



**US Army Corps
of Engineers®**
St. Paul District

Appendix H – HTRW Phase 1

Riverbank Stabilization Project Feasibility Report and Integrated Environmental Assessment

Section 203 Tribal Partnership Program

September 2021

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**US Army Corps
of Engineers®**
St. Paul District

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PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT – Lower Sioux Community Riverbank Stabilization

Tribal Partnership
Morton, Redwood County, Minnesota

7/21/21

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1.0 Abbreviations

ACM	Asbestos Containing Material
AIRS	Aerometric Information Retrieval System
AST	Aboveground Storage Tank
AUL	Activity and Use Limitation
ASTM	American Society for Testing Materials
CDL	Clandestine Drug Labs
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CESQG	Conditionally-Exempt Small Quantity Generators
CFR	Code of Federal Regulations
CONSENT	Superfund Consent Decrees
CORRACTS	Corrective Action Report
DOD	Department of Defense Sites
EDR	Environmental Data Resources
EPA	United States Environmental Protection Agency
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
FIFRA	Federal Insecticide, Fungicide, & Rodenticide Act
FINDS	Facility Index System
FOIA	Freedom of Information Act
FTTS	FIFRA/TSCA Tracking System
FUDS	Formerly Used Defense Sites
FR	Federal Register
HMIRS	Hazardous Materials Information Reporting System
LQG	Large Quantity Generators
LAST	Leaking Aboveground Storage Tank
LUCIS	Land Use Control Information System
LUST	Leaking Underground Storage Tank
MLTS	Material Licensing Tracking System
NFRAP	Former CERCLIS Sites
NPDES	National Pollutant Discharge Elimination
NPL	National Priorities List
NPL LIENS	Federal Superfund Liens
NWI	National Wetlands Inventory
ODI	Open Dump Inventory
PADS	PCB Activity Database System
PCBs	Polychlorinated Biphenyls
PDF	Portable Digital Format
PLP	Permanent List of Priorities
RAATS	RCRA Administrative Action Tracking System

RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
REC	Recognized Environmental Condition
ROD	Records of Decision
SEMS	Superfund Enterprise Management System Archive
SHWS	State Hazardous Waste Sites
SPILLS	Spills Database
SQG	Small Quantity Generators
SSTS	Section 7 Tracking Systems
SWF	Solid Waste Facility
SWRCY	Solid Waste Recycling
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage, and Disposal Facilities
UMTRA	Uranium Mill Tailings Sites
USACE	United States Army Corps of Engineers
USC	United States Code
USGS	United States Geological Survey
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program
WI WRRSER	Wisconsin Remedial Response Site Evaluation Report

2.0 Liability Statement

The following excerpts, unless otherwise noted, are from ASTM E 1527-13; Appendix X1.1.5.2; CERCLA Operator Liability:

‘A person may be liable as a CERCLA operator when they exercise control over a facility.’

As defined in 42 U.S.C. 9601 (20) (A) The term “owner or operator” means (ii) in the case of an onshore facility or an offshore facility, any person owning or operating such facility.

As defined in 42 U.S.C. 9601 (9) (A) The term “facility” means any building, structure, installation, equipment, pipe or pipeline, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located.

*‘Some courts have held that **a person may be liable as a current CERCLA operator where the person did not exercise control over historic operations that caused the contamination but dispersed or moved around contaminated soil...***

*‘Like a past CERCLA owner, a past operator must have exercised control over the site “at the time of disposal” to be liable as a CERCLA operator. Many courts have held that **disposal is not limited to the original release but can encompass subsequent dispersal or movement of hazardous substances.***

3.0 General Information

Project Information: Lower Sioux Community Riverbank Stabilization

Site Information: 40677 Reservation Highway 3
Morton, MN 56270

County: Redwood

Latitude, Longitude: 44.5391582, -94.9824376

Site Assessor:

[Redacted Signature]

Ashley M. Woods
Geologist

Senior Reviewer:

[Redacted Signature]

Grant A. Riddick, P.G.

Signed version in file

Environmental Professional Qualification:

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

[Redacted Signature]

Grant A. Riddick, P.G.

4.0 Executive Summary

4.1 Subject Property Description

The subject property is located in the northern extent of the Lower Sioux Indian Community along the Minnesota River, south east of Redwood Falls, MN. The site is located adjacent to the city of Morton, in Redwood County, Minnesota on Lower Sioux Indian Community tribal lands. The property can be accessed from Highway 3 via County Rd 24.

The subject property is a narrow strip of land approximately ¼ mile long, encompassing approximately 0.75 acres. The property is tribal land and includes riverbank of the Minnesota River.

4.2 Environmental Report Summary

Currently, the subject property is a recreational area used for hunting and fishing. The land is predominately vegetated with wetland and riparian forest plants. A two-track soil and gravel access road runs parallel to the proposed project site. There were scattered debris, plastic bottles, and empty metal containers along the subject property. The EDR identified one illegal dumping site ½ mile SW of the subject property. During site reconnaissance, no dump sites, chemicals, evidence of staining, or other recognized environmental concern was observed on or near the immediate vicinity of the subject property.

4.3 Recommendations

Based on the information obtained during the site reconnaissance and document review, **a Phase II ESA would currently not be necessary** for the subject property. It should be noted that the complete report must be read in order to fully understand the findings associated with the subject property.

5.0 Introduction

5.1 Purpose

The purpose of the Phase I ESA was to evaluate the current and historic conditions of the subject property in an effort to identify recognized environmental conditions (REC) in connection with the subject property and surrounding operations.

A Recognized Environmental Condition (REC) is defined by ASTM E 1527-13 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. *De minimis* conditions are not recognized environmental conditions.

5.2 Scope of Work

The Phase I ESA conducted at the subject property was in accordance with ASTM Standard Practice E 1527-13 and further defined below:

- USACE has gathered and reviewed available historic data, including fire insurance maps, survey plat maps, aerial photography, topographic maps from the United States Geological Survey (USGS), hydrogeology and geologic maps from the Minnesota Geologic Survey (MNGS), USACE USAF construction documents, and interviews with knowledgeable persons.
- USACE has reviewed state and federal environmental databases including NPL, CERCLIS, CORRACTS, RCRA, ERNS, SHWS, SWF, LUST, LAST, UST, AST, CDL, HMIRS, PADS, and SPILLS.
- USACE has physically inspected the subject property via walking survey, looking for signs of recognized environmental conditions such as stressed vegetation, soil staining, dumping, and evidence of aboveground and underground storage tanks.
- USACE has physically observed adjoining properties, paying particular attention to evidence of underground storage tanks, questionable housekeeping practices, or unusual business practices.

5.3 Limitations and Exceptions

The information, conclusions, and recommendations stated in the report are based upon work undertaken by trained professional and technical staff working for the U.S. Army Corps of Engineers, and also upon information provided by others. We have accepted as true and accurate the information provided by other sources, we cannot be held responsible for the accuracy of this information.

The Phase I ESA was conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the environmental profession under similar conditions. No other warranty or guarantee, expressed or implied, is included or intended in this report or otherwise.

The scope of this assessment does not purport to encompass every report, record, or other form of documentation relevant to the subject property being evaluated. The observations contained herein are made during site reconnaissance, review of

ownership records, discussions with local government personnel, and review of readily accessible environmental databases. The Phase I ESA is based upon our professional judgment concerning the significance of the data collected and in no way attempts to forecast future site conditions.

6.0 Site Description

6.1 Location and Legal Description

Address: 40677 Reservation Highway 3
Morton, MN 56270

Legal Description: Fifth Principal Meridian, Minnesota
T112N, R34W, Sec. 6, NW 1/4,
The area described contains 0.75 acres of land, more or less.

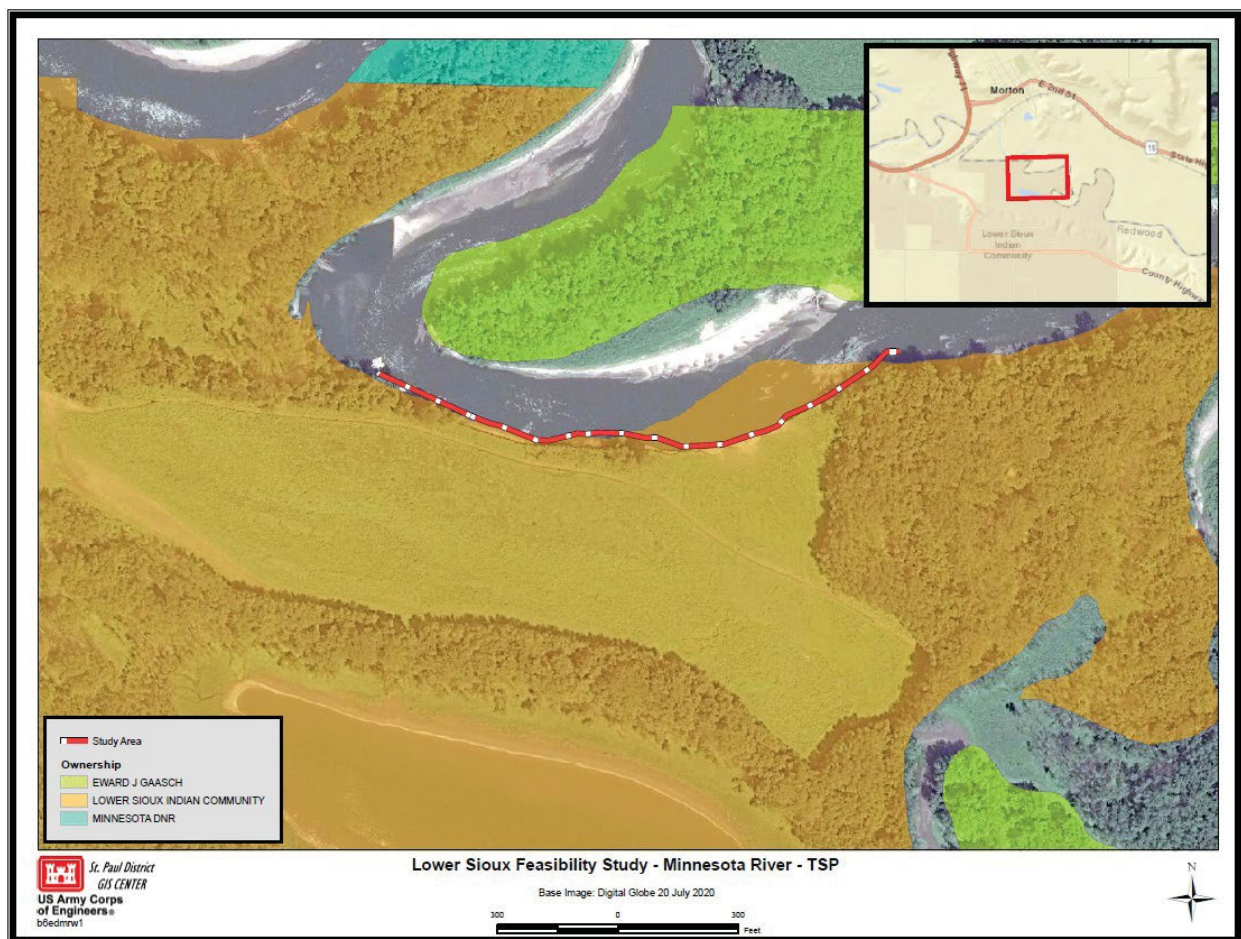


Figure 1 Lower Sioux Community Subject Property Fee in red

6.2 Site and Vicinity Description

Currently, the subject property is at the north central border of the Lower Sioux Community, along the outer bend of the Minnesota River. The site is bound by the Minnesota River to the north, and the Lower Sioux Community land to the south, and is located about one mile south of Morton, MN. The land is a state wetland, with riparian forest and flood plain vegetation. South of the property are residential homes, ceremonial land, and businesses of the Lower Sioux Community.

6.2.1 Site Geology

Minnesota bedrock geology is among the oldest recorded on the planet. Much of the western Minnesota River Basin overlies undivided marine sediment of shale and sandstone dated to the Cretaceous Age (70–150 million years ago [mya]). Traveling downstream and southeastward the river valley abruptly turns to the northeast when it encounters resistant limestone of Ordovician Age (440–500 mya).

The Lower Minnesota Valley is older, with undivided sandstones dated to the Cambium Age (500–545 mya). The oldest bedrock features are Late Archean granite (3–2.5 billion years ago[bya]) and Middle Archean gneiss (3.6–3 bya) forming bluffs along the main stem, and is exposed as highly weathered rock at the downstream extent of the subject property. This pattern of bedrock helps explain the outcomes of repeated glaciations. Ancient sedimentary rocks were pushed, crushed, ground, and mixed by glaciers many times, and then they were redeposited as glacial till plains. Glacial outwash flows forming the river valley were diverted by resistant bedrock. The most recent glaciation was the Wisconsin Age 75,000–9,000 years ago, which created the template for the modern landscape.

The soils at the project site consist of alluvial sands, silts, and clays. The major soil resource concerns are water erosion, wetness, and maintenance of the content of organic matter. Soils within the project area are identified as Du Page loam which is considered prime farmland if protected from flooding or not frequently flooded during the growing season.

6.2.2 Site Hydrogeology

The subject property is within state wetlands and FEMA Flood Zone 27129C0736C. Depth to groundwater at the subject property is anticipated to flow north, towards the Minnesota River, and to have a similar elevation to the river water level, approximately El. 807 feet NAVD 1998.

6.3 Current Use of the Property

The subject property is primarily used for recreation and hunting. There is a gravel and soil road for site access, and a stairway cut into the riverbank soil. There are several pull offs, soil two track path, from the access road for parking.

6.4 Adjoining Property Information

The adjoining properties are residential and recreational in use. During the site reconnaissance the following properties were identified in the immediate vicinity:

Direction from Site	Use	Property Type
North	River/Rec.	Minnesota River and DNR Land
South	Recreational	Vacant Land-Tribal
West	Recreational	Vacant Land-Tribal
East	Recreational	Vacant Land-Tribal

6.5 Local Government and Past Owner Provided Information

USACE conducted an electronic questionnaire with The Lower Sioux Community Office of the Environment Director, Deb Dirlam. The purpose of the interview was to determine if there are any known past or present environmental concerns associated with the site.

There were no unusual conditions identified from the interview, however the location of a household material dumping area was corrected to be located approx. 1/2 mile SW of the subject property. No evidence of chemical substances were observed when the site was cleaned up, and a closure form was sent to the EPA in 2019.

7.0 Records Review

7.1 Standard Environmental Records Sources

At the request of the USACE, Environmental Data Resources, Inc. (EDR) conducted a search of Federal and State databases containing potential or known sites of environmental contamination. The number of listed sites identified within a one mile search radius are summarized in the following table. For a detailed listing of

databases and findings, a copy of the EDR Radius Map Report has been included in Appendix A of this report.

Database List	Subject Property Listings	Total Number of Listings	Environmental Concerns Posed to Subject Property
CDL Sites	N	0	None
Federal NPL Sites	N	0	None
Federal Delisted NPL Sites	N	0	None
Federal CERCLIS Sites	N	0	None
Federal CERCLIS NFRAP Sites	N	0	None
RCRA CORRACTS Sites	N	0	None
RCRA TSD Facilities	N	0	None
RCRA SQG	N	0	None
RCRA LQG	N	0	None
RCRA-CESQG	N	0	None
Federal ERNS Sites	N	0	None
SPILLS Reports	N	0	None
Landfill/SW Disposal Sites	N	1	None
US Brownfield sites	N	0	None
State HW Sites	N	0	None
State CERCLIS Sites	N	0	None
State Institutional Control Sites	N	0	None
Delisted NLP Sites	N	0	None
PLP	N	0	None
AIRS Sites	N	0	None
Brownfield sites	N	0	None
SRS	N	0	None
Voluntary Cleanup Sites	N	0	None
LUST/LAST Sites	N	0	None
UST/AST Sites	N	0	None

Upon reviewing the EDR reports, no standard environmental records were identified within the subject property.

Approximately 1/2 mile southwest of the subject property is an area of illegal dumping of household materials. The tribe removed the items, and sent a closure letter to the EPA in 2019. The tribe reports no petroleum or chemicals were found. If potential contaminants were to mobilize, they would be expected to flow in surface runoff and the groundwater, captured by a wetland between the dumping area and project site. Potential household material contaminants from the illegal dumping are not expected to have mobilized to impact the subject property.

7.2 Physical Setting Sources

Physical setting sources were provided by the EDR GeoCheck Physical Setting Source Addendum unless otherwise noted. A copy of the GeoCheck report can be found in Appendix A of this report.

Groundwater flow direction was identified by the EDR AQUIFLOW Information System. The groundwater flow gradient shifts North towards the Minnesota River, along the assessment area. The GeoCheck report lists no wells in the immediate project area. Residential use wells are listed beyond about a half mile radius from the project site.

The EDR describes surface soils to be a moderately well drained silty-clay loam. The USACE conducted geotechnical exploration borings in the project area in 2021. Under the organic rich topsoil, a silty clay was described from about 1'-11' deep, followed by sands, then underlain by completely and highly weathered granitic bedrock.

7.3 Historical Use

7.3.1 Sanborn Fire Insurance Maps

Historic fire insurance maps were requested from EDR and a search of the Sanborn Library, LLC was conducted. Historic maps are detailed drawings that show the locations and use of structures on a given property during a specific year. The maps were originally used by insurance companies to assess fire risk. A copy of the Sanborn Map Report can be found in Appendix B of this report.

EDR reported this as an unmapped property and no fire insurance maps were found.

7.3.2 City Directories

Historic and current city directories of the subject property and subject property street were requested from EDR. City directories were obtained between 1920 and 2014, records were published about every 5 years. City directories have been published for cities and towns across the United States since the 1700s. Originally a list of residents, the city directory developed into a tool for locating individuals and businesses. While city directory coverage is comprehensive for major cities, it may be limited for rural areas and small towns. A copy of the available information for the subject property can be found in Appendix C of this report.

There were no unusual entries identified from the city directories.

7.3.3 Topographical Maps

Historic topographic map coverage of the subject property was requested from EDR. A 1952 USGS 15 Minute Topographic quadrangle, and 1982, 1983, 1995 and 2013 USGS 7.5 Minute Topographic quadrangles were obtained. Partial copies of the topographic maps can be found in Appendix D of this report.

There were no unusual conditions identified from the topographic maps.

7.3.4 Aerial Photos

Historic aerial photos of the subject property were requested from EDR. Photo coverage was available for the following years: 1938, 1951, 1953, 1975, 1977, 1985, 1992, 2006, 2010, 2013, and 2017. A copy of the EDR aerial photo package can be found in Appendix E of this report.

There were no unusual conditions identified from the aerial photos.

8.0 Site Reconnaissance

8.1 Methodology and Limiting Conditions

Site reconnaissance was conducted on July 2nd, 2021 by Ashley Woods, USACE Saint Paul District Geologist. Weather conditions at the time of the site reconnaissance were sunny, and warm (approximately 85° F). During the inspection the subject property was accessed by the gravel and soil road, and hiking through thick vegetation. Photographs taken during the site reconnaissance can be found in Appendix F of this report.

8.2 General Site Setting

The subject property is located south east of Morton, MN in Redwood County. The tribal land is primarily used for recreation and hunting along the Minnesota River. The land is a state wetland, and riverbank, dominated by wetland and riparian forest vegetation.

8.3 Site Visit Findings

Note: All referenced photos can be found in Appendix F of this report.

8.3.1 Subject Property

- Typical site setting with access road (Fig. 1)
- Typical site setting along riverbank (Fig. 2 and 3)
- Typical surrounding vegetation was observed (Fig. 4 and 5)
- Occasional debris observed (Fig. 5)

9.0 Conclusions

The U.S. Army Corps of Engineers has conducted a Phase I Environmental Site Assessment of the subject property in conformance with the scope and limitations of ASTM Standard Practice E 1527-13. This assessment revealed that there were no observed potential risks for contamination due to recognized environmental conditions on the subject property.

Based on the information obtained during the site reconnaissance and document review, ***a Phase II Environmental Site Assessment is not currently recommended for the subject property.***

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Appendix A

EDR Radius Map with GeoCheck

This appendix is available for viewing upon request.

Appendix B

Certified Sanborn Map Reports

This appendix is available for viewing upon request.

Appendix C

EDR City Directory Image Reports

This appendix is available for viewing upon request.

Appendix D

EDR Historical Topographic Map Reports

This appendix is available for viewing upon request.

Appendix E

EDR Aerial Photo Decade Packages

This appendix is available for viewing upon request.

Appendix F

Site Reconnaissance Photos

<u>FIGURE</u>	<u>PAGE</u>
FIGURE 1. SITE SETTING WITH ACCESS ROAD	5
FIGURE 2. SITE SETTING ALONG RIVERBANK.....	5
FIGURE 3. SITE SETTING ALONG RIVERBANK 2	6
FIGURE 4. TYPICAL SITE VEGETATION	6
FIGURE 5. OCCASIONAL PIECE OF DEBRIS.....	7



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Figure 1. Site Setting with Access Road



Figure 2. Site Setting Along Riverbank 1



Figure 3. Site Setting Along Riverbank 2



Figure 4. Typical Site Vegetation



Figure 5. Occasional Piece of Debris