

# AGRICULTURAL IMPACT STATEMENT



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**DATCP  
#4466**

## Wisconsin Reliability Natural Gas Pipeline Project

Lincoln, Manitowoc, Marathon, Oconto, Outagamie,  
Portage, Sheboygan, Washington, Waukesha,  
Waupaca, and Winnebago Counties, Wisconsin



WISCONSIN DEPARTMENT OF AGRICULTURE,  
TRADE AND CONSUMER PROTECTION  
*PUBLISHED JUNE 30, 2023*

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**WISCONSIN DEPARTMENT OF AGRICULTURE,  
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# LETTER TO THE READER

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Dear Reader,

Through the Agricultural Impact Statement ("AIS") program, agricultural operations have the opportunity to provide feedback, document impacts, and suggest alternative solutions when their agricultural lands are affected by an entity with the potential powers of eminent domain. The AIS program also provides affected agricultural landowners time to gather information to make well-informed decisions before a project begins. Lastly, the AIS program makes suggestions and recommendations to project initiators to promote project alternatives and management practices that would reduce potential impacts to agricultural lands and operations.

The AIS program also 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 operations 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
AI	Agricultural Inspector
AIN	Agricultural Impact Notification
AIS	Agricultural Impact Statement
ATWS	Additional Temporary Workspace
BMP	Best Management Practice
CREP	Conservation Reserve and Enhancement Program
CRP	Conservation Reserve Program
DATCP	Department of Agriculture, Trade and Consumer Protection (the "Department")
EI	Environmental Inspector
FERC	Federal Energy Regulatory Commission
FP	Farmland Preservation Program
HDD	Horizontal Directional Drilling
MFL	Managed Forest Law
PACE	Purchase of Agricultural Conservation Easement
ROW	Right-of-Way
USDA	U.S. Department of Agriculture
WisDNR	Wisconsin Department of Natural Resources

# TERMS

<i>Agricultural Operation</i>	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.
<i>Easement</i>	Easements are contracts – bound to the property – which allow another party the right to use or enter a property without owning the property. Easements may be temporary (i.e. time limited) or permanent.
<i>Horizontal Directional Drilling</i>	A technique involving the drilling of an underground pilot hole to tunnel for an extended linear distance to avoid surface disturbance to a resource like a waterbody, wetland, or infrastructure. The pilot hole is enlarged through successive ream borings with progressively larger bits. Finally, a pre-welded segment of pipe is pulled or pushed through the completed tunnel.
<i>Mitigation</i>	Avoiding, minimizing, rectifying (repairing), reducing, eliminating, compensating for, or monitoring environmental & agricultural impacts.
<i>Open Trench</i>	The excavation of a trench to install individual sections of a pipeline. After the pipeline is installed, the trench is backfilled with soil.
<i>Lift-and-Lay</i>	The process of excavating and removing an existing pipe, while collocating a new pipe in the same open trench.
<i>Prime Farmland</i>	Defined by the U.S. Department of Agriculture as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and that is available for these uses.
<i>Right-of-Way (ROW)</i>	The right to cross another’s property for transportation or transmission purposes, such as roads, powerlines, and pipelines.
<i>Severance</i>	Splitting an agricultural parcel into two or more smaller parcels
<i>Three-Lift Soil Handling</i>	A soil handling method requiring the excavation and stockpiling of 1) topsoil, 2) subsoil and 3) substratum in three separate piles. After excavation and construction is complete, the excavated soils are backfilled in the reverse order from which they were removed (i.e. last soil removed is the first soil backfilled).
<i>Topsoil</i>	The thin, top layer of soil where the majority of nutrients for plants is found.
<i>Uneconomic Remnant</i>	The property remaining after a partial taking of property, if the property remaining is of such size, shape, or condition as to be of little value or of substantially impaired economic viability.
<i>Wasteland</i>	Small or irregularly shaped areas within a remnant agricultural field that are not able to be cultivated. These areas reduce the amount of tillable acres within a remnant field, which may also impact the economic viability of the remnant field.

# SUMMARY OF AGRICULTURAL IMPACT STATEMENT

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The Wisconsin Department of Agriculture, Trade and Consumer Protection (“Department”) has prepared Agricultural Impact Statement (“AIS”) #4466 for an interstate natural gas pipeline expansion project proposed by the ANR Pipeline Company (“ANR”). ANR is a subsidiary of TC Energy. The proposed pipeline project (referred to as “Wisconsin Reliability Project” or “Project”) is located in Wisconsin and Illinois. In Wisconsin, the Project travels through central and southeastern portions of the state as shown in Figure 1. ANR has indicated the primary reason for the Project is to maintain reliable and safe natural gas transportation, while also expanding and upgrading pipeline & compression facilities to meet increasing market demand for natural gas (ANR, 2023a).

To construct the Wisconsin side of the Project, ANR proposes to replace a total of 37.3 miles of existing steel natural gas pipeline with a total of 40.0 miles of larger diameter steel pipeline. The proposed replacement would occur in two separate sections referred to as route segment PL-2 & PL-3 as seen in Figure 1. In Wisconsin, the proposed Project crosses through 11 counties and 24 municipalities, as detailed in Table 1, and commonly overlaps with or runs parallel to existing *easements* held by ANR. The proposed route also contains several deviations from existing *Right-of-ways* (“ROW”) where ANR plans to acquire new *easements*. As proposed, the Project will impact 138 agricultural landowners and approximately 527.1 acres of agricultural lands.

The Federal Energy Regulatory Commission (“FERC”) has authority over the Project. FERC must grant ANR a Certificate of Public Convenience and Necessity (“CPCN”) before ANR obtains the right to proceed with the Project. Through the issuance of a CPCN, FERC would select the project route and other project criteria ANR shall follow. To date, ANR has submitted a CPCN application for the Project to FERC under Docket ID: CP23-15-000 and is awaiting ruling from FERC. The Department will provide FERC with AIS #4466 as evidence to aid in determining the outcome of ANR’s CPCN application.

In accordance with [Wis. Stat. §32.035\(3\)](#), ANR has provided the Department with the necessary information and materials to conduct an AIS. The Department has also contacted agricultural landowners and operators impacted by the Project route. In accordance with [Wis. Stat. §32.035\(4\)\(b\)](#), the Department has reviewed and analyzed ANR materials and the comments from the affected agricultural landowners and operators to assess the agricultural impacts of the proposed project.

Through the AIS, the Department offers a set of recommendations – beginning on page 7 – and conclusions to ANR and the agricultural landowners and operators to help mitigate current and future impacts on agricultural lands and *agricultural operations* along the Project route. If ANR deviates from the selected route or sites, ANR 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.

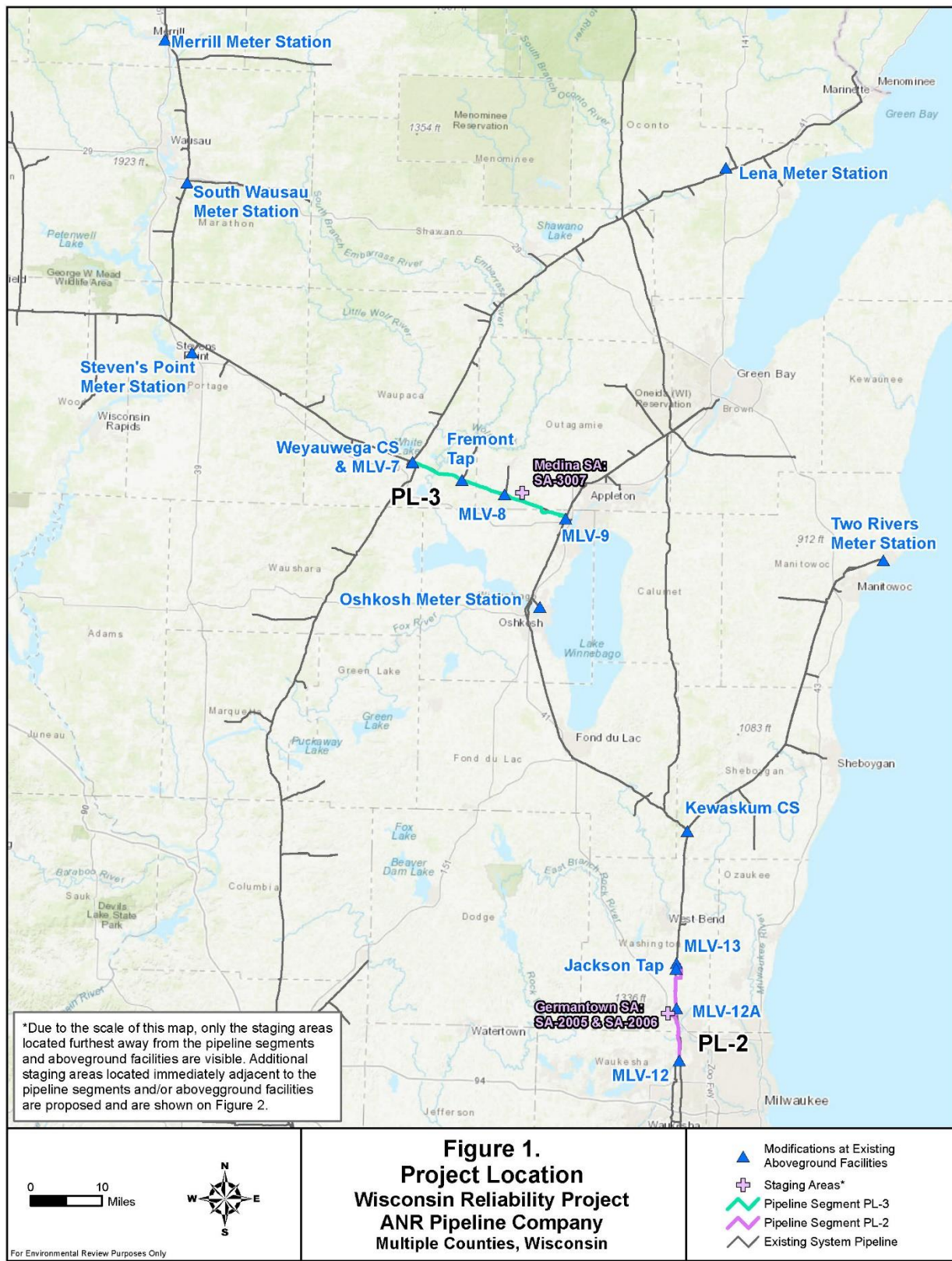


Figure 1: Location of the Wisconsin Reliability Project route segments PL-2 & PL-3, aboveground facilities, and staging areas across central and southeastern Wisconsin (ANR, 2023a).

# AGRICULTURAL IMPACT STATEMENT RECOMMENDATIONS

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The Department has reviewed and analyzed the materials provided by ANR and comments from the affected agricultural landowners and operators regarding the proposed Wisconsin Reliability Project. The Department has found ANR's agricultural *mitigation* plan, as shown in Appendix B, to conform to best management practices, *mitigation* practices, and policies sought by the Department to *mitigate* impacts from pipeline construction projects to agricultural landowners and operations. Should FERC approve the Project, the Department provides the following recommendations, in accordance with [Wis. Stat. §32.035\(4\)\(b\)](#) to FERC, ANR, and agricultural landowners and operators to help mitigate impacts on agricultural lands and *agricultural operations* resulting from the Project.

## Recommendations to the Federal Energy Regulatory Commission

- 1) Should the Commission approve the Project, the Commission may find it reasonable to consider implementing route variation PL-2-B as part of the final route. The Department evaluated route variations PL-2-A and PL-2-B as part of this analysis and found variant PL-2-B to be best suited to reduce overall impacts to the *agricultural operation* impacted by the variants. Should the Department's recommendation conflict with ANR's final proposed route, the Commission may also find it reasonable to re-evaluate both route variations.

## Recommendations to ANR Pipeline Company

ANR has reviewed these recommendations and did not object, but did offer several comments as shown in Appendix J. Through their response, ANR has documented its consideration to remove decommissioned sections of pipeline from the Bentle Trust property – recommendation three – and has declined to adopt that aspect of the recommendation (Appendix J). The Department's response to ANR's comments and actions taken to address ANR's feedback is available in Appendix J.

- 1) Where construction activities have altered existing drainage patterns or the natural stratification of soils resulting in new wet areas or decreased productivity, ANR should work with landowners to determine a means to return the agricultural land either in the ROW or affected adjoining lands to pre-construction function. New drainage tiles or ditching, decompaction, regrading, or additional fill may be required to correct problems that arise after construction is complete. Additional fill, if located in wetlands – including farmed wetlands – is subject to local, state and/or federal wetland permitting.
- 2) Should the Project result in the removal of agricultural lands from conservation *easements* and/or farmland preservation agreements from within the ROW, ANR should pay all fees incurred by the agricultural landowner resulting from the land's alteration or removal from the contract/agreement.



- 3) Should either the new or existing pipeline impede the function of Bentle Trust's drainage system, the Department recommends that ANR work with Bentle Trust to resolve historic or new drainage issues caused by ANR pipelines. Furthermore, ANR should consider removing decommissioned sections of pipeline that may hinder the function of drainage tiling systems on the Bentle Trust property.

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

- 1) Landowners should review ANR's agricultural *mitigation* plan as shown in Appendix B to learn about the methods and practices ANR will use to mitigate project impacts to or regarding: *topsoil*, soil compaction, drainage, drain tiles, dewatering, erosion, fencing, weed control, irrigation, compensation, feed supply & dairy operations, biosecurity, etc.
- 2) Landowners with conservation *easements* within the ROW should consult with the conservation program provider to determine if there any implications resulting from 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*, landowners should negotiate with ANR to recover any incurred costs.
- 3) Landowners should inform ANR about the existence and location of drainage systems or planned drainage systems that could be affected by the Project.
- 4) 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.
- 5) Livestock owners & operators within the Project ROW who are concerned about noise potential from the Project should inform ANR or their representatives during the *easement* negotiation process.
- 6) Prior to the start of construction, landowners should identify for ANR 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.
- 7) After construction is complete, landowners should monitor for drainage problems. If problems are observed that can be attributed to construction, the landowner and ANR should work together to develop a mutually agreeable solution.
- 8) *Agricultural operations* 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.

# AGRICULTURAL IMPACT STATEMENT

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## 1. INTRODUCTION

The Wisconsin Department of Agriculture, Trade and Consumer Protection (“Department”) has prepared Agricultural Impact Statement (“AIS”) #4466 in accordance with [Wis. Stat. §32.035](#) for a natural gas pipeline expansion project proposed by the ANR Pipeline Company (“ANR”). ANR is a subsidiary of TC Energy. The proposed pipeline project (referred to as “Wisconsin Reliability Project” or “Project”) is a subsection of an interstate pipeline project between Illinois and Wisconsin. In Wisconsin, the Project is located across multiple counties and municipalities as shown in Figure 1. Through the Project, ANR expects to increase natural gas service reliability and expand natural gas services to Midwestern U.S. consumers (ANR, 2023a).

### 1.1. Federal Authority

As an interstate natural gas pipeline project, the U.S. Federal Energy Regulatory Commission (“FERC”) holds regulatory decision authority over the Project. ANR must obtain permission from FERC, through the granting of a Certificate of Public Convenience and Necessity (“CPCN”), before ANR can construct the project. ANR submitted their application for a CPCN to FERC in November 2022. FERC assigned docket number CP23-15-000 to ANR’s application, which can be followed on FERC’s online *eLibrary* at <https://elibrary.ferc.gov/eLibrary/search>.

Through a pre-application filing process, FERC evaluated the scope of potential environmental impacts from the Project and determined to prepare an Environmental Assessment (“EA”) (Bose, 2023). The EA process allows FERC to analyze the need for the Project and the potential environmental and community impacts caused by it. When complete, FERC will publish the EA for the Project to the *elibrary* under docket number CP23-15-000. FERC will also receive testimony and hold hearings to further assess the impacts of this Project as part of the CPCN process. At the conclusion of the CPCN process, FERC will either approve ANR’s application as presented, approve the application with modifications, or deny the application to construct the proposed Wisconsin Reliability Project. Should FERC grant a CPCN, ANR still cannot construct the project until it receives all other Federal and State permits and approvals. As a state level regulator, the Department has participated with FERC throughout the EA process as a cooperating agency.

### 1.2. Department Authority

In Wisconsin, the Department prepares an AIS – according to [Wis. Stat. §32.035](#) – when a project involves the actual or potential exercise of eminent domain powers to acquire any interest in more than five acres of land from any *agricultural operation*. 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 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.

ANR provided the Department with an agricultural impact notification (“AIN”), that complies with Wis. Stat. §32.035(3), for the Wisconsin Reliability Project (ANR, 2023a). This AIN serves as the Department’s main reference document for the Project. Upon review of the AIN, the Department determined it would prepare this AIS for the Project. As an interstate project, the scope of this AIS is limited to *agricultural operations* impacted only in Wisconsin.

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

Should ANR actualize its powers of condemnation for this acquisition, information on the appraisal and compensation process under eminent domain is provided within Appendix F. The full text of [Wis. Stat. §32.035](#) is included in Appendix G. Additional references to statutes that govern eminent domain and condemnation processes and other sources of information are also included in Appendix H.

## **2. PROJECT DESCRIPTION**

### **2.1. Project Purpose**

ANR has indicated the primary reason for the Wisconsin Reliability Project is to maintain reliable and safe natural gas transportation, while also expanding and upgrading pipeline & compression facilities to meet increasing market demand for natural gas services (ANR, 2023b). ANR denoted that existing pipeline & compression facilities scheduled for replacement were constructed back in the 1950s and 1960s. ANR reported that these existing facilities are comparatively less environmentally friendly and are not as capable of meeting future market demands for natural gas (ANR, 2023b).

### **2.2. Project Location**

In Wisconsin, the proposed project occurs within 11 counties and 24 municipalities as detailed in Table 1. The proposed project route generally occurs across central and southeastern Wisconsin as shown in Figure 1.



Table 1: Wisconsin counties and municipalities impacted by ANR’s proposed Wisconsin Reliability Project.

Pipeline Facility	County	Municipality	Municipality Name
PL-2	Washington	Village	Germantown
PL-2	Washington	Town	Germantown
PL-2	Washington	Village	Jackson
PL-2	Washington	Town	Jackson
PL-2	Washington	Town	Polk
PL-2	Washington	Village	Richfield
PL-2	Waukesha	Village	Menomonee Falls
PL-2	Waukesha	Village	Lannon
PL-3	Outagamie	Town	Dale
PL-3	Outagamie	Town	Grand Chute
PL-3	Outagamie	Village	Greenville
PL-3	Waupaca	Town	Caledonia
PL-3	Waupaca	Town	Royalton

Pipeline Facility	County	Municipality	Municipality Name
PL-3	Waupaca	City	Weyauwega
PL-3	Winnebago	Town	Clayton
PL-3	Winnebago	Village	Fox Crossing
Compressor Station	Sheboygan	Town	Scott
Compressor Station	Waupaca	City	Weyauwega
Meter Station	Lincoln	City	Merrill
Meter Station	Manitowoc	City	Two Rivers
Meter Station	Marathon	Village	Weston
Meter Station	Oconto	Town	Lena
Meter Station	Portage	Town	Hull
Meter Station	Portage	City	Stevens Point
Meter Station	Winnebago	City	Oshkosh

Includes laydown yards and staging areas

### 2.3. Preferred Project System

ANR’s preferred project system for the Wisconsin Reliability Project is to replace a total of 37.3 miles of existing steel natural gas pipeline with a total of 40.0 miles of larger diameter steel pipeline. ANR proposes to replace this pipeline in two separate locations referred to as route segment PL-2 & PL-3 as seen in Figure 1. In segment PL-2, ANR plans to replace 13.7 miles of existing 14-inch-diameter pipe with approximately 16.0 miles of 30-inch-diameter pipe. In segment PL-3, ANR proposes to replace 23.6 miles of existing 24-inch-diameter pipe with approximately 24.0 miles of 30-inch-diameter pipe (ANR, 2023b).

Generally, ANR plans to locate the new pipeline on or parallel to the existing pipeline alignment (i.e., pathway). There are a few locations where ANR proposes to re-align the pipeline, as detailed in Section 2.4. Sections of existing pipeline not removed during construction will be retired and abandoned in place after the new pipeline becomes operational (ANR, 2023b).

#### 2.3.1. Pipeline Installation Methods

The pipeline will be installed using a combination of *open trench* and *horizontal directional drilling* (“HDD”). For additional information on *open trench* and HDD, review the Department’s Natural Gas Pipeline Construction Process publication [ARM-LWR-562](#) available at [agimpact.wi.gov](http://agimpact.wi.gov). Across agricultural lands in segments PL-2 & PL-3, ANR proposes the *open trench* method with trench dimensions no greater than 8 ft. deep and 20 ft. wide. Expanded widths are required to allow for the new pipeline to be placed into the existing ROW, when possible, using a process referred to as *lift-and-lay* installation. ANR refers to the process of excavating and removing an existing pipe,

while collocating a new pipe in the same *open trench*, as *lift-and-lay* installation. ANR plans to maintain a minimum of four feet of soil cover over the top of the pipeline (ANR, 2023b).

ANR's stated their ability to collocate pipelines in the existing ROW throughout segments PL-2 & PL-3 depends on their ability to temporarily divert existing natural gas deliveries to other pipelines to provide continuous service throughout construction. ANR also evaluated developmental pressures, environmental sensitivities, and engineering constraints when determining where collocation is possible. ANR stated that collocation is possible in segment PL-2, but not PL-3. Where ANR cannot collocate the pipeline, ANR may use a construction method referred to as "parallel-lay". In such case, ANR would offset the new pipe approximately 25 ft. from the existing pipeline. Should ANR be unable to collocate or parallel-lay the new pipe, ANR proposes to create a new pipeline alignment. After the new pipeline is placed into service, the remaining sections of existing pipeline, not removed during collocation, will be retired and abandoned in place (ANR, 2023b).

### **2.3.2. *Aboveground Facilities***

ANR proposes to modify several existing aboveground facilities including, compressor stations, metering stations, and minor appurtenance facilities as part of the Project. Modifications to and/or the expansion of existing facility footprints will occur on lands owned by ANR or within the existing ROW. ANR is not proposing to create new aboveground facilities (ANR, 2023b). As *agricultural operations* would not be impacted by the proposed aboveground facility modifications, further evaluation into these modifications is beyond the scope of the AIS.

### **2.3.3. *Project System Alternatives***

In their application for a CPCN, ANR proposed a preferred project system for the Project. However, ANR did evaluate three project system alternatives including, a no-build alternative, using third-party pipelines, pipeline looping, and a Greenfield pipeline (i.e., entirely new pipeline), but each were dismissed (ANR, 2023b). As ANR is seeking permission to construct the preferred project system, evaluating system alternatives is beyond the scope of this AIS.

## **2.4. Preferred Project Route**

ANR's preferred route for the Wisconsin Reliability Project is presented in Figure 1, but remains subject to change by FERC. The preferred route generally follows the alignment of an existing pipeline controlled by ANR. ANR disclosed five areas across route segments PL-2 & PL-3, as shown in Appendix A, where it proposes to realign the pipeline. ANR's primary reason to realign four of the five areas, as shown in Appendix A: Figures 1-3 & 5, is to avoid residential, commercial, and/or industrial developments in the Villages of Menomonee Falls, Germantown, Jackson, and the Village of Greenville. The remaining realignment, as shown in Appendix A: Figure 4, is proposed to minimize environmental impacts to the Jenny Bayou where the Project is proposed to cross the Wolf River in the Town of Caledonia, Waupaca County (ANR, 2023b).

## 2.5. Route Alternatives

As part of their CPCN application, ANR evaluated route alternatives in comparison to the preferred route shown in Figure 1. In Wisconsin, ANR's evaluation of route alternatives was specific to route segments PL-2 & PL-3 where realignment was planned. Complete route alternatives were not evaluated as the preferred route generally follows along an existing pipeline ROW. The segment PL-2 & PL-3 route alternatives evaluated by ANR are shown in Appendix A (ANR, 2023b).

ANR evaluated the potential impacts to structures, residencies, agricultural soils, *prime farmland*, forests, wetlands, etc. for each route alternative. ANR concluded that each route alternative posed higher risks to commercial or residential developments, environmentally sensitive areas, and/or was constrained by engineering difficulties. For these reasons, ANR dismissed each route alternative (ANR, 2023b). The results of ANR's evaluation are documented in *Resource Report 10: Alternatives*, which is available for download from FERC's online *eLibrary* at <https://elibrary.ferc.gov/eLibrary/search> (ANR, 2022a).

Acting in their capacities as cooperating agencies to FERC, the Wisconsin Department of Natural Resources ("WisDNR") and the Department reviewed a draft version of Resource Report 10, during the pre-application stage of ANR's application for a CPCN. Through this exchange, the Department routinely offered feedback to ANR regarding information, data, and conclusions contained within the draft report. The Department found the published Resource Report 10 adequately reflected the evaluation of route alternatives and the selection of the preferred route shown in Figure 1. For more information on the potential impacts of the Project route alternatives refer to Resource Report 10 (ANR, 2022a).

## 2.6. Route Variations

Route variations generally consist of minor shifts in the pipeline alignment (i.e., pathway) to avoid a site-specific resource issue or to address landowner concerns. Route variations are smaller in scale and shorter in length than route alternatives. The route variations ANR has analyzed for the Project come from comments received during ANR open house events, ongoing negotiations with landowners, and comments submitted to FERC during the Project scoping period. A full list of route variations is provided in Appendix D.

As part of the Project EA, FERC reviewed the complete list of route variations and found that the *route [variations] not adopted do not provide a significant environmental advantage over the routes that are proposed* (FERC, 2023). The Department has also reviewed the route variations not adopted by ANR and concurs with FERC's assessment, with the exception of route variation segment PL-2-A and PL-2-B. At the time of this analysis, ANR and the impacted landowner disclosed that these route variations were still under negotiation. As shown in Figure 2, these two route variations occur near MP 114.7 of segment PL-2 inside the Village of Menomonee Falls. ANR's preferred route is referred to as PL-2-A, while PL-2-B is known as the alternative. The alternative



route variation was requested by a landowner to avoid forest and trail impacts. ANR stated that they will continue to work with the landowner to identify an agreeable route in this area and will only construct one route variations upon the Project’s approval (ANR, 2023b). The Department has analyzed these two route variations as shown in Section 4.3.2: *America Farms Inc.*

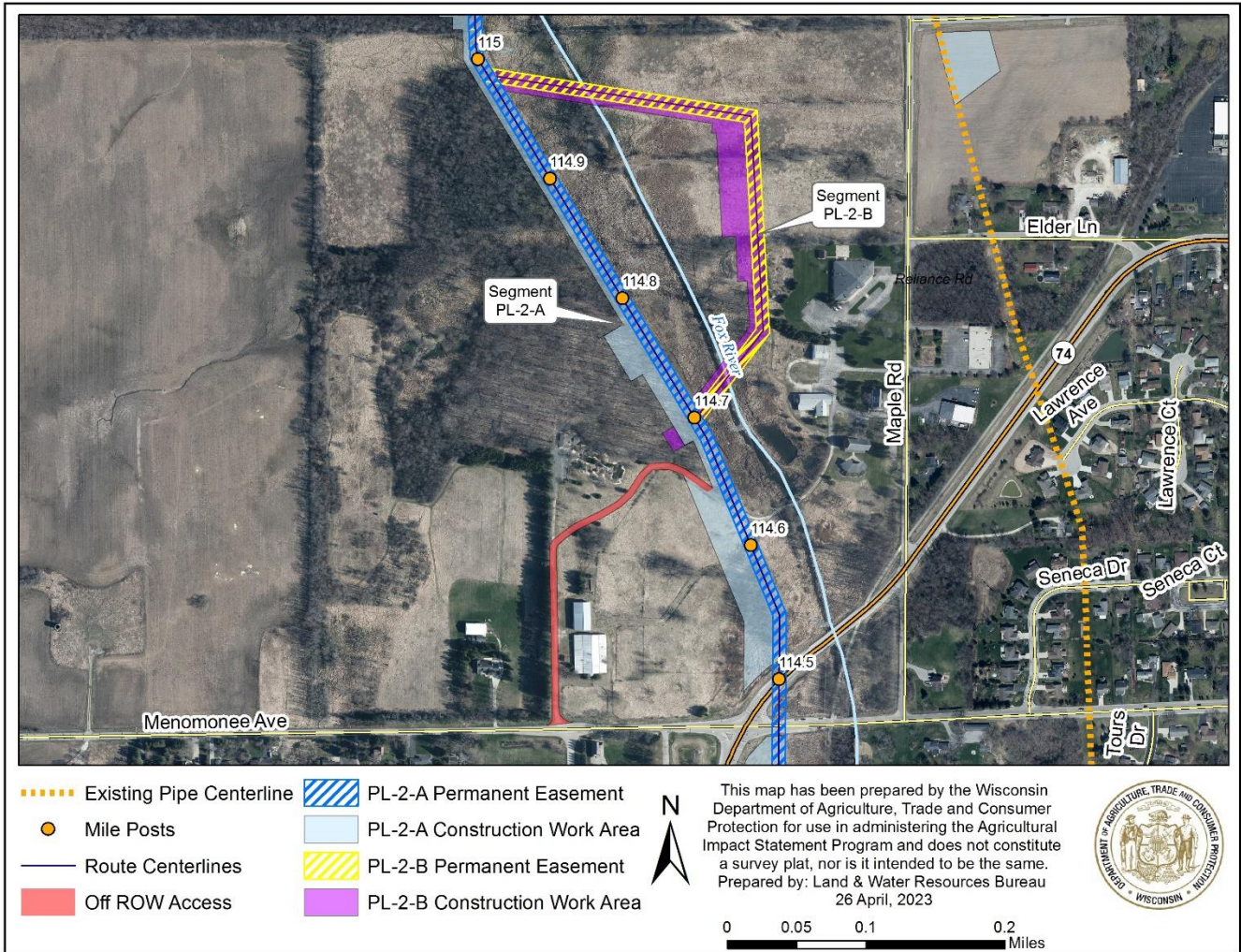


Figure 2: Wisconsin Reliability Project Route variations PL-2-A (Preferred) and PL-2-B (Alternative) for segment PL-2 in the Village of Menomonee Falls, Waukesha County, WI (ANR, 2023a).

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

ANR generally proposes a 110 ft. wide construction ROW to accommodate the installation of the pipeline and provide temporary storage of *topsoil* and subsoil piles (i.e., spoils). The construction ROW will also include additional temporary work areas, of varying sizes, for the modification of existing aboveground facilities discussed in Section 2.3.2. ANR stated that it will make efforts to reduce temporary construction land requirements and associated clearing, to the extent practicable in segment PL-2, by using the *lift-and-lay* method to collocate the new pipeline into the existing ROW. Where ANR utilizes the *lift-and-lay* method, the permanent ROW width is expected to remain unchanged, thus alleviating the need for new permanent *easements* (ANR, 2023b).

Where the new pipeline is offset from the existing pipeline, ANR proposes to acquire up to an additional 50 ft. wide permanent *easement* adjacent to the existing *easement*. Along much of segment PL-3 and at many road crossings, ANR is planning to overlap new and existing permanent *easements*. Overlapping *easements* has the potential to reduce the width of additional permanent *easements* in segment PL-3 down to 25 ft. and at road crossings to 10-to-15 ft. (ANR, 2023b).

**2.7.1. Additional Temporary Workspace**

ANR plans to acquire additional temporary workspace (ATWS) *easements/agreements* at specific locations along the pipeline route to accommodate construction activities near road/railroad crossings, the top/bottom of steep slopes, special construction methods at sensitive resource locations, foreign utility crossings, sharp bends in the pipeline, truck turnaround areas, pipeline abandonment activities, modifications at existing aboveground facilities, and the beginning and end of each pipeline segment. ANR will utilize larger ATWSs for construction locations that require greater spoil storage (ANR, 2023b).

**2.8. Project Schedule**

Pending issuance of all federal, state, and local approvals and permits, ANR plans to follow the timeline of activities shown in Table 2. ANR anticipates construction to start fall of 2024 and for the pipeline to be in service by November 2025 (ANR, 2023a). Construction at any single point along the pipeline, from surveying and staking to cleanup and restoration, could last 4 to 5 months or more. Daily construction activities would typically occur on a 6-day work week (Monday through Saturday) with a typical construction workday of at least 10 hours in duration that would occur during daytime hours between 7:00 am and 7:00 pm, but may be extended (FERC, 2023).

Table 2: The anticipated construction timeline for the proposed Wisconsin Reliability Project, pending approval by FERC and obtaining all permits (ANR, 2023a).

<b>Project Activity</b>	<b>Preliminary Date</b>
Easement Procurement Start	August 2022
Anticipated FERC Approval	November 2023
Vegetation Removal Start	Fall 2024
Pipeline Installation Start	Spring 2024
Anticipated Project In-Service	November 2025

**2.9. Off-ROW Access Roads**

ANR plans to utilize existing public and private roads as much as possible to gain access to the construction ROW. Where existing access roads are not suitable for construction traffic, ANR

proposes to improve these roads to allow for construction traffic. Where existing access roads cannot provide adequate access, ANR proposes to construct new off-ROW access roads. ANR plans to leave the newly constructed access roads and road improvements in place following construction, except in wetlands, or unless otherwise requested by the landowner or land-managing agency (ANR, 2023b).

In total, ANR is proposing 35 off-ROW access roads. These access roads, whether existing or new, will generally be between 10 and 60 feet wide with additional modifications to accommodate turning radius improvements, if needed (ANR, 2023b).

### **2.10. Staging Areas and Laydown Yards**

ANR plans to create ten staging areas to support construction activities. These staging areas will provide space for temporary offices, parking, equipment and material storage, and pipe preassembly and staging. Seven of the staging areas are located at the existing Kewaskum and Weyauwega compressor stations. The remaining three staging areas (SA-2005, SA-2006, and SA-2007) are proposed to be located off existing ROW and away from existing aboveground facilities.

## **3. AGRICULTURAL SETTING**

### **3.1. 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 FP 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.

#### ***3.1.1. Farmland Preservation Planning & Zoning***

All five counties where ANR plans to install pipeline as part of route segments PL-2 & PL-3, as seen in Table 1, have FP plans, certified by the Department, covering all or portions of their respective counties (DATCP, 2023a). Counties where ANR is only proposing to create and/or modify aboveground facilities, as seen in Table 1, are beyond the scope of the AIS for reasons discussed in Section 2.3.2. Of these five counties, Washington County is the only county where municipalities do not have FP zoning for at least a portion of the county (DATCP, 2023a). Areas that have adopted FP zoning will have a FP zoning district certified by the Department. This zoning district restricts covered lands to agricultural uses and uses compatible with agriculture and is certified to be consistent with the state's FP Law, Chapter 91. ANR should consult with all applicable local zoning authorities to identify if additional restrictions apply and to ensure compliance with local zoning regulations.

### ***3.1.2. 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 FP tax credit.

A review of route segments PL-2 & PL-3 identified three counties – Outagamie, Waukesha, and Waupaca Counties – that contain AEAs (DATCP, 2023a; DATCP, 2023b). Of these three counties, segment PL-3 crosses the southern half of the Greenville Greenbelt AEA in Outagamie County. As segment PL-3 crosses the Greenville Greenbelt AEA, ANR plans to acquire a new 25 ft. wide linear permanent ROW from FP agreement number 612. The new permanent ROW would be located directly adjacent to the existing permanent ROW as described in Section 2.6 for the offset pipelines. Prior to 2009, owners of eligible farmland could sign 10 to 25-year FP agreements outside of AEA boundaries. The Project does not cross any effective pre-2009 FP agreements in the five counties where ANR plans to install pipeline as part of route segments PL-2 & PL-3.

#### **Non-conforming Land Use**

The construction of a natural gas pipeline is a non-conforming land use according to Wis. Stat. § 91.62(1)(c). Agricultural lands covered by an effective FP agreement, where a non-conforming land use is planned, are required to release the affected lands prior to the initiation of the non-conforming land use. Affected lands that are returned to an agricultural land use, post-construction and reclamation, are eligible to reapply for an FP agreement. Landowners should contact the Department to release affected agricultural lands from an FP agreement. As part of the release, the Department is required to collect a conversion fee, according to Wis. Stat. § 91.66, to release lands from an FP agreement. Where the Project compels the release of land from an effective FP agreement, ANR should consider offering to pay all FP conversion fees incurred by agricultural landowners.

The Project could impact future agreements within this AEA. Landowners that are interested in enrolling into a new FP agreement within the project area of the Greenville Greenbelt AEA should contact the Department to see how the pipeline may impact their eligibility to enroll.

### **3.2. 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.



### ***3.2.1. Conservation Reserve Enhancement Program (CREP)***

The CREP program 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, 2019). A review of the Department's CREP records indicate that route segments PL-2 & PL-3 would not directly impact any current CREP fields or *easements*.

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

The CRP program 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, 2022). CRP enrollment information is privileged to the USDA and CRP program participants. However, several agricultural landowners reported to the Department that portions of their agricultural lands were enrolled in the CRP program, but did not disclose the location or the enrollment number. Absent information from the USDA and the impacted landowners, the Department cannot verify if any impacted agricultural parcels are enrolled within the CRP program.

### ***3.2.3. Managed Forest Law (MFL)***

The MFL program is a voluntary sustainable forestry program administered by the Department of Natural Resources ("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 and reforestation and afforestation of land to meet the size and density requirements are required in enrolled landowner's management plans. Land with buildings or improvements associated with buildings are not eligible for MFL. Exceptions such as utility right of ways 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 route segment PL-2 & PL-3 will impact approximately 25.3 acres of MFL enrolled lands across Outagamie, Washington, Waupaca, and Waukesha Counties (Table 1, Table 3). MFL lands where ANR possesses existing permanent *easements* are not included in this total. MFL agreements impacted by the Project and acres of impact are shown in Table 3. ANR will remove all trees and shrubs from these affected areas during construction. Post-construction, ANR will manage the permanent ROW and may remove trees within this ROW to maintain access and prevent root damage to the pipeline (DATCP, 2023a).



The loss of forestland within these MFL agreements may cause some parcels to lose their eligibility 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 Project to their MFL enrolled lands. ANR has acknowledged the potential for the Project to result in lost eligibility for continued MFL enrollment. Should this occur, ANR will compensate affected MFL enrollees as described in Section 10(g) of the AMP (Appendix B).

Table 3: Managed Forest Law lands where ANR plans to acquire new *easements* as part of the proposed Wisconsin Reliability Project in Wisconsin.

County	Segment	Mile Post	MFL Order Number	Acres of Newly Impacted MFL Land (acres)		
				<i>Permanent*</i> <i>Easement</i>	<i>Temporary</i> <i>Easement</i>	<i>Total</i>
Outagamie	PL-3	85.7	45-013-2019	0.4	1.4	1.8
		85.4	45-008-2003	0.6	1.1	1.7
Washington	PL-2	125.1	67-020-1999	1.4	0.0	1.5
		117.8	67-002-2017	1.1	0.5	1.6
Waukesha	PL-2	113.8	68-006-1995	1.5	1.6	3.2
Waupaca	PL-3	73.4	69-034-2001	0.2	1.1	1.3
		70.7	69-009-2011	0.6	1.4	2.0
		70.8	69-011-2011	0.9	2.2	3.1
		74.4	69-013-2021	0.2	1.2	1.4
		73.4	69-034-2012	0.5	1.1	1.6
		74.6	69-081-2017	0.9	2.6	3.5
		77	69-063-2020	0.4	1.2	1.6
76.4	69-057-2021	0.4	0.6	1.0		
<b>Totals</b>				<b>9.2</b>	<b>16.1</b>	<b>25.3</b>

\*Existing permanent easements on MFL lands have been excluded from this analysis.

### 3.2.4. Purchase of Agricultural Conservation Easement Programs

The 2009 - 2011 State of Wisconsin budget authorized the state Purchase of Agricultural Conservation *Easement* ("PACE") Program under [Wis. Stats. § 93.73](#). PACE provided matching funds to local governments and non-profits to assist with the purchase of permanent agricultural conservation *easements*. PACE was intended to provide an additional layer of protection within certified FP planned areas and designated AEAs that prioritized the preservation of agricultural lands at risk of development.

A review of the Department's PACE Program shows the Project would not impact any state-held PACE *easement*. 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 Alliance, 2023; Tall Pines, 2023).

### **3.3. Drainage Districts**

Drainage districts are local governmental entities governed under Wis. Stat. Ch. 88 and organized under a county drainage board and for the primary purpose of draining lands for agricultural use (DATCP, 2021). Landowners who benefit from drainage pay assessments to cover the cost to construct, maintain, and repair the district's drains. According to the Department, approximately 190 active districts exist within 27 of Wisconsin's 72 counties (DATCP, 2021).

A review of the Department's Drainage Program database indicates segment PL-2 will cross one active drainage district – the Jackson-Germantown Drainage District in Washington County. While the Jackson-Germantown Drainage District is active, Washington County does not have a county drainage board to administer the functions of a drainage district according to Wis. Stat. § 88.21. Residents may petition for the creation of a County Drainage Board according to Wis. Stat. § 88.17. Residents interested in petitioning should contact the Department's State Drainage Engineer for additional information.

As the construction of the Project will install underground natural gas pipeline across the Jackson-Germantown Drainage District, ANR is required by Wis. Stat. § 88.67(3) to inform and consult with the drainage board having jurisdiction. In the absence of a Washington County Drainage Board, Wis. Stat. § 88.11(1m) provides the Department the authority to perform any functions related to a drainage district that the Department considers appropriate. ANR should contact the Department's State Drainage Engineer for additional information related to the jurisdiction of the Jackson-Germantown Drainage District.

## **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 consider alternatives that may reduce impacts to agricultural lands. The Department has used information provided by ANR for this AIS and information gathered from agricultural landowners and operators to analyze the potential agricultural impacts of the Wisconsin Reliability Project in the counties impacted by route segments PL-2 & PL-3 in Wisconsin. The analysis of the agricultural impacts and conclusions drawn from it form the basis of the Department's recommendations within the AIS Recommendation Section above.

As [Wis. Stat. §32.035](#) limits the scope of this analysis to agricultural impacts, this analysis only examines and evaluates the aspects of the Project that affect *agricultural operations* and agricultural lands in Wisconsin. Furthermore, as ANR has submitted an application for a CPCN to FERC to construct the preferred project system and route, this analysis will not evaluate the potential agricultural impacts of alternative systems nor routes. During ANR's pre-application stage to FERC, system and route alternatives were assessed by FERC and the Department. Records of FERC's and the Department's assessment of system and route alternatives can be found on FERC's online *eLibrary* at <https://elibrary.ferc.gov/eLibrary/search> under docket number PF22-5-000.

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

Before constructing the Project, ANR will be acquiring *easement* contracts for permanent ROW and temporary construction areas. These *easement* contracts grant the utility the right to construct, operate, maintain, inspect, and repair the pipeline. According to [Wisconsin Statute § 196.745](#), the utility is required to maintain the natural gas pipeline in an adequate and safe manner. All vegetation will be removed from the *easement* for construction of the pipeline. In addition, maintenance of the in-service pipeline will require continual management of vegetation that grows within the *easement*. The type of vegetation that is allowed to grow within the *easement* and how vegetation is maintained are all subject to the *easement* contract. Regarding liability, the landowner is not liable for the construction, operation, maintenance, or repair of the pipeline, provided the landowner has not damaged any project facilities. Additional information about the appraisal and compensation process is included in Appendix F.

After the *easement* is acquired by the utility, the *easement* seller still owns the land. Furthermore, no member of the public, other than utility employees or representatives have access to the *easement* without the landowner's permission. Under normal conditions, utilities typically make every effort to notify landowners before they anticipate accessing the *easement*. In emergency response situations, the utility has the right to access the *easement* without permission from the landowner. The *easement* contract will contain all specifics regarding access, rights, liabilities, and responsibilities and should be thoroughly reviewed by the landowner prior to signing.

#### **4.2. Agricultural Land Acquisitions & Easements**

As proposed, the preferred route for the Wisconsin Reliability Project will affect approximately 527.1 acres of agricultural lands in Wisconsin, but is still subject to revision by ANR and/or FERC. Revisions could include route alternatives and/or minor route variations. As this project is an expansion of an existing natural gas pipeline, ANR already holds *easements* for many of the affected agricultural lands. Where ANR requires additional agricultural lands, ANR plans to use a combination of temporary and permanent *easements* to obtain the necessary rights to construct the Project. The Department analyzed all agricultural lands impacted by the Project in Wisconsin, regardless if ANR held an existing *easement* or not.

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

### **4.3. Agricultural Landowner Concerns**

The Department attempted to contact 118 agricultural landowners and operators impacted by the Project who had agricultural impacts of ½ or more acres as shown in Table 4. There were 20 agricultural landowners and operators with impacts less than ½ acre, who were not contacted by the Department. The following section relays the feedback and comments received from stakeholders and agricultural 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. FERC also solicited public comments on the Project, which are available in FERC's *eLibrary* at <https://elibrary.ferc.gov/eLibrary/search> under docket numbers PF22-5-000 and CP23-15-000.

#### ***4.3.1. Summary of Agricultural Responses***

The Department received 36 responses (31% response rate) from agricultural landowners and operators. Respondents were asked to answer questions on a range of topics including the basics of their *agricultural operation*, their general concerns for the Project, and potential impacts to their operations resulting from the Project. Copies of redacted responses are included within Appendix I.

Commonly held concerns included concerns for lost access to agricultural lands during construction, direct crop losses during construction & lingering yield reductions post-restoration, and damage to drain tiling/drainage infrastructure (Figure 3). Within written comments to the Department, respondents frequently mentioned their concerns for the removal of trees and inability to continue a forest land use within the permanent ROW. Respondents also reported potential impacts unrelated to non-agricultural land uses, such as harming the potential for agricultural lands to be developed. Impacts to non-agricultural land uses are beyond the scope of this document. Records of reported concerns and potential impacts are included within Appendix I.

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. Twelve respondents (46% of respondents) indicated an enrollment, with most of these respondents (67%) stating enrollment within MFL. Respondents also reported enrollments within federally managed programs such as CRP and Conservation Stewardship Programming, but did not disclose the location or agreement number to the Department.

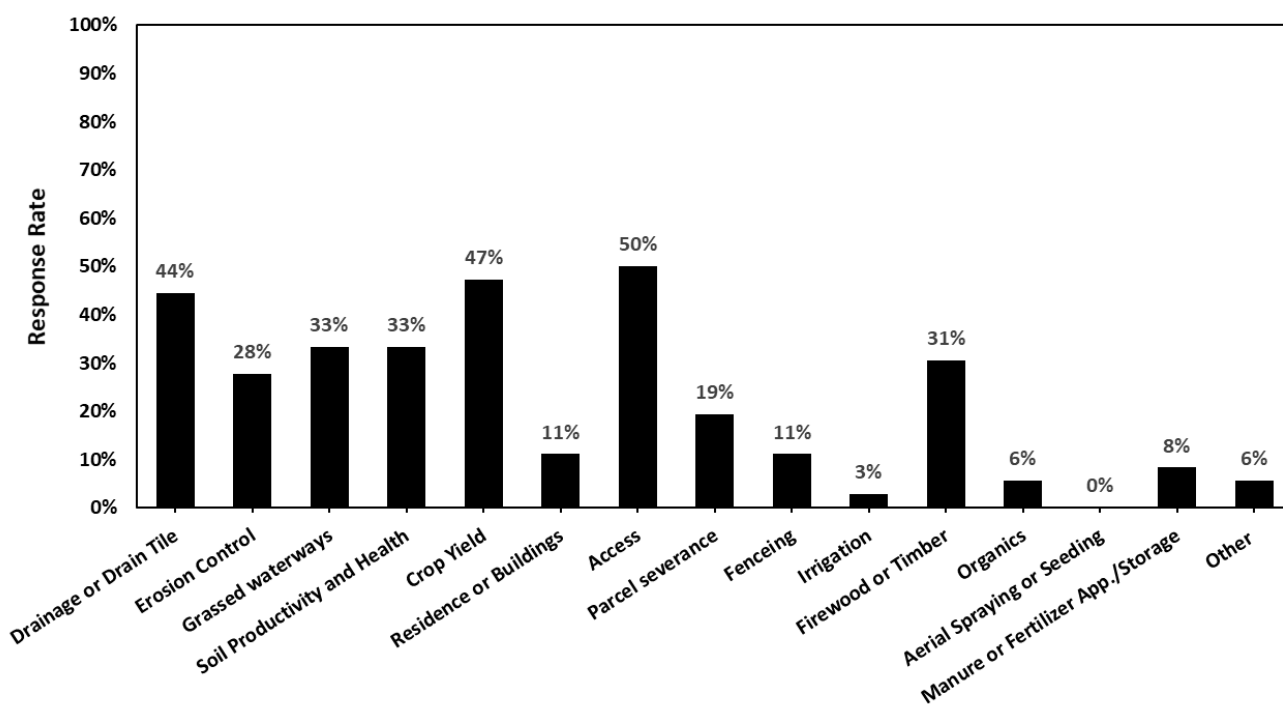


Figure 3: Generalized concerns reported to the Department from agricultural landowners and operators regarding the proposed Wisconsin Reliability Project.

#### 4.3.2. *Distinct Agricultural Concerns*

Over the course of the survey, the following *agricultural operations* brought forward unique concerns warranting further evaluation by the Department. While other *agricultural operations* may also have similar or different unique concerns, they were not disclosed to the Department during the survey. ANR has reviewed each distinct agricultural concern reported herein and submitted a response to each concern as shown in Appendix J.

##### Lenser Property

The Lenser’s reported ANR had altered a section of proposed route segment PL-2, which crossed their agricultural land (parcel MNFV0017994003) near mile post 115.8, in Waukesha County. During the pre-application stage, ANR drafted segment PL-2 to run parallel with an existing electric transmission line across the length of the Lenser property (ANR, 2022b). However, ANR’s application to FERC contains a variation to segment PL-2, such that it deviates from the existing transmission line approximately mid-way across the Lenser property (Appendix A: Figure 1; ANR, 2022a). The variation from the draft route lessens the benefits of shared ROW across the Lenser property. The Department encourages utilities to share existing ROW, where possible, to concentrate project impacts to areas with pre-existing disruptions.

Table 4: Agricultural landowners and operators with more than ½ acre of impact from the proposed Wisconsin Reliability Project, in Wisconsin, the Department attempted to contact.

Agricultural Landowner	Impact (acres)	Agricultural Landowner	Impact (acres)	Agricultural Landowner	Impact (acres)
BAST INVESTMENTS LLC	22.7	ALLEN & CHRISTINA STEINHAGEN	4.7	WAYNE BEHNKE	2.5
RICHARD & MARY EHRlich	20.0	MARTY & SUZETTE NIKODEM	4.5	ANDREW UJAZDOWSKI	2.5
HEIDTKE FAMILY FARM LLC	18.7	JEROME WALLENFANG	4.5	AGM NATURE PRESERVE LLC	2.3
JOHN & SHERI REINDL	13.4	MARK & DEBORAH GETTELMAN LIV TRUST	4.4	DAVID KOPLIEN	2.3
AMERICA FARMS INC	12.4	NHIA XIONG LEE	4.3	TERRY JESKE	2.3
STEINACKER FARMS INC	11.6	GARY KLUSMEYER	4.3	RICHARD & CYNTHIA NOVOTNY	2.2
TINEDALE FARMS LLC	11.6	RATHKE FAMILY TRUST	4.2	SECURA INSURANCE	2.2
EVERGREEN HUNTING CLUB INC	10.5	JEFFREY LONG	4.2	CHRISTOPHER & THERESA REYSEN	2.1
MENNING FAMILY IRREV TRUST	9.8	BRIAN KAZMIERCZAK	4.2	BIG RING PROPERTIES LLC	2.0
DANIEL HALLMAN	9.7	MICHAEL GREEN	4.2	GERMANTOWN LAND LLC	1.9
ROBERT LODUHA REV TRUST	9.1	HECKENDORF FARMS LLC	4.1	PHENG LEE	1.9
SCHLADWEILER PROPERTIES LLC	8.6	ROSS & MARCELLA BISHOP	4.1	CHARLES GORGES	1.8
DANIEL & SUSAN GRUETZMACHER	8.4	BARBARA KERCHOFF REV LIV TRUST	3.9	SCOTT & JULIE HALVORSON	1.7
LARRY BENTLE FARM REV TRUST	8.1	KEVIN KACZOR	3.9	BRYAN STELZNER REV TRUST	1.6
SHERMAN HEIGHTS LP	8.0	HERBERT & THERESE GROSS	3.8	JON & MARCIA FOLVEN	1.6
SANDRA & WILLARD MEYER	7.7	RAEANN KALBUS	3.8	MICHAEL & LAURIE KNAUS	1.6
PAUL & MARILYN TANK REV LIV TRUST	7.2	LANNON QUARRY LSP LLC	3.7	WILLARD MEYER	1.6
MARVIN PAUL ETTEN JR REV TRUST	7.1	THE WEDELL TRUST	3.6	JAMES FEILBACH JT REV LIV TRUST	1.6
MCC INC	7.0	BRIAN & PATRICIA ELSHOLTZ	3.5	RYAN & ELYSE HARTLEBEN	1.6
WILLIAM & SUSAN PATTERSON	7.0	BRYANT & ERIN VAN CRONKHITE	3.5	SPEAKER PROPERTIES LLC	1.5
JOHN & JANE HOULIHAN	7.0	JANET FISCHER	3.4	GAIL & GUY MACIEJEWSKI	1.4
OSCAR RATHKE LIV TRUST	6.7	ELMER SCHROEDER JR	3.4	JACK SKOMSKI	1.3
DANKE FAMILY IRREV TRUST	6.6	DANIEL & ERIN DRAHEIM	3.4	MICHAEL & EMILY MILLER	1.2
DANIEL KOHL	6.2	HOWARD & JACQUELINE KISLEWSKI	3.3	VILLAGE OF JACKSON	1.2
GERALD & JANICE SKOMSKI	6.2	CHRIS & MAREAH FOATE	3.3	JOHN GORGES	1.1
OUTAGAMIE COUNTY	6.0	SAGER TRUST	3.2	CHUE LEE	1.1
CLAIR GORGES	5.6	ROBERT WECKWERTH	3.2	ANTHONY GORGES	1.1
THOMAS AEGERTER	5.5	LOREN & NANCY HAUKE REV LIV TRUST	3.2	AUSTIN MOZDZEN	1.1
POPE FAMILY FARM LLC	5.5	BRUCE & BETH YEKO	3.2	DONALD LAUER	1.0
STATE OF WISCONSIN	5.3	WILLIAM & CHRISTINA BECKER	3.1	ARLENE SCHABO	1.0
CHAD DEGAL	5.3	NANCY STURN	3.0	SUSAN GILBERT IRREV TRUST	0.9
JJGRK REV LIV TRUST	5.3	INTEGRATED PUBLIC RESOURCES LLC	3.0	JAMES BACON & TANNA ARNDT	0.9
HILDA WISE	5.3	GREGORY & JASON RADTKE	2.9	ALLEN HAASE FAMILY IRREV TRUST	0.9
JAMES MERKEL	5.1	PALOROMA FARMS LLC	2.9	SHIRLEY NEUMAN	0.8
LOREN VANDERKINTER	5.0	TERRY & MARY SCHLAVER	2.8	DANIEL & BEATRICE REINDL	0.8
BRUCE BENTON	4.9	TWIN CITY ROD AND GUN CLUB	2.8	ERICH & CATHERINE KORTH REV LIV TRUST	0.8
BRUCE & VICKY BODWAY	4.9	JOSH & NICOLE WOLFGRAM	2.7	THOMAS RICHMOND	0.7
MELVIN & ALICE LENSER	4.7	MICHAEL & LYNN DEKOCH	2.7	BRADEN MENNOR	0.7
ANGIE GUSTAFSON	4.7	WILLIAM & EILEEN WANDSNIDER	2.6	MARK & AMY MAASS	0.5
COPPENS REV TRUST	4.7				

#### America Farms Inc. Property

Segment PL-2 of the proposed Project crosses two parcels (parcel MNFV0034989 and MNFV0034991) owned by America Farms Inc. between mile post 114.5 and 115.0 in Waukesha County. This segment also contains a route variation, known as PL-2-B, still under consideration. America Farms Inc. and ANR each requested the Department evaluate the agricultural impacts of the preferred route variant PL-2-A and the alternative variant PL-2-B, as shown in Figure 2. America Farms Inc. disclosed to the Department the diverse nature of its *agricultural operation* including the production of maple syrup, equestrian facilities, pasture lands, croplands etc. and *non-agricultural operations* such as a wedding venue and other outdoor activities. America Farms Inc. has also relayed their preference for route variant PL-2-B to the Department.

This analysis has found that variant PL-2-A would permanently remove economically productive trees used by America Farms Inc. to produce an agricultural commodity - maple syrup. The soil and hydrologic conditions near route variant PL-2-A, combined with the potential for a prohibition on future trees within the proposed ROW, creates conditions where it's unlikely for another economically viable agricultural land use to replace maple syrup production, thus potentially creating a *wasteland*. By comparison, variant PL-2-B would travel through tracks of land used for crop production, where impacts are expected to be temporary. Variant PL-2-B would also allow for the pre-existing land use (i.e., cropland) to return after ANR's restoration activities are complete. Should the Commission approve the project, the Commission may find it reasonable to consider implementing route variant PL-2-B as part of the final route.

#### Larry Bentle Farm Revocable Trust Property

Segment PL-3 of the proposed Project crosses three parcels (parcels 111113300, 111114200, and 111114300) owned by Larry Bentle Farm Revocable Trust between mile posts 86.2 and 87.1 in Outagamie County. Bentle Trust reported to the Department that the original natural gas pipeline installed by ANR in the 1960's degraded the function of their drain tiling in the aforementioned parcels and has hindered additional tiling upgrades on these parcels. Bentle Trust stated the cause for the disruption was insufficient burial depth for the original pipeline. Bentle Trust requests that ANR install segment PL-3 at a depth that allows their tiling to pass over the top of the pipeline and allow for future tiling on these parcels. In addition, Bentle Trust requests that when ANR decommissions the existing pipeline, that they remove the shallow buried segments of the pipeline that hinder the function of their existing drainage tile.

Maintaining the function of drain tile systems is a critical component to maintaining the productivity of agricultural croplands. ANR plans for *open trench* construction along segment PL-3, as seen in Section 2.3.1, calls for a minimum of four feet of soil cover above the top pipeline. In addition, ANR's AMP as seen in Appendix B, calls for one foot of separation between the pipeline and drain tiles. Across the Bentle Trust property, ANR has committed to a minimum of two feet of separation



between the pipeline and drain tiles (Appendix J). In practice, these construction standards allow for the continued function of existing drainage tiling systems. Whether ANR allows for the installation of new drain tiling across the ROW would be resolved during *easement* negotiations between ANR and Bentle Trust. Should either the new or existing pipeline impede the function of Bentle Trust's drainage system, the Department recommends that ANR work with Bentle Trust to find a solution to resolve historic drainage issues and any new issues caused by ANR pipelines.

ANR's plans to parallel-lay segment PL-3 approximately 25 ft. away from the existing pipeline means the existing pipeline is not readily accessible for removal. ANR's choice to parallel-lay segment PL-3 is detailed in Section 2.3.1, but is generally due to the requirement to maintain natural gas service through the existing line, while segment PL-3 is constructed. ANR has indicated their intent to retire and abandon the existing pipeline in place (ANR, 2023b). ANR described their rationale for abandoning the existing pipeline in place along the Bentle Trust property in Appendix J. In brief, ANR stated the removal of the retired pipeline would create additional environmental impacts and prolong the construction period on the Bentle Trust property (Appendix J).

#### ***4.3.3. Concern Mitigation Measures***

ANR has prepared an agricultural *mitigation* plan ("AMP") for the Wisconsin Reliability Project that addresses many of the potential impacts agricultural landowners and operators have disclosed to the Department. ANR also addresses the distinct agricultural concerns, discussed above, within Appendix J. A copy of the AMP is included within Appendix B. As the AMP was prepared after the survey, the Department recommends agricultural landowners and operators review the AMP (Appendix B) to learn about the methods and practices ANR will use to mitigate impacts to access, crop loss/yield reductions, damage to drain tiling/drainage infrastructure, etc. The Department's review of the AMP is included within Section 5.1.

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

The acquisitions of agricultural property can 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 agricultural lands impacted by the Project.

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

*Severance* may be a physical barrier such as a road or non-physical barrier such as land use restrictions. Severing an agricultural parcel to accommodate a project 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, divide the operation of a farm, or potentially result in farmland conversion. Under Wisconsin's Eminent Domain Statute, compensation for damages resulting from *severance* is described in Wis. Stat. § 32.09(6).

As the majority of the proposed Project ROW is collocated and/or runs parallel to ANR's existing ROW in segments PL-2 & PL-3, the potential for the pipeline to physically sever an agricultural parcel into two or more remnant agricultural fields is reduced. Where the pipeline deviates from its existing alignment, with the exception of route variations PL-2-A & PL-2-B, ANR proposes to generally follow field boundaries and/or other utility ROWs. Aligning the route with field boundaries can reduce the potential to sever an agricultural parcel. Post-restoration, many pre-existing agricultural land uses should be able to return, which further reduces the potential for *severance*.

Post-construction, ANR will however impose certain land use restrictions within the ROW that will prevent the construction of agricultural related buildings and the growth of some agricultural commodities such as trees or other woody plants. While agricultural landowners can still access these lands, they may be prohibited from continuing a pre-existing land use within the ROW such as, MFL, maple syrup production, Christmas tree production, etc. In these situations, land use restrictions create a non-physical barrier to agricultural production. Essentially, land use restrictions have the potential to sever a proportion of an agricultural parcel that may no longer contribute to a forest/tree based *agricultural operation*.

Several agricultural landowners reported to the Department their concerns for Project land use restrictions to prevent the continuation of MFL and forest production lands. Details of their concerns are provided in Section 4.3 and Appendix I.

#### **4.4.2. Access**

Acquisitions of farmland may permanently remove existing points of access utilized by *agricultural operations* to enter their remnant farmland. Access to farmland may also be temporarily lost within the construction area while a project is under construction. When agricultural lands and operations lose access, even temporarily, agricultural productivity may be impacted if crops, livestock, or other agricultural products cannot be tended. Lost access may also directly result in lost income if a field cannot be planted or harvested, or if an entire *agricultural operation* is hindered.

As proposed, the Project has the potential to temporarily limit access to agricultural fields in Project laydown yards, staging areas, off-ROW access roads and construction areas. *Agricultural operations* may also temporarily lose access to adjoining fields, which are not directly impacted by the Project. These access limitations will generally disappear once construction activities have concluded and restoration activities are complete. Agricultural parcels where ANR is planning to create temporary laydown yards and staging areas would have the most prolonged access limitations.

Several agricultural landowners reported concerns for access limitations as a result of the Project. Details of their concerns are provided in Section 4.3 and Appendix I. Post-construction and once restoration activities have concluded, access should return to pre-existing conditions. To mitigate temporary access impacts, the Department recommends ANR inform *agricultural operations* at least 30 days prior to when they will lose access to the impacted farm fields and indicate when access will be lost and for how long. ANR should also work with agricultural landowners and any agricultural tenant operators to determine safe new access points to adjoining or remnant fields.

#### **4.4.3. Wasteland**

Acquisitions and *easements* that sever farmland frequently create small remnant fields that may be difficult to access or are irregularly shaped. Small remnant fields that are irregularly shaped can make it difficult for agricultural equipment to navigate and reduce the amount of tillable acres. Land use restrictions within the ROW may also prevent the continuation of the only economically viable agricultural land use for the land. These impacts reduce agricultural productivity and decrease the economic viability of the land, which increases the potential of creating undeveloped land ([Wis. Stat. § 70.32\(2\)\(a\)\(5\)](#)) or what is commonly referred to as *wasteland*. 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.

The Department's analysis found that the Project, as a whole, is unlikely to create agricultural *wastelands* or *uneconomic remnant* fields. This determination is based on three main findings: 1) the Project ROW primarily runs parallel to existing utility corridors, 2) the Project does not propose any above ground facilities in agricultural areas and 3) the impacted agricultural lands can largely be returned to their pre-existing agricultural use. Collectively, these aspects limit the Project's potential to change the shape of a field or to create agricultural *wastelands*.

Given the vast amount of agricultural land and the variety of *agricultural operations* impacted by the Project, the potential to create a *wasteland* or *uneconomic remnant* fields still exists. The potential is greatest for agricultural lands where the existing agricultural land use cannot be continued within the ROW, such as MFL lands or forest related land uses, and there are no economically viable alternative replacement land uses and/or the loss of the land use within the ROW prevents the entire parcel from continuing within a viable agricultural land use.

#### **4.5. Agricultural Buildings and Infrastructure**

ANR reported to the Department that the proposed Wisconsin Reliability Project will impact two structures on an agricultural property, which include a shed and a cargo container. ANR stated that they plan to acquire or relocate these two structures as a result of the Project. The structures are both located on parcel number 21-01-42-1 in the Town of Weyauwega, Waupaca County near Milepost 70.6 on Segment PL-3. ANR acknowledged the potential for the Project to impact existing

drainage tiling across agricultural parcels (ANR, 2023a). The Department analyzed the potential for the Project to impact drainage and drain tile in Section 4.8, with additional review of ANR's plans to mitigate impacts to drain tiles in Section 5.6.4.

#### **4.6. Prime Farmland and Soils**

As proposed, the Project will impact approximately 527.1 acres of agricultural lands and soils across the entire construction area, including staging areas and access roads. The final acreage of impacted agricultural lands and soils may vary slightly based on any remaining route variations yet to be determined. The soils impacted by the proposed Project were cataloged and analyzed by farmland classification, for the proposed route, using the NRCS *prime farmland* soils GIS layer. Farmland soil classifications impacted by the Project include *prime farmland* and *prime farmland if drained* (Table 5). *Prime farmland* is designated by the USDA according to section 622.3 of the National Soil Survey Handbook (USDA, 2017) 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 5. The soil texture of agricultural soils impacted by the Project was analyzed, in general terms, across the project ROW.

At the project level, the vast majority (82.4% or 434.6 acres) of the agricultural lands impacted by the Project in Wisconsin hold some level of federal or state priority designation (Table 5). The prevalence of impacts to priority designated agricultural lands is consistent across route segments, but there are some differences. Across segment PL-2 nearly all of the impacted agricultural lands (92.7%) hold a priority designation, while a lesser majority (75.2%) is observed in segment PL-3 (Table 5). The agricultural soils across the construction area, when classified by texture, are primarily loam or silt loam soils in route segment PL-2 and loamy sand and silt loam soils in segment PL-3 (Table 5). In general, loam and 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). Loamy sand soils are coarse-textured porous soils (Cornell, 2017) that aren't able to hold onto water as well as medium or fine textured soils, and may require irrigation to best suit crop production (UW-Extension, 2005). This soils analysis shows that ANR's preferred route for the proposed Wisconsin Reliability Project will predominately impact priority farmland and high-quality soils.

#### **4.7. Soil Health**

Soil structure, texture, organic matter and microorganisms are all important factors that influence soil health (Wolkowski and Lowery, 2008). Project construction activities with the potential to impact soil health include excavation and the movement of heavy equipment through the Project ROW that may compact soil. 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). This construction-caused soil

compaction may also damage drain tiles leading to ponded water where none existed prior to construction. Construction activities may also disrupt and/or mix soil profiles within the Project ROW as well as the surrounding area. Research has also shown that pipeline construction activities and impacts (e.g. equipment axle weight, use of excavation, intermixing of soil layers etc.) have the potential to negatively impact crop yields from two years up to a decade within the ROW depending on the construction methods, severity of the construction impacts, and *mitigation* practices (Culley and DOW 1988; Soon et al., 2000; Shi et al., 2014).

The Project has the potential to create a range of soil health impacts for the impacted *agricultural operations*. The nature of *open trench* construction methods inevitably brings risks of *topsoil* mixing and soil compaction. For more information on pipeline construction methods and *open trench* excavation, refer to the Department's Natural Gas Pipeline Construction Process publication [ARM-LWR-562](#), which is available at [agimpact.wi.gov](#). Collectively, these risks raise the potential for yield losses for the impacted agricultural landowners in the Project ROW. ANR has prepared an agricultural *mitigation* plan to mitigate impacts to soil health. The Department has reviewed the Project AMP and found that it complies with agricultural *mitigation* and restoration activities the Department seeks. The Department's review and analysis of the AMP is contained in Section 5.1.

#### 4.8. Drainage

Maintaining proper field drainage is vital to the success of an *agricultural operation*. However, pipeline construction activities have the potential to affect both surface and subsurface (i.e. drain tile) drainage patterns and the overall soil health of agricultural fields. Potential drainage impacts from the construction of a pipeline include broken or damaged drainage tile lines, alterations to the topography of existing grassed waterways, or changes to known surface water flowlines. When these impacts happen and go unrepaired, drainage may become impaired, leading to the buildup of standing water on fields. Standing water on agricultural fields has a broad range of negative impacts including crop losses, concentrating mineral salts, flood damage to farm buildings, or causing disease in livestock.

The Project has the potential to create a range of drainage impacts for the impacted *agricultural operations*. The nature of *open trench* construction methods brings risks of damage or breakage of drain tiles. Collectively, these risks raise the potential for yield losses, flood damage, and health impacts to livestock for the impacted agricultural landowners in the Project ROW. Certain agricultural landowners, as discussed in Section 4.3, may have a higher risk of encountering these potential impacts. ANR has prepared an agricultural *mitigation* plan to mitigate impacts to soil health. The Department has reviewed the Project AMP and found that it complies with agricultural *mitigation* and restoration activities the Department seeks. The Department's review and analysis of the AMP is contained in Section 5.1, with a focused analysis on drain tiles in Section 5.6.4.

Table 5: Agricultural soils, by farmland classification, in the counties impacted by route segments PL-2 & PL-3 of the proposed Wisconsin Reliability Project in Wisconsin.

<b>Soil Texture</b>	<b>Prime Farmland*</b> (acre)	<b>Prime Farmland if Drained<sup>o</sup></b> (acre)	<b>Farmland of Statewide Importance<sup>†</sup></b> (acre)	<b>Not Prime Farmland<sup>‡</sup></b> (acre)	<b>Total</b> (acre)
<b>Segment PL-2</b>					
Gravel	0.0	0.0	0.0	1.3	1.3
Loam	21.5	0.0	4.2	13.1	38.8
Muck	0.0	0.0	5.9	0.0	5.9
Sandy Loam	0.5	0.0	0.0	0.0	0.5
Silt Loam	91.7	66.1	10.2	1.6	169.6
Silty Clay Loam	0.0	2.0	0.0	0.0	2.0
<i>Segment PL-2 Total</i>					218.1
<b>Segment PL-3</b>					
Clay Loam	0.0	0.7	0.0	0.0	0.7
Gravel	0.0	0.0	0.0	0.1	0.1
Loam	5.7	0.6	7.8	2.5	16.6
Loamy Sand	0.0	0.5	51.1	43.3	94.8
Muck	0.0	0.0	3.7	28.7	32.4
Sand	0.0	0.0	0.0	1.8	1.8
Sandy Loam	24.2	0.0	0.3	0.0	24.5
Silt Loam	84.5	16.7	10.9	0.0	112.1
Silty Clay	0.0	2.6	0.0	0.0	2.6
Silty Clay Loam	9.3	14.1	0.0	0.0	23.4
<i>Segment PL-3 Total</i>					309.0
<b>Project Total</b>					<b>527.1</b>
<p>*<b>Prime farmland</b> 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.</p> <p><sup>o</sup><b>Prime farmland if drained</b>, indicates that if farmland is drained it would meet prime farmland criteria.</p> <p><sup>†</sup><b>Farmlands of statewide importance</b> 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.</p> <p><sup>‡</sup><b>Not Prime farmland</b>, indicates farmland is neither prime farmland nor of designated importance.</p>					

## 5. AGRICULTURAL IMPACT MITIGATION

Whether it be by design or geographic footprint, some projects have the potential for greater agricultural impacts. Common characteristics of projects with the potential for increased agricultural impacts include construction areas spreading across long linear tracks of land, impacts to numerous landowners, or state/federal requirements to prepare an environmental assessment or environmental impact statement. Examples of these projects include natural gas pipelines, high-voltage electric transmission lines, or the expansion/creation of a highway corridor. In response to these types of projects, the Department analyzes the potential for best management practices (“BMP”) and/or an agricultural *mitigation* plan (“AMP”) to reduce or eliminate project related agricultural impacts.

### 5.1. Agricultural Mitigation Plan (AMP)

The Department recognizes the value and benefits achieved when any project initiator proactively supports practices and plans to restore impacted lands to pre-construction conditions and mitigate impacts to agricultural productivity. AMPs are one example of plans that describe the policies and methods project initiators will follow, during all phases of a project, to achieve these goals. AMPs typically describe, in detail, effective construction *mitigation* measures, restoration methods, best practices for communication with *agricultural operations*, and outlines the duties of the project’s Agricultural Inspector (“AI”).

ANR has prepared separate AMPs for the Project in Illinois and Wisconsin. ANR stated within the AMP their commitment to restoring construction areas to pre-construction conditions and belief that the AMP will assure this outcome for agricultural areas impacted by the Project (ANR, 2023c). During the development of the AMP for Wisconsin, the Department consulted with ANR and offered feedback to maximize the potential for BMPs and other practices to mitigate impacts and restore *agricultural operations* to pre-construction conditions.

The Department reviewed ANR’s final AMP for Wisconsin, as shown in Appendix B, to verify that it aligns with current agriculturally relevant BMPs and *mitigation* practices the Department advocates with natural gas pipeline projects. The remainder of Section 5 will document the Department’s review and will offers suggestions to ANR and agricultural landowners and operations to increase protections for *agricultural operations* and mitigate agricultural impacts. The Department did not review the Illinois AMP as it is beyond the scope of the Department’s authority.

In addition to the AMP for Wisconsin, ANR is required to follow all other federal and state *mitigation* plans and related permits. These additional plans and permits may overlap with various aspects of the AMP in Wisconsin. ANR must follow all required plans and permits and where overlap exists they will follow the most restrictive standard.

## 5.2. Agricultural Inspector (AI)

When a project affects agricultural land an AI may need to be hired. AI's role is to monitor project construction & restoration 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. They will also verify if the project initiator is complying with any agricultural BMPs or conditions established by the project initiator or required by a regulatory agency.

The construction of the Wisconsin Reliability Project holds the potential for numerous agricultural impacts, which ANR plans to mitigate by following an AMP. ANR stated in the AMP, as seen in Appendix B, that they will hire one or more AI for the Project to monitor the implementation of the AMP during all phases of the Project. ANR will also hire several environmental inspectors ("EI") to ensure compliance with environmental regulations. Depending on candidate qualifications, ANR may hire an EI to serve as an AI. The Department believes either a dedicated AI or an EI serving with the responsibilities of an AI, would be sufficient to ensure ANR adheres to the AMP and any additional BMPs the Department has recommended for and adopted by ANR.

## 5.3. Stormwater & Erosion Control Permitting

The Project's land disturbance activities may be subject to municipal stormwater management and erosion control ordinances, in addition to all state and federal level permitting requirements. Project activities may also be subject to shoreland zoning ordinances. ANR should consult with all impacted zoning authorities for applicable construction site erosion control and stormwater management requirements, shoreland zoning requirements, and other permits to ensure construction proceeds in a manner minimizing drainage issues and soil erosion for the project site. As stormwater and erosion control activities are regulated by other levels of governance – federal, state, county, and local – analysis of the Projects potential for stormwater and erosion impacts are beyond the scope of this AIS.

## 5.4. Three-Lift Soil Handling

The *three-lift soil handling* procedure is recommended for cropland and pasture where the mixing of subsoil layers from construction practices such as pipeline trenching, may result in persistent crop yield reductions. For agricultural soils, the typical pipeline construction practice is to remove and stockpile only the *topsoil* (usually the top 12 inches) from the entire pipeline trench. In contrast, the *three-lift soil handling* method requires the stockpiling of the 1) *topsoil*, 2) subsoil, and 3) substratum in three separate piles. After the pipeline has been placed within the trench, the excavated soils would be backfilled in the reverse order from which they were removed (i.e., last soil removed is the first soil backfilled). For more information on the *three-lift soil handling* method,



refer to the Department's Three-Lift Soil Management publication [ARM-LWR-294](https://www.agimpact.wi.gov/ARM-LWR-294) available at [agimpact.wi.gov](https://www.agimpact.wi.gov).

The *three-lift soil handling* method is useful when the proposed trench will intersect both the B and C horizons of a soil profile and the C horizon is of poorer quality (gravel, rock, and/or sand) than the B horizon (silt, clay, and/or loam). Alternatively, this practice may be applicable to soil profiles with a distinct upper and lower B horizon, as opposed to a B and C horizon. Additional factors such as slope, soil drainage, thickness of the soil horizons, and acres of soil units crossed by the project are important in determining soil candidates for which the three-lift method could be beneficial for protecting crop yields. A key for identifying soil candidates for *three-lift soil handling* is provided in Appendix E.

ANR has prepared a thorough *three-lift soil handling* BMP within the AMP, which is shown in Appendix B. Prior to construction, ANR will utilize Department criteria, as seen in Appendix E, to identify soil candidates and areas that qualify for three-lift handling. During construction, the AI will monitor excavation activities within the qualified *three-lift soil handling* areas and verify if *three-lift soil handling* is appropriate. The Department has found ANR's *three-lift soil handling* BMP to be consistent with the methodology set forth by the Department.

### **5.5. Yield Compensation & Crop Loss**

The Department's soil health analysis, seen in Section 4.7, has indicated the potential for the Wisconsin Reliability Project to impact soil health and crop yields for an extended period post-construction. As livelihoods of *agricultural operations* are irrevocably linked to the productivity of the soil and crop yields, project initiators have an obligation to compensate impacted agricultural landowners or operators for the future yield reductions across the project ROW. Compensation for yield loss generally occurs at the time of *easement* contract negotiations.

The Department recommends that agricultural landowners request reimbursement for 100% of crop value within the construction area for each year of lost production, plus an additional 100% of crop value for lingering post-construction yield reductions that may take two or more years to recover. Where tenant agricultural operators exist, compensation for crop and yield loss should be directly issued to the tenant agricultural operators. An example agreement for a one year project, reimburses an agricultural landowner or tenant operator for 100% crop loss for the year of construction, followed by a 60% reimbursement the second year post-construction and 40% for the third year post-construction. Agricultural landowners should also work with the project initiator to determine the most appropriate way to determine the value of the crop within the ROW during the year of construction, as well as future crop value.

ANR has prepared a yield reduction and crop loss plan, as part of the AMP shown in Appendix B. The Department also recommends that agricultural landowners 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 occur.

## **5.6. Recommended BMPs**

The following section relays the Department's analysis of ANR's AMP in Wisconsin, with the exception of the three agricultural related topics highlighted in Sections 5.3 – 5.5. Agricultural landowners and operations should review the following information, in conjunction with the AMP, to understand the range of *mitigation* practices ANR will follow. The AMP does not exclude agricultural landowners and operations from asking ANR to follow additional *mitigation* practices on their lands.

### **5.6.1. Topsoil Segregation**

Agricultural *topsoil* is an invaluable resource that should be preserved. Excavation activities required to create the *open trench* needed to install a natural gas pipeline has 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. ANR has prepared BMPs for the management and segregation of agricultural *topsoil* as seen in Appendix B. When paired with ANR's soil restoration BMPs, ANR's collection of *topsoil* segregation practices conform to the *mitigation* practices the Department seeks to preserve the quality of agricultural *topsoil*. ANR is also required by FERC to have a *topsoil* segregation plan, as seen in Appendix C, and will follow all requirements at the most restrictive level.

### **5.6.2. Increased Soil Rock Content**

Large stones at the surface can damage farm machinery and lead to added costs to landowners for removal. Many subsoil layers have a greater rock content than the *topsoil*. Trench excavations may bring up lower soil horizons with rocky subsoil, which may mix with upper soil layers. Even where *three-lift soil handling* is used, additional rocks may be spread through the subsoil layer during backfilling. Project initiators may also apply gravel or rock at access points to agricultural fields or access roads which may mix with soil within or adjacent to the ROW. ANR has prepared a BMP for soil restoration as seen in Appendix B, which conforms to the *mitigation* practices the Department seeks to prevent increased rock content in agricultural *topsoil*. ANR is also required by FERC to have a variety of BMPs, as seen in Appendix C, to prevent an increase in soil rock content and will follow all requirements at the most restrictive level.

### **5.6.3. Soil Compaction & Wet Conditions**

Equipment used to construct natural gas pipelines has the potential to compact soil and reduce soil productivity on the farmland traversed during construction. During wet soil conditions, soil structure weakens and the potential for soil compaction and soil layer mixing increases. Soil

compaction is widely known to have a range of potential negative impacts to the productivity of soil, including reduced crop productivity, reduce crop uptake of water and nutrients, restriction of plant rooting depth, decreased water infiltration and increased surface runoff. Review Section 4.7: *Soil Health* for additional information on the factors influencing soil health. ANR has prepared a BMP for soil compaction management, soil decompaction, and construction during wet conditions, as seen in Appendix B, that conforms to the *mitigation* practices the Department seeks to alleviate soil compaction issues. ANR is also required by FERC to have a soil compaction *mitigation* plan, as seen in Appendix C, to prevent an increase in soil rock content and will follow all requirements at the most restrictive level.

#### ***5.6.4. Drain Tile Repair & Drainage***

Construction activities – especially those that excavate soil – can disrupt, damage or break agricultural infrastructure including drainage tiles, grassed waterways, and drainage ditches. Project initiators have a duty to restore the agricultural landscape as near to pre-existing conditions as possible. The Department’s soil health analysis, seen in Section 4.7, has indicated the potential for the Wisconsin Reliability Project to damage or break several agricultural drain tile lines. ANR has prepared a stepwise plan for temporary and permanent drain tile repairs as seen in Appendix B. ANR’s plan for drain tile repair conforms to the *mitigation* practices the Department seeks to preserve the quality of agricultural *topsoil*. ANR is also required by FERC to develop procedures for construction through drainage areas and repairing damaged tiling, as seen in Appendix C, and will follow all requirements at the most restrictive level.

The Department recommends *agricultural operations* consider the following to mitigate impacts to drain tiles and drainage:

- *Agricultural operations* should inform ANR about the existence and location of drainage systems or planned drainage systems that could be affected by the Project.
- 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.

#### ***5.6.5. Deicing & Traction Control***

Construction crews commonly apply various products to improve vehicle traction across temporary road matting within the construction ROW to control for wet, slippery, or icy conditions. The application of chloride based deicing agents, such as rock salt, to temporary road matting within the construction ROW during the winter season can lead to chloride rich runoff that has potentially detrimental impacts to the health of nearby soils, ecosystems and surface waters (Richburg, 2001; Kelly *et al.*, 2008; Corsi *et al.*, 2010). Alternative deicing products, which are less damaging to the health of soil, vegetation and ecosystems as compared to chloride, do exist. For example, county

highway departments commonly apply sand or small lime chips (1/8" to 3/16" diameter), or a combination of the two as an alternative to rock salt, especially when surface temperatures are colder than 15°F when rock salt is less effective. However, chloride may still be required to mitigate situations that pose elevated safety risks.

ANR has prepared a BMP for deicing and traction control, as seen in Appendix B, that conforms to the *mitigation* practices the Department seeks to preserve soil health. When considering alternatives to chloride based deicing products, ANR may wish to review the list of alternative deicing products contained within the University of Wisconsin Madison - Extension publication [A3877](#).

#### ***5.6.5. Dewatering***

During excavation, trench 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. In Wisconsin, the discharge of sediment-laden water from a dewatering operation is regulated by WisDNR according to [WisDNR technical standard 1061](#). However, the discharge of construction waters must also comply with local ordinances, state level permit conditions, and the provisions of the federal Clean Water Act. ANR acknowledged the multiple levels of oversight and has stated that all dewatering standards will be met or exceeded at all times (Appendix B). ANR is also required by FERC to have a variety of BMPs, as seen in Appendix C, to mitigate dewatering impacts and will follow all requirements at the most restrictive level.

#### ***5.6.6. Fencing***

Construction may require fences that cross the Project ROW to be severed. Changes to existing fence lines can interfere with grazing activities, particularly for rotational grazing operations that depend on precise, scheduled grazing in specific areas. ANR has prepared a BMP to address impacts to fencing as seen in Appendix B. This BMP conforms to the *mitigation* practices sought by the Department.

#### ***5.6.7. 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. ANR has prepared a BMP, as seen in Appendix B, to control for weeds within the Project area. ANR is also required by FERC to have a plan, as seen in Appendix C, for detection, containment, and treatment of noxious weeds and invasive species during construction. ANR weed control BMPs adhere to *mitigation* practices the Department seeks from project initiators.

The Department also believes ANR and *agricultural operations* may wish to consider implementing the following:

- *Agricultural operations* 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 [W DATCP DriftWatch website](#) at the provided link or at <https://wi.driftwatch.org/>.
- ANR 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, ANR should contact the operation to discuss the appropriate methods required to minimize the risk of accidental exposure.

#### ***5.6.8. 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 agricultural operator first works the land. The debris from various woody tress species, such as cherry or walnut trees cans be toxic to livestock. To mitigate the potential impact of construction debris, ANR will follow a final cleanup process, as seen in Appendix B. The cleanup process aligns with FERC requirements, as seen in Appendix C, and contains the *mitigation* practices the Department advocates for to mitigate the impact of construction debris.

#### ***5.6.9. Feed Supply and Dairy Operations***

The construction of a natural gas pipeline 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. To mitigate the potential impact of feed supply disruptions, ANR will compensate dairy operations as seen in Appendix B.

#### ***5.6.10. Construction Noise***

Landowners near the Project ROW may experience noises associated with construction techniques and the movement of heavy equipment. This noise 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.

As part of the EA for the Project, FERC evaluated the potential for construction activities and the continual operation of facilities to generate noise at levels of concern to public health and welfare. FERC found that noise from these project activities may be intermittent or continuous, but would generally be limited to short durations over 3 to 4 weeks at any one location. Furthermore, FERC found that ANR's planned *mitigation* practices would mitigate the level of noise to levels considered to be non-significant (FERC, 2023).

To mitigate the effects of construction noise, ANR plans to limit construction activities to daytime hours where possible, maintain construction equipment in good working order, and use mufflers for equipment exhaust. However, weather conditions, site conditions, specialized construction techniques, emergencies, or other atypical circumstances may necessitate extended work outside of typical workday hours (7:00 a.m. to 7:00 p.m.), including work on Sundays and holidays.

Nearby *agricultural operations* may also wish to consider the following recommendation:

- Livestock owners & operators within the Project ROW who are concerned about the noise potential for the Project should inform ANR or their representatives of their concerns and ask for advanced warning before noise generating construction activities begin.

#### ***5.6.11. Irrigation***

Natural gas pipeline construction activities and the placement of the pipeline 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. ANR has prepared a BMP to address impacts to irrigation and irrigation systems as seen in Appendix B. This BMP conforms to the *mitigation* practices sought by the Department. ANR is also required by FERC to have a variety of BMPs, as seen in Appendix C, to mitigate impacts to irrigation systems and will follow all requirements at the most restrictive level.

The Department recommends that *agricultural operations* consider the following recommendation:

- Prior to construction, *agricultural operations* that use irrigation within or adjacent to the Project ROW should inform ANR 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.

#### ***5.6.12. Temporary Access Roads***

ANR 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.

To mitigate the potential impact of temporary access roads, ANR will follow a final cleanup process, as seen in Appendix B. ANR is also required by FERC to restore the ROW, clear all debris and remove all stones and rocks associated with access roads (Appendix C). ANR's cleanup process aligns with FERC requirements and contains the *mitigation* practices the Department recommends to mitigate the impact of temporary construction roads.

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

If approved, the Project will impact approximately 25.3 acres of MFL lands. An explanation of the state's MFL program and what that means for the woodlands enrolled within the program is provided in Section 3.2.3. 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 the production and sale syrup. The removal of any trees from a property may also decrease the market value of the property. ANR will follow brush and tree clearing BMPs, as seen in Appendix B, to mitigate impacts to MFL lands and align with BMPs sought by the Department.

The Department recommends that *agricultural operations* consider the following recommendations:

- Landowners who wish to obtain their own appraisal should also hire an appraiser who has experience and expertise in valuing trees.
- Landowners who wish to farm within the deforested area should discuss tree stump removal with ANR during the *easement* negotiation process.

#### ***5.6.14. 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* or *herbicide free* 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 dewatering. ANR and their contractors must use caution and care where the Project ROW borders or crosses an area with certification. Wis. Admin. Code § ATPC 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. ANR has prepared a BMP for organic farms and other areas with certification, as seen in Appendix B, that conforms to the *mitigation* practices the Department seeks to preserve agricultural areas with certifications.

To mitigate impacts to areas with certifications, the Department recommends that *agricultural operations* consider the following recommendations:

- *Agricultural operations* with an area of certification should contact ANR and report the range and type of substances that are and are not permitted according to their certifications.
- *Agricultural operations* 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/>.
- ANR 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, ANR should contact the operation to discuss the appropriate methods required to minimize the risk of accidental exposure.

#### ***5.6.15. 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 that impact an *agricultural operation*. Certified organic farms and farms with other certifications such as pesticide-free or herbicide-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). ANR has prepared a BMP for biosecurity, as seen in Appendix B, that conforms to the practices the Department seeks to avoid the spread of agricultural diseases and pests.

#### ***5.6.16. Restoration***

Restoration is the final step in assuring an impacted agricultural area is restored as close as possible to preconstruction conditions. In general, restoration activities include the soil restoration, soil grading and seeding. Stockpiled *topsoils* and subsoils removed during construction are returned, in the proper order, and graded to match 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.

ANR has proposed various BMPs in Appendix B to restore the impacted agricultural lands as close as reasonably possible to their pre-construction conditions. Collectively, these BMPs contain the majority of *mitigation* practices the Department supports. ANR is also required by FERC to have a restoration plan, as seen in Appendix C, and will follow all requirements at the most restrictive level.

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