Mississippi Valley Division,

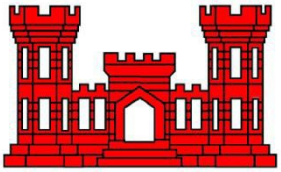
Regional Planning and Environment Division South

# Yazoo Backwater Area Water Management Project

## APPENDIX F-2 - Hazardous, Toxic, and Radioactive Waste

## November 2024

# Appendix F-2
# Hazardous, Toxic, and Radioactive Waste



**U.S. ARMY CORPS OF ENGINEERS**

4.1.1.1.9 HTRW

HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW) EVALUATION TO THE 2024 FINAL ENVIRONMENTAL IMPACT STATEMENT

# Background:

In 2019 the Yazoo Study Area experienced record flooding when over 448,000 acres were inundated for over six months. The combination of more frequent and significant flooding, substantial environmental, economic, and safety concerns, and improved environmental analysis and documentation concerning the Yazoo Study Area prompted the initiation of a final environmental impact statement (FEIS) for a water management solution for flooding in the Yazoo Basin.

# Methodology:

The purpose of a Phase I Environmental Site Assessment (ESA) is to identify, to the extent feasible in the absence of sampling and analysis, the range of contaminants (i.e., *Recognized Environmental Conditions* [RECs]) within the scope of the U.S. Environmental Protection Agency's (EPA) Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. The 2002 Brownfields Amendments to the CERCLA require EPA to promulgate regulations establishing standards and practices for conducting "all appropriate inquiries". "All appropriate inquiries" is a process of evaluating a property's environmental conditions and assessing potential liability for any contamination. "All appropriate inquiries" must be conducted to obtain certain protections from liability under the federal Superfund Law (i.e., CERCLA). As directed by the EPA, the results of an "all appropriate inquiries" investigation must be documented in a report. The EPA requires no specific format, length, or structure of the written report. However, the EPA recommends utilizing the American Society for Testing and Materials (ASTM) E 1527-13 standard as it is consistent with the requirements and provisions in the "all appropriate inquiries" rule.

Alternative 1 for this project is the "No Action" alternative and was not subject to HTRW evaluations for this planning level study. A Phase I ESA was conducted to assess the potential for HTRW materials within the project footprints for each of the proposed structural features included in the proposals considered for Alternative 2 and Alternative 3. 40 CFR1502.21 provides for disclosure requirements if information necessary to determine impacts are incomplete or unavailable. The proposed flood mitigation resiliency measures associated with Alternative 4 could include hundreds of structures below elevation 98.2 NGVD. These structures were not fully identified and evaluated for HTRW at this planning stage of the project.

The results of the Phase I ESA for Alternatives 2 and Alternative 3 are presented in this memorandum. The Phase I ESA includes the following tasks: 1) the review of HTRW Phase I Environmental Database Corridor Reports and state and federal databases (e.g., Resource Conservation and Recovery Act Information (RCRA), Toxic Release Inventory (TRI),

Superfund Enterprise Management System, Assessment, Cleanup and Redevelopment Exchange System, National Pollutant Discharge Elimination System (NPDES) and state databases on underground storage tanks and hazardous waste programs, etc.) to identify RECs, and 2) site reconnaissance to determine if RECs are within the work item right-of-way (ROW). When the final EIS is completed, Record of Decision (ROD) is signed, and funding allocated, then a follow up Phase I ESA would be executed on the selected project features prior to construction.

# Structural Features Description – Alternative 2 and Alternative 3:

The project area contains multiple structural features located in Yazoo Basin of Mississippi which are associated with the proposals which are presented as the same in Alternative 2 and Alternative 3. This includes the construction of a large pumping station capable of providing flood relief to the interior of the Yazoo Backwater Basin when the Mississippi River is experiencing high stages. The project also includes the construction of a 34 well sites capable of supplementing flow to the headwaters of the following six watersheds (HUC 10): Granicus Bayou, Black Bayou, Rolling Fork Creek - Upper Deer Creek, Snake Creek - Bogue Phalia, Hushpuckena River and Harris Bay0ou – Big Sunflower River. These watersheds are found within the larger Big Sunflower and Steele Bayou Basins (HUC 8) during environmentally low flow periods.

Yazoo Backwater Pumping Station

The largest structural feature of the project includes the construction of a pumping station consisting of 14 pumps capable of delivering a maximum total capacity of 25,000 cubic feet per second (cfs). The pumping station shall be located between Newsome Bayou and the Yazoo River approximately 1.20 miles in length crossing Hwy 465.Construction of this structural feature shall include the pump station, inlet channel, outlet channel, a borrow area and a new levee associated with the pump station. This feature will also require the removal of part of the existing levee for construction of the inlet channel and subsequent construction of a bridge over the inlet channel to connect the existing levee. The pump station right of way will be approximately 450 acres. The pump station will also require the construction of enlarged access road and utility installations from Hwy 61. These two features shall subsequently be referred to as pumping station access road. The right of way for the access road and subsequent levee widening will be approximately 25.07 acres. Map 4.1.1.1.9.1 shows the location of the proposed pump station and adjacent features.

In addition, the pump station will require the excavation of borrow material from two designated borrow areas. One proposed borrow area is located within the pump site ROW north of Hwy 465 and north of the Yazoo Backwater Levee, approximately 250 feet west of the inlet channel, and approximately 0.5 miles northwest of the Steele Bayou structure (approximately 15 acres). The other borrow area is east of Hwy 61 approximately 6 miles Northeast of the pump site right of way area and approximately 215 acres. An access road will be constructed to access the borrow area from MS Hwy 465. From MS Hwy 465,

approximately 0.1 miles of site work will be required in order to construct an access road to tie into an existing coffer dam. The access road will be constructed on the coffer dam and continue for approximately 0.25 miles and intersect with the existing Yazoo Backwater Levee road. The access road will then continue west along the levee road for approximately 0.2 miles. From the levee road, the access road construction will turn north for approximately 0.15 miles to the borrow area. The borrow area access road right of way is approximately 9.74 acres. Map 4.1.1.1.9.2 shows the location of the proposed borrow area and adjacent features.

Supplemental Low Flow Groundwater Wells

The project also includes the construction of 34 independent groundwater wells sites strategically spaced in close proximity to the Mississippi River levee and along headwater streams of the Big Sunflower and Steele Bayou Basins. These well field locations are upstream of the backwater area in the counties of Washington, Bolivar, and Coahoma. Each groundwater well will mimic a common design capable of delivering a maximum of 5.0 cfs during low flow periods. The pump for each well field will be situated on the top bank of headwater stream with a pipe discharging water onto a splash pad which will then flow down a constructed re-aeration trough to the channel. A negligible quantity of material will be moved for construction of each well site. Each well site will be complemented with riprap for stabilization and an access road will be constructed for each site. The total right of way for the 34 well sites will be approximately

30.9 acres and the right of way for the access roads to the well sites will be approximately 12.19 acres. Map 4.1.1.1.9.3 shows the tentative location of the Well Sites within the Steele Bayou and Big Sunflower Basins. It should be noted that the current well pad sites are subject to multiple screening criteria (pump test efficiency, landowner agreements, power availability, etc.) which exceed the level of effort for this planning stage of the project. However if any of the well pad sites are to be relocated, HTRW concerns will serve as a limiting criterion.

# Task 1 Results:

Yazoo Backwater Pumping Station and Borrow Area

CEMVK-EC-H personnel conducted a review of the environmental records for the areas surrounding the pumping station and the borrow area with access road on the 15th of April 2024. The coordinates of the ROW perimeter for pumping station and the borrow area were uploaded into the online NEPAssist Tool administered by the Environmental Protection Agency (EPA). A one-mile buffer was generated with the tool around each item, followed by a NEPAssist Report. The report identified facilities within the buffer that may be listed on the federal TRI, NPDES, RCRA or Air Emissions databases. The coordinates of the ROW perimeter for the pumping station and the borrow area were also uploaded into the Underground Storage Tank (UST) online Groundwater Remediation & Assessment Division (GARD) Tool administered by the Mississippi Department of Environmental Quality (MDEQ). A one-half mile buffer was projected around the pumping station, the borrow area and

applicable access roads for each. The GARD Tool identified any UST's within the buffer area.

No facilities within the one-mile buffer of the pump site area and borrow area were identified on the NEPAssist tool databases for TRI, NPDES, RCRA or Air Emissions. No facilities within the one-half mile buffer of the borrow area and borrow area access road were identified on the GARD database for UST's. A follow up online records review will be conducted of the defined ROW of the pump site and the borrow area during the design phase of this project.

Supplemental Low Flow Groundwater Wells

CEMVK-EC-H personnel Mr. Brian S. Johnson conducted a review of the environmental records for the areas surrounding the supplemental low flow groundwater well sites on the 9th through the 13th of August 2020. The coordinates for each of the 34 supplemental low flow groundwater

wells were uploaded into the online NEPAssist Tool administered by the Environmental Protection Agency (EPA). A one-mile buffer was generated with the tool around each well location, followed by a NEPAssist Report. The report identified facilities within the buffer that may be listed on the federal TRI, NPDES, RCRA or Air Emissions databases. The coordinates for the 34 well sites were also uploaded into the UST online GARD Tool administered by the MDEQ. A one-half mile buffer was projected around each well location. The GARD Tool identified any UST's within the buffer area. The facilities identified within the buffer areas of each well are listed in Table 4.1.1.1.9.1.

Two facilities were identified on the NEPAssist database for TRI as being located within the one-mile buffer of well site, YBP-BB-HB-35 (Horseshoe Bayou). Caldwell Culvert Co reported a fugitive or non-point air emissions release of Toluene for the 1995 calendar year. Hagar Cos Greenville reported releases of chromium compounds, sulfuric acid, hydrochloric acid, toluene, cyanide compounds, methyl isobutyl ketone, chlorine, acetone, and sodium hydroxide for the calendar years ranging from 1987 to 1997. The reported releases came in the form of fugitive or non-point air emissions, stack or point air emissions, discharges to receiving streams or water bodies (via storm water runoff) or discharges to publicly owned treatment works (POTWs).

Eight Facilities within the one-mile buffer of seven well sites were identified for maintaining NPDES permits on the NEPAssist database. The well sites and permitted facilities were: YBP- BP-BP-16 (Bogue Phalia) - Gunnison POTW, YBP-BP-LB-24 (Laban Bayou) - Beulah POTW, YBP-DC-BB-28 (Browns Bayou) - Benoit POTW, YBP-MC-MC-33b (Main Canal) (2) - Marine Gears Inc, and United Parcel Service, YBP-BB-HB-34 (Horseshoe Bayou) - Metcalfe POTW, YBP-BB-HB-35 (Horseshoe Bayou) - Contech Engineered Solutions, and YBP-MC-No9-43 (Ditch No9) - Wayside Community Development.

Four facilities were identified on the NEPAssist database for RCRA within the one-mile buffer of four well sites. The well sites were: YBP-DC-WB-32 (Williams Bayou) - Novartis Crop Protection, YBP-BB-HB-34 (Horseshoe Bayou) - CVS Pharmacy #5808, YBP-BB-HB-35

(Horseshoe Bayou) - Hagar Hinge Co and YBP-MC-No6-44 (Ditch No6) - Union Carbide Agricultural Products.

Two facilities were identified on the NEPAssist database for Air Emissions within the one-mile buffer of three well sites. The well sites were: YBP-DC-DC-29 (Deer Creek) - Monsanto AG Products LLC, YBP-DC-DC-30 (Deer Creek) - Monsanto AG Products LLC, and YBP-BB-HB- 35 (Horseshoe Bayou) - Hagar Hinge Co.

Eight facilities were identified on the GARD database for UST's within the one-half mile buffer of five well sites. The well sites were: YBP-HB-HB-4 (Harris Bayou) - Hoff Grocery, YBP-HP-HP-7 (Hushpuckena River) (2) – Rico's Grocery, Sportsman Grocery, YBP-DC-DC-29 (Deer Creek) - Scott Airport, YBP-DC-WB-32 (Williams Bayou) - Winterville Cash Store, and YBP-MC-MC-33b (Main Canal) (3) - Lee F Antrim, M & M Grocery, Oakes Warehouse & Storage.

None of the facilities identified in the federal and state environmental databases are believed to pose a significant risk to the construction of the structural features of the Yazoo Area Pump

Project which includes the Pumping Station and access road, the Borrow Area and access road and the Well Sites.

A thorough review of the Corridor Reports indicates there are no RECs within the ROW of the structural project features. When the final EIS is completed, ROD is signed, and funding allocated, then a final full Phase I ESA would be executed on the project feature prior to construction.

# Task 2 Results:

CEMVK-EC-H personnel Mr. Ryan Horton and Mr. Jay Hogue made a site visit to the ROWs of the various structural features on the 8 and 11 of April 2024. The ROWs for the borrow area, pump station right of way and the well sites were inspected for the presence of pipes, containers, tanks or drums, ponds or lagoons, car bodies, tires, refrigerators, trash dumps, electrical equipment, oil drilling equipment, gas or oil wells, discoloration of vegetation or water sheens, discoloration of soils, out-of-place dirt mounds or depressions in the landscape, evidence of fire, stressed soils with lack of vegetation, discoloration of vegetation, animal remains, unusual animal behavior, biota indicative of a disturbed environment, and odors indicative of poor water quality or chemical presence.

<u>Yazoo Backwater Pumping Station and Borrow Area</u>

The proposed footprint of the borrow area and pump station, which includes the inlet and outlet channels and the surrounding ROW limits, was visited on 8 and 11 April 2024 respectively. The inspection was conducted on-foot and by vehicle around the two sites in question. Limited access was available at the time of the site visit to one area of the Steele Bayou Pump site due to inundation from recent heavy precipitation. A 55-gallon drum partially full of liquid was observed in the Right of Way (ROW) near the proposed outlet

channel. No indications of distressed soil or offensive odors were detected in the immediate area. Based on the findings from the records search and site reconnaissance there is little reason to believe that a HTRW will be encountered. A follow up site assessment will be conducted of the defined ROW of the pump site and the borrow area during the design phase of this project.

Supplemental Low Flow Groundwater Wells

The land use around the 34 well sites was predominantly row crop agriculture. The proposed well site labeled, YBP-BB-HB-34 (Horseshoe Bayou), is in close proximity to an existing underground gas pipeline crossing.

None of the aforementioned indicators of HTRW were found during the ROW site visits to any of the other structural features.

Based on the results of this assessment there is little reason to believe that a HTRW will be encountered. A follow up HTRW assessment will be conducted at each of the finalized low flow well sites during the design phase. If it is determined that an existing well pad site should be relocated due to other site limitations, HTRW concerns shall be evaluated and included as a screening criteria.

# Structural Features Description – Alternative 4:

Alternative 4 involves the construction of flood mitigation resiliency measures for multiple structures in the Yazoo Basin below elevation 98.2 NVGD. This alternative would provide flood protection for structures when the interior of the Yazoo Basin is experiencing flood stages.

# Task 1:

MVK personnel will perform a review of environmental records on all viable structures below.

98.2 NVGD should this plan be put into action. Each structure will be uploaded in the online NEPAssist tool administered by the EPA to find any reported environmental facilities that may impact construction. These potential facilities include TRIs, facilities maintain NPDES permits, RCRA facilities or Air Emissions as well as LUST's.

# Task 2:

Due to the uncertainty associated with Alternative 4 and the lack of ROW, a complete HTRW site reconnaissance was not practicable for this DEIS. HTRW concerns that may arise from this alternative include but are not limited to leaking power pole transformers, leaking external propane tanks, agricultural truck refueling stations, septic tanks, automotive drums, dilapidated combustion engines, etc. A thorough HTRW assessment will be conducted for

each of the structures which benefit from flood proofing measures during the early stages of design. A full impact determination for Alternative 4 was not possible at this planning stage of the project which attributes a high level of uncertainty for HTRW. Contingency costs associated with remediation measures for potential HTRW impacts should be assessed with Alternative 4.

# Recommendations:

It is recommended that the following actions be initiated at the start the selected alternative proposed for the Yazoo Basin Water Management Project.

# Alternative 2 and Alternative 3:

It is recommended that the 55-gallon drum that was found partially full of liquid should be carefully removed from the ROW making sure to keep unknown contents contained. This drum should be disposed of properly according to federal, state, and local guidelines.

Due to the presence of a gas pipeline crossing at the well site labeled YBP-BB-HB-34 (Horseshoe Bayou), it is recommended that the site footprint be moved toward the east a few hundred feet along top bank in the agricultural field to avoid impacts to the existing utility.

Based on the results of Task 1 and Task 2 described for Alternative 2 and Alternative 3 as well as the Recommendations described above, the probability of encountering HTRW during construction of the two major structural features for the Yazoo Area Backwater Project is low. As previously stated, when the final EIS is completed, ROD is signed, and funding allocated, then a final full Phase I ESA would be executed on the project feature prior to construction.

Given a Phase I ESA is only valid for a 6-month period and that there are currently no detailed designs for these structural features, the most appropriate timing for a full Phase I ESA would be after funding has been allocated and detailed designs have been completed. A follow up site assessment will be conducted at each of the finalized low flow well sites during the design phase.

# Alternative 4:

It is recommended that MVK conduct an HTRW Assessment within the defined ROW of the identified structures subject to flood proofing measures during the design phase of this project. The results of this assessment should include design measures to mitigate for identified HTRW impacts.

*Table 4.1.1.1.9.1 Facilities listed on EPA's NEPAssist Tool database and MDEQ's GARB database that are located within the prescribed buffer area around the 34 well sites*

| Well Site | TRI | NPDES | RCRA | Air Emissions | UST | Facility Name |
|---|---|---|---|---|---|---|
| YBP-HB-RB-1 (Ritchies Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-HB-RB-2 (Ritchies Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-HB-RB-3 (Ritchies Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-HB-HB-4 (Harris Bayou) | N/A | N/A | N/A | N/A | X | UST – Hoff Grocery |
| YBP-HB-HB-5 (Harris Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-HB-HB-6 (Harris Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-HP-HP-7 (Hushpuckena River) | N/A | N/A | N/A | N/A | X | UST (2) – Rico's Grocery, Sportsman Grocery |
| YBP-HP-HP-8 (Hushpuckena River) | N/A | N/A | N/A | N/A | N/A | |
| YBP-HP-MS-10 (McNeil Slough) | N/A | N/A | N/A | N/A | N/A | |
| YBP-HP-SB-12 (Upper Stokes Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-HP-EB-13 (Edwards Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-BP-BP-14 (Bogue Phalia) | N/A | N/A | N/A | N/A | N/A | |
| YBP-BP-BP-15 (Bogue Phalia) | N/A | N/A | N/A | N/A | N/A | |
| YBP-BP-BP-16 (Bogue Phalia) | N/A | X | N/A | N/A | N/A | NPDES - Gunnison POTW |
| YBP-BP-LB-18 (Lane Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-BP-LB-19 (Lane Bayou, Charlie Capp WMA) | N/A | N/A | N/A | N/A | N/A | |

| Well Site | TRI | NPDES | RCRA | Air Emissions | UST | Facility Name |
|---|---|---|---|---|---|---|
| YBP-BP-LB-20 (Lane Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-BP-LB-22 (Laban Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-BP-LB-23 (Laban Bayou) | N/A | N/A | N/A | N/A | N/A | |

*Table 4.1.1.1.9.1(continued) Facilities listed on EPA's NEPAssist Tool database and MDEQ's GARB database that are located within the prescribed buffer area around the 34 well sites*

| Well Site | TRI | NPDES | RCRA | Air Emissions | UST | Facility Name |
|---|---|---|---|---|---|---|
| YBP-BP-LB-24 (Laban Bayou) | N/A | X | N/A | N/A | N/A | NPDES - Beulah POTW |
| YBP-BP-SB-26 (Lower Stokes Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-DC-SB-27 (Straight Bayou) | N/A | N/A | N/A | N/A | N/A | |
| YBP-DC-BB-28 (Browns Bayou) | N/A | X | N/A | N/A | N/A | NPDES - Benoit POTW |
| YBP-DC-DC-29 (Deer Creek) | N/A | N/A | N/A | X | X | Air Emissions - Monsanto AG Products LLC; UST – Scott Airport |
| YBP-DC-DC-30 (Deer Creek) | N/A | N/A | N/A | X | N/A | Air Emissions - Monsanto AG Products LLC |
| YBP-DC-WB-32 (Williams Bayou) | N/A | N/A | X | N/A | X | RCRA - Novartis Crop Protection; UST – Winterville Cash Store |
| YBP-MC-MC-33b (Main Canal) | N/A | X | N/A | N/A | X | NPDES (2) – Marine Gears Inc, United Parcel Service; UST (3) – Lee F Antrim, M & M Grocery, Oakes Warehouse & Storage |

| Well Site | TRI | NPDES | RCRA | Air Emissions | UST | Facility Name |
|---|---|---|---|---|---|---|
| YBP-BB-HB-34 (Horseshoe Bayou) | N/A | X | X | N/A | N/A | NPDES – Metcalfe POTW; RCRA – CVS Pharmacy #5808 |
| YBP-BB-HB-35 (Horseshoe Bayou) | X | X | X | X | N/A | TRI (2) – Caldwell Culvert Co, Hager Cos Greenville; NPDES – Contech Engineered Solutions; RCRA – Hagar Hinge Co; Air Emissions – Hagar Hinge Co |
| YBP-MC-No8-39 (Ditch No8) | N/A | N/A | N/A | N/A | N/A | |
| YBP-MC-No6-40 (Ditch No6) | N/A | N/A | N/A | N/A | N/A | |
| YBP-MC-No8-41 (Ditch No8) | N/A | N/A | N/A | N/A | N/A | |
| YBP-MC-No9-43 (Ditch No9) | N/A | X | N/A | N/A | N/A | NPDES - Wayside Community Development |
| YBP-MC-No6-44 (Ditch No6) | N/A | N/A | X | N/A | N/A | RCRA - Union Carbide Agricultural Products |

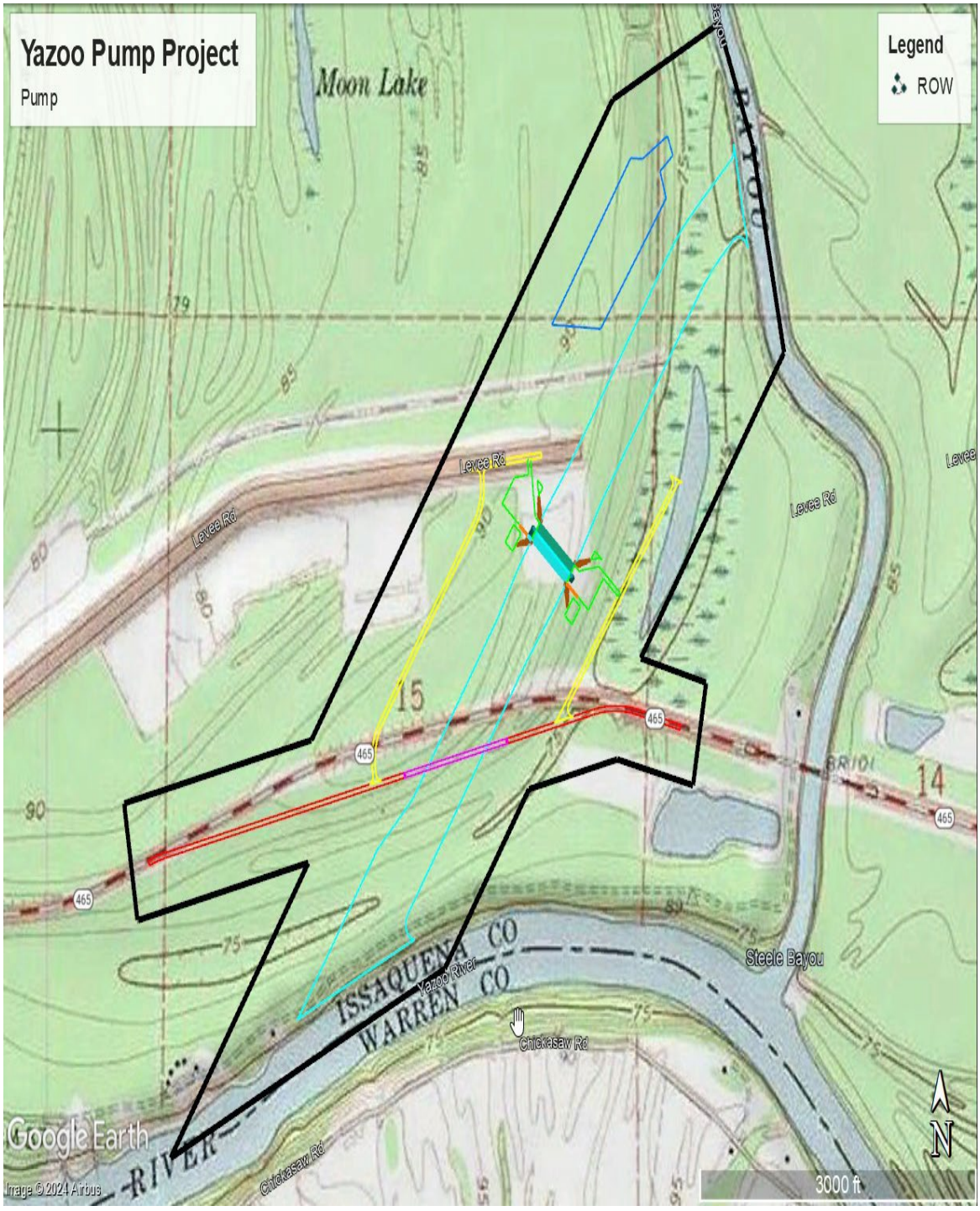



*Figure 4.1.1.1.9.1 Map of Location of the Pump Station ROW*

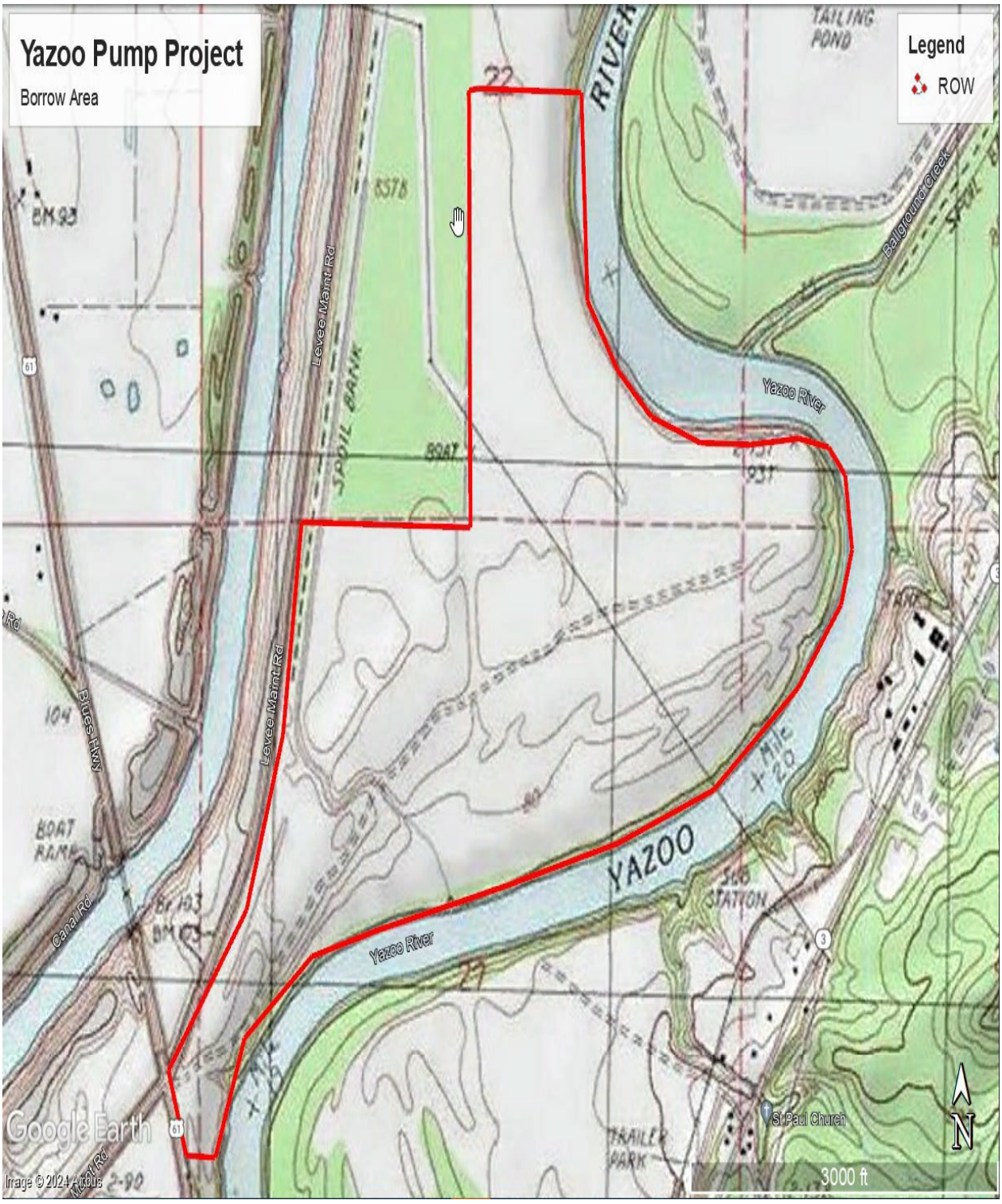



*Figure 4.1.1.1.9.2 Map of Location of the Borrow Area needed for Pump Station*

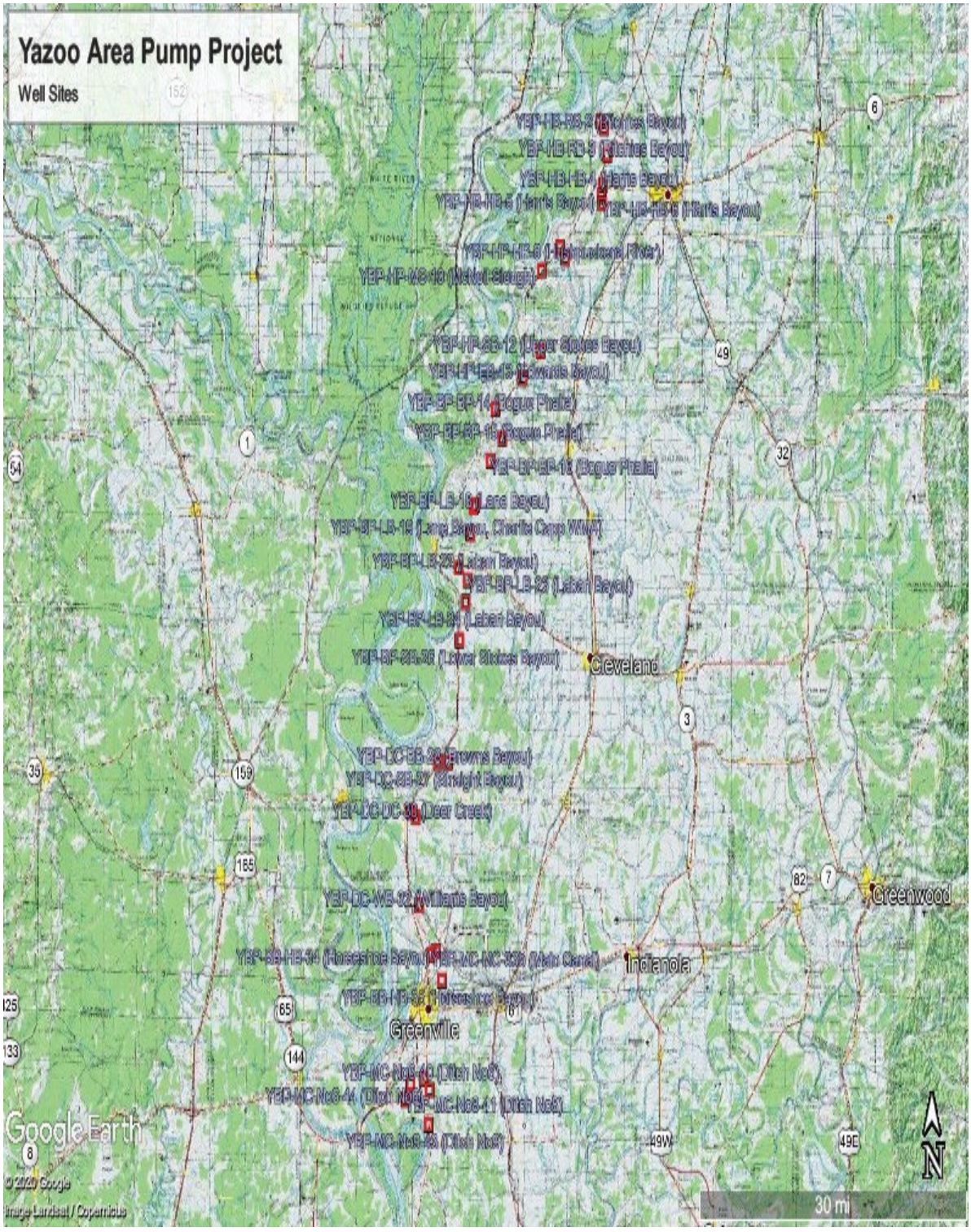



*Figure 4.1.1.1.9.3 Map of Location of the Well Sites within the Steele Bayou and Big Sunflower Basins*

*Figure 4.1.1.1.9.1: Partially filled 55-gallon drum observed within the ROW of the proposed Steele Bayou Pump site*