agricultural lands. In order to promote the opportunity for alternatives, the Department has used information provided by ATC for this AIS and information gathered by the Department from

agricultural landowner(s) to analyze the potential agricultural impacts of the Project in Sheboygan County, WI. The analysis of the agricultural impacts and conclusions drawn from the analysis form the basis of the Department’s recommendations within the AIS Recommendation Section above.

#### **4.1. Landowner Rights**

[Wisconsin Statute § 182.017](#), also referred to as the “Landowner Bill of Rights”, describes the rights of landowners and the requirements the utility must adhere to, when a transmission line will be constructed on private property. The transmission line applicant and contractor operating on the applicants behalf must comply with all aspects of this statute, which covers the range of topics described below:

- Compensation
- Infrastructure Repair
- Soil Conservation & Erosion
- Debris Removal
- Consent for Weed & Brush Control
- Landowner and Utility Liabilities
- Tree Harvesting and Tree Ownership
- Interference with television & radio reception
- Right-of-way Restriction

The applicant may request landowners to waive some rights during the negotiation process, but landowners are not required to do so. The Landowner Bill of Rights is still applicable to condemned land. The Department recommends that each affected landowner review the Landowners Bill of Rights (see Appendix D Section V) in its entirety prior to the start of easement negotiations.

#### **4.2. Agricultural Land Acquisitions**

In order to implement the proposed Project, ATC will affect approximately 42.9 to 45.2 acres of agricultural lands depending on the selected route, access roads, stringing areas and laydown yards. ATC owns 17 existing easements along proportions of the proposed route, but has determined the existing easements are insufficient to accommodate the proposed Project for reasons outlined in Section 2.4 above. Therefore, ATC plans to use a combination of temporary and permanent easements to obtain the necessary rights to construct the Project across all agricultural lands, regardless of a lands’ current easement status (ATC, 2021a). As ATC’s current easement on agricultural lands are insufficient, the Department analyzed Project impacts to agricultural lands, regardless of the lands’ current easement status.

The Department attempted to contact 19 agricultural landowners as shown in Table 6 and six agricultural tenant operators impacted by the Project alternative routes who had agricultural impacts of one or more acres. There were another 28 agricultural landowners impacted by the proposed Project route alternatives with impacts less than one acre, who were not contacted. The following section relays the feedback and comments received from stakeholders and agricultural

Table 6: Agricultural landowners, shown by Project route, the Department attempted to contact. Agricultural landowners with less than one acre of impact were not contacted.

<b>Agricultural Landowner</b>	<b>Acres of Impacted Agricultural Land (acres)</b>		
	<u>Permanent Easement</u>	<u>Temporary Easement</u>	<u>Total</u>
<b>Preferred Route (Segments B, D and F)</b>			
Bruce Manz & Wendy Scheibl	2.19	0.24	2.43
Daniel Kwiatkowski	2.10	0.52	2.62
Eldon Rahn	3.25	1.16	4.41
Gloria M Hopf Survivors Trust	4.71	0.02	4.72
Joseph & Tanya Weisfeld	1.14	0.06	1.20
Linda Hamann	1.22	0.34	1.56
Randall Grunewald	1.43	0.00	1.43
Ronald & Betty Strahl/Strahl Trust	1.10	0.00	1.10
Ronald & Sandra Roskopf	4.61	0.25	4.87
Rudolph Stapel	2.34	0.00	2.34
Schafer Properties LLC	1.32	0.00	1.32
Thad & Jason Athorp	5.65	1.62	7.27
William Ochs	2.36	0.00	2.36
Total of (13) Agricultural Landowners < 1.0 acre of Impact	7.26	0.30	7.56
<b>Preferred Route Totals</b>	<b>40.68</b>	<b>4.51</b>	<b>45.19</b>
<b>Alternative Route (Segments A, C, E and F)</b>			
Gloria M Hopf Survivors Trust	3.81	0.00	3.81
James & Tammy Risseeuw	1.85	0.00	1.85
Jane Vandoske	1.75	0.00	1.75
Kathlyn Imig	1.96	0.00	1.96
Kohler Co	2.98	0.00	2.98
Laura Bachmann	1.70	0.00	1.70
Robert Bachmann	2.38	0.35	2.73
Ronald & Sandra Roskopf	1.32	0.00	1.32
Rudolph Stapel	1.92	0.00	1.92
Thad & Jason Athorp	5.81	0.00	5.81
William Ochs	5.78	0.00	5.78
Total of (25) Agricultural Landowners < 1.0 acre of Impact	11.29	0.03	11.32
<b>Alternate Route Totals</b>	<b>42.54</b>	<b>0.39</b>	<b>42.93</b>

landowners through the Department's efforts. The information obtained helped form the basis of the Department's analysis of agricultural impacts to specific agricultural landowners and agricultural landowners in general. According to Appendix E of the Project CPCN, ATC has also engaged in a public outreach campaign, including the distribution of project notifications to every landowner within 300 ft of the Project's proposed centerline and the creation of a project specific website at [www.atc-projects.com](http://www.atc-projects.com) (ATC, 2021e), however this information was not included within the AIN. ATC did not indicate whether in-person or virtual open houses in the affected area were conducted to gather public and stakeholder input.

Agricultural tenant operators impacted by the Project may be eligible for a farm replacement payment from ATC in accordance with Wis. Stat. §32.19(4m)(b) if ATC exercises the powers of eminent domain through a jurisdictional offer to the agricultural property owner. A voluntary sale between ATC and an agricultural property owner, after a jurisdictional offer has been made, would not negate the potential for a farm replacement payment.

### **4.3. Summary of Landowner Concerns**

In order to gather additional information about the project's impact to agricultural lands and farm operations, the Department mailed surveys to agricultural landowners in the Project ROW routes who had agricultural impacts of one or more acres. In total, the Department mailed 19 surveys and conducted six phone surveys to tenant operators with contact information listed on returned surveys. Agricultural landowners were given the opportunity to respond by mail, an online survey or call the AIS program manager to give a verbal response. A total of 11 agricultural landowners responded, resulting in a response rate of 58%. Additionally, three of the six renters responded to the phone survey. A complete record of responses received for the Project can be found in Appendix C: Agricultural Landowner Comments.

The majority of the respondents reported their agricultural operations consisted of cropland followed by homes and farm buildings. Two respondents also indicated their agricultural operations possessed livestock and farm animals including cattle and pigs.

When asked to select any of the concerns shown in Figure 2 about the Project, the primary concern identified by respondents was drainage or drainage tiles (Figure 2). Respondents were also concerned about impacts related to access, erosion control, residence and aerial spraying/seeding (Figure 2). Other areas of concern reported by the respondents are shown in Figure 2.

Agricultural landowners were also asked to indicate if they participated in any conservation or agricultural programming including FP agreements, FP zoning, CREP, CRP and MFL. One respondent indicated that they have land enrolled in FP through FP zoning, one respondent indicated they have lands enrolled in MFL, and one respondent indicated they participate in the USDA NRCS Environmental Quality Incentives Program (EQUP). Respondents did not report participation in any other conservation or agricultural program identified by the Department.

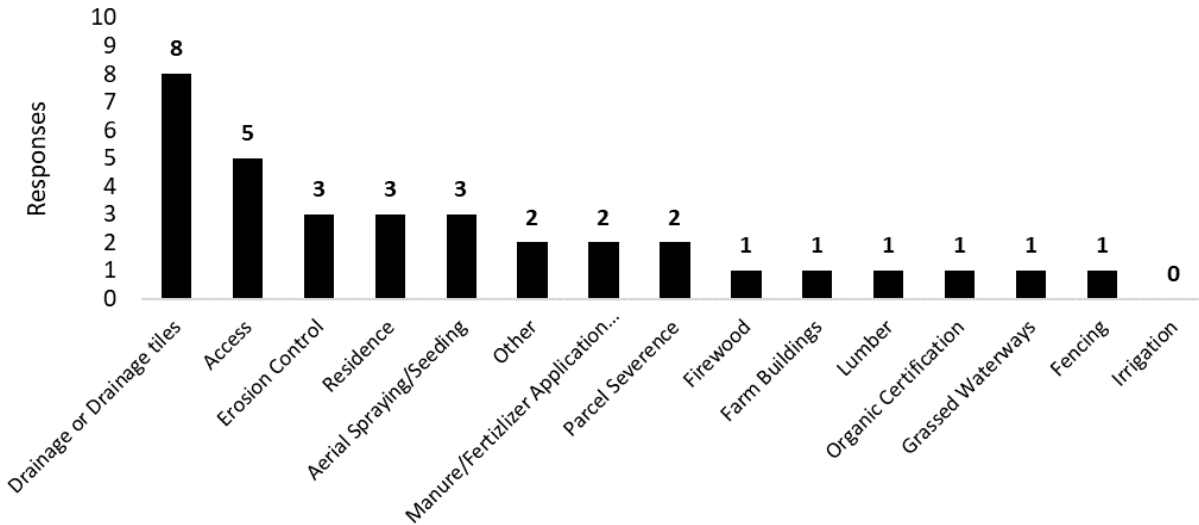


Figure 2: Landowner concerns resulting from the proposed Project.

The Department also requested agricultural landowners report the current land use within the proposed Project ROW as shown in Figure 3. The most common (56% of respondents) land use reported within the Project ROW was cropland. Crop Production is defined as an “Agricultural use” under [Wis. Stat. § 91.01\(2\)](#) if it’s conducted for the purpose of producing an income or livelihood. The next most common choice (with 19%) was managed woodlands with the remaining responses shown in Figure 3A.

#### 4.3.1. Landowner Concern Conclusions

After review and analysis of the agricultural landowner responses obtained from the Project surveys, the Department has identified the following priority areas of agricultural landowner concerns: route location, drainage or drainage tiles and access. Farmland drainage systems are an important tool for managing water levels especially on hydric soils and for increasing crop yield. Over half of all respondents indicated concerns related to drainage or drainage tiles. For example, one landowner was concerned about lost access to drainage tiles especially for maintenance, and another landowner noted that the alternate route would go over 5-6 drainage lines. To mitigate impacts to drainage systems, agricultural landowners should provide ATC with locations of drainage structures; in-turn, ATC should provide additional considerations to preserve these structures, which are directly linked to the productivity of the impacted agricultural land.

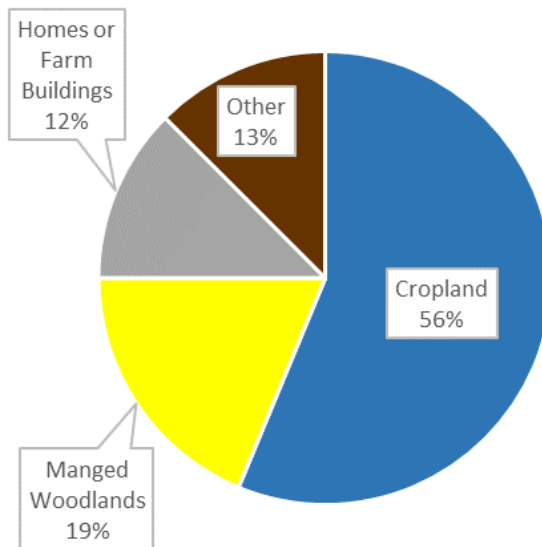


Figure 3: Landowner responses categorized by land use in Project Area.

Additionally, three respondents noted their preference to locate the Project ROW along either CTH FF or I-43 in order to preserve their cropland, forestland or agricultural operation. In keeping with the Department's mission to support the preservation of farmland, the Department recommends that the PSC select a route that utilizes as much pre-existing roadway ROW in order to lessen impacts to agricultural lands and operations. Please refer to Section 4.5 *Prime Farmland and Soils* for a comparative analysis of route impacts to agricultural soils and an alternative route proposed by the Department in keeping with agricultural landowner suggestions that the Project be located within CTH FF and I-43 ROW (Figure 5).

#### **4.4. Severance, Access and Wasteland**

The temporary and permanent easements of agricultural property required to implement any of the proposed Project alternative routes could result in agricultural parcel severance, removal of existing field access points and potentially the creation of wastelands and uneconomic remnant parcels. The circumstances (i.e. loss of access, severance, wasteland etc.) surrounding the impacts to each impacted remnant agricultural parcel are unique, thus some agricultural parcels may remain economically viable, while others may not. The following analysis will document the potential for severance, loss of access and potential creation of wastelands and uneconomic remnant parcels for the agricultural parcels impacted by the proposed alternatives for the proposed Project in Sheboygan County, WI.

##### **4.4.1. Severance**

As proposed, the preferred and alternative routes will temporarily and/or permanently sever agricultural parcels to accommodate the construction of the transmission line. Severance may be a physical barrier such as a temporary access road or a non-physical barrier such as permanent land use restrictions. Imposing land use restrictions as part of a transmission line easement ROW may still allow an agricultural landowner to access lands. However, barring the growth of trees or other woody plants as part of an easement may prevent the continuation of an existing agricultural land use, such as managed forestlands. Regardless of the means, severing an agricultural parcel effectively splits the existing parcel into two or more smaller parcels. Severing an agricultural parcel may also remove existing access points, create agricultural wastelands or uneconomic remnant parcels, and even divide the operation of a farm. Under Wisconsin's Eminent Domain Statute, compensation for damages resulting from severance is described in [Wis. Stat. § 32.09\(6\)](#).

Both the proposed preferred and alternative Project routes hold the potential to sever agricultural parcels. Evaluated severance by segments shows that segments B has the greatest potential to sever existing continuous tracks of farmland and MFL lands. Segment C also crosses through several continuous tracks of farmland. The remaining segments tend to follow along existing roadway ROWs where the potential for agricultural parcel severance is mitigated.

Where the proposed Project impacts MFL lands along segments A and B, the Department recommends ATC utilize the mitigation efforts described in Section 5.5.8 “Managed Forest Law, Trees and Other Woody Vegetation” to mitigate impacts to managed forests and preserve continuous tracks of managed forests where possible.

#### *4.4.2. Access*

As proposed, the Project has the potential to temporarily limit agricultural field access and limit access to agricultural operations. When agricultural lands and operations lose access, even temporarily, agricultural productivity may be impacted if crops, livestock or other agricultural products cannot be tended too. Lost access may also directly result in lost income if a field cannot be planted or harvested, or if an agricultural operation as a whole is hindered.

Access limitations would be specific to temporary and permanent easements utilized for laydown yards, staging areas, off-ROW access roads and the transmission line ROW. As the proposed preferred and alternative project ROWs generally follow roadway easements (e.g. CTH FF, I-43, Dairyland Drive etc.) any agricultural parcel or operation between the Howards Grove and Erdman substations has the potential to experience temporary access limitations. Agricultural parcels where ATC is proposing to site the transmission line mid-field (generally segment B) or planning to install temporary access roads that cross the middle of an agricultural parcel such as the parcel IDs 59014183400 and 59014183420 under segment B, would have the greatest potential for access limitations.

At this time, it is unclear where ATC would provide new access points to access fields severed by the transmission line ROW or whether ATC would allow agricultural operations to cross the ROW to access remnant fields during the construction phase. In order to accommodate field access to the remnant fields, the Department recommends that ATC work with agricultural landowners and any agricultural tenant operators to determine safe new access points to the remnant fields.

#### *4.4.3. Wasteland*

Acquisitions and easements that impact farmland frequently create small remnant fields that may be difficult to access, are irregularly shaped, or are no longer able to produce the pre-existing agricultural crop (e.g timber). These small irregularly shaped remnant fields may also contain numerous obstacles, such as transmission line poles, that can make it difficult for agricultural equipment to navigate and reduce the amount of tillable acres. This in turn reduces agricultural productivity, decreases the economic viability of the land and increases the likelihood of creating undeveloped land ([Wis. Stat. § 70.32\(2\)\(a\)\(5\)](#)) or what is commonly referred to as wasteland as shown in Figure 4. Compensation for the reduction in the value of parcels that are small and/or irregularly shaped and the potential creation of uneconomic remnant parcels according to [Wis. Stat. 32.05\(3m\)](#) should be addressed in the appraisal of each affected parcel.

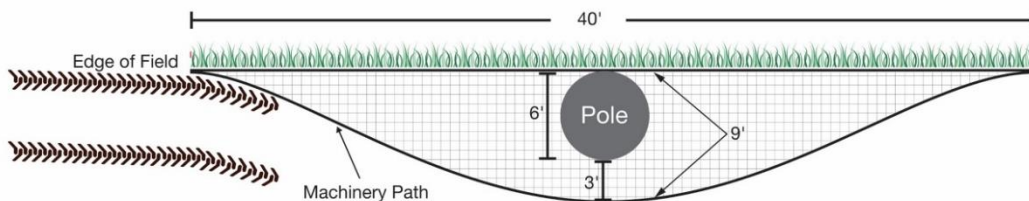


#### 4.4.3.1. Wasteland

By the nature of transmission line projects, both the preferred and alternative routes proposed by ATC for the Project have the potential to permanently create small amounts of agricultural wastelands in the immediate area surrounding each transmission line pole (Figure 4). Six agricultural landowners and tenants (43% of respondents) reported to the Department concerns about driving farming equipment around transmission towers and the lost productivity and revenue that would result from altering planting patterns around the towers (Appendix C "Agricultural Landowner Comments"), which elevates the cause for concern around the creation of tower induced wastelands. Where the transmission line would require the deforestation of managed forestlands (parcel IDs 59004036630, 59014183130, and 59014183450) and prevents further growth of timber, the entirety of Project ROW within an MFL parcel may be wastelands if that land does not have a suitable secondary agricultural purpose.

To mitigate the potential to create wastelands of MFL land, the Department recommends that the PSC select a route that avoids the fragmentation of major blocks of forest and prioritize the preservation of windbreaks and MFL lands. Furthermore, the Department recommends ATC utilize the mitigation efforts described in Section 5.5.8 "Managed Forest Law, Trees and Other Woody Vegetation" to mitigate impacts to managed forests and preserve continuous tracks of managed forests where possible.

**Figure A: Field Edge Effect on Tower Location**



**Figure B: In-Field Effect of Tower Location**

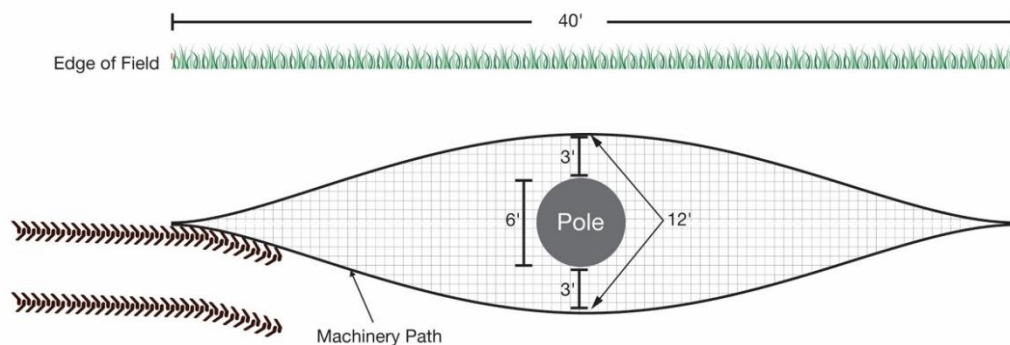


Figure 4: Examples of agricultural wastelands created by altering the pathway of agricultural machinery to navigate around transmission line towers along a field edge (Figure A) and within a field (Figure B).

#### 4.4.3.2. Uneconomic Remnant Fields

The potential for the proposed Project to create uneconomic remnant fields is limited and specific to the project segments (A and B) that impact MFL lands (parcel IDs 59004036630, 59014183130, and 59014183450). If the proposed Project is approved, narrow tracks of MFL forestlands would no longer be permitted to grow timber, yet the impacted land may have no suitable alternative agricultural use as they are part of larger blocks of MFL land. In effect, the land use restrictions on the impacted MFL land could turn the remnant field into uneconomic remnants.

To mitigate the potential creation of uneconomic remnant fields, if the PSC approves the Project the Department recommends the PSC consider selecting a route or building a route from individual segments that share existing roadway ROW to the greatest extent possible in order to mitigate impacts to MFL lands and the potential creation of uneconomic remnant fields.

### **4.5. Prime Farmland and Soils**

As proposed, the Project will impact between 42.9 to 45.2 acres of agricultural lands and agricultural soils depending on the selected route, access roads, stringing areas and laydown yards. Impacts to prime farmland and soils measured in this analysis reflect the Project's cumulative impact and does not necessarily differentiate between permanent or temporary impacts to an agricultural operation. The soils impacted by the proposed Project were cataloged and analyzed by farmland classification, for each route alternative, using the USDA-Natural Resources Conservation Service prime farmland soils GIS layer. Farmland soil classifications impacted by the Project include prime farmland, prime farmland if drained, farmland of statewide importance or farmland of local importance (Table 7). Prime farmland is designated by the USDA according to section 622.3 of the National Soil Survey Handbook (USDA, 2017b) and is based on the ability of the land and soil to produce crops. Definitions of prime farmland, prime farmland if drained and farmlands of statewide/local importance are provided under Table 7. The soil texture of agricultural soils impacted by the Project was analyzed, in general terms, across the project ROW.

Nearly all of the agricultural lands (98% - 100%), irrespective of route alternative, impacted by the Project hold some level of Federal or State priority designation. Respective to the preferred and alternative routes, the USDA has designated approximately 36.6 and 39.1 acres as prime farmland/prime if drained, while the State of Wisconsin has designated approximately another 8.6 and 2.7 acres as farmland of statewide importance (Table 7). Across the impacted agricultural parcels, the soils primarily consists of silt loam textured soils of various soil series. Silt loam soils are medium-textured soils (Cornell, 2017) with good soil structure, possess an ideal ability to hold onto water without becoming excessively wet and are usually best suited for crop production (UW-Extension, 2005).

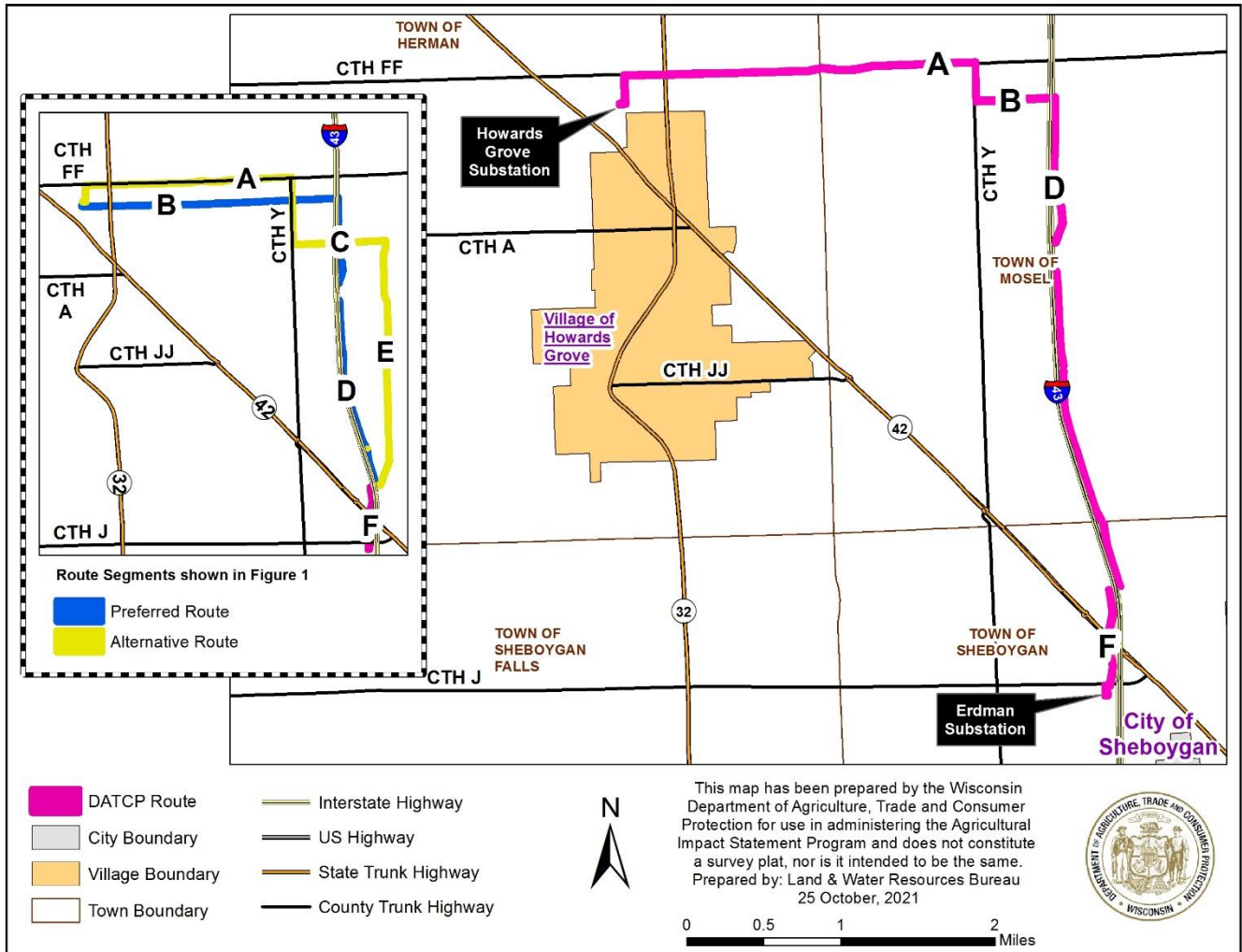


Figure 5: An alternative route proposed by the Department comprised of existing fractions of segments A and B with segments D and F for the proposed Howards Grove to Erdman transmission line project in Sheboygan County, WI.

This soils analysis shows that both the preferred and alternative routes will impact or remove prime farmland and high quality soils. Comparatively, the acreage of potential impacts to prime farmland posed by the preferred and alternative routes are similar (22.1, 20.7 acres respectively), but the preferred route does impact 6.3% more acres of prime farmland. When evaluating the cumulative impacts to all farmlands with some designation of Federal and State importance, the impact of the preferred route increases to 8% more acres than the alternative route. This increase can be traced back to individual segments, for example, from the proposed Howards Grove substation to the point at which segments A and B cross on CTH Y, segment B will impact an additional 2.8 acres (13.6% more) of farmland as compared to segment A. The reduction in acres seen in segment A to this point is attributable to the segments shared ROW with CTH FF. In general, the Department recommends selecting a route that shares an existing roadway ROW to the greatest extent possible to mitigate impacts to prime farmland and agricultural soils. Furthermore, the Department recommends that the PSC consider building a route from individual segments or fractions of segments that follow the CTH FF and I-43 ROWs as suggested by impacted agricultural landowners

(e.g. segments A/B, D and F) as seen in Figure 5. Combining fractions of segments A and B with segments D and F, as proposed by the Department, would maximize shared roadway ROW, eliminate impacts to MFL land, reduce the potential creation of uneconomic remnants and lessen impacts to prime farmland and other important soils.

Table 7: Agricultural soils, shown by Project route and farmland classification, impacted by the proposed Project in Sheboygan County, WI.

Soil Texture	Prime Farmland* (acre)	Prime Farmland if Drained <sup>o</sup> (acre)	Farmland of Statewide Importance <sup>‡</sup> (acre)	Not Prime Farmland <sup>φ</sup> (acre)	Total (acre)
<b><i>Preferred Route (Segments B, D and F)</i></b>					
Loam	0.0	1.9	0.0	0.0	1.9
Muck	0.0	0.0	6.6	0.0	6.6
Sandy Loam	0.9	0.0	0.0	0.0	0.9
Silt Loam	19.2	8.1	0.0	0.0	27.4
Silty Clay	0.0	0.0	0.3	0.0	0.3
Silty Clay Loam	1.9	4.6	1.7	0.0	8.3
<b><i>Preferred Route Total</i></b>					<b>45.2</b>
<b><i>Alternative Route (Segments A, C, E and F)</i></b>					
Alluvial	0.0	0.0	0.0	0.7	0.7
Loam	0.1	2.8	0.0	0.0	2.8
Loamy Sand	0.0	0.0	0.8	0.0	0.8
Muck	0.0	0.0	0.3	0.0	0.3
Sandy Loam	1.1	0.0	0.0	0.0	1.1
Silt Loam	16.4	13.4	0.0	0.3	30.2
Silty Clay Loam	3.1	2.3	1.6	0.0	7.0
<b><i>Alternative Route Total</i></b>					<b>42.9</b>

\***Prime farmland** is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and may be utilized for cropland, pastureland, rangeland, forest land, or other lands excluding urban built-up land or water. It has the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management.

<sup>o</sup>**Prime farmland if drained**, indicates that if farmland is drained it would meet prime farmland criteria.

<sup>‡</sup>**Farmlands of statewide importance** are set by state agency(s). Generally, these farmlands are nearly prime farmland and economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce yields high as prime farmlands under proper conditions.

<sup>φ</sup>**Not Prime farmland**, indicates farmland is neither prime farmland nor of designated importance.

## 4.6. Drainage and Soil Health

Maintaining proper field drainage and preserving soil health is vital to the success of an agricultural operation. If drainage is impaired, water can settle in fields and cause substantial damage, such as reducing soil health, harming or killing crops and other vegetation, concentrating mineral salts, flooding farm buildings, or causing hoof rot and other diseases that affect livestock. Soil structure, texture, organic matter and microorganisms are all important factors that influence soil health (Wolkowski and Lowery, 2008).

### 4.6.1. Drainage and Soil Health Impacts

Project construction activities have the potential to disrupt and/or mix soil profiles within the Project ROW as well as the surrounding area. Construction activities may affect the existing surface and subsurface (i.e. drain tile) drainage patterns of agricultural fields if drainage tile lines are broken or if the topography of grassed waterways, known water flowlines or erosion control structures are altered. Agricultural landowner feedback gathered by the Department indicates that several impacted agricultural parcels contain drainage tile that could be affected by the Project (Appendix C: Agricultural Landowner Comments). The agricultural soils impacted by the proposed Project are also widely known to be hydric or contain hydric inclusions. Hydric soils are commonly saturated, flooded or ponded for an extended period during the growing season, causing anaerobic conditions within the upper soil layer and may be associated with wetlands. It's also common practice for agricultural operations to install drainage systems to mitigate the impacts of hydric soils, thus the presence of drainage tile is likely widespread throughout the Project area.

The movement of heavy equipment through the Project ROW may also compact soil and impede drainage. UW-Extension report A3367 states that heavy equipment with axle loads that exceed 10 tons increase the risk of soil compaction into subsoil layers that cannot be removed by conventional tillage (Wolkowski and Lowery, 2008). In addition, research has also shown that construction activities can negatively impact soil properties, soil health and crop yields for up to a decade within the ROW depending on the type and severity of construction impacts (e.g equipment axle weight, use of excavation, intermixing of soil layer etc.) (Culley and DOW 1988; Shi et al., 2014).

The Department recommends ATC take several mitigation efforts related to topsoil mixing, soil compaction, drainage, de-watering, and erosion control as see in Section 5.5 "Recommended Mitigation Efforts" to mitigate impacts to drainage and soil health on agricultural lands and preserve prime farmland & soils.

## **5. AGRICULTURAL IMPACT MITIGATION**

ATC has indicated within their CPCN application and AIN, pending Project approval, they will coordinate and consult with each agricultural landowner to obtain detailed information about each agricultural operation including but not limited to: locations of farm infrastructure, animals and crops, current farm biological security practices, locations of drainage tiles, use of off-ROW access roads, landowner concerns and coordination of construction access routes. ATC will use agricultural landowner feedback to identify potential project impacts to each agricultural operation along the Project route and to the extent practicable, implement measures to mitigate impacts (DATCP, 2021a; ATC, 2021a).

The Department recommends that landowners whom are concerned about potential impacts to their agricultural land should keep records of the conditions of the ROW before, during, and after construction. Records could include keeping crop yield records, beginning once the ROW is known, and photographs taken every season. These measures can help a landowner negotiate for compensation, should damages caused by Project occur.

### **5.1. Independent Environmental Monitor (IEM)**

For large-scale utility projects, the requirement for project initiators (i.e. utilities) to hire an IEM has become a standard part of a PSC approval order. When hired, an IEM works on behalf of the PSC, WisDNR, the Department or other state regulatory agency as opposed to the utility. IEMs monitor project construction activities and report on a wide range of environmental issues such as construction impacts to wetlands, waterways, protected species, archaeological sites, state and federal properties, and erosion control. The IEM is also responsible for reporting incidents and has the power to stop project work if construction activities would violate permits, approvals, PSC order conditions, or agreement with a state regulatory agency.

Given the Project 1) proposes a length ranging from 6.9 – 7.8 miles, 2) contains a brief transmission line construction schedule (May – December 2022) that avoids the winter snow melt period and 3) has the potential to co-locate up to 42% of the Project ROW on existing ROW, the Department believes the potential magnitude of environmental impacts do not constitute the need for an IEM. Should the PSC decide to require an IEM for the Project, the IEM should be hired in consultation with and the approval of the PSC, DATCP, and WisDNR and all reports generated by the IEM should be shared with the PSC, DATCP, and WisDNR.

### **5.2. Independent Agricultural Monitor (IAM)**

When a project affects a significant amount of agricultural land an IAM may also need to be hired. IAMs monitor project construction activities and report on a wide range of agricultural issues including but not limited to construction impacts to soil health, soil erosion, crop damage,

agricultural operations, irrigation and impacts to surface and subsurface drainage. Similar to and IEM, an IAM works on behalf of the PSC, WisDNR, the Department or other state regulatory agency as opposed to the utility. IAMs should also verify the project initiator is complying with any agricultural best management practices and agricultural conditions in the PSC order and any environmental relevant construction documents approved by the PSC. While the duties of an IAM and IEM may sound similar, the IAM specializes in agricultural impacts and the IAM does not hold the power to stop the project.

The proposed Project offers two route alternatives with comparable amounts of potential agricultural impacts. Agricultural impacts from the Project may include but are not limited to crop damage, loss of access, soil compaction, mixing of topsoil, soil erosion, impacts to surface and subsurface drainage, impacts to irrigation systems and stray voltage. For assistance mitigating these potential agricultural impacts and working with agricultural landowners during the negotiations, construction and restoration phases of the Project, ATC plans to hire an experienced Agricultural Specialist. Given the circumstances of the Project, which are outlined in the IEM Section above, the Department believes the magnitude of agricultural impacts do not constitute the need for an IAM. Absent an IAM, the Agricultural Specialist hired by ATC will have the ability to assist impacted agricultural landowners and help mitigate the potential agricultural impacts from the Project.

Should the PSC require an IAM for the Project, the Department recommends the IAM complete the Department's standard Agricultural Monitoring Form for Transmission Line Projects (ARM-LWR-543) seen in Appendix F or equivalent. For the Department to maintain timely review of Project activities occurring on agricultural lands, the IAM should document daily observations of construction activities on agricultural land only. The IAM should send the Department an updated form weekly.

### **5.3. Agricultural Mitigation Plan**

According to the AIN submitted to the Department (DATCP, 2021a) and the CPCN application submitted to the PSC [REF#: 414784](#) (ATC, 2021a), ATC will not have an agricultural mitigation plan. In place of an agricultural mitigation plan, ATC described their standard practices to mitigate Project impacts to agricultural operations.

ATC plans to minimize Project impacts to agricultural lands through careful consideration of agricultural impacts during the routing & siting process and by implementing construction practices aimed at preserving top soil, reduce soil mixing, preventing erosion, and minimizing soil compaction (DATCP, 2021a; ATC, 2021a). Such stated construction practices include:

- Siting construction access routes to mitigate agricultural impacts.
- Placement of timber matting for vehicle/equipment access and work pads to distribute equipment loads over a larger surface area and minimize compaction of soils.

- Segregation of top soil within agricultural lands during excavation activities to preserve top soil.
- Coordinating with landowners during the design process to avoid, to the extent practicable, the siting of a transmission line tower or project structure on or near drain tiles.
- Restoring agricultural lands to pre-existing conditions through soil de-compaction, repair of drain tile if necessary, and appropriate compensation for any loss in productivity.
- Hiring an Agricultural Specialist to work with agricultural landowners through the different project phases: negotiations, construction and restoration.

Prior to construction, ATC also proposes to consult with each agricultural landowner to understand their farm specific agricultural operation, including but not limited to: locations of farm infrastructure, animals and crops, current farm biological security practices, locations of drainage tiles, use of off-ROW access roads, landowner concerns and coordination of construction access routes. ATC plans to incorporate agricultural landowner feedback to identify potential project impacts to each agricultural operation along the Project route and to the extent practicable, implement measures to mitigate the impacts.

To mitigate the impacts of stray voltage, ATC stated (Stratton, K., personal communication, October 20, 2021) to the Department that ATC works through the local distribution company to perform Neutral to Earth Voltage (NEV) testing. For the Project, ATC reported that Alliant Energy is the local distribution company and they follow pre & post NEV testing in accordance with the PSC Phase II Stray Voltage Testing Protocol. ATC reported within the CPCN (ATC, 2021a) that five confined animal dairy operations are located within ½ mile of the proposed alternate route that meet transmission/distribution collocation criteria for pre- and post- construction NEV testing. ATC also stated there four confined animal dairy operations located within ½ mile of the preferred route, but they did not meet transmission/distribution collocation criteria for pre- and post-construction NEV testing. To ensure agricultural landowners along the route the PSC selects are aware of their ability to request pre- and post- NEV testing, at no cost, the Department recommends that ATC inform each landowner with livestock facilities within ½-mile of the selected Project ROW of their ability to request Phase II Stray Voltage Testing from their local utility (Alliant Energy), ATC or the PSC. Should the PSC select the proposed alternative project route, the Department recommends that ATC inform the five pre-identified confined animal dairy operations that it's recommended they conduct pre- and post-construction NEV testing.

#### **5.4. Cleanup and Restoration**

In accordance with [Wis. Stat. § 182.017\(7\)\(c\)](#), following the completion of construction activities, ATC will restore the area to preconstruction conditions. In general, cleanup and restoration activities include the removal of construction mats, temporary clear span bridges, and any other



material or debris (including stones and rocks) from the ROW. Stockpiled topsoils and subsoils removed during construction are returned, in the proper order, and graded to match the existing topography and slopes. All ruts and depressions are restored and new topsoil may be brought in where topsoil has been lost or seriously mixed with subsoils. Agricultural soils are also monitored for compaction and when required undergo decompaction efforts to return the soil structure to its original condition. In areas where crops are not present--such as roadsides, pastures, old fields or upland woods--native seed mixes (or other appropriate seed mixes approved by the landowner) may be sown.

Under Wis. Stat. § 182.017(7)(c), if drainage tiles, fencing or other agricultural features are damaged during construction, ATC is responsible to repair and/or replace the damage feature. ATC is also responsible to pay for any crop damages caused by construction or maintenance of the transmission line. Within the AIN to the Department (DATCP, 2021a), ATC stated they will work with agricultural landowners to compensate them for crop damages, compaction, and potential future crop loss as a result of the Project in the following manner. Yield losses would be identified and agreed to in a Damage Report supplied by the landowner once construction commences. ATC would use the USDA Custom Rate Guide as the reference to set crop damage payments, while the National Agricultural Statistics Service website, which gives average yield by crop by county, would be referenced to confirm crop yields. Compensation for soil compaction claims will depend on if the agricultural operator decompacts the soil or if an ATC contractor conducts soil decompaction. Should guidance be required to settle an agricultural damage claim, ATC plans to utilize the subcontracted Agricultural Specialist during the claim process (DATCP, 2021a).

The Department recommends that ATC continue to monitor the ROW for soil erosion and maintain erosion control practices until there is sufficient vegetative growth in the ROW to mitigate soil erosion. Only after restoration activities are complete and vegetation has re-established within the ROW, should temporary restoration erosion control devices, not designed to be left in place, be removed.

## **5.5. Recommended Mitigation Efforts**

### ***5.5.1. Topsoil Mixing***

Agricultural topsoil is an invaluable resource that should be preserved. Excavation activities required to create the structural foundations for electric transmission line poles have the potential to mix highly productive topsoil with underlying less productive and potentially rocky subsoils. Deep rutting also has the potential to intermix topsoil. If intermixing of topsoil occurs, the resulting soils are generally known to be less productive and in-turn reduce the agricultural productivity of the impacted area. When excavation is needed, ATC is required by [Wis. Stat. § 182.017\(7\)\(c\)](#) to segregate and stockpile topsoil from subsoil.

The Department recommends that ATC take the following steps to prevent the mixing of topsoil with subsoil layers within the Project ROW:

- 1) Do not spread mixed soils or segregated subsoils over cropland, pastures or other agricultural fields.
- 2) Prevent and monitor for erosion to keep topsoil segregated and within the ROW.
- 3) Avoid working in areas with recently saturated soils.
- 4) If rutting occurs, allow sufficient time for the soil to dry before repairing the ruts.
- 5) If topsoil mixing occurs, remove the intermixed soil and replace with new topsoil.

### ***5.5.2. Soil Compaction***

Equipment used to construct electric transmission lines has the potential to compact soil and reduce soil productivity on the farmland traversed during construction. Soil compaction is widely known to have a range a potential negative impacts to the productivity of soil, including reduced crop productivity, reduced crop uptake of water and nutrients, restriction of plant rooting depth, decreased water infiltration and increased surface runoff.

Several factors influence whether soil becomes compacted. An important influence is soil moisture: the wetter the soil, the more likely it is to be compacted from traffic. The potential for compaction also depends on the soil texture. Coarser textured soils, like sand or sandy loam, are less likely to become compacted than are clay or silty clay loams. Finally, the axle weight of the construction equipment affects compaction. UW-Extension report A3367 states that heavy equipment with axle loads that exceed 10 tons increase the risk of soil compaction into subsoil layers that cannot be removed by conventional tillage (Wolkowski and Lowery, 2008). The expected compaction depth increases as the axle load and soil moisture content increases.

The Department recommends taking the following steps to prevent soil compaction and rutting wherever possible. Measures to prevent soil compaction within the Project ROW include:

- 1) Using low-ground pressure and/or wide tracked equipment to reduce axel weight applied to soils.
- 2) Using construction matting in wet areas, areas prone to rutting, or wetlands to spread out ground pressure.
- 3) When possible, conducting construction work during winter months when the ground is frozen.
- 4) Avoiding work in areas with recently saturated soils.
- 5) If rutting occurs, allowing sufficient time for the soil to dry before repairing the ruts.

After construction is complete, the ROW will be compacted to some degree. The Department recommends measuring for soil compaction post-construction within the Project ROW and outside of the Project ROW with a penetrometer throughout the soil horizon and comparing the measurements. If soil measurements within the Project ROW are comparatively higher, this is an indication that compaction has occurred. In areas where soil compaction occurred, the Department recommends ATC take steps to decompact the soils by conducting a sufficient amount of deep tillage (V-ripper, chisel plow, para plow or other depth appropriate tillage implement) within the ROW to help restore the soil structure to pre-construction productivity. Following decompaction, the soil should be measured again for signs of compaction to ensure proper decompaction has occurred throughout the topsoil and subsoil profile. The Department also recommends ATC monitor soil moisture conditions post-construction throughout the Project ROW for signs of standing water. Areas with standing water may also have experienced soil compaction and should be measure for compaction.

### ***5.5.3. Drainage***

Proper field drainage is vital to a successful farm operation. Construction of an electric transmission line can disrupt improvements such as drainage tiles, grassed waterways, and drainage ditches, which regulate the flow of water on farm fields. If drainage is impaired, water can settle in fields and cause substantial damage, such as killing crops and other vegetation, concentrating mineral salts, flooding farm buildings, or causing hoof rot and other diseases that affect livestock. Construction-caused soil compaction or damaged drain tiles can lead to ponded water where none existed prior to construction. If drain tiles are damaged, ATC is required by [Wis. Stat. § 182.017\(7\)\(c\)](#) to repair or replace the damage drain tile.

To help mitigate the potential for drainage impacts, the Department recommends the following:

- 1) Agricultural landowners should inform ATC about the existence and location of drainage systems or planned drainage systems that could be affected by the Project.
- 2) Agricultural landowners should document field moisture conditions and the historic presence/absence of ponded water prior to the start of construction for post-construction comparisons.
- 3) ATC should consider using the techniques outlined in Section 5.5.2 "Soil Compaction" when crossing a known drain tile.
- 4) Where construction activities have created new wet areas, ATC should work with the landowner to determine the best means to return the agricultural land to pre-construction function.

#### ***5.5.4. De-watering***

During excavation/auguring of the structure foundation for a transmission line pole, dewatering may be necessary. Improper dewatering can result in soil erosion, sedimentation and deposition of gravel, sand, or silt onto adjacent agricultural lands, and the inundation of crops. The discharge of these construction waters must be in compliance with current drainage laws, local ordinances, WisDNR permit conditions, and the provisions of the Clean Water Act. ATC is required by [Wis. Stat. § 182.017\(7\)\(c\)](#) to compensate the landowner for any damage to agricultural fields caused by construction de-watering activities

The Department recommends the following to mitigate the impacts of construction water discharge on agricultural lands:

- 1) ATC should identify prior to construction 1) excavation sites with low areas and/or hydric soils where de-watering is likely and 2) suitable upland areas for discharge.
- 2) Discharge locations should be well-vegetated areas with topography that will prevent the water from returning to the ROW, resist soil erosion, and allow for infiltration and settling of gravel and other unwanted sediments prior to entering a field, pasture, or waterbody.
- 3) ATC should consider using pre-filter bags or other filter devices, prior to discharge, in order to capture sediments, gravel and rocks.
- 4) Cropland, pasturelands and other agricultural areas selected for discharge should not be inundated for more than 24 hours, as longer durations could result in crop damage.
- 5) ATC should not directly discharge or allow construction waters from non-organic farms to enter an organic farming operation.

#### ***5.5.5. Irrigation***

Electric transmission line construction activities and the placement of transmission line poles can interfere with the operation of linear or center pivot irrigation systems used to irrigate crops. Soil compaction from construction equipment may also impact or damage underground piping that supplies irrigation systems. Any interruption to irrigation systems cause by the Project can deprive crops from needed water and nutrients resulting in decrease crop yields.

The Department recommends the following to mitigate the impacts to irrigation systems:

- 1) Prior to construction, agricultural operations that use irrigation within or adjacent to the Project ROW should inform ATC of their irrigation system, how the Project may impact the system, irrigation schedules frequency of irrigation and weather conditions that may change the irrigation schedule.
- 2) ATC should consider using the techniques outlined in Section 5.5.2 "Soil Compaction" when crossing a known irrigation pipeline.

- 3) If the Project plans to disrupt an irrigation system, ATC should notify the landowner beforehand and establish a mutually acceptable amount of time that the system will be taken out-of-service.
- 4) If any part of an irrigation system is damaged as a result of construction activities, ATC should pay for and repaired reported damages as soon as possible.
- 5) If an irrigation system needs to be reconfigured as a result of the Project, ATC should work with the irrigation operators to reconfigure the irrigation equipment where necessary and to compensate them for any portion of cropland where the irrigation system no longer operates.

#### ***5.5.6. Erosion and Conservation Practices***

Electric transmission line construction activities and the placement of transmission line poles can destabilize existing erosion control practices such as diversion terraces, grassed or lined waterways, outlet ditches, water and sediment control basins, vegetated filter strips, etc. The destabilization of these erosion control practices have the potential to cause soil erosion within the ROW, but also from upland fields. During wet conditions the risk of soil erosion is increased, as exposed soils, especially areas with increased slope, may more easily erode and move downslope. Wind erosion may also be of concern if existing windbreaks are removed from the ROW, especially when soils are dry. If left unchecked, significant erosion can have an adverse effect on the long-term productivity of agricultural lands. ATC is required by [Wis. Stat. § 182.017\(7\)\(c\)](#) to restore existing erosion control practices such as diversion terraces, grassed or lined waterways, outlet ditches, water and sediment control basins, vegetated filter strips, etc. that are damaged by construction activities to pre-construction condition and function.

The Department recommends the following to mitigate soil erosion within the Project ROW:

- 1) Once construction is complete, pending soil decompaction, impacted agricultural lands within the ROW should be returned to cropland or seeded with the appropriate seed mix.
- 2) ATC should inspect all temporary erosion control structures on a daily basis throughout construction and restoration phases and undertake erosion control structure maintenance as required to prevent soil erosion within the ROW.
- 3) ATC should avoid impacting any existing permanent erosion control structure (e.g diversion terraces, grassed or lined waterways, outlet ditches, water and sediment control basins, vegetated filter strips, etc.) that's intended to prevent soil erosion from an upland agricultural area.
- 4) Should ATC disrupt an existing permanent erosion control structure, a temporary structure should be installed until the permanent erosion control is restored.

### ***5.5.7. Temporary Access Roads***

ATC has proposed to install temporary access roads as part of the Project, when an alternative access road does not exist, to allow personnel and construction equipment to access the Project corridor. When a temporary access road is constructed there is a range of potential negative effects to agricultural lands including the mixing of topsoil with subsoil & rocks, soil compaction, soil erosion, and interference with existing drainage & irrigation. New temporary access roads also have the potential to impact agricultural operations by severing cropland or pastures, limiting field access or limiting access to agricultural infrastructure & buildings. Any of these impacts can result in lost agricultural productivity whether from lost soil productivity, crop losses or the direct loss of agricultural revenue when access to agricultural infrastructure is limited. When the Project has completed, ATC is required by [Wis. Stat. § 182.017\(7\)\(c\)](#) to restore the land to its original condition, clear all debris and remove all stones and rocks associated with the access roads. However, if desired by the landowner and in consultation with ATC, temporary access roads may be left in place after construction.

The Department recommends the following to mitigate the impacts of access roads when they cross agricultural lands within the Project ROW:

- 1) ATC should consult with agricultural landowners before siting any temporary access roads.
- 2) ATC should strip and stockpile the topsoil for later reuse during restoration.
- 3) After top soil removal, ATC should install a geotextile construction fabric along the roadbed prior to the placement of gravel/rock roadway.
- 4) Access roads should also be designed to allow proper drainage and minimize soil erosion.
- 5) ATC should consider using the techniques outlined in Section 5.5.3 "Drainage" when siting an access road over drain tiles.

### ***5.5.8. Managed Forest Law, Trees and other Woody Vegetation***

If approved, the Project will impact a total of approximately 0.9 acres regardless of route alternative. An explanation of the state's MFL program and what that means for the woodlands enrolled within the program is provided in Section 3.3.4 "Managed Forest Law". Additional acres of unmanaged forest lands will also be impacted, but are beyond the scope of this AIS as unmanaged forest lands are not defined as an agricultural use according to [Wis. Stat. § 91.01\(2\)](#). Both managed and unmanaged woodlands can provide financial benefit to the landowner either directly through the sale of managed forest for timber, the sale of firewood, or the harvest of tree sap for sale. The removal of any trees from a property may also decrease the market value of the property.

Prior to the start of construction, ATC will remove all woody vegetation, trees and brush not already removed by the landowner from the full width of the Project ROW. Vegetation will be cut at

or slightly above the ground surface using mechanized equipment or by hand. Tree stumps are generally left in place, except in areas where stump removal is necessary to facilitate the movement of construction vehicles, or required by the landowner. Once removed, trees are not permitted to regrow or be replanted in the Project ROW after construction is complete or while maintained by ATC. According to [Wis. Stat. § 182.017\(7\)\(e\)](#) affected landowners will maintain ownership of all trees removed by ATC during construction. ATC is also required to provide the landowner a reasonable amount of time, prior to construction, to harvest the trees on their own. Post construction and restoration, the deforested land could be used for farming so long as the intended crop or agricultural equipment does not interfere with transmission line facilities. ATC will manage and maintain deforested areas, including vegetation removal and management within the deforested ROW for those areas that landowners do not wish to crop or maintain.

The Department recommends the following to mitigate the impacts of tree and woody material removal from the Project ROW:

- 1) The PSC should select a route that avoids the fragmentation of major blocks of forest and prioritize the preservation of windbreaks, MFL lands and forestlands used for specialty forest products.
- 2) ATC should adjust the placement of transmission line poles to minimize the need for tree removal and prioritize the preservation of trees used for windbreaks.
- 3) ATC should compensate agricultural landowners for the construction of any additional structures that serve in the place of the harvested trees.
- 4) ATC should hire an appraiser who has experience and expertise in valuing trees.
- 5) Landowners who wish to obtain their own appraisal should also hire an appraiser who has experience and expertise in valuing trees.
- 6) Landowners who wish to farm within the deforested area should discuss tree stump removal with ATC during the easement negotiation process.

#### ***5.5.9. Fencing***

The construction process may require fences that cross the Project ROW to be severed. According to Wis. Stat. § 182.017(7)(c), if ATC is required to cut or sever a fence they are required to install a temporary gate and repair all damages to fencing. Changes to existing fence lines can interfere with grazing activities, particularly for rotational grazing operations that depend on precise, scheduled grazing in particular areas. To mitigate the impacts to fencing, the Department recommends the following:

- 1) Prior to construction, ATC should consult with agricultural landowners with grazing operations in and adjacent to the Project ROW and modify construction activities and timing to mitigate impacts to livestock.
- 2) ATC and agricultural landowners should agree on the appropriate measures to prevent livestock from entering the Project ROW.
- 3) ATC should develop a plan for livestock to access pastures adjacent to the Project ROW or otherwise compensate the landowner for the costs related to restricted grazing.

#### ***5.5.10. Weed Control***

The Project may introduce noxious weeds or other invasive plants species into the Project ROW that compete with agricultural crops. Noxious weeds may also spread from parcel to parcel by construction equipment and project activities. Once weeds establish, they can interfere with agricultural harvesting equipment, attract unwanted insects, and require physical removal or chemical applications to remove.

Post construction and restoration, agricultural operations may resume normal agricultural cropping activities within the ROW so long as the crop or agricultural equipment do not interfere with transmission line facilities. After construction and during the operation of the line, ATC is required by [Wis. Stat. § 182.017\(7\)\(d\)](#) to control weeds and brush around the transmission line facilities. However, ATC shall not use herbicide for weed and brush control without the express written consent of the landowner ([Wis. Stat. § 182.017\(7\)\(d\)](#)).

The Department recommends the following to control for and manage the spread of noxious weeds within the project ROW:

- 1) Agricultural landowners should state in writing whether they do or do not give ATC their consent for herbicide to be applied within the ROW they own.
- 2) ATC should clean construction equipment and materials prior to entering an area of certification.
- 3) ATC should clean all roadways (private, county, state etc.) of construction debris, dirt and rocks.
- 4) ATC should use tracking pads at frequently used access points.
- 5) Agricultural landowners and beekeepers should consider using the free online [DriftWatch](#)<sup>™</sup> and [BeeCheck](#)<sup>™</sup> registries, operated by [FieldWatch](#)<sup>™</sup> to communicate areas containing specialty crops or beehives with pesticide applicators, in order to minimize the risk of accidental exposure. For more information on DriftWatch, please visit the [DATCP DriftWatch website](#) at the provided link or at <https://wi.driftwatch.org/>.



- 6) ATC and its contractors that are applying herbicide or pesticides should utilize the Department's Driftwatch™ [online mapping tool](#) to locate agricultural lands and operations that are susceptible to herbicide or pesticides. If the online mapping tool locates an agricultural operation on or near areas that will receive herbicide or pesticide applications, ATC should contact the operation to discuss the appropriate methods required to minimize the risk of accidental exposure.

#### ***5.5.11. Aerial Application of Seeds and Sprays***

The location of an electric transmission line on cropland can restrict the aerial application of seeds and chemicals and can increase the danger of making aerial applications. In turn, agricultural pilots have to maneuver to avoid transmission lines, which may result in uneven, imprecise or missed aerial applications. When aerial applications are restricted or prevented agricultural produces may experience 1) increased weed growth and pest infestations that reduce crop yields, 2) increased cost and labor from land based application of seeds and chemical in non-applied areas.

To mitigate the potential for impacts to aerial application, the Department recommends the following:

- 1) Agricultural landowners inform ATC if they use aerial applications.
- 2) ATC and the impacted agricultural landowners work to determine the most effective techniques to minimize the impact to their aerial applications.
- 3) ATC install colored wire shielding near fields that utilize aerial applications.

#### ***5.5.12. Construction Debris***

After construction is complete, there may be construction debris remaining on the field. If large pieces of debris or rocks are left in the field, agricultural machinery may be damaged when the landowner first works the land. ATC is required by [Wis. Stat. § 182.017\(7\)\(c\)](#) to clear all debris and remove all stones and rocks resulting from construction activity upon completion of construction. To that end, ATC shall also clear the ROW of signage, construction mat debris, litter, and spoil piles etc.

To mitigate the potential impact of construction debris, the Department recommends the following:

- 1) Should a landowner find construction debris remaining in the field after ATC has cleared the field, the landowner should contact the ATC IEM or IAM to report the debris prior to operating agricultural equipment in the field.
- 2) Should ATC remove an existing power line pole from within or immediately adjacent to cropland, ATC should remove the old structure at a minimum of four feet below the ground surface.

- 3) Should ATC create a hole within croplands during the removal of any part of the existing transmission structure, they should fill the hole with clean imported topsoil.

#### ***5.5.13. Crop Rotation and Dairy Operations***

The construction of an electric transmission line may disrupt a planned crop or crop rotation. Impacts to alfalfa fields and planned alfalfa seeding are especially disruptive to dairy operations as they need to maintain a proper supply of alfalfa to feed dairy cows. Any delays, yield reductions or damages to an alfalfa crop may require the dairy operation to buy haylage or hay, obtain more corn silage, and/or provide protein supplements such as soybean oil meal to make up for the lost alfalfa. With advanced notice of the Project's construction schedule, a dairy operator would be better able to adjust forage requirements and plan for any increased associated costs. If the Project is approved, the Department recommends that ATC provide any impacted dairy operations with advanced notice of the construction schedule across their operations and compensate the landowner for any increased costs associated with construction impacts to forage requirements.

#### ***5.5.14. Organic Farms & Other Areas with Certifications***

Construction and ongoing maintenance activities for the Project may jeopardize a farm's organic certification or other certifications such as *pesticide-free* (certified areas) if a prohibited chemical is used on their certified land, drifts from a neighboring field or enters their land on construction machinery, construction matting or improper de-watering. ATC and their contractors must use caution and care where the Project ROW borders or crosses an area with certification. Wis. Admin. Code § ATCP 29.50(2) states that no pesticides (includes herbicides) may be used in a manner that results in pesticide overspray or significant pesticide drift. In addition, any oil or fuel spill on these farms could prevent or remove a farm's certification.

To mitigate impacts to areas with certifications, the Department recommends the following:

- 1) ATC should not apply pesticides to organic farms or other certified farms that preclude the use of these chemicals without the expressed written consent of the landowner.
- 2) ATC shall not apply a pesticide in a manner that results in overspray or significant drift.
- 3) ATC should clean construction equipment and materials prior to entering an area of certification.
- 4) ATC should post signs at entry points to an area of certification denoting its existence and reminding personnel of appropriate mitigation steps to take.
- 5) Agricultural landowners with an area of certification should contact ATC and report the range and type of substances that are and are not permitted according to their certifications.

- 6) Agricultural landowners and beekeepers should consider using the free online [DriftWatch™](#) and [BeeCheck™](#) registries, operated by [FieldWatch™](#) to communicate areas containing specialty crops or beehives with pesticide applicators, in order to minimize the risk of accidental exposure. For more information on DriftWatch, please visit the [WDATCP DriftWatch website](#) at the provided link or at <https://wi.driftwatch.org/>.
- 7) ATC and its contractors that are applying herbicide or pesticides should utilize the Department's Driftwatch™ [online mapping tool](#) to locate agricultural lands and operations that are susceptible to herbicide or pesticides. If the online mapping tool locates an agricultural operation on or near areas that will receive herbicide or pesticide applications, ATC should contact the operation to discuss the appropriate methods required to minimize the risk of accidental exposure.
- 8) ATC should generate and distribute a list of organic farms or other certified farms and the prohibited chemicals to their construction staff and contractors.
- 9) Prior to construction, ATC and the farms with areas of certification should agree to the appropriate methods to avoid unintentional contacts or applications of prohibited chemicals from entering their farms.
- 10) ATC may wish to underlay heavily used areas of the ROW with geotextile fabric in order to limit the potential for prohibited substances from contaminating areas with certification.
- 11) ATC should consult with farms with areas of certification prior to the application of seeds for revegetation efforts on their property.

#### ***5.5.15. Biosecurity***

Farm biosecurity is the implementation of measures designed to protect a farm operation from the entry and spread of diseases and pests. Construction activities can spread weeds, diseases, chemicals and genetically modified organisms (GMO's) that impact an agricultural operation. Certified organic farms and farms with other certifications such as pesticide-free are susceptible to the widest range of biosecurity impacts and may suffer greater negative impacts if their agricultural operation is exposed to a biosecurity threat. For more information on basic biosecurity protocols, please visit the Department's [Basic Biosecurity](#) website at the provided link or at [https://datcp.wi.gov/Pages/Programs\\_Services/BasicBiosecurity.aspx](https://datcp.wi.gov/Pages/Programs_Services/BasicBiosecurity.aspx).

The Department recommends the following to mitigate biosecurity risks within the Project ROW:

- 1) ATC and agricultural operations within the Project ROW should develop a biosecurity plan that contains a set of protocols including but not limited to: Cleaning construction equipment between parcels; handling manure within the ROW; identifying responsible parties that can move livestock and manure within the ROW; and establishing communication channels to report construction and farm activities within the ROW.

- 2) ATC and their contractors should avoid contact with livestock and manure throughout the Project.
- 3) If livestock need to be moved, ATC should work with the livestock owner to move the livestock.

#### ***5.5.16. Stray Voltage***

Electric distribution systems are grounded to the earth to ensure safety and reliability. At the site of the grounding, electrical current enters the earth where voltage can be detected. This is generally known as Neutral to Earth Voltage (NEV). When a person, animal or object is near an NEV, the voltage may pass to them resulting in electrical contact (i.e. shock); this is generally known as stray voltage. Stray voltage often goes unnoticed by humans, but stray voltage from NEV may affect animals on farms. Animals may encounter stray voltage any time the animal makes contact with an electrified point such as a fencing, feeder, the earth or stalls. Animals affected by stray voltage may show changes in behavior or milk production.

The PSC administers Wisconsin's Stray Voltage program under [Wis. Stat. § 196.857](#) in cooperation with the Department. The PSC established the Phase II Stray Voltage Testing Protocol to fulfill its duty to create a standard stray voltage NEV testing protocol as required by Wis. Stat. § 196.857(b). Under the Phase II testing protocol, a utility is mandated to take corrective action to resolve any electrical contact at or above 0.5 volts (Reines and Cook, 1999). The Stray Voltage program is able to review voltage testing data generated by the utility and the conclusions the utility has reached. For more information on the PSC Stray Voltage program, impacts to agricultural operations and mitigation steps, visit <https://psc.wi.gov/Pages/Programs/StrayVoltageHomePage.aspx>.

Should additional concerns for the health of a herd arise from stray voltage testing, the Department's [Herd-Based Diagnostic Program](#) may be able to assist. The program provides a licensed veterinarian, free of charge, to help producers investigate concerns with milk production, milk quality, herd health, and more. For more information on the Herd-Based Diagnostic Program visit <https://datcp.wi.gov/Pages/Herd-basedDiagnostics.aspx>.

The Department recommends the following to mitigate the impact of stray voltage within the project ROW:

- 1) Confined animal feeding operations or any operation with livestock facilities within ½-mile of the proposed power line should request Phase II Stray Voltage Testing pre- and post-transmission line energization testing from their utility provider, ATC, or the PSC.

- 2) ATC should inform each landowner with livestock facilities within ½-mile of the Project ROW of their ability to request Phase II Stray Voltage Testing from their local utility, ATC or the PSC. ATC should be responsible for costs associated with Phase II Stray Voltage Testing within ½-mile of the Project corridor.
- 3) As required by PSC guidance set forth under [Wis. Stat. § 196.857](#), ATC shall take action to resolve electrical contacts at livestock feeding operations detected at or above 0.5 volts that are a result of the Project.

#### ***5.5.17. Construction Noise and Dust***

During each phase of the Project, noise and dust is likely to be generated. Landowners near the Project ROW may experience noises and dust associated with construction techniques, movement of heavy equipment, and helicopters. This noise and dust may cause dairy, beef cattle and other grazing livestock to stampede, break through fences, and escape from the farm property. Fur animals, poultry and other confined livestock may also be impacted by these sounds.

To mitigate impacts of noise and dust, the Department recommends the following:

- 1) Livestock owners & operators within the Project ROW whom are concerned about the noise potential for the Project should inform ATC or their representatives during the easement negotiation process.
- 2) Livestock owners & operators near the Project ROW who are concerned about the noise potential for the Project should inform ATC of their concerns prior to the project construction.
- 3) ATC should identify agricultural livestock operations with sensitive animals within and adjacent to the Project ROW and provide them appropriate advance warning of construction activities, including the use of helicopters, so they may take steps to safe guard their animals.
- 4) ATC should avoid loud and dusty construction activities in the early morning (before 7am) or evening (after 6pm).
- 5) ATC should clean all roadways (private, county, state etc.) of construction debris, dirt and rocks.
- 6) ATC should use tracking pads at frequently used access points.
- 7) When construction activities have the potential to generate substantial amounts of dust that could impact livestock or an agricultural operation, ATC should apply water over the dust generating areas to reduce dust output.

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