

Lebanon
UTILITIES

**PRELIMINARY ENGINEERING REPORT
FOR
LEBANON UTILITIES
WATER SUPPLY PROGRAM
(DW 24 77 06 03)**

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PREFACE

APPLICANT NAME: Lebanon Utilities

PUBLIC WATER SUPPLY ID: IN5206003

SECTION 1 CURRENT CONDITIONS

SECTION 1 - CURRENT CONDITIONS

The Lebanon Utilities Water System has an overall capacity of approximately 4.60 MGD (million gallons per day). Presently, based upon current demands and allocated water for future projects, the remaining allocatable water in the system is at or near zero. While Lebanon Utilities' Water System has a strong supply of water for current users and previously approved and allocated projects, the amount of allocatable water capacity is extremely limited. The system contains one pressure zone and two water treatment plants (WTPs), the Sugar Creek WTP and the Chicago Street WTP.

The distribution system contains approximately 12.5 miles of water mains up to 24 inches in diameter. Areas where lead service lines have been identified are located within the downtown area in the older section of the distribution system. Lebanon Utilities is actively working with 120Water to comply with IDEM Lead and Copper Rules. Lebanon Utilities policy is to remove and replace lead and galvanized service lines should they be encountered during construction of a project. The projects anticipated within this Preliminary Engineering Report are not anticipated to impact the downtown areas.

Sugar Creek WTP

- Capacity: 3,312,000 gallons per 20-hour day
- Wet Well: 400,000 gallons
- High Service Pumps
 - HSP 1: 1,050 GPM
 - HSP 2: 1,050 GPM
 - HSP 3: 1,050 GPM

Chicago Street WTP

- Capacity: 1,440,000 gallons per 20-hour day
- Wet Well: 250,000 gallons
- High Service Pumps
 - HSP 4: 275 GPM
 - HSP 5: 60 GPM
 - HSP 6: 675 GPM
 - HSP 7: 700 GPM

Wellfields

- Sugar Creek Wellfield
 - Well 1: 700 GPM
 - Well 2: 700 GPM
 - Well 3: 700 GPM
 - Well 4: 700 GPM
 - Well 5: 700 GPM
- Southside Wellfield
 - Well 1: 500 GPM
 - Well 2: 500 GPM
 - Well 3: 600 GPM
- Chicago Street Wellfield
 - Well 3: 350 GPM

- Well 4: 350 GPM
- Well 10: 500 GPM

Water Storage

- Abner Longley WSF (Ground Storage Tank and Booster Station): 2,000,000 gallons
- Park Street Elevated Storage Tank: 500,000 gallons
- Elm Street Elevated Storage Tank: 250,000 gallons

The current population in Lebanon, Indiana, per the United States Census Bureau is 16,662 (2020 Decennial Census).

The following table is the potable water consumption over the past 12 months:

	Month	Pumped (MG)	Billed (MG)
1	July 2024	67.46	62.96
2	June 2024	72.04	60.96
3	May 2024	63.02	51.94
4	April 2024	59.85	46.42
5	March 2024	57.86	45.44
6	February 2024	52.03	45.44
7	January 2024	57.35	44.48
8	December 2023	49.63	43.08
9	November 2023	56.08	44.20
10	October 2023	68.85	51.09
11	September 2023	63.54	54.37
12	August 2023	64.49	58.29
	TOTAL	702.20	608.67

The following is a list of the 10 most significant current water users:

- Ken's Foods
- Skjodt-Barrett
- FGF LLC
- Monosol
- Fluor Corporation (Eli Lilly LP1 and LP2 construction)
- Witham Hospital
- Lebanon Community School Corporation
- Lebanon Newcold
- Boone County Facilities (Sherrif's Office and Jail)
- DS Smith Packaging

SECTION 2 UTILITY NEEDS

Lebanon Utilities updates their Water System Capital Improvements Plan (CIP) each year. Chapter 1 of the Water CIP discusses recently completed projects and identifies Emergency Hazards associated with the Water System. Short-Range and Long-Range Capital Projects are evaluated within the Water CIP. The 2024 version of the Water CIP has been included as Attachment I.

LEAP-Lebanon Innovation District

The Indiana Economic Development Corporation (IEDC) established the LEAP-Lebanon Innovation District (LEAP District) in Lebanon, Indiana, to attract high-tech jobs and help the State of Indiana deliver strategic, investment-ready sites for tech-focused companies. Eli Lilly and Company broke ground in 2023 on a \$3.7 billion pharmaceutical manufacturing campus known as LP1 and LP2. LP1 and LP2 have been allocated an average of 864,000 GPD with a peak of 1.35 MGD. While there was enough available water capacity in Lebanon Utilities Water System to support LP1 and LP2, an additional water source will be needed to support other facilities and developments that IEDC hopes to attract to the LEAP District. Usage of water during construction of the LP1 and LP2 facilities is already around 200,000 GPD of water. A Land Use Map for the LEAP District has been included as Figure 4.

The City of Lebanon and IEDC continue to attract developments, and it is estimated that as much as 10 MGD to 15 MGD of water will be needed to satisfy future LEAP District demands over the next 10-year period.

City of Lebanon Developments

In addition to the water needs of the LEAP District, the City of Lebanon has a number of residential developments, commercial developments, and industrial developments, both already under construction and prospective, with future water needs. Over 530,000 GPD average water capacity has already been allocated for development projects outside of the LEAP District. In addition to those development projects that have already been allocated, there is another 400,000 GPD average of development projects that have approved plans but have not been allocated water capacity due to a lack of available capacity. Additionally, larger development projects, such as the Henke Waterford Development located in the southeast corner of the City and the Hickory Junction Area located near the new Fieldhouse, are projected to require as much as 4 MGD to 5 MGD of average water capacity over the next 10 to 20 years of buildout. A map showing potential Lebanon Civil District projects has been included as Figure 5.

The City of Lebanon continues to attract developments, and it is estimated that as much as 5 MGD to 10 MGD of water will be needed to satisfy future City demands over the next 10-year period.

Available Water Capacity

Lebanon Utilities currently has a strong supply of water for existing users and projects that have been previously allocated, but due to unprecedented levels of demand, there is now a lack of available water capacity over the current supply of 4.6 MGD to allocate for future developments. To satisfy the projected 15 MGD to 25 MGD demands over the next 10-year period an additional water source will be needed. An additional consideration is the timing of additional water capacity. City development projects that have approved plans but have not been allocated water capacity are wanting to start construction and prospective LEAP District projects have indicated the desire to utilize water as soon as possible.

Additional capacity is also required for the protection of human life and property in the event of a fire or natural disaster.

SECTION 3 EVALUATION OF ALTERNATIVES

No Action Alternative

The No Action Alternative is not a viable option as the City's future water needs exceed the current water supply. Should no action be taken then City developments that have already been approved, along with prospective City and LEAP District developments, will not be able to move forward.

Alternative 1 – Wholesale Water Supply

Lebanon Utilities began discussions regarding wholesale water supply with Citizens Energy Group (CEG) over 10 years ago as part of the Boone County Water Feasibility Study that was completed in 2014. CEG recently supplied a memo outlining the anticipated construction and delivery schedule for providing wholesale water to Lebanon which is as follows:

- January 2027 – Up to 2 MGD available
- January 2028 – Up to 10 MGD available
- August 2029 – Up to 17.1 MGD available
- January 2031 – Up to 25 MGD available

Improvements to the CEG Water System are necessary to supply the wholesale water to connection points with Lebanon Utilities and Lebanon Utilities will need to construct infrastructure to connect to the existing Lebanon Utilities System and to distribute the wholesale water from the connection points with CEG to its customers. Infrastructure improvements will be completed on a phased basis to coincide with CEG's delivery schedule.

This alternative provides a regionalized solution to address Lebanon's water supply needs. Lebanon falls within the Wabash River Basin and CEG's source water is located within the White River Basin. It is anticipated that as part of a phased expansion of the Lebanon Utilities Wastewater Treatment Plant that treated effluent from that facility will be rerouted to an outfall that will convey that flow back to the White River Basin. This improvement will mitigate impacts to the water cycle within the White River Basin.

Alternative 1 is the recommended alternative.

Alternative 2 – Additional Groundwater Supply within Lebanon

Intera, a water resources management company, conducted a data review and analysis of the potential expansion of the Lebanon Utilities groundwater supply in 2021. Their conclusions were that the potential for expanding the local groundwater supply in Lebanon appears to be limited by multiple factors. It was noted that further investigations would be required to determine the maximum amount of additional safe yield that could be added to the Lebanon Utilities water System but provided preliminary estimate of an additional 1 MGD to 2 MGD as the most likely safe yield. The Indiana Finance Authority has contracted Intera to continue their Lebanon groundwater supply investigations, but even with the best-case scenario of 2 MGD not all of the City's future water needs would be satisfied.

Alternative 2 was not selected at this time as it will not satisfy the City's future water needs.

Alternative 3 – Additional Water Supply from Clinton County

In early 2024, Lebanon Utilities had discussions with Frankfort Municipal Utilities about the possibility of Frankfort providing a wholesale water supply of up to 3 MGD. Frankfort recently completed a water treatment plant expansion and indicated they have available capacity that could be delivered on a short schedule. Following those discussions and after consideration, Frankfort Municipal Utilities provided a letter in July 2024 indicating that they do not have interest in providing wholesale water to Lebanon.

Lebanon Utilities has also evaluated the viability of constructing a new wellfield and water treatment plant within Clinton County and transmission lines to deliver water to Lebanon. The Tipton Complex Aquifer System is located in Clinton County and could potentially provide up to 3 to 5 MGD of supply. The time required to plan, permit, design, finance, and construct the improvements needed to implement this alternative is likely between 4 and 8 years.

Alternative 3 was not selected at this time as it will not satisfy the City's future water needs or schedule.

Alternative 4 – Additional Water Supply from Tippecanoe County

The Wabash Alluvial Aquifer System, located in Tippecanoe County in the vicinity of the City of Lafayette, has sufficient yield to produce water to satisfy Lebanon's projected demands. A preliminary study conducted by Intera, indicated that the average flow rate of the Wabash River is 2 billion gallons per day and that the Wabash Alluvial Aquifer itself is deeper and wider than previous studies have noted. Taking into account these factors, in addition to modeling efforts, Intera indicated that the aquifer will be able to support central Indiana regional demand without impacting the aquifer or Wabash River. Further testing and analysis are still being conducted and once testing is complete, results will be further vetted by independent experts. A new wellfield, water treatment plant, water transmission mains, and storage tanks would be needed to supply water to Lebanon. The time required to plan, permit, design, finance, and construct the improvements needed to implement this alternative is likely between 5 and 10 years.

Alternative 4 was not selected at this time as it will not meet the City's schedule.

Alternative 5 – Sugar Creek Reservoir

The most significant source of surface water in Boone County is Sugar Creek. A Water Resources Study was completed in 2009 by Greeley and Hansen for Lebanon Utilities that evaluated the construction of a reservoir on Sugar Creek. The study found that a reservoir could provide a long-term safe yield of 5 MGD for Lebanon through construction of a dam, the resulting reservoir, a new surface water treatment plant, and a water transmission line. The reservoir was contemplated to have a water surface area of approximately 500 acres and a storage capacity of 1 billion gallons. The development of a reservoir would not only bring additional water supply to Lebanon, but also would bring the added benefits of prime real estate along the reservoir, economic benefits, higher property values, and increased recreational opportunities such as fishing and boating. The reservoir would require extensive property acquisition, road modifications, pipeline and utility relocations, and railroad modifications. Additionally, the environmental permitting process for a reservoir would be extensive. The time required to plan, permit, design, finance, and construct a reservoir is likely between 20 and 25 years.

Alternative 5 was not selected at this time as it will not meet the City's schedule.

SECTION 4 PROPOSED ALTERNATIVE

Wholesale Water Supply

CEG recently supplied a memo outlining the anticipated construction and delivery schedule for providing wholesale water to Lebanon which is as follows:

- January 2027 – Up to 2 MGD available
- January 2028 – Up to 10 MGD available
- August 2029 – Up to 17.1 MGD available
- January 2031 – Up to 25 MGD available

Improvements to the CEG Water System are necessary to supply the wholesale water to connection points with Lebanon Utilities and Lebanon Utilities will need to construct infrastructure to connect to the existing Lebanon Utilities System and to distribute the wholesale water from the connection points with CEG to its customers. Infrastructure improvements will be completed on a phased basis to coincide with CEG's delivery schedule.

Lebanon Utilities and BF&S, working in partnership with CEG, have developed a phased plan for construction of the improvements needed to distribute wholesale water throughout the Lebanon Utilities Water System. Figure A depicts the Current Conditions of the Lebanon Utilities Water System and the location of existing water mains 12 inches in diameter and larger.

Wholesale Water Supply – Phase 1

Phase 1 of the overall program will provide an additional 2 MGD water supply. Infrastructure improvements for Phase 1 include a meter vault, ground storage tank, and booster station at Connection Point 1 with CEG, large diameter water transmission lines to connect Connection Point 1 to the existing Lebanon Utilities System, and an elevated storage tank near SR 32 to help regulate pressures. Figure B depicts the Phase 1 infrastructure improvements.

Connection Point 1

Connection Point 1 between the CEG Water System and Lebanon Utilities Water System will consist of a shared water meter vault, a Lebanon Utilities ground storage tank, and Lebanon Utilities booster station. Connection Point 1 will be located on a 5-acre site west of the intersection of CR 250 South and CR 200 East. The property the site is to be located on will need to be acquired and is anticipated to be owned by Lebanon Utilities. CEG will convey water through the water meter vault to the ground storage tank that will be owned and operated by Lebanon Utilities. Lebanon Utilities will then utilize a booster station to pump water from the ground storage tank to the Lebanon Utilities Water System. Chemical boosting is likely to occur at Connection Point 1 to ensure water quality. The size of the ground storage tank is anticipated to be 2 million gallons, and the booster station is anticipated to be sized to push 15 MGD.

Phase 1 Water Transmission Lines

Large diameter water transmission lines will be needed to convey flow from Connection Point 1 to existing water mains in the Lebanon Utilities Water System. The water mains are anticipated to be constructed west along CR 250 South from Connection Point 1 to the CSX Railroad; then will parallel the CSX Railroad property to John Shaw Road; then along John Shaw Road to appoint in line with CR 200 South where it will head west to CR 200 South to continue west along CR 200 South from State Road 39 to CR 300 West; north along CR 300 West from CR 200 South to CR 50 North; and east along CR 50 North and SR 32 from CR North 300 West to just west of Enterprise Boulevard where a connection will be made to an existing 12-inch water main located along SR 32. Water transmission lines will be placed in an easement adjacent to the existing road Right-of-Way. The water transmission lines are likely to be 30 to

36 inches in diameter and generally constructed with a minimum cover of 54 inches. A permanent 25-foot easement and temporary 15-foot easement for construction will be needed adjacent to existing Right-of-Way. On which side of the roadways the permanent and temporary easements will be located will be determined during final design based upon potential impacts to property owners and easement acquisition.

Phase 1 Elevated Storage Tank

An Elevated Storage Tank will be constructed south of the roadway where State Road 32 currently changes to CR 50 North (east of CR 300 West). The site is anticipated to be 5 acres. It is anticipated that the Elevated Storage Tank will be located on property currently owned by the IEDC that will become Lebanon Utilities property. The Elevated Storage Tank will provide redundancy, resiliency, and firefighting capacity for the area. The size of the Elevated Storage Tank is anticipated to be 2 million gallons.

Wholesale Water Supply – Phase 2

Phase 2 of the overall program will increase the additional water supply by 8 MGD from 2 MGD up to a maximum of 10 MGD. Infrastructure improvements for Phase 2 include a meter vault, ground storage tank, and booster stations at Connection Point 2 with CEG, large diameter water transmission lines to between Connection Point 2 and the existing Lebanon Utilities System, and large diameter water mains through LEAP to loop the improvements made in Phase 1 with existing large diameter mains in the northern portion of the Lebanon Utilities Water System in the vicinity of CR 300 North. Appendix A, Figure C depicts the Phase 2 infrastructure improvements.

Connection Point 2

Connection Point 2 between the CEG Water System and Lebanon Utilities Water System will consist of a shared water meter vault, two 1-million-gallon Lebanon Utilities ground storage tanks, and a Lebanon Utilities booster station on a roughly 3-to-5-acre site with a to-be-determined location in the vicinity of Kern Road and CR 400 East. The property that the site is to be located on will need to be acquired and is anticipated to be owned by Lebanon Utilities. CEG will convey water through the water meter vault to the ground storage tanks that will be owned and operated by Lebanon Utilities. Lebanon Utilities will then utilize a booster station to pump water from the ground storage tanks to the Lebanon Utilities Water System. Chemical boosting is likely to occur at Connection Point 2 to ensure water quality.

Phase 2 Water Transmission Lines (East)

Large diameter water transmission lines will be needed to convey flow from Connection Point 2 to existing water mains in the Lebanon Utilities Water System. The transmission line is anticipated to be constructed northwest along the Big 4 Trail from the connection point to where the trail crosses Prairie Creek. The water main will then turn south and extend to CR 100 S before turning west where it will then connect with an existing water main along Indianapolis Avenue. The new transmission line will then cross under I-65 from east-to-west before continuing southwest along John Shaw Road to where it will connect to a transmission line from Phase 1. Water transmission lines will be placed in an easement adjacent to existing roadways where possible. Water transmission lines may also be placed under or near paved trails or through existing farmland purchased by the IEDC. The water transmission lines are likely to be 30 inches in diameter and generally constructed with a minimum cover of 54 inches. A permanent 25-foot easement and temporary 15-foot easement for construction will be needed adjacent to existing Right-of-Way. On which side of the roadways the permanent and temporary easements will be located will be determined during final design based upon potential impacts to property owners and easement acquisition.

Phase 2 Water Transmission Line Extension (West)

As part of the Phase 2 improvements, large diameter transmission lines will be constructed through the LEAP District from the Phase 1 transmission lines along SR 32 to the existing 24-inch water main that

conveys water from the Sugar Creek WTP along CR 300 North. The water transmission lines are likely to be 30 inches in diameter and generally constructed with a minimum cover of 54 inches. A utility corridor will be established through property controlled by IEDC to allow for construction and future maintenance of improvements. The corridor is mostly existing farmland but may be converted to grassy or paved sites as development progresses. Some of the proposed corridor alignment may also be placed through wooded areas.

Wholesale Water Supply – Phase 3

Phase 3 of the overall program will allow the wholesale water supply to increase from 10 MGD up to 17.1 MGD and then eventually to 25 MGD. Infrastructure improvements for Phase 3 include a meter vault, ground storage tank, and booster station at Connection Point 3 with CEG, large diameter water transmission lines to connect Connection Point 1 to the existing Lebanon Utilities System, and an elevated storage tank near CR 300 North to help regulate pressures. Figure D depicts the Phase 3 infrastructure improvements.

Connection Point 3

Connection Point 3 between the CEG Water System and Lebanon Utilities Water System will consist of a shared water meter vault, a Lebanon Utilities ground storage tank, and Lebanon Utilities booster station, on a roughly 3-to-5-acre site with a to be determined location in the vicinity of SR 32 and CR 400 East. The property the site is to be located on will need to be acquired and is anticipated to be owned by Lebanon Utilities. CEG will convey water through the water meter vault to the ground storage tank that will be owned and operated by Lebanon Utilities. Lebanon Utilities will then utilize a booster station to pump water from the ground storage tank to the Lebanon Utilities Water System. Chemical boosting is likely to occur at Connection Point 3 to ensure water quality. The size of the ground storage tank is anticipated to be in the 2-to-3-million-gallon range.

Phase 3 Water Transmission Lines

Large diameter water transmission lines will be needed to convey flow from Connection Point 3 to existing water mains in the Lebanon Utilities Water System. The water mains are anticipated to be constructed west along SR 32 to CR 300 East, then north along CR 300 East to CR 75 North, then west along CR 75 North to John Bart Road, then north along existing John Bart Road and a future extension of John Bart Road to CR 300 North, and then west along CR 300 North to connect to an existing 24-inch water main. Water transmission lines will be placed under existing roadways or next to existing roadways. The water transmission lines are likely to be 30 to 36 inches in diameter and generally constructed with a minimum cover of 54 inches. A permanent 25-foot easement and temporary 15-foot easement for construction will be needed adjacent to existing Right-of-Way. On which side of the roadways the permanent and temporary easements will be located will be determined during final design based upon potential impacts to property owners and easement acquisition.

Phase 3 Elevated Storage Tank

An Elevated Storage Tank will be constructed generally along CR 300 North between Witt Road and SR 39. The final location of the improvements will be determined during design, but the site is anticipated to be in the 3-to-5-acre range and property will need to be acquired for the site. The Elevated Storage Tank will provide redundancy, resiliency, and firefighting capacity for the area. The size of the Elevated Storage Tank is anticipated to be in the 1-to-2-million-gallon range.

SECTION 5 EVALUATION OF ENVIRONMENTAL IMPACTS

Wholesale Water Supply – Phase 1

There are no significant environmental impacts expected to result from the implementation of the Phase 1 improvements.

1. Location Information

LU/CEG Connection Point 1 – Ground Storage Tank and Booster Station

Connection Point 1 will be located on a 5-acre site west of the intersection of CR 250 South and CR 200 East.

Section 17, Township 18 North, Range 1 East

Latitude: 40°00'10" North
Longitude: 86°26'14" West

Water Transmission Lines

The water mains are anticipated to be constructed west along CR 250 South from Connection Point 1 to the CSX Railroad; then will parallel the CSX Railroad property to John Shaw Road; then along John Shaw Road to appoint in line with CR 200 South where it will head west to CR 200 South to continue west along CR 200 South from State Road 39 to CR 300 West; north along CR 300 West from CR 200 South to CR 50 North; and east along CR 50 North and SR 32 from CR North 300 West to just west of Enterprise Boulevard where a connection will be made to an existing 12-inch water main located along SR 32.

Section 17, Township 18 North, Range 1 East & Section 18, Township 18 North, Range 1 East & Section 13, Township 18 North, Range 1 West & Section 12, Township 18 North, Range 1 West & Section 11, Township 18 North, Range 1 West & Section 14, Township 18 North, Range 1 West & Section 10, Township 18 North, Range 1 West & Section 15, Township 18 North, Range 1 West & Section 09, Township 18 North, Range 1 West & Section 16, Township 18 North, Range 1 West & Section 04, Township 18 North, Range 1 West & Section 03, Township 18 North, Range 1 West & Section 33, Township 19 North, Range 1 West & Section 34, Township 19 North, Range 1 West & Section 35, Township 19 North, Range 1 West

Latitude: 40°00'24" North
Longitude: 86°28'43" West

Elevated Storage Tank

An Elevated Storage Tank will be constructed south of the roadway where State Road 32 currently changes to CR 50 North (east of CR 300 West). The site is anticipated to be 5 acres.

Section 34, Township 19 North, Range 1 West

Latitude: 40°02'44" North
Longitude: 86°31'10" West

2. Description of Construction Disturbance Area/Corridor

LU/CEG Connection Point 1 – Ground Storage Tank and Booster Station

The site for the LU/CEG Connection Point 1 is anticipated to be in the 3-to-5-acre range. The final size and location of the improvements will be determined during design.

Water Transmission Lines

Water transmission lines will be placed under existing roadways or next to existing roadways. The water transmission lines are likely to be 30 to 36 inches in diameter and generally constructed with a minimum cover of 54 inches. A permanent 25-foot easement and temporary 15-foot easement for construction will be needed adjacent to existing Right-of-Way. On which side of the roadways the permanent and temporary easements will be located will be determined during final design based upon potential impacts to property owners and easement acquisition.

Elevated Storage Tank

The site for the Elevated Storage Tank is anticipated to be in the 3-to-5-acre range. The final size and location of the improvements will be determined during design.

3. Vegetation and Site Disturbance History

LU/CEG Connection Point 1 – Ground Storage Tank and Booster Station

The final size and location of the improvements will be determined during design, but the site is anticipated to consist of ground that has previously been utilized as farmland.

Water Transmission Lines

Water transmission lines will be placed under existing roadways or next to existing roadways. The water transmission lines are likely to be 30 to 36 inches in diameter and generally constructed with a minimum cover of 54 inches. A permanent 25-foot easement and temporary 15-foot easement for construction will be needed adjacent to existing Right-of-Way. On which side of the roadways the permanent and temporary easements will be located will be determined during final design based upon potential impacts to property owners and easement acquisition.

Elevated Storage Tank

The final size and location of the improvements will be determined during design, but the site is anticipated to consist of ground that has previously been utilized as farmland.

4. Brownfield Discussion

None of the improvements are anticipated to be located near or within a current or former brownfield site.

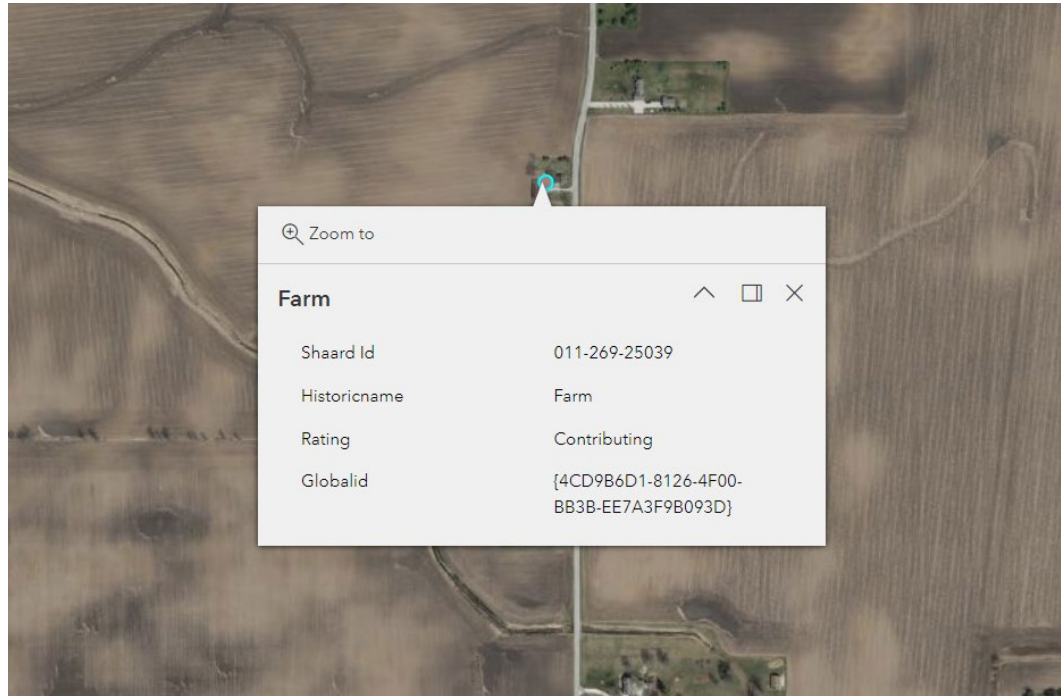
5. Negative Environmental Impacts of the Preferred Alternative

a. Disturbed/Undisturbed Land

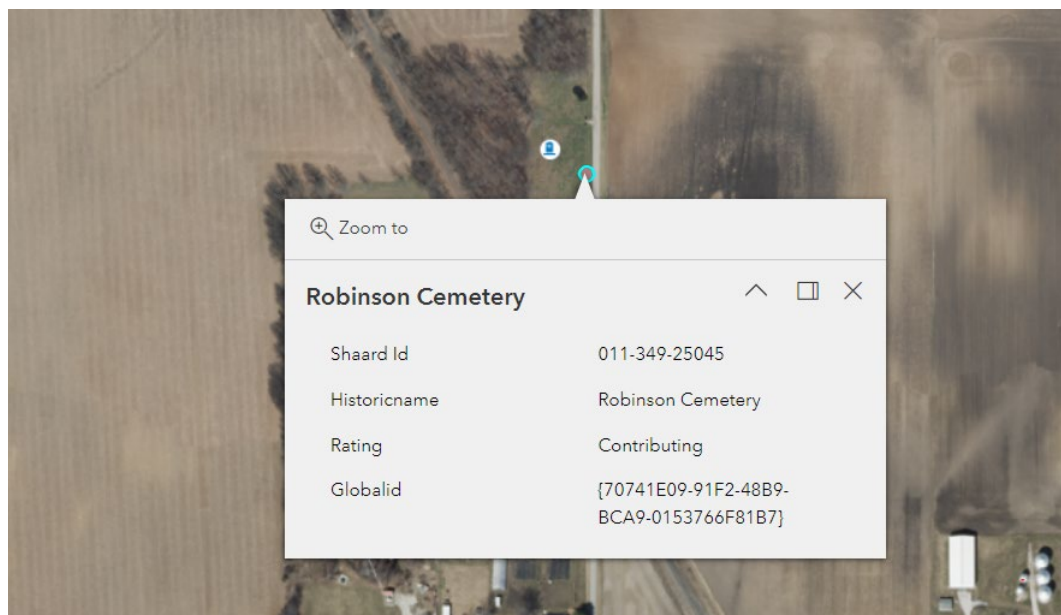
Improvements will occur in areas that have previously been utilized as farmland or within existing roadway Right-of-Way.

b. Historic Properties

The majority of the improvements are not anticipated to impact historical or architectural resources. There is one farm property labeled along CR 300 West that is labeled as “Contributing” that is anticipated to be impacted. Contributing properties meet the basic inventory criteria, but do not possess any noteworthy historic or architectural significance.



The improvements will occur within 250 feet of The Robinson Cemetery but are planned for the opposite side of the roadway and are not anticipated to impact the cemetery. Trenchless methods will be utilized in this area along John Shaw Road to avoid wetland impacts.



c. Wetlands

Wetlands are not anticipated to be negatively impacted by construction or operation of improvements. Construction of small portions of the water transmission lines may need to cross designated wetlands for Phase 1. Construction of water transmission lines in these areas will be performed utilizing trenchless installation methods. Drilling and receiving pits for trenchless installations will fall outside of designated wetland areas.

d. Surface Waters

Water mains will need to cross Edlin Ditch and Shaw Ditch. Crossings of any ponds or lakes will be avoided and efforts will be made for the alignment of the water mains to avoid crossings of Deer Creek and Big Walnut Creek. The project will not adversely affect any Outstanding State Resource Waters listed in 327 IAC 2-1.3-3(d), Exceptional Use Streams listed in 327 IAC 2-1-11(b), Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-(2), or waters on the Salmonid Rivers listed in 327 IAC 2-1.5-5(a)(3).

e. Groundwater

The improvements are not anticipated to have any effects on sole source aquifers.

f. 100-Year and 500-Year Floodplain and Flood Hazard Statement

The proposed improvements are not anticipated to be located within either the 100-Year or 500-Year Floodplains.

g. Plants and Animals

It is not anticipated that the construction and operation of the project will negatively impact state or federal-listed endangered species or their habitat. The project will be implemented to minimize impact to non-endangered species and their habitat. Mitigation measures cited in comment letters from the Indiana Department of Natural Resources and U.S. Fish and Wildlife Service will be implemented should any be received.

h. Farmland

A Farmland Conversion Impact Rating form shall be submitted to NRCS for the proposed project areas. Additional information will be provided when made available.

i. Air Quality

Air quality issues will be that of any normal construction project with respect to erosion, dust and noise control. The project should not affect the ozone, create airborne pollutants, or create other air quality concerns.

j. Open Space and Recreational Areas

The proposed improvements will neither create nor destroy and open space or recreational opportunities.

k. Lake Michigan Coastal Management Zone

The proposed improvements are not located within the Lake Michigan Coastal Zone and will not impact the Lake Michigan Coastal Zone.

I. National Natural Landmarks

The construction and operation of the proposed project will not impact any National Natural Landmarks.

6. Mitigation Measures Discussion

Any mitigation measures cited in comment letters from the Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented. The project will be implemented to minimize impact to non-endangered species and their habitat.

Existing topsoil will be reused during the restoration process, if applicable. The amount of dust may be mitigated by periodic wetting of exposed soils to reduce the suspension of particles. Normal daytime hours will be used for work activities to reduce noise impacts.

All unavoidable tree clearing will be performed between October 15th and March 31st per the Range-wide Indiana Bat Protection and Enhancement Plan Guidelines.

7. Induced/Secondary Impacts Statement

The Lebanon Utilities and City of Lebanon, through local zoning laws, the authority of its council or planning commission, or other means, will ensure that future development and utility projects connecting to SRF-funded facilities will not adversely affect wetlands, wooded areas, steep slopes, archaeological/historical/structural resources, or other sensitive environmental resources. The Lebanon Utilities and City of Lebanon will require new development and utility projects to be constructed within the guidelines of the US Fish and Wildlife Service, Indiana Department of Natural Resources, Indiana Department of Environmental Management, and other environmental review authorities.

8. Cumulative Impacts Discussion

The overall project is to be completed in phases with similar impacts anticipated for future phases as those noted for Phase 1. All required information contained in Section 5 of the PER will be provided for subsequent phases.

9. Area of Potential Effect Graphics and Figures

Required graphics and figures are attached.

Wholesale Water Supply – Phase 2

There are no significant environmental impacts expected to result from the implementation of the Phase 2 improvements.

1. Location Information

LU/CEG Connection Point 2 – Ground Storage Tanks and Booster Station

Connection Point 2 will be located on a roughly 3-to-5-acre site near the intersection of Kern Road and CR 400 East.

Section 11, Township 18 North, Range 1 East

Latitude: 40°0'52" North

Longitude: 86°23'30" West

Water Transmission Lines (East)

The water transmission lines will be constructed from Connection Point 2 to existing water mains in the Lebanon Utilities Water System. The transmission line is anticipated to be constructed northwest along the Big 4 Trail from the connection point to where the trail crosses Prairie Creek. The water main will then turn south and extend to CR 100 S before turning west where it will then connect with an existing water main along Indianapolis Avenue. The new transmission line will then cross under I-65 from east-to-west before continuing southwest along John Shaw Road to where it will connect to a transmission line from Phase 1.

Section 11, Township 18 North, Range 1 East & Section 10, Township 18 North, Range 1 East & Section 09, Township 18 North, Range 1 West & Section 04, Township 18 North, Range 1 West & Section 05, Township 18 North, Range 1 West & Section 08, Township 18 North, Range 1 West & Section 06, Township 18 North, Range 1 West & Section 07, Township 18 North, Range 1 West & Section 12, Township 18 North, Range 1 West & Section 18, Township 18 North, Range 1 West & Section 13, Township 18 North, Range 1 West

Latitude: 40°01'31" North

Longitude: 86°26'28" West

Water Transmission Line Extensions (West)

The water transmission line extension will be constructed through the LEAP District from the Phase 1 transmission lines along SR 32 to the existing 24-inch water main that conveys water from the Sugar Creek WTP along CR 300 North.

Section 15, Township 19 North, Range 1 West & Section 14, Township 19 North, Range 1 West & Section 22, Township 19 North, Range 1 West & Section 23, Township 19 North, Range 1 West & Section 27, Township 19 North, Range 1 West & Section 34, Township 19 North, Range 1 West

Latitude: 40°04'15" North

Longitude: 86°30'38" West

2. Description of Construction Disturbance Area/Corridor**LU/CEG Connection Point 2 – Ground Storage Tanks and Booster Station**

The site for the LU/CEG Connection Point 2 is anticipated to be in the 3-to-5-acre range. The final size and location of the improvements will be determined during design.

Water Transmission Lines (East)

Water transmission lines will be placed under existing roadways or next to existing roadways where possible. They may also be placed under or near paved trails or through existing farmland purchased by the IEDC. The water transmission lines are likely to be 30 to 36 inches in diameter and generally constructed with a minimum cover of 54 inches. A permanent 25-foot easement and temporary 15-foot easement for construction will be needed adjacent to existing Right-of-Way. On which side of the roadways the permanent and temporary easements will be located will be determined during final design based upon potential impacts to property owners and easement acquisition.

Water Transmission Line Extensions (West)

The water transmission lines are likely to be 30 inches in diameter and generally constructed with a minimum cover of 54 inches. A utility corridor will be established through property controlled by

IEDC to allow for construction and future maintenance of improvements. The corridor is mostly existing farmland but may be converted to grassy or paved sites as development progresses. Some of the proposed corridor alignment may also be placed through wooded areas.

3. Vegetation and Site Disturbance History

LU/CEG Connection Point 2 – Ground Storage Tanks and Booster Station

The final size and location of the improvements will be determined during design, but the site is anticipated to consist of ground that has previously been utilized as farmland.

Water Transmission Lines (East)

Water transmission lines will be placed under existing roadways or next to existing roadways. They may also be placed under or near paved trails or through existing farmland purchased by the IEDC. The water transmission lines are likely to be 30 inches in diameter and generally constructed with a minimum cover of 54 inches. A permanent 25-foot easement and temporary 15-foot easement for construction will be needed adjacent to existing Right-of-Way. On which side of the roadways the permanent and temporary easements will be located will be determined during final design based upon potential impacts to property owners and easement acquisition.

Water Transmission Line Extensions (West)

The water transmission lines are likely to be 30 inches in diameter and generally constructed with a minimum cover of 54 inches. A utility corridor will be established through property controlled by IEDC to allow for construction and future maintenance of improvements. The corridor is mostly existing farmland but may be converted to grassy or paved sites as development progresses. Some of the proposed corridor alignment may also be placed through wooded areas.

4. Brownfield Discussion

None of the improvements are anticipated to be located near or within a current or former brownfield site.

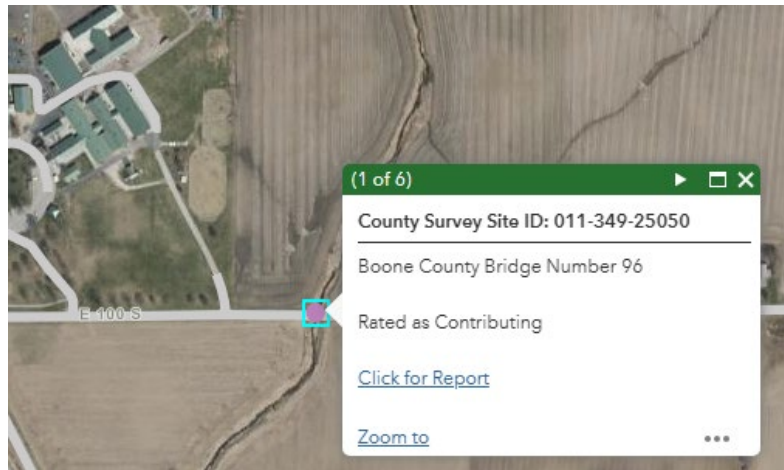
5. Negative Environmental Impacts of the Preferred Alternative

a. Disturbed/Undisturbed Land

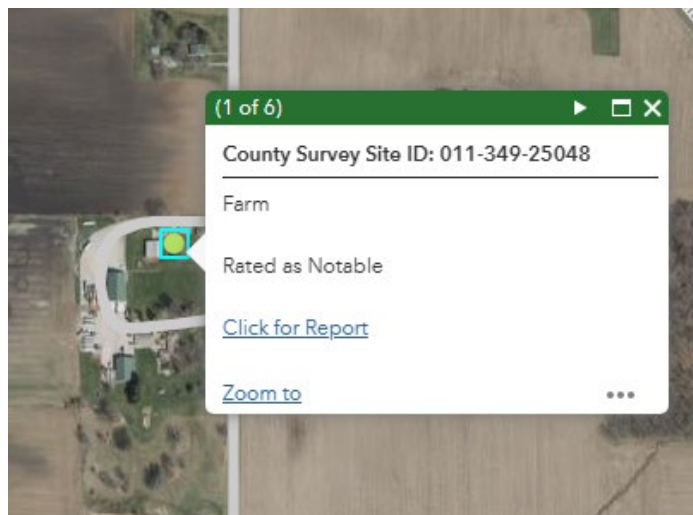
Improvements will occur in areas that have previously been utilized as farmland or within existing road or trail Right-of-Way. A small portion of the transmission line extension corridor may be placed in a wooded location.

b. Historic Properties

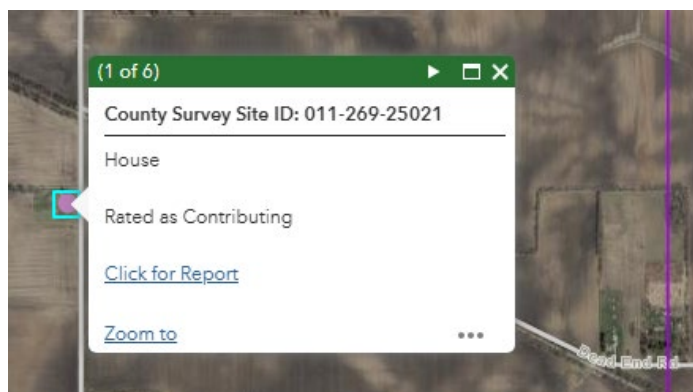
The majority of the improvements are not anticipated to impact historical or architectural resources. There is a bridge (Boone County No. 96) along E 100 S that is labeled as "Contributing" that the project will be adjacent to but is not anticipated to be impacted. There is also a farm along S 100 E that is labeled as "Notable" that the project will be adjacent to but is not anticipated to be negatively impacted. The residence at 1460 N 250 W is also labeled as "Contributing" that project will be adjacent to but is also not anticipated to be negatively impacted.



The water main should be installed far enough away from the historic bridge such that the bridge should be able to function as before. Extra care and consideration will be essential when installing the water main in this portion of the project.



The water main should be installed off the historic farm's property and should not impact any existing structures in the area. Extra care and consideration will be essential when installing the water main in this portion of the project.



The water main should be installed off the historic house's property and should not impact any existing structures in the area. Extra care and consideration will be essential when installing the water main in this portion of the project.

c. Wetlands

Wetlands are not anticipated to be negatively impacted by construction or operation of improvements. Construction of small portions of the water transmission lines may need to cross designated wetlands for Phase 2, specifically along the Big 4 Trail Right-of-Way. There is also an emerging wetland near S 100 E that the alignment of the water lines will avoid. The ponds near US 52 will be avoidable during construction. Construction of water transmission lines near wetland areas will be performed utilizing trenchless installation methods. Drilling and receiving pits for trenchless installations will fall outside of designated wetland areas.

d. Surface Waters

Water mains will cross Prairie Creek several times throughout construction and those crossings will be completed by trenchless methods. Crossings of any ponds or lakes will be avoided and efforts will be made for the alignment of the water mains to avoid crossings of Deer Creek and Big Walnut Creek. The project will not adversely affect any Outstanding State Resource Waters listed in 327 IAC 2-1.3-3(d), Exceptional Use Streams listed in 327 IAC 2-1-11(b), Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-(2), or waters on the Salmonid Rivers listed in 327 IAC 2-1.5-5(a)(3).

e. Groundwater

The improvements are not anticipated to have any effects on sole source aquifers.

f. 100-Year and 500-Year Floodplain and Flood Hazard Statement

Connection Point 2 will not be located within either the 100-year or 500-year floodplain. The transmission lines will pass through the Prairie Creek floodplain and floodways

No standing structures are anticipated to be located within either the 100-Year or 500-Year Floodplains.

g. Plants and Animals

It is not anticipated that the construction and operation of the project will negatively impact state or federal-listed endangered species or their habitat. The project will be implemented to minimize impact to non-endangered species and their habitat. Mitigation measures cited in comment letters from the Indiana Department of Natural Resources and U.S. Fish and Wildlife Service will be implemented should any be received.

h. Farmland

A Farmland Conversion Impact Rating form shall be submitted to NRCS for the proposed project areas. Additional information will be provided when made available.

i. Air Quality

Air quality issues will be that of any normal construction project with respect to erosion, dust and noise control. The project should not affect the ozone, create airborne pollutants, or create other air quality concerns.

j. Open Space and Recreational Areas

The proposed improvements will neither create nor destroy any open space or recreational opportunities.

k. Lake Michigan Coastal Management Zone

The proposed improvements are not located within the Lake Michigan Coastal Zone and will not impact the Lake Michigan Coastal Zone.

l. National Natural Landmarks

The construction and operation of the proposed project will not impact any National Natural Landmarks.

6. Mitigation Measures Discussion

Any mitigation measures cited in comment letters from the Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented. The project will be implemented to minimize impact to non-endangered species and their habitat.

Existing topsoil will be reused during the restoration process, if applicable. The amount of dust may be mitigated by periodic wetting of exposed soils to reduce the suspension of particles. Normal daytime hours will be used for work activities to reduce noise impacts.

All unavoidable tree clearing will be performed between October 15th and March 31st per the Range-wide Indiana Bat Protection and Enhancement Plan Guidelines.

7. Induced/Secondary Impacts Statement

The Lebanon Utilities and City of Lebanon, through local zoning laws, the authority of its council or planning commission, or other means, will ensure that future development and utility projects connecting to SRF-funded facilities will not adversely affect wetlands, wooded areas, steep slopes, archaeological/historical/structural resources, or other sensitive environmental resources. The Lebanon Utilities and City of Lebanon will require new development and utility projects to be constructed within the guidelines of the US Fish and Wildlife Service, Indiana Department of Natural Resources, Indiana Department of Environmental Management, and other environmental review authorities.

8. Cumulative Impacts Discussion

The overall project is to be completed in phases with similar impacts anticipated for future phases as those noted for Phases 1 and 2. All required information contained in Section 5 of the PER will be provided for subsequent phases.

9. Area of Potential Effect Graphics and Figures

Required graphics and figures are attached.

Wholesale Water Supply – Phase 3

Phase 3 Evaluation of Environmental Impacts to be added with future revisions of the PER.

SECTION 6 PUBLIC PARTICIPATION AND LEGAL, FINANCIAL, AND MANAGERIAL CAPABILITY

Phase 1 - Public Hearing

A Public Hearing was held on November 4, 2024, from 5:00 p.m. to approximately 5:35 p.m. at the Lebanon Municipal Building. An Informational Open House Meeting preceded the official Public Hearing starting at 4:00 p.m. The Public Hearing was noticed in the both the Lebanon Reporter and Indy Star newspapers. Proof of Publication in the Lebanon Reporter and Indy Star newspapers is included as Attachment C. Copies of the Preliminary Engineering Report were available for public viewing from October 25, 2024, through November 9, 2024, at the Customer Service Office of the Lebanon Municipal Building.

8 members of the public attended the Information Open House Meeting (see Attachment D for Meeting Attendance Record) and 9 members of the public and 4 Lebanon Utilities Service Board Members attended the Public Hearing (see Attachment E for Meeting Attendance Record). The Public Hearing was also livestreamed on the Lebanon Utilities' YouTube channel. A Public Hearing Meeting Summary has been included as Attachment F.

Comments were received from the public at the Public Hearing and through mail and email correspondence. Comments received from the public have been included as Attachment G. Responses to public comments have been included as Attachment H.

Phase 2 - Public Hearing

A Public Hearing will be conducted for the Phase 2 Improvements prior to approval of the updates to the Preliminary Engineering Report. The Public Hearing will be livestreamed on the Lebanon Utilities Youtube channel and Public Hearing Meeting Summary will be generated. The Public Hearing will be noticed in both the Lebanon Reporter and Indy Star newspapers. It is anticipated that an Informational Open House Meeting will precede the Public Hearing.

Any comments received from the Public prior to or at the Public Hearing will be responded to and documented in the Public Hearing Minute Minutes. Any comments received after the Public Hearing during the required comment period will be responded to by Lebanon Utilities directly via mail and email correspondence.

Phase 3 – Public Hearing

Phase 3 Public Hearing information to be added with future revisions of the PER.

Interlocal Agreements

The Water Supply Agreement between CEG and Lebanon Utilities has been approved by each respective Board and is awaiting execution of financial agreements before final signatures. The Water Supply Agreement has been included as Attachment B.

ENVIRONMENTAL GRAPHICS

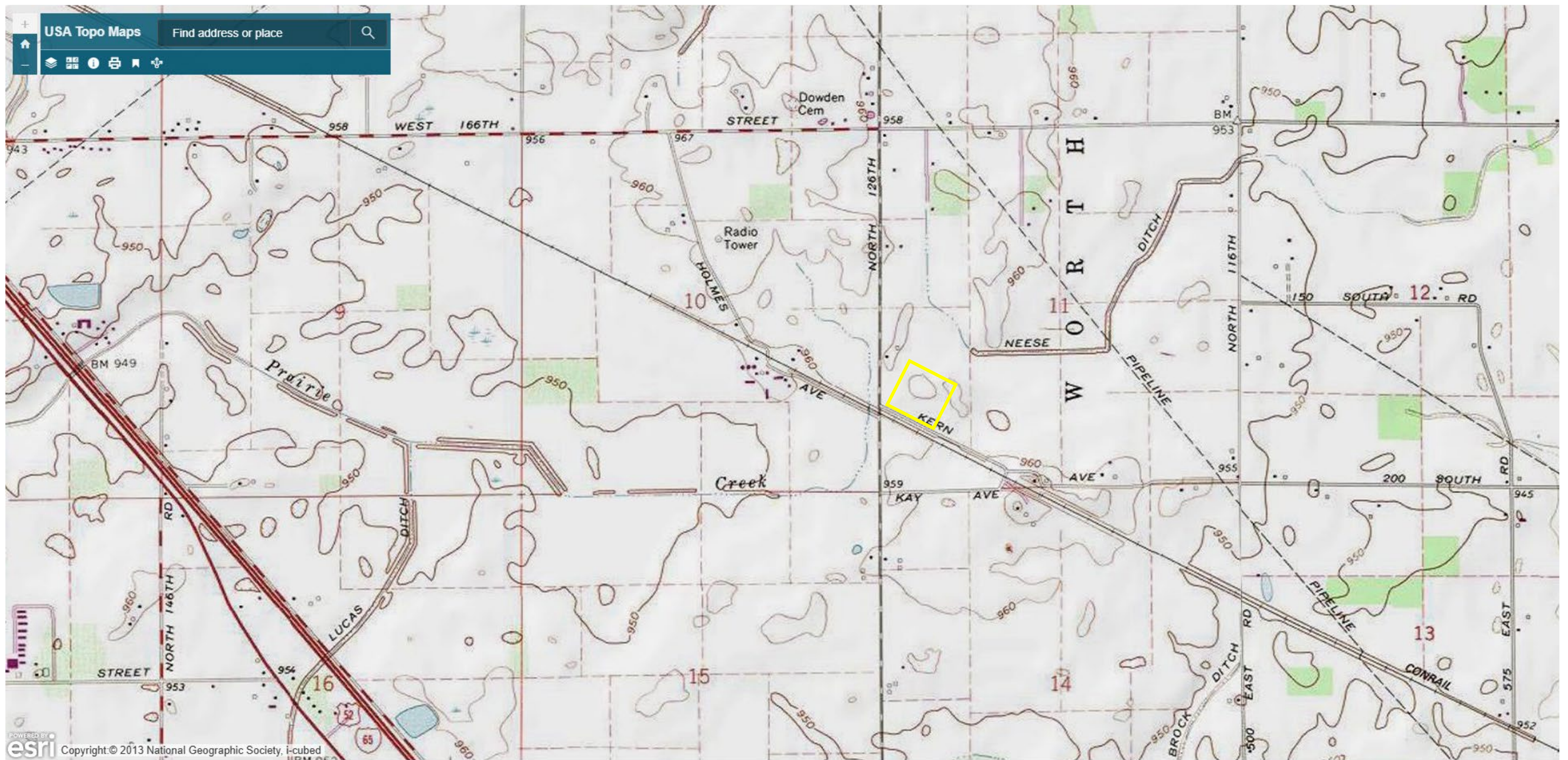
PHASE 2

**LEBANON UTILITIES
PUBLIC WATER SUPPLY ID: IN 5206003**

**PRELIMINARY ENGINEERING REPORT
WHOLESALE WATER SUPPLY - PHASE 2**

ENVIRONMENTAL GRAPHICS – LU/CEG CONNECTION POINT 2

Updated 10/24/2025



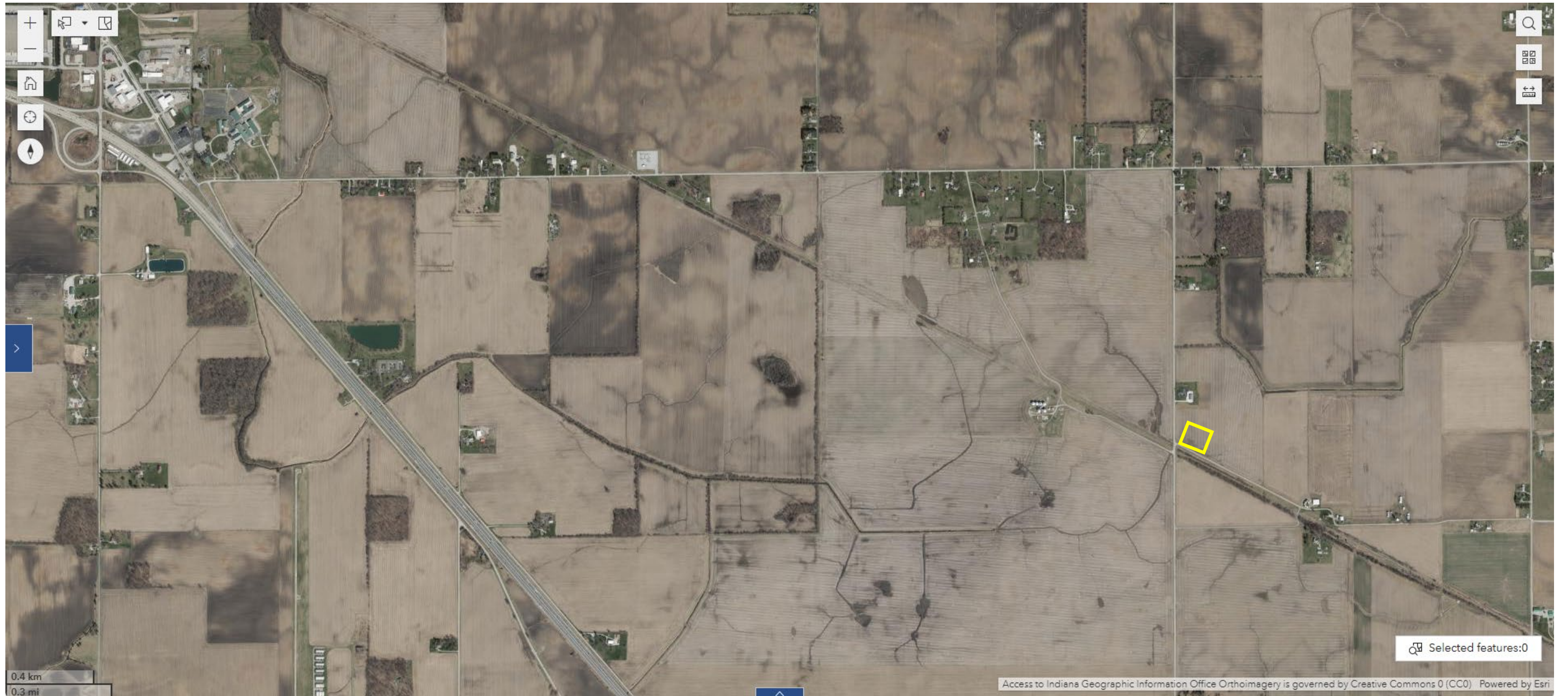
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

LU/CEG CONNECTION POINT 2

USGS TOPO MAP

Updated 10/24/2025

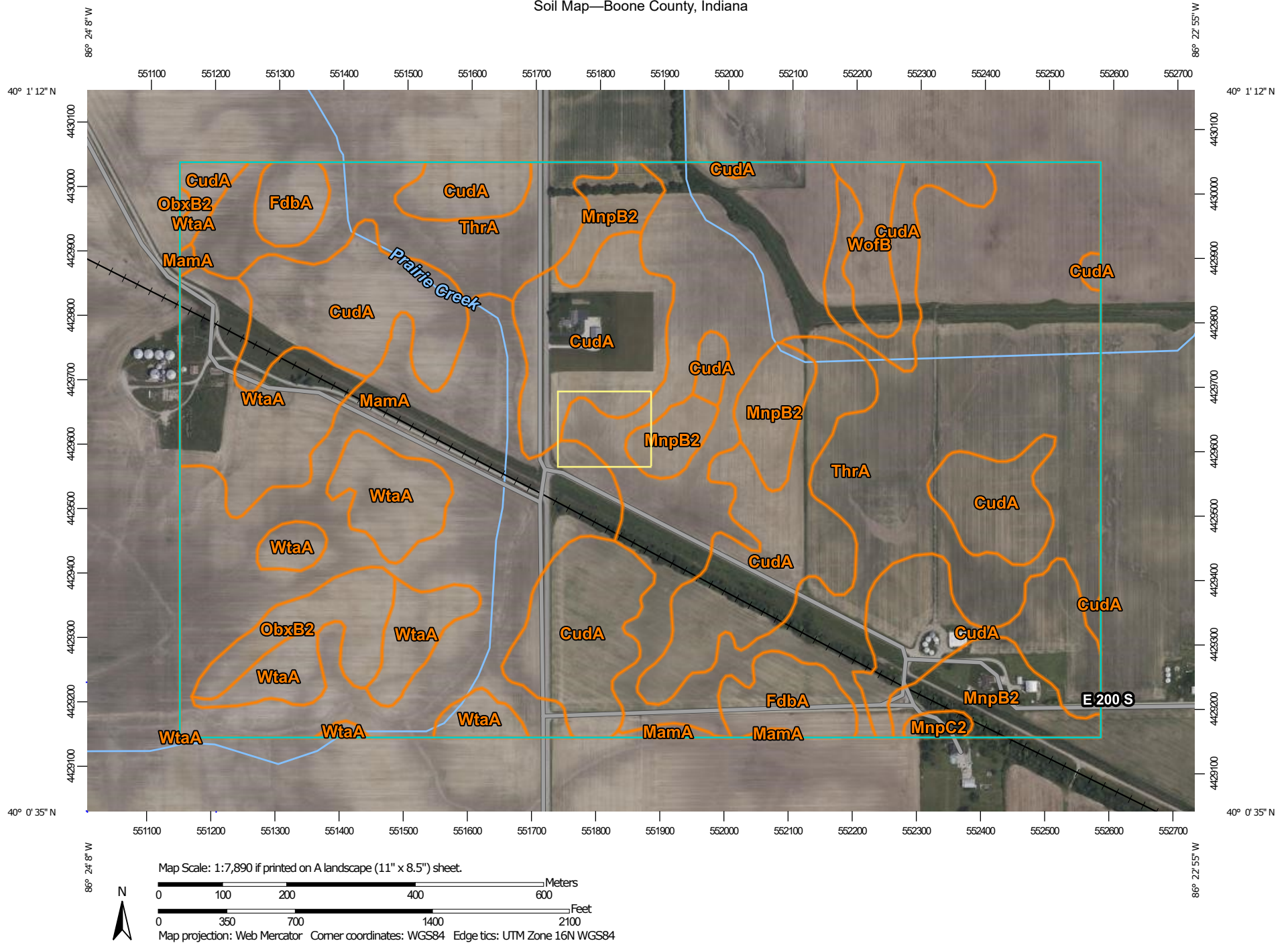


LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

LU/CEG CONNECTION POINT 2
AERIAL PHOTOGRAPHY MAP
Updated 10/24/2025

Soil Map—Boone County, Indiana



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

10/16/2025
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Boone County, Indiana

Survey Area Data: Version 28, Sep 4, 2025

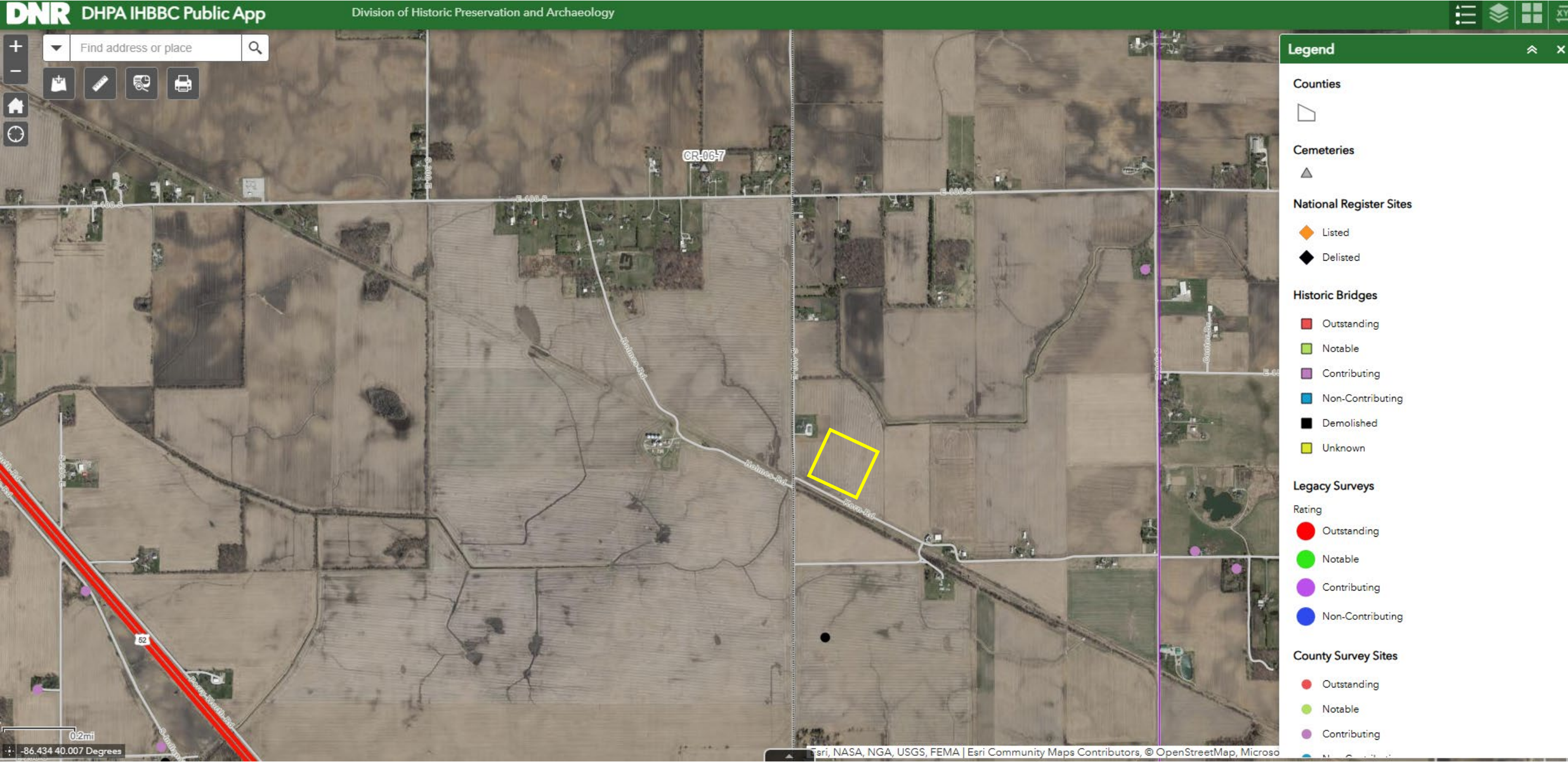
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2024—Jul 1, 2024

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CudA	Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes	89.3	28.1%
FdbA	Fincastle silt loam, Tipton Till Plain, 0 to 2 percent slopes	8.3	2.6%
MamA	Mahalasville silty clay loam, 0 to 2 percent slopes	52.5	16.5%
MnpB2	Miami silt loam, 2 to 6 percent slopes, eroded	18.1	5.7%
MnpC2	Miami silt loam, 6 to 12 percent slopes, eroded	0.9	0.3%
ObxB2	Ockley silt loam, 2 to 6 percent slopes, eroded	6.5	2.0%
ThrA	Treaty silty clay loam, 0 to 1 percent slopes	106.1	33.3%
WofB	Williamstown-Crosby silt loams, 2 to 4 percent slopes	4.5	1.4%
WtaA	Whitaker silt loam, 0 to 2 percent slopes	31.9	10.0%
Totals for Area of Interest		318.2	100.0%



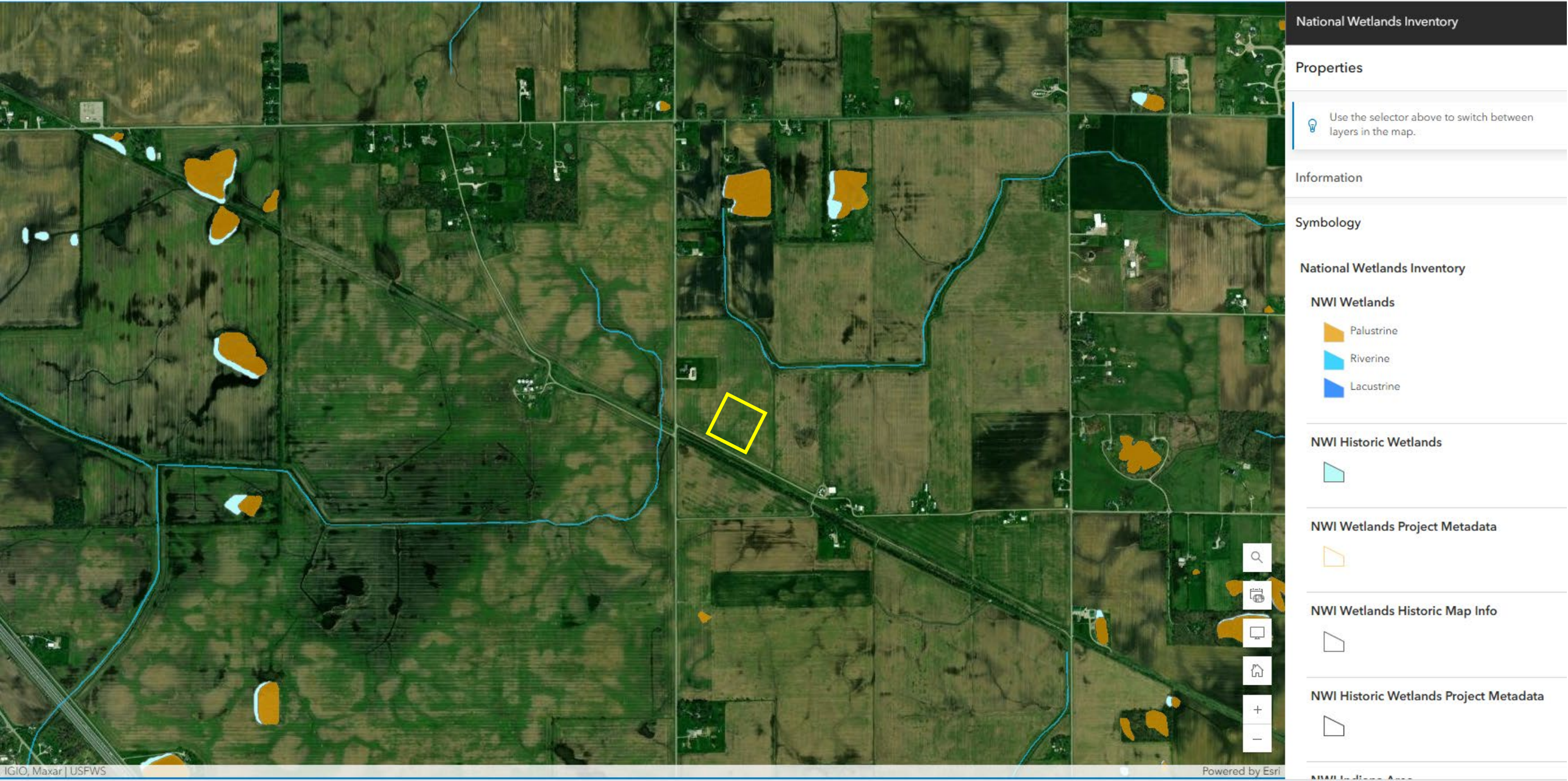
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

LU/CEG CONNECTION POINT 2

INDIANA HISTORICAL STRUCTURES MAP

Updated 10/24/2025



LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

LU/CEG CONNECTION POINT 2

WETLANDS MAP – From Indianamap.org and arcgis.com

Updated 10/24/2025

Legend

- Area of Complex Channels
- Area to be Submerged
- BayInlet
- Bridge
- CanalDitch
- DamWeir
- Flume
- Foreshore
- Hazard Zone
- Inundation Area
- Lock Chamber
- Rapids
- SeaOcean
- Special Use Zone
- Spillway
- StreamRiver
- Submerged Stream
- Wash
- Water Intake/Outflow

Waterbody - Large Scale

FType

- Estuary
- Ice Mass
- Lake Pond
- Playa
- Reservoir
- Swamp Marsh



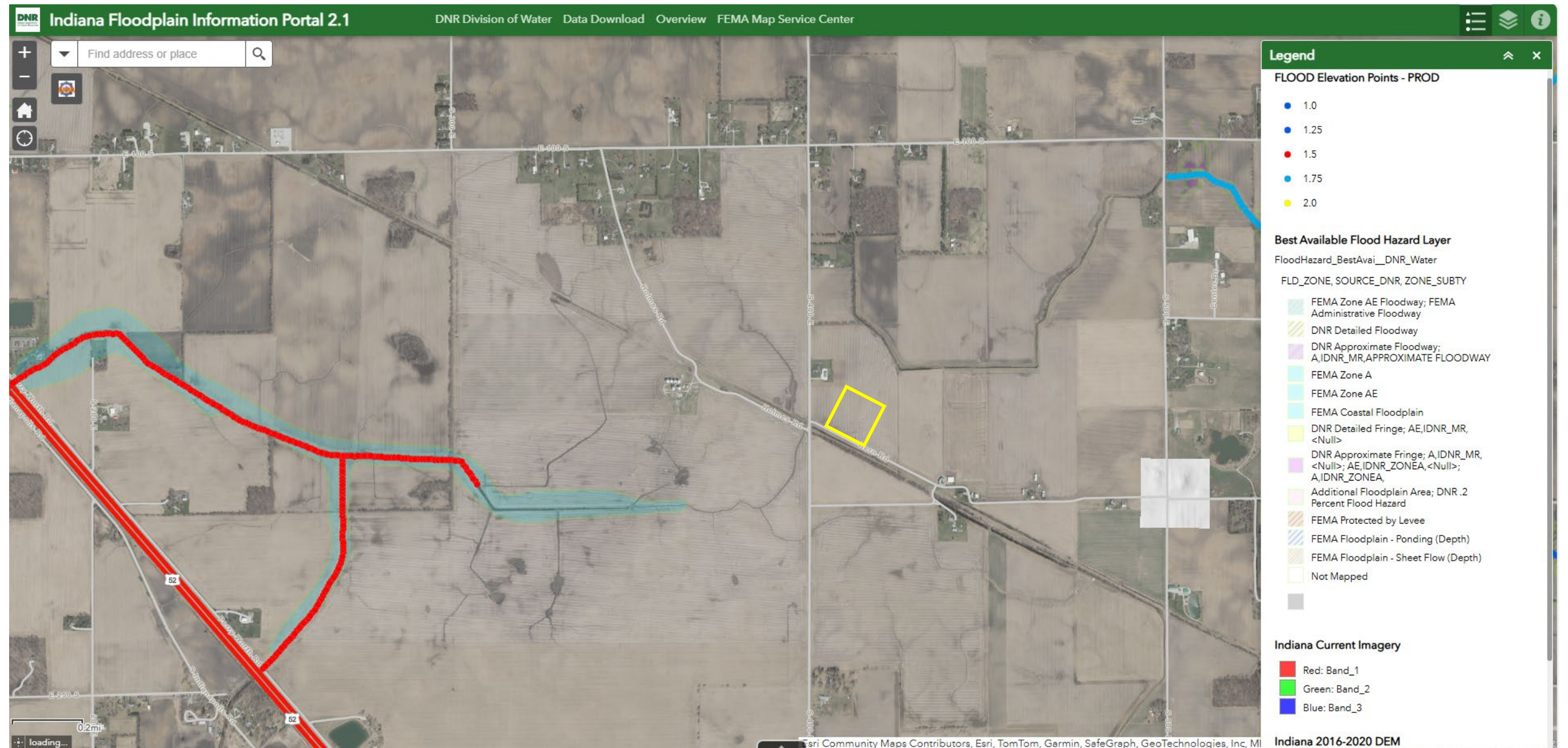
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

LU/CEG CONNECTION POINT 2

WATERWAYS MAP – From hydro.nationalmap.gov and arcgis.com

Updated 10/24/2025



LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

LU/CEG CONNECTION POINT 2

FLOODPLAIN MAP

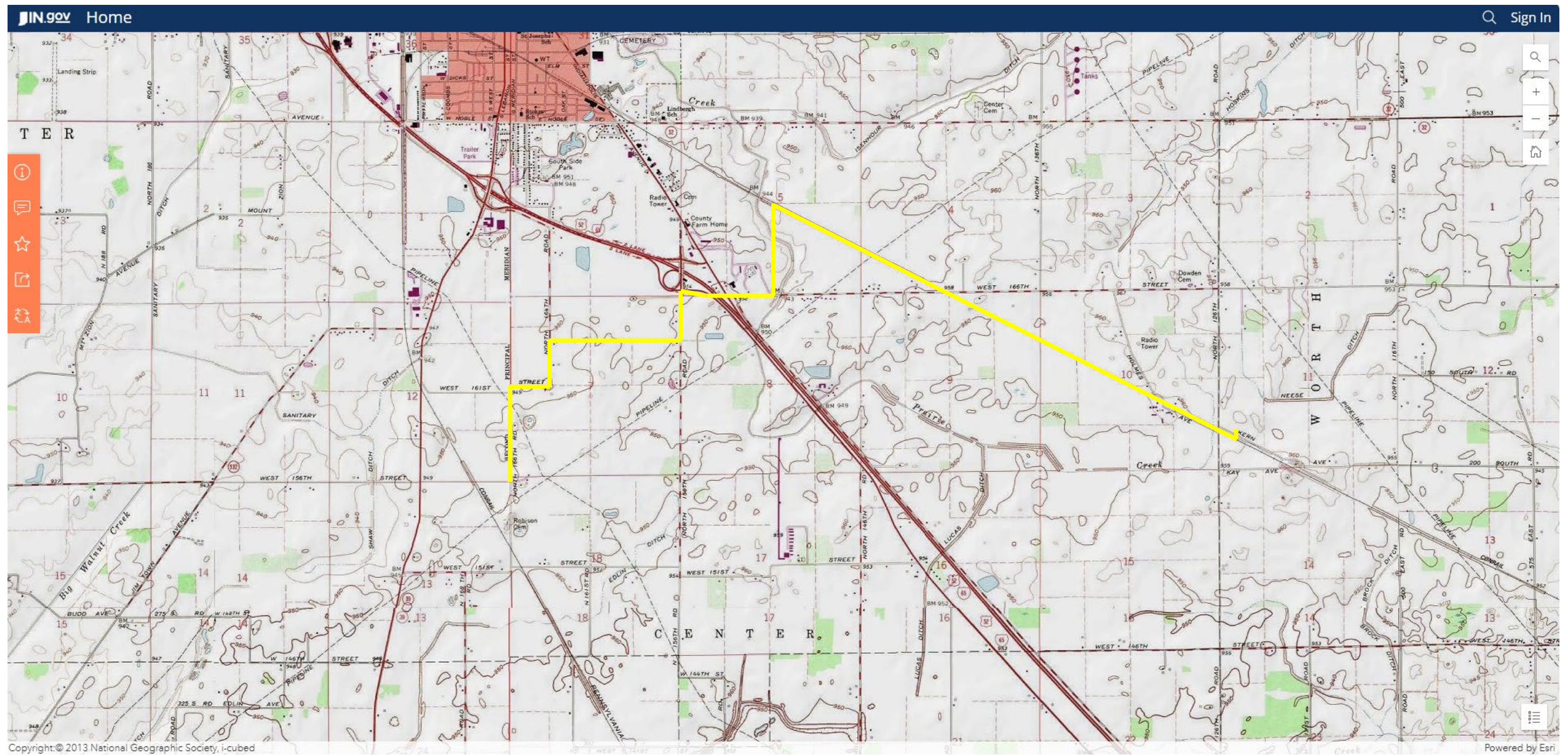
Updated 10/24/2025

**LEBANON UTILITIES
PUBLIC WATER SUPPLY ID: IN 5206003**

**PRELIMINARY ENGINEERING REPORT
WHOLESALE WATER SUPPLY - PHASE 2**

ENVIRONMENTAL GRAPHICS – WATER TRANSMISSION LINES (EAST)

Updated 10/24/2025



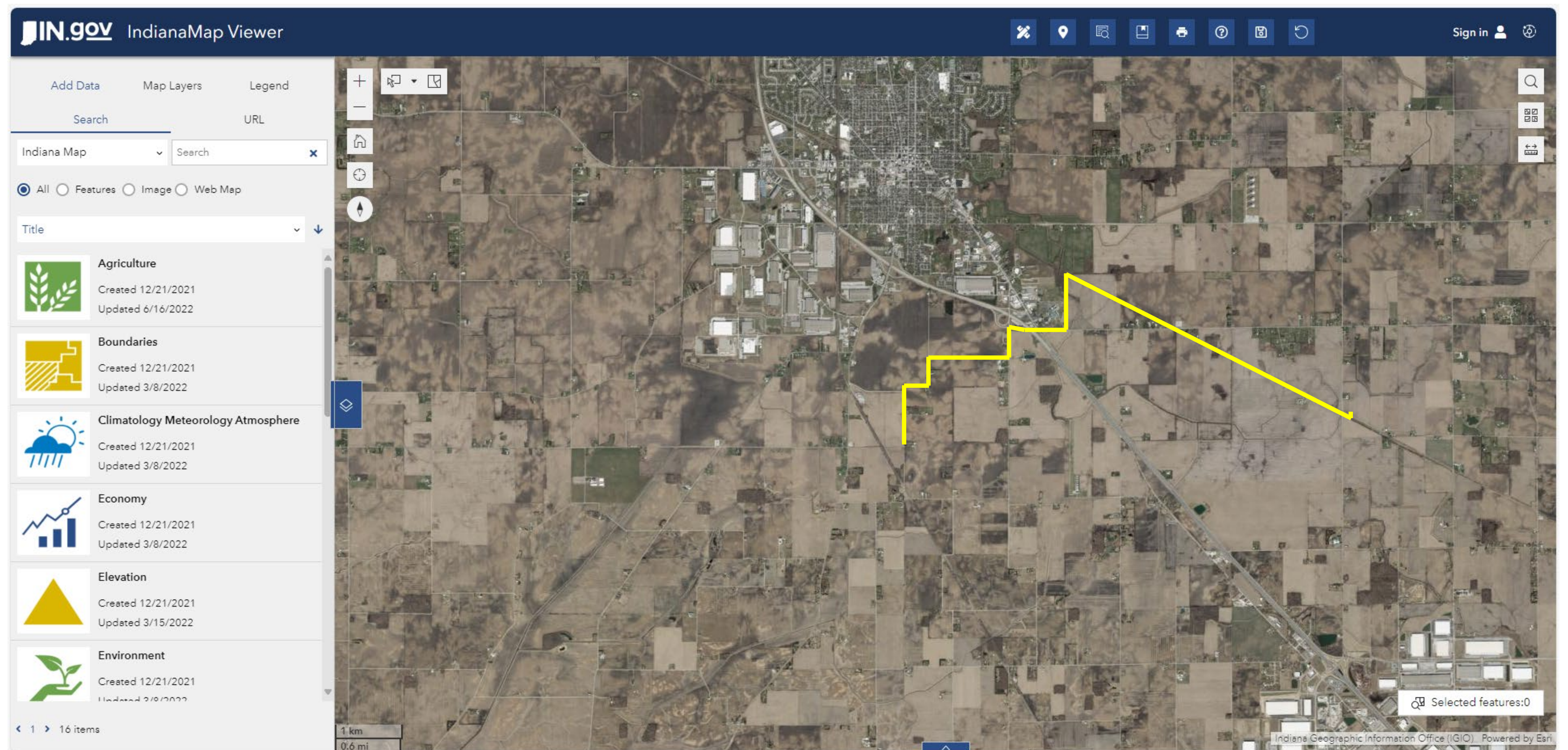
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT – WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (EAST)

USGS TOPO MAP

Updated 10/24/2025



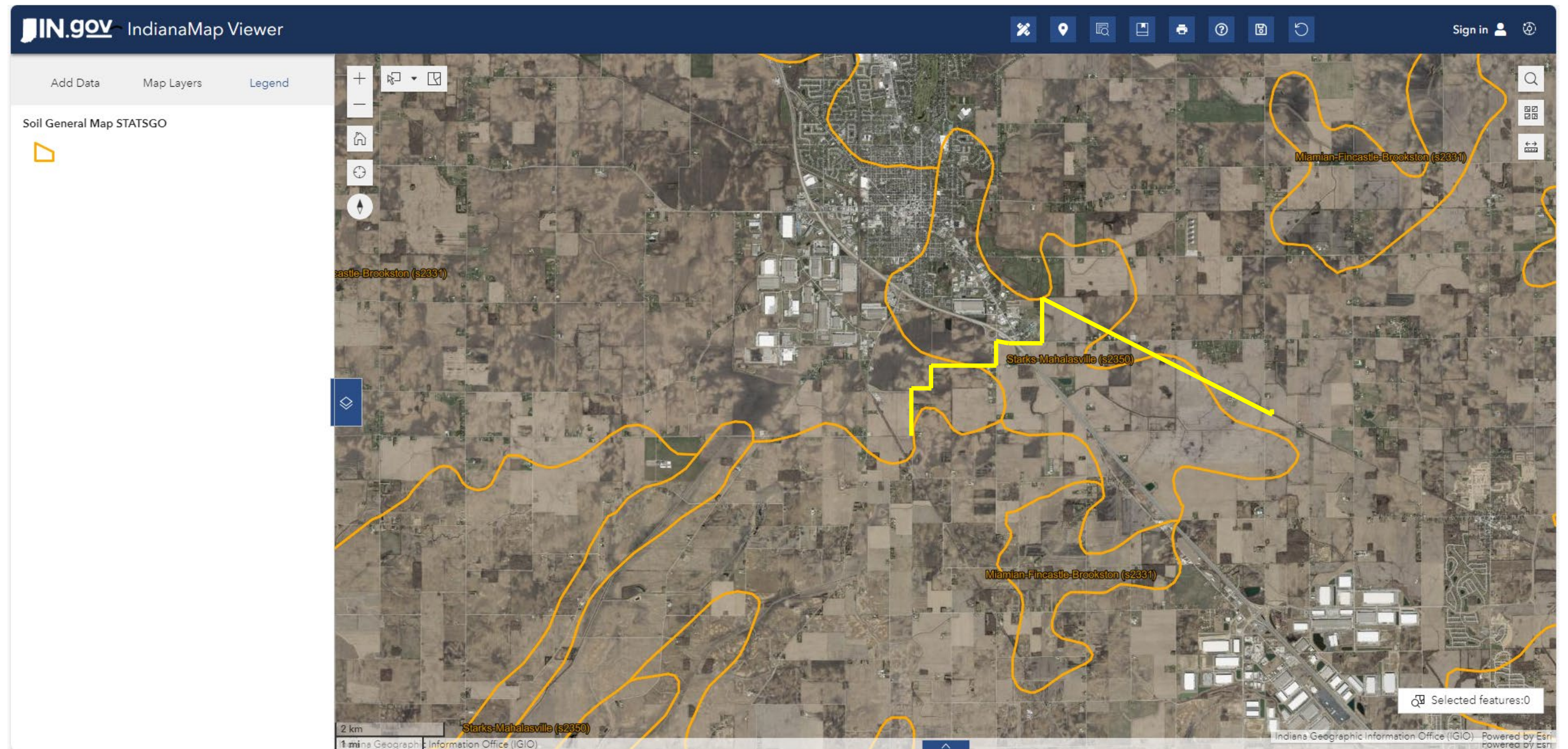
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (EAST)

AERIAL PHOTOGRAPHY MAP

Updated 10/24/2025



LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (EAST)

SOILS MAP

Updated 10/24/2025

Map Scale: 1:38,000 if printed on A landscape (11" x 8.5") sheet.

0 500 1000 2000 3000 Meters

0 1500 3000 6000 9000 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge ticks: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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Soil Survey Area: Boone County, Indiana

Survey Area Data: Version 28, Sep 4, 2025

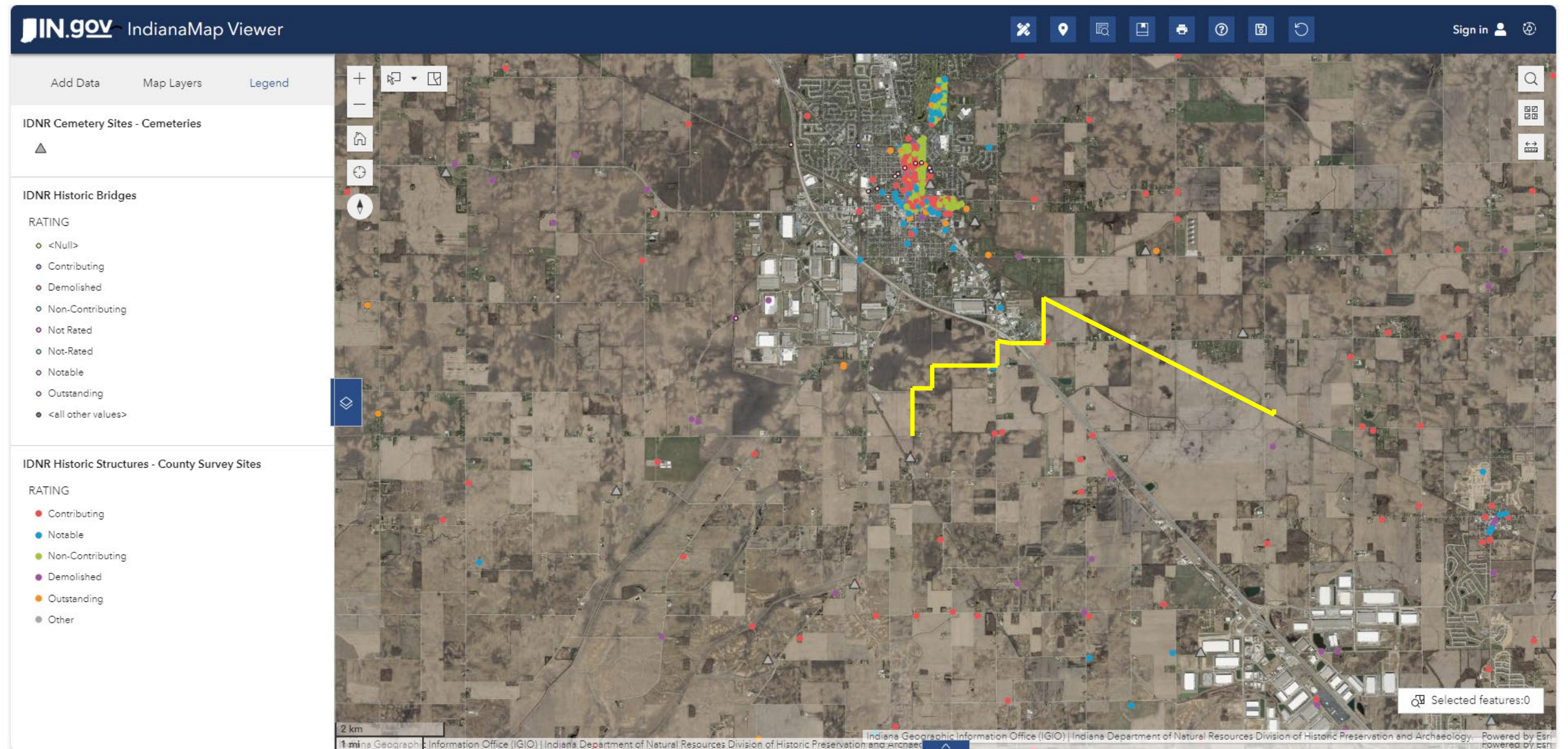
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 15, 2022—Jul 1, 2024

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Map Unit Legend

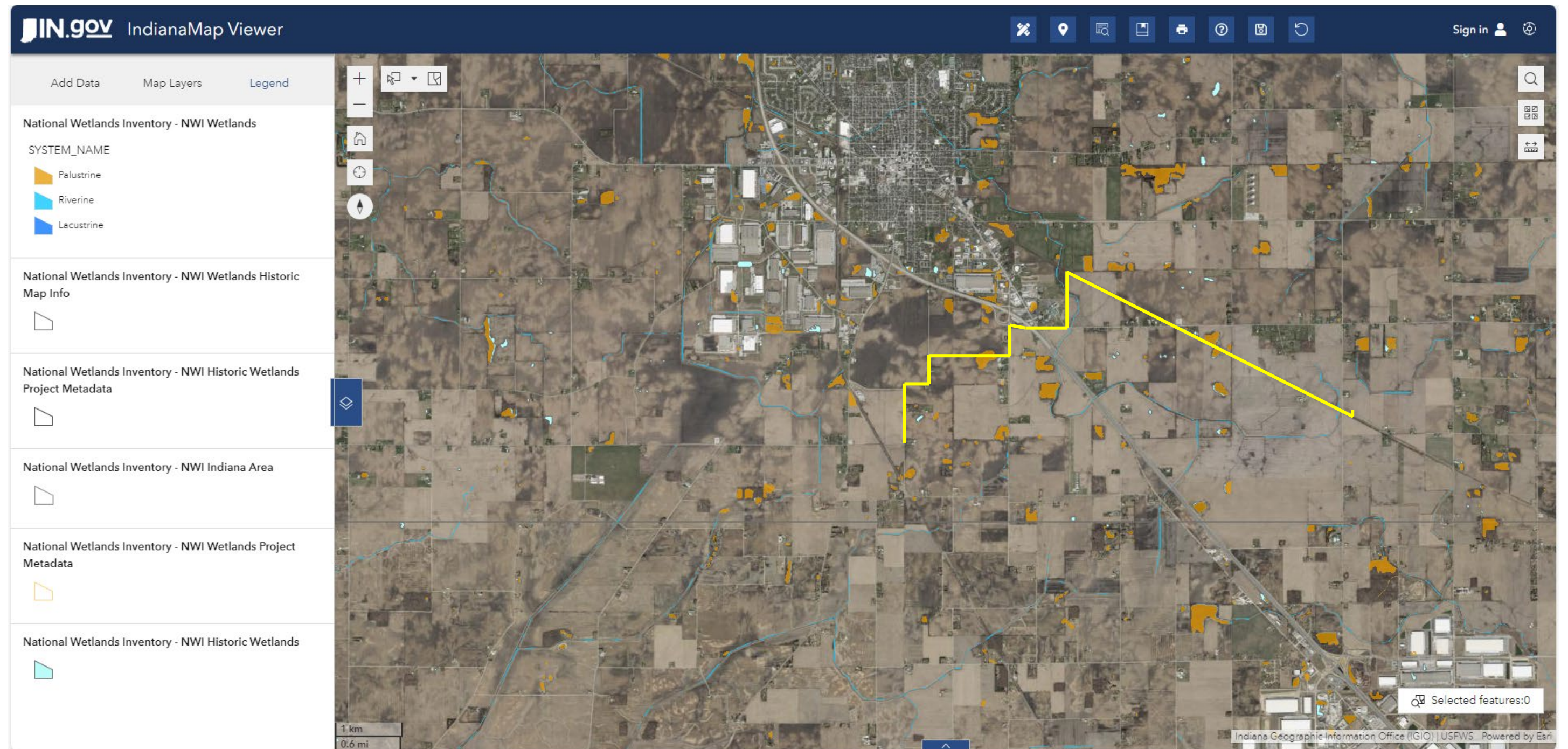
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CudA	Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes	124.3	11.7%
CxdA	Cyclone silty clay loam, 0 to 2 percent slopes	138.6	13.1%
FdbA	Fincastle silt loam, Tipton Till Plain, 0 to 2 percent slopes	177.1	16.7%
MamA	Mahalasville silty clay loam, 0 to 2 percent slopes	290.4	27.4%
MnpB2	Miami silt loam, 2 to 6 percent slopes, eroded	47.6	4.5%
ObxA	Ockley silt loam, 0 to 2 percent slopes	2.6	0.2%
ObxB2	Ockley silt loam, 2 to 6 percent slopes, eroded	4.9	0.5%
ThrA	Treaty silty clay loam, 0 to 1 percent slopes	71.3	6.7%
UfnA	Urban land-Crosby-Treaty complex, fine loamy subsoil, 0 to 2 percent slopes	1.6	0.2%
UfxA	Urban land-Fincastle complex, 0 to 2 percent slopes	24.9	2.3%
UhuA	Urban land-Mahalasville complex, 0 to 1 percent slopes	22.8	2.2%
UmyA	Urban land-Treaty complex, 0 to 1 percent slopes	6.8	0.6%
WofB	Williamstown-Crosby silt loams, 2 to 4 percent slopes	3.9	0.4%
WtaA	Whitaker silt loam, 0 to 2 percent slopes	143.0	13.5%
Totals for Area of Interest		1,059.9	100.0%



LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (EAST)
HISTORICAL STRUCTURES MAP
Updated 10/24/2025



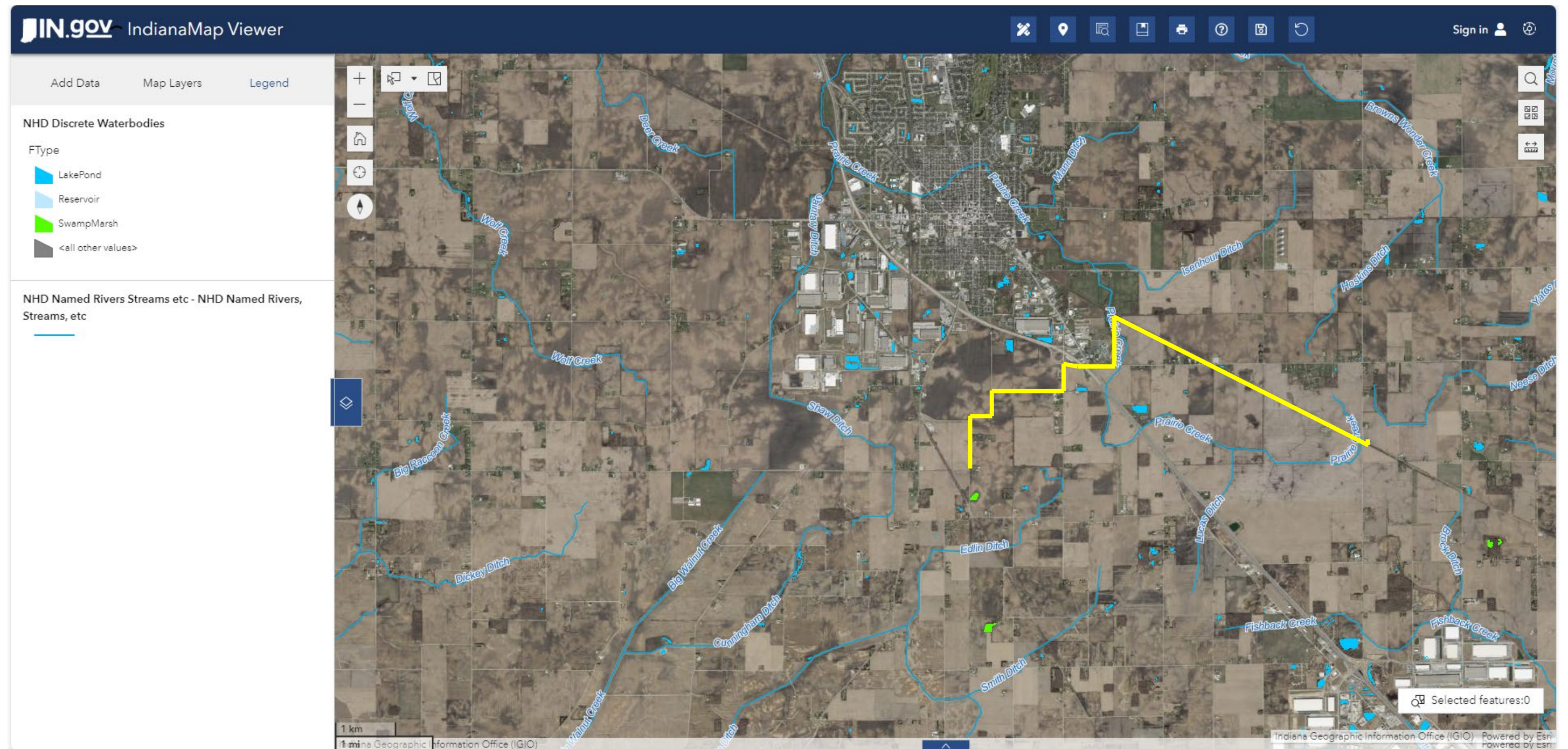
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (EAST)

WETLANDS MAP

10/24/2025



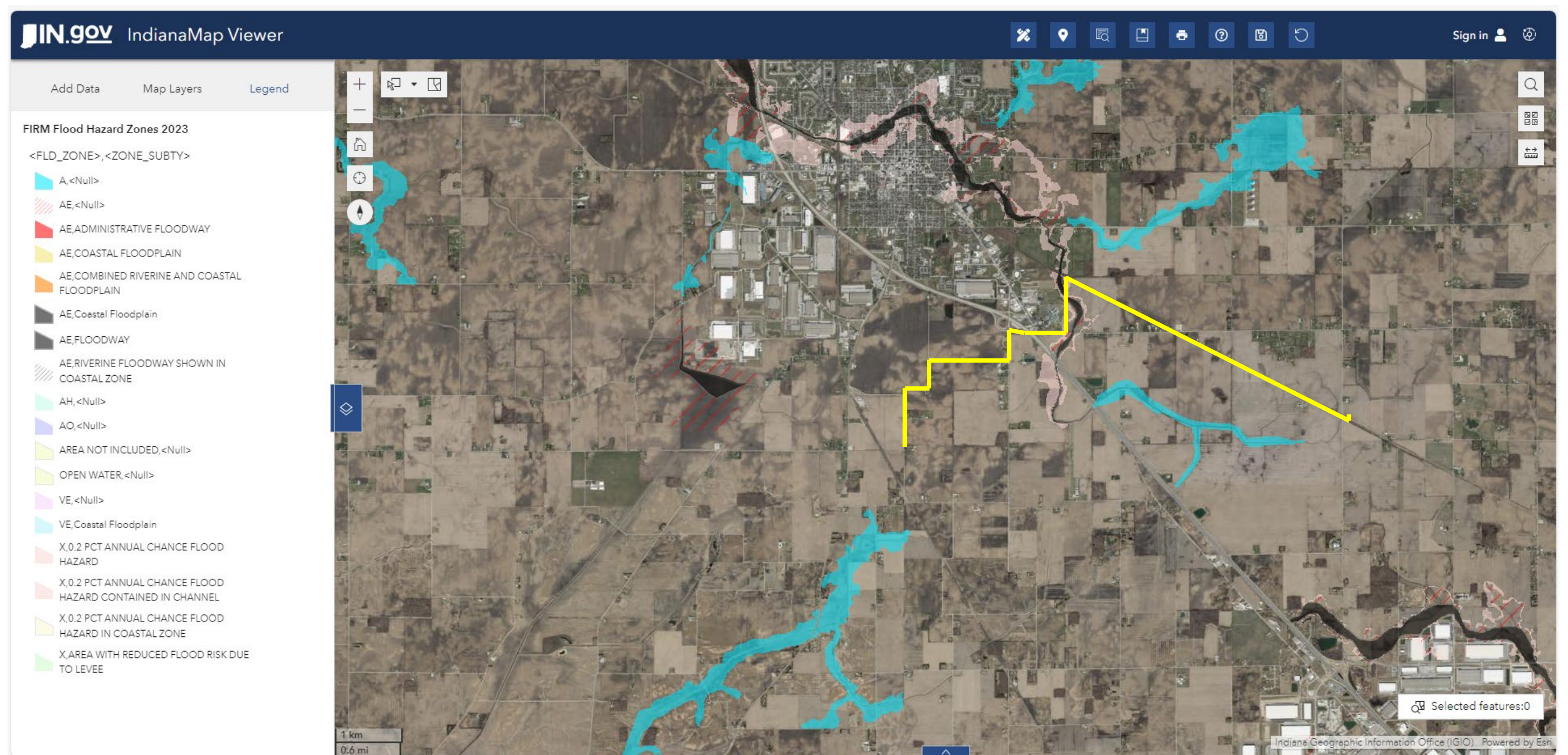
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (EAST)

WATERWAYS MAP

Updated 10/24/2025



LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (EAST)

FIRM FLOOD HAZARD ZONES

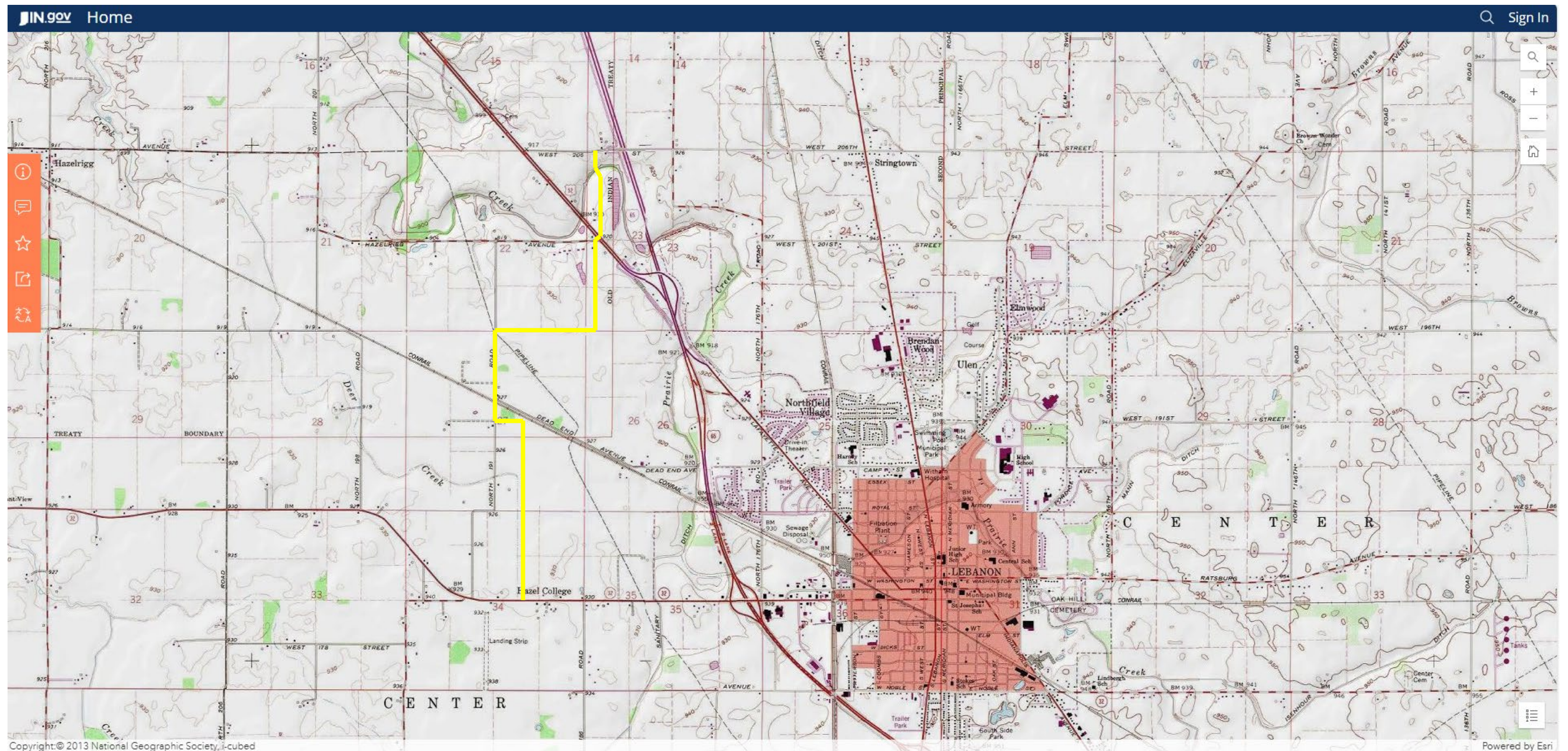
Updated 10/24/2025

**LEBANON UTILITIES
PUBLIC WATER SUPPLY ID: IN 5206003**

**PRELIMINARY ENGINEERING REPORT
WHOLESALE WATER SUPPLY - PHASE 2**

ENVIRONMENTAL GRAPHICS – WATER TRANSMISSION LINES (WEST)

Updated 10/24/2025



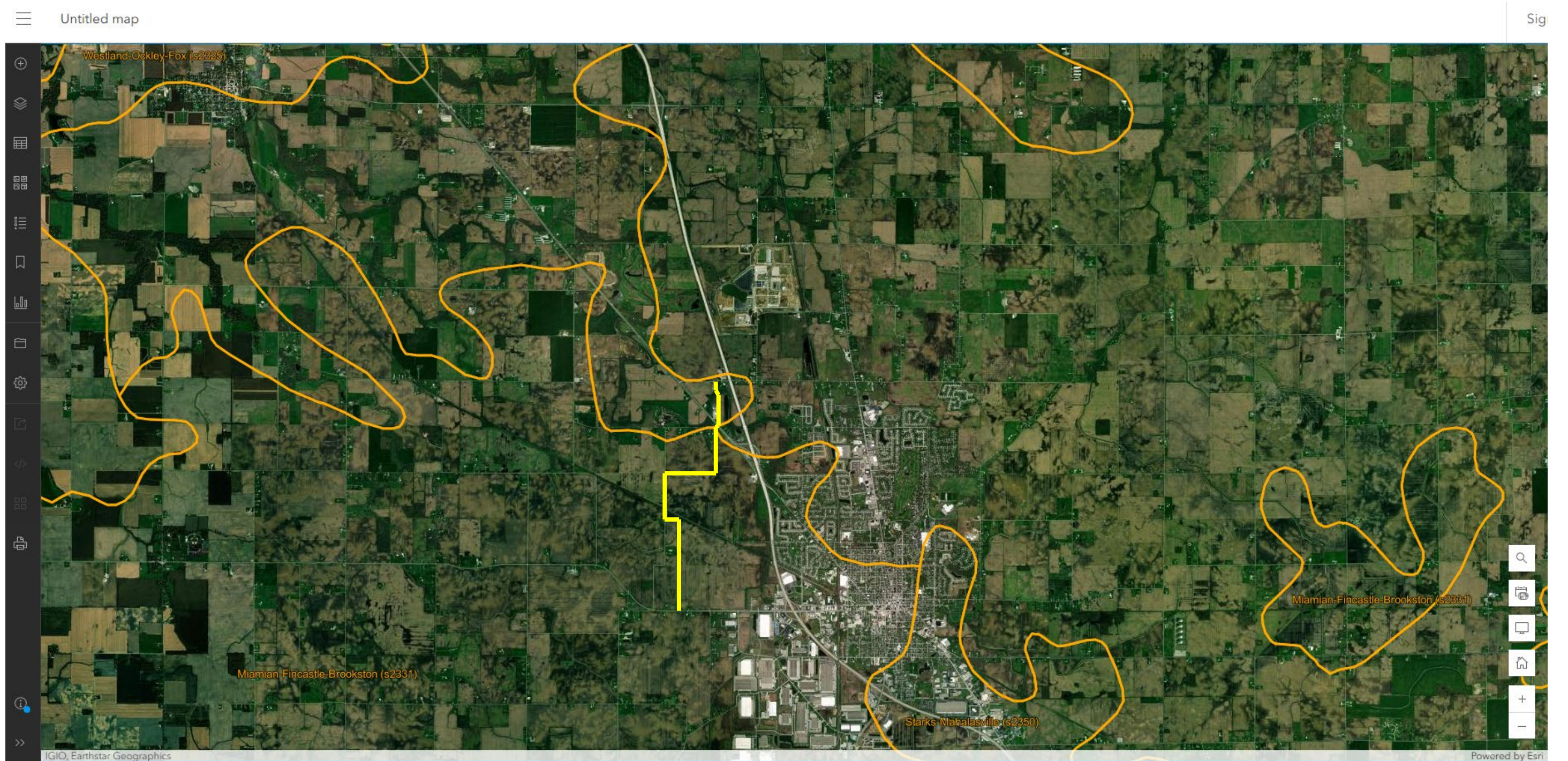
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (WEST)

USGS TOPO MAP

Updated 10/24/2025



LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

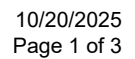
WATER TRANSMISSION LINES (WEST)

SOILS MAP

Updated 10/24/2025

Map Scale: 1:24,700 if printed on A portrait (8.5" x 11") sheet.

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Boone County, Indiana

Survey Area Data: Version 28, Sep 4, 2025

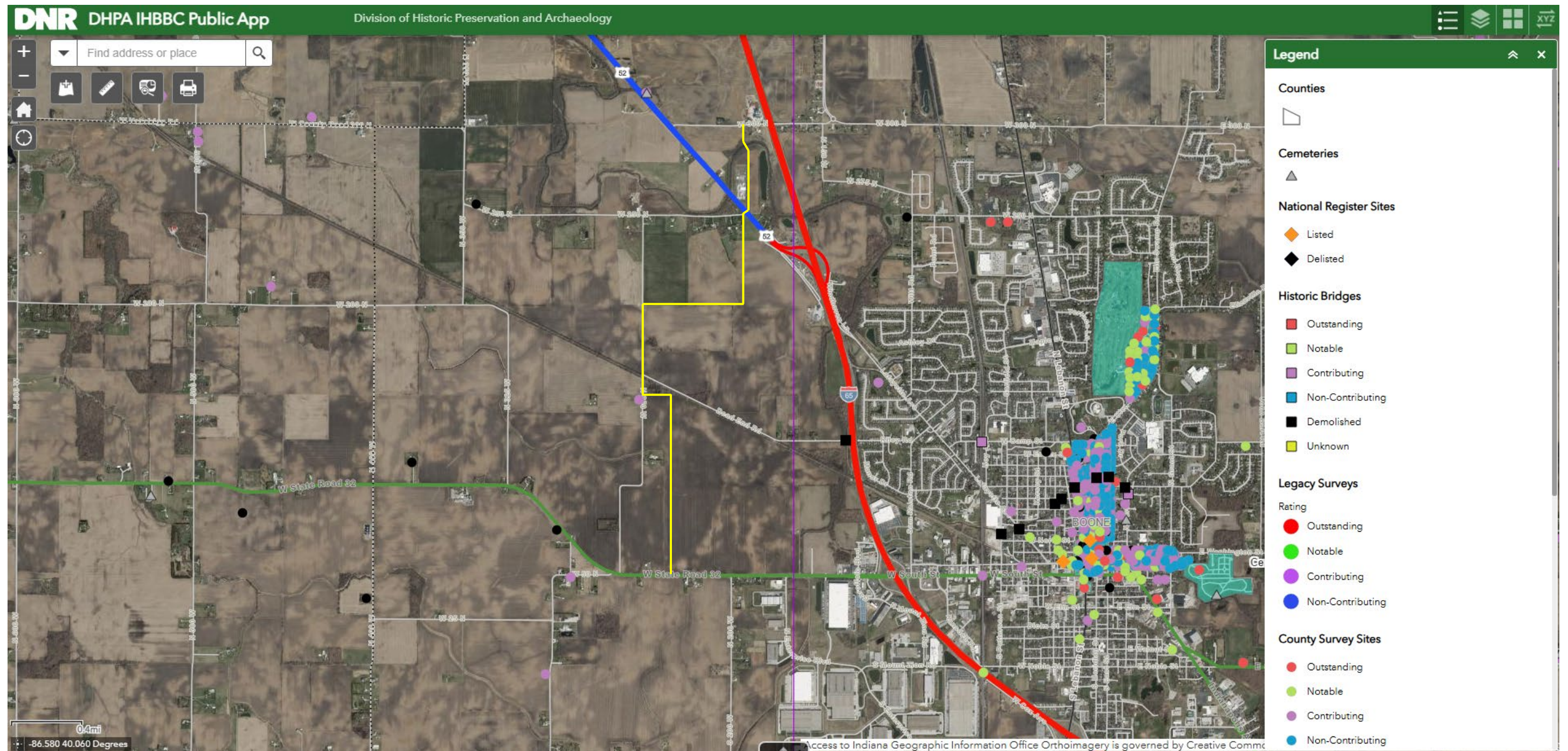
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 15, 2022—Jun 21, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CudA	Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes	24.1	5.4%
CxdA	Cyclone silty clay loam, 0 to 2 percent slopes	277.8	61.8%
EdeAW	Eel and Beckville soils, 0 to 2 percent slopes, occasionally flooded, very brief duration	0.7	0.2%
FdbA	Fincastle silt loam, Tipton Till Plain, 0 to 2 percent slopes	102.0	22.7%
MnpB2	Miami silt loam, 2 to 6 percent slopes, eroded	17.3	3.8%
MnpC2	Miami silt loam, 6 to 12 percent slopes, eroded	1.8	0.4%
ObxA	Ockley silt loam, 0 to 2 percent slopes	5.4	1.2%
ObxB2	Ockley silt loam, 2 to 6 percent slopes, eroded	0.5	0.1%
SngA	Sleeth silt loam, 0 to 2 percent slopes	2.1	0.5%
SocAW	Sloan silty clay loam, 0 to 1 percent slopes, occasionally flooded, very brief duration	6.6	1.5%
ThrA	Treaty silty clay loam, 0 to 1 percent slopes	0.7	0.2%
W	Water	2.7	0.6%
WdrA	Wawaka silt loam, 0 to 2 percent slopes	1.6	0.4%
WofB	Williamstown-Crosby silt loams, 2 to 4 percent slopes	2.2	0.5%
WqvA	Westland silty clay loam, 0 to 2 percent slopes	3.8	0.8%
XfuB2	Miami-Rainsville complex, 2 to 6 percent slopes, eroded	0.0	0.0%
Totals for Area of Interest		449.3	100.0%



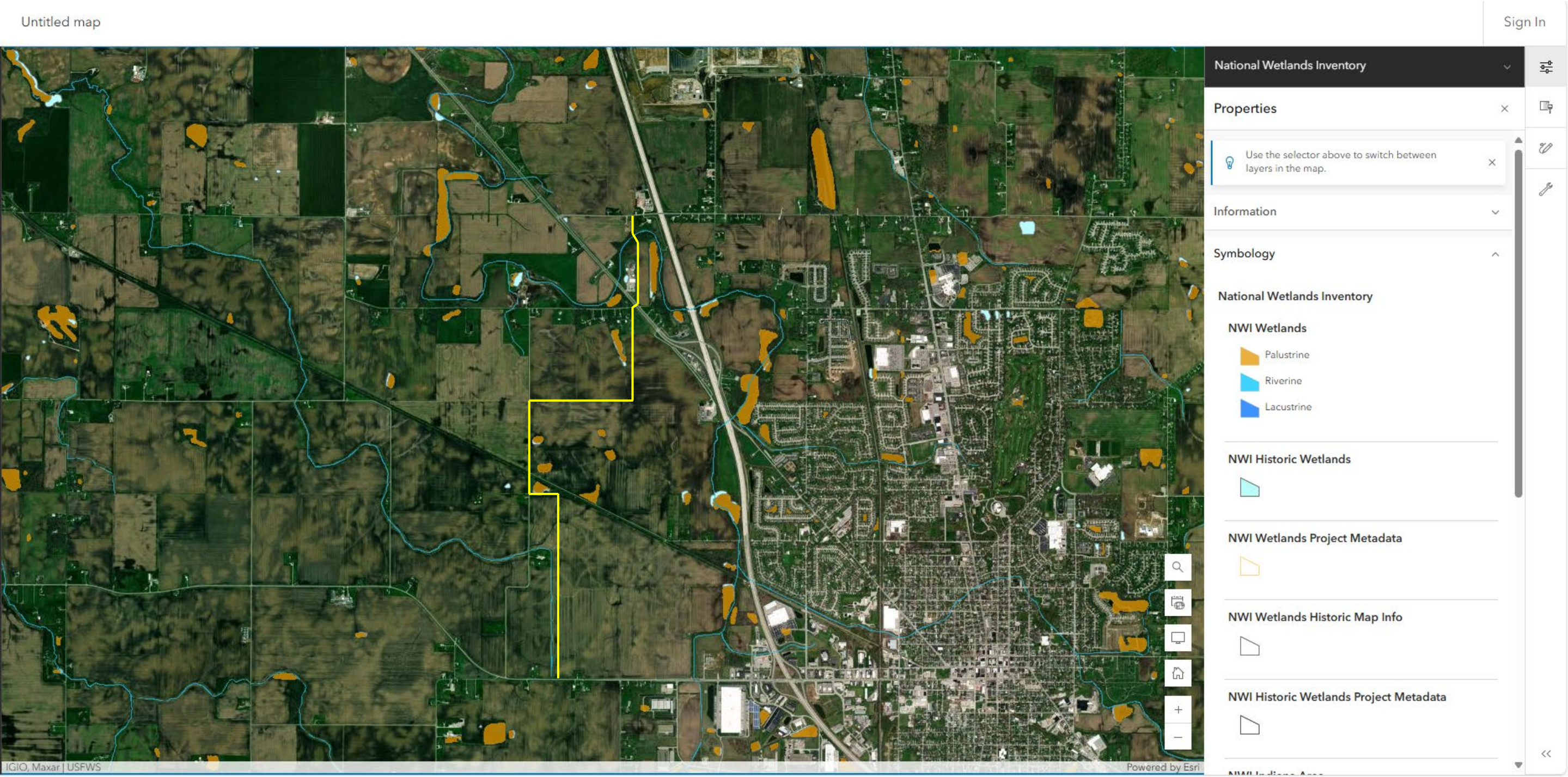
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (WEST)

HISTORICAL STRUCTURES MAP

Updated 10/24/2025



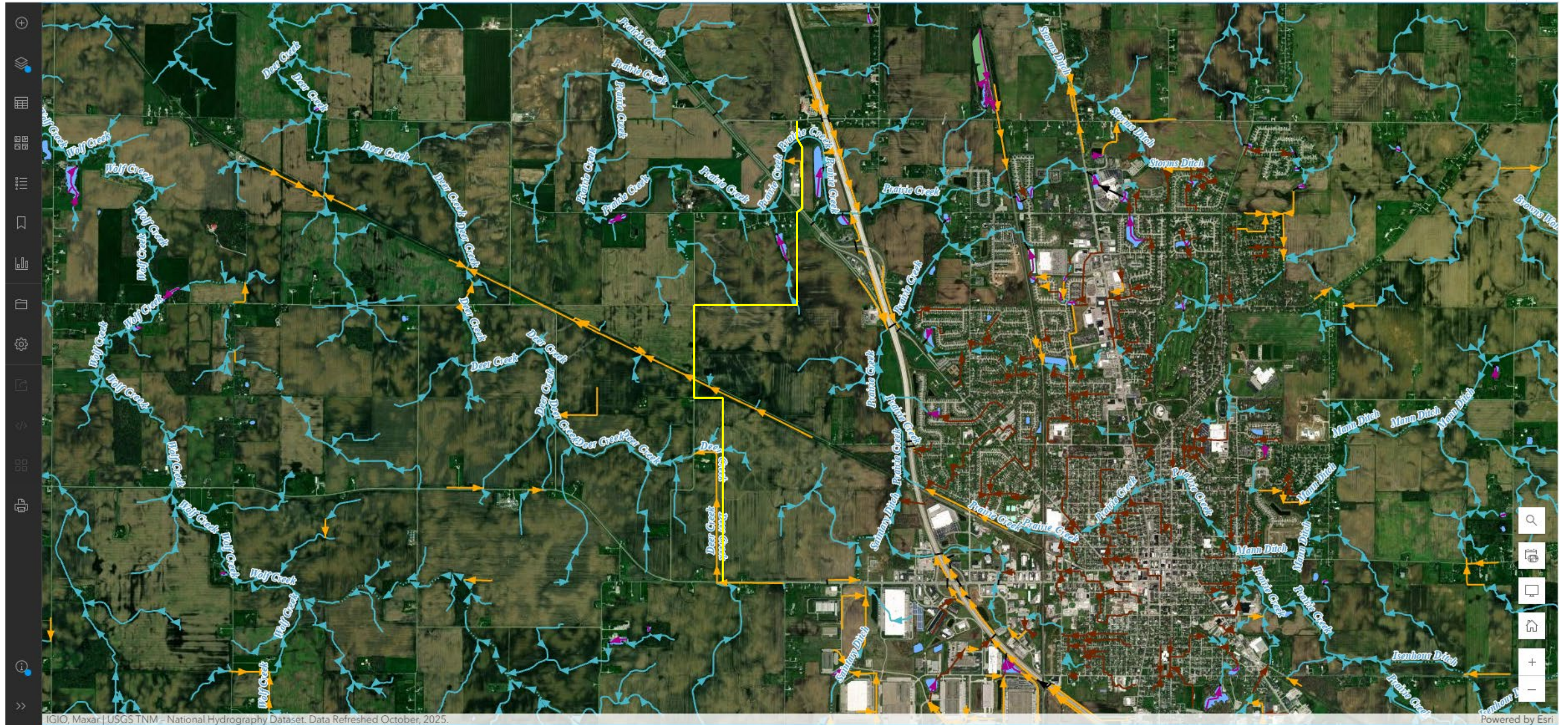
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (WEST)

WETLANDS MAP – From Indianamap.org and arcgis.com

10/24/2025



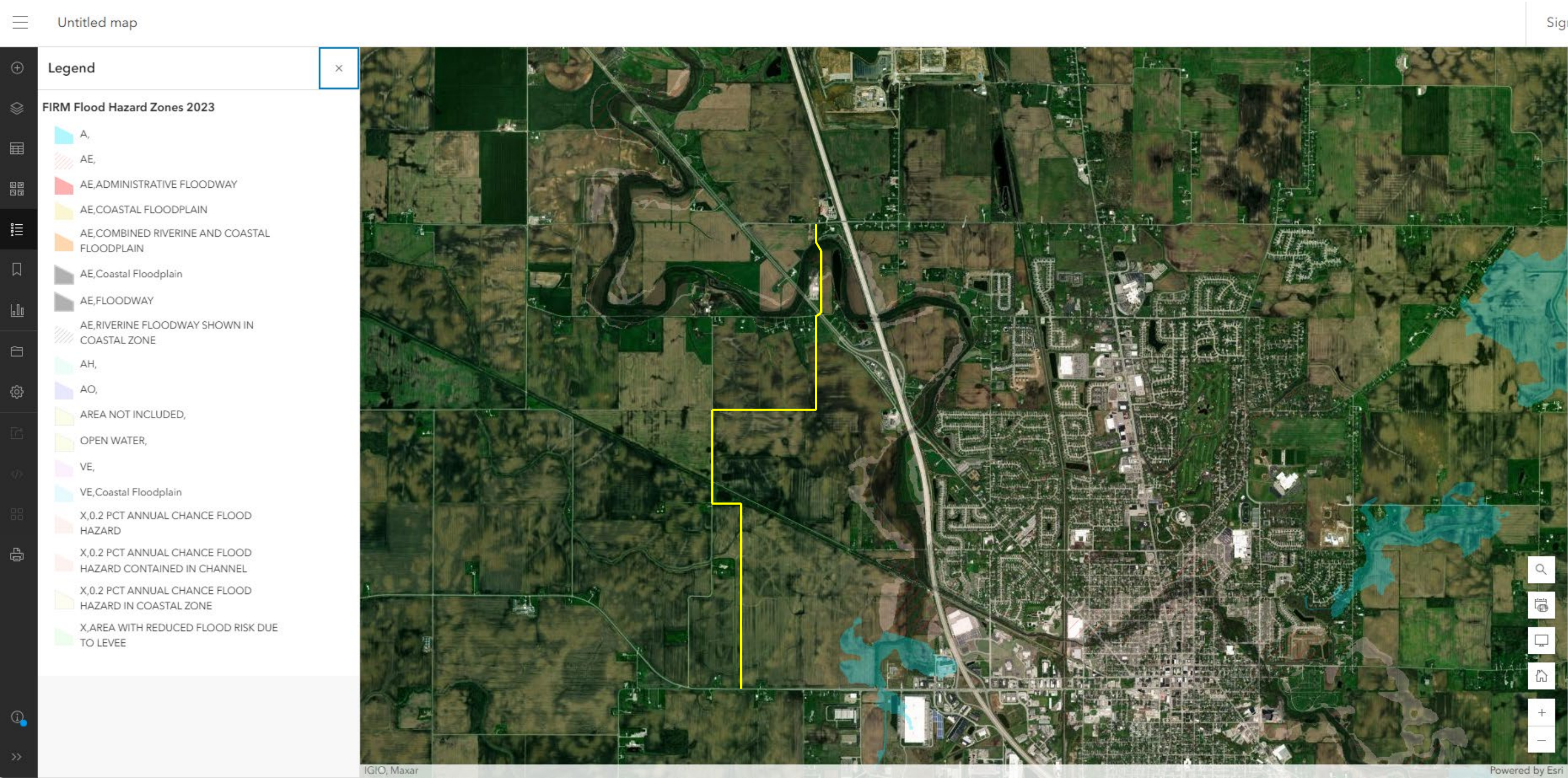
LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY - PHASE 2

WATER TRANSMISSION LINES (WEST)

WATERWAYS MAP - From hydro.nationalmap.gov and arcgis.com

Updated 10/24/2025



LEBANON UTILITIES

PRELIMINARY ENGINEERING REPORT - WHOLESALE WATER SUPPLY – PHASE 2

WATER TRANSMISSION LINES (WEST)

FIRM FLOOD HAZARD ZONES

Updated 10/24/2025

APPENDIX A

WHOLESALE WATER SUPPLY PROGRAM PHASING SCHEMATICS

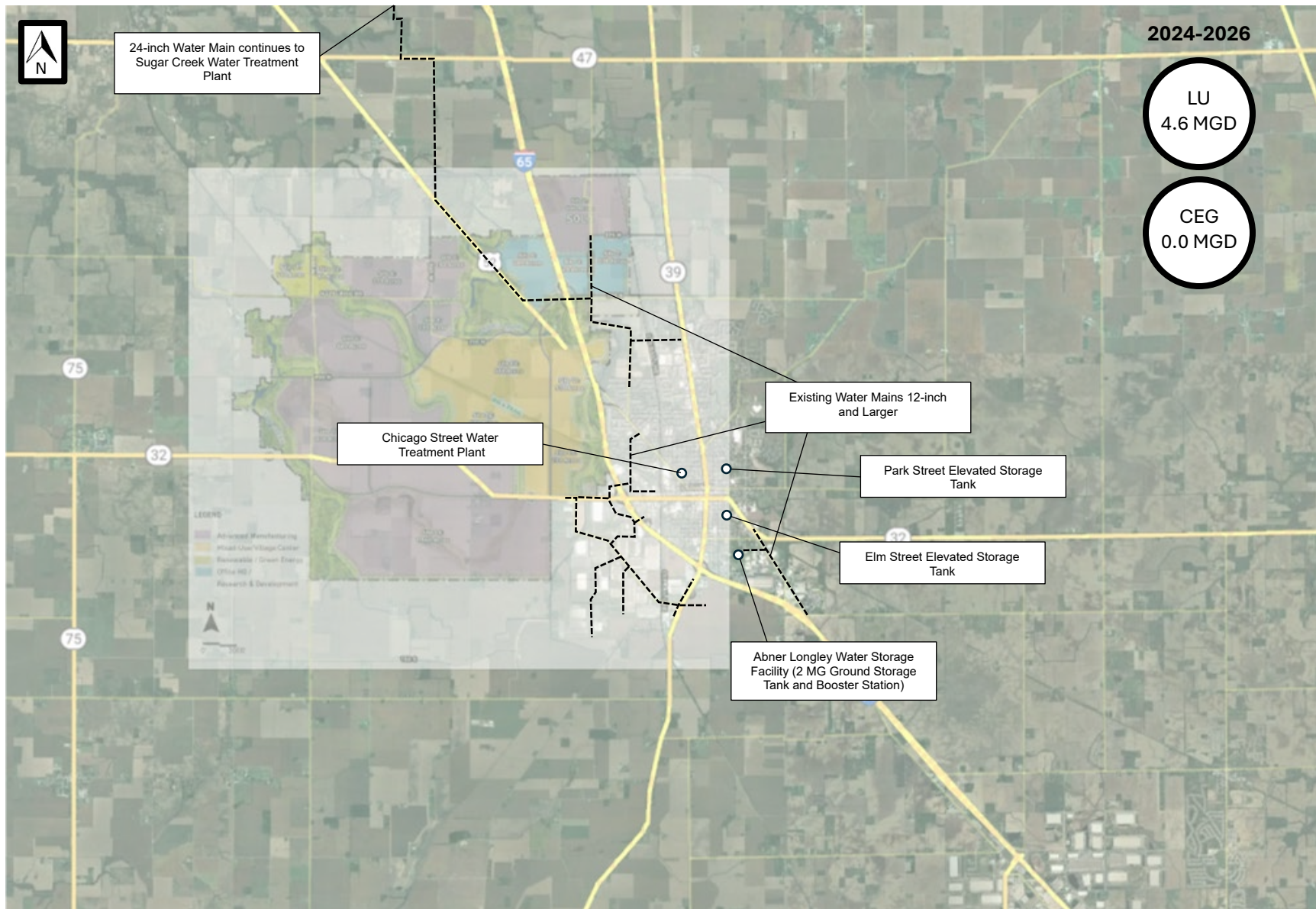


Figure A – CURRENT CONDITIONS – Updated 11/12/2024

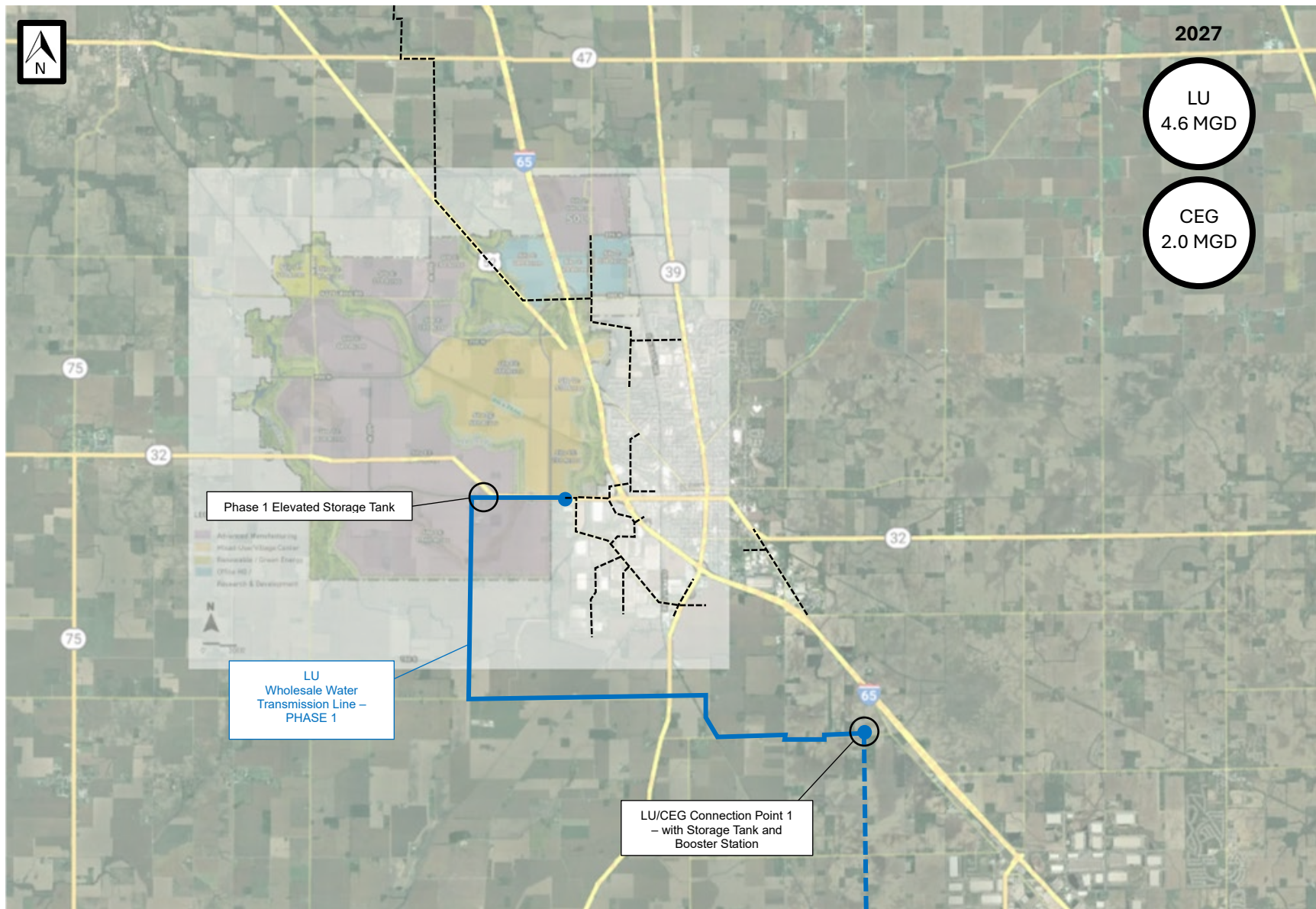


Figure B – WHOLESALE WATER SUPPLY – PHASE 1 – Updated 11/12/2024

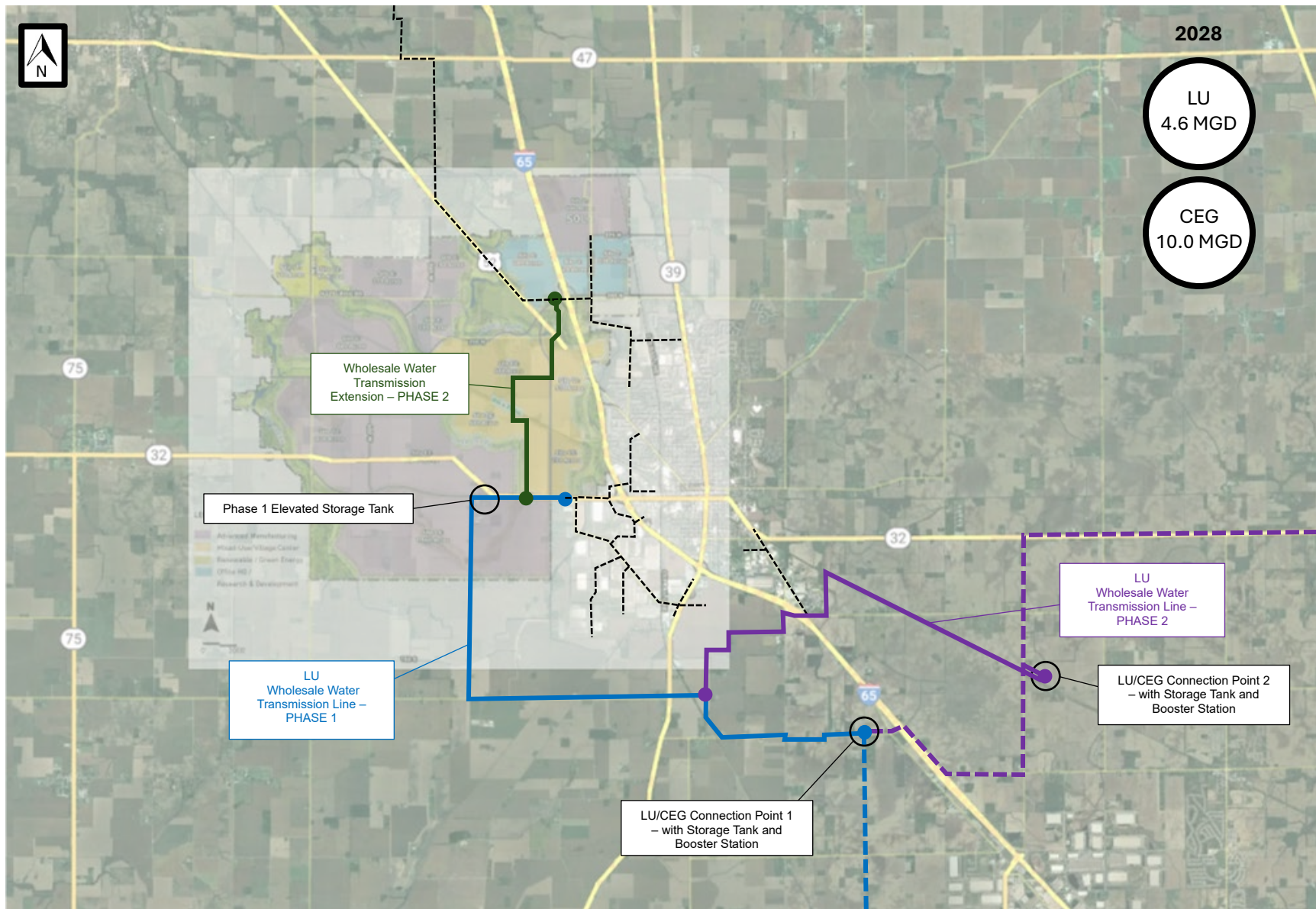


Figure C – WHOLESale WATER SUPPLY – PHASE 2 – Updated 10/24/2025

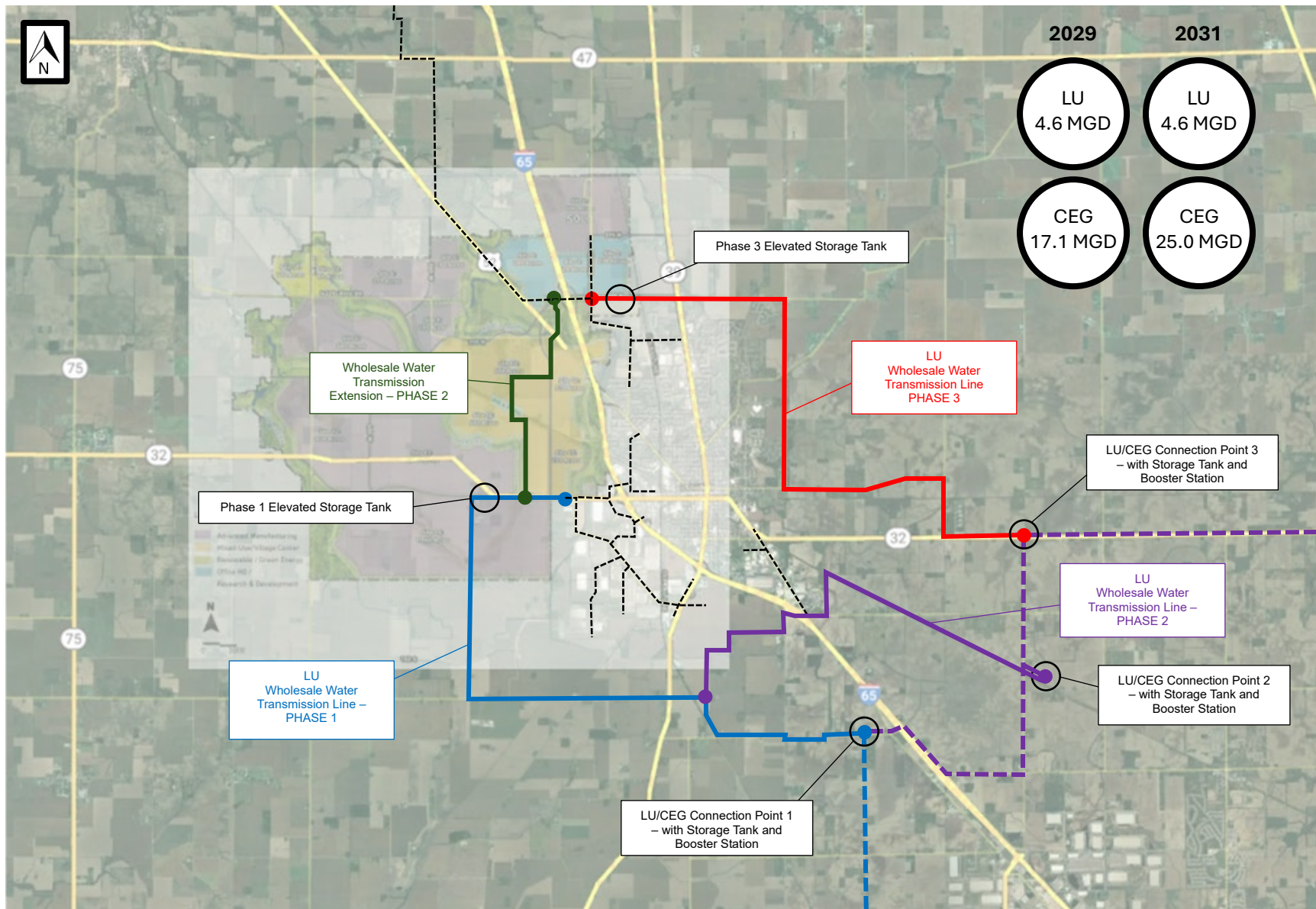


Figure D - WHOLESALE WATER SUPPLY - PHASE 3 - Updated 10/24/2025

APPENDIX B

WHOLESALE WATER SUPPLY PROGRAM PHASED COST ESTIMATES

WHOLESALE WATER SUPPLY PHASE 1**Construction Costs (dollars)**

Item	Quantity	Unit	Unit Cost	Total Cost
<i>Connection Point 1</i>				
Meter Vault	1	LS	\$500,000.00	\$500,000.00
2 MG Ground Storage Tank	1	LS	\$6,000,000.00	\$6,000,000.00
15 MGD Booster Station	1	LS	\$6,000,000.00	\$6,000,000.00
<i>Phase 1 Water Transmission Lines</i>				
30-inch DI Water Main	10300	LFT	\$750.00	\$7,725,000.00
36-inch DI Water Main	38000	LFT	\$900.00	\$34,200,000.00
<i>Phase 1 Elevated Storage Tank</i>				
2 MG Elevated Storage Tank	1	LS	\$8,000,000.00	\$8,000,000.00
Contingencies				\$6,250,000.00
Construction Costs Sub-total				\$68,675,000.00

Total Project Costs (dollars)

Administrative and Legal	\$1,000,000.00
Land & Right-of-Way Acquisition	\$8,500,000.00
Relocation	\$0.00
Engineering Fees	\$3,500,000.00
Design (included in Engineering Fees)	\$0.00
Construction	\$0.00
Other	\$0.00
Project Inspection	\$5,500,000.00
Costs Related to Startup	\$0.00
Non Construction Costs Sub-total	\$18,500,000.00
Construction Costs Sub-total	\$68,675,000.00
Total Phase 1 Project Cost	\$87,175,000.00

WHOLESALE WATER SUPPLY PHASE 2**Construction Costs (dollars)**

Item	Quantity	Unit	Unit Cost	Total Cost
<i>Connection Point 2</i>				
Meter Vault	1	LS	\$500,000.00	\$500,000.00
1 MG Ground Storage Tank	2	LS	\$4,000,000.00	\$8,000,000.00
15 MGD Booster Station	1	LS	\$10,000,000.00	\$10,000,000.00
<i>Phase 2 Water Transmission Lines (East)</i>				
30-inch DI Water Main	33000	LFT	\$800.00	\$26,400,000.00
<i>Phase 2 Water Transmission Line Extension (West)</i>				
30-inch DI Water Main	17500	LFT	\$800.00	\$14,000,000.00
Contingencies				\$3,500,000.00
Construction Costs Sub-total				\$62,400,000.00

Total Project Costs (dollars)	
Administrative and Legal	\$1,000,000.00
Land & Right-of-Way Acquisition	\$4,000,000.00
Relocation	\$0.00
Engineering Fees	\$3,000,000.00
Design (included in Engineering Fees)	\$0.00
Construction	\$0.00
Other	\$0.00
Project Inspection	\$4,600,000.00
Costs Related to Startup	\$0.00
Non Construction Costs Sub-total	\$12,600,000.00
Construction Costs Sub-total	\$62,400,000.00
Total Phase 2 Project Cost	\$75,000,000.00

WHOLESALE WATER SUPPLY PHASE 3

Construction Costs (dollars)				
Item	Quantity	Unit	Unit Cost	Total Cost
<i>Connection Point 3</i>				
Meter Vault	1	LS	\$500,000.00	\$500,000.00
1 MG Ground Storage Tank	2	LS	\$4,000,000.00	\$8,000,000.00
15 MGD Booster Station	1	LS	\$10,000,000.00	\$10,000,000.00
<i>Phase 3 Water Transmission Lines</i>				
30-inch DI Water Main	45000	LFT	\$800.00	\$36,000,000.00
<i>Phase 3 Elevated Storage Tank</i>				
2 MG Elevated Storage Tank	1	LS	\$15,000,000.00	\$15,000,000.00
Contingencies				\$5,500,000.00
Construction Costs Sub-total				\$75,000,000.00

Total Project Costs (dollars)	
Administrative and Legal	\$1,000,000.00
Land & Right-of-Way Acquisition	\$7,200,000.00
Relocation	\$0.00
Engineering Fees	\$3,800,000.00
Design (included in Engineering Fees)	\$0.00
Construction	\$0.00
Other	\$0.00
Project Inspection	\$6,000,000.00
Costs Related to Startup	\$0.00
Non Construction Costs Sub-total	\$18,000,000.00
Construction Costs Sub-total	\$75,000,000.00
Total Phase 3 Project Cost	\$93,000,000.00

OVERALL WHOLESALE WATER SUPPLY PROGRAM

Non Construction Costs Sub-total	\$49,100,000.00
Construction Costs Sub-total	\$206,075,000.00
Total Overall Program Project Cost	\$255,175,000.00

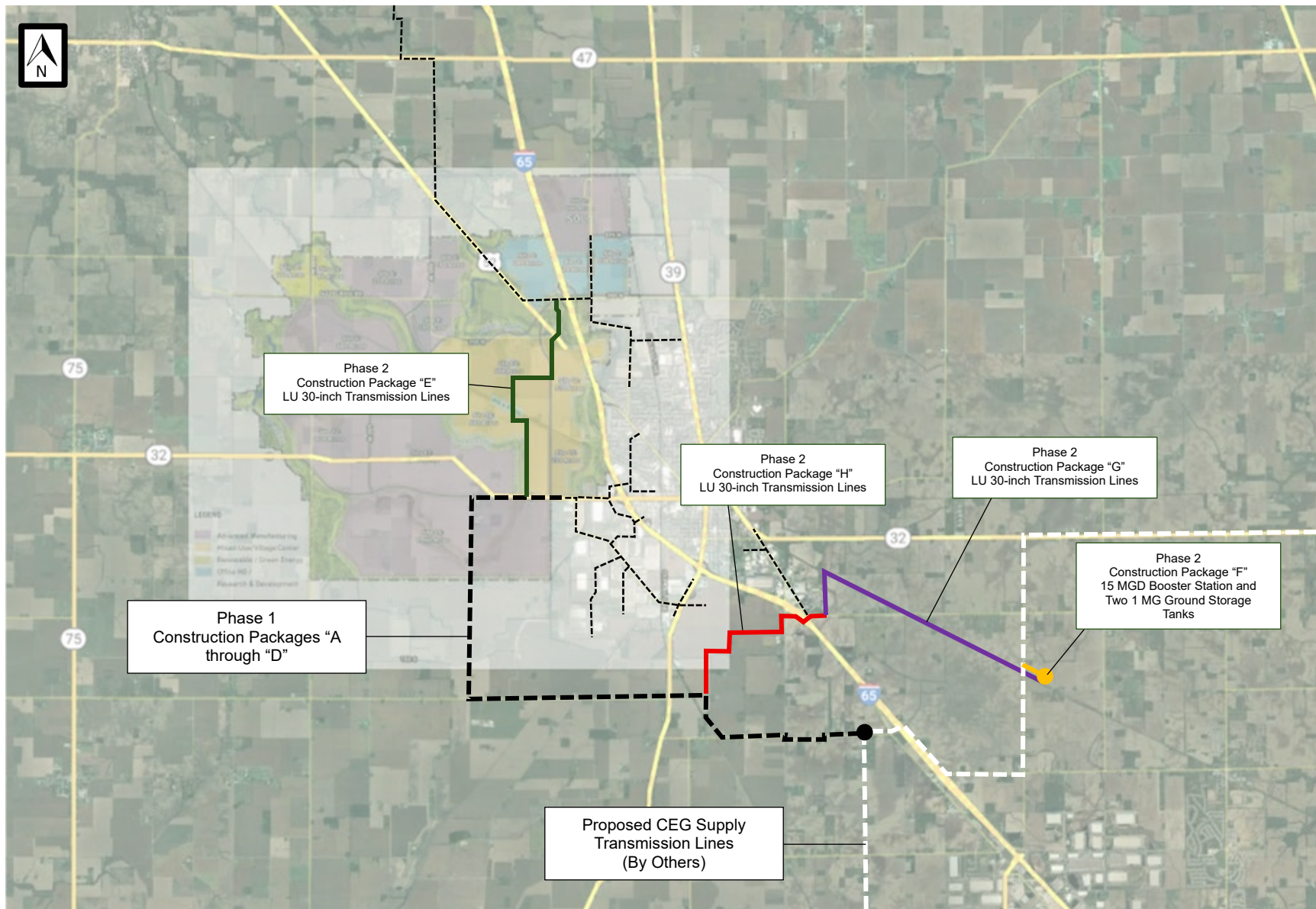
APPENDIX C

WHOLESALE WATER SUPPLY PROGRAM OVERALL SCHEDULE

	PHASE 1	PHASE 2	PHASE 3
2024 - Q4			
2025 - Q1	Loan Closing		
2025 - Q2	Design/Permitting & Land and Easement Acquisition		
2025 - Q3			
2025 - Q4	Procurement/Initiation of Construction		
2026 - Q1	Construction	Loan Closing	
2026 - Q2		Design/Permitting & Land and Easement Acquisition	
2026 - Q3		Procurement/Initiation of Construction	
2026 - Q4			
2027 - Q1	Substantial Completion/Initiation of Operation	Construction	
2027 - Q2			
2027 - Q3			
2027 - Q4			
2028 - Q1		Substantial Completion/Initiation of Operation	
2028 - Q2			
2028 - Q3			
2028 - Q4			
2029 - Q1			Loan Closing
2029 - Q2			Design/Permitting & Land and Easement Acquisition
2029 - Q3			Procurement/Initiation of Construction
2029 - Q4			Construction
2030 - Q1			
2030 - Q2			
2030 - Q3			
2030 - Q4			
2031 - Q1			Substantial Completion/Initiation of Operation

APPENDIX E

PHASE 2 MILESTONE SCHEDULE AND CONSTRUCTION PACKAGES SCHEMATIC



WHOLESALE WATER SUPPLY PROGRAM – PHASE 2 CONSTRUCTION PACKAGES SCHEMATIC – Updated 11/11/2025