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**Appendix B –  
Hazardous, Toxic and Radioactive Waste (HTRW)  
Phase I Environmental Site Assessment  
For  
UPPER WABASH MASTER PLAN**



October 2021

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## Table of Contents

1	Introduction.....	1
2	Authority.....	1
2.1	HTRW Policy.....	1
2.1.1	HTRW Considerations – Operation and Maintenance Projects .....	1
2.1.2	HTRW Considerations – Outgrant Property.....	2
3	GUIDANCE.....	3
4	DEFINITIONS.....	3
4.1	Hazardous, Toxic, and Radioactive Waste.....	3
4.2	Non-Hazardous, Toxic, and Radioactive Waste .....	3
4.3	Recognized Environmental Condition .....	4
4.4	Controlled Recognized Environmental Condition .....	4
4.5	Historical Recognized Environmental Condition .....	4
4.6	De Minimis Condition.....	4
4.7	Data Gap.....	4
5	Laws and Regulations.....	5
5.1	Federal.....	5
5.2	State.....	5
6	SURVEY METHODOLOGY .....	6
7	STUDY AREA DESCRIPTION .....	6
7.1	Upper Wabash Reservoirs.....	6
7.1.1	JE Roush Lake .....	7
7.1.2	Mississinewa Lake .....	7
7.1.3	Salamonie Lake.....	7
7.2	Water Quality .....	8
7.2.1	IDEM 303D/305B Report.....	8
7.2.2	Natural Resource Conservation Service (NRCS) Water Quality Resource Concerns 8	
7.2.3	USACE Lake Monitoring Program .....	9
7.2.4	Harmful Algal Blooms (HABs).....	9
7.2.5	NPDES Individual Discharge Permits.....	9
7.3	Soil and Groundwater Quality.....	10
8	Database Search.....	11
8.1	Federal Databases.....	11
8.1.1	JE Roush Lake .....	11
8.1.2	Mississinewa Lake .....	13
8.1.3	Salamonie Lake.....	15
8.2	State Databases.....	17
9	Land Uses and Facility Operations.....	20
9.1	JE Roush Lake.....	22
9.1.1	U.S. Army Corps of Engineers (USACE) Facilities.....	22

9.1.2	Indiana Department of Natural Resources Facilities .....	22
9.2	Mississinewa Lake .....	24
9.2.1	U.S. Army Corps of Engineers Facilities.....	24
9.2.2	Indiana Department of Natural Resources Facilities .....	24
9.3	Salamonie Lake .....	25
9.3.1	U.S. Army Corps of Engineers Facilities.....	25
9.3.2	Indiana Department of Natural Resources Facilities .....	25
10	Site Reconnaissance.....	26
11	Findings and Conclusions .....	27
12	References.....	29

**LIST OF ATTACHMENTS**

- Attachment 1: NRCS Upper Wabash Rapid Watershed Assessment
- Attachment 2: NRCS Salamonie Rapid Watershed Assessment
- Attachment 3: LRC Water Quality Annual Report 2020
- Attachment 4: 2021 HAB IDEM Count-ID-Toxin Results
- Attachment 5: Reservoir NPDES Discharge Permits
- Attachment 6: IDEM State Listed Cleanup Sites by County
- Attachment 7: IDEM State LUST Information (Virtual File Cabinet)
- Attachment 8: Historical Topographic Maps
- Attachment 9: JE Roush ERGO Audits
- Attachment 10: JE Roush 2020 IDNR Annual Compliance Reports
- Attachment 11: Real Estate Record Search, IDNR FWA Range
- Attachment 12: Mississinewa ERGO Audits
- Attachment 13: Mississinewa IDNR 2020 Compliance Report
- Attachment 14: Salamonie ERGO Audits
- Attachment 15: Salamonie IDNR 2019 Compliance Report

**LIST OF FIGURES**

- Figure 1 - Upper Wabash Project Location Map
- Figure 2 - JE Roush Property Map
- Figure 3 - Mississinewa Property Map
- Figure 4 - Salamonie Property Map

Figure 5 - JE Roush Enviromapper Results

Figure 6 - Mississinewa Enviromapper Results

Figure 7 - Salamonie Enviromapper Results

## **LIST OF TABLES**

Table 1: Clean Water Act Section 303(d) listed waters

Table 2: JE Roush Federal Database Records Review

Table 3: Mississinewa Federal Database Records Review

Table 4: Salamonie Lake Federal Database Records Review

Table 5: Registered USTs within Study Area

Table 6: LUST Actions within Study Area

Table 7: Historical Topographic Maps Reviewed

Table 8: JE Roush Shooting Range 2020 Groundwater Sampling Results

## 1 Introduction

The purpose of this report is to discuss the hazardous, toxic, and radioactive waste (HTRW) Phase I Environmental Site Assessment (ESA) for the Upper Wabash Master Plan, including the Salamonie, Mississinewa, and J.E. Roush Flood Risk Management Reservoir properties (referred herein as “Study Area”). This report includes investigation of both federal facilities and outgrant areas. According to ER 1165-2-132, non-HTRW issues that do not comply with the federal, state, and local regulations should be discussed in the HTRW investigation along with HTRW issues; therefore, this HTRW investigation identifies both HTRW and non-HTRW environmental issues associated with the Study Area. The methods used in performing the investigation are described in detail. Conclusions and recommendations regarding impacts due to potential HTRW and non-HTRW environmental issues associated with Study Area are provided.

## 2 Authority

### 2.1 HTRW Policy

Engineer Regulation (ER) 1165-2-132, Hazardous, Toxic, and Radioactive Waste (HTRW) Guidance for Civil Works projects, dated June 26, 1992, provides guidance for consideration of HTRW within project boundaries which may affect/be affected by U.S. Army Corps of Engineers (USACE) civil works projects. The ER states the USACE policy for addressing HTRW and outlines the timing and cost sharing requirements for HTRW encountered during each phase of a civil works projects. Goals of the ER are to identify the level of detail required for HTRW investigation for each phase of a civil works project, promote early detection and response by appropriate responsible parties, determine viable options to avoid HTRW, and establish a mechanism for resolution of HTRW issues. The USACE HTRW policy provides the following:

- Civil works funds are not be used for HTRW related activities except as specifically stated in the policy or provided for specifically in law (see paragraph 6a, ER 1165-2-132).
- Construction of civil works projects should be avoided in HTRW contaminated areas, where practicable. The USACE and project sponsor will cost share environmental investigations to identify existence of HTRW (see paragraph 6b, ER 1165-2-132).

#### 2.1.1 HTRW Considerations – Operation and Maintenance Projects

HTRW considerations for projects operated and maintained by USACE include:

- HTRW considerations of appropriate post-response monitoring should be included in the project O&M manual for projects operated and maintained by the USACE.
- HTRW materials encountered during OMRRR activities on project lands are generally anticipated to be of a localized nature. Examples of HTRW problems expected would

include, but are not limited to, unanticipated discovery of HTRW sites, contaminated discharges, and illegal disposal of HTRW materials on project lands.

- When HTRW sites are discovered during OMRRR, the affected area should be secured and protected until the contaminants are identified and site safety and health programs and plans in accordance with 29 CFR 1910.120 and ER 385-1-92 are put into effect. A thorough record should be kept of all circumstances and actions taken to deal with the problem.
- Procedures for dealing with HTRW encountered during OMRRR may involve activities which may require specialized assistance from knowledgeable sources or specialty contractors. Existing operational procedures have the flexibility to effectively incorporate and address HTRW requirements. Legal and contractual issues should be carefully considered. EPA, State, and local agencies should be consulted as appropriate.
- ER 1130-2-434 provides guidance for developing contingency and action plans to respond to hazardous substance incidents on USACE operated projects.
- Conducting assessments in accordance with the Environmental Review Guide for Operations (ERGO) is a proactive approach to hazardous materials management. The ERGO is a comprehensive evaluation tool for achieving, maintaining, and monitoring compliance with environmental laws and regulations at USACE-operated facilities. Section III of ERGO, the Hazardous Materials Management protocol, addresses the generic requirements and good management practices associated with the proper storage and handling of chemicals and with the spill contingency and response requirements related to hazardous materials. Oil, pesticides, and asbestos are hazardous materials which require special management practices at USACE facilities.

### 2.1.2 HTRW Considerations – Outgrant Property

The portions of USACE projects where the right to use the real property has been granted to another Federal agency, state or local government, or private person (outgrants) will have as a condition of their outgrant that the grantee shall comply with all relevant Federal, state, and local laws and regulations. The inspections to assure compliance with the terms of the outgrant shall take cognizance of the grantee's adherence to the environmental laws including those concerning the release, disposal, and storage of hazardous substances. The grantee, or other responsible party, will be responsible for compliance with HTRW laws and regulations. Additional HTRW requirements for outgrant areas are summarized below:

- Outgranted areas will also be considered in the contingency and action plans discussed in ER 1130-2-434. Such plans will be developed and implemented taking into consideration the views and any special needs of the grantees.
- The grantee, project manager, district element issuing the grant, and cognizant regulatory agency, shall be notified of any release or threatened release of HTRW.

### 3 GUIDANCE

Supplemental guidance was provided by the Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process (Designation: E 1527-13) prepared by the American Society for Testing of Materials (ASTM). The purpose of this guidance is to define good commercial and customary practice in the United States (US) for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and petroleum products. These standards recommend that an environmental assessment include a records review, site visit, interviews, and report preparation.

### 4 DEFINITIONS

#### 4.1 Hazardous, Toxic, and Radioactive Waste

The objective of ER 1165-2-132 is to outline procedures to facilitate early identification and appropriate consideration of HTRW. This investigation, therefore, identifies potential HTRW and discusses resolutions and/or provides recommendations regarding the HTRW identified. Except for dredged material and sediments beneath navigable waters proposed for dredging, for purposes of this guidance, HTRW includes any material listed as a "hazardous substance" under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq (CERCLA). (See 42 U.S.C. 9601(14).) Hazardous substances regulated under CERCLA include "hazardous wastes" under Sec. 3001 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6921 et seq; "hazardous substances" identified under Section 311 of the Clean Air Act, 33 U.S.C. 1321, "toxic pollutants" designated under Section 307 of the Clean Water Act, 33 U.S.C. 1317, "hazardous air pollutants" designated under Section 112 of the Clean Air Act, 42 U.S.C. 7412; and "imminently hazardous chemical substances or mixtures" on which EPA has taken action under Section 7 of the Toxic Substance Control Act (TSCA), 15 U.S.C. 2606; these do not include petroleum or natural gas unless already included in the above categories. (See 42 U.S.C. 9601(14).)

#### 4.2 Non-Hazardous, Toxic, and Radioactive Waste

According to ER 1165-2-132, non-HTRW environmental issues that do not comply with Federal, state, and local regulations should be discussed in the HTRW investigation. For example, solid waste is a non-HTRW issue considered. Petroleum releases from Leaking Underground Storage Tanks (LUSTs) are not considered HTRW but are regulated. These sites have the potential to impose environmental hazards. Non-HTRW issues identified during the investigation are also discussed in this report, along with resolutions and/or recommendations for resolution.

### 4.3 Recognized Environmental Condition

For the purposes of this investigation, the term REC may be used interchangeably with HTRW to identify a potential HTRW or non-HTRW environmental issue. ASTM defines a recognized environmental condition (REC) as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

### 4.4 Controlled Recognized Environmental Condition

ASTM defines a controlled recognized environmental condition (CREC) as “a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).”

### 4.5 Historical Recognized Environmental Condition

ASTM defines a historical recognized environmental condition (HREC) as “a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).”

### 4.6 De Minimis Condition

ASTM defines a de minimis condition as “a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions nor controlled recognized environmental conditions.”

### 4.7 Data Gap

A data gap is defined by ASTM E1527-13 as a lack of or inability to obtain information required by this practice despite good faith efforts by the Environmental Professional to gather such information. Data gaps may result from the incompleteness in any of the activities required by

this practice including, but not limited to, the site reconnaissance, interviews, and historical research.

## 5 Laws and Regulations

### 5.1 Federal

The definition of HTRW according to ER 1165-2-132, page 1, paragraph 4(a) is as follows: “Except for dredged material and sediments beneath navigable waters proposed for dredging, for purposes of this guidance, HTRW includes any material listed as ‘hazardous substance’ under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq (CERCLA). (See 42 U.S.C. 9601(14).) Hazardous substances regulated under CERCLA include ‘hazardous wastes’ under Sec. 3001 of the Resource Conservation and Recovery Act, 42 U.S.C. 6921 et seq; ‘hazardous substances’ identified under Section 311 of the Clean Air Act, 33 U.S.C. 1321, ‘toxic pollutants’ designated under Section 307 of the Clean Water Act, 33 U.S.C. 1317, ‘hazardous air pollutants’ designated under Section 112 of the Clean Air Act 42 U.S.C. 7412; and ‘imminently hazardous chemical substances or mixtures’ on which EPA has taken action under Section 7 of the Toxic Substance Control Act, 15 U.S.C. 2606; these do not include petroleum or natural gas unless already included in the above categories. (See 42 U.S.C. 9601(14).)”

As noted in 42 U.S.C. 9601(14), the term “hazardous substance” does not include crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance, nor does the term include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel. Underground storage tanks (USTs) are federally regulated under 40 CFR Part 280, which includes technical standards and corrective action requirements for owners and operators of USTs.

### 5.2 State

Indiana regulates Underground Storage Tanks (USTs) and Leaking Underground Storage Tanks (LUSTs) under 329 Indiana Administrative Code Article 9, Underground Storage Tanks. The Underground Storage Tank program is responsible for assuring that all regulated underground storage tanks meet the U.S. EPA's and Indiana's requirements for release detection, spill and overflow prevention and corrosion protection, and to ensure that tanks not meeting those requirements are properly closed or upgraded. The state educates and assists underground storage tank owners and operators and encourages and promotes voluntary compliance. In addition to this state regulation, the Indiana Department of Environmental Management (IDEM) published a Risk Integrated System of Closure (RISC) User's Guide that provides a stand-alone RISC resource for UST owners, operators, and consultants dealing solely with petroleum and regulated hazardous substance releases (LUSTs). Hazardous substances covered under these rules include the definition in 1301:7-9-02(B)(27): "Hazardous substance" means any substance listed in rule 1301:7-9-03 of the Administrative Code, but not including any substance regulated as a hazardous waste under Chapters 3745-50 to 3745- 69 of the Administrative Code, or any

mixture of such substance and petroleum which is not contained in a petroleum UST system.

The State of Indiana Cleanup Program manages sites that are contaminated with hazardous substances or petroleum but are not included on the National Priorities List of the Federal Superfund program, after which it is modeled. The program follows aspects of the National Oil and Hazardous Substances Pollution Contingency Plan, 40 Code of Federal Regulations, Part 300, as well as the Remediation Closure Guide. These sites are mainly received into the State Cleanup Program by referral by the IDEM Emergency Response Section, after receipt of a spill or release report required under the IDEM Spill Rule, 327 Indiana Administrative Code (IAC) 2-6.1.

## 6 SURVEY METHODOLOGY

This report fully relies on previously developed and available information for the Study Area and surrounding area. The methods used to evaluate environmental conditions at the Study Area included review of existing information, a limited visual site inspection (VSI), records review (including environmental records), review of previously prepared investigations, and a review of available historical internal and external inspections of the Study Area. The information contained in this HTRW Phase I ESA will be used to:

- Identify areas of concern requiring additional evaluation.
- Evaluate the potential for adjacent properties to impact the Study Area from off-site sources.
- Identify compliance issues.

This report reflects the observations, information, and data collected during the period of April 2020 through September 2021.

The following data gaps were identified during completion of this investigation:

- Detailed visual site inspection of the property was not conducted.
- Structures present on the properties were not inspected.

## 7 STUDY AREA DESCRIPTION

### 7.1 Upper Wabash Reservoirs

The Upper Wabash reservoirs (location shown in **Figure 1**) were created to reduce the impacts of flooding along the Wabash River and are located in the Upper Wabash, Salamonie, and Mississinewa watersheds. The dams at J. Edward Roush Lake (referred herein as “JE Roush”), Mississinewa Lake, and Salamonie Lake store precipitation from storms and winter snow melt and work in coordination to release that stored volume of water incrementally; this storage provides flood risk reduction benefits for the downstream communities of Huntington, Wabash, Peru, Logansport, and Lafayette, IN, along with 140,500 acres of agricultural land and related

developments. The Upper Wabash Lakes may also be referred as “Reservoirs” throughout this report.

#### 7.1.1 JE Roush Lake

J. Edward Roush Lake is located on the Wabash River (mile 411.4) in northeastern Indiana, approximately 80 miles northeast of Indianapolis and 20 miles southwest of Fort Wayne (see **Figure 2**). The city of Huntington is within four miles of the lake. The lake is located in Huntington and Wells Counties. At total storage pool the lake extends twenty-nine miles upstream from the dam. Land acquisition began in 1962 with construction beginning in 1963. Impoundment of the lake started in January of 1969. JE Roush Lake operates for recreation, fish, and wildlife activities, while also providing a constant supply of water for downstream low-flow augmentation. The design of the dam consists of rolled earth fill with a concrete center section containing the emergency spillway with three crest gates. The sluice gates and bypass are also located in the concrete center section. The project also includes a USACE operated and maintained levee and pump plant in the town of Markle, approximately seven miles upstream from the dam. The levee and pump plant protect the town during periods of high river and lake levels. There is also a USACE operated and maintained levee protecting the Star of Hope cemetery. Total fee acreage of property associated with JE Roush Lake is 8,628 acres plus 4,133 acres of flowage easement.

#### 7.1.2 Mississinewa Lake

Mississinewa Lake is located on Mississinewa River in northern Indiana, approximately 65 miles northeast of Indianapolis and 9 miles from Peru, Indiana (**Figure 3**). The dam site is 7.1 miles upstream from where the Mississinewa River meets the Wabash River. The lake area lies in Wabash, Miami, and Grant Counties. At summer pool level, the lake extends 20 miles upstream from the dam site. At total storage pool, the lake extends thirty-one miles up the river. The dam was constructed between 1962 and 1967. Mississinewa Lake operates for recreation, fish, and wildlife activities, while also providing constant supply of water for downstream low-flow augmentation. Total fee acreage of property associated with Mississinewa Lake is 15,072 acres plus 3,425 acres of flowage easement.

#### 7.1.3 Salamonie Lake

Salamonie Lake is located on the Salamonie River, 3.1 miles from its confluence with the Wabash River at mile 394.3, in northeastern Indiana, approximately 75 air miles northeast of Indianapolis and 10 miles east of Wabash, Indiana (see **Figure 4**). The dam site is in Wabash County and the project area extends into Huntington County. At total storage pool, the lake extends thirty miles upstream from the dam site. Construction of the outlet works began on 9 December 1961. Impoundment of the lake started in December of 1966. Salamonie Lake operates for recreation, fish, and wildlife activities, while also providing a constant supply of water for downstream low-flow augmentation. The project also has a USACE operated and maintained levee and dike in the town of Lancaster. The levee and dike protect a cemetery during periods of high lake levels. Total fee acreage of property associated with Salamonie Lake is 11,958 acres plus 3,064 acres of flowage easement.

## 7.2 Water Quality

### 7.2.1 IDEM 303D/305B Report

The National Water Quality Inventory Report to Congress (Combined 303(d)/305(b) report) is the primary means of informing Congress and the public about general water quality conditions in the United States. These reports consist of water quality assessments submitted by states, tribes, and others and summarized by the US Environmental Protection Agency (USEPA) for Congress. In addition to designated uses, the report calls for a listing of impaired waters (Section 303(d)). States are required to develop and implement Total Maximum Daily Loads (TMDLs) for water resources listed on their respective 303(d) lists. The 303(d) impairments for the Upper Wabash Lakes are listed in Table 1. “Designated Use” is a description of the use of the water body that is impaired, while the “Cause of Impairment” is a description of the cause of impairment.

**Table 1: Clean Water Act Section 303(d) listed waters**

<b>Water Body</b>	<b>Impaired Designate Use/Cause of Impairment</b>
Mississinewa Lake	Human Health and Wildlife-Fish Consumption/PCBs (fish tissue)
JE Roush Lake	Human Health and Wildlife-Fish Consumption/PCBs (fish tissue)

While water quality is generally good in the Upper Wabash Lakes, several water quality issues are known in the Study Area. Flow management, mineral and resource extraction impacts, harmful algal blooms (HABs), climate change, and the presence of invasive species impact water quality in the reservoirs. These types of regional water quality issues are similar to those experienced in other waterbodies in the region. In addition, the presence of a flood control reservoir can have impacts to a watershed and the surrounding ecosystem. The flow of water through an impoundment influences the physical, chemical, and biological conditions both upstream and downstream, which ultimately determines the ecological integrity of the aquatic environment.

### 7.2.2 Natural Resource Conservation Service (NRCS) Water Quality Resource Concerns

According to the U.S. Department of Agriculture Natural Resource Conservation Service (NRCS), surface water quality in the Upper Wabash and Salamonie watersheds is a resource concern (**Attachments 1 and 2**). There are approximately 13 percent or 333 miles of the 2,593 total miles of the streams within the Upper Wabash watershed that have identified impairments. Excessive amounts of sediments, nutrients, and bacteria degrade the water quality causing an unbalanced fish community with depressed populations and limited diversity. There are approximately 9 percent or 34 miles of the 377 total miles of the streams within the Salamonie watershed that have identified impairments. Excessive amounts of sediments, nutrients, and bacteria degrade the water quality causing an unbalanced fish community with depressed populations and limited diversity.

### 7.2.3 USACE Lake Monitoring Program

A fixed-site sampling program has been implemented by USACE at each of the Upper Wabash lakes to assist in monitoring each projects' long-term water quality. These sites have been carefully chosen to be the most representative of the lakes watershed and to provide the best overall assessment for that project. Extra sites and increased sampling effort may be conducted depending on environmental conditions and budgetary constraints. Water quality surveys implemented under the fixed-site sampling program include collection of project profiles to monitor the status and progression of thermal and chemical stratification in a reservoir using temperature and dissolved oxygen readings in the reservoir near the deepest part of the reservoir at the dam site, and annual ambient surveys to capture the status of water quality in the reservoir, tailwater, and a few inlet streams during thermal stratification.

The 2020 Annual Water Quality Report, included as an **Attachment 3**, suggests that the water quality in the Upper Wabash reservoirs does not exceed the state of Indiana water quality standards. Tailwater samples collected at all three reservoirs outlets exceed USEPA criteria for turbidity, chlorophyll a, total nitrogen, and/or total phosphorous. Carlson Trophic State Index (TSI), calculated using values from Secchi depth, chlorophyll-a, and phosphorous values, indicate that the Upper Wabash reservoirs are eutrophic in nature due to the elevated presence of nutrients. Elevated nutrients contribute to the development of harmful algal blooms (HABs) in the lakes and are generally caused by agricultural runoff in the watershed.

### 7.2.4 Harmful Algal Blooms (HABs)

IDEM monitors Salamonie and Mississinewa Lakes for HABs in the beach swimming areas during the recreation season. Results of HAB sampling and reported results compiled from IDEM monitoring activities in 2021, including cell count, identification and cyanotoxin results, are provided in **Attachment 4**. Mississinewa and Salamonie Lakes were under a beach advisory alert for a majority of the 2021 recreation season. A beach advisory alert means that swimming and boating are permitted, but users are suggested to avoid contact with algae and avoid swallowing water while swimming. Bathing or showering with warm soapy water is recommended after coming into contact with lake water. In addition, the advisory suggests that lake water should not be used for cooking or bathing and pets should not be allowed to swim or drink water where algae is present.

### 7.2.5 NPDES Individual Discharge Permits

A summary of the IDEM National Pollutant Discharge Elimination System (NPDES) Clean Water Act (CWA) individual discharge permits issued to industrial, state, and municipal facilities in the Upper Wabash, Salamonie, and Mississinewa watersheds with direct discharges to the Wabash River (or JE Roush Lake), Salamonie River (or Salamonie Lake), or Mississinewa River (or Mississinewa Lake) are provided as **Attachment 5**. NPDES general permit coverage, such as permits issued for stormwater discharge, construction runoff, industrial pre-treaters, and MS4 permits issued to facilities in the watershed are not included in **Attachment 5**. In general, NPDES direct discharges to the Wabash, Salamonie, and Mississinewa waterways are generated

from sewerage systems, water treatment systems, or industrial operations, such as pulp mills, chemical plants, or refuse systems (landfill). A detailed review of facilities with NPDES permit violations, including general permits, that are on or adjacent to Federal property, with direct discharge to Upper Wabash, Salamonie, or Mississinewa waterways are discussed in paragraph 8.1.

### 7.3 Soil and Groundwater Quality

According to the Rapid Watershed Assessment for the Upper Wabash and Salamonie watersheds completed by the NRCS (**Attachment 1 and 2**) the Upper Wabash and Salamonie watersheds consists primarily of crop, pasture, and forested land, with approximately 9 – 13% urban development, and < 1% wetland. The majority of soils in the watersheds have low to medium erosion potential, yet nutrients and sedimentation are significant resource concerns.

The NRCS resource areas in the Upper Wabash and Salamonie watersheds include Indiana and Ohio Till Plain. Eastern portions of the watershed consist of broad, level clayey till plain with some end moraines, lake basins, and sand and gravel outwash. Extensive corn, soybean, wheat, and livestock farming on artificially drained soils with scattered woodlots. Soils are well drained to very poorly drained, formed in Wisconsin Age glacial drift derived mostly from limestone and dolomite. Western portions consist of relatively flat-lying ground moraine with moderate relief, cut by steep-valleyed large streams. Extensive corn, soybean, and livestock farming with scattered woodlands and residential, commercial, and industrial development. Soils are well drained to very poorly drained, formed in thin to moderately thick loess and Wisconsin Age glacial drift derived mostly from limestone and dolomite.

The soil quality in the Study Area is largely unknown. The Upper Wabash and Salamonie watersheds consist of soils subject to erosion by water with high surface runoff classification. Soils are also susceptible to wind erosion. Widespread agricultural use of property in the watershed suggests that soils in the Study Area may contain residual pesticides, fungicides, rodenticides, and herbicides that are commonly used to maintain active crops. Fertilizer use and livestock waste on agricultural properties may also suggest soils contain excess nutrients. In addition, operation, use, and maintenance of mechanical farm equipment could lead to isolated occurrences of spilled gasoline, hydraulic fluid, and oil in the agricultural areas.

The Upper Wabash watershed has more than 29,000 acres of soils with high leaching index which allows contaminants on the land surface to be carried into the ground water from infiltrating water. Approximately 3% of the watershed is within an identified wellhead protection area. The Salamonie watershed has more than 7,150 acres of soils with high leaching index which allows contaminants on the land surface to be carried easily into the ground water from infiltrating water. There are an additional 2,700 acres of wellhead protection areas. Because of this condition, non-point pollutants such as fertilizers, pesticides, and livestock waste have the potential to contaminate the ground water aquifer.

## 8 Database Search

### 8.1 Federal Databases

Information used to complete the Federal records review was obtained from the U.S. Environmental Protection Agency EnviroMapper for Envirofacts (<http://www.epa.gov/emefdata/em4ef.home>). EnviroMapper is a single point of access to select U.S. EPA environmental compliance records. The Web site provides access to several EPA databases that provide information about environmental activities that may affect air, water, and land quality in the United States. Databases linked to the EnviroMapper include air emissions (AIRS/AFS), Superfund sites (CERCLIS), toxic releases (TRI), hazardous waste (RCRAInfo), waste dischargers - Permit Compliance System (PCS) and Integrated Compliance Information System (ICIS), and brownfields (ACRES). Only sites on, or adjacent to, government owned property were investigated as part of this assessment.

#### 8.1.1 JE Roush Lake

Regulated facilities located on or adjacent to the JE Roush Study Area are shown in **Figure 5**. A listing of sites on or adjacent to the Study Area, regulatory database, status of compliance actions, and the HTRW impact determination for the Study Area are provided in **Table 2**. In general, there are multiple current active or terminated NPDES permits issued to facilities on or adjacent to the JE Roush Lake; none of the facilities that discharge to waterways have noncompliance actions. Facilities on or near the Study Area regulated under RCRA have no known releases. Two HRECs are present in the study area associated with previous LUST activities at the Huntington Reservoir (previous name of JE Roush Lake) and within the Huntington Community; these actions are discussed in paragraph 8.2.

**Table 2: JE Roush Federal Database Records Review**

Site Name (Address)	Database	Status	HTRW/REC Determination
Huntington County Community Administrative Office  1360 N Warren Road Huntington, IN 46750	RCRA Info  FRS – UST and LUST	RCRA handler, INR000012880, no violations reported.  UST/LUST status discussed in section 8.2	RCRA: no known releases.  LUST: HREC – see paragraph 8.2.
J E Roush Lake Upstream Dam Embankment Side Roads & Riprap Overlay  Warren Road and Wabash River Huntington, IN 46750	ICIS – NPDES	NPDES non-major construction permit INRA00777, active through 2023, no violations reported.	No known unregulated releases or noncompliance, REC unlikely.

<b>Site Name (Address)</b>	<b>Database</b>	<b>Status</b>	<b>HTRW/REC Determination</b>
Huntington Reservoir: Little Turtle State Rec. Area and Kil-So-Quah RSD WWTP  517 N Warren Road Huntington, IN 46750- 9204	ICIS – NPDES  IN-FRS: UST and LUST	NPDES non-major permit IN0024104 expired 2004. NPDES non-major permit IN0024112 expired 2010. No violations reported.  UST/LUST status discussed in section 8.2.	NPDES: No known unregulated releases or noncompliance.  LUST: HREC – see paragraph 8.2.
Mobil Huntington Terminal  RTE 2 Meridan Road Huntington, IN 46750	RCRA Info	RCRA handler, IND000715326 – no violations reported.	No known releases. REC unlikely.
INDOT Des 1600260 & 1600267 Bridge Replacement  I-69 & E 200 S Huntington, IN 46750	ICIS – NPDES	INRA03528, non-major and stormwater NPDES permit, terminated. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.
Tracy Street Reconstruction  100-399 Tracy St Markle, IN 46770	ICIS – NPDES	INR10K579, non-major NPDES permit, terminated. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.
Msm Transport Incorporated  4654 E Markle Road Markel, IN 46770	ICIS – NPDES	NPDES non-major and stormwater construction permit, INRA04203, expires 2024. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.
Tanners Creek - Desoto- Sorenson 345 Transmission Sag Remediation  SR116 & CR 400 N Markle, IN 46770	ICIS-NPDES	INR10H415, non-major NPDES permit. Expired 2018. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.
Eastside Dairly Llc - Markle In  4341 S 500 E Markle, IN 46770	ICIS – NPDES	INA006161, CAFO and non-major NPDES permit, expired 2012. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.

8.1.2 Mississinewa Lake

Regulated facilities located on or adjacent to the Mississinewa Study Area are shown in **Figure 6**. A listing of sites on or adjacent to the Study Area, regulatory database, status of compliance actions, and the HTRW impact determination for the Study Area are provided in **Table 3**. In general, there are multiple current active or terminated NPDES permits issued to facilities on or adjacent to Mississinewa Lake; one facility discharging into Mississinewa Lake has known noncompliance actions associated with discharge of solids and/or nutrients above established permit limits. Discharge of waste water into Mississinewa Lake with excess concentrations of solids and nutrients may negatively impact water quality in the lake. Facilities on or near the Study Area regulated under RCRA have no known releases. One HREC is present in the Study Area associated with previous LUST activities at the Mississinewa reservoir maintenance facility; this action is discussed in paragraph 8.2.

**Table 3: Mississinewa Federal Database Records Review**

<b>Site Name (Address)</b>	<b>Database</b>	<b>Status</b>	<b>HTRW/REC Determination</b>
Kokomo Grain Company, inc.  E Penn St Amboy, IN 46911	ICIS- Air/AFS  UST	Minor operating air permit.  UST onsite.	No known unregulated releases or noncompliance, REC unlikely.
Rays Auto Parts  9653 S SR 19 Amboy, IN 46911	ICIS - NPDES	Individual NPDES permit INRM00780, Non-POTW stormwater discharge. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.
Peoria Fishing Site, Mississinewa Reservoir, Miami State Recreation Area  4627 South 625 East Peru, IN 46970-8928	ICIS - NPDES	Active Sewerage System, Individual NPDES Permit for Miami State Recreation Area (IN0024279). (IDNR). Previous permits (IN0024279, IN0030121 and IN0030112) at site have been terminated. Current permit expires 2026.  IN0024279 - Violation identified for excess nutrients and solids in the discharge.	Discharge of water into Mississinewa Lake with excess concentrations of solids and nutrient may negatively impact water quality.
Mississinewa reservoir maintenance facility	LUST	Previous UST and LUST discussed in paragraph 8.2.	LUST: HREC – see paragraph 8.2.

<b>Site Name (Address)</b>	<b>Database</b>	<b>Status</b>	<b>HTRW/REC Determination</b>
Bridge #13 over Mississinewa Reservoir  Mississinewa Rd Somerset, IN 46984	RCRA Gen	Previous Federal LQG, 2005. No known violations.	No known releases. REC unlikely.
Somerset Subdivision WWTP  698 Cassette Rd Wabash, IN 46992- 1029	ICIS – NPDES	Previous public/private NPDES permit IN0029815, sewerage system, expires 2025. No known violations.	No known unregulated releases or noncompliance, REC unlikely.
Ind Cities Water- Somerset  23 N 2nd Street lot 2 Somerset, IN 46984	ICIS – NPDES	Terminated Water Supply Permit (IN0003212). No known violations.	No known unregulated releases or noncompliance, REC unlikely.
Wabash Valley Power Association- Red Bridge Substation  CR 600 W & Mississinewa Rd Amboy, IN 46911	ICIS – NPDES	Active NPDES stormwater construction permit (INR10P915). No known violations.	No known unregulated releases or noncompliance, REC unlikely.
D & B Sunoco  6629 E 500 S Marion, IN 46952	RCRA Gen	Previous RCRA generator. No known violations.	No known releases, REC unlikely.
Body by Howard 4413 N Wabash Rd Marion, IN 46952	RCRA Gen	RCRA generator. No known violations.	No known releases, REC unlikely.
Ind Cities Wtr- Wabash Well  unknown Wabash, IN 46992	ICIS - NPDES	Terminated Public Water Supply (IN0003239), individual NPDES permit.	No known unregulated releases or noncompliance, REC unlikely.

<b>Site Name (Address)</b>	<b>Database</b>	<b>Status</b>	<b>HTRW/REC Determination</b>
New Schoonebeck, LLC (Bekel family)  1616 E. 800 S. La Fontaine, IN 46940	ICIS - NPDES	Dairy Farm, private, unpermitted. No compliance actions.	No known unregulated releases or noncompliance, REC unlikely.
Matthew and Elizabeth Whitesell  7651 S CR750 W Wabash, IN 46992	ICIS- NPDES	NPDES permit INR10M653 stormwater construction expires 2021. No known violations.	No known unregulated releases or noncompliance, REC unlikely.

8.1.3 Salamonie Lake

Regulated facilities located on or adjacent to the Salamonie Study Area are shown in **Figure 7**. A listing of sites on or adjacent to the Study Area, regulatory database, status of compliance actions, and the HTRW impact determination for the Study Area are provided in **Table 4**. In general, there are multiple current active or terminated NPDES permits issued to facilities on or adjacent to Salamonie Lake; two facilities discharging into Salamonie Lake have known noncompliance actions associated with discharge of solids and/or nutrients above established NPDES permit limits. Discharge of waste water into Salamonie Lake with excess concentrations of solids and nutrients may negatively impact water quality in the lake. One HREC is present in the Study Area associated with previous LUST activities at the Salamonie Reservoir; this action is discussed in paragraph 8.2.

**Table 4: Salamonie Lake Federal Database Records Review**

<b>Site Name (Address)</b>	<b>Database</b>	<b>Status</b>	<b>HTRW/REC Determination</b>
Dora State Recreation Area  9214 W Lost Bridge Road Lagro, IN 46941	ICIS - NPDES	IN0024091, non-major NPDES permit expired 2005. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.
Salamonie Reservoir Lost Bridge West SRA  9214 W Lost Bridge Road Andrews, IN 46702-9731	ICIS – NPDES	IN0024198, expired 2004, non-major NPDES permit.  IN0030449, non-major NPDES permit active through 2026. Violation identified, phosphorous limit exceeded, solids removal not to standards.	Discharge of water into Salamonie Lake with excess concentrations of solids and nutrients may negatively impact water quality.

<b>Site Name (Address)</b>	<b>Database</b>	<b>Status</b>	<b>HTRW/REC Determination</b>
	SFDW  IN - FRS	Discharge to Salamonie Reservoir.  SFDW – Mt. Etna treatment plant.  IN – FRS UST and LUST	LUST: HREC – see paragraph 8.2.
Salamonie Reservoir 521 Mount Hope State Recreation Area  Andrews, IN 46702	ICIS - NPDES	IN0030457 non-major NPDES permit expired 2004. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.
Bozarth Recreational Resort-Treatment Plant #1  7309 E 400 S Lagro, IN 46941	ICIS – NPDES       SFDW	IN0041637, non-major NPDES permit, expires 2025. Violation identified. Nitrogen, BOD and phosphorous exceedances. Discharge to Salamonie Lake.  Zoomers RV resort camp store treatment plant.	Discharge of water into Mississinewa Lake with excess concentrations of solids and nutrient may negatively impact water quality.
Reynolds-Topeka 345kv Transmission Line  Statewide Reynolds, IN 47980	ICIS – NPDES	INR10K5769, non-major NPDES permit, expired 2020. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.
Salamonie reservoir 521  Mount Etna State Rec. Area Andrews, IN 46702	ICIS – NPDES	IN0024287, non-major NPDES permit, expired 2004. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.
Mt. Etna Municipal WWTP  6500 S 500 W Mount Etna, IN 46750	ICIS - NPDES	IN0058963, non-major NPDES permit, expires 2022, POTW. No violations reported.	No known unregulated releases or noncompliance, REC unlikely.

## 8.2 State Databases

A list of state cleanup sites by county located in the Study Area, obtained from the IDEM State Cleanup Program database, are summarized in **Attachment 6**. Review of the sites suggests that there are no previous cleanup actions conducted within the Study Area.

The IDEM UST Branch maintains databases tracking the UST and LUST activities within the state. The LUST report lists a priority and a disposition for each site. IDEM assigns a priority to each site to ensure that the ones with the greatest chance of impacting people are cleaned up first. High priority sites have measurable free product, drinking water impacts, surface impacts, and/or vapors in buildings or utilities. Medium priority sites have no high priority conditions, but there is possible ground water contamination. Low priority sites only have soil contamination.

UST and LUST databases were searched for sites that may be on or near the Study Area. Additional information about each site was queried using IDEM's online Virtual File Cabinet (VFC). A listing of USTs that may be on or near the Study Area are presented in **Table 5**. Two USTs are listed as currently in use by the IDNR at Salamonie Lake, at Lost Bridge State Recreation Area. A listing of LUST actions that are within the Study Area, and the HTRW impact determination, are presented in **Table 6**. LUST inquiry results obtained through the VFC are provided in **Attachment 7**. Review of database results suggest that all LUST actions within the Study Area have been remediated to IDEM standards with No Further Action (NFA) and unconditional closure.

**Table 5: Registered USTs within Study Area**

NAME/ID	ADDRESS	CITY	TANK #	TRACS TANK #	TANK CAPACITY	INSTALL DATE	TANK STATUS	SUBSTANCE	OWNER NAME
Salamonie Reservoir - 32766	9214 W Lost Bridge W	Andrews	1	1C1	2000	10-Nov-1992	Currently in use	Gasoline	IDNR Dept of Natural Resources
Salamonie Reservoir - 32766	9214 W Lost Bridge W	Andrews	2	2C1	1000	10-Nov-1992	Currently in use	Diesel	IDNR Dept of Natural Resources

**Table 6: LUST Actions within Study Area**

UST Facility ID	LUST Incident Number	NAME	Street Address	CITY	State	ZIP	County	Priority	HTRW/REC Determination
18032	199411511	Us Army Corps of Engineers	Rr 1 Box 202a	Peru	IN	46970	Miami	Medium	Located at Grissom AFB. Not within Study Area.
16550	199209502	Salamonie Reservoir	9214 W Lost Bridge W	Andrews	IN	46702	Huntington	Low	DNR-lead cleanup action for remediation of gasoline contaminated soil found during UST removal. IDEM status: No Further Action required. Unconditional Closure. Site considered HREC.

UST Facility ID	LUST Incident Number	NAME	Street Address	CITY	State	ZIP	County	Priority	HTRW/REC Determination
11731	199811526	Mississinewa Reservoir Maintenance Facility	4673 County Rd S 625 E	Peru	IN	46970	Miami	High	DNR-lead cleanup action of remediation of impacted soils and groundwater. IDEM status: No Further Action required. Unconditional Closure. Site considered HREC.
4155	199002556	Salamonie State Forest	US 24 & SR 524	Lagro	IN	46941	Wabash	Low	Limited documentation available. Gasoline LUST incident. IDEM status: No Further Action required. Unconditional Closure. Site considered HREC.
4033	199904523	Huntington Reservoir	517 N Warren Rd	Huntington	IN	46750	Huntington	Low	DNR-lead cleanup action for remediation of gasoline/diesel contaminated soil found during UST removal. IDEM status: No Further Action required. Unconditional Closure. Site considered HREC.

## 9 Land Uses and Facility Operations

### 9.1 Historical Land Use

Pre-and post-dam construction topographic maps were reviewed to determine historic land use. Historical topographic maps reviewed are summarized in **Table 7**. Historical maps were obtained from the USGS (<https://ngmdb.usgs.gov/topoview/>, accessed on 29 October 2021) provided in **Attachment 8**. Due to the scale of the maps few details are visible, however the Study Area appears to have little development beyond towns, roads, and isolated structures adjacent to roadways, presumed to be farmhouses and support structures. Most of the areas adjacent to the rivers are natural and undeveloped, located within steep ravines. There is no evidence that the area adjacent to the Mississinewa, Salamonie, or Wabash River were developed for industrial or commercial use prior to construction of the project.

**Table 7: Historical Topographic Maps Reviewed**

Map Name/ID	Series	Year	Landforms
Somerset Quadrangle, Indiana	7.5 minute topographic	1953	Mississinewa River and surrounding area
Peoria Quadrangle, Indiana	7.5 minute topographic	1953	Mississinewa River, Butler, Harrison, Waltz and surrounding area
Somerset Quadrangle, Indiana	7.5 minute topographic	1969	Mississinewa Reservoir
Peoria Quadrangle, Indiana	7.5 minute topographic	1969	Mississinewa Reservoir, Butler, Harrison, Waltz and surrounding area
Mount Etna Quadrangle, Indiana	7.5 minute topographic	1951	Salamonie River and surround area south

<b>Map Name/ID</b>	<b>Series</b>	<b>Year</b>	<b>Landforms</b>
Andrews Quadrangle, Indiana- Huntington Co.	7.5 minute topographic	1951	Salamonie River, Lancaster, Polk, Huntington, Dallas, and surrounding areas
Lagro Quadrangle, Indiana	7.5 minute topographic	1951	Salamonie River
Lagro Quadrangle, Indiana	7.5 minute topographic	1969	Salamonie River, Salamonie Reservoir
Andrews Quadrangle, Indiana- Huntington Co.	7.5 minute topographic	1969/photo revised 1981	Salamonie Reservoir, Lancaster, Polk, and surrounding areas
Majenica Quadrangle, Indiana- Huntington Co.	7.5 minute topographic	1952	Wabash River, Rock Creek, and surrounding area
Markle Quadrangle, Indiana	7.5 minute topographic	1955	Wabash River, Markle, Rock Creek and surrounding area
Majenica Quadrangle, Indiana- Huntington Co.	7.5 minute topographic	1969	Wabash River, Huntington, Huntington Reservoir, Huntington Dam, Rock Creek, Tah Kum Wa Creek, Majenica Creek and surrounding area
Wabash, Indiana	30x60 minute topographic	1986	Study Area including Mississinewa, Salamonie, and Roush Reservoirs and surrounding communities

## 9.2 JE Roush Lake

### 9.2.1 U.S. Army Corps of Engineers (USACE) Facilities

U.S. Army Corps of Engineers (USACE) JE Roush lake personnel have the responsibility for the day-to-day operation and maintenance of JE Roush Dam, Markle Levee, and the Star of Hope Levee for flood control and other authorized purposes. USACE personnel also operate and maintain three small recreation areas adjacent to the dam: Observation Mound, Arrowhead North, and Arrowhead South. Service contracts are utilized for mowing, trash pickup, restroom cleaning, and herbicide application. Internal and external reports of ERGO inspections conducted between 2015 and 2020 on government property at the JE Roush project area are provided in **Attachment 9**. A listing of issues identified in ERGO inspections are minor in nature, as summarized below. No releases were identified.

- Inadequate secondary containment for hazardous materials storage
- Inappropriate storage of compressed gases
- Operational Management Plan requires update
- SPCC Plan requires update/reformat to comply with EPA template
- Inadequate labeling of hazardous materials in non-laboratory areas
- Small fuel tank for outboard motor stored improperly
- Inadequate housekeeping in hazardous materials storage area (materials on flammables cabinet)
- Natural Resource Plan inadequate

### 9.2.2 Indiana Department of Natural Resources Facilities

A large percentage of the government fee land at JE Roush Lake is leased to the Indiana Department of Natural Resources as a Fish and Wildlife Area (FWA). Indiana Division of Fish & Wildlife operates and maintains the recreation facilities and wildlife areas at the lake. IDNR is the managing agency for the wildlife program and for most of the recreation areas which include fishing piers, concrete boat launching ramps, campgrounds, and car-top boat launching ramps. IDNR also operates a shooting range within the FWA with pistol and distance bays, trap and skeet shooting, and archery ranges. Most revenues used in development, operation, and maintenance of J.E. Roush Lake Fish & Wildlife Area are derived from the sale of hunting, fishing, and trapping licenses. Funds are also derived from the federal Pittman-Robertson and Dingell-Johnson programs to aid fish and wildlife restoration. These funds are derived from taxes levied on sport hunting, shooting, and fishing equipment.

Review of the Fiscal Year 2020 State Annual Compliance Report (**Attachment 10**) suggests that all IDNR water and sanitary systems on the premises have been inspected and comply with Federal, State, and local standards. The facilities on the premises are operated and maintained in accordance with State, county, and municipal requirements for construction, health safety, food service, water supply, sanitation, use of pesticides, and licenses and permits to do business. IDNR has provided a list of pesticides and herbicides used on the property and the acreages of treatment for control of grasses, weeds, poison ivy, algae, cattail, purple loosestrife, and stump

treatment on the property. IDNR has two 2,500 – gallon capacity gasoline and two 2,000 – gallon capacity diesel ASTs, one each at the office and barn locations. IDNR also has four 2,120 – gallon capacity propane ASTs and one 500 – gallon propane UST at the office, residence, Markel barn (2), and Markel residence, respectively. There are no known releases from these ASTs/USTs. Tanks have been inspected by the Fire Marshall.

9.2.2.1 Shooting Range

Review of local USACE records suggests that IDNR installed four groundwater monitoring wells on the site in April 2020 for the purpose of obtaining groundwater samples at the JE Roush Fish and Wildlife Area shooting range (see **Attachment 11** for results of records search). Three groundwater wells were installed hydraulically down gradient of the shooting range, and one groundwater well was installed hydraulically up gradient to the shooting range. One (1) groundwater sample was collected from each well. Analytical results for the April 2020 sampling event are summarized in **Table 8**.

**Table 8: JE Roush Shooting Range 2020 Groundwater Sampling Results**

Sample Location	Total Pb (mg/L)	Dissolved Pb (mg/L)	IDEM RISC MCL (mg/L)
MW-1	0.004	< 0.0075	0.015
MW-2	0.20	< 0.0075	0.015
MW-3	0.034	< 0.0075	0.015
MW-4	0.037	< 0.0075	0.015

While groundwater flow was expected to be to the northwest towards the Wabash River (located to the north), field observations suggest that groundwater flow may be to the southeast. It is unclear if the field observations reflect actual site conditions or if slow recharge from clay soils present at the site resulted in inaccurate flow direction observations. Analysis of groundwater samples for lead (Pb) suggest that dissolved lead was not detected in collected samples. Total lead detected in the groundwater samples ranged between 0.004 mg/L to 0.20 mg/L. Results suggest that three of four samples collected exceed the IDEM groundwater screening value for lead, based on the maximum contaminant level (MCL) of lead in drinking water, 0.015 mg/L. It is unknown if the activities at the shooting range are impacting the groundwater or soil quality at the site. Lead is a common element in soil. Background concentrations of lead in the soils may be influencing the concentrations found in the groundwater at the site; however, soil quality at the site is unknown. Documentation provided in **Attachment 11** suggests IDNR actively manages the lead released at the shooting range facility. 28,614 pounds of lead bullets were received from IDNR JE Roush Fish and Wildlife Area and recycled by MT2, LLC in 2017. JE Roush staff have recently (from March to May 2020) sifted through site soils in the proposed project area and cleaned out all spent casings.

Activities conducted at the shooting range within the JE Roush Fish and Wildlife Area may result in a release of hazardous substances to the environment. A primary concern of outdoor firing ranges is the fate and transport of heavy metals from bullets, bullet fragments accumulating in soil, and release of materials from trap and skeet targets, typically clay pigeons, composed of limestone/talc and petroleum resin. Additional investigation of potential soil and

groundwater impacts to the site from the shooting range operation will be required in the future to determine the condition of the property prior to a real estate transaction, when IDNR no longer operates the facility onsite, or lease is not renewed.

### 9.3 Mississinewa Lake

#### 9.3.1 U.S. Army Corps of Engineers Facilities

USACE Mississinewa lake personnel have the responsibility for the day-to-day operation and maintenance of Mississinewa Dam and related structures for flood control and other authorized purposes. USACE personnel also maintain the Observation Mound, Peoria Fishing Site, and the Outlet Fishing Site, which includes shelters, restrooms, picnic sites, playground equipment, and bank fishing access points. Internal and external reports of ERGO inspections conducted between 2015 and 2020 on government property at the Mississinewa project area are provided in **Attachment 12**. A listing of issues identified in ERGO inspections are minor in nature, as summarized below. No releases were identified.

- Operational Management Plan requires update
- Inadequate cultural resources management practices
- Inadequate hazardous materials management practices (aerosol storage)
- Inappropriate storage of flammable liquids and compressed gases (propane and gasoline storage)
- Natural Resource Plan inadequate
- Inadequate PCB management practices (dispose of fluorescent bulb)
- Inadequate solid waste management practices (construction debris)
- Inadequate secondary containment for hazardous materials storage (spill containment)
- Inadequate labeling of hazardous materials in non-laboratory areas (signage)
- Inadequate housekeeping in hazardous materials storage area (materials on flammables cabinet)
- Inadequate containment for container of POL other than a storage tank

#### 9.3.2 Indiana Department of Natural Resources Facilities

The majority of the government fee land associated with Mississinewa Reservoir and surrounding area is leased to the Indiana Department of Natural Resources, who operate several major state recreation areas (SRAs) including Miami, Red Bridge, Pearson Mill, and Frances Slocum. The IDNR also has natural resource and wildlife management programs in place under the same lease agreement. The recreation areas feature a beach, concrete boat launching ramps, campgrounds, archery range, playgrounds, sports areas, fishing piers, a nature center, and car-top boat launching ramps.

Review of the Fiscal Year 2020 State Annual Compliance Report (**Attachment 13**) suggests that all IDNR water and sanitary systems on the premises have been inspected and comply with Federal, State, and local standards. The facilities on the premises are operated and maintained in accordance with State, county, and municipal requirements for construction, health safety, food

service, water supply, sanitation, use of pesticides, and licenses and permits to do business. IDNR has provided a list of pesticides and herbicides used on the property and the areas of treatment for control of grasses, weeds, invasive species, and aquatic vegetation on the property. IDNR has one 250 – gallon capacity propane AST at the Miami SRA wood shop, six 500 – gallon capacity propane USTs at the Miami SRA, two 500 – gallon capacity propane USTs at the Miami SRA office, three 1,000 – gallon capacity propane ASTs at the property manager, wildlife specialist, and assistant manager residences, one 2,000 – gallon capacity gasoline ASTs at the Miami SRA, two 1,000 – gallon gasoline ASTs at the Miami SRA recreation/wildlife, two 1,000 – gallon capacity diesel ASTs and the Miami SRA recreation/wildlife, and one 500 – gallon capacity gasoline AST at the Miami SRA waste water treatment facility. There are no known releases from these tanks. Tanks have been inspected and approved by the Fire Marshall.

## 9.4 Salamonie Lake

### 9.4.1 U.S. Army Corps of Engineers Facilities

USACE Salamonie lake personnel have the responsibility for the day-to-day operation and maintenance of the Salamonie Dam and the Lancaster Levee and Dike for flood control and other authorized purposes. USACE personnel also operate and maintain two small recreation areas adjacent to the dam: Observation Mound and the Tailwater Site. Service contracts are utilized for mowing, trash pickup, restroom cleaning, and herbicide application. Internal and external reports of ERGO inspections conducted between 2015 and 2020 on government property at the Salamonie project area are provided in **Attachment 14**. A listing of issues identified in ERGO inspections are minor in nature, as summarized below. No releases were identified.

- Cultural resources plan not up to date
- Operational Management Plan requires update
- Inadequate secondary containment for hazardous materials storage (concrete sealant)
- Inadequate natural resources management practices
- Inadequate recordkeeping (fire extinguisher inspection)
- Natural Resources Management Plan is inadequate
- Inappropriate storage of compressed gases
- Inadequate storage tank management practices
- Uncharacterized/unknown waste stream

### 9.4.2 Indiana Department of Natural Resources Facilities

A large percentage of the government fee land is leased to the Indiana Department of Natural Resources. IDNR manages the recreation and wildlife management programs. There are several main recreation areas including the Lost Bridge West SRA, Lost Bridge East SRA, Dora-New Holland SRA, Mount Etna SRA, Mount Hope SRA. Recreation areas feature a beach, concrete boat launching ramps, a marina, campgrounds, a nature center, disc golf, fishing piers, and car-top boat launching ramps. Headquarters for Upper Wabash Interpretive Services (UWIS)

programming for Mississinewa Lake and Salamonie Lake is located at the Salamonie Lake Nature Center.

Review of the Fiscal Year 2020 State Annual Compliance Report (**Attachment 15**) suggests that all IDNR water and sanitary systems on the premises have been inspected and comply with Federal, State, and local standards. The facilities on the premises are operated and maintained in accordance with State, county, and municipal requirements for construction, health safety, food service, water supply, sanitation, use of pesticides, and licenses and permits to do business. IDNR has provided a list of pesticides and herbicides used on the property and the areas of treatment for control of grasses, weeds, invasive species, and phragmites on the property. IDNR has one 500 – gallon capacity diesel AST and nine propane ASTs, total capacity 6,500 – gallon, at the Lost Bridge SRA, comfort stations, and residences, and three USTs at the Lost Bridge West Service Area: one 2,000 – gallon gasoline, one 1,000 – gallon diesel, and one 500 – gallon fuel oil tank. There are no known releases from these tanks. Tanks have been inspected and approved by the Fire Marshall.

## **10 Site Reconnaissance**

A site visit was conducted on October 7<sup>th</sup> and 8<sup>th</sup>, 2020, by the PDT for the master plan development. The PDT visited all three project areas and inspected the main areas of the project, including the dam and outlet structures, larger recreation areas, beach areas, support areas (upstream levees and Markle pump station), historic structures, and the JE Roush shooting range. PDT met with IDNR staff and staff from the State Forest onsite. IDNR and State Forest site managers present during site reconnaissance did not recall any HTRW or non-HTRW issues that may impact the Study Area, with the exception of HAB in the reservoirs. Due to the size of the project areas, and the Study Area, the entire site was not inspected for signs of HTRW. Lack of a comprehensive site inspection is considered a data gap for this investigation. USACE should continue to conduct HTRW reviews for development actions being implemented on Federal property, including outgrant properties, as part of the real estate/NEPA review process to ensure that actions concerning the release, disposal, and storage of hazardous substances conducted by USACE and/or IDNR comply with all relevant Federal, state, and local laws and regulations. Based on status of areas inspected during site reconnaissance, the dam structure, tailwater areas, and supporting USACE facilities visited appear to be well maintained. IDNR managed properties also appear to be well maintained. No visible signs of stressed vegetation or RECs were identified.

The outside of buildings in the Study Area appear to be in good condition; buildings were not surveyed by qualified LBP and ACM inspectors during site reconnaissance. The age of the structures present onsite are unknown. It is presumed the any structure built prior to 1978 may contain lead-paint or asbestos containing materials (ACM). The use of lead-based paint (LBP) was common from the 1800s through the 1970s. LBP was used as a primer for metals and maintenance painting into the 1970s. In 1973, the Consumer Product Safety Commission established a maximum lead content in paint of 0.5 percent by weight; in 1978, it was lowered to 0.06 percent. Asbestos is designated as a hazardous substance with a reportable quantity in the Superfund regulations. No known lead paint or asbestos surveys are known for buildings in the

Study Area. A survey of ACM and/or LBP is recommended prior to renovation or demolition of buildings constructed prior to 1978.

## 11 Findings and Conclusions

The purpose of this investigation was to identify HTRW and non-HTRW issues that do not comply with the Federal, State, and local regulations associated with the Salamonie, Mississinewa, and J.E. Roush Flood Risk Management Reservoirs. The methods used in performing the investigation are described in detail. Conclusions and recommendations regarding potential HTRW and non-HTRW environmental issues associated with Study Area are provided below:

- Activities conducted at the shooting range within the JE Roush Fish and Wildlife Area may result in a release of hazardous substances to the environment and is a potential REC. A primary concern of outdoor firing ranges is the fate and transport of heavy metals from bullets, bullet fragments accumulating in soil, and release of materials from trap and skeet targets, typically clay pigeons, composed of limestone/talc and petroleum resin. Additional investigation of potential soil and groundwater impacts to the site from the shooting range operation will be required in the future to determine the condition of the property prior to a real estate transaction, when IDNR no longer operates the facility onsite, or lease is not renewed.
- A survey of ACM and/or LBP is recommended prior to renovation or demolition of buildings constructed prior to 1978.
- If HTRW sites are discovered during future site actions, the affected area should be secured and protected until the contaminants are identified and site safety and health programs and plans are put into effect. A thorough record should be kept of all circumstances and actions taken to deal with releases or discovery of previous releases onsite. Procedures for dealing with an HTRW condition may involve activities which may require specialized assistance from knowledgeable sources or specialty contractors. Federal (USEPA), State (IDEM), and local agencies should be consulted as appropriate.
- Continue to conduct ERGO inspections on Federal property. Good management practices associated with the proper storage and handling of chemicals and spill contingency and response requirements related to hazardous materials should be conducted onsite.
- Where use of real property has been granted to another Federal agency, state or local government, or private person, the grantee actions concerning the release, disposal, and storage of hazardous substances must comply with all relevant Federal, state, and local laws and regulations. Conduct HTRW reviews for development actions being implemented on outgrant properties as part of real estate and NEPA reviews.
- Release of excess nutrients into eutrophic lakes, through discharge of treated waste water or agricultural runoff, could have a negative impact on water quality. Elevated nutrient loading can contribute to the development of HABs. While discharge of excess solids and

nutrients into Mississinewa and Salamonie Lakes through NPDES discharge is not a REC, annual water quality monitoring should continue to ensure that the water quality within the lakes meet the State of Indiana water quality standards for all designated uses.

No HTRW investigation can wholly eliminate uncertainty regarding the potential for HTRW associated with a project area. Performance of the HTRW investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for HTRW in connection with a project area.

## 12 References

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## Figures

**Attachments**

*(available digitally upon request)*