

AGRICULTURAL IMPACT STATEMENT



**DATCP
#4355**

**Town of Ixonia Utility District #1
Wastewater Treatment Plant
Town of Ixonia
Jefferson County**



**WISCONSIN DEPARTMENT OF AGRICULTURE,
TRADE AND CONSUMER PROTECTION**
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Town of Ixonia Utility District #1 Wastewater Treatment Plant

WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION

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MISSION STATEMENT

Dear Reader,

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

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

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

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

Thank you

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SUMMARY OF AGRICULTURAL IMPACT STATEMENT

The Wisconsin Department of Agriculture, Trade and Consumer Protection (referred to as the Department) has prepared this Agricultural Impact Statement (AIS) for the proposed acquisition of land by the Town of Ixonia (referred to as the Town) in Jefferson County, WI (DATCP #4355). The Town's Utility District #1 has proposed this project in order to construct a new wastewater treatment plant (WWTP) as a replacement for the existing Utility District #1 WWTP (Figure 1). The existing Utility District #1 WWTP is currently unable to fully comply with its Wisconsin Pollutant Discharge Elimination System (WPDES) permit.

On a treatment basis, the Town's Utility District #1 WWTP is meeting its Total Suspended Solid and Biological Oxygen Demand removal treatment standards according to its WPDES permit. The WWTP is currently operating outside of its WPDES treatment standards for ammonia and is operating on a permit variance for chloride. In the future, the WWTP has documented that it may not be able to achieve Total Phosphorus reduction standards required for the Rock River Total Maximum Daily Load. In addition, the WWTP may not be able to handle the increased wastewater influent rate (MGD) that is expected to result from the future population growth for the Town.

The Town evaluated a total of five project alternatives. A no-build alternative was not evaluated due to the inability of the existing WWTP to meet the conditions of its WPDES permit. Based on the five proposed alternatives the Town selected a preferred alternative, which is to replace the existing WWTP at a new location and to relocate the outfall to the Rock River. Working from the preferred alternative, the Town evaluated and ranked a total of six potential locations to locate the new WWTP on. The Town selected the location with the highest rank as the preferred site. The preferred site consists of 46.6 acres of agricultural land located adjacent to the unincorporated community of Ixonia (Figure 1). The land is owned by a single agricultural landowner and is proposed to be acquired by a fee-simple acquisition.

In accordance with [Wis. Stat. §32.035](#), the Town has provided the Department with the necessary information and materials to conduct an AIS. The Department has also contacted the agricultural property owner and operator of the preferred site affected by the Town's the proposed preferred alternative. In accordance with [Wis. Stat. §32.035\(4\)\(b\)](#), the Department has reviewed and analyzed the Town's materials and comments from the affected agricultural property owner and operator of the preferred site to assess the agricultural impacts of the Town's proposed Utility District #1 WWTP. Through the AIS analysis, the Department offers a set of recommendations and conclusions to the Town and the agricultural land owner and operator to help mitigate current and future impacts on agricultural lands and agricultural operations at the preferred site.

The set of recommendations are located within the Agricultural Impact Statement Recommendation Section beginning on page 3. The Agricultural Impact Statement analysis begins on page 5 with information on the project located in Section II. Information and conclusions on the agricultural setting of Jefferson County and impacted area can be found in Section III, the agricultural impacts of the project on the area, landowner and operator in Section IV and information on the appraisal and compensation process in Section V.

If the Town deviates from the preferred alternative or the preferred site, the Town 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.

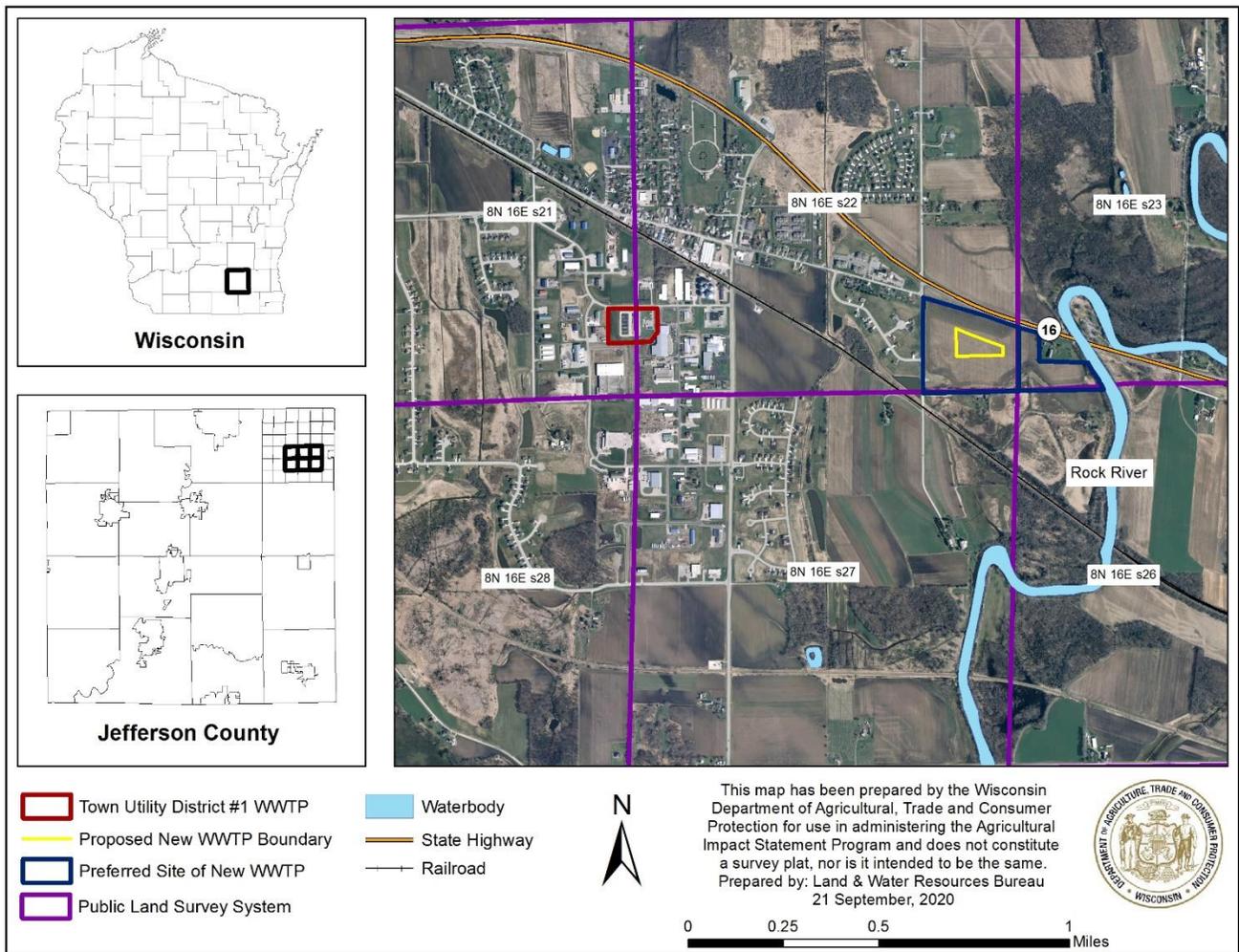


Figure 1: Location of the Town of Ixonia existing and proposed new Utility District #1 wastewater treatment plants. The proposed new location represents the Town's preferred alternative at the preferred site adjacent to the unincorporated community of Ixonia.

AGRICULTURAL IMPACT STATEMENT RECOMMENDATIONS

The Wisconsin Department of Agriculture, Trade and Consumer Protection (referred to as the Department) has reviewed and analyzed the materials provided by the Town of Ixonia (referred to as the Town) and comments from the affected agricultural property owners and operators regarding the Town's proposed Utility District #1 wastewater treatment plant (WWTP). In accordance with [Wis. Stat. §32.035\(4\)\(b\)](#), the Department provides the following recommendations to the Town and agricultural land owners and operators to help mitigate impacts on agricultural lands and agricultural operations.

Recommendations to the Town of Ixonia

- Agricultural land owner(s) and rental operator(s) should be given advance notice by the Town of the acquisition and project-timeline so that ongoing and projected agricultural activities can be adjusted accordingly.
- If there is adequate growing season for a crop to mature and be harvested after the Town of Ixonia acquires the land, but before construction of the wastewater treatment plant begins, the Town should consider formalizing a rental contract with the current agricultural operator(s) to harvest a crop for that season.
- During project design, the Town of Ixonia should consult with the Jefferson County Conservationist to ensure that land restoration and planting of the landscape around the facility proceeds in a manner that minimizes drainage problems, soil erosion and soil compaction on the remaining remnant agricultural lands as well as adjacent properties.
- During excavation and installation of the sanitary main pipeline, from the WWTP to the Rock River outflow, the Town should consider implementing the three-lift soil handling method. Implementation of the three-lift soil handling method along the sanitary main track, denoted for the preferred alternative, would reduce construction impacts to the affected soils, promote future agricultural benefits and potentially minimizes the loss of soil productivity.
- After construction of the wastewater treatment plant is complete, the Town should consider allowing appropriate agricultural uses, such as but not limited to no-till cropping (corn, soybean or hay etc.) or managed grazing on all or parts of the remaining lands not developed for the construction of the WWTP. Doing so would minimize the conversion of agricultural land around the site.

- The Town should consider locating the sanitary pipeline as close to the edge of the field and outside of future potential cropland areas as possible. Doing so would lessen the impacts to future potential croplands and reduce any future potential for damage caused by agricultural equipment, if future agricultural practices are allowed by the town following construction.

Recommendations to the Farmland Owners and Operators

- The affected farmland owner(s) should fully describe and discuss property improvements and farm operations with the appraiser(s) so that the appraiser(s) can appropriately value the extent of the project's impacts on the property.
- With approval from the Town of Ixonia, the affected agricultural operator(s) may be able rent the remaining remnant agricultural space for appropriate agricultural uses, such as but not limited to no-till cropping (corn, soybean or hay etc.) or managed grazing.
- The affected farmland owner(s) should inform the tenant agricultural operator(s) if the Town of Ixonia has made a jurisdictional offer, under the power of eminent domain.

AGRICULTURAL IMPACT STATEMENT

I. INTRODUCTION

The Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) (referred to as the Department) has prepared this agricultural impact statement (AIS) in accordance with [Wis. Stat. §32.035](#) for the proposed Town of Ixonia Utility District #1 Wastewater Treatment Plant (WWTP) (Figure 1, 2). WWTPs operate as municipal utilities that service the public welfare by collecting and treating municipal wastewater from residential, commercial, and industrial sources. Once municipal wastewater is properly treated, it's no longer acutely toxic and is released into the environment. Both Federal and State laws and regulations govern the release of treated municipal wastewater in order to mitigate the negative impacts its release has to the environment, wildlife, and public.

The AIS is an informational and advisory document that describes and analyzes the potential effects of the project on agricultural operations and agricultural resources, but it cannot stop a project. The Department is required to prepare an AIS when the actual or potential exercise of eminent domain powers involves an acquisition of interest in more than 5 acres of land from any agricultural operation. The term agricultural operation includes all owned and rented parcels of land, buildings, equipment, livestock, and personnel used by an individual, partnership, or corporation under single management to produce agricultural commodities.

The AIS reflects the general objectives of the Department in its recognition of the importance of conserving important 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.

As stated in Wis. Stat. §32.035(4)(d):

Waiting period. The condemnor may not negotiate with an owner or make a jurisdictional offer under this subchapter until 30 days after the impact statement is published.

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

II. PROJECT DESCRIPTION

The Project

The Town of Ixonia, in Jefferson County, WI (referred to as the Town) has proposed to construct a new wastewater treatment plant (WWTP) at a new location to replace the existing

facility that services the Town's Utility District #1. Utility District #1 services the central portion of the Town including the unincorporated community of Ixonia. To date, the Town is currently working with the WI Department of Natural Resources to finalize the facility plan for the Utility District #1 WWTP. In lieu of the final facility plan, the Town has provided a draft version of the facility plan to the Department. The draft facility plan (Donohue, 2020) in conjunction with the Town's agricultural impact notification to the Department were analyzed as part of the AIS and serve as reference documents for the project, its existing facility, the project need and project alternatives. The Town's proposed project represents its preferred project alternative at its preferred location. The proposed WWTP facility would be located adjacent to the unincorporated community of Ixonia (Figure 1) on two parcels of agricultural land (parcel ID's 012-0816-2244-000 and 012-0816-2333-003) shown in Figure 2. The proposed project would acquire the entire acreage of both parcels (46.6 acres) by a fee-simple acquisition (i.e to purchase full ownership and exclusive rights to the property) to construct the WWTP facility.

The proposed WWTP facility would consist of several different structures including a structure to house influent screening, an anaerobic selector structure, a three ring oxidation ditch, two secondary clarifiers and a structure to house UV disinfection. Future planning also includes the option to construct facilities for cloth media disk filters, an aerobic digestion/biosolids storage system and a gravity belt thickener for biosolids thickening. These structures and the future optional structures would be centrally located on a 3.7 acre section of the parcel ID's 012-0816-2244-000 (Figure 2). A service road (approximately 1.6 acre) would be constructed to encircle these structures and contain two access points along River Valley Road. Two pipelines would also be constructed on the farmland parcels including:

- 1) A 10 inch diameter force main (FM) pipeline carrying untreated sewerage from the Town's Utility District #1 into the WWTP.
- 2) A 14 inch diameter sanitary main (SAN) pipeline carrying treated effluent from the WWTP east to the point of outfall (i.e discharge) along the Rock River.

The pipelines would be installed below ground within a trench excavated to a depth providing a minimum distance of 6 ft from the top of the pipeline to the soils surface and have a design life of 50 years. The SAN pipeline would have three manholes, seen in Figure 2, located along the pipeline to provide surface access, while the FM would have no manholes.

Existing Facility

According to the draft facility plan (Donohue, 2020), the existing Utility District #1 WWTP for the Town was constructed 1982, expanded in 2003 and is currently operating under the Wisconsin Pollutant Discharge Elimination System (WPDES) permit 0031038-09-0. This WWTP is centrally located within the unincorporated community of Ixonia (Figure 1) and provides sewer service to

an estimated 3,039 people (Donohue, 2020). Due to the WWTP's location within the community of Ixonia, it is in close proximity (< 500 feet) on all sides to developed light industrial urban land uses. The main components of the existing WWTP consist of an influent lift station, settling tanks, dosing tank and recirculating sand filters.

Under the Town's preferred project alternative, the existing Utility District #1 WWTP (Figure 1) would be converted to an influent screening facility and lift station. The influent pumps and headworks would be repurposed for use as part of a lift station that would send all flowage it receives to the new Town of Ixonia WWTP. The existing filter cells would be repurposed as wet weather storage and pumps that currently pump from the headworks into the sand cells would be repurposed as wet weather pumps (Donohue, 2020).

Project Need

The need for the proposed project or a project alternative is detailed within the Town's draft facility plan (Donohue, 2020). In brief, the Utility District #1 WWTP current and future inability to fully achieve its WPDES wastewater treatment standards would indicate the potential for corrective action by the Town. An evaluation of the Town's draft facility plan shows that the Utility District #1 WWTP is currently operating near its influent rate (MGD) treatment capacity. Future population growth within the Utility District #1 service area are predicted to increase and this could further degrade the WWTP ability to properly handle wastewater influent rates (MGD) from the district. On a treatment basis, Utility District #1 WWTP is currently only meeting its Total Suspended Solid (TSS) treatment standard on a consistent basis and is generally meeting Biological Oxygen Demand (BOD₅) removal treatment standards according to its WPDES permit. This WWTP is currently operating outside of its WPDES treatment standards for ammonia, is operating on a permit variance for chloride and has some incidences of BOD₅ outside of treatment standards. The Utility District #1 WWTP has also documented that it may not be able to achieve Total Phosphorus reduction standards required for the Rock River Total Maximum Daily Load (TMDL) standard.

Alternatives

As part of the Town's draft facility plan and agricultural impact notification submission to the Department, the Town evaluated four alternatives, in addition to the proposed project (Donohue, 2020). A no-build alternative was not evaluated due to the inability of the existing Town WWTP for Utility District #1 to meet its WPDES requirements.

- *Alternative A: Regionalization of the WWTP*

The Town contacted the City of Oconomowoc, the closest WWTP, and asked if they would accept the municipal untreated wastewater from the Town's Utility District #1 WWTP. The

Mayor, City Administrator, and City Engineer of Oconomowoc released a decision stating that the City of Oconomowoc WWTP or its sewer service area would not expand to accept the Town's municipal wastewater. Based on the decision of the City of Oconomowoc, the Town removed regionalization with the City of Oconomowoc WWTP as an alternative. The Town also acknowledged the possibility of regionalization with the City of Watertown. Given that the City of Watertown is 14 miles away, the Town believed the cost to develop sewer and pumping to the Watertown WWTP would be cost-prohibitive and did not evaluate this alternative.

- *Alternative B: Upgrade and Expand Existing WWTP with Existing Outfall*

The Town's draft facility plan states that the existing plant has the space available to expand onto nearby land owned by the Town. However, the Town's agricultural impact notification states that upgrading the existing facility would not allow the Town to meet its WPDES standard to discharge chloride unless the outfall location is moved to the Rock River, which has a higher threshold for chloride. As chloride cannot be removed by standard wastewater treatment practices, the Town did not evaluate other practices that would reduce chloride within its untreated or treated municipal wastewater. Furthermore, the Town's draft facility plan concluded that there is not sufficient space at the current location to allow for the required 500 ft setback from any residence when siting the expanded WWTP.

- *Alternative C: Upgrade and Expand Existing WWTP, Relocate Outfall to the Rock River*

Under this alternative, detailed within the Town's agricultural impact notification, the Town would upgrade and expand the existing WWTP as well as relocate the outfall location to the Rock River. The Rock River was selected as the new receiving stream as it has a higher threshold for chloride under WPDES regulations. However, similar to Alternative B, the Town's draft facility plan concluded that there is not sufficient space at the current location to allow for the 500 ft setback from any residence when siting the expanded WWTP.

- *Alternative D: Replace the Existing WWTP at the Existing location, Relocate Outfall to the Rock River*

Under this alternative, detailed within the draft facility plan, the Town would decommission the existing WWTP and replace it with a new WWTP at the existing location. However, similar to Alternative B and C the Town concluded that there is not sufficient space to allow for the 500 ft property setback from any residence when siting the new WWTP. Furthermore, the Town concluded that it would not be feasible to continue treatment at the existing WWTP, while the new facility is constructed.

- **Alternative E:** Replace the Existing WWTP at a New location, Relocate Outfall to the Rock River (Proposed Alternative seen in Figure 2)

Under this alternative, detailed within the draft facility plan, the Town would construct a new WWTP on new land. The new WWTP would contain wastewater treatment systems detailed in Section II, *The Project* seen above. The Town originally looked at eight potential locations to site the new WWTP. The sites were evaluated based on several criteria, which were used to narrow the potential locations down to six sites. The remaining six sites were ranked within a weighted decision table according to the following criteria: conveyance distance/costs, land acquisition complexity, access to the site and construction & permitting complexity. The proposed project site seen in Figure 2 was ranked the highest and selected as the preferred location.

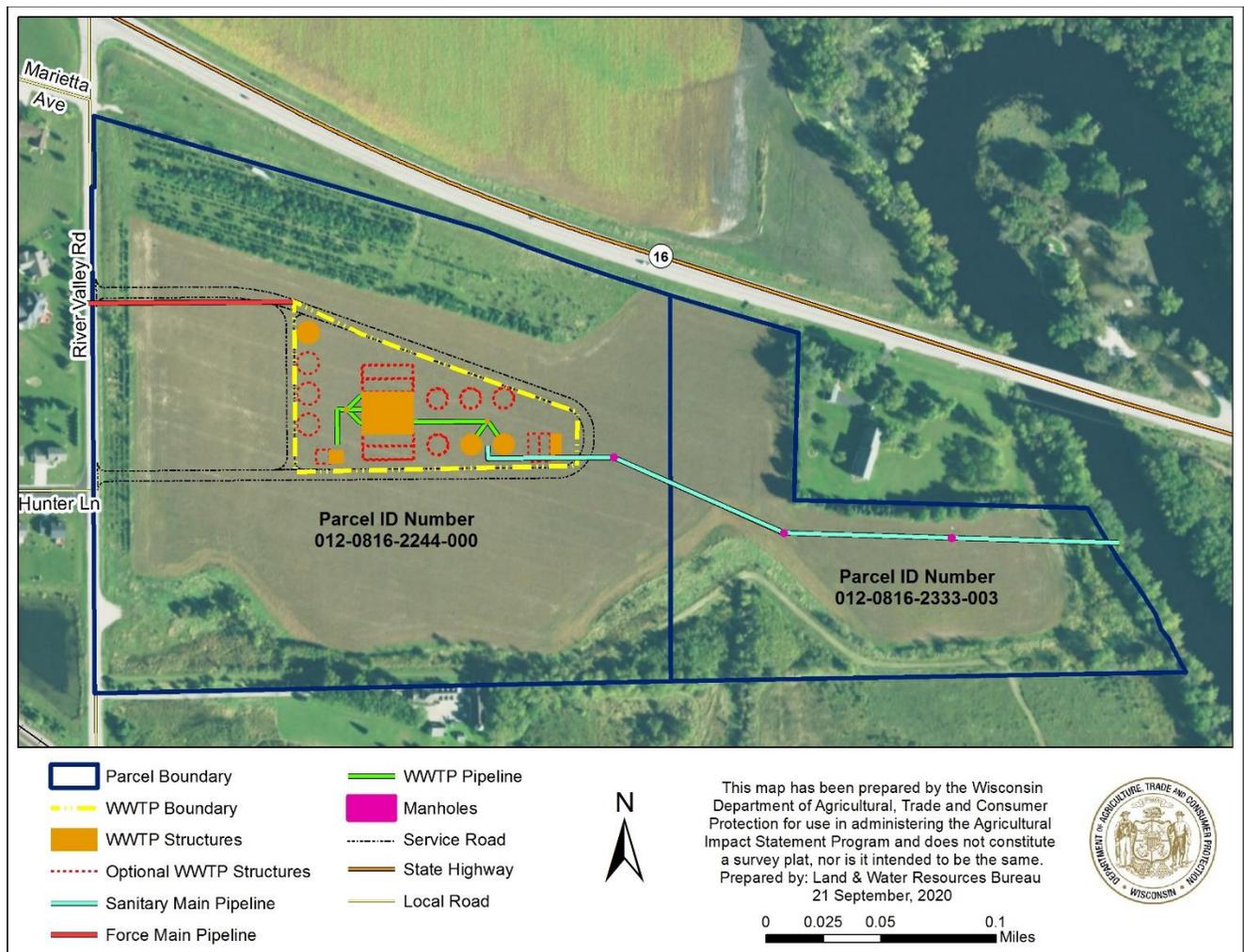


Figure 2: Location and general design of the proposed new wastewater treatment plant for the Town of Ixonia, WI Utility District #1 at the preferred location.

III. AGRICULTURAL SETTING

The agricultural setting of a county has the potential to broadly impact agricultural land valuations. For example, counties with productive lands and/or urban counties with increased developmental pressures are generally known to result in higher sale prices for agricultural lands (Borchers et al., 2014; Nantel, 2020). As the impacted lands for the Town’s WWTP reside within Jefferson County, the agricultural setting of Jefferson County will be analyzed to provide baseline information to assess the productivity and valuation of agricultural lands within the County. Section IV, *Agricultural Impacts* will analyze and discuss the potential impacts of the project on impacted agricultural lands.

Agricultural Productivity

In 2017 the U.S. Department of Agriculture (USDA) Census of Agriculture determined that Jefferson County had 1,098 farm operations on 221,355 acres of agricultural lands (USDA, 2017). Reviewing Jefferson County crop yield data can assess the general agricultural productivity of the county’s farm operations. The most recent crop yield data from the USDA Wisconsin Agricultural Statistics Bulletin (Table 1) shows that Jefferson County, over a three year period (2016 – 2018) has consistently produced average crop yields that are near or above the state average (USDA, 2017a; USDA, 2018; USDA, 2019a). The crop yield data from Jefferson County would indicate that the agricultural operations as a whole are productive operations that meet or exceed state average crop yields (Table 1).

Table 1: Crop yields for selected crops (2016 to 2018) in Jefferson County and the Wisconsin State average yield (USDA, 2017a; USDA, 2018; USDA, 2019a).

Crop	Crop Yield (bushels / acre)					
	2016		2017		2018	
	Jefferson Co.	State Avg	Jefferson Co.	State Avg	Jefferson Co.	State Avg
Corn (Grain)	195.3	178.0	173.4	174.0	NA	172.0
Soybeans	58.5	55.0	46.1	47.0	52.2	49.0
Oats	NA	66.0	48.8	59.0	NA	61.0
Winter Wheat	75.4	79.0	70.0	68.0	79.4	71.0

* NA = data not published

Land in Agriculture

Jefferson County, with a population of 84,579 residents (DOA-2019a) is classified as a Micropolitan Statistical Area (DOA 2019b), which is defined as a county that contains urbanized population clusters of at least 10,000 but less than 50,000 people (Standards, 2010). Jefferson County is also located to the west of Wisconsin’s largest Metropolitan Statistical Area (MSA) the

Milwaukee-Racine-Waukesha County cluster and to the east of Wisconsin 2nd largest MSA the Madison-Janesville-Beloit MSA.

Urban development pressures on agricultural lands are known to increase the rate of farmland conversion and increase agricultural land sale values (Azadi et al., 2010; Borchers et al., 2014). The following analysis will identify if agricultural lands within Jefferson County are exhibiting signs of urban pressure and development. In 2017, Jefferson County had 221,355 acres of land in farms or 62.2% of the county, which is higher than the statewide average of 41.3% (USDA, 2017b). However, between 1997 and 2017 (8.6%) of agricultural lands within Jefferson County were converted out of agricultural use, a proportion more than double the statewide average (3.9%) (Table 2) (USDA, 2017b). During this same time-period (1997 – 2017) Jefferson County lost 11.5% of its’ farming operations, which is almost 10 times higher than the average loss experienced across Wisconsin (Table 3) (USDA, 2017b).

Table 2: Agricultural land in production within Jefferson County and Wisconsin (USDA, 1997; USDA, 2017b).

Location	Acres of Agricultural Land (acres)		Agricultural Land Converted (%)
	<u>1997</u>	<u>2017</u>	
Jefferson County	242,301	221,355	8.6%
Wisconsin	14,900,205	14,318,630	3.9%

Table 3: Change in the number of farms between 1997 and 2017 within Jefferson County and Wisconsin (USDA, 1997; USDA, 2017b).

Location	Number of Farming Operations		Change in Farming Operations	Percent Change (%)
	<u>1997</u>	<u>2017</u>		
Jefferson County	1,240	1,098	-142	-11.5%
Wisconsin	65,602	64,793	-809	-1.2%

The location of Jefferson County between Wisconsin’s 1st and 2nd largest MSA has likely contributed to the high rate of farmland conversion and loss of farming operations. For example, the population within the 53036 zip code, which encompasses the proposed project within Jefferson County, is designated as a *Metropolitan Area Core* by the USDA Rural-Urban Commuting Area Codes (USDA, 2010). This designation indicates that the population within the 53036 zip code area provides primary population flow to the Milwaukee-Racine-Waukesha County MSA cluster.

It is apparent from this analysis that Jefferson County is losing agricultural land and farming operations at a higher rate than statewide averages. Furthermore, the urban development pressures that surround Jefferson County are likely contributing to these high rates of agricultural land and farming operations losses. Going forward, the 2040 WI-DOA (2013) population

projections for the MSA Counties that surround Jefferson County indicate population growth between 7.2% (Milwaukee County) and 24.3% (Dane County). Likewise, Jefferson County is predicted to see a 19.9% increase in its population by the year 2040 (DOA, 2013). The impact of the MSA counties and growth within Jefferson County is also apparent at the Town and community level. At the Town level, the WI-DOA (2013) predicts that between 2010-2040 the Town of Ixonia will see a 57% population and designated the Town as one of the fastest growing municipalities, by percent, in WI. At the community level, the draft facility plan for Town's Utility District #1 WWTP projects that by 2040 Utility District #1 will provide service to an estimated 5,250 people, an increase of 80.7% from its existing service population. The community, Town, and County level developmental pressures that accompany the metropolitan growth in this area are impacting agricultural land conversion, through projects like the Utility District #1 WWTP. Moreover, the potential for the continued high levels of agricultural land conversion within Jefferson County is apparent from WI-DOA projected population increases for the Town of Ixonia, Jefferson County and the surrounding area.

Property Valuation

The valuation of agricultural lands is a key component of a county's agricultural settings. This valuation broadly serves as an indicator for the demand of agricultural land as well as its market value. Circumstances that impact the land such as agricultural productivity, urban development pressures and the intended future use of the land also factor into agricultural land valuation. Nonetheless, market conditions for agricultural land sales may vary from year to year and may not be apparent at the local scale.

The analysis of agricultural land value performed here encompassed agricultural land sales for both continued agricultural use and agricultural land diverted to other land uses, at the county scale and over a three-year time period. As the Town's proposed WWTP is located within the 53036 zip code, which physically borders Waukesha County and is also influenced by the Waukesha County MSA, the analysis included both Jefferson and Waukesha Counties. For the aforementioned reasons, the valuation of agricultural lands in within the 53036 zip code is considered equivalent to Waukesha County. The results of the agricultural land sale value analysis are shown in Table 4.

The average (\$ /acre) sale price for agricultural land sold for continued agriculture use between 2016 – 2018 in Jefferson and Waukesha Counties was \$6,810 and \$10,772 respectively. In comparison to the statewide averages, agricultural land sold for agricultural uses in Jefferson and Waukesha Counties sold for 30% and 105% above the state average sale price. Across the state and Waukesha County agricultural lands sold for development to non-agricultural uses averaged sales values of \$10,544 and \$14,456 respectively. However, Jefferson County agricultural land sales for development to non-agricultural uses were lower than the state average, at \$5,947.

Table 4: Agricultural land sales from 2016 – 2018 in Jefferson County, Waukesha County and the Wisconsin State average (USDA, 2017a; USDA, 2018; USDA, 2019).

Location	Agricultural Land Sale* (\$ / acre)					
	2016		2017		2018	
	Sold for Ag ^ϕ	Diverted [⌘]	Sold for Ag ^ϕ	Diverted [⌘]	Sold for Ag ^ϕ	Diverted [⌘]
Jefferson County	7,399	5,800	5,826	-	7,204	6,093
Waukesha County	-	8,051	11,406	10,300	10,138	25,016
Wisconsin Average	5,221	7,558	4,960	10,794	5,587	13,280

*Sales based on "arms length" transactions, not including sales outside of market conditions (e.g. family sales or foreclosures)

ϕ Agricultural land sold for continued agricultural use

⌘ Agricultural land sold and diverted to other use outside of agriculture

The average sale price for agricultural lands in Jefferson and Waukesha Counties, with the exception of agricultural land sold for development Jefferson County, is well above state averaged sale prices. The above average sale prices for agricultural land shown in this area indicates there is a strong level of demand for both agricultural land for the purpose of agricultural as well as lands for development. Given the Town proposes to locate the WWTP within the 53036 zip code, the estimate of agricultural land valuation for the purpose of development in this analysis is based on the 2016 - 2018 average sale price for agricultural lands sold for development within Waukesha County and not Jefferson County. As such, the analysis has established an average valuation of \$14,456 per acre for agricultural land sold for development in this area. The estimated valuation proposed within this analysis is not a valuation of any particular agricultural land or property and is only intended to establish an estimated average valuation for agricultural lands sold to non-agricultural uses within the 53036 zip code. As the data used within the analysis is an average over the 2016 – 2018 time period it is likely the averaged sale valuation for agricultural lands sold for development to non-agricultural uses in the year 2020 has changed.

Farmland Preservation

Wisconsin’s Farmland Preservation Program (FPP) provides counties, towns, and landowners with tools to aid in protecting agricultural land for continued agricultural use and to promote activities that support the larger agricultural economy. Through this program, counties adopt a state-certified farmland preservation plan that maps areas identified as important for farmland preservation and agricultural development based upon reasonable criteria. Based on the plan local governments may choose to adopt an exclusive agricultural zoning ordinance to ensure that farmland covered by the ordinance is eligible for farmland preservation tax credits. Such an ordinance must also be certified by the Department.

A review of the Departments Farmland Preservation Program shows that Jefferson County has a DATCP-certified Farmland Preservation Plan (DATCP, 2020a). In addition, all towns within

Jefferson County have county-administered zoning. A review of Jefferson County's current zoning map indicated that both parcels of the preferred location are zoned as an A-1 exclusive agricultural district. As agricultural zoning is administered at the county level, the Jefferson County Zoning Ordinance (Jefferson, 2018) was investigated to determine the permitted and conditional uses within an agricultural zone. Under the Jefferson County A-1 exclusive agricultural district, utilities are listed under two uses:

- A permitted principal use when "required under state or federal law to be located in a specific place, or that is authorized to be located in a specific place under a state or federal law that preempts the requirement for a conditional use permit" (Jefferson, 2018).
- A conditional permitted use that "qualifies under §91.46(4) of the Wisconsin Statutes."

As no state or federal law is requiring the Town to locate the WWTP at the specific proposed project location, the siting of the proposed project WWTP within an farmland preservation zoning district would be governed under [Wis. Stat. §91.46\(4\)](#) or require the parcels to be rezoned under [Wis. Stat. §91.48](#). In order for a utility's use to conditionally qualify within a farmland preservation district, the utility's use must meet the five criteria established under [Wis. Stat. §91.46\(4\)](#). If these criteria are not met, the utility's intended use would not comply with Wis. Stat. §91.46(4).

Agricultural Enterprise Areas

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 agriculture and further supports local farmland preservation and agricultural development goals. Designation as an AEA also enables eligible landowners to enter into farmland preservation agreements. Through a farmland preservation agreement, a landowner agrees to voluntarily restrict the use of his/her land to agriculture for fifteen years in exchange for a tax credit. Both AEAs and FPP zoning areas are required to follow the state soil and water conservation standards to protect water quality and soil health.

A review of the Department's AEA program shows that Jefferson County has one AEA. The Scuppernong AEA is located in the southeastern corner of Jefferson County and spans the Towns of Palmyra, Sullivan, Cold Spring, and Hebron (DATCP, 2020b). None of the six agricultural sites the Town evaluated within the preferred alternative (Alternative E) are located within the Scuppernong AEA.

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 of lands for agricultural use (DATCP, 2019b). Landowners who benefit from drainage pay assessments to cover the cost

to construct, maintain, and repairing the district's drains. According to the Department, approximately 176 active districts exist within 31 of Wisconsin's 72 counties (DATCP, 2019b). A review of the Department's interactive drainage district web map (DATCP, 2020c) indicated that drainage district numbers 3, 36, 41 and 44 are located within the Town of Ixonia. However, none of the six agricultural sites the Town evaluated within the preferred alternative (*Alternative E*) are located within the Town's drainage districts.

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 to meet their conservation goals. The USDA and the Department jointly administer the CREP program in Wisconsin. The CRP 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, 2019a). A review of the Department's CREP records indicated that none of the six agricultural sites the Town evaluated within the preferred alternative (*Alternative E*) are enrolled within the CREP program.

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, 2019b). Eligible agricultural landowners must possess lands with the potential for long-term improvements to water quality, prevent soil erosion or establish beneficial wildlife habitats according to the USDA Environmental Benefits Index (USDA, 2019b). The Wisconsin State office of the USDA Farm Service Agency was contacted for CRP records pertaining to the preferred location. The preferred location is not enrolled within the CRP program.

IV. AGRICULTURAL IMPACTS

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

operator(s) to analyze the potential agricultural impacts of the Town’s WWTP at its preferred location. The analysis of the Town’s agricultural impacts and conclusions drawn from the analysis form the basis of many of the Departments recommendations within the Agricultural Impact Statement Recommendation Section above.

Prime Farmland and Soils

The Town’s preferred alternative for the WWTP project would impact 46.6 acres of agricultural lands. The soils that are impacted by the proposed project were cataloged by soil map unit (Figure 3) and soil texture (Table 5) using the Department’s 2016 prime farmland soils GIS layer. These soils were analyzed for impacts to soils designated as prime farmland, prime farmland if drained or farmland of statewide importance (Table 5). Prime farmland is designated by the USDA according to section 622.3 of the National Soil Survey Handbook (USDA, 2017c) 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 importance are provided under Table 5.

Table 5: Soils impacted by the proposed Town of Ixonia wastewater treatment plant.

<u>Soils</u>		Prime Farmland* (acre)	Prime Farmland if Drained ^ϕ (acre)	Farmland of Statewide Importance [‡] (acre)
Texture	Acres			
Fine Sandy Loam	7.7	7.7	-	-
Silt Loam	30.9	6.6	18.5	5.8
Silty Clay Loam	7.9	-	7.9	-
<i>Totals</i>	46.6	14.3	26.4	5.8

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

^ϕ**Prime farmland if drained**, indicates that if farmland is drained it would meet prime farmland criteria.

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

The majority of agricultural lands (approximately 29.0 acres) impacted by the Town’s WWTP are tillable soils for agricultural crop production, while the remaining 17.6 acres are agricultural woodlands (Figure 3). The soils on the impacted parcels are predominately (66%) silt loam textured soils. Silt loam soils are medium-textured soil 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). All of the farmland contained within the impacted parcels hold some level of USDA or WI special farmland designation. Based on Table 5, 31% of the impacted area is designated as prime farmland, another 57% is designated as prime farmland if drained

(cumulatively 87% potentially prime farmland) and the last 13% have been designated by the state as farmland of statewide importance. The silt loam soils within the impacted area also comprise 62% of the prime farmland (including prime farmland if drained). From this analysis, the Town’s preferred proposed alternative for the WWTP at the preferred location has the potential to remove both high quality soils and prime farmland from production.

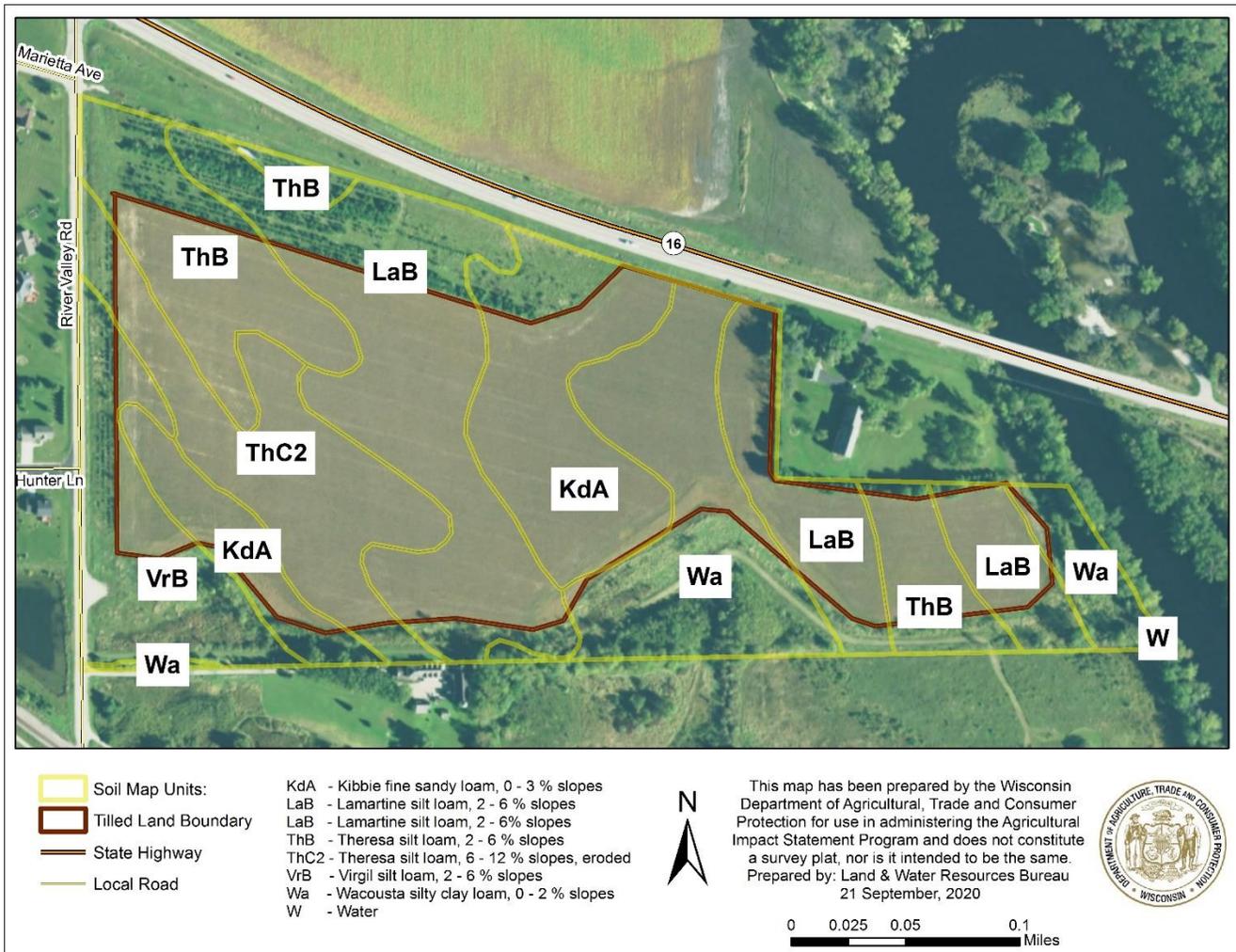


Figure 3: Soil map units and tillable land of proposed Town of Ixonia wastewater treatment plant.

Three-Lift Soil Handling

The three-lift soil handling procedure is recommended for cropland and pasture where the mixing of the subsoil layers from construction practices such as a pipeline trench, 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).

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 protection of crop yields. A key for identifying soil candidates for three-lift soil handling is provided in Appendix C.

Using the soil characteristics and descriptions compiled by the USDA Natural Resources Conservation Services (NRCS) Web Soil Survey, the Department's review of the project area identified soils and potential areas that could benefit from three-lift soil handling procedures. The following soil map units (KdA, LaB, ThC, Vrb) shown in Figure 3 were all determined to be soils that would benefit from the three-lift soil handling method. These soil map units are located across both affected parcels and form the predominate soil map units along the track of the sanitary main pipeline. Therefore, the soils along the planned track of the sanitary main pipeline, from the WWTP to the Rock River outflow, would benefit from the three-lift soil handling method.

Landowner Impacts

The Town's proposed preferred alternative for the WWTP facility would affect two parcels of agricultural land (parcel ID's 012-0816-2244-000 and 012-0816-2333-003) seen in Figure 2. Louis J. Morgan II owns these two parcels of agricultural land totaling 46.6 acres and rents the tillable portion of the land (Figure 3) to the Runyard Grain Farm LLC. DATCP contacted via phone and email Louis J. Morgan II and the Runyard Grain Farm LLC to assess the impacts the Town's proposed project would have to their agricultural operations. Louis J. Morgan II was willing to provide comments, while the Runyard Grain Farm LLC declined to comment.

Mr. Morgan's agricultural land holdings and agricultural operation consist of the two parcels of agricultural land affected by the Town's proposed preferred alternative for the WWTP facility. From these two parcels, Mr. Morgan rents approximately 29 acres of tillable cropland to the Runyard Grain Farm LLC and manages the remaining 17.6 acres as agricultural woodlands. Mr. Morgan has indicated that the Town's proposed fee-simple acquisition (i.e to purchase full ownership and exclusive rights to the property) of his agricultural land holdings would cease his entire agricultural operation. The loss of this agricultural operation would have many direct impacts to Mr. Morgan including:

- Lost income from cropland rental
- Lost income from woodland firewood sales
- Loss of enjoyment gained from the property

Runyard Grain Farm LLC, based out of Oconomowoc, WI is an agricultural operation that produces corn, soybeans, hay, wheat and oats on agricultural lands it owns or rents. Runyard Grain Farm LLC also operates an agricultural equipment sales and service business. As part of their agricultural operation, the Runyard Grain Farm LLC employs a corn and soybean rotation on the 29 acres of cropland it rents from Mr. Morgan. As tenants of agricultural land impacted by the Town's WWTP, the Runyard Grain Farm LLC may be eligible for a farm replacement payment from the Town in accordance with [Wis. Stat. §32.19\(4m\)\(b\)](#) if the Town exercises the powers of eminent domain through a jurisdictional offer to Mr. Morgan. A voluntary sale between the Town and Mr. Morgan, after a jurisdictional offer has been made, would not negate the potential for a farm replacement payment to Runyard Grain Farm LLC.

As the Town proposes to acquire the entire acreage of both parcels (46.6 acres) by a fee-simple acquisition, Mr. Morgan and the Runyard Grain Farm LLC would not be able to utilize the remnant agricultural space area located outside of the 3.7 acre WWTP boundary as seen in Figure 2, which primarily consists of prime farmland. The remnant space that will remain outside of the WWTP boundary would include the entirety of parcel ID 012-0816-2333-003 (12.8 acre), with the exception of the sanitary main pipeline man holes, and remaining remnant agricultural area within parcel ID 012-0816-2244-000 (approximately 28.4 acre) not impacted by the 1.6 acre service road.

Allowing agricultural operations to rent the remnant agricultural space outside of the WWTP boundary for appropriate agricultural uses would reduce the overall impact to agriculture. The remaining undeveloped lands consist primarily of prime farmland located within a county known to produce crop yields near or above the state average. If construction impacts to this prime farmland are minimized, allowing access to these remaining remnant agricultural lands would likely be economically sustainable for an agricultural operation. For example, given the Town's proposed plan to trench pipelines a minimum distance of 6 ft from the top of the pipeline to the soils surface, there is the potential to allow appropriate agricultural uses, such as but not limited to non-till cropping (corn, soybean or hay etc.) or managed grazing, on either impacted parcel. Alternatively, the Town could relocate the pipeline outside of the cropland field boundaries to eliminate any potential for damage caused by agricultural equipment. If agricultural land is made available, parcel ID 012-0816-2333-003 has the potential to rent approximately 7.2 acre of agricultural cropland as well as additional acres of cropland rental primarily to the south of the WWTP on parcel ID 012-0816-2244-000.

Drainage and Soil Health

Maintaining proper field drainage and preserving soil health is vital to the success of an agricultural operation. If drainage is impaired, water can settle in fields and cause substantial damage, such as reducing soil health, harming or killing crops and other vegetation, concentrating mineral salts, flooding farm buildings, or causing hoof rot and other diseases that

affect livestock. Soil structure, texture, organic matter and microorganisms are all important factors that influence soil health (Wolkowski and Lowery, 2008). Maintaining good soil health is essential to maintaining proper internal drainage and achieving economical crop yields. The Town's construction plan for the WWTP facility on the affected parcels does include plans to engineer and re-grade the landscape surrounding the WWTP boundary on parcel ID 012-0816-2244-000 for proper drainage. The landscape of parcel ID 012-0816-2333-003 is to remain largely unaffected by construction with the exception of the sanitary main carrying treated effluent to the Rock River outfall location.

The heavy construction equipment such as bulldozers and excavators potentially weighing over 50 tons that will be installing the two WWTP pipelines and re-grading the landscape have the potential to impact drainage across these agricultural fields. 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); suggesting these agricultural fields are at risk of soil and sub-soil compaction. In addition, research has shown that construction of pipelines can negatively impact soil properties, soil health and crop yields for up to a decade within the impacted area depending on the type and severity of construction impacts (e.g equipment axle weight, use of excavation, intermixing of soil layer etc.) (Culley and DOW 1988; Shi et al., 2014). Consequently, the 29 acres of cropland, much of it prime agricultural soils on parcel ID's 012-0816-2244-000 and 012-0816-2333-003 may experience several negative impacts for years after the Town's WWTP has been completed, including but not limited to:

- Soil compaction, potentially subsoil compaction, within the area of the pipelines and surrounding the WWTP boundary from construction equipment
- Intermixing of topsoil and subsoil layers within the area the pipelines from trench excavation and installation, as well as re-graded landscape surrounding the WWTP boundary
- Decreased infiltration and internal drainage through surface soil and subsoil layers within the area of the pipelines and surrounding the WWTP boundary
- Decreased soil health and fertility throughout the pipelines areas and area surrounding the WWTP boundary
- Decreased potential crop yield throughout the pipelines areas and area surrounding the WWTP boundary

V. APPRAISAL AND COMPENSATION PROCESS

Before land acquisition negotiations begin, the Town of Ixonia Wastewater Utility (referred to as the Town) will provide an appraisal of the affected property to each landowner. An appraisal is an estimate of fair market value. The acquisition of land by utilities with eminent domain authority in Wisconsin is stipulated under [Wis. Stat. §32.06](#). Additional information about the appraisal process and landowners rights can be found in the Wisconsin Department of Administration publication, "[The Rights of Landowners under Wisconsin Eminent Domain Law](#)," also listed in appendix B.

The Town may conduct a market study to determine current area property values of affected property. If the landowner signs an appraisal waiver form, the market study will be the basis for the Town's offer of compensation and no individual property appraisal will be conducted. The Town may also offer additional compensation to landowners who choose to sign the appraisal waiver form.

Landowners have the right to obtain their own appraisal of their property under Wisconsin's eminent domain law ([Wis. Stat. §32.06](#)) and will be compensated for the cost of this appraisal if the following conditions are met:

- The appraisal must be submitted to the utility or its designated real estate contractor within 60 days after the landowner receives the initial utility appraisal
- The appraisal fee must be reasonable
- The appraisal must be a full, narrative appraisal
- The appraisal must be completed by a qualified appraiser

A jurisdictional offer to the landowner will include an appraisal of the fair market value for the land acquisition or easement and any anticipated damages to the property. The fair market value means the price that a willing buyer would pay to a willing seller in the market. This will be based on at least one full narrative appraisal for each property the Town intends to acquire. The appraisal must be presented to the landowner. The amount of compensation is based on the appraisal(s) and is established during the negotiation process between Town and the individual landowners.

The Town is required to provide landowners with information about their rights in this process before negotiations begin. [Wis. Stat. § 32.035\(4\)\(d\)](#) additionally stipulates that the Town cannot negotiate with a landowner or make a jurisdictional offer until 30 days after the AIS is published.

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DATCP Administrator, Agricultural Resource Management Division - Sara Walling

DATCP Director, Bureau of Land and Water - Lacey Cochart

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Dexter Runyard

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