FOURTH FIVE-YEAR REVIEW REPORT FOR FOX RIVER NRDA/PCB RELEASES SUPERFUND SITE A.K.A. LOWER FOX RIVER AND GREEN BAY SUPERFUND SITE BROWN, DOOR, MARINETTE, OCONTO, OUTAGAMIE, KEWAUNEE, AND WINNEBAGO COUNTIES, WISCONSIN

Prepared by

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LIST OF ABBREVIATIONS & ACRONYMS

A/OT	Agencies/Oversight Team
ADS	Advanced Disposal Services Hickory Meadows Landfill
BMP	Baseline Monitoring Plan
BOTW	BRRTS on the Web
BRRTS	Bureau for Remediation and Redevelopment Tracking System
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIA	Cap Integrity Assessment
CIL	Chemical Isolation Layer
COCs	Contaminants of Concern
CMMP	Cap Monitoring and Maintenance Plan
CCU	Cap Certification Unit
COMMP	Cap Operation Maintenance and Monitoring Plan
CWA	Clean Water Act
cy	Cubic yards
DDT	Dichloro-Diphenyl-Trichloroethane
DMUs	Dredge Management Units
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FYR	Five-Year Review
GAC	Granular Activated Carbon
gem	Gallons per minute
ICs	Institutional Controls
ICIAP	Institutional Controls Implementation and Assurance Plan
LFR	Lower Fox River
LLBdM	Little Lake Butte des Morts
LOAEC	Lowest Observed Adverse Effects Concentration
LTM	Long Term Monitoring
MGP	Manufactured Gas Plant
MNR	Monitored Natural Recovery
MOA	Memorandum of Agreement
NAPL	Non-Aqueous Phase Liquid
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	North Focus Area
NPL	National Priorities List
NRDA	Natural Resources Damage Assessment
OU	Operable Unit
PCB	Polychlorinated Biphenyl
PRPs	Potentially Responsible Parties
RAOs	Remedial Action Objectives
RAL	Remedial Action Level

RI/FS	Remedial Investigation/ Feasibility Study
ROD	Record of Decision
SDDP	Sediment Desanding and Dewatering Plant
SFA	South Focus Area
Site	Fox River NRDA/PCB Releases Superfund Site (aka Lower Fox River and Green Bay Superfund Site)
SMU	Sediment Management Unit
SRA	Special Remediation Area
SWAC	Surface Weighted Average Concentration
TOC	Total Organic Carbon
TSCA	Toxic Substances Control Act
TSS	Total Suspended Solids
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
UU/UE	Unlimited Use and Unrestricted Exposure
WDNR	Wisconsin Department of Natural Resources
WWTP	Wastewater Treatment Plant
YOY	Young of Year

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The United States Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121. This FYR is consistent with the National Contingency Plan (NCP) at 40 C.F.R. Section 300.430(f)(4)(ii), and it considers EPA policy.

This is the fourth FYR for the Fox River NRDA/PCB Releases Superfund Site also known as the Lower Fox River and Green Bay Superfund Site (the Site). The triggering action for this statutory review is the signature date of the previous FYR on November 25, 2019. The FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of five operable units (OUs), and all five OUs will be addressed in this FYR. The Site OUs are as follows:

- OU 1 - Little Lake Butte des Morts
- OU 2 - Appleton to Little Rapids
- OU 3 - Little Rapids to De Pere
- OU 4 - De Pere to Green Bay
- OU 5 - Green Bay

The FYR was led by James Saric, the Remedial Project Manager for EPA Region 5. Participants included Tauren Beggs, Carrie Webb, Rae-Ann Eifert and Jim Killian with the Wisconsin Department of Natural Resources (WDNR); George Berken, Gary Kincaid, Ava Grosskopf, and Jay Grosskopf with The Boldt Company (WDNR contractor); and Karen Chen, the Community Involvement Coordinator with EPA. The potentially responsible parties (PRPs) were notified of the initiation of the FYR. The review began on October 11, 2023.

Site Background

The Site comprises a 39-mile stretch of the Lower Fox River (LFR) as well as the bay of Green Bay. The river portion of the Site extends from the outlet of Lake Winnebago and continues downstream to the mouth of the river at Green Bay, Wisconsin. The bay portion of the Site includes all of Green Bay from the City of Green Bay to the point where Green Bay enters Lake Michigan. The Site has been divided into five discrete OUs by EPA and WDNR (the Response Agencies). An OU is a geographical area designated for the purpose of analyzing and implementing remedial actions and is defined on the basis of similar features and characteristics (*e.g.,* physical and geographic properties). The river and the bay OUs are listed above and depicted in Figure 1, which is attached to this FYR.

The river and areas bordering the river include the following uses: recreational (with likely subsistence fishing), residential, commercial, agricultural, and industrial. Residential areas are concentrated upriver (Neenah/Menasha and Appleton areas) but are also present from De Pere to Green Bay. Industrial use is present in the Neenah/Menasha and Appleton area and is scattered along the river up to and including Green Bay. Agricultural use is located mainly between Appleton and De Pere.

History of Contamination

For many years, a large number of paper production facilities have been and continue to be concentrated along the river. Some of the facilities manufactured and/or recycled carbonless copy paper containing Polychlorinated Biphenyls (PCBs) from 1954 to 1971. PCBs were released from the paper production facilities to the Fox River directly, or after passing through municipal wastewater treatment plants (WWTPs). PCBs were then transported within the river system, as PCBs have a tendency to sink and adhere to sediments in the river bottom. PCBs have contaminated areas in the 39-mile length of the Lower Fox River and Green Bay.

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Fox River NRDA/PCB Releases Superfund Site		
EPA ID: WID0001954841		
Region: 5	**State:** WI/MI	**City/County:** Brown, Door, Marinette, Oconto, Outagamie, Kewaunee, and Winnebago Counties, Wisconsin, and Delta and Menominee Counties, Michigan

SITE STATUS	
NPL Status: Proposed	
Multiple OUs? Yes	**Has the site achieved construction completion?** Yes

REVIEW STATUS
Lead agency: EPA *[If "Other Federal Agency", enter Agency name]*:
Author name (Federal or State Project Manager): James Saric
Author affiliation: EPA
Review period: 10/11/2023 - 5/28/2024
Date of site inspection: 3/22/2024
Type of review: Statutory

Review number: 4
Triggering action date: 11/25/2019
Due date *(five years after triggering action date)*: 11/25/2024

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

This is a contaminated sediment site. Groundwater is not a media of concern and was not investigated during the remedial investigation/feasibility study (RI/FS).

The Site is contaminated with PCBs, a hazardous substance and probable human carcinogen. Other contaminants of concern (COCs) include dioxins/furans, the pesticide dichloro-diphenyl-trichloroethane (DDT) and its metabolites (Dichlorodiphenyldichloroethane and Dichlorodiphenyldichloroethylene), the pesticide dieldrin and metals including arsenic, lead, and mercury. These non-PCB contaminants were found to present substantially less risk compared to PCBs. Additionally, some of the other contaminants identified in sediment have similar fate and transport properties and are generally found with PCBs. For this reason, a remedy that effectively addresses PCB exposure will also address the other less toxic COCs in the sediment. EPA estimates that the 14 million cubic yards (cy) of contaminated river sediments contain over 65,000 pounds of PCBs, and at least several hundred million cy of sediments in Green Bay are contaminated with as much as 150,000 pounds of PCBs. Because fish and wildlife are contaminated with PCBs, people who eat contaminated fish or waterfowl may suffer adverse health effects. Fish consumption advisories for the Site were first issued in 1976 and 1977 by WDNR and the State of Michigan, respectively. The advisories are still in effect. The Site contamination has also adversely impacted wildlife.

In conjunction with the RI/FS, EPA approved the ecological risk and exposure assessment for the Site in December 2002 (RETEC, 2002). The results of the risk assessment are summarized in the 2002 and 2003 Records of Decision (RODs) (EPA, 2002; EPA and WDNR, 2003). The conclusions of the evaluations (which are still valid, since site conditions are relatively unchanged since the 2002 ROD) are:

- Human health and ecological receptors are at risk in each OU.
- Fish consumption is the exposure pathway representing the greatest level of risk for human and ecological receptors, other than the direct risks posed to benthic invertebrates via direct exposure to contaminated sediments.
- The primary COC is PCBs.

Response Actions

The Site was proposed for the National Priorities List (NPL) on July 28, 1998. EPA deferred placing the Site on the NPL, pending cooperation of the PRPs. The Response Agencies conducted extensive evaluations, particularly beginning in 1989 with the Green Bay Mass Balance Study, as well as demonstration projects in two discrete areas of the river (known as Deposit N/O and Sediment Management Unit (SMU) 56/57) from 1998 - 2000. Details of these projects are discussed in the 2003

ROD. In 2000, the SMU 56/57 project was completed as a time-critical removal action. A total of 90,000 cubic yards (cy) of PCB-contaminated sediments were removed and disposed off-site during these dredging projects.

In December 2002, the Response Agencies signed the ROD for OU 1 and OU 2 which called for active remediation in OU 1 and monitored natural recovery (MNR) in most of OU 2. In June 2003, the Response Agencies issued a ROD for OU 3, OU 4, and OU 5 which called for active remediation in OU 2 (deposit DD), OU 3, and OU 4, and MNR for OU 5. The Response Agencies subsequently modified the remedies described in the 2002 and 2003 RODs. A ROD Amendment signed on June 26, 2007, modified certain aspects of the 2003 ROD for all or part of the following OUs: OU 2 (Deposit DD), OU 3, OU 4, and OU 5 (near the mouth of the river) (EPA and WDNR, 2007b). A second ROD Amendment, signed on June 12, 2008, made changes to parts of the remedy described in the 2002 ROD for OU 1 (EPA, 2008a). In general, the ROD Amendments changed the selected remedies from all-dredging to a combination of dredging, capping, and covering.

The Response Agencies issued an Explanation of Significant Differences (ESD) on February 26, 2010, which addressed modifications to the monitoring requirements for OU 2, cap design modifications for OUs 2-5, and cost increases for OUs 2-5 (EPA and WDNR, 2010).

OU 1 (a.k.a. Little Lake Butte des Morts)

OU 1 consists of the first seven upstream miles of the Lower Fox River, commonly known as Little Lake Butte des Morts (LLBdM). As modified by the 2008 ROD Amendment, the OU 1 remedy consists of the following actions for all sediments with PCB concentrations greater than 1 part per million (ppm).

- Dredging and off-site disposal.
- Minimum 7-inch thick engineered cap of sand (3-inches) and armor stone (4-inches).
- Minimum 3-inch thick sand cover for areas with PCB concentrations less than 2 ppm and where the contaminant interval is less than 6-inches in thickness.
- Minimum 6-inch-thick sand cover for areas with residual PCB concentrations less than 10 ppm and where the contaminant interval is less than 6-inches in thickness.
- Minimum 9-inch-thick sand cover for areas with residual PCB concentrations less than 15 ppm and where the contaminant interval is less than 6-inches in thickness on an exceptional basis.
- Long-term monitoring and maintenance. Monitoring consists of monitoring fish and surface water, and cap integrity and containment effectiveness. If cap integrity is compromised, either cap repair or removal (along with removal of underlying contamination) is conducted.

The Remedial Action Level (RAL) for the major COC, PCBs, is 1 ppm, with a goal for a PCB surface-weighted average concentration (SWAC) of 0.25 ppm. This compares to a pre-remediation SWAC of 3.7 ppm which represents a 93% reduction. Remedial action construction for OU 1 was formally completed on December 15, 2010.

OU 2

OU 2 consists of 19 miles of the Lower Fox River downstream of OU 1. The remedy for OU 2 predominantly consists of monitored natural recovery (MNR), including measuring PCB levels in water, sediment, and fish. The RAL for the major COC, PCBs, is 1 ppm.

OU 2 (Deposit DD), OU 3, OU 4, and OU 5 (river mouth)

OU 3 and OU 4 consist of a six and seven mile stretch of the Lower Fox River, respectively downstream of OU 2. The active remedy, as modified by the 2007 ROD Amendment and 2010 ESD, consists of the following actions for all sediments with PCB concentrations greater than 1 ppm:

- Dredging and off-site disposal.
- An engineered cap of sand and armor stone with a minimum thickness of 7 inches ("A Caps"), 10 inches ("B Caps"), or 21 inches ("C Caps"), depending on the level of PCB contamination and location relative to the navigation channel, with "targeted" average thicknesses of 13 inches, 16 inches, or 33 inches, respectively.
- A 6-inch-thick sand cover for areas with PCB concentrations less than 2 ppm, and where the contaminant interval is less than 6 inches in thickness.
- Long-term monitoring and maintenance. This consists of monitoring fish, surface water, and cap integrity. If cap integrity is compromised, either cap repair or removal (with removal of underlying contamination) is conducted.

The RAL for the major COC, PCBs, is 1 ppm. There is a post-remediation goal for a PCB SWAC of 0.28 ppm for OU 3 and 0.25 ppm for OU 4, compared to a pre-remediation SWAC of 2.0 ppm for OU 3 which represents an 86% reduction, and 3.2 ppm for OU 4 which represents a 92% reduction. Remedial action construction for OUs 2-5 was formally completed on October 3, 2022.

OU 5 (except near river mouth)

OU 5 consists of approximately 120 miles long by 10-20 miles wide (1626 sq. miles) downstream of OU 4. The selected remedy for OU 5 is MNR with institutional controls (ICs). MNR activities include monitoring to confirm long-term recovery of Green Bay through reliance on natural processes, primarily dispersion. The pre-remediation SWAC for OU 5 is 0.25 ppm.

Remedial Action Objectives

The RODs, ROD Amendments, and ESD adopted the same site-wide remedial action objectives (RAOs). The following five RAOs were established for the Site:

- RAO 1: Achieve, to the extent practicable, surface water quality criteria for PCBs throughout the Lower Fox River and Green Bay. This RAO is intended to reduce PCB concentrations in surface water as quickly as possible. The current water quality criteria for PCBs are 0.003 nanograms per liter (ng/L) for the protection of human health, and 0.012 ng/L for the protection of wild and

domestic animals. Water quality criteria incorporate all routes of exposure assuming the maximum amount is ingested daily over a person's (or animal's) lifetime.

- RAO 2: Protect humans who consume fish from exposure to COCs that exceed protective levels. This RAO is intended to protect human health by targeting removal of fish consumption advisories as quickly as possible. The Response Agencies defined the expectation for the protection of human health as recreational and high-intake fish consumers being able to safely eat unlimited amounts of fish within 10 to 30 years, respectively, following remedy completion.

- RAO 3: Protect ecological receptors from exposure to COCs above protective levels. This RAO is intended to protect ecological receptors such as invertebrates, birds, fish, and mammals. The Response Agencies defined the ecological expectation of achieving safe ecological thresholds for fish-eating birds and mammals within 30 years following remedy completion. Although the Feasibility Study did not identify a specific time frame for evaluating ecological protection, the 30-year figure was used as a measurement tool.

- RAO 4: Reduce transport of PCBs from the Lower Fox River into Green Bay and Lake Michigan. The objective of this RAO is to reduce the transport of PCBs from the river into Green Bay and Lake Michigan as quickly as possible. The Response Agencies defined the transport expectation as a reduction in PCB loading to Green Bay and Lake Michigan to levels comparable to the PCB loading from other Lake Michigan tributaries. This RAO applies to each OU.

- RAO 5: Minimize the downstream movement of PCBs during implementation of the remedy. This objective would minimize, as much as feasible, the release of contaminants during remedial activities such as dredging, capping, or placing sand covers.

Exit Criteria

The long-term monitoring (LTM) plan defines exit criteria to be used in determining when RAOs have been achieved to reduce or eliminate monitoring for fish tissue, surface water and sediment. LTM is ongoing for OUs 1 through 5. The LTM plan for OU 1 was approved in 2011 (Foth, 2011a). The LTM plan for OUs 2 through 5 was approved July 21, 2023 (Foth Infrastructure & Environment, LLC and LimnoTech, Inc., 2023). The LTM plan provides the following exit criteria:

Exit Criteria 1: Comparison to Background Concentrations (All Media). This criterion will be satisfied when it can be shown that Site contaminant concentrations are equivalent to ambient background contamination in relatively unimpacted reference areas.

Exit Criteria 2: Comparison to Risk-based Target Concentrations (Human Health and Ecological Fish Species). This criterion will be satisfied when it can be shown that Site concentrations have achieved levels that indicate fish consumption advisories may be reduced or eliminated and are protective of wildlife.

Exit Criteria 3: Comparison to SWAC-Reduction Targets (Water and YOY Species). This criterion will be satisfied when it can be shown that PCB concentrations in water and Young of Year (YOY) fish tissue have achieved a 90 percent reduction relative to 2006-2007 baseline conditions.

Exit Criteria 4: Evaluation of Recovery Rate, i.e., Slope (All Fish Species and Water). After a minimum of three sampling events, the rate of post-construction PCB concentration reductions will be analyzed based on an exponential decay function. If the PCB reduction rate indicates conditions will be achieved within 30 years after remediation, the monitoring schedule may be adjusted.

Exit Criteria 5: Evaluation of Laboratory Blank Contamination Levels (Water). If OU sample mean concentrations are less than three times the laboratory method blank concentrations, analytical method performance will be evaluated to determine whether additional optimization is practicable, or alternatively, it will be concluded that concentrations have reached the limit of analytical capabilities for reliable determinations. If OU concentrations fall within this range of method blank contamination, the LTM goals will be determined to be met to the extent practicable using best available technology.

In addition to the exit criteria listed above, a weight of evidence evaluation of LTM results will be conducted in consultation with WDNR and EPA during each FYR to determine whether the preponderance of data indicates risk-reduction goals are or are not being achieved. This provides for adaptive management of LTM goals and objectives using the knowledge gained during the course of the monitoring program. Based on this evaluation, the monitoring intensity may be increased, decreased, or eliminated for specific media in certain OUs.

Application of the exit criteria to fish tissue, surface water, and sediment are further discussed in the LTM results section of this FYR.

Status of Implementation

Since 2004, the PRPs have performed dredging, capping, and covering remedial activities. Demonstration projects and a time-critical removal were completed previously. Tables 1 and 2 below summarize dredging, capping, and cover quantities addressed by the remedial action activities from 2004 through 2020. By the end of the 2020 dredging season, approximately 6.3 million cy of PCB-contaminated sediment were removed, 279 acres (~2.1 million cy) capped, and 762 acres (~0.6 million cy) sand-covered. Dredging was completed on June 2, 2020, and EPA issued a formal notice of construction completion on October 3, 2022 (EPA and WDNR, 2022). For additional detail on construction activities, the reader is referred to the OUs 2 through 5 Certification of Remedial Action Completion Report for the Fox River NRDA/PCB Releases Superfund Site (Tetra Tech EC, Inc.; J.F. Brennan Company, Inc.; and Stuyvesant Projects Realization, Inc., 2022).

OU 1

The remedy selected in the OU 1 ROD and 2008 ROD Amendment specifies the removal and landfill disposal of PCB-impacted sediment exceeding the RAL of 1.0 ppm PCBs. Dredging of PCB impacted sediment began in OU 1 in 2004 and was completed in 2009. Additionally, as authorized by the 2008

ROD Amendment, sand covers and engineered caps were placed in select areas. Sediment removal was accomplished using hydraulic dredges followed by sediment dewatering, water treatment, and off-site landfill disposal of the dewatered sediment. Engineered caps involved the placement of a sand layer covered with armor stone, where a post-cap water depth equal to or greater than 6.0 feet could be attained. Refer to Appendix G for an overview of the final remedial alternative locations. Sand covers were placed in two specific applications: 1) to manage dredge residuals and 2) to cover areas of very low concentrations (less than 2 ppm PCBs) in locations that were not dredged, all consistent with the requirements set forth in the 2008 ROD Amendment. As required by the Consent Decree (CD) and the Amended CD (EPA, 2004b; EPA, 2008b), the PRPs prepared a Remedial Action (RA) Work Plan each calendar year specifying activities to be undertaken during the forthcoming construction season. Upon review and approval by the Response Agencies, the work was performed by qualified contractors with oversight by representatives of EPA and WDNR. To summarize, the OU 1 remedial activities completed in OU 1 from 2004 through 2009, the annual results for dredging, engineered cap placement, and sand cover placement are provided in Tables 1 and 2. Remedial action construction for OU 1 was formally completed on December 15, 2010 (Foth Infrastructure & Environment, LLC and CH2M HILL, Inc., 2010).

OUs 2 through 5

For the MNR remedy at OU 2 and OU 5, baseline monitoring has been completed and long-term monitoring is ongoing.

The construction of an interim action identified as "Phase 1" was completed in 2007. This dredging project was located in OU 4 just downstream of the De Pere Dam, and removed 130,000 cy of PCB contaminated sediments, consistent with the 2003 ROD and 2007 ROD Amendment.

In 2014, remedial actions for OUs 2-5 included the recommissioning and testing of the Sediment Desanding and Dewatering Plant (SDDP) and WWTP process system equipment, piping, instrumentation, and all other ancillary equipment and building systems to enable re-start of full-scale remediation and processing operations. Dredging, desanding, and dewatering operations were performed from April to November 2014. Spreading operations for installing engineered caps, remedy, and residual sand covers, and residual caps were performed from May to November 2014. In addition to volumes shown in Table 2, 7,912 cy of sediment were removed by scour. Post-dredge confirmation sampling results were evaluated in collaboration with the Response Agencies to determine final primary remedy or residuals management requirements in accordance with the ROD and ROD Amendment. Resultant residual management for these areas is depicted in the final remedy figures illustrated in Appendix G. Residual dredging was performed on over 38.1 acres in dredge-only remedy areas

For the 2015 construction season, dredging, desanding, and dewatering of non-TSCA and TSCA sediment from OU 4 were performed from March to November. Spreading operations for installing engineered caps, remedy and residual sand covers, and residual caps were performed from May to November. In addition to the volumes of material removed from OU 4 shown in Table 2, 7,300 cy of sediment were removed by natural scour. As in 2014, results of post-dredge confirmation sampling were used to identify the need for residual dredging that was performed on over 1.11 acres in dredge-only remedy areas. Resultant residual management for these areas is depicted in the final remedy figures illustrated in Appendix G. Debris removal consisted of removal of deteriorated sections of the wooden Wakefield

wall, concrete, rock rubble, and wood pilings from adjacent uplands and in the river along the RGL property shoreline. For the 2016 construction season, dredging, desanding, and dewatering of non-TSCA and TSCA sediment from OU 4 were performed from April to November. Spreading operations for installing engineered caps, remedy and residual sand covers, and residual caps were performed from May to November. Dredging, desanding, dewatering, and disposing were conducted this season. In addition to the volumes of material removed from OU 4 shown in Table 2, 399 cy of sediment were removed from these DMUs by natural forces (scour). Post-dredge confirmation sampling results indicated the need for residual dredging that was performed on approximately 23.48 acres in dredge-only remedy areas. Resultant residual management for these areas is depicted in in the final remedy figures illustrated in Appendix G.

For the 2017 construction season, dredging, desanding, and dewatering of non-TSCA sediment from OU 4 was performed between March and November. Spreading operations for installing engineered caps, remedy, and residual sand covers were performed from August to November. Mechanical placement operations for quarry spall, buttress and berm installations and larger armor stone began in April. After sand spreading was completed, a limited amount of sand and quarry spall was placed mechanically for structural buttresses in the RGL Slip, and City Slip from November to December. In addition to the volumes of material removed from OU 4 shown in Table 2, 3,082 cy of sediment were removed from these DMUs by scour and 3,442 cy of sediment were accreted, resulting in a net accretion of 360 cy. About 346,953.22 tons of non-TSCA waste resulting from the 2017 operations season were disposed of at ADS from December 2016 to December 2017. Appendix G illustrates the final remedy figures and DMUs closed in OU 4 in 2017.

For the 2018 construction season, dredging, desanding, and dewatering of non-TSCA sediment from OU 4 and OU 5 were performed from March to November. In addition to the volumes of material removed from OUs 4 and 5 shown in Table 2, 2,289 cy of sediment were removed from these DMUs by scour, and 11,371 cy of sediment were accreted, resulting in a net accretion of 9,082 cy. Sand and armor stone placement were completed for CC22. Quarry spall placement in CC22 was started but not completed; therefore, cap CC22 is expected to be completed in 2019. A portion of the armor stone buttress at the C. Reiss Terminal dock in dredge area OU4-D68B-5 was temporarily removed to complete dredging in adjacent areas, then restored. Post-dredge confirmation sampling results were used by the A/OT to confirm the need for residual dredging which was performed on 24.63 acres in dredge-only remedy areas. About 318,541.65 tons of non-TSCA waste resulting from the 2018 dredging operations season were disposed of at ADS from January to December. Throughout the season, communications with affected riparian property owners, municipalities, and utility owners continued to take place in instances where they could be affected by remediation activities. Appendix G illustrates the final remedy figures and DMUs closed in OU 4 in 2018. No OU 5 management units were closed in 2018.

For the 2019 construction season, dredging, desanding, and dewatering operations began on April 1, 2019. Dredging for the 2019 season was completed on November 11, 2019. Total volumes of material removed from OUs 4 and 5 are shown in Table 2. This included dredging approximately 474,384 cy of non-TSCA sediment in 2019. The dredging activities included hydraulic dredging of 443,617 cy that was processed through the SDDP and WWTP, and 30,767 cy that was mechanically dredged from the MGP North Focus Area (NFA) and disposed of separately under a WPSC agreement. No TSCA sediment was dredged. During 2019, dredging was completed in OU 5 beyond the Arc (i.e., transect 5004) in

accordance with the RA described in the Addendum to the Final 2019 Update to Phase 2B Remedial Action Work Plan Remediation in Operable Unit 5 beyond the Arc, included in the 2019 Remedial Action Work Plan (Tetra Tech EC, Inc.; Anchor QEA, LLC; J.F. Brennan Co., Inc.; Stuyvesant Projects Realization, Inc.; and Foth Infrastructure & Environment, LLC, 2019). A total of 154,005 cy of non-TSCA sediment was removed from dredge areas beyond the Arc. To accomplish remediation goals specified in the ROD and to remain on schedule, the LLC and the A/OT agreed on certain areas where RA south of the Arc would be modified. Modifications included no further dredging in certain management units, since most of the areas subject to the balance agreement had already been dredged, and not installing sand covers on others. The project beneficially reused 141,858 tons of separated sand generated from non-TSCA dredging for construction at the ADS Hickory Meadows Landfill and at GP's Green Bay West Landfill in 2019. At the end of the 2019 season, approximately 6,000 tons of sand eligible for beneficial reuse remained on site as a base layer for 2020 stockpiling of additional separated sand. For the 2019 construction season, the project installed approximately 7.27 acres of engineered caps in primary and residual dredge areas; installed approximately 4.70 acres of primary remedy sand covers; installed approximately 35.94 acres of residual sand covers; and installed sand or/ armor stone, quarry spall, and rip rap in approximately 2.7 acres of buttresses. Appendix G illustrates the final remedy figures and Appendix F illustrates DMUs closed in 2019.

For the 2020 construction season, dredging, desanding, and dewatering began on April 21, 2020. Dredging was completed on June 2, 2020. This completed the dredging for the year, and also for the project. Total volumes of material removed from OUs 4 and 5 are shown in Table 2. Approximately 13,680 cy of non-TSCA sediment were dredged in 2020. For the 2020 construction season, the project installed approximately 6.32 acres of engineered caps in primary and residual dredge areas; installed approximately 3.04 acres of primary remedy sand covers; installed approximately 34.14 acres of residual sand covers; and installed sand or armor stone, quarry spall, and rip rap in approximately 0.20 acres of buttresses. All in-river RA work was completed on July 30, 2020. Demobilization of OUs 2–5 activities at the SDDP was initiated in January 2020 and completed in October 2021. 246,761.89 tons of non-TSCA waste resulting from the 2019 operations season was disposed of, and 8,566.29 tons from 2020 operations, at ADS Hickory Meadows Landfill in Hilbert, Wisconsin. This waste consisted of filter cake, scalpings, filter press cloths, separated sand with apparently high organic content, miscellaneous PPE, spent media (sand, gravel, and GAC from the multi-media WTP sand filters and GAC vessels), residual MGP wastes and other miscellaneous wastes from the LLC Processing Facility. An additional approximate 276 tons of demobilization waste consisting of used pipe, conveyor belts, metal panels, sand separation tower parts and scalping screen parts were disposed of at the ADS/GFL landfill in Hilbert, Wisconsin, from late May 2020 through late November 2020. In 2020, 14,186 tons of beneficial reuse material were shipped for construction to GP's Green Bay West Landfill. Appendix G illustrates the final remedy figures and Appendix F illustrates the DMUs closed in 2020. EPA issued a formal notice of construction completion for OUs 2 through 5 on October 3, 2022 (EPA and WDNR, 2022).

Green Bay MGP NAPL

In 2017, coordination efforts began in order to conduct remediation activities in OU 4 in the area near the confluence of the East River and the Fox River to address Manufactured Gas Plant (MGP) Non-Aqueous Phase Liquid (NAPL) and PCB contamination. Additional sampling was conducted in the area in

order to determine the extent of MGP NAPL presence. Two areas were identified for remediation, the north focus area (NFA) and the south focus area (SFA).

Remedial action activities in the Green Bay MGP SFA were completed in the 2018 season. Information on remediation activities at the MGP SFA can be found in the Draft Remedial Action Summary Report submitted by Wisconsin Public Service to the Response Agencies on January 31, 2019 (Ramboll, 2019). MGP text in this report is limited only to the PCB wastes treated at the LFR Treatment Facility and hauled to landfills that also may have contained MGP waste, including 35,746.65 tons of waste to ADS and 6,516.20 tons to the Waste Management Ridgeview Landfill in Whitelaw, Wisconsin.

Remediation work in the NFA was completed in the 2019 construction season. The NFA is located on the north side of the East River at the confluence with the Fox River. The Lower Fox River PCB project overlapped with WPSC's MGP Superfund project in this area. PCB contaminated sediment was removed by dredging, as was MGP contaminated sediment containing DNAPL and PAH. 30,767 cy of non-TSCA contaminated sediment was mechanically dredged from the NFA. Approximately 45,202 tons of MGP-impacted waste was shipped to Waste Management's Ridgeview Landfill in Whitelaw, Wisconsin under a WPSC agreement. No MGP-impacted waste was processed through the LLC facility.

An armored cap was also constructed as part of the remediation of the NFA MGP. The Cap Operation Maintenance and Monitoring Plan (*COMMP)* (Anchor QEA, LLC; Tetra Tech EC, Inc.; and Foth Infrastructure & Environment, LLC, 2021) states that "*if the final remedy for the MGP site has not been determined prior to 2022, the NFA armored cap will be included with the monitoring of all other caps addressed in this COMMP beyond the Year 2 survey planned for 2022 and reported in the USEPA 5-year review, until such time as a final remedy for the MGP site is determined and the cap monitoring and maintenance responsibility has been legally transferred to WPS by the Responsible Agencies, through the formal CERCLA RI/FS, ROD process/mechanism."* In accordance with the COMMP, a Year 2 survey was performed for the NFA armored cap, which is documented in the 2022 CIA and summarized in the paragraph below. WPSC was contacted regarding the 2022 CIA, and EPA anticipates that a Record of Decision will be issued for the MGP Superfund project in 2025.

The NFA MGP cap was surveyed utilizing the Year 0 (2020) to Year 2 (2022) hydrographic survey comparison (isopach surface) of the NFA MGP cap. Irregularities were observed with apparent deposition of up to 3 feet in a depressed area through the center of the cap and an area of elevation decrease of up to 1.0 foot on the south side of the cap along the bulkhead wall. Cross sections were cut through the area and the 2022 elevations were compared to the 2020 Year 0 bathymetry. The evaluation indicated that settlement was occurring due to consolidation of underlying sediment; in addition, deposition was occurring in the low areas. There were no observed signs of diminished cap integrity.

Table 1: Total Dredging, Capping, and Cover Quantities Completed from 2004 through 2020

Remedial Activity	OU 1	OU 2	OU 3	OU 4/OU 5	2019[2]	2020[2]	Total
Dredging (in situ cubic yards)[1]	371,600	3,009	235,858	5,263,702	474,384	13,680	6,362,233
Caps as the Primary Remedy (Types A, B or C) (acres)	113.90	6.98	26.80	105.38	3.03	4.33	260.42
Sand Cover as the Primary Remedy (acres)	107.10	0.29	61.96	37.81	4.70	3.04	214.90
Sand Cover over Dredge Residuals (acres)	36.5	0	52.08	388.05	35.94	34.14	546.71
Engineered Cap over Dredge Residuals (acres)	0	0	0	8.36	0	0.34	8.70
Shoreline Caps (acres)	0	0	0	0.54	0	0	0.54
Special Remediation Area Caps (acres)	0	0	0	2.81	4.26	1.99	9.04
Buttress (acres)	0	0	0	4.92	2.70	0.20	7.82
Berm (acres)	0	0	0	1.90	0	0	1.90
Temporary Sand Covers (acres)	0	0	0	1.49	0	0	1.49

Notes:

1. Dredge volumes shown are total volume **dredged, desanded, and dewatered**, which include overcut volumes and Phase 1 area volumes dredged as part of the Phase 2B work (i.e., excluding Phase 1 dredging performed in 2007).
2. Volumes and areas shown for 2019 and 2020 are from OU 4 and OU 5 only.

Table 2: Annual Dredge Volumes from 2004 through 2020[1]

	Non-Toxic Substances Control Act (TSCA) Quantity Including Overcut (cy)						
	OU 1	OU 2	OU 3	OU 4/OU 5	Non-TSCA Total	OU 4 TSCA Quantity (cy)	Total Quantity (cy)
2004	18,000	0	0	0	18,000	0	18,000
2005	88,200	0	0	0	88,200	0	88,200
2006	102,100	0	0	0	102,100	0	102,100
2007[3]	121,800	0	0	104,030	225,830	27,832	253,662
2008	41,500	0	0	0	41,500	0	41,500
2009	0	3,009	126,351	407,808	537,168	7,367	544,535
2010	0	0	45,576	685,441	731,017	0	731,017
2011	0	0	63,931	171,478	235,409	0	235,409
2012	0	0	0	637,471	637,471	21,809	659,280
2013	0	0	0	569,369[2]	569,369	19,907[2]	589,276
2014	0	0	0	546,475	546,475	0	546,475
2015	0	0	0	455,049	455,049	58,895	513,944
2016	0	0	0	530,353	530,353	7,371	537,724
2017	0	0	0	558,370	558,370	0	558,370

	Non-Toxic Substances Control Act (TSCA) Quantity Including Overcut (cy)					OU 4 TSCA Quantity (cy)	Total Quantity (cy)
	OU 1	OU 2	OU 3	OU 4/OU 5	Non-TSCA Total		
2018	0	0	0	585,841	585,841	0	585,841
2019	0	0	0	474,384	474,384	0	474,384
2020	0	0	0	13,680	13,680	0	13,680
Total	371,600	3,009	235,858	5,636,417	6,246,884	115,389	6,362,233

Notes:

1. Dredge volumes for 2004 through 2020 reflect total volumes **dredged, desanded, and dewatered**, which include the overcut volumes, and include **dredging, desanding, and dewatering** of 67,157 cy from the Phase 1 area in 2010.
2. Based on a 2019 review, the 2013 TSCA and non-TSCA dredge volumes are increased by 7 cy and 8,946 cy, respectively.
3. Dredge volumes for 2007 reflect total volumes dredged, de-sanded, and dewatered, which include the overcut volumes, and include dredging, de-sanding, and dewatering of 104,030 cy (non-TSCA) and 27,832 cy (TSCA) from Phase 1 area in 2007.

Institutional Controls

Table 3: Summary of Planned and/or Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
OU 1 sediment caps	Yes	Yes	OU 1	Protect the caps (engineered remedy) and reduce potential exposure in areas where residual contamination will remain. Dredging in capped areas must be performed in a manner that does not remove or otherwise compromise capping material. Minimize potential for cap disturbance. Regulate activity, such as dredging or construction that could impact engineered cap integrity. Inform regulators and public of engineered cap locations. Implement monitoring and maintenance.	Chapter 30, Wisconsin Statutes (existing); Section 404 of the Clean Water Act (CWA), 33 U.S.C. §1344 (existing); Sections 9 and 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. §401 and 403 (existing); WDNR BOTW Database (existing); Navigational Maps (existing); MOA with WDNR (existing); Communications with

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
					municipalities (existing).
OU 1 Dams	Yes	Yes	OU 1	Assure long-term dam integrity	USACE/WDNR Maintenance (existing)
OUs 1, 2, 3, 4, and 5 Fish	Yes	Yes	OUs 1, 2, 3, 4, and 5	Reduce human exposure.	Fish advisories issued (in effect since 1976)
OUs 2, 3, 4, and 5 Caps Constructed in Federal Navigation Channels	Yes	Yes	OUs 2, 3, 4, and 5	Ensure that USACE maintenance dredging does not extend more than 2 feet below the federally-authorized channel depth and that no other activity, such as dredging, impacts the integrity of the engineered caps.	MOA with Brown County and municipalities regarding mapping and communications (planned); MOA with EPA, USACE, and WDNR, and possibly Brown County Port Authority, regarding dredging requirements in federal navigational channel (planned); MOA with WDNR and USACE regarding regulatory programs (planned);

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
					WDNR BOTW Database (existing); WDNR and Brown County GIS Mapping System (existing); Governmental Notices such as fish advisories (in effect since 1976) and navigational maps (existing); WDNR Chapter 30 requirements (existing); Sections 10 and CWA 401/404 USACE permit requirements (existing).
OUs 2, 3, 4, and 5 Caps Constructed Outside of Federal Navigation Channels that are not Riparian Caps	Yes	Yes	OUs 2, 3, 4, and 5	Ensure that no activity such as dredging impacts engineered cap integrity.	MOA with Brown County and municipalities regarding mapping and communications (planned); MOA with WDNR and USACE regarding regulatory programs (planned); WDNR BOTW Database (existing); WDNR and Brown County GIS Mapping System (existing); Governmental Notices such

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
					as fish advisories (in effect since 1976) and navigational maps (existing); WDNR Chapter 30 requirements (existing); Sections 10 and CWA 401/404 USACE permit requirements (existing).
OUs 2, 3, 4, and 5 Constructed Riparian Sediment Caps	Yes	Yes	OUs 2, 3, 4, and 5	Ensure that no activity, particularly Chapter 30 permit exempt activity, impacts the integrity of shoreline caps.	MOA with Brown County and municipalities regarding mapping and communications (planned); MOA with WDNR and USACE regarding regulatory programs (planned); WDNR BOTW Database (existing); WDNR and Brown County GIS Mapping System (existing); Governmental Notices such as fish advisories (in effect since 1976) and navigational maps (existing); Riparian Landowner Notifications and Consultations (ongoing);

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
					Utility notification (existing); WDNR Chapter 30 requirements (existing); Sections 10 and CWA 401/404 USACE permit requirements (existing).

Maps showing the areas in which the ICs apply are included in Appendix E. These maps depict the current conditions of the Site, with construction complete, which do not allow for UU/UE.

Status of Access Restrictions and ICs:

OU 1

As one element of the OU 1 remediation, engineered caps were placed on 114 acres of the total of 1,365 acres of lakebed in LLBdM *(i.e.,* 7% of the lakebed in OU 1 has been capped) and, therefore, ICs are needed. The PRPs developed an OU 1 Institutional Controls Implementation and Assurance Plan (ICIAP) in 2013 that was re-submitted to the Response Agencies in June 2017 and September 2023; and approved on September 23, 2023 (Foth Infrastructure & Environment, LLC and CH2M HILL, Inc., 2023). The PRPs developed engineered caps to isolate contamination left behind in the sediment, and placed the caps where sediment contained less than 10 ppm PCBs in the top 8 inches. The protection of engineered caps will, in turn, assure the long-term protectiveness of the remedy. From an ICs perspective, it is important to note that the PRPs placed OU 1 engineered caps only in those areas of OU 1 where the water depth above the cap surface would equal 6 feet or more. Because of this requirement, the engineered caps were placed well beyond the shoreline, in the deeper areas of LLBdM. The minimum distance from the shoreline to any part of the engineered cap in OU 1 is more than 300 feet. Because LLBdM is an impoundment created by the Upper Appleton dam, its water level is relatively stable, meaning that short of a calamity, or unprecedented drought, this distance will be assured. Appendix E includes a map reflecting the location of areas with engineered caps for OU 1. Because capped areas retain some level of residual contamination, they do not qualify for "UU/UE" by public or private entities in the future. It is necessary to identify activities that might disrupt engineered caps and then to describe how the impact of such activities will be mitigated through design, location, monitoring and ICs. As defined in EPA's *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites* (USEPA, 2005) and the 2008 ROD Amendment for OU 1, ICs are non-engineered instruments, such as administrative and legal controls, that 1) help minimize the potential for human health or ecological exposure to sediment contamination; and 2) ensure the long-term integrity of the remedy. The term "institutional control" generally refers to "non-engineered instruments, such as administrative and legal controls that help to minimize the potential for human exposure to contamination and protect the

integrity of the remedy" (USEPA, 2004). In OU 1, ICs are required to protect the cap (engineered remedy) and to reduce potential exposure in areas where residual contamination remains. ICs applicable to OU 1 include the following:

- Governmental controls including permit conditions for future actions; and
- Informational devices including signage and fish consumption advisories that may be required until RAOs are met.

The actions the PRPs have taken or will take to implement OU 1 ICs and communicate with both the Response Agencies and the public are enumerated below:

- Registered the engineered caps on the Wisconsin Remediation and Redevelopment Database (WRRD). The OU 1 cap database is available to other regulators and the public by accessing the WDNR's website at: https://dnr.wisconsin.gov/topic/Brownfields/WRRD.html

- Updated and is maintaining the OU 1 website - In order to provide a second means of continued public notice of the areas that have been capped in LLBdM, the PRPs update and are maintaining the website located at www.littlelakecleanup.com, including maps of the capped areas in OU 1, applicable fish consumption advisories and contact information.

- Provided information to WDNR for Diggers Hotline - The PRPs contacted WDNR to place the shape files, provided in Appendix A of the ICIAP, with the Diggers Hotline "One-Call System" established under Section 182.0175(1m), Wis. Stats.

- Provided information on OU 1 engineered cap locations to local municipalities and libraries - the PRPs provided information on how to access the WDNR Bureau for Remediation and Redevelopment Tracking System on the Web (BOTW) database, or an alternative system used by WDNR, and the OU 1 website to local municipalities and libraries, including Winnebago County, the Cities of Neenah and Menasha, the Village of Fox Crossing, and the libraries in Appleton, Menasha, and Neenah. The PRPs also provided copies of the maps of the engineered cap locations. If requested, the PRPs will also provide a copy of the database of the OU 1 engineered cap locations to any of the municipal entities.

- Provided information on fish advisories applicable to OU 1 - When WDNR/WDHS revise the fish advisories for OU 1, the PRPs will update the OU 1 website with the new advisories. Note that WDNR/WDHS will themselves issue press releases on the change. The PRPs will continue to update the OU 1 website until the PCB fish advisories have been lifted for OU 1.

- Prepare and submit an Annual Certification Report on the OU 1 ICs - An annual report and certification regarding the status and effectiveness of ICs in OU 1 will be submitted to EPA and WDNR. The annual certification process will be evaluated as part of the CERCLA FYR process.

- Communications with local municipalities - The PRPs have identified the municipalities that border on OU 1 or are otherwise affected by the ICs created pursuant to the OU 1 ICIAP. These municipalities include Winnebago County, the City of Menasha, and the Village of Fox Crossing,

and their successors (collectively, "Municipalities"). In lieu of executing an MOA with the Municipalities, PRPs will fulfill the following substantive requirements that were contemplated for an MOA:

- PRPs will contact each of the Municipalities to determine an appropriate point of contact and will set up an email list to enable communication with them as a group. The PRPs will utilize this email list to provide the Municipalities with updates on the status of the ICs, on no less than an annual basis until the Response Agencies approves the cessation of the notices.
- PRPs agree to work cooperatively with Winnebago County to provide, in a format compatible with Winnebago County's GIS mapping needs, coordinates of all engineered caps. PRPs agree to reasonably cooperate with Winnebago County in the development of the Map. Such cooperation shall include sharing of mapping information of relevant features PRPs may have discovered during the OU 1 remedial action (such as utility crossing locations). In lieu of Winnebago County developing a separate Map, PRPs may contact Winnebago County and request the County to host on the County website 1) a current static Map of engineered cap locations in OUs 1; and 2) the following link to the WDNR BOTW database for OU 1 (BRRTS No. 02-71-582406)): https://dnr.wi.gov/botw/GetActivityDetail.do?detailSeqNo=582406
- PRPs will reasonably cooperate with the Municipalities and provide them with available information they may reasonably request to facilitate public communications with the public to prevent interference with the integrity of the engineered caps.
- PRPs will meet with the Municipalities, as requested by them, to discuss riparian development activities or uses, such as harbor and port development (if any), that could have an impact on the integrity of the engineered caps.
- PRPs will request meetings with the Municipalities on the same schedule as set forth in the approved Lower Fox River Operable Unit 1 Cap Monitoring and Maintenance Plan (CMMP) (Foth and CH2MHILL, 2011).

OUs 2 through 5

The PRPs developed an ICIAP to address ICs for OUs 2 through 5 (Anchor QEA, LLC and Tetra Tech EC, Inc., 2023). In accordance with the ICIAP, an IC may be deemed to be already in place if another agency has responsibility for enforcing a prohibition on the activity that otherwise would need to be the subject of an IC (EPA 2005). Chapter 30 of the Wisconsin Statutes, Sections 401 and 404 of the CWA, and Sections 9 and 10 of the Rivers and Harbors Act give WDNR and USACE the authority and responsibility to enforce prohibitions on activities that would threaten the integrity of the engineered caps in OUs 2 through 5. The use of these existing regulatory authorities as ICs will be confirmed through MOAs with Brown County, WDNR, and USACE. To the extent that existing regulatory authorities do not fully address potential risks to the constructed remedy, additional ICs will be implemented to address those potential risks. Table 4 provides a list of ICs that will be implemented in OUs 2 through 5. The list is organized by three distinct capping scenarios: 1) caps in the federal navigational channel; 2) caps outside of the navigational channel that are not shoreline caps, namely caps that maintain no less than 3 feet of navigable water above the top of the cap; and 3) shoreline caps, namely those caps that do not maintain 3 feet of navigable water above the top of the cap. The ICIAP for OUs 2-5 was initially approved by the

Response Agencies on October 26, 2012, but revised after construction was completed, and approved by the Response Agencies on May 9, 2023.

Table 4: ICs to be Implemented at OUs 2 through 5

	Caps Constructed in Federal Navigation Channels	Caps Constructed Outside of Federal Navigation Channels that are not Riparian Caps	Constructed Riparian Sediment Caps
Objectives of Institutional Control	Ensure that USACE maintenance dredging does not extend more than 2 feet below the federally authorized channel depth and that no other activity, such as dredging, impacts the integrity of the engineered caps.	Ensure that no activity such as dredging impacts engineered cap integrity	Ensure that no activity, particularly Chapter 30 permit exempt activity, impacts the integrity of shoreline caps
Enforcement and Permit Devices	▪ MOA with Respondents, Brown County and municipalities regarding mapping and communications ▪ MOA with Respondents, USACE and WDNR regarding regulatory programs and dredging requirements in federal navigational channel ▪ USEPA Administrative Order for RA	▪ MOA with Brown County and municipalities regarding mapping and communications ▪ MOA with WDNR and USACE regarding regulatory programs ▪ USEPA Administrative Order for RA	▪ MOA with Brown County and municipalities regarding mapping and communications ▪ MOA with WDNR and USACE regarding regulatory programs ▪ USEPA Administrative Order for RA
Informational Devices	▪ MOA with Respondents, Brown County and municipalities regarding mapping and communications ▪ MOA with Respondents, USACE and WDNR regarding dredging requirements in federal navigational channel and regulatory programs ▪ WDNR BRRTS Registry ▪ WDNR and Brown County GIS Mapping System ▪ Governmental Notices such as fish advisories and navigational maps ▪ Utility notification ▪ Diggers Hotline	▪ MOA with Brown County and municipalities regarding mapping and communications ▪ MOA with WDNR and USACE regarding regulatory programs ▪ WDNR BRRTS Registry ▪ WDNR and Brown County GIS Mapping System ▪ Governmental Notices such as fish advisories and navigational maps ▪ Utility notification ▪ Diggers Hotline	▪ MOA with Brown County and municipalities regarding mapping and communications ▪ MOA with WDNR and USACE regarding regulatory programs ▪ WDNR BRRTS Registry ▪ WDNR and Brown County GIS Mapping System ▪ Governmental Notices such as fish advisories and navigational maps ▪ Riparian Landowner Notifications and Consultations ▪ Utility notification ▪ Diggers Hotline
Governmental Controls	▪ WDNR Chapter 30 requirements ▪ Sections 10 and 401/404 USACE permit requirements	▪ WDNR Chapter 30 Requirements ▪ Sections 10 and 401/404 USACE permit requirements	▪ WDNR Chapter 30 requirements ▪ Sections 10 and 401/404 USACE permit requirements
Proprietary Controls	None anticipated	None anticipated	None anticipated

Current Compliance: Currently, the caps finalized in OUs 1, 2, 3 and 4 are being maintained and have not been disturbed as evidenced by the monitoring done pursuant to the CMMP in OU 1, as well as the COMMP in OUs 2-5, as documented in the 2022 Cap Integrity Assessment report (Foth Infrastructure & Environment, LLC, 2024). The ICIAP for OU 1 was updated and approved on September 22, 2023. The ICIAP for OUs 2 through 5 was updated and approved on May 9, 2023.

IC Follow up Actions Needed: MOAs for the OUs 2 through 5 ICIAP need to be finalized for communication strategies between counties, municipalities, WDNR, and USACE. Annual certifications need to be performed by the PRPs, since the ICIAPs are approved and construction has been finalized. Fish advisories, although existent, are not fully effective as fish consumption does occur. As fish tissue concentrations decline and ultimately achieve cleanup levels, fish advisories will need to be re-evaluated, as deemed necessary.

Long-Term Stewardship: The approved ICIAP for OU 1 and ICIAP for OUs 2 through 5 require annual certifications to be submitted to the Response Agencies providing evaluations of ICs for effectiveness and compliance by the PRPs.

Systems Operations/Operation & Maintenance

After construction completion and verification that the 2007 and 2008 ROD Amendments' RAL and/or SWAC standards have been met, the Site will be monitored on a regular basis. For OU 1, the construction of the remedial action was approved in 2010 with the approval of the Lower Fox River Operable Unit 1, Remedial Action Certification of Completion Report. For OUs 2-5 construction completion of the remedial action was approved on October 3, 2022, with Response Agency approval of the OUs 2-5 Remedial Action Certification of RA Completion Report.

A long-term monitoring (LTM) plan identifies the LTM activities to be conducted as long as PCBs are present at the Site. LTM is ongoing for OUs 1 through 5. The LTM plan for OU 1 was approved in 2011 (Foth, 2011a). The LTM plan for OUs 2 through 5 was approved July 21, 2023 (Foth Infrastructure & Environment, LLC and LimnoTech, Inc., 2023). LTM at the Site consists of the following:

- Long-term sediment monitoring of the MNR areas only (OU 2 and OU 5).
- Post-construction monitoring to determine if caps are installed as designed.
- Long-term monitoring of caps to confirm their containment effectiveness. If necessary, additional maintenance of caps will be conducted.
- Long-term monitoring of surface water and fish tissue for confirmation of environmental improvements.

Post-construction monitoring began in 2010 at OU 1; 2012 at OU 2 and OU 3; and 2021 in OU 4 and OU 5. System operation and maintenance of an active treatment system is not required, as the remedy is dredging (*i.e.*, removal) and capping (containment). The SDDP began demobilization activities in January 2020 and was completed in October 2021. As discussed above, a LTM plan has been developed for sampling and analysis of surface water, fish tissue, and sediment and will be implemented as long as PCBs are present at the Site above cleanup levels.

III. PROGRESS SINCE THE LAST REVIEW

The protectiveness determinations and statements from the last FYR as well as the recommendations from the last FYR and the current status of those recommendations are provided in Tables 5 and 6 below.

Table 5: Protectiveness Determinations/Statements from the 2019 FYR

OU #	Protectiveness Determination	Protectiveness Statement
1	Not Protective	The remedy at OU 1 is not protective of human health and the environment. While the remedy construction for OU 1 has been implemented and constructed in accordance with the requirements of the decision documents and design specifications, the RAOs have not been achieved. Monitoring data shows that there have been improvements in PCB fish tissue concentrations for the indicator species. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the

OU #	Protectiveness Determination	Protectiveness Statement
		Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. Monitoring data shows that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents. Effective ICs need to be fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining the remedy components (*i.e.*, caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.

OU #	Protectiveness Determination	Protectiveness Statement
2	Not Protective	The remedy at OU 2 is not protective of human health and the environment. While the remedy construction for OU 2 has been implemented and constructed in accordance with the requirements of the decision documents and design specifications, the RAOs have not been achieved. Monitoring data shows that there have been improvements in PCB fish tissue concentrations for the indicator species. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. Monitoring data shows that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents. Effective ICs need to be fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining the remedy components (*i.e.*, caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.

OU #	Protectiveness Determination	Protectiveness Statement
3	Not Protective	The remedy at OU 3 is not protective of human health and the environment. While the remedy construction for OU 3 has been implemented and constructed in accordance with the requirements of the decision documents and design specifications, the RAOs have not

OU #	Protectiveness Determination	Protectiveness Statement
		been achieved. Monitoring data shows that there have been improvements in PCB fish tissue concentrations for the indicator species. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. Monitoring data shows that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents. Effective ICs need to be fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining the remedy components (*i.e*., caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.

OU #	Protectiveness Determination	Protectiveness Statement
4	Not Protective	The remedy at OU 4 is not protective of human health and the environment. The OU 4 remedy is currently being implemented and constructed in accordance with the decision documents and the design specifications. In the areas of OU 4 where construction has been completed, ongoing PCB fish tissue monitoring of indicator species shows decreases towards achieving RAOs. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. In order for the remedy to be protective, the following actions need to be taken: the remedy needs to be fully implemented; monitoring data needs to show that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents; and effective ICs need to be fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining the remedy components (*i.e.,* caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.

OU #	Protectiveness Determination	Protectiveness Statement
5	Not Protective	The remedy at OU 5 is not protective of human health and the environment. The OU 5 remedy is currently being implemented and constructed in accordance with the decision documents and the design specifications. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. In order for the remedy to be protective, the following actions need to be taken: the remedy needs to be fully implemented; monitoring data needs to show that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents; and effective ICs need to be fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining the remedy components (*i.e.*, caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.

Table 6: Status of Recommendations from the 2019 FYR

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
1, 2, 3, 4, and 5	ICIAP has not been fully implemented.	Implement the portions of the OUs 2 through 5 ICIAP that have not yet been implemented. Approve and implement OU 1 ICIAP.	Addressed in Next FYR	The OUs 2-5 ICIAP was updated and approved on 5/9/23. The OU1 ICIAP was updated and approved on 9/22/23. The Responsible Parties have implemented ICs required by the OU 1 ICIAP, and are in the process of implementing ICs required by the OUs 2-5 ICIAP.	NA
4 and 5	Current PCB concentrations in fish tissue, sediments, and surface water indicate that the remedy is not currently	Complete implementation of the remedy to address PCB-contaminated sediments and address ongoing	Completed	Construction Completion for OUs 2 through 5 was achieved on 10/3/2022. However, it will take 10-30 years for fish tissue to reach protective levels. Long-term monitoring will continue for fish, surface water and sediment until RAOs are achieved.	10/3/2022

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
	protective and RAOs have not been met.	unacceptable exposures.			

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was made available by a newspaper posting in the *Green Bay Press Gazette* on 3/20/2024 (Appendix D) stating that there was a FYR underway and inviting the public to submit any comments to EPA. The results of the review and the report will be made available at the Site information repositories located at:

Appleton Public Library
225 N. Oneida St.
Appleton, WI
920-832-6173

Brown County Library
515 Pine St.
Green Bay, WI

Door County Library
107 S. Fourth Ave.
Sturgeon Bay, WI

Oneida Community Library
201 Elm St.
Oneida, WI

Oshkosh Public Library
106 Washington Ave.
Oshkosh, WI

Further information regarding recent site construction and remediation-related activities can be found at the following EPA Region 5 website: http:// www.epa.gov/superfund/fox-river

WNDR maintains the following website: https://dnr.wisconsin.gov/topic/foxriver

Data Review

LONG-TERM MONITORING

The LTM program measures progress towards RAOs that are based on surface water and fish tissue PCB concentrations. The three RAOs considered in LTM include the following:

- Monitor reductions in surface water and fish tissue PCB concentrations;
- Monitor progress toward achieving human health risk reduction goals; and
- Monitor progress toward achieving ecological risk reduction goals.

Baseline Monitoring Program

Between August 2006 and June 2007, a coordinated baseline monitoring program of water column and fish tissue PCB concentrations was conducted by the PRPs throughout the entire LFR, in accordance with the Baseline Monitoring Program (BMP). These data were to be used as a baseline to monitor future progress toward achieving agency-established RAOs for the LFR. The 2006-2007 baseline data were collected during active remediation of OU 1. To address concerns by stakeholders that baseline data might have been affected by remediation work and thus might not accurately reflect pre-remedial conditions, a statistical analysis of historical water and fish tissue PCB data was conducted by WDNR *Project Effectiveness Evaluation - Fish, Water and Sediment Draft - Lower Fox River Little Lake Buttes des Morts/OU 1*, (WDNR, 2011). The objective of the analysis was to evaluate the post-remediation data in the context of the historical record. Observations regarding the baseline data with the historical record were also made in the analysis.

Baseline Monitoring Water Data

The BMP required monthly water quality monitoring for all 12 calendar months. Subsequent data analysis showed that, in part, because of less desorption of PCBs in cold temperatures, the water quality data to best conservatively estimate annual PCB water concentrations flowing through the LFR were those collected during the eight "warm" months of the year (April through November, inclusive). Further, ice conditions made sampling in the winter months dangerous. Water quality and field parameters (Total PCBs, Total Organic Carbon [TOC], Total Suspended Solids [TSS], temperature, turbidity, and flow) for these eight months were taken from the *Baseline Monitoring Report* (Anchor QEA and TetraTech, 2009).

The baseline range in water column blank-corrected total PCB concentrations was:
0.04 - 1.00 ng/L (median 0.30 ng/L) in Lake Winnebago,
0.27 - 10.86 ng/L (median 2.78 ng/L) in OU 1,
0.30 - 11.61 ng/L (median 3.05 ng/L) in OU 2A,
0.31 - 12.32 ng/L (median 4.44 ng/L) in OU 2B,
0.32 - 14.28 ng/L (median 2.91 ng/L) in OU 2C,
0.41 - 12.73 ng/L (median 4.37 ng/L) in OU 3,
1.84 - 80.66 ng/L (median 15.36 ng/L) in OU 4,
0.97 - 3.63 ng/L (median 1.87 ng/L) in OU 5A,
0.57 - 3.56 ng/L (median 0.73 ng/L) in OU 5B,
0.23 - 1.17 ng/L (median 0.40 ng/L) in OU 5C.
Notes: Concentrations are updated from the *Baseline Data Report* using median method blank correction.

Baseline Monitoring PCB Correlations and Controlling Variables

Baseline monitoring conducted by the PRPs demonstrated that temperature and TSS concentrations exert the greatest controlling influence on total PCB concentrations in the water column. The correlation with flow was much weaker, which was attributed to contradictory influences throughout the year. For example, low flows during late summer occur during the period of highest temperatures, leading to high PCB concentrations, whereas high flows during spring runoff can cause higher suspended sediment concentrations in the river and thereby contribute to higher PCB concentrations. In addition, higher flows can reduce concentrations by dilution. Whether the PCB inputs to the river are due to porewater flux or sediment resuspension will also affect the correlation. Thus, the relationship between flow and PCB concentration is complex.

Baseline Monitoring Fish Tissue Data

Fish tissue summary statistics comprise total PCB Aroclor concentrations, lipid content, fish length, and fish weight, sorted by location and species, and based on data from the *Baseline Monitoring Report*. As set forth in the report, the baseline ranges in fish tissue comprise the following total PCB concentrations:

- Walleye:
  <19 - 36 µg/kg (median 20 µg/kg) in Lake Winnebago
  21 - 340 µg/kg (median 140 µg/kg) in OU 1
  97 - 800 µg/kg (median 300 µg/kg) in OU 2A
  21 - 480 µg/kg (median 130 µg/kg) in OU 2B
  130 - 1800 µg/kg (median 380 µg/kg) in OU 2C
  250 - 2000 µg/kg (median 450 µg/kg) in OU 3
  240 - 1400 µg/kg (median 575 µg/kg) in OU 4
  180 - 1300 µg/kg (median 400 µg/kg) in OU 5A
  160 - 450 µg/kg (median 290 µg/kg) in OU 5B

- Smallmouth Bass:
  <19 - 70 µg/kg (median 20 µg/kg) in Lake Winnebago
  20 - 540 µg/kg (median 160 µg/kg) in OU 1
  96 - 530 µg/kg (median 200 µg/kg) in OU 2A
  110 - 320 µg/kg (median 210 µg/kg) in OU 2B
  71 - 470 µg/kg (median 140 µg/kg) in OU 2C
  66 - 370 µg/kg (median 190 µg/kg) in OU 3
  140 - 950 µg/kg (median 400 µg/kg) in OU 4
  150 - 460 µg/kg (median 320 µg/kg) in OU 5A
  <19 - 1200 µg/kg (median 320 µg/kg) in OU 5B

- Carp:
  28 - 46 µg/kg (median 36 µg/kg) in Lake Winnebago
  300 - 3600 µg/kg (median 1750 µg/kg) in OU 1
  2100 - 11000 µg/kg (median 2400 µg/kg) in OU 2A
  800 - 1500 µg/kg (median 1200 µg/kg) in OU 2B
  670 - 1500 µg/kg (median 930 µg/kg) in OU 2C
  590 - 1600 µg/kg (median 970 µg/kg) in OU 3

2800 - 6400 µg/kg (median 4600 µg/kg) in OU 4
480 - 980 µg/kg (median 805 µg/kg) in OU 5A
72 - 950 µg/kg (median 240 µg/kg) in OU 5B

- Drum:

110 - 250 µg/kg (median 170 µg/kg) in Lake Winnebago
160 - 650 µg/kg (median 445 µg/kg) in OU 1
770 - 2300 µg/kg (median 1100 µg/kg) in OU 2A
310 - 1300 µg/kg (median 580 µg/kg) in OU 2B
590 - 1700 µg/kg (median 1100 µg/kg) in OU 2C
460 - 2000 µg/kg (median 1400 µg/kg) in OU 3
740 - 2300 µg/kg (median 1250 µg/kg) in OU 4
950 - 1700 µg/kg (median 1450 µg/kg) in OU 5A
750 - 2100 µg/kg (median 1300 µg/kg) in OU 5B

- Gizzard Shad:

<19 - 33 µg/kg (median 26 µg/kg) in Lake Winnebago
790 - 1000 µg/kg (median 895 µg/kg) in OU 1
180 - 550 µg/kg (median 300 µg/kg) in OU 2A
89 - 130 µg/kg (median 98 µg/kg) in OU 2B
<19 - 190 µg/kg (median 100 µg/kg) in OU 2C
190 - 870 µg/kg (median 400 µg/kg) in OU 3
250 - 1800 µg/kg (median 845 µg/kg) in OU 4
260 - 360 µg/kg (median 335 µg/kg) in OU 5A
230 - 350 µg/kg (median 285 µg/kg) in OU 5B

LTM Results

Surface Water

Surface water quality results from the *2022 Long-Term Monitoring Summary Report* (Foth Infrastructure & Environment, LLC, 2024) indicate that Year 2022 concentrations substantially decreased from those observed during 2006-2007 baseline monitoring. The surface water arithmetic averages for each OU are presented in Table 7. The Exit Criteria 3 target threshold for surface water is obtained when at least a 90% reduction in PCB concentration compared to baseline is achieved. This is determined by comparing the 90% UCL on the geometric mean ratio of the current LTM sampling event to the baseline geometric mean (Exit Criteria 3). When not correcting for method blanks, 90% confidence limits on the estimated reduction from baseline are 89% for OU 1; 84% or greater for OU 2A, OU 2B, and OU 3; and 78% for OU 2C. When correcting for method blanks, 90% confidence limits on the estimated reduction from baseline are 91% for OU 1. Further, when correcting for method blanks, 90% confidence limits on the estimated reduction from baseline are 85% or greater for OU 2A, OU 2B, and OU 3, and 79% for OU 2C. These estimates are based on regression modeling and incorporate temperature as covariate data for OU 1, OU 2A, and OU 2B, and both temperature and total suspended solids (TSS) as covariate data for OU 2C and OU 3. In OU 4, a 96% reduction from baseline (90% confidence limit based on regression modeling) is observed in the 2022 data, both with and without correcting for method blanks (Table 8).

Table 7: Surface Water Arithmetic Averages (ng/L)

	Event Year	LW	OU1	OU2A	OU2B	OU2C	OU3	OU4	OU5A	OU5B	OU5C
Method Blank Corrected	2006/07	0.42	6.1	5.8	6.1	6.4	7.5	40	2.5	1.3	0.59
	2010	0.11	0.95	-	-	-	-	-	-	-	-
	2012	0.15	1.4	2.3	2.8	2.3	3.4	-	-	-	-
	2014	0.17	-	0.66	1.1	0.95	1.3	-	-	-	-
	2018	0.12	0.38	0.58	0.8	0.72	0.85	-	-	-	-
	2021	-	-	-	-	-	-	1.3	0.86	0.34	0.10
	2022	0.16	0.46	0.66	0.85	0.78	0.8	1.2	0.71	0.45	0.21
Not Corrected for Method Blank	2006/07	0.52	6.2	5.9	6.2	6.5	7.6	40.1	2.6	1.4	0.69
	2010	0.15	1	-	-	-	-	-	-	-	-
	2012	0.18	1.4	2.4	2.9	2.4	3.5	-	-	-	-
	2014	0.19	-	0.69	1.1	0.97	1.3	-	-	-	-
	2018	0.15	0.41	0.61	0.83	0.75	0.88	-	-	-	-
	2021	-	-	-	-	-	-	1.4	0.9	0.38	0.14
	2022	0.23	0.54	0.74	0.92	0.86	0.87	1.3	0.79	0.52	0.28

Note: Arithmetic average values are not utilized for a direct evaluation with Exit Criterion 3. LW and OU5C are background reference data.

Table 8: Exit Criterion 3 – 90% UCL on the LTM/Baseline Geometric Mean Ratio (Given as Percent Reduction from Baseline) for Surface Water

	Event Year	OU1	OU2A	OU2B	OU2C	OU3	OU4	OU5A	OU5B
Method Blank Corrected	2010	83%	-	-	-	-	-	-	-
	2012	73%	62%	55%	65%	68%	-	-	-
	2014	-	82%	78%	82%	80%	-	-	-
	2018	86%	85%	83%	82%	87%	-	-	-
	2021	-	-	-	-	-	97%	61%	53%
	2022	91%	87%	85%	79%	88%	96%	66%	31%
Not Corrected for Method Blank	2010	83%	-	-	-	-	-	-	-
	2012	73%	62%	55%	64%	67%	-	-	-
	2014	-	82%	78%	82%	80%	-	-	-
	2018	86%	84%	83%	82%	87%	-	-	-
	2021	-	-	-	-	-	95%	61%	54%
	2022	89%	85%	84%	78%	87%	96%	64%	30%

Evaluation of projected 30-year recovery rate indicates that, for OU 1, OU 2B and OU 3 concentration trends are projected to drop below the Exit Criterion 3 prior to 2030 with 90% statistical confidence well before the end of the 30-year post-construction period, for both the method blank corrected and uncorrected data. The trend in OU 2A shows concentration trends dropping below the target prior to 2030 for the method blank corrected data, and prior to 2032 for the uncorrected data. For OU 2C, concentration trends show PCB reductions fall below the baseline within the 30-year post-construction period, but below the 90% statistical confidence level. Trending evaluation was not performed for OUs 4 and 5 because there have only been 2 LTMP sampling events (2021 and 2022) since remediation was completed.

In OU 1, OU 2A, OU 5A and OU 5B, the surface water concentrations are reaching levels comparable to laboratory method blank concentrations, illustrating the very low concentrations that are being achieved.

Fish Tissue

The 2022 *LTM Summary Report* (Foth Infrastructure & Environment, LLC, 2024) presents the results of fish tissue samples collected in fall 2022 from carp, drum, gizzard shad, smallmouth bass, and walleye. The sample results are presented in Table 9.

Table 9: Fish Tissue Arithmetic Averages (ug/Kg)

Species	Event	LW	OU1	OU2A	OU2B	OU2C	OU3	OU4	OU5A	OU5B
Carp	2006/07	36	1917	4120	1200	988	972	4600	780	337
	2010	73	1147	-	-	-	-	-	-	-
	2012	67	1261	825	599	707	549	-	-	-
	2014	98		1547	498	581	860	-	-	-
	2018	113	217	687	276	455	626	-	-	-
	2021	-	-	-	-	-	-	277	-	-
	2022	38	304	706	170	525	291	840	-	-
Drum	2006/07	175	450	1268	728	1082	1292	1347	1392	1490
	2010	95	306	-	-	-	-	-	-	-
	2018	92	419	-	450	539	405	-	-	-
	2021	-	-	-	-	-	-	799	1282	1046
	2022	80	274	459	425	620	455	843	1190	1522
Gizzard Shad	2006/07	24	895	343	102	112	427	938	325	283
	2010	20	321	-	-	-	-	-	-	-
	2012	13	19	67	20	58	184	-	-	-
	2014	6.3	-	28	9.5	18	40	-	-	-
	2018	6.3	23	626	42	115	204	-	-	-
	2021	-	-	-	-	-	-	97	152	177
	2022	12	17	-	45	19	25	33	167	210
Smallmouth	2006/07	26	212	255	208	187	197	442	319	359

Bass	2010	-	97	-	-	-	-	-	-	-
	2012	-	209	141	-	-	-	-	-	-
	2014	-	-	122	-	-	-	-	-	-
	2018	6.3	108	103	123	142	144	-	-	-
	2021	-	-	-	-	-	-	298	312	-
Walleye	2006/07	19	135	317	142	579	677	671	494	296
	2010	16	25	-	-	-	-	-	-	-
	2012	53	83	-	184	650	928	-	-	-
	2014	59	-	-	170	226	331	-	-	-
	2018	48	63	86	179	277	260	-	-	-
	2021	-	-	-	-	-	-	243	300	252
	2022	18	42	75	128	195	343	221	206	238

Note: Non-detected values replaced with one-half times the detection limit. The values in this table are averages. To reject Human Health or Ecological Fish, Exit Criteria 2's risk Null Hypotheses, the OU Arithmetic UCL90% must be less than 50 ppb or 7600 ppb respectively.

Young of Year (YOY)

Gizzard shad represent the YOY fish species and are monitored to provide an early indication of ecosystem recovery. Gizzard shad fish tissue results from the *2022 LTM Summary Report* indicate that average PCB concentrations for gizzard shad decreased substantially in the 2022 data over the 2006-2007 baseline values for OU 1 and OU 4. Similar to surface water, the YOY target threshold is obtained with at least a 90% reduction in PCB fish tissue concentration compared to baseline. This is obtained by comparing the 90% UCL on the geometric mean ratio of the current LTM sampling event to the baseline geometric mean (Exit Criteria 3). For the YOY species (gizzard shad), 90% confidence limits on the estimated reduction from baseline are 98% in OU 1 and 91% in OU 4 (Table 10). On February 9, 2024, Foth Infrastructure & Environment, LLC, on behalf of Glatfelter Corporation and Georgia-Pacific Corporation, submitted a request for termination of the gizzard shad (YOY) fish species monitoring in OU 1 and OU 4. The information presented, demonstrated a 90% reduction in PCB concentrations in YOY fish in OU 1 and OU 4, achieving the LTMP Exit Criteria 3. Therefore, on March 4, 2024, the Response Agencies approved the termination of gizzard shad (YOY) monitoring for fish tissue in OU 1 and OU 4.

Gizzard shad in OU 2 do not presently show an overall decreasing trend with the LTM data. Note that limited samples have been available in OU 2, particularly in OU 2A and OU 2B, with only two samples in 2018 for OU 2A and three samples for OU 2B. In 2022, no samples were obtained in OU 2A and again only three in OU 2B. Decreases over baseline are also observed in OU 3 (UCL of 82%) and OU 5A (UCL of 78%).

Table 10: Exit Criterion 3 – 90% UCL on the LTM/Baseline Geometric Mean Ratio (Given as Percent Reduction from Baseline) Fish Tissue

Species	Event Year	OU1	OU2A	OU2B	OU2C	OU3	OU4	OU5A	OU5B
	2010	58%	-	-	-	-	-	-	-
	2012	97%	73%	77%	NSR	50%	-	-	-

Gizzard Shad	2014	-	86%	89%	55%	83%	-	-	-
	2018	96%	71%	51%	71%	58%	-	-	-
	2021	-	-	-	-	-	91%	68%	29%
	2022	98%	-	49%	NSR	82%	91%	78%	28%

Note: Exit Criteria 3 applies only to young of year (gizzard shad) for fish tissue monitoring. NSR – No significant reduction.

Ecological

Fish tissue results from the *2022 LTM Summary Report* compared carp and drum PCB fish tissue concentrations to the ecological risk target. The ecological RAO is evaluated using the Lowest Observed Adverse Effects Concentration (LOAEC) as developed in the Ecological Risk Assessment for the LFR. Exit Criteria 2 requires achieving a 90% UCL on the arithmetic average compared to the LOAEC for carp and drum of 7,600 µg/kg. Carp and drum 90% confidence limits (by OU) for the 2022 dataset are presented in Table 11 below, and range from 255 µg/kg to 1,982 µg/kg, indicating all results fall below the LOAEC 7,600 µg/kg target. On February 1, 2024, Foth Infrastructure & Environment, LLC, on behalf of Glatfelter Corporation and Georgia-Pacific Corporation, submitted a formal request for termination of the ecological fish species monitoring pursuant to the 2023 LTMP. PCB concentrations for carp and drum in all OUs were well below the Exit Criterion 2 ecological risk LOAEC (7,600 ug/Kg) with statistical certainty during the baseline sampling event (2006) and all subsequent sampling events including 2022. Therefore, based on the data collected since 2006 and the LTMP Weight of Evidence consideration arguments presented, on March 4, 2024, the Response Agencies approved the termination of monitoring ecological fish tissue in all OUs.

Table 11: Fish Tissue 90% UCLs on Arithmetic Average (ug/Kg)

Species	Event	LW	OU1	OU2A	OU2B	OU2C	OU3	OU4	OU5A	OU5B
Carp	2006/07	39	2587	6766	1388	1180	1197	5446	887	586
	2010	107	1508	-	-	-	-	-	-	-
	2012	100	1594	989	688	752	618	-	-	-
	2014	126	-	2422	648	667	1016	-	-	-
	2018	174	247	1107	376	596	746	-	-	-
	2021	-	-	-	-	-	-	315	-	-
	2022	52	424	1083	255	813	441	1497	-	-
Drum	2006/07	204	559	1688	990	1414	1799	1693	1558	1897
	2010	121	373	-	-	-	-	-	-	-
	2018	107	651	-	576	670	635	-	-	-
	2021	-	-	-	-	-	-	939	1732	1257
	2022	88	357	547	520	864	553	1221	1542	1982
Smallmouth Bass	2006/07	33	266	303	230	230	225	509	377	446
	2010	-	122	-	-	-	-	-	-	-
	2012	-	260	161	-	-	-	-	-	-
	2014	-	-	157	-	-	-	-	-	-
	2018	6.3	122	120	152	160	174	-	-	-
	2021	-	-	-	-	-	-	343	378	-

Walleye	2006/07	22	163	372	175	747	859	783	590	327
	2010	21	32	-	-	-	-	-	-	-
	2012	63	112	-	221	760	1191	-	-	-
	2014	75	-	-	220	268	467	-	-	-
	2018	63	80	136	229	364	322	-	-	-
	2021	-	-	-	-	-	-	301	328	325
	2022	20	51	84	148	232	393	253	244	261

Note: Parametric 90% UCLs are calculated based on the student's t-distribution as $\bar{x} + t_{n-1}(0.9) \times s/\sqrt{n}$.
Ecological risk target= 7,600 ug/kg
Human Health risk target= 50 ug/kg

Human Health

Fish tissue results from the *2022 LTM Summary Report* compared walleye and smallmouth bass PCB fish tissue concentrations to the human health risk target. The human health goal is the removal or relaxation of fish consumption advisories (50 µg/kg total PCB). Exit Criteria 2 requires achieving a 90% UCL on the arithmetic average compared to the 50 ug/kg unlimited consumption level for the human health species of walleye and smallmouth bass. None of the OUs have PCB fish tissue concentrations below the 90% UCL of 50 µg/kg unlimited consumption level as illustrated in Table 11, above. However, in 2022 OU 1 walleye demonstrated an average concentration of 42 µg/kg with a 90% UCL of 51 µg/kg. Walleye in OU 2B, and OU 2C have a decreasing trend, but not currently at the rate of projecting concentrations below the risk target with 90% statistical confidence. Walleye in OU 2A does not presently show an overall decreasing trend with the LTM data. Walleye in OU 3 does show a decreasing trend such that the 90% confidence limit on the trend drops below the 50 µg/kg human health unlimited consumption target prior to the end of the 30-year post-construction period. No trending was performed for the OU 4 and OU 5 data since only two sampling events have been completed.

New walleye sample data will be collected from Little Bay and Big Bay de Noc during post-2022 LTM events for reference concentration comparisons applicable to OU 4, OU 5A, and OU 5B.

Capped Areas

Long-term monitoring of engineered caps installed in OUs 1, and 3-5 will be performed to ensure their long-term integrity and protectiveness. However, sand covers (placed as the primary remedy or as a post-dredge residuals management technique) will not require long-term monitoring or maintenance, consistent with the ROD Amendment. Cap locations discussed in this section are illustrated in the final remedy figures in Appendix G. Baseline cap conditions are to be established immediately following cap placement (*i.e.,* during the season in which they are installed and designated as year 0) using pre- and post-cap bathymetric surveys and physical cap material thickness measurements. The long-term monitoring of engineered caps includes bathymetric surveys (primarily using hydrographic methods supplemented with manual survey or poling, as necessary), of the cap surface to monitor the integrity and surface elevation of the caps, beginning in Year 2 following construction, continuing at Year 4, and then approximately every 5 years thereafter unless monitoring indicates a reduced frequency is appropriate. If an area appears to be disturbed, geophysical surveying and/or diver-assisted inspection may also be performed to better understand the mechanism(s) responsible for the disturbance and the extent of the disturbance. Given that completion of capping has spanned approximately 11 years

(beginning in 2010 and continuing into 2020), the initial (*i.e.,* Year 2) monitoring has occurred and will occur independently within groups of cap certification units (CCUs) completed within the same year of construction. However, subject to adaptive management and the Response Agencies' approval, follow-up monitoring of CCUs completed in different years may potentially be combined to more efficiently monitor the caps. If post-construction monitoring or other information indicates that the cap in an area no longer meets its original performance criteria and that degradation of the cap may result in an actual or threatened release of PCBs exceeding the 1.0 ppm RAL to the sediment surface, additional response activities, potentially including cap sampling where feasible, will be undertaken in the affected area. These additional response actions will be subject to collaborative workgroup discussion and the Response Agencies' approval.

OU 1 Caps

The objective of the CMMP is to ensure that the engineered cap areas retain their physical integrity and protectiveness over time. Single- and multi-beam hydrographic surveys of test cap and cap placement areas of OU 1 performed after completion of the remedial action at OU 1 showed cap consolidation nearly complete, and that none of the CCUs experienced erosion of more than 5% of the CCU area. The 113.9-acre OU 1 cap placement areas, therefore, were found to be performing as designed. Assessment of cap integrity for OU 1 occurred in 2010 (year 0), 2011, 2012, 2018 and 2022.

Based upon the results of the Year 8 (2018) to Year 12 (2022) and Year 0 (2010) to Year 12 hydrographic survey comparisons, no areas of interest were identified. Poling/probing conducted on October 19, 2022, indicated cap armor stone was present at all poling/probing locations, providing statistical confidence that cap armor layer coverage exceeds 95% over the OU as a whole. The results of this survey, along with the observation that sediment deposition is present at a very high percentage of the poling/probing locations, indicate that the placed armored caps are present and performing as designed. Box plots comparing the 2018 to 2022 data indicates settlement has substantially ended. However, note that the isopach maps for these areas show general elevation increases and decreases of 0-0.5 feet since 2018, with more area showing increases than decreases. Isopach maps and box plots comparing the 2022 survey to the 2010 survey (Year 0 baseline), accounting for deposition measured during poling/probing, indicate broad areas of sediment consolidation have occurred. While general increases and decreases in bathymetric surface elevations of 0-0.5 feet are evident in CCUs 1-17, observed settlement becomes greater (approximately 1-1.5 feet) in the more downstream portion of the OU 1 cap area beginning with the bend to the east near CCU-18 and CCU-19 where deeper sediment deposits exist beneath the cap. Because physical poling/probing confirmed the cap armor stone remains present at all poling locations, settling of the top elevation is attributed to consolidation of the underlying soft sediment. Implementation of the Year 12 cap monitoring in OU 1 indicates that the approximately 115 acres of caps remain in place, functioning as designed, and that there is no indication of need for either additional focused investigation of the integrity of the caps, or for repair. Based on the CMMP schedule, the next routine cap monitoring survey for OU 1 (Year 17) will occur in 2027.

OU 2 Caps

Caps constructed for OU 2 are located immediately upstream from OU 3 and did not require monitoring consistent with the 2010 ESD (EPA and WDNR, 2010). These areas contained high quantities of debris,

and since the completion of cap construction at OU 2, these areas have been turned into ecological habitat. ICs are being implemented consistent with the OUs 2-5 ICIAP.

OU 3 Caps

The Year 0 (2011) survey work was completed to serve as the baseline post-construction survey for engineered caps in OU 3. The data indicated that when applying approved statistical procedures, the minimum cap aggregate thicknesses were achieved in all cases. The hydrographic survey data collected for the Year 0 cap monitoring indicated that the cap material in place met the performance standards set forth in the *Lower Fox River Remedial Design 100% Design Report* (Tetra Tech, Anchor, J.F. Brennan, and Boskalis Dolman. 2009) and the COMMP*,* and no irregularities were identified. These surveys serve as the baseline for later surveys to assess long-term cap performance. Assessment of cap integrity for OU 3 occurred in 2011 (year 0), 2014, 2018 and 2022.

Based upon the results of the Year 7 (2018) to Year 11 (2022) and Year 0 (2011) to Year 11 hydrographic survey comparisons, no areas of interest were identified. Poling conducted on October 18, 2022, indicated cap armor stone was present at all poling locations, providing statistical confidence that cap armor layer coverage exceeds 95% over the OU as a whole. The results of this survey, along with the observation that sediment deposition is present at a very high percentage of the poling locations, indicate that the placed armored caps are present and performing as designed. Similar to OU 1, box plots comparing the 2018 to 2022 data indicate settlement has substantially ended. However, note that the isopach maps for these areas show general elevation increases and decreases of 0-0.5 feet since 2018. Isopach maps and box plots comparing the 2022 survey to the 2011 survey (Year 0 baseline), accounting for deposition measured during poling/probing, indicate overall decreases in bathymetric surface elevations of 0-1.0 feet, with minor areas up to 1.5 feet, indicating overall consolidation of the underlying sediment throughout OU 3. The larger differences are seen in CA13A, CA13E, CA15, and CA69, located generally in the center of the cap area. Areas of elevation increases (sediment deposition) of 0-0.5 feet are seen throughout OU 3 but much less prominently, most notably in CA16B, CA17, and CB31. Implementation of the Year 11 cap monitoring in OU 3 indicates that the 27 acres of caps remain in place, functioning as designed, and there is no indication of need for either additional focused investigation of the integrity of the caps, or for repair. Based on the COMMP schedule, the next routine cap monitoring survey for OU 3 (Year 16) will occur in 2027.

OU 4 Caps

The Year 0 (2014 Upper OU 4) survey work was completed to serve as the baseline post-construction survey for engineered caps in Upper OU 4 in years 2013 through 2014. The Year 0 (2017 Middle OU 4) survey work was completed to serve as the baseline post-construction survey for engineered caps in Middle OU 4 in years 2015 through 2017. The Year 0 (2020 Lower OU 4) survey work was completed to serve as the baseline post-construction survey for engineered caps in Lower OU 4 in years 2018 through 2020. The data indicated that when applying approved statistical procedures (i.e., summary statistics), the minimum cap aggregate thicknesses were achieved in all cases. The hydrographic survey data collected for the Year 0 cap monitoring throughout OU 4 indicated that the cap material in place met the performance standards set forth in the *Lower Fox River Remedial Design 100% Design Report* and

the COMMP. These surveys serve as the baseline for later surveys to assess long-term cap performance. Assessment of cap integrity for OU 4 occurred in 2014, 2016, 2017, 2018 and 2022.

Based upon the results of the Year 4 (2018) to Year 8 (2022) and Year 0 (2014) to Year 8 hydrographic survey comparison of caps placed 2013-2014, no areas of interest were identified. Poling conducted on October 10-13, 2022, indicated cap armor stone was present at all poling locations, providing statistical confidence that cap armor layer coverage exceeds 95% over the caps placed 2013-2014 area as a whole. The results of this survey, along with the observation that sediment deposition is present at a very high percentage of the poling locations, indicate that the placed armored caps are present and performing as designed. Isopach maps and box plots comparing the 2022 survey to the 2014 survey (Year 0 baseline) indicate that sediment consolidation has not occurred as broadly in OU 4 as what was observed in OU 1 and OU 3 but has averaged a decrease of approximately 0.6 feet and is still ongoing. Several cap areas reflect a larger variation in the Year 0 to 2022 survey differences, indicating settlement which is not uniform across the cap area. These are CB6-1-1, CA24B-1, CA24B-2, CB39-1-1, and CB45-1. These CCUs are either in the turning basin just below the De Pere Dam, or just upstream of the Highway 172 bridge. The isopach figures indicate that there were general increases and decreases in top of cap surface elevations of 0-0.5 feet since the previous survey in most of the cap areas, with general increases and decreases of up to 1.0 foot between the Year 0 to 2022 surveys. However, additional deposition (identified as an increase in bathymetric elevation) (0.5-2.5 feet range, 1 foot on average, since the previous survey and up to 6.5 feet since the Year 0 survey) was noted in a large portion of the cap areas north of the De Pere Dam, with the greatest elevation difference being in CB39 and CB39-1-1 near the Voyageur Park Turning Basin; in a large portion of the cap areas just south of the Highway 172 bridge; and in a large portion of the cap areas north of the Highway 172 bridge and south of the GP facility. Poling/probing measurements confirm that deposition of sediment has occurred in these areas of a similar magnitude as that indicated in the survey. Deposition in these areas is expected due to the decrease in river flow velocity caused by widening of the river channel downstream of the De Pere Dam and again upstream of the Highway 172 bridge, lengthening periods of slack water. Implementation of the Year 8 cap monitoring in OU 4 indicates that the 52 acres of caps completed in 2013-2014 remain in place, consistent with their design, and there is no indication of need for either additional focused investigation of the integrity of the caps, or for repair. Based on the COMMP schedule, the next routine cap monitoring survey for caps placed in 2013-2014 in OU 4 (Year 13) will occur in 2027.

Based upon the results of the Year 1 (2018) to Year 5 (2022) and Year 0 (2015/16) to Year 5 (2022) (for select caps) hydrographic survey comparison of caps placed 2015-2017, no areas of interest were identified. Poling conducted on October 11-14, 2022, indicated cap armor stone was present at all poling locations providing statistical confidence that cap armor layer coverage exceeds 95% over the caps placed 2015-2017 area as a whole. The results of this survey, along with the observation that sediment deposition is present at a very high percentage of the poling locations, indicate that the placed armored caps are present and performing as designed. Isopach maps and box plots comparing the Year 1 and Year 5 hydrographic surveys show consolidation averaging approximately 0.3 feet and is ongoing. As with the OU 4 cap areas placed 2013-2014, several cap areas reflect a larger variation in the Year 0 to 2022 survey differences, indicating settlement which is not uniform across the cap area. These are CC2E S-2, CCD34-2, and CBD35A-8B. These are either just downstream of the Highway 172 bridge or along the western GP shoreline. The isopach figures for caps along the navigation channel, in the area of the GP shoreline and south of the Fort Howard Turning Basin indicate general increases and decreases of 0-

0.5 feet in bathymetric surface elevations since the Year 1 survey, with general increases and decreases of up to 1.0 foot between the Year 0 and 2022 surveys. In areas of lower bathymetric elevations (e.g., CB11A-1, CB45-4, CCC2E S-2), more significant deposition has occurred since the Year 0 survey (up to >3.0 feet). Deposition increases upstream of the Highway 172 bridge, where the river widens, and continues at a magnitude of 1.0-1.5 feet since 2018 (up to 2.5 feet since Year 0) to the GP shoreline where the river again narrows. Deposition in these areas is expected due to the decrease in river flow velocity caused by widening of the river channel downstream of the Highway 172 bridge and deepening of the river channel south of and within the Fort Howard Turning Basin, lengthening periods of slack water. Implementation of the Year 5 cap monitoring in OU 4 indicates that the 57 acres of caps completed in 2015 through 2017 remain in place, consistent with their design, and there is no indication of need for either additional focused investigation of the integrity of the caps, or for repair. Based on the COMMP schedule, the next routine cap monitoring survey for caps placed in 2015 through 2017 in OU 4 (Year 10) will occur in 2027.

Based upon the results of the Year 0 (2020) to Year 2 (2022) hydrographic survey comparison of caps placed 2018 through 2020, several areas of interest were identified. Results of the comparison of the Year 0 and Year 2 hydrographic surveys showed consolidation averaging approximately 0.5 feet. Poling conducted on October 14, 2022, October 20, 2022, and June 2, 2023, indicated cap armor stone was present at all poling locations, providing statistical confidence that cap armor layer coverage exceeded 95% (closer to 99%) over the caps placed 2018 through 2020 area as a whole. The results of this survey, along with the observation that sediment deposition was present at a very high percentage of the poling locations, indicated that the placed armored caps were present and performing as designed.
As with the OU 4 cap areas placed 2013 through 2014, one area (SRA-04) reflected a larger variation in the Year 2018 to 2022 survey differences, indicating settlement which was not uniform across the cap area. This is along the east shoreline just downstream of the East River confluence. Downstream of the Fort Howard Turning Basin, the occurrence of caps decreases significantly, the caps were more recently placed (2018 through 2020), and several of the caps are SRA caps. SRA caps were placed over utilities and often have irregular/uneven surfaces. In general, the evaluation indicated that settlement occurred between the Year 2018 and 2022 surveys due to consolidation of underlying sediment; in addition, the low areas were being filled in with sediment. Implementation of the Year 0 to Year 2 cap monitoring in OU 4 indicated that the 17 acres of caps completed in 2018 through 2020 remained in place, consistent with their design, and there was no indication of need for either additional focused investigation of the integrity of the caps, or for repair.

Special Remediation Area (SRA) Caps

SRA caps have been constructed in areas requiring site-specific designs including over utility crossings intended to provide chemical isolation and armoring where it would be unsafe to dredge closer to the utility. Due to location-specific constraints, such as resistance to vessel propeller wash forces, SRA caps cannot achieve all cap design or performance criteria and are appropriately categorized as exceptional areas as identified in the 2003 ROD and 2007 ROD Amendment. SRA cap integrity is evaluated similarly to aggregate caps in that routine monitoring is based on initial post-construction bathymetric surveys compared to subsequent bathymetric surveys. If bathymetric surveys show evidence of erosion of the top of the cap in excess of specified amounts for a contiguous area greater than 5% of the individual SRA cap footprint, the need for additional assessment will be evaluated in collaboration with the Response

Agencies. Note that SRA caps have a significant thickness and small amounts of erosion would not impact the CIL of the SRA cap, and therefore overall cap performance.

The SRA cap Year 0 surveys were evaluated in 2021. The evaluation resulted in one area of interest in SRA cap SRA-06-01. To assess the irregularity of the bathymetric surface elevations (specifically, a depression within area of higher elevations), a cross-section was cut through the area and the Year 0 bathymetric surface elevations were compared to the 2018 post-dredge and pre-cap placement bathymetry. There was no indication of need for either additional focused investigation of the integrity of the caps, or for repair.

The SRA caps were evaluated during the 2022 CIA (Year 2) and areas of interest were further investigated in several of the SRA caps, specifically SRA-06-01, SRA-06-02, SRA-03-03, SRA-05-07-01, SRA-04-01, and SRA-08-02. There was no indication of need for either additional focused investigation of the integrity of the caps, or for repair.

Monitored Natural Recovery Areas and Cap Chemical Isolation Layer

MNR sediment sampling was completed in OU 2A, OU 2B, and OU 2C in 2012, 2014, 2018, and 2022, and in OU 5A, OU 5B, and OU 5C in 2021. In all cases, MNR surface sampling results for 2022 in OU 2 and 2021 in OU 5 were lower in PCB concentration (total Aroclors) than co-located samples collected during the historical monitoring events, supporting a conclusion that natural recovery of surface sediments is occurring in OU 2 and OU 5. The next monitoring event will be in 2027.

Chemical Isolation Layer (CIL) sampling in three select Type B cap areas in OU 3 in 2012, 2014, and 2018 indicated that measurable levels of PCBs in the 2-inch segment of the sand CIL analyzed at each location were not present. Since the CIL sampling results in OU 3 were consistent (at below detection levels when first placed), as well as in 2012, 2014, and 2018, the *2018 OU1-3 LTM Summary Report* (Foth Infrastructure & Environment, LLC, 2021b) recommended that CIL sampling in OU 3 be discontinued from the LTM program. On April 8, 2021, with the acceptance of the *2018 OU1-3 LTM Summary Report*, the Response Agencies approved removing the OU 3 CIL sampling requirement from future LTM events.

CIL monitoring of representative "Type B" caps in OU 4 was performed during October 2021, and all 15 locations sampled indicated no measurable level of PCBs in the 2-inch segment of the sand CIL analyzed at each location. The results of this study, as well as the sampling performed in OU 3, support a conclusion that the method of placement of the CIL and the methods used to sample the CIL for this study (diver assisted coring) have resulted in measurable conditions consistent with the requirements for chemical isolation of PCBs in Type B caps in OU 4. That is, a “clean” sand CIL of the required thickness is present above PCBs in the sediment bed.

Because results from the 2021 CIL sampling event are consistent with the placement testing and demonstrate continued CIL performance over time in OU 4 Type B caps, a memorandum requesting to remove the CIL sampling in OU 4 was submitted by the PRPs on March 9, 2022. The Response Agencies approved removing OU 4 CIL sampling from the 2022 LTM event but required that sampling in OU 4 continue until at least three sample events are complete (i.e., 2027 and 2032).

Site Inspection

The inspection of the Site was conducted on 3/22/2024. In attendance were James Saric with EPA, Rae-Ann Eifert and Jim Killian with WDNR, Gary Kincaid and Jay Grosskopf with Boldt Corporation. The purpose of the inspection was to assess the protectiveness and implementation of the remedy. The remedy was formally completed on October 3, 2022. However, although the Site is construction complete, fish tissue levels exceed cleanup levels and long-term monitoring is required. During the inspection, fish consumption advisory signs were observed at multiple boat launches along the Fox River. During the Site inspection, EPA confirmed that the remedy was implemented and functioning as planned, with no observed issues. The site inspection checklist and site inspection pictures are included in Appendix B and Appendix C.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Yes.

Question A Summary:

The remedy construction has been finalized in all OUs. OU 1 was considered construction complete on December 15, 2010. OUs 2 through 5 were considered construction complete on October 3, 2022. Remedial action activities were conducted in accordance with the requirements of the RODs, ROD Amendments, ESD, and design specifications. Current levels of PCBs still exceed remediation goals for fish tissue, sediments, and surface water, but monitoring performed to date shows decreases in PCB contamination in fish tissue, sediments, and surface water towards the achievement of RAOs established for the Site. Therefore, although fish tissue concentrations are decreasing, they have not met cleanup levels and present a human health exposure risk, as fishing has been observed and the Response Agencies believe that fish are being consumed. Monitoring is ongoing for all OUs and will continue until all remedial goals are achieved. Fish consumption advisories are in place and will be re-evaluated as deemed appropriate by WDNR. ICIAPs have been developed and approved for OU 1 (9/22/23) and for OUs 2 through 5 (5/9/23). Full implementation of the ICs as detailed in the ICIAPs is underway.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

Yes.

Question B Summary:

The exposure assumptions, toxicity data, cleanup levels, and RAOs established in the RODs, ROD Amendments, and ESD remain valid. There are no new promulgated standards applicable to the Site.

QUESTION C: Has any other information come to light that could call into question the protectiveness of

the remedy?

No.

Question C Summary:

At this time, no other information has come to light that would call into question the protectiveness of the remedy. Although climate change may result in increased flooding and more frequent higher-flow conditions, the sediment caps have been constructed to withstand high flow events. In addition, most PCB contamination was found in depositional, lower-flow environments, and is less prone to erosion.

VI. ISSUES/RECOMMENDATIONS

Issues/ Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
None

Issues and Recommendations Identified in the Five-Year Review:

OU(s): 2, 3, 4 and 5	**Issue Category:** Institutional Controls			
	Issue: Portions of the OUs 2 through 5 ICIAP have not been fully implemented.			
	Recommendation: Implement portions of the approved OUs 2 through 5 ICIAP that have not yet been implemented. MOAs for the OUs 2 through 5 ICIAP need to be finalized for communication strategies between counties, municipalities, WDNR, and USACE.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	Yes	PRP	EPA/State	12/31/2028

OU(s): 1, 2, 3, 4 and 5	**Issue Category:** Remedy Performance
	Issue: Fish are contaminated with levels of PCBs that are unsafe for unlimited human consumption.
	Recommendation: Maintain a fish-consumption advisory until fish tissue concentrations reach safe levels. Collect additional fish tissue samples as required

	in the LTM plan. Continue public outreach efforts to inform the public of risks associated with eating fish, limiting fish consumption, and safe eating practices. Re-evaluate effectiveness during the next FYR.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	State	EPA/State	12/31/2028

VII. PROTECTIVENESS STATEMENTS

Protectiveness Statement(s)	
Operable Unit: 1	*Protectiveness Determination:* Not Protective
Protectiveness Statement: The remedy at OU 1 is not protective of human health and the environment. While the remedy construction for OU 1 has been implemented and constructed in accordance with the requirements of the decision documents and design specifications, the RAOs have not been achieved. Monitoring data shows that there have been improvements in PCB fish tissue concentrations for the indicator species. Long-term monitoring will continue until RAOs are achieved. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. Monitoring data shows that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents. ICs are fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining the remedy components (*i.e.*, caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.	

Protectiveness Statement(s)	
Operable Unit: 2	*Protectiveness Determination:* Not Protective
Protectiveness Statement: The remedy at OU 2 is not protective of human health and the environment. While the remedy construction for OU 2 has been implemented and constructed in accordance with the requirements of the decision documents and design specifications, the RAOs have not been achieved. Monitoring data shows that there have been improvements in PCB fish tissue concentrations for the indicator species. Long-term monitoring will continue until RAOs are achieved. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. Monitoring data shows that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents. Effective ICs need to be fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining	

the remedy components (*i.e.*, caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.

Protectiveness Statement(s)	
Operable Unit: 3	*Protectiveness Determination:* Not Protective
Protectiveness Statement: The remedy at OU 3 is not protective of human health and the environment. While the remedy construction for OU 3 has been implemented and constructed in accordance with the requirements of the decision documents and design specifications, the RAOs have not been achieved. Monitoring data shows that there have been improvements in PCB fish tissue concentrations for the indicator species. Long-term monitoring will continue until RAOs are achieved. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. Monitoring data shows that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents. Effective ICs need to be fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining the remedy components (*i.e.*, caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.	

Protectiveness Statement(s)	
Operable Unit: 4	*Protectiveness Determination:* Not Protective
Protectiveness Statement: The remedy at OU 4 is not protective of human health and the environment. While the remedy construction for OU 4 has been implemented and constructed in accordance with the requirements of the decision documents and design specifications, the RAOs have not been achieved. Monitoring data shows that there have been improvements in PCB fish tissue concentrations for the indicator species. Long-term monitoring will continue until RAOs are achieved. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. Monitoring data shows that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents. Effective ICs need to be fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining the remedy components (*i.e.*, caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.	

Protectiveness Statement(s)	
Operable Unit: 5	*Protectiveness Determination:* Not Protective

Protectiveness Statement: The remedy at OU 5 is not protective of human health and the environment. While the remedy construction for OU 5 has been implemented and constructed in accordance with the requirements of the decision documents and design specifications, the RAOs have not been achieved. Monitoring data shows that there have been improvements in PCB fish tissue concentrations for the indicator species. Long-term monitoring will continue until RAOs are achieved. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. Monitoring data shows that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents. Effective ICs need to be fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining the remedy components (*i.e.*, caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.

Sitewide Protectiveness Statement
Protectiveness Determination: Not Protective
Protectiveness Statement: The Site is not protective of human health and the environment. Although the remedies for OUs 1 through 5 have been implemented and constructed in accordance with the requirements of the decision documents and design specifications, and the Site has achieved construction completion, the RAOs have not been achieved. Monitoring data shows that there have been improvements in PCB fish tissue concentrations for the indicator species. Long-term monitoring will continue until RAOs are achieved. There are fish consumption advisories in place and warning signs posted along the river, however, fishing has been observed and the Response Agencies believe that fish are being consumed. Ecological receptors are still exposed to unacceptable risks posed by PCB contamination in fish, sediments and surface water. Monitoring data shows that PCB concentrations in sediments, surface water, and fish are decreasing to meet the RAOs as intended in the decision documents. Effective ICs need to be fully implemented. Compliance with ICs will be ensured by maintaining, monitoring, and enforcing ICs, as well as maintaining the remedy components (*i.e.*, caps) at the Site. It will take some time following completion of the remedial activities to see the fish concentrations decrease to protective levels.

VIII. NEXT REVIEW

The next FYR report for the Fox River NRDA/PCB Releases Superfund Site is required five years from EPA's signature date of this review.

APPENDIX A – REFERENCE LIST

RETEC, 2002. *Final Baseline Human Health and Ecological Risk Assessment for the Lower Fox River and Green Bay, Wisconsin, Remedial Investigation and Feasibility Study*. Prepared for Wisconsin Department of Natural Resources by The RETEC Group, Inc., Seattle, Washington and Pittsburgh, Pennsylvania. December 2002.

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APPENDIX B – SITE INSPECTION CHECKLIST

Site Inspection Checklist

I. SITE INFORMATION	
Site name: **Fox River NRDA/PCB Releases**	**Date of inspection:** **3/22/2024**
Location and Region: **Green Bay, WI Region 5**	**EPA ID:** **WID0001954841**
Agency, office, or company leading the FYR: **US EPA**	**Weather/temperature:** CLOUDY, SNOW Click or tap here to enter text. 30° EAST 5

Remedy Includes: (Check all that apply)

- ☐ Landfill cover/containment
- ☐ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☒ Monitored natural attenuation **(OU2 and OU5 MNR)**
- ☐ Groundwater containment
- ☐ Vertical barrier walls
- ☒ Other: **Sediment Remediation**

Attachments:

- ☐ Inspection team roster attached
- ☐ Site map attached

Jim SARIC - U.S. EPA
Rae-Ann Eifert - DNR
Jim Killian - DNR
Gary Kincaid Bolds
Jay Grosskopf Bolds

II. INTERVIEWS (Check all that apply)

1. **O&M Site Manager** NA, Title , Click or tap to enter a date.

   Interviewed: ☐ at site ☐ at office ☐ by phone Phone Number: Click here to enter text.

   Problems, suggestions: ☐ Report attached

   Click or tap here to enter text.

2. **O&M Staff** NA, Title , Click or tap to enter a date.

   Interviewed: ☐ at site ☐ at office ☐ by phone Phone Number: Click here to enter text.

   Problems, suggestions: ☐ Report attached

   Click or tap here to enter text.

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

   Agency: **NA**

   Contact: Name , Title , Click or tap to enter a date., P: Phone Number

   Problems, suggestions: ☐ Report attached

   Click or tap here to enter text.

   Agency: Click or tap here to enter text.

   Contact: Name , Title , Click or tap to enter a date., P: Phone Number

   Problems, suggestions: ☐ Report attached

   Click or tap here to enter text.

   Agency: Click or tap here to enter text.

   Contact: Name , Title , Click or tap to enter a date., P: Phone Number

   Problems, suggestions: ☐ Report attached

   Click or tap here to enter text.

   Agency: Click or tap here to enter text.

   Contact: Name , Title , Click or tap to enter a date., P: Phone Number

   Problems, suggestions:

   Click or tap here to enter text.

4. **Other Interviews (optional):** ☐ Report attached

   NA

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)			
1. O&M Documents			
☐ O&M manual	☐ Readily available	☐ Up to date	☒ N/A
☐ As-built drawings	☐ Readily available	☐ Up to date	☒ N/A
☐ Maintenance logs	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			
2. Site-Specific Health and Safety Plan		☐ Readily available	
☐ Contingency Plan/Emergency Response Plan		☐ Readily available	
Remarks: NA			
3. O&M and OSHA Training Records	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			
4. Permits and Service Agreements			
☐ Air discharge permit	☐ Readily available	☐ Up to date	☒ N/A
☐ Effluent discharge	☐ Readily available	☐ Up to date	☒ N/A
☐ Waste disposal, POTW	☐ Readily available	☐ Up to date	☒ N/A
☐ Other permits: Click or tap here to enter text.			
Remarks: Click or tap here to enter text.			
5. Gas Generation Records	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			
6. Settlement Monument Records	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			
7. Groundwater Monitoring Records	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			
8. Leachate Extraction Records	☐ Readily available	☐ Up to date	☒ N/A
Remarks: Click or tap here to enter text.			

9. Discharge Compliance Records

☐ Air	☐ Readily available	☐ Up to date	☒ N/A
☐ Water (effluent)	☐ Readily available	☐ Up to date	☒ N/A

Remarks: Click or tap here to enter text.

10. Daily Access/Security Logs

☐ Readily available ☐ Up to date ☒ N/A

Remarks: Click or tap here to enter text.

IV. O&M COSTS

1. O&M Organization

☐ State in-house
☐ PRP in-house
☐ Federal Facility in-house
☐ Contractor for State
☒ Contractor for PRP
☐ Contractor for Federal Facility

Remarks: Responsible Parties and their Contractor are responsible for O&M.

2. O&M Cost Records

☐ Readily available ☐ Up to date ☒ Funding mechanism/agreement in place

Original O&M cost estimate Click or tap here to enter text. ☐ Breakdown attached

Total annual cost by year for review period if available

From	To	Total cost	
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached
From	To	Total cost	
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached
From	To	Total cost	
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached
From	To	Total cost	
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached
From	To	Total cost	
Click or tap to enter a date.	Click or tap to enter a date.	Click or tap here to enter text.	☐ Breakdown attached

3. Unanticipated or Unusually High O&M Costs During Review Period

Describe costs and reasons:

NA

V. ACCESS AND INSTITUTIONAL CONTROLS

☒ Applicable ☐ N/A

1. Fencing Damaged ☐ Location shown on site map ☐ Gates secured ☒ N/A

Remarks: Click or tap here to enter text.

2. Other Access Restrictions ☐ Location shown on site map ☐ Gates secured

Remarks: Fish Advisory signs exist throughout the Fox River. No access restrictions on the Fox River.

3. Institutional Controls (ICs)

A. Implementation and Enforcement

Site conditions imply ICs not properly implemented	☐ Yes	☒ No	☐ N/A
Site conditions imply ICs not being fully enforced	☐ Yes	☒ No	☐ N/A
Type of monitoring (*e.g.*, self-reporting, drive by)	There is an ICIAP for OU1 and OUs2 through OU5 that has been approved by the Agencies.		
Frequency	Per OU1 and OUs 2-5 ICIAP		
Responsible party/agency	Georgia-Pacific and Glatfelter		

Contact: Name , Title , Click or tap to enter a date., P: Phone Number

Reporting is up-to-date	☒ Yes	☐ No	☐ N/A
Reports are verified by the lead agency	☒ Yes	☐ No	☐ N/A
Specific requirements in deed or decision documents have been met	☒ Yes	☐ No	☐ N/A
Violations have been reported	☐ Yes	☐ No	☒ N/A

Other problems or suggestions:

Click or tap here to enter text.

B. Adequacy ☒ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks: Click or tap here to enter text.

4. General

A. Vandalism/Trespassing ☐ Location shown on site map ☒ No vandalism evident

Remarks: Click or tap here to enter text.

B. Land use changes on site ☒ N/A

Remarks: Click or tap here to enter text.

C. Land use changes off site ☒ N/A

Remarks: Click or tap here to enter text.

VI. GENERAL SITE CONDITIONS

1. Roads ☐ Applicable ☒ N/A

A. Roads damaged ☐ Location shown on site map ☐ Roads adequate ☒ N/A

Remarks: Click or tap here to enter text.

B. Other Site Conditions

Remarks: **NA**

VII. LANDFILL COVERS

1. Landfill Surface ☐ Applicable ☒ N/A

A. Settlement (Low Spots) ☐ Location Shown on Site Map ☐ Settlement Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: NA

B. Cracks ☐ Location Shown on Site Map ☐ Cracking Not Evident

Lengths: Click or tap here to enter text. Widths: Click or tap here to enter text. Depths: Click or tap here to enter text.

Remarks: NA

C. Erosion ☐ Location Shown on Site Map ☐ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: NA

D. Holes ☐ Location Shown on Site Map ☐ Holes Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: NA

E. Vegetative Cover ☐ Grass ☐ Cover Properly Established

☐ Tress/Shrubs (indicate size and locations on a diagram ☐ No Signs of Stress

Remarks: NA

F. Alternative Cover (armored rock, concrete, etc.) ☒ N/A

Remarks: Click or tap here to enter text.

G. Bulges ☐ Location Shown on Site Map ☐ Bulges Not Evident

Areal Extent: Click or tap here to enter text. Height: Click or tap here to enter text.

Remarks: NA

H. Wet Areas/Water Damage ☐ Wet Areas/Water Damage Not Evident

☐ Wet Areas	☐ Location Shown on Site Map	Areal Extent: Click or tap here to enter text.
☐ Ponding	☐ Location Shown on Site Map	Areal Extent: Click or tap here to enter text.
☐ Seeps	☐ Location Shown on Site Map	Areal Extent: Click or tap here to enter text.
☐ Soft Subgrade	☐ Location Shown on Site Map	Areal Extent: Click or tap here to enter text.

Remarks: NA

I. Slope Instability ☐ Location Shown on Site Map ☐ Slope Instability Not Evident

☐ Slides Areal Extent: Click or tap here to enter text.

Remarks: NA

2. Benches ☐ Applicable ☒ N/A

(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

A. Flows Bypass Bench ☐ Location Shown on Site Map ☒ N/A or Okay

Remarks: Click or tap here to enter text.

B. Bench Breached ☐ Location Shown on Site Map ☒ N/A or Okay

Remarks: Click or tap here to enter text.

C. Bench Overtopped ☐ Location Shown on Site Map ☒ N/A or Okay

Remarks: Click or tap here to enter text.

3. Letdown Channels ☐ Applicable ☒ N/A

(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

A. Settlement ☐ Location Shown on Site Map ☐ Settlement Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: NA

B. Material Degradation ☐ Location Shown on Site Map ☐ Degradation Not Evident

Material Type: Click or tap here to enter text. Areal Extent: Click or tap here to enter text.

Remarks: NA

C. Erosion ☐ Location Shown on Site Map ☐ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: NA

D. Undercutting ☐ Location Shown on Site Map ☐ Undercutting Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: NA

E. Obstructions ☐ Location Shown on Site Map ☐ Undercutting Not Evident

Type: Click or tap here to enter text.

Areal Extent: Click or tap here to enter text. Size: Click or tap here to enter text.

Remarks: NA

F. Excessive Vegetative Growth ☐ Location Shown on Site Map ☐ Excessive Growth Not Evident

Areal Extent: Click or tap here to enter text. ☐ Vegetation in channels does not obstruct flow

Remarks: NA

4. Cover Penetrations ☐ Applicable ☒ N/A

A. Gas Vents ☐ Active ☐ Passive

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☒ N/A

Remarks: Click or tap here to enter text.

B. Gas Monitoring Probes

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☒ N/A

Remarks: Click or tap here to enter text.

C. Monitoring Wells

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☒ N/A

Remarks: Click or tap here to enter text.

D. Leachate Extraction Wells

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ Good condition ☐ Evidence of leakage at penetration

☐ Needs Maintenance ☒ N/A

Remarks: Click or tap here to enter text.

E. Settlement Monuments ☐ Located ☐ Routinely Surveyed ☒ N/A

Remarks: Click or tap here to enter text.

5. Gas Collection and Treatment ☐ Applicable ☒ N/A

A. Gas Treatment Facilities

☐ Flaring ☐ Thermal Destruction ☐ Collection for Reuse

☐ Good condition ☐ Needs Maintenance

Remarks: NA

B. Gas Collection Wells, Manifolds, and Piping

☐ Good condition ☐ Needs Maintenance ☒ N/A

Remarks: Click or tap here to enter text.

C. Gas Monitoring Facilities (e.g. gas monitoring of adjacent homes or buildings)		
☐ Good condition	☐ Needs Maintenance	☒ N/A
Remarks: Click or tap here to enter text.		
6. Cover Drainage Layer	☐ Applicable	☒ N/A
A. Outlet Pipes Inspected	☐ Functioning	☒ N/A
Remarks: Click or tap here to enter text.		
B. Outlet Rock Inspected	☐ Functioning	☒ N/A
Remarks: Click or tap here to enter text.		
7. Detention/Sediment Ponds	☐ Applicable	☒ N/A
A. Siltation	☐ Siltation Not Evident	☒ N/A
Areal Extent: Click or tap here to enter text.	Depth: Click or tap here to enter text.	
Remarks: Click or tap here to enter text.		
B. Erosion	☐ Erosion Not Evident	
Areal Extent: Click or tap here to enter text.	Depth: Click or tap here to enter text.	
Remarks: NA		
C. Outlet Works	☐ Functioning	☒ N/A
Remarks: Click or tap here to enter text.		
D. Dam	☐ Functioning	☒ N/A
Remarks: Click or tap here to enter text.		
8. Retaining Walls	☐ Applicable	☒ N/A
A. Deformations	☐ Location Shown on Site Map	☐ Deformation Not Evident
Horizontal Displacement: Click or tap here to enter text.		
Vertical Displacement: Click or tap here to enter text.		
Rotational Displacement: Click or tap here to enter text.		
Remarks: NA		
B. Degradation	☐ Location Shown on Site Map	☐ Deformation Not Evident
Remarks: NA		
9. Perimeter Ditches/Off-Site Discharge	☐ Applicable	☒ N/A
A. Siltation	☐ Location Shown on Site Map	☐ Siltation Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: NA

B. Vegetative Growth ☐ Location Shown on Site Map ☒ N/A

☐ Vegetation Does Not Impede Flow

Areal Extent: Click or tap here to enter text. Type: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

C. Erosion ☐ Location Shown on Site Map ☐ Erosion Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: NA

D. Discharge Structure ☐ Functioning ☒ N/A

Remarks: Click or tap here to enter text.

VIII. VERTICAL BARRIER WALLS

☐ Applicable | ☒ N/A

1. Settlement ☐ Location Shown on Site Map ☐ Settlement Not Evident

Areal Extent: Click or tap here to enter text. Depth: Click or tap here to enter text.

Remarks: NA

2. Performance Monitoring Type of Monitoring: NA

☐ Performance Not Monitored ☐ Evidence of Breaching

Frequency: Click or tap here to enter text. Head Differential: Click or tap here to enter text.

Remarks: Click or tap here to enter text.

IX. GROUNDWATER/SURFACE WATER REMEDIES

☐ Applicable | ☒ N/A

1. Groundwater Extraction Wells, Pumps, and Pipelines ☐ Applicable ☒ N/A

A. Pumps, Wellhead Plumbing, and Electrical ☒ N/A

☐ Good Condition ☐ All Required Wells Properly Operating ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

B. Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances

☐ Good Condition ☐ Needs Maintenance

Remarks: NA

C. Spare Parts and Equipment

☐ Readily Available ☐ Good Condition ☐ Needs to be Provided ☐ Requires Upgrade

Remarks: NA

2. Surface Water Collection Structures, Pumps, and Pipelines ☐ Applicable ☒ N/A

A. Collection Structures, Pumps, and Electrical

☐ Good Condition ☐ Needs Maintenance

Remarks: NA

B. Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances

☐ Good Condition ☐ Needs Maintenance

Remarks: NA

C. Spare Parts and Equipment

☐ Readily Available ☐ Good Condition ☐ Needs to be Provided ☐ Requires Upgrade

Remarks: NA

3. Treatment System ☐ Applicable ☒ N/A

A. Treatment Train (Check components that apply)

☐ Metals removal ☐ Oil/Water Separation ☐ Bioremediation

☐ Air Stripping ☐ Carbon Absorbers

☐ Filters Click or tap here to enter text.

☐ Additive (e.g. chelation agent, flocculent) Click or tap here to enter text.

☐ Others Click or tap here to enter text.

☐ Good Condition ☐ Needs Maintenance

☐ Sampling ports properly marked and functional

☐ Sampling/maintenance log displayed and up to date

☐ Equipment properly identified

☐ Quantity of groundwater treated annually Click or tap here to enter text.

☐ Quantity of surface water treated annually Click or tap here to enter text.

Remarks: NA

B. Electrical Enclosures and Panels (properly rated and functional)

☒ N/A ☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

C. Tanks, Vaults, Storage Vessels ☒ N/A

☐ Proper Secondary Containment ☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

D. Discharge Structure and Appurtenances

☒ N/A ☐ Good Condition ☐ Needs Maintenance

Remarks: Click or tap here to enter text.

E. Treatment Building(s)

☒ N/A ☐ Good condition (esp. roof and doorways)

☐ Needs repair ☐ Chemicals and equipment properly stored

Remarks Click or tap here to enter text.

F. Monitoring Wells (Pump and Treatment Remedy) ☒ N/A

☐ Properly secured/locked ☐ Functioning

☐ Routinely sampled ☐ All required wells located

☐ Good condition ☐ Needs Maintenance

Remarks Click or tap here to enter text.

4. Monitoring Data

A. Monitoring Data:

☐ Is Routinely Submitted on Time ☐ Is of Acceptable Quality

B. Monitoring Data Suggests:

☐ Groundwater plume is effectively contained ☐ Contaminant concentrations are declining

5. Monitored Natural Attenuation

A. Monitoring Wells (natural attenuation remedy) ☒ N/A

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled

☐ All required wells located ☐ Needs Maintenance ☐ Good condition

Remarks: Click or tap here to enter text.

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

1. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).
The PCB sediment excavation and capping remedy was completed in 2020, and is effective and functioning as designed.

2. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.
There are no issues related to O&M. The ICIAPs for OU1 and OUs 2 through 5 address ICs. The Cap Operation, Monitoring and Maintenance Plan (COMMP) addresses O&M for sediment caps. The Long-Term Monitoring Plan addresses fish, surface water and sediment monitoring.

3. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.

None

4. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

None

APPENDIX C – SITE INSPECTION PHOTOGRAPHS



North view looking in the Bay of Green Bay (Operable Unit 5)



Looking South from Metro Boat Launch at downstream section of Operable Unit 4



Environmental Education Center at Metro Boat Launch, Green Bay, WI



From left to right: Jim Saric, US EPA; Rae-Ann Eifert, WDNR; Jim Killian, WDNR; and Jay Grosskopf, Boldt



Site of former Operable Units 2-5 sediment processing facility, which went through decommissioning, decontamination, demobilization, and restoration in 2020 through 2022



Fish advisory sign at Perkofski boat launch upstream portion of Operable Unit 4



Fish advisory sign at Perkofski boat launch upstream portion of Operable Unit 4



Upstream portion of Operable Unit 4 looking toward De Pere Dam



De Pere Dam dividing Operable Unit 3 and Operable Unit 4



Southern view of downstream portion of Operable Unit 3



Little Rapids Dam dividing Operable Unit 2 and Operable Unit 3



Southern view of downstream portion of Operable Unit 2



Looking North near the upstream portion of Operable Unit 2 in Kimberly, WI



Fox River Crossing in Little Lake Butte des Morts (Operable Unit 1)



Looking South in Little lake Butte des Morts (Operable Unit 1)

APPENDIX D – NEWSPAPER ADVERTISEMENT

Classifieds

To Advertise, visit our website: **classifieds.greenbaypressgazette.com**
- Public Notices/Legals email: **legals@greenbaypressgazette.com**
- Business & Services email: **gwmservicedirectory@gannett.com**
- To post job openings, visit: **greenbaypressgazette.com/jobs**

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All classified ads are subject to the applicable rate card, copies of which are available from our Advertising Dept. All ads are subject to approval before publication. Green Bay Press-Gazette reserves the right to edit, refuse, reject, classify or cancel any ad at any time. Errors must be reported in the first day of publication. Green Bay Press-Gazette shall not be liable for any loss or expense that results from an error in or omission of an advertisement. No refunds for early cancellation of order.

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If you like Boxers, you'd love Boxer Poodle Puppies! M, F, 5 wks, parents AKC reg., family dogs! Poodle performance. 414-699-8351



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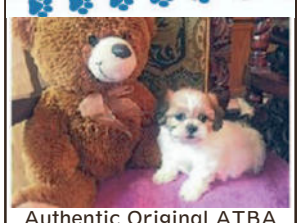
$400 - SHIH TZU PUPPIES SHOTS, WORMED. MALES/FEMALES. Ready Now! 920-594-0828



TEDDY BEAR puppies Non-shedding, home raised w/kids. House training started 920-428-9653 Will deliver



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Assorted Stuff
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WAUSAU ANTIQUE SALE Mar 23-24, DC Everest High School, 6400 Alderson St., Weston SAT 9-5, SUN 10-3. antiqueshowsinwis.com 50 booths, 40th yr, 715-355-5144

Antiques & Collectibles

Antiques Wanted: Cash for old furniture, advertising, crocks, decoys, gold, and silver coins Pre-1964 Eberts 920-682-0687 *No Commission* We Will Come to You!

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WOW!

BOOKS- 80% hardcover quality books. house full, all categories from 1960's-1990's and some older. Make offer. Call 920-973-6949.

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Dryers, Washers, Stoves, Fridges, Wringers, Jukeboxes 920-496-9896 Dead or Alive!

RIDING LAWN MOWERS riding lawn mowers wanted - running or not - 920 494-4329. 920 494-4329 -Jim

WANTED: Military items from WWII or older, US, German, Japanese. Helmets, edged weapons, pistols, rifles, military collections. (920) 627-5333 All Calls Welcome! If no answer, lv msg. w/area code

LOOK!

INSTANT CASH PAID for baseball, football, basketball cards, sports mem., autographs, game used sports items, coins, gold, silver, watches, diamonds, old toys, trains, comic books, old photos, military, presidential, huge collections, lots of others. Scott, 513-295-5634 Instant Cash Paid - goodasgold@roadrunner.com

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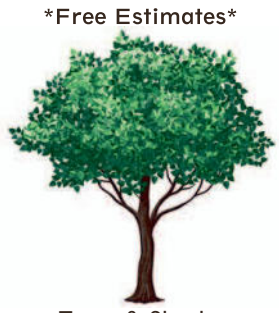

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Your Source Public Notices
for the latest...

Beer/Liquor Licenses

APPLICATION FOR LIQUOR LICENSE
To Whom It May Concern: I hereby certify that Brian Bradley residing in Algoma, Wisconsin, Kewaunee County, has applied to the Town of Lincoln for a Combination Class B Retail License for the sale of fermented malt beverages and intoxicating liquors for the period ending June 30, 2025, at the building situated at E2578 County Road S, Casco, Wisconsin.

Dated 3/15/2024
Mary Ann Salmon, Clerk
Town of Lincoln

APPLICATION FOR LIQUOR LICENSE
To Whom It May Concern: I hereby certify that Kevin Kotarek residing in Casco, Wisconsin, Kewaunee County, has applied to the Town of Lincoln for a Combination Class B Retail License for the sale of fermented malt beverages and intoxicating liquors for the period ending June 30, 2025, at the building situated at E3261 County Road S, Casco, Wisconsin.

Dated 3/15/2024
Mary Ann Salmon, Clerk
Town of Lincoln
Run: March 20, 2024 WNAXLP

LIQUOR & FERMENTED MALT BEVERAGE APPLICATION
The following original application has been received by the Clerk of the City of Green Bay for a license to sell intoxicating liquor and fermented malt beverages under a Class "B" Beer & "Class B" Liquor Permit for the 2023-2024 license year:
333 Main, LLC
at 333 Main St.
Green Bay, WI 54301
Celestine Jeffreys
Green Bay City Clerk
Dated at Green Bay, Wisconsin,
This March 13, 2024
RUN: March 20, 21, 22, 2024 WNAXLP

NOTICE OF LIQUOR LICENSE APPLICATION
The Clerk of the Town of Humboldt has received the following application for license to sell intoxicating liquor and /or fermented malt beverages for 2024

Temporary Class "B" Combination---
Sugar Bush Little League
5970 Humboldt Rd
Luxemburg WI 54217
President: Jason Ledvina

Judy Baierl, Clerk
Town of Humboldt
March 11,2024
Run: 3/18, 20, 22, 2024 WNAXLP

NOTICE OF APPLICATION FOR LICENSE
CITY OF ALGOMA

Please take notice that the following application has been received and is on file in the office of the CITY CLERK of the CITY OF ALGOMA for intoxicating liquor, fermented malt beverage and wine for the year ending the 30th day of June, 2024. Publication is being made in accordance with 125.04(3)(g) of the Wisconsin Statutes. The applicant(s) will be considered for approval at the Common Council meeting on April 01, 2024.

Combination Class "B" Beer & "Class B" Liquor:
• **Vandertie Ventures, LLC (The Steele Pour)**, 322 Steele St., Algoma, WI – Mariah Vandertie, Agent

Dated this 18th Day of March, 2024.
Erin Mueller, City Clerk
Run March 18, 19, 20, 2024 WNAXLP

Notice To Creditors

STATE OF WISCONSIN, CIRCUIT COURT, BROWN COUNTY
IN THE MATTER OF THE ESTATE OF James G. Perrault
02/10/2024
Notice to Creditors
(Informal Administration)
Case No. 24 PR 60
PLEASE TAKE NOTICE:
1. An application for informal administration was filed.
2. The decedent, with date of birth 07/31/1950 and date of death 02/10/2024, was domiciled in Brown County, State of WI, with a mailing address of 1287 Hastings St., Green Bay, Wisconsin 54301.
3. All interested persons waived notice.
4. The deadline for filing a claim against the decedent's estate is JUNE 21, 2024.
5. A claim may be filed at the Brown County Courthouse, Green Bay, Wisconsin, Room 160.
DATE SIGNED: March 7, 2024
Electronically signed by Whitney J. Davister
Probate Registrar
Attorney Devin C. Shanley
300 N. Broadway, Ste. 1A
Green Bay, Wiscosnin 54303
Telephone (920) 831-0300
Bar Number 1090094
Run March 13, 20, 27, 2024 WNAXLP

STATE OF WISCONSIN CIRCUIT COURT BROWN COUNTY
IN THE MATTER OF THE ESTATE OF SANDRA D. CUNNINGHAM
DOD: 06/04/2021
Notice to Creditors
(Informal Administration)
Case No. 24 PR 73
PLEASE TAKE NOTICE:
1. An application for informal administration was filed.
2. The decedent, with date of birth 02/16/1954 and date of death 06/04/2021, was domiciled in Brown County, State of WI, with a mailing address of 1242 Hastings St., Green Bay, Wisconsin.
3. All interested persons waived notice.
4. The deadline for filing a claim against the decedent's estate is JUNE 20, 2024.
5. A claim may be filed at the Brown County Courthouse, Green Bay, Wisconsin, Room 160.
DATE SIGNED: March 7, 2024
Electronically signed by Whitney J. Davister
Probate Registrar
Attorney Devin C. Shanley
300 N. Broadway, Ste. 1A
Green Bay, Wisconsin 54303
Telephone: (920) 831-0300
Bar Number:1090094
RUN: March 13, 20, 27, 2024 WNAXLP

STATE OF WISCONSIN, CIRCUIT COURT, BROWN COUNTY
IN THE MATTER OF THE ESTATE OF JOHN C. SWANSON
DOD: 06/10/2023
Notice to Creditors
(Informal Administration)
Case No. 24 PR 74
PLEASE TAKE NOTICE:
1. An application for informal administration was filed.
2. The decedent, with date of birth 10/05/1961 and date of death 06/10/2023, was domiciled in BROWN County, State of WISCONSIN, with a mailing address of 412 LOIS ST., DE PERE, WI 54115.
3. All interested persons waived notice.
4. The deadline for filing a claim against the decedent's estate is JUNE 20, 2024.
5. A claim may be filed at the BROWN County Courthouse, 100 S. JEFFERSTON ST., GREEN BAY, WI 54301, Wisconsin, Room 160.
DATE SIGNED: March 8, 2024
Electronically signed by Whitney J. Davister
Probate Registrar
Attorney Devin C. Shanley
300 N. Broadway, Ste. 1A
Green Bay, Wiscosnin 54303
Telephone (920) 831-0300
Bar Number 1090094
Run March 13, 20, 27, 2024 WNAXLP

Notice To Creditors

STATE OF WISCONSIN, CIRCUIT COURT, BROWN COUNTY
IN THE MATTER OF THE ESTATE OF James G. Perrault
02/10/2024
Notice to Creditors
(Informal Administration)
Case No. 24 PR 60
PLEASE TAKE NOTICE:
1. An application for informal administration was filed.
2. The decedent, with date of birth 07/31/1950 and date of death 02/10/2024, was domiciled in Brown County, State of WI, with a mailing address of 1287 Hastings St., Green Bay, Wisconsin 54301.
3. All interested persons waived notice.
4. The deadline for filing a claim against the decedent's estate is JUNE 21, 2024.
5. A claim may be filed at the Brown County Courthouse, Green Bay, Wisconsin, Room 160.
DATE SIGNED: March 7, 2024
Electronically signed by Whitney J. Davister
Probate Registrar
Attorney Devin C. Shanley
300 N. Broadway, Ste. 1A
Green Bay, Wisconsin 54303
Telephone: (920) 831-0300
Bar Number:1090094
RUN: March 13, 20, 27, 2024 WNAXLP

Notice To Creditors

GREEN BAY, WI 54301, Wisconsin, Room REGISTER IN PROBATE.
DATE SIGNED: March 7, 2024
Electronically signed by Whitney J. Davister
Probate Registrar
ATTORNEY CURTIS R. CZACHOR
107 N. BROADWAY ST., SUITE II
GREEN BAY, WI 54303
920-435-7300 Bar Number 1018252
Run: March 13, 2024 WNAXLP

STATE OF WISCONSIN
CIRCUIT COURT
BROWN COUNTY
IN THE MATTER OF JOANNE L CAHOON
NOTICE TO CREDITORS
(informal Administration)
Case No. 24PR65
PLEASE TAKE NOTICE:
1. An application for informal administration was filed.
2. The decedent, with date of birth of June 2, 1939, and date of death January 16, 2024 was domiciled in Brown County, State of Wisconsin, with a mailing address of 713 Cardinal Lane, Green Bay, WI 54313.
3. All interested parties waived notice.
4. The deadline for filing a claim against the decedent's estate is June 11, 2024.
5. A claim may be filed at the Brown County Courthouse, Green Bay, Wisconsin, 160.
BY THE COURT:
DATE SIGNED: February 27, 2024
Electronically signed by Whitney Davister
Sandra J Mehre
WNAXLP
March 6,13,20 2024
LWIX0069063

STATE OF WISCONSIN
CIRCUIT COURT
BROWN COUNTY
IN THE MATTER OF THE ESTATE OF IDA V. LAGOSH
NOTICE TO CREDITORS
(Informal Administration)
Case No. 24 PR 66
PLEASE TAKE NOTICE:
1. An application for Informal administration was filed.
2. The decedent, with date of birth of December 13, 1925, and date of death February 24, 2024 was domiciled in Brown County, State of Wisconsin, with a mailing address of 1308 South Norwood Avenue, Green Bay, WI 54304.
3. All interested parties waived notice.
4. The deadline for filing a claim against the decedent's estate is June 14, 2024.
5. A claim may be filed at the Brown County Courthouse, 100 S. Jefferson Street, Green Bay, Wisconsin, Room 160.
BY THE COURT:
DATE SIGNED: March 1, 2024
Electronically signed by Whitney J. Davister
Miller & Miller, LLC - John R. Miller
PO Box 200
Portage, WI 53901
608-742-8585
Bar No. 1015298
WNAXLP
March 6,13,20 2024
LWIX0069368

EPA

EPA Begins Review of Fox River Superfund Site

Green Bay, Wisconsin

The U.S. Environmental Protection Agency is conducting its fourth five-year review of the Fox River NRDA/PCB Releases Superfund site, located at the Lower Fox River in northeastern Wisconsin. The Superfund law requires regular checkups of sites that have been cleaned up – with waste managed on-site – to make sure the cleanup continues to protect people and the environment. This review is expected to be completed in November 2024.

The 39-mile Lower Fox River has 12 dams and includes the highest concentration of pulp and paper mills in the world. During the 1950s and 1960s, these mills routinely used polychlorinated biphenyls (PCBs) in their operations, contaminating the river.

Cleanup work occurred from 2004 to 2020 under the oversight of EPA and the Wisconsin Department of Natural Resources. The work addressed more than 6 million cubic yards of PCB-contaminated sediment across 39 miles of the Lower Fox River, at an estimated cost of $1 billion. Dredging and capping in the East River was also completed.

Long-term monitoring, which will include studying fish tissue, water, and sediment for PCB concentrations, will be done along the entire river by Georgia-Pacific and Glatfelter, two of the responsible companies. It is anticipated that it will take 10-30 years for fish tissue to recover.

More information is available at www.epa.gov/superfund/fox-river.

The five-year review is an opportunity for you to tell EPA about site conditions and any concerns you have. Contact:

Karen Chen	**James Saric**
Community Involvement Coordinator	Remedial Project Manager
312-886-6009	312-886-0992
chen.karen01@epa.gov	saric.james@epa.gov

You may also call EPA toll-free at 800-621-8431, 8:30 a.m. to 4:30 p.m., weekdays.

WI-38991245

NOTICE

To the Electors of Kewaunee County:
Pursuant to Wisconsin Statutes 5.84(1) notice is hereby given that a public test of the following election equipment will take place at the various municipalities in Kewaunee County:
1) ImageCast Evolution (ICE) – will tabulate optical scan ballots
To be used to canvas votes for the April 2, 2024 Presidential Preference Primary & Spring Election.

The public test will be conducted at the various locations on the following dates and times specified below:

Town of Ahnapee Ahnapee Town Hall 303 N. Water Street, Algoma March 25, 2024 – 4:00 PM 920-676-6509	Town of Pierce Pierce Town Hall N6061 County Road D, Kewaunee March 26, 2024 - 5:00 PM 920-255-1507
Town of Carlton Carlton Town Hall N1296 Town Hall Road, Kewaunee March 23, 2024 - 9:00 AM 920-388-3251	Town of Red River Red River Town Hall E0505 County Road S, Luxemburg March 25, 2024 - 6:00 PM 920-495-0148
Town of Casco Casco Town Hall E3675 County Road T, Casco March 25, 2024 – 9:00 AM 920-255-2909	Town of West Kewaunee West Kewaunee Town Hall 1523 Ellis Street, Kewaunee March 27, 2024 - 7:00 PM 920-255-1147
Town of Franklin Franklin Town Hall N1885 County Road AB, Denmark March 26, 2024 – 1:00 PM 920-562-4898	Village of Casco Village Hall Meeting Room 211 First Street entrance-lower level March 25, 2024 – 4:40 PM 920-837-2220
Town of Lincoln Lincoln Town Hall N8016 Maple Road, Casco March 23, 2024 - 4:00 PM 920-366-3640	Village of Luxemburg Municipal Office 206 Maple Street, Luxemburg March 25, 2024 - 11:00 AM 920-845-2722
Town of Luxemburg Luxemburg Town Hall E1027 State Road 54, Luxemburg March 23, 2024 – 9:00 AM 920-536-1245	City of Algoma City Hall 416 Fremont Street, Algoma March 26, 2024 - 10:00 AM 920-487-5203
Town of Montpelier Montpelier Town Hall E0704 J-J Rd., Luxemburg March 26, 2024 - 9:00 AM 920-309-1036	City of Kewaunee City Hall 401 Fifth Street, Kewaunee March 26, 2024 - 2:00 PM 920-388-5000

All members of the public interested in viewing this public test are urged to be present at the stated time and place.

/s/Jamie Annoye, Kewaunee County Clerk

WI-38995001

DOOR COUNTY WISCONSIN

THE DOOR COUNTY HIGHWAY DEPARTMENT SEEKS APPLICANTS FOR THE POSITION OF HIGHWAY WORKER

Do you hold a CDL (Class B and C) and are looking for a position where you can help make a difference in the Door County Community? Would you like to have Friday's off during the summer months? Are you looking for a rewarding job that can offer you variety in your day to day tasks? Would you like to find a job that offers great starting pay with excellent benefits?

If so, then becoming a Highway Worker might be just what you are looking for. This position performs a variety of highway maintenance and construction work on State, County and Local roads and right-of ways throughout Door County. This position is responsible for operating various highway construction, maintenance and snow and ice control equipment. Assignments given can change from day to day and from season to season.

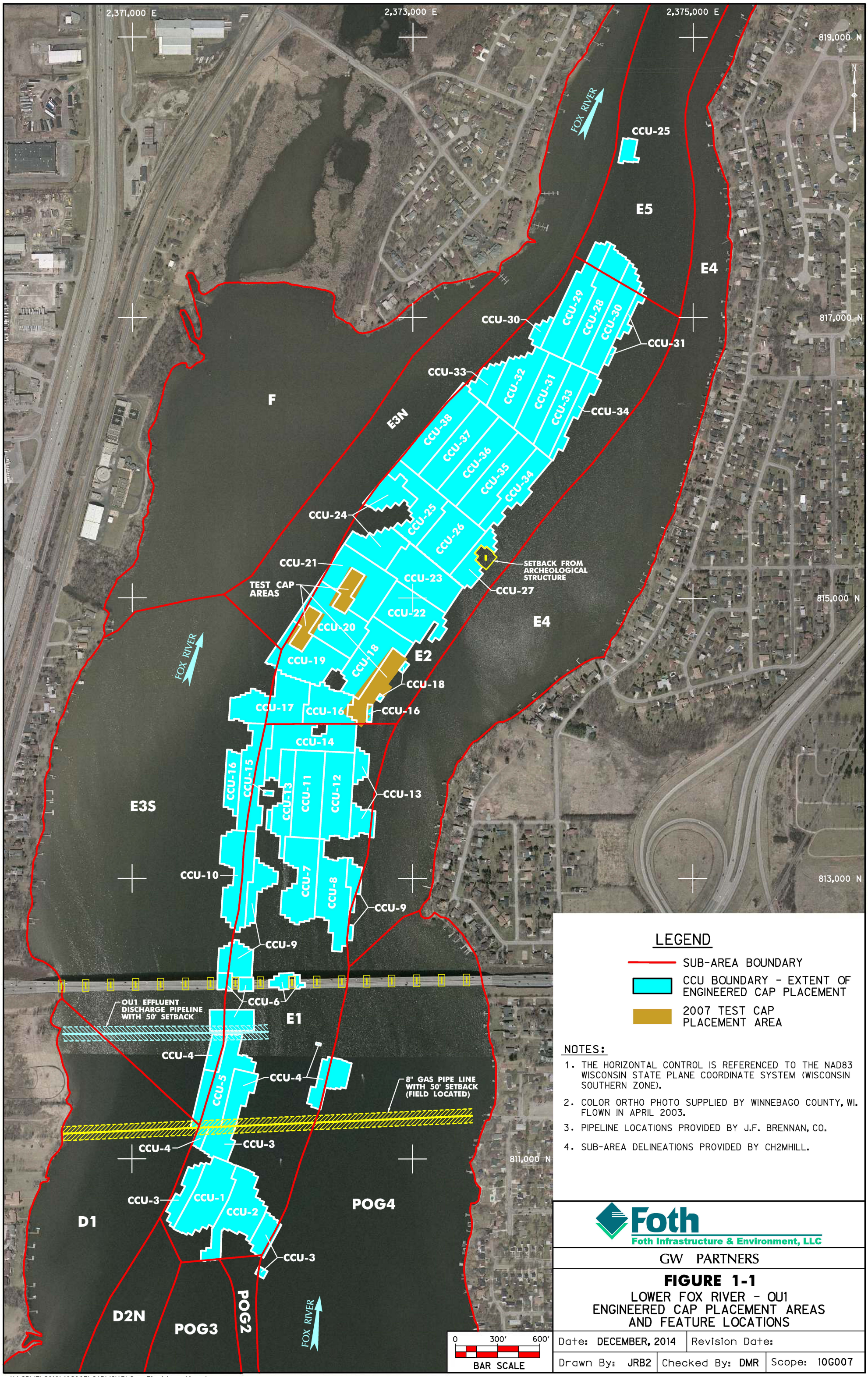
This is a full-time position, with competitive wages and exceptional benefits, including health, dental, vision, paid time off (PTO) plan, 457(b)s and Wisconsin Retirement System benefits, including retirement, life insurance and income continuation insurance. Starting wage for the position $25.11 per hour with room to advance to Highway Maintenance Technician after successful completion of 24 months of employment in the Highway Department

To complete the application and access more information from the job description/requirements go to www.co.door.wi.gov Click on **Employment** then click on link TO REVIEW JOB OPPORTUNITIES OR LOG-IN TO YOUR ACCOUNT. Or scan the QR Code below.

This position is open until filled so don't delay - Apply today!

WI-38814116

APPENDIX E – MAPS FOR AREAS WHICH DO NOT ALLOW UU/UE



LEGEND

- SUB-AREA BOUNDARY
- CCU BOUNDARY - EXTENT OF ENGINEERED CAP PLACEMENT
- 2007 TEST CAP PLACEMENT AREA

NOTES:

1. THE HORIZONTAL CONTROL IS REFERENCED TO THE NAD83 WISCONSIN STATE PLANE COORDINATE SYSTEM (WISCONSIN SOUTHERN ZONE).
2. COLOR ORTHO PHOTO SUPPLIED BY WINNEBAGO COUNTY, WI. FLOWN IN APRIL 2003.
3. PIPELINE LOCATIONS PROVIDED BY J.F. BRENNAN, CO.
4. SUB-AREA DELINEATIONS PROVIDED BY CH2MHILL.

Foth
Foth Infrastructure & Environment, LLC

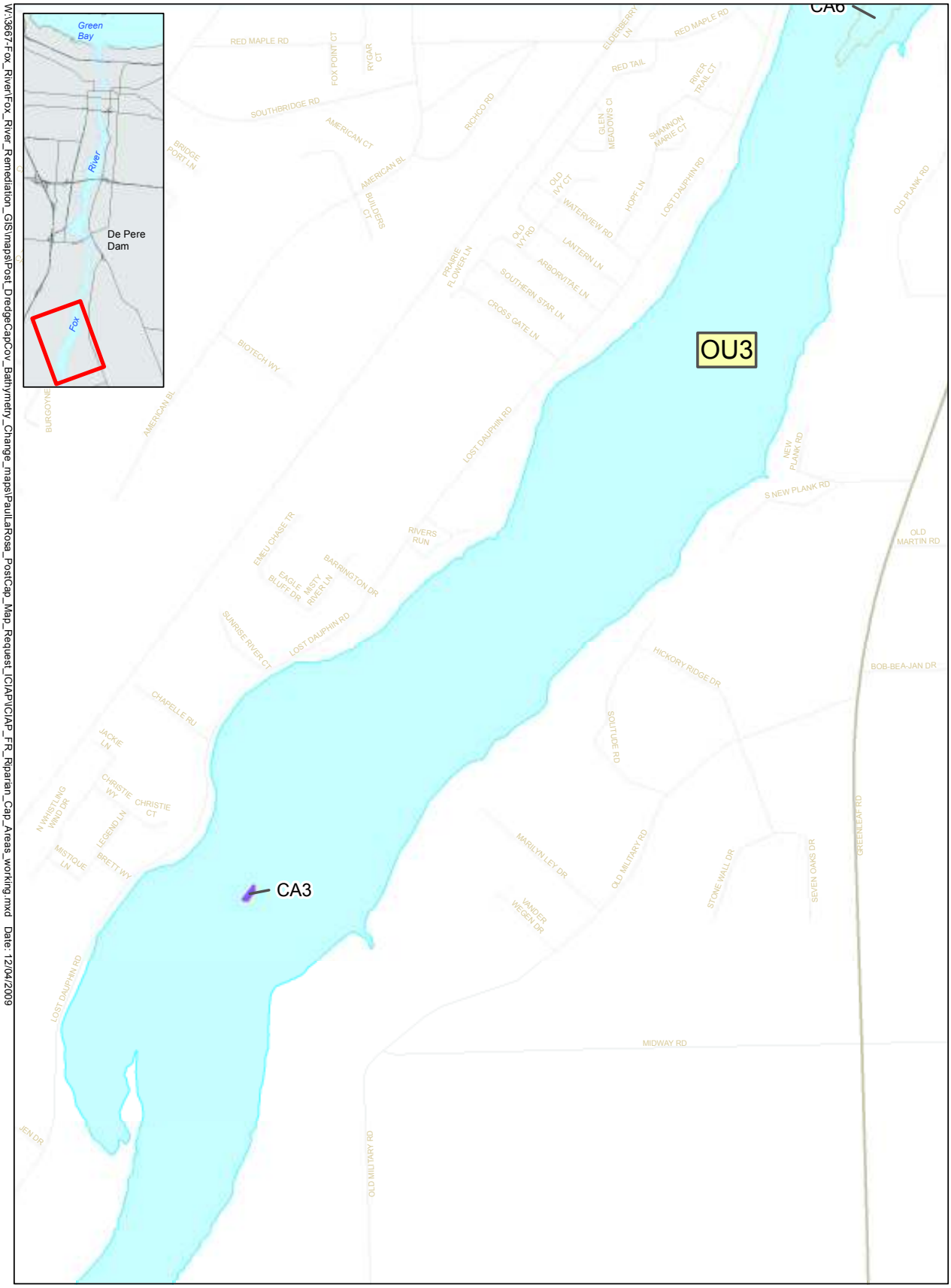
GW PARTNERS

FIGURE 1-1

LOWER FOX RIVER - OU1
ENGINEERED CAP PLACEMENT AREAS
AND FEATURE LOCATIONS

Date: DECEMBER, 2014	Revision Date:	
Drawn By: JRB2	Checked By: DMR	Scope: 10G007

X:\GB\IE\2010\10G007\CAD\ICIAP\Cap-Final-Location.dgn
12/5/2014 Jrb2



Fox River Shoreline
Major Road
Minor Road
Shoreline Cap
Cap A, B or C
Cap Area in Less Than 5 Feet of Water
Area Within 300 feet of the OU 4B Shoreline
Fox River

Figure 2-1A

Fox River OU 3
Riparian Cap Areas

Brown County, Wisconsin, USA

TETRA TECH
ANCHOR QEA

N
W E
S

0 500 1,000
Feet

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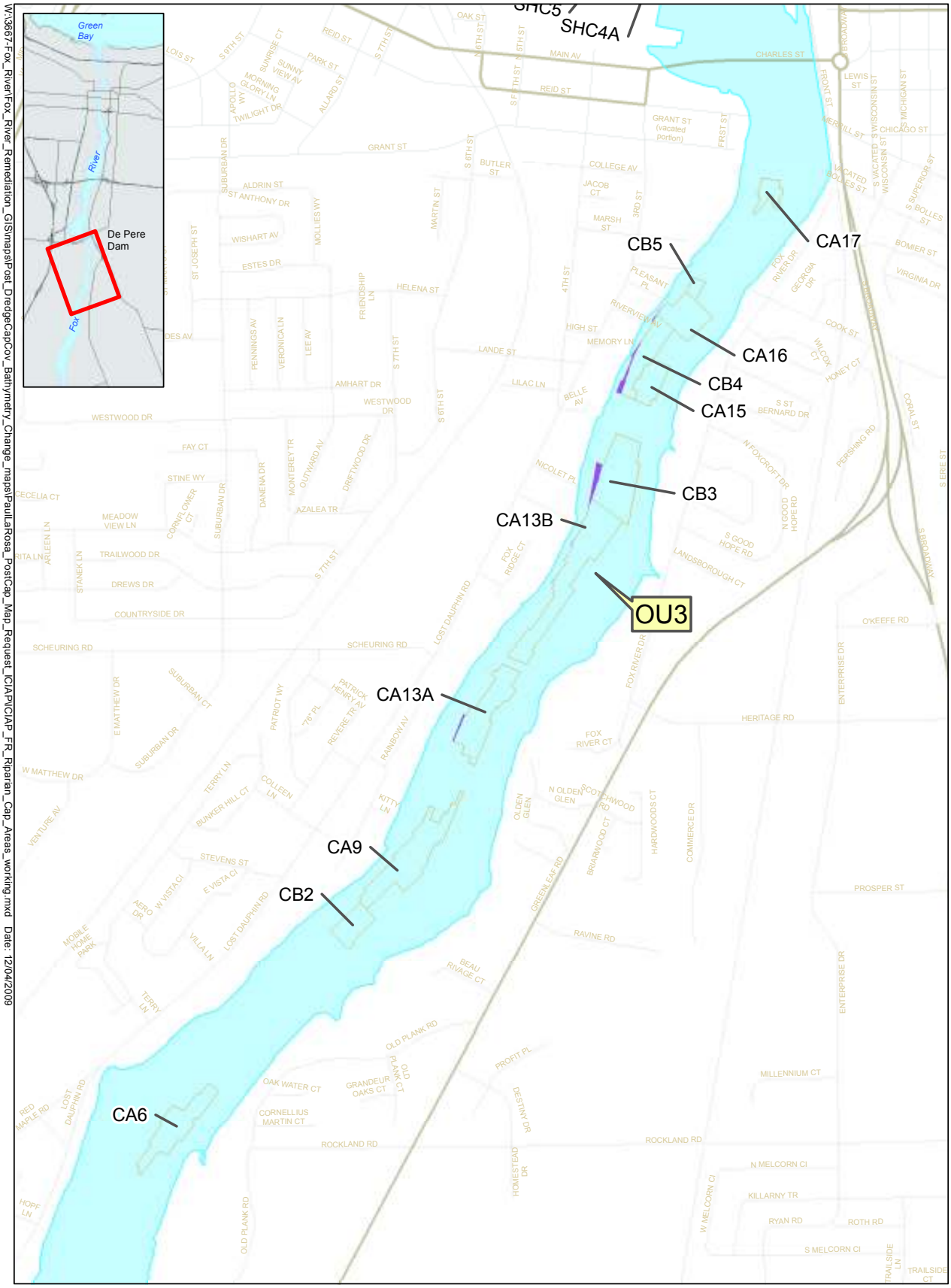

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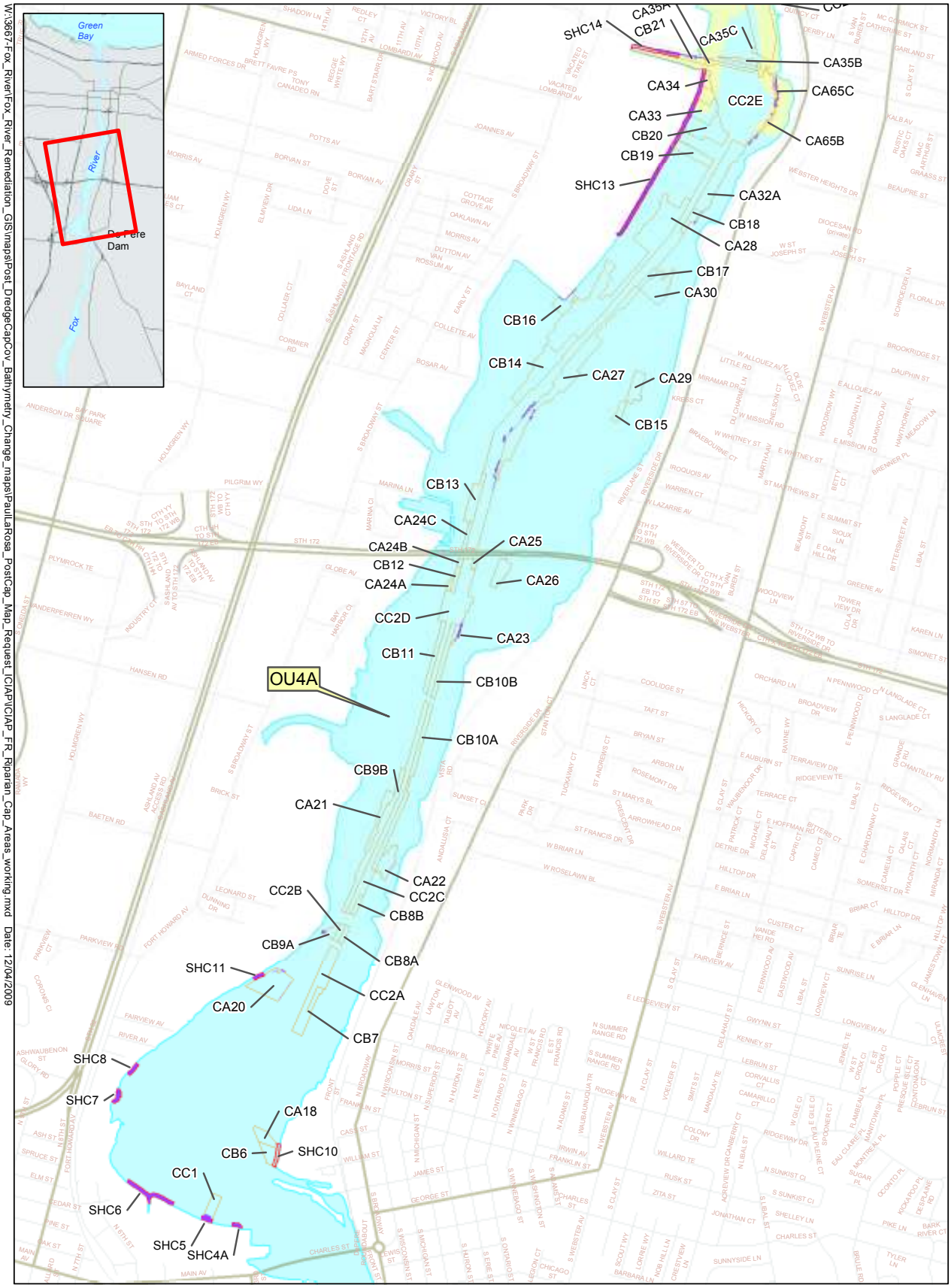
Figure 2-1B

Fox River OU 3
Riparian Cap Areas

Brown County, Wisconsin, USA

TETRA TECH
ANCHOR QEA



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Fox River Shoreline
Major Road
Minor Road
Shoreline Cap
Cap A, B or C
Cap Area in Less Than 5 Feet of Water
Area Within 300 feet of the OU 4B Shoreline
Fox River

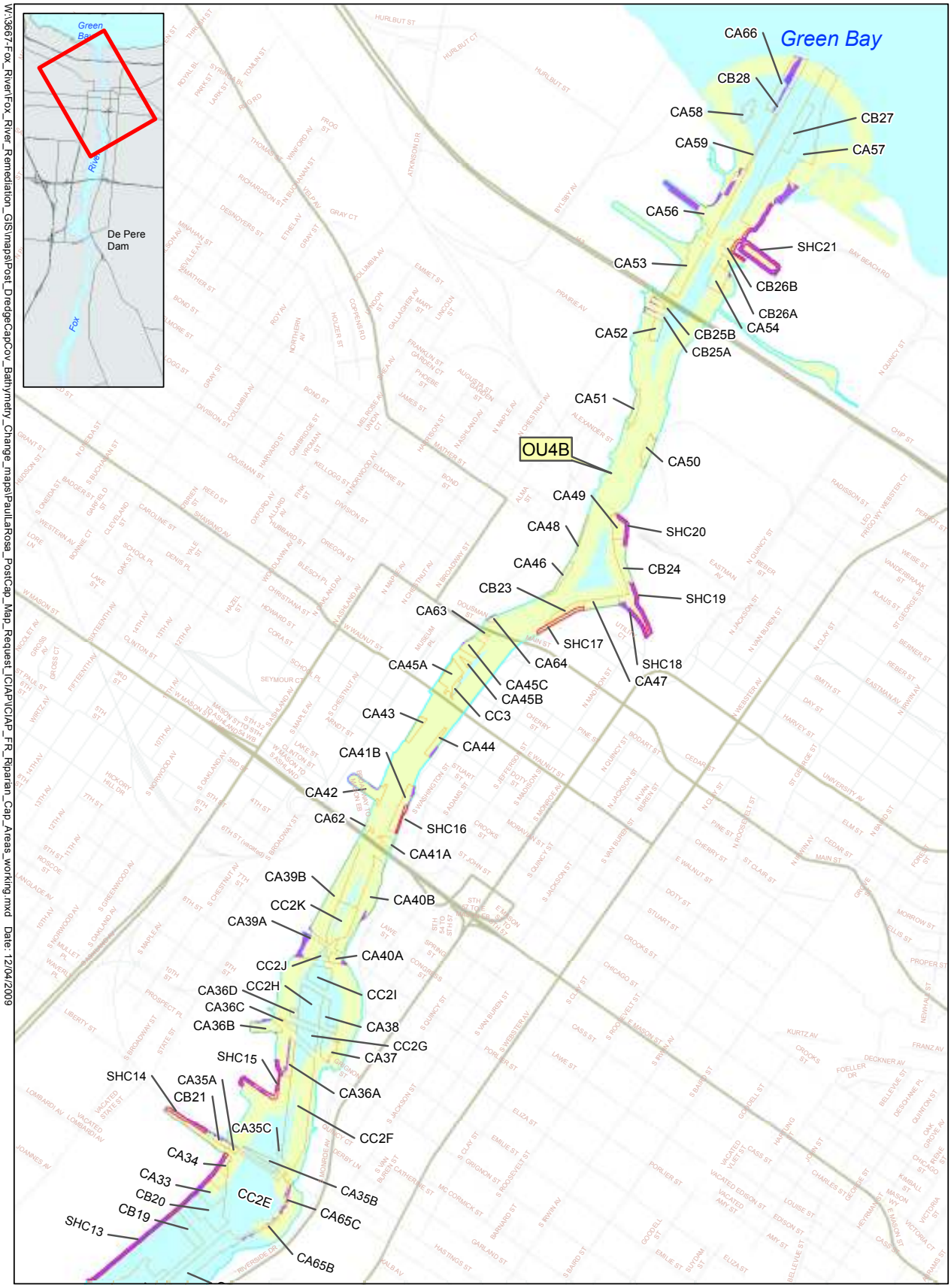
Figure 2-2A

Fox River OU 4 and
OU 5 Riparian Cap Areas

Brown County, Wisconsin, USA

TETRA TECH
ANCHOR QEA

0 500 1,000
Feet



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Fox River Shoreline
Major Road
Minor Road
Shoreline Cap
Cap A, B or C
Cap Area in Less Than 5 Feet of Water
Area Within 300 feet of the OU 4B Shoreline
Fox River

Figure 2-2B

Fox River OU 4 and OU 5 Riparian Cap Areas

Brown County, Wisconsin, USA

TETRA TECH
ANCHOR QEA

0 500 1,000
Feet

APPENDIX F – OU4/OU5 DREDGE MANAGEMENT UNITS CLOSED IN 2019/2020

Figure ES-1. OU4 Dredge Management Units Closed in 2019 and 2020

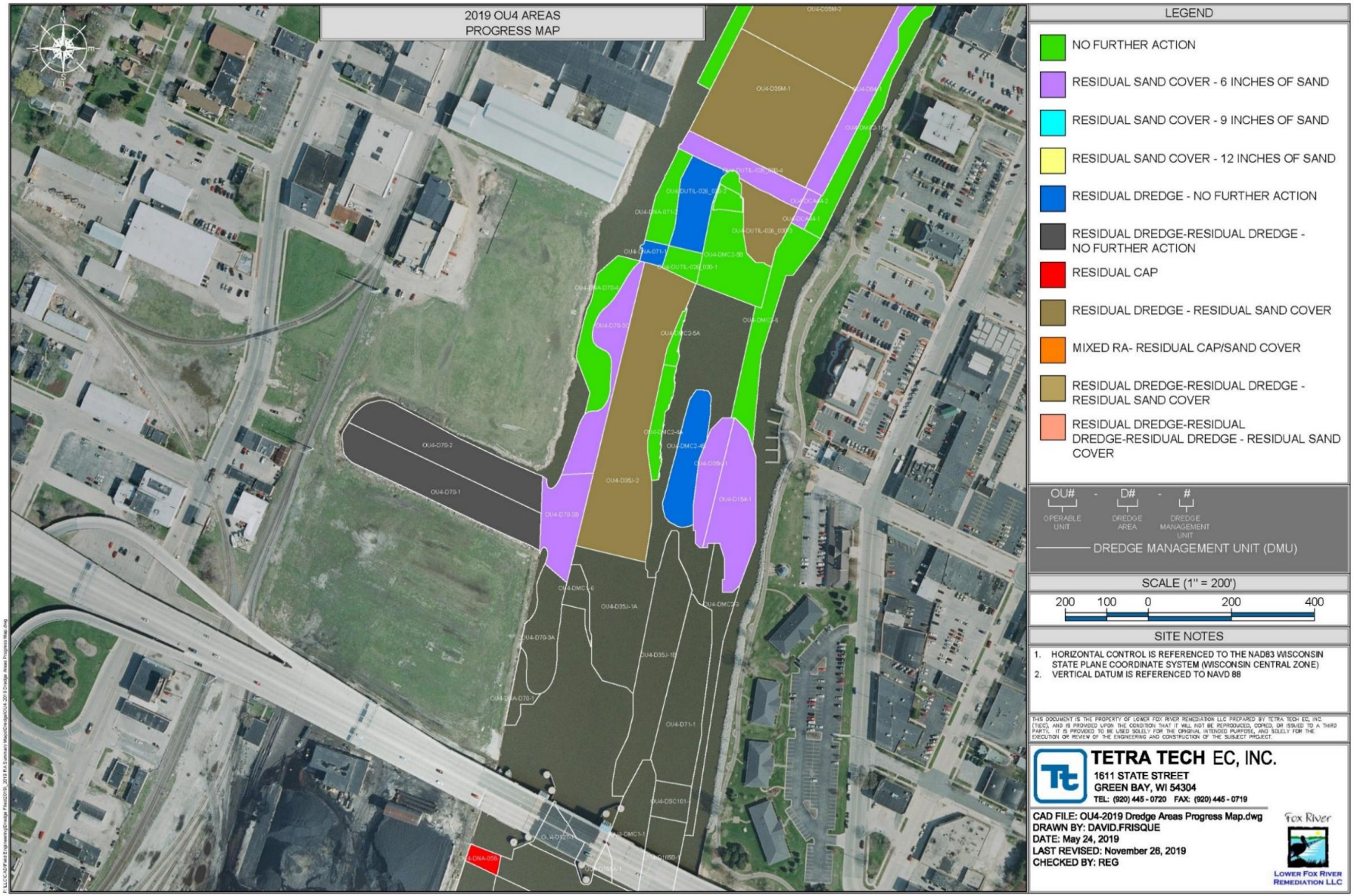


Figure ES-2. OU4 Dredge Management Units Closed in 2019 and 2020

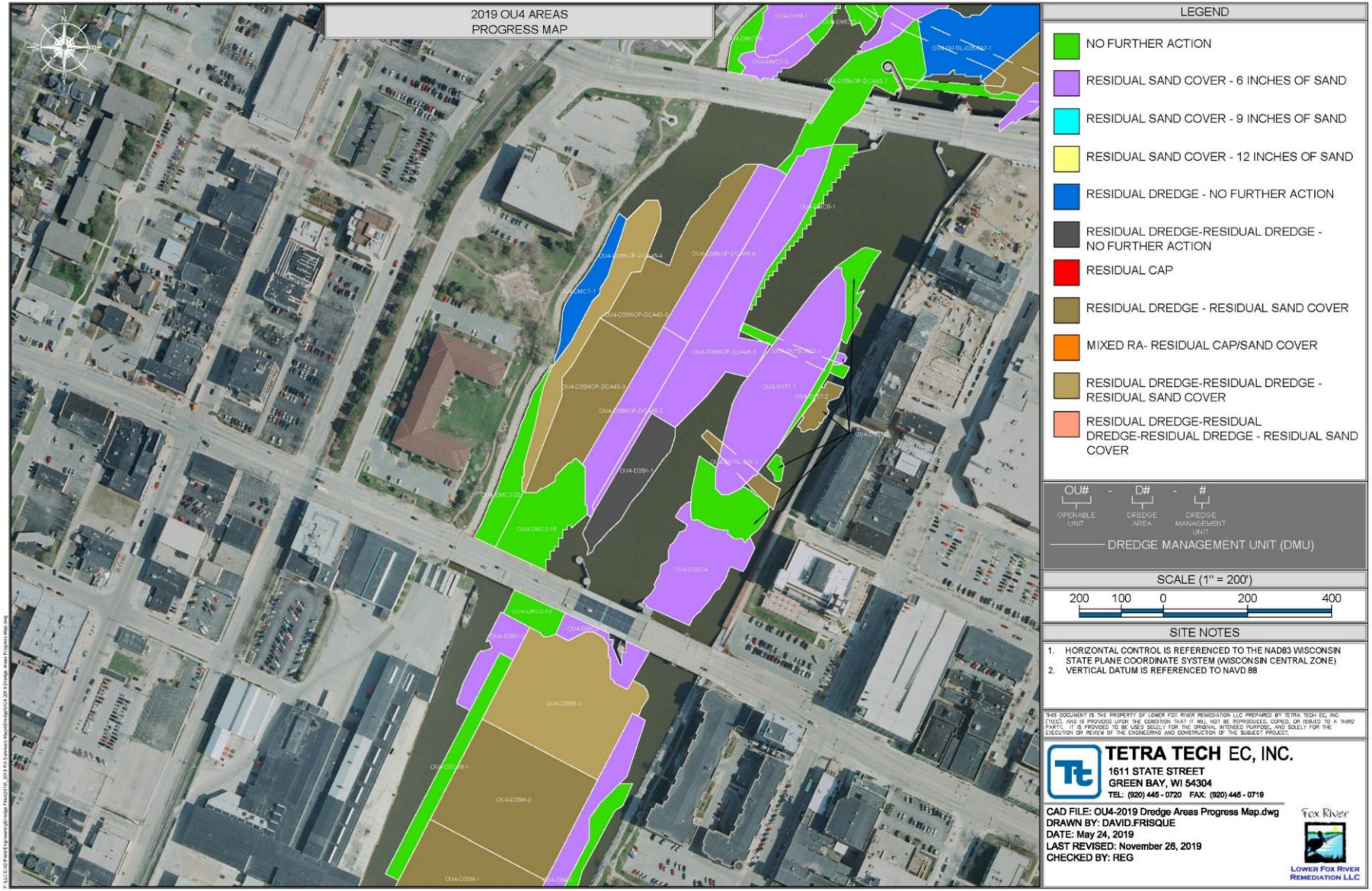


Figure ES-3. OU4 Dredge Management Units Closed in 2019 and 2020

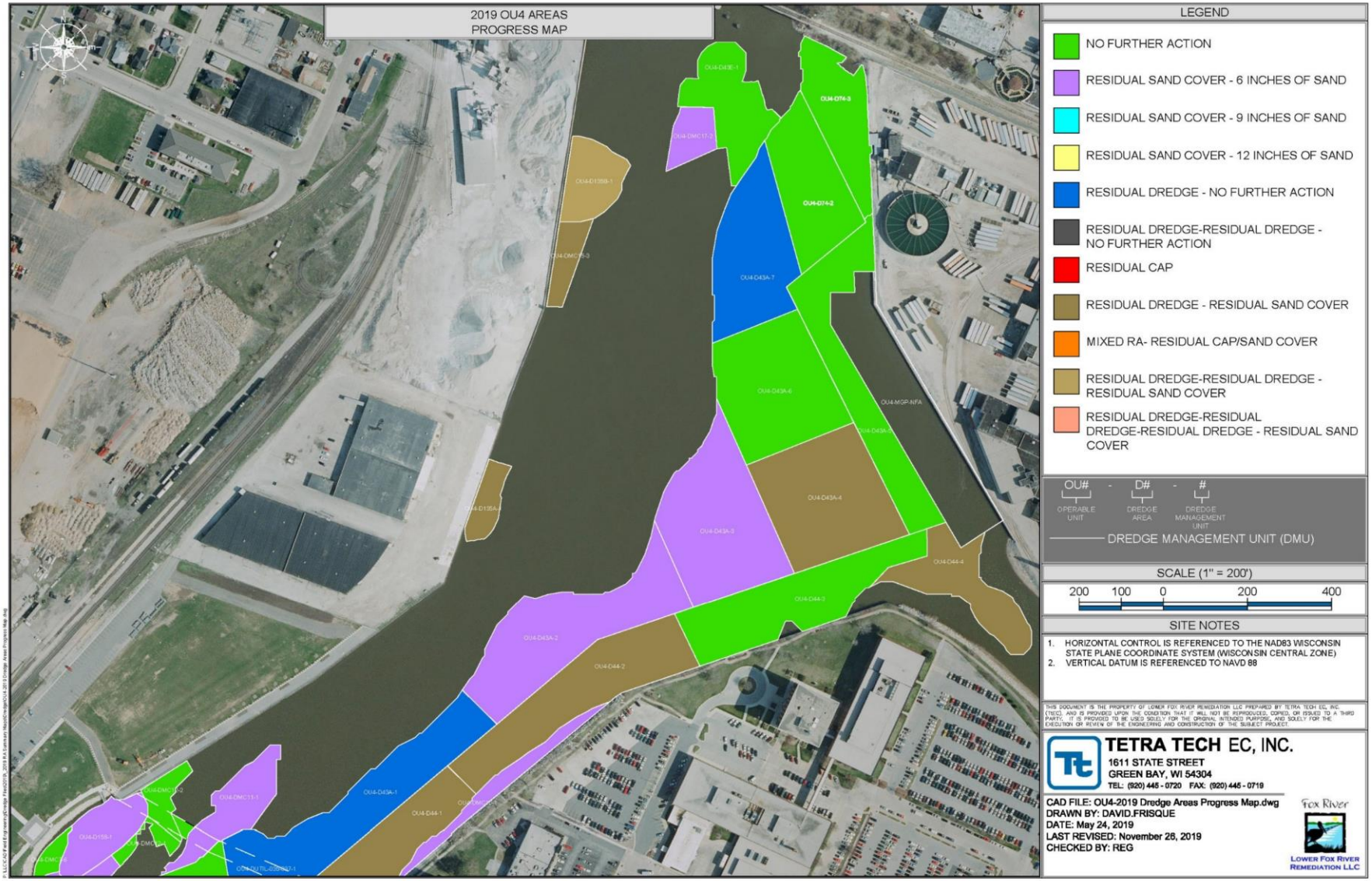


Figure ES-4. OU4 Dredge Management Units Closed in 2019 and 2020

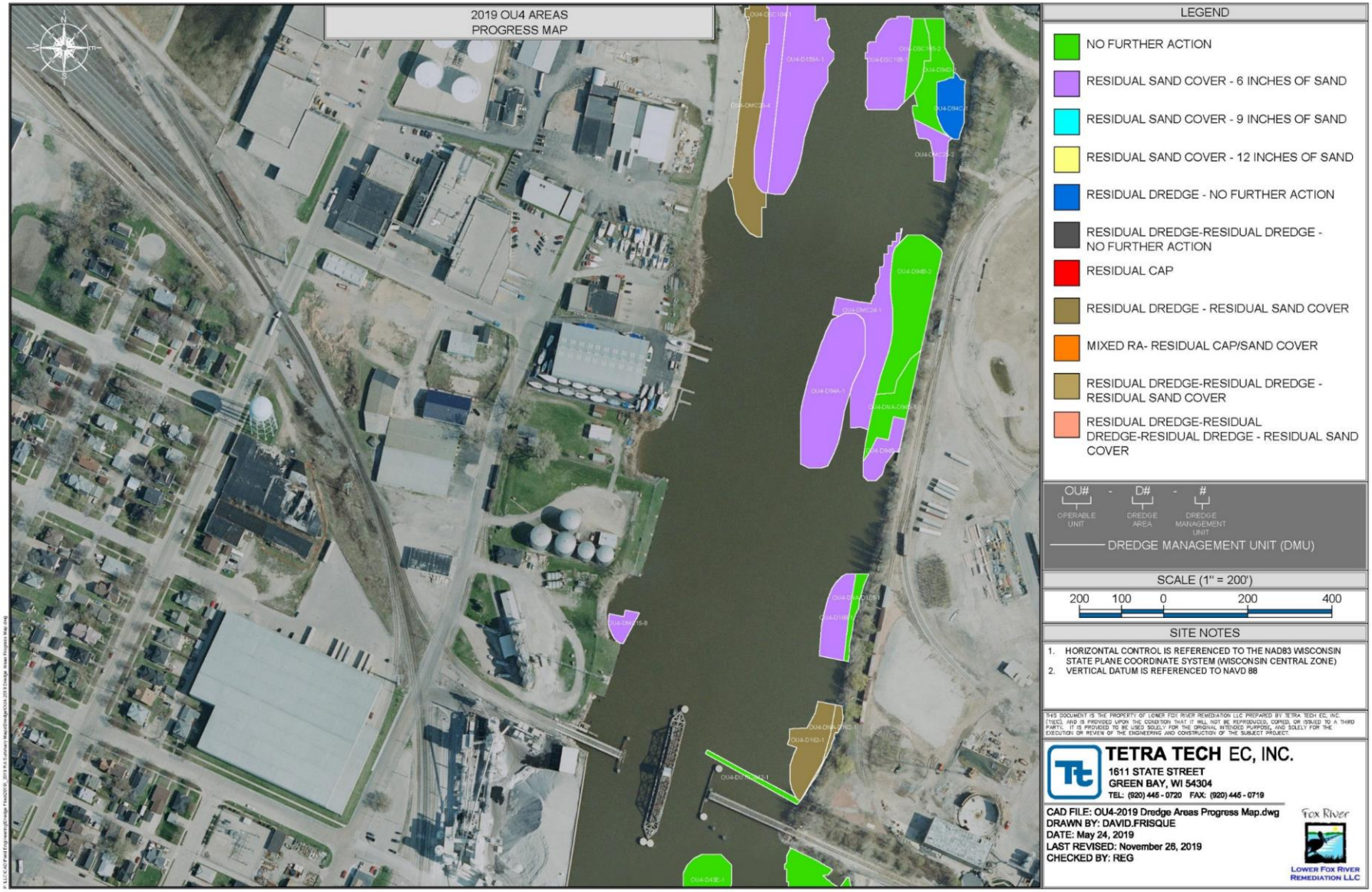


Figure ES-5. OU4 Dredge Management Units Closed in 2019 and 2020

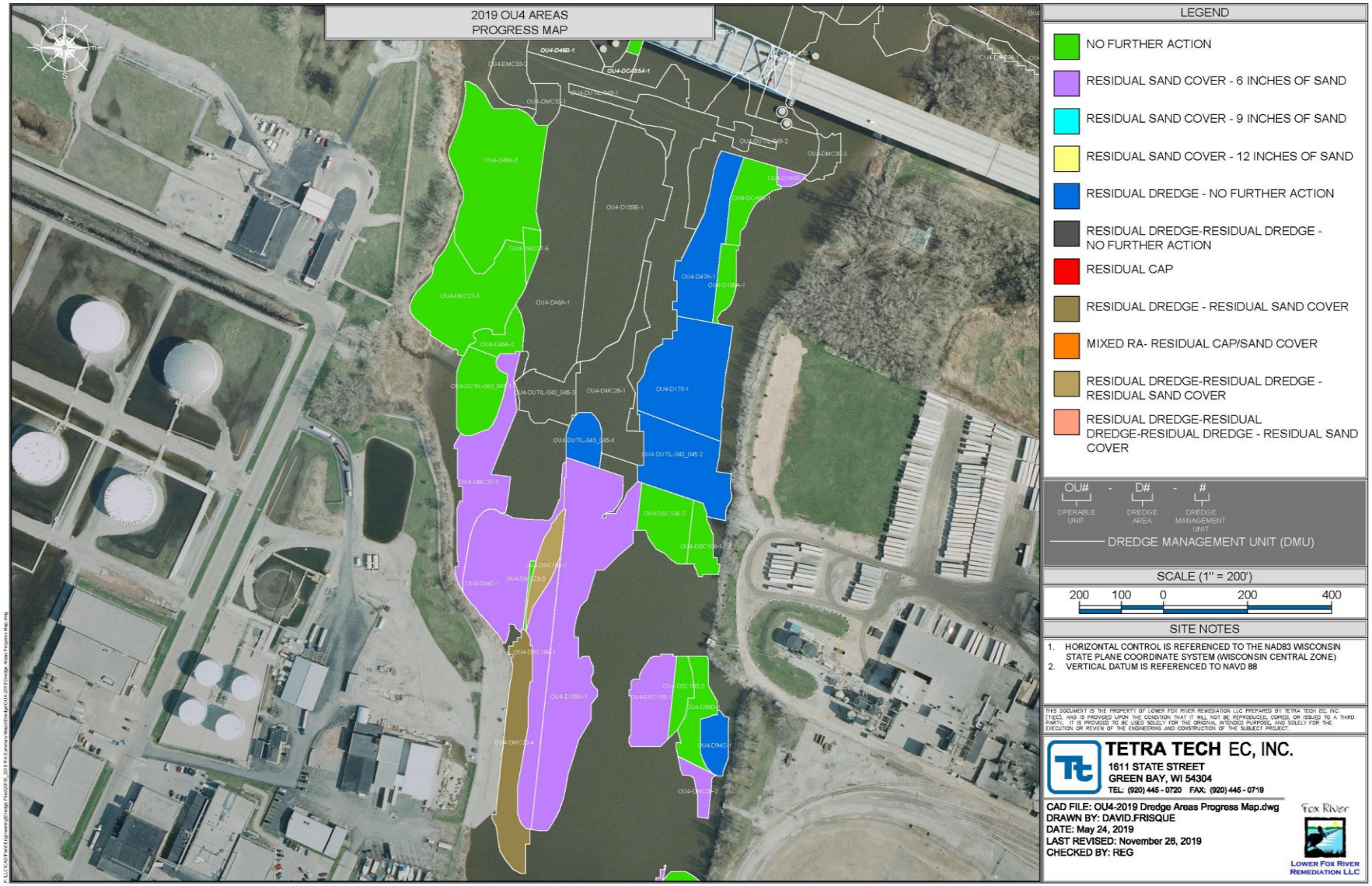


Figure ES-6. OU4 Dredge Management Units Closed in 2019 and 2020

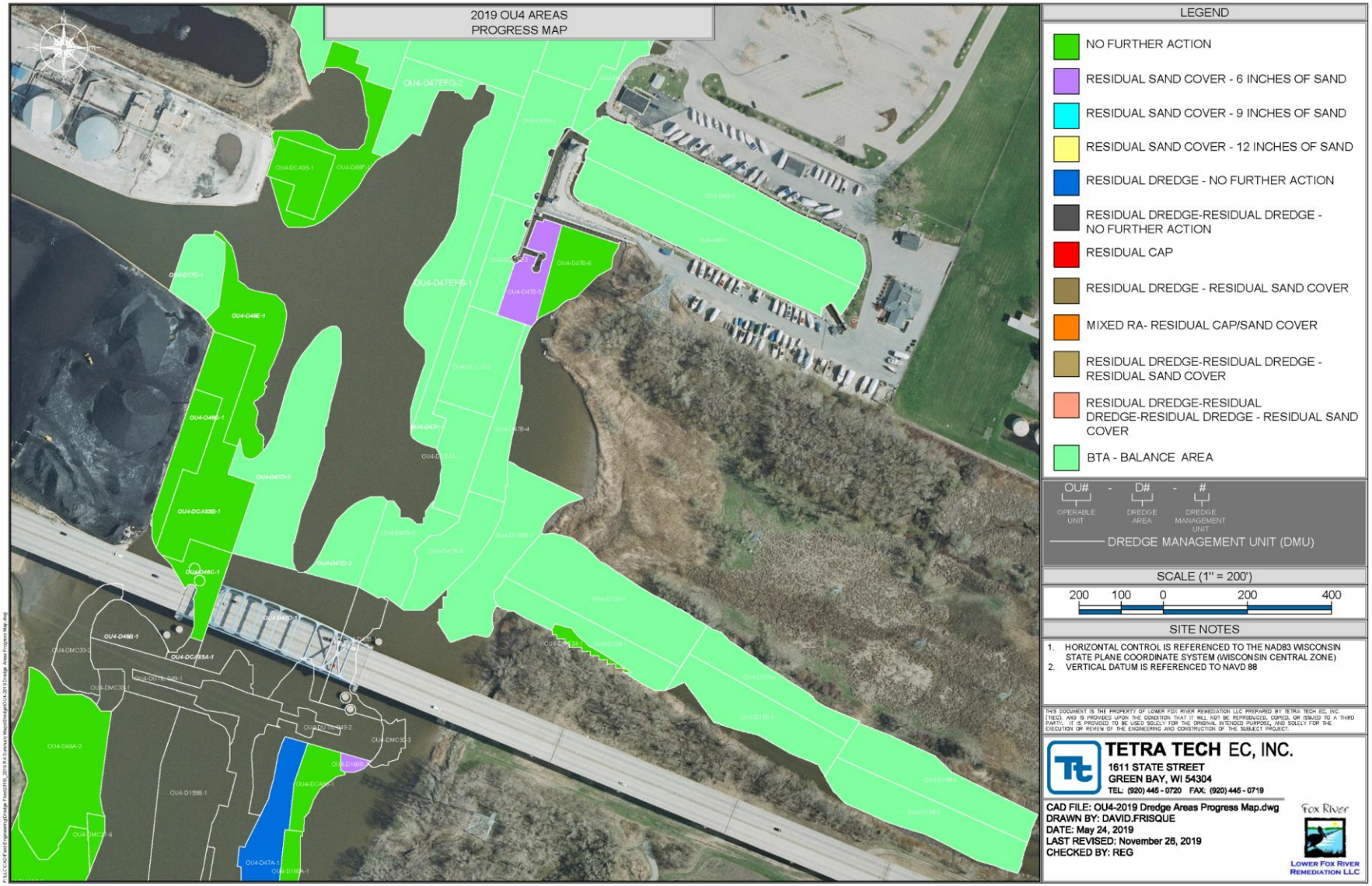


Figure ES-7. OU4/OU5 Dredge Management Units Closed in 2019 and 2020

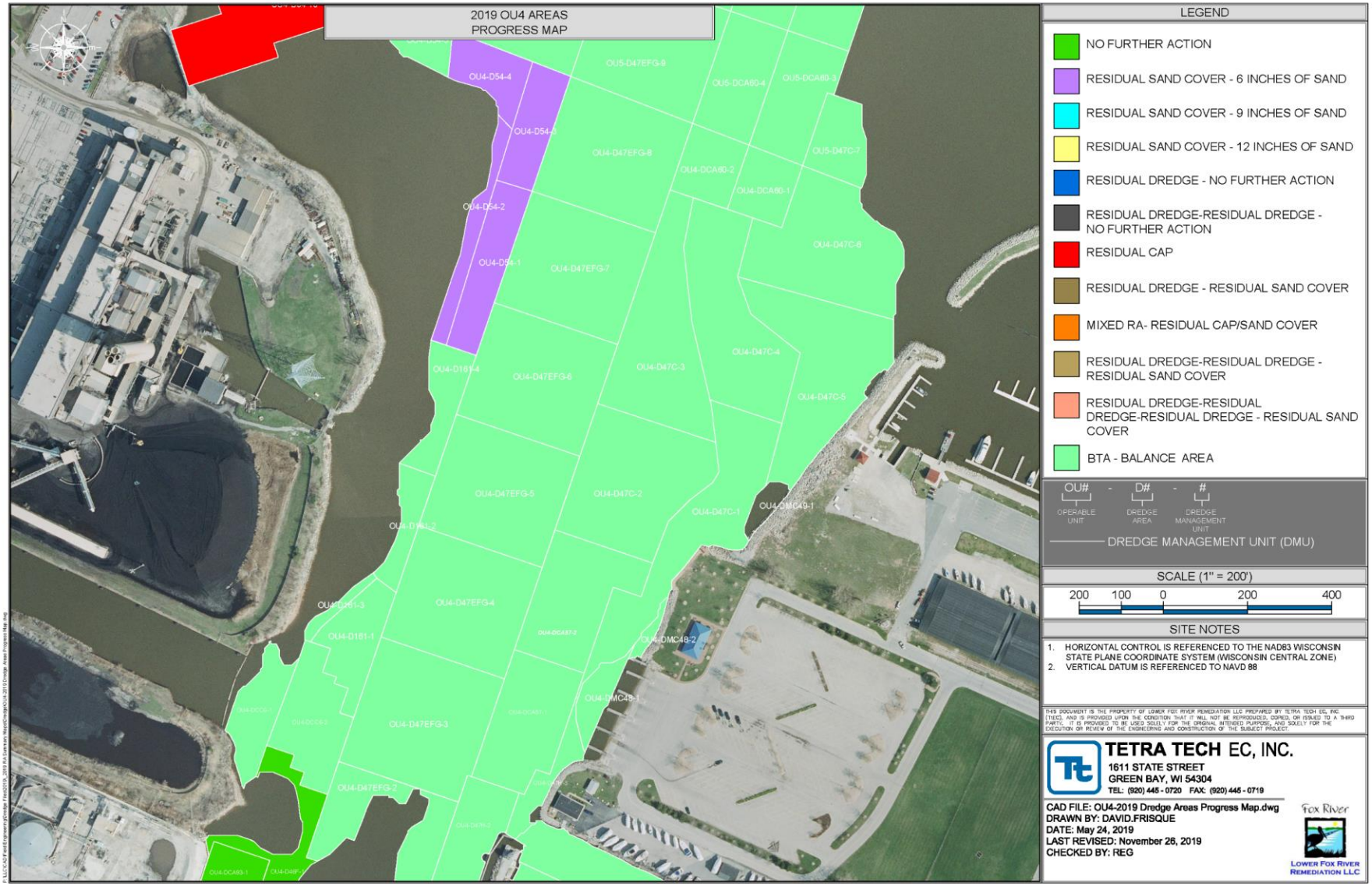


Figure ES-8. OU4/OU5 Dredge Management Units Closed in 2019 and 2020

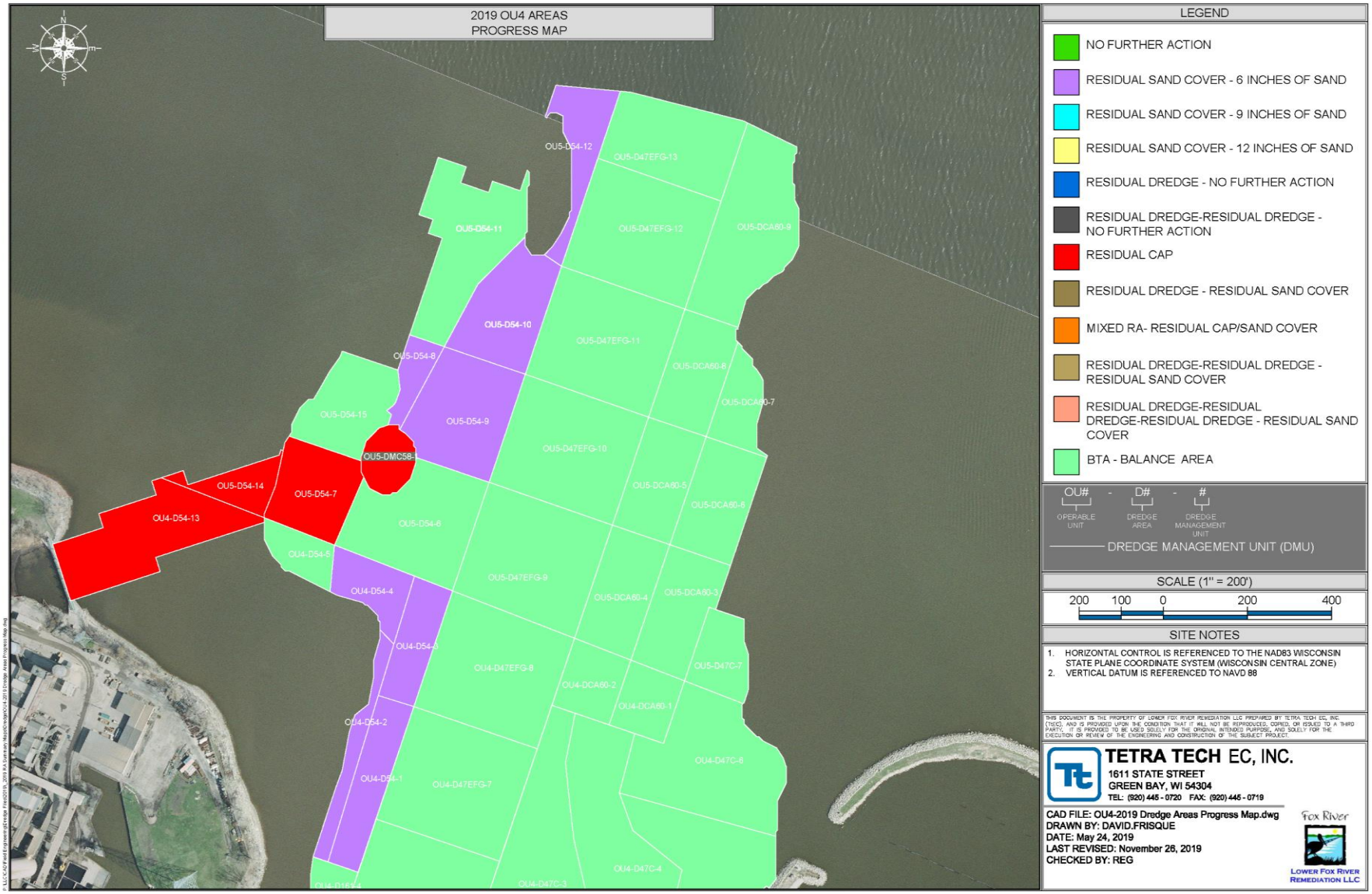


Figure ES-9. OU5 Beyond the Arc Dredge Management Units Closed in 2019

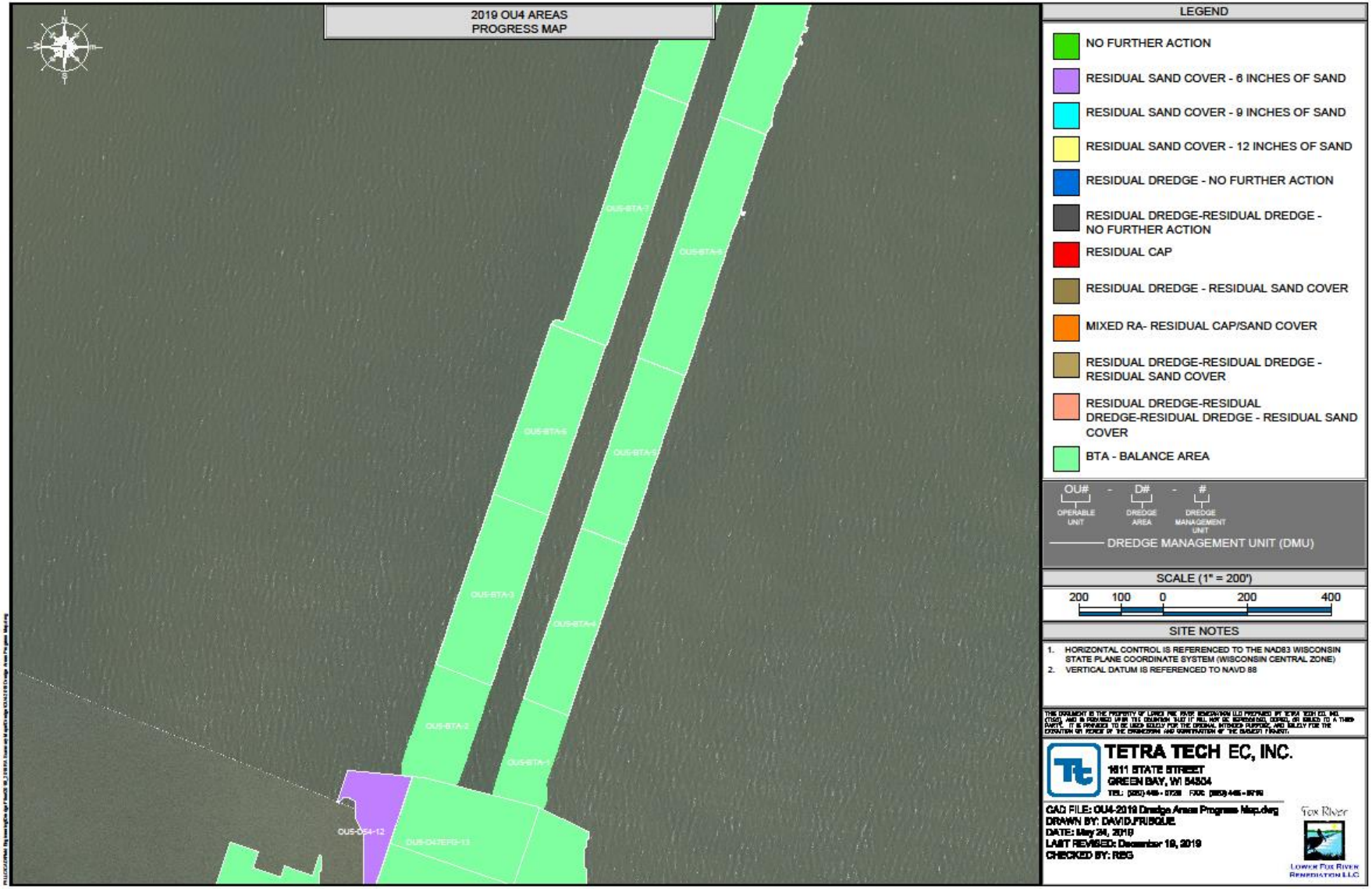
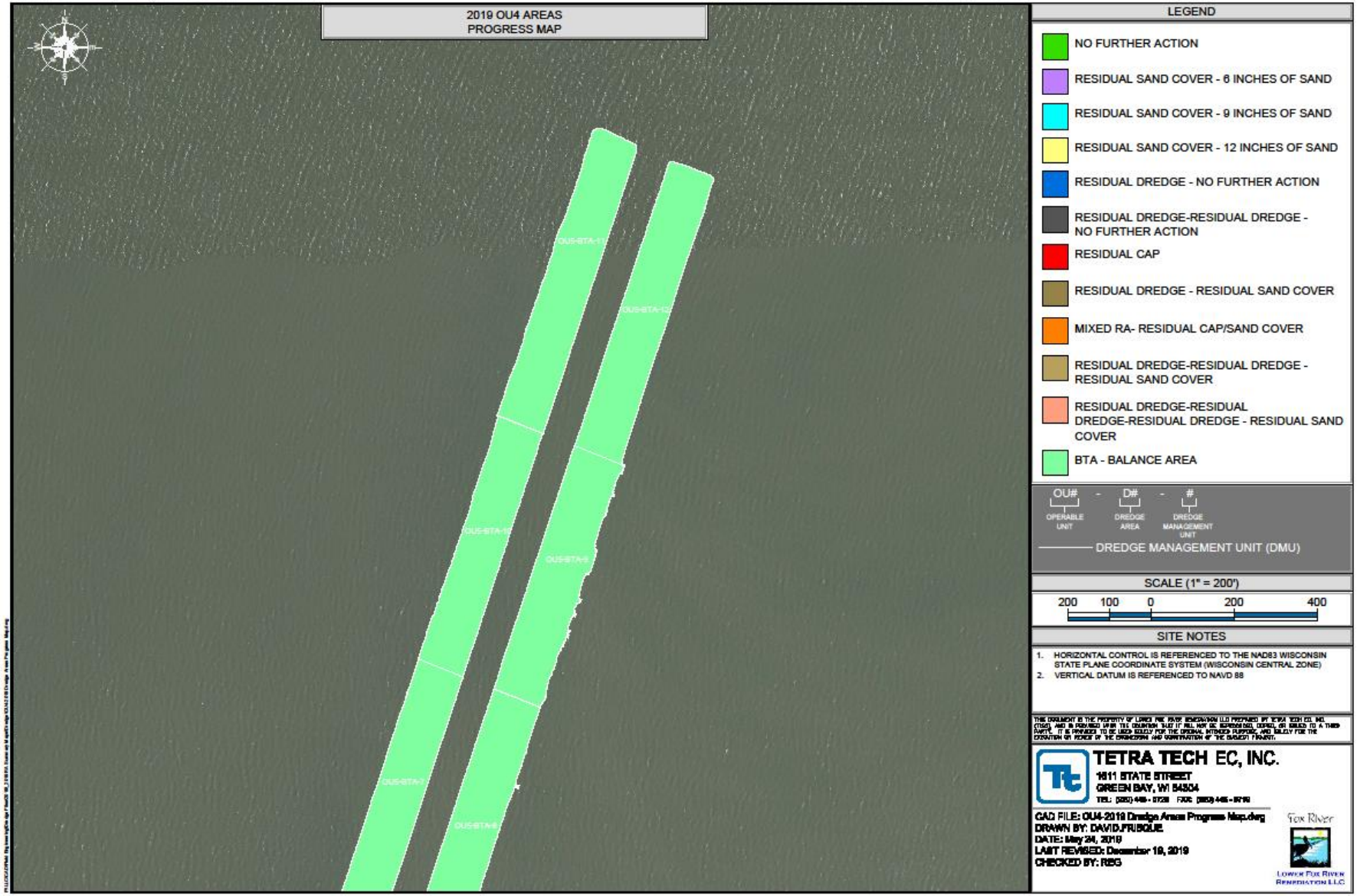
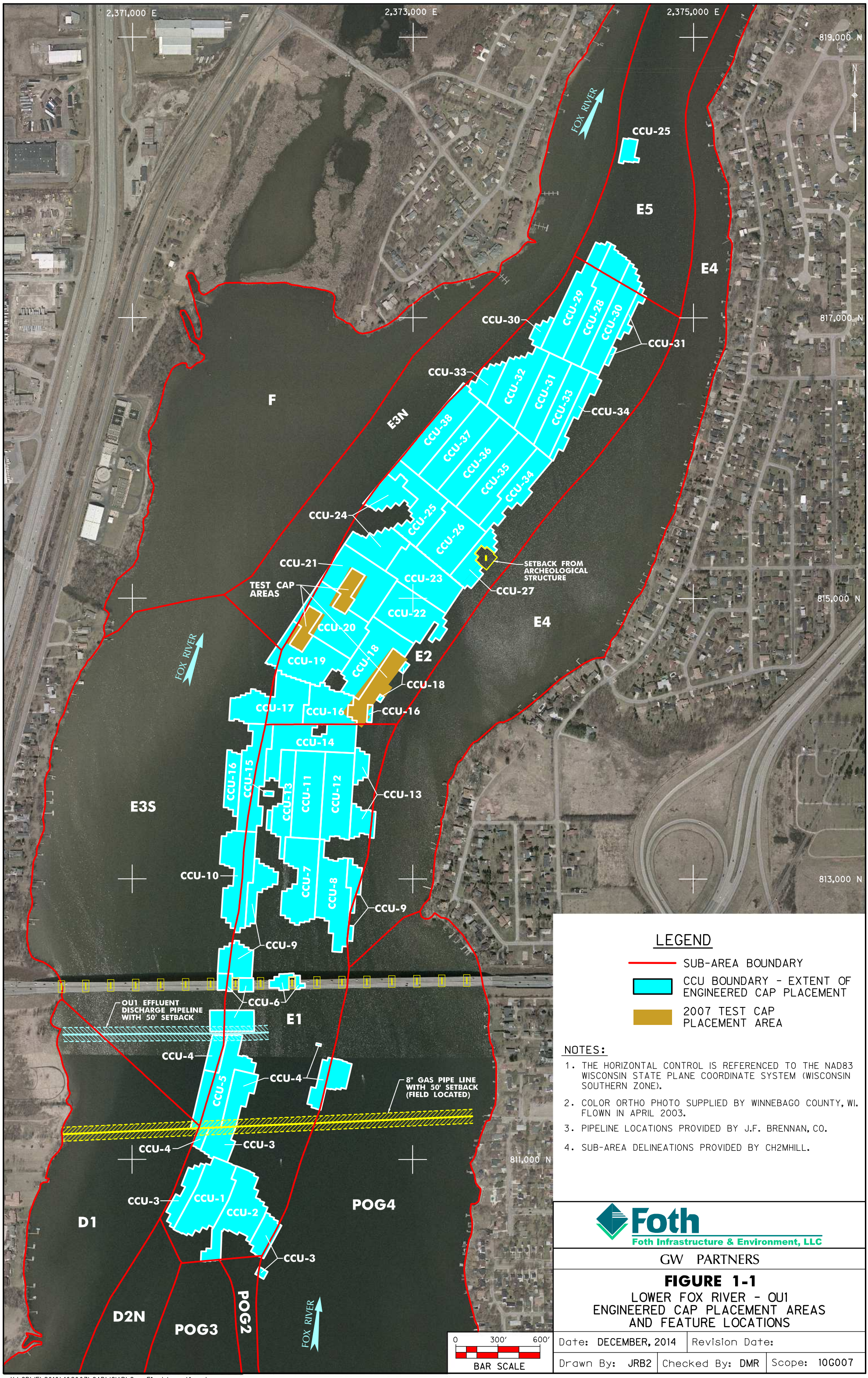


Figure ES-10.OU5 Beyond the Arc Dredge Management Units Closed in 2019



APPENDIX G – OU1 THROUGH OU5 FINAL REMEDY FIGURES



LEGEND

- SUB-AREA BOUNDARY
- CCU BOUNDARY - EXTENT OF ENGINEERED CAP PLACEMENT
- 2007 TEST CAP PLACEMENT AREA

NOTES:

1. THE HORIZONTAL CONTROL IS REFERENCED TO THE NAD83 WISCONSIN STATE PLANE COORDINATE SYSTEM (WISCONSIN SOUTHERN ZONE).
2. COLOR ORTHO PHOTO SUPPLIED BY WINNEBAGO COUNTY, WI. FLOWN IN APRIL 2003.
3. PIPELINE LOCATIONS PROVIDED BY J.F. BRENNAN, CO.
4. SUB-AREA DELINEATIONS PROVIDED BY CH2MHILL.

Foth
Foth Infrastructure & Environment, LLC

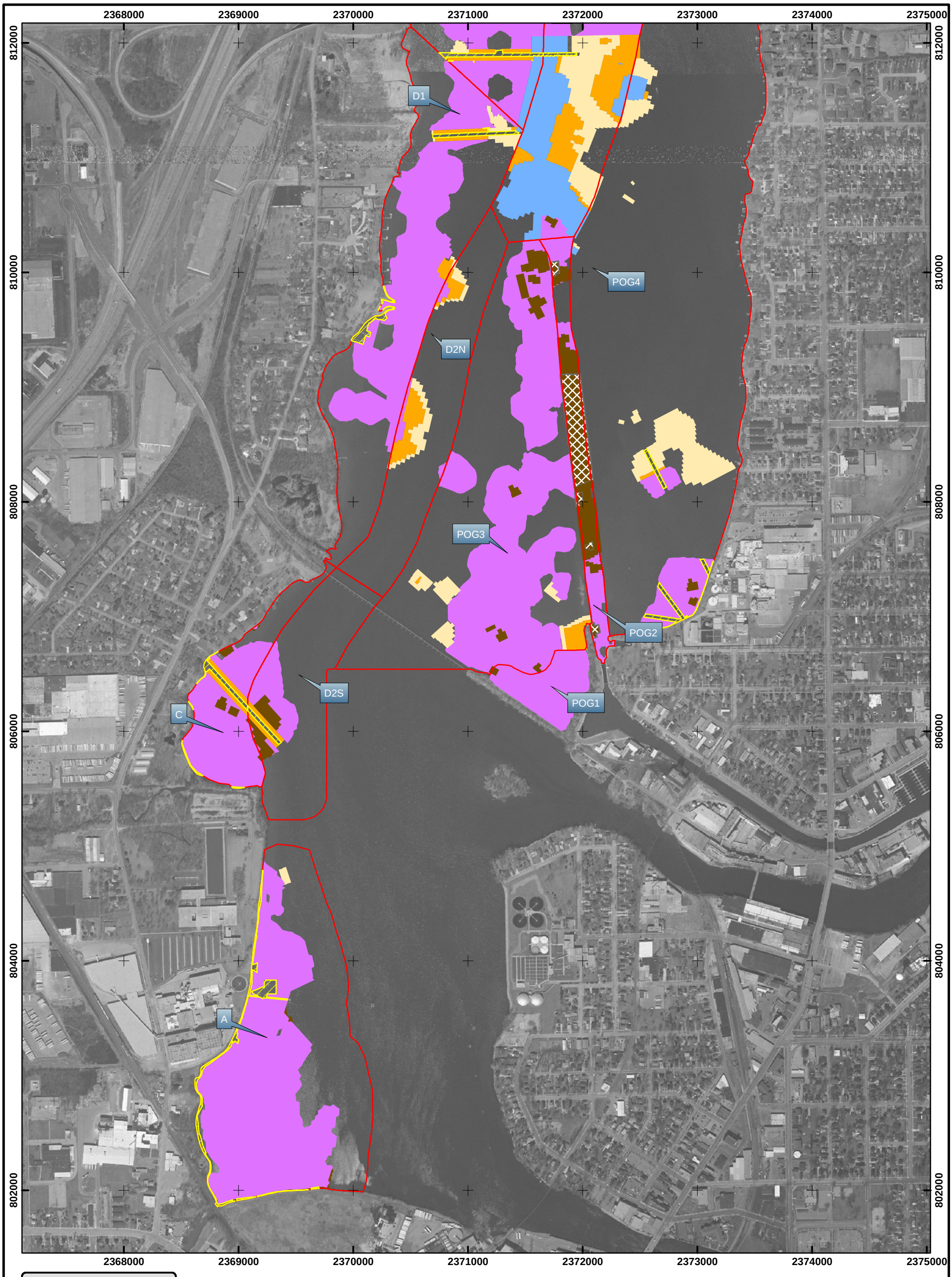
GW PARTNERS

FIGURE 1-1

LOWER FOX RIVER - OU1
ENGINEERED CAP PLACEMENT AREAS
AND FEATURE LOCATIONS

Date: DECEMBER, 2014	Revision Date:	
Drawn By: JRB2	Checked By: DMR	Scope: 10G007

X:\GB\IE\2010\10G007\CAD\ICIAP\Cap-Final-Location.dgn
12/5/2014 jrb2



Legend

- Shoreline, Pipeline, Artifacts

Remedial Alternatives

- Engineered Cap
- 3 Inch Sand Cover
- 6 Inch Sand Cover
- 6 Inch Residual Sand Cover
- 9 Inch Residual Sand Cover
- Completed Dredge Areas
- Sub-area/DMU Boundaries

Notes:

1. All areas presented depict as-constructed conditions.
2. Orthophoto provided by Winnebago County, WI.
3. The horizontal control is referenced to the NAD83 Wisconsin State Plane Coordinate System (Wisconsin Southern Zone).

N

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FIGURE 1-2
LOWER FOX RIVER OU1
LOCATION OF REMEDIAL ALTERNATIVES (SOUTH)

Scale: 0 400 800 Feet	Date: AUGUST, 2010
Drawn By: DAT	Checked By: NRA	Scope: 08G007

X:\GB\IE\2008\08G007\GIS\mxd\RACR\RecharacterizationSouth.mxd

2370000 2371000 2372000 2373000 2374000 2375000 2376000 2377000

822000 820000 818000 816000 814000 812000

E6 E5 E3N F E4 E2 E3S E1

Legend

- Shoreline, Pipeline, Artifacts

Remedial Alternatives

- Cap Placement Test Area
- Engineered Cap
- 3 Inch Sand Cover
- 6 Inch Sand Cover
- 6 Inch Residual Sand Cover
- 9 Inch Residual Sand Cover
- Completed Dredge Areas
- Sub-area/DMU Boundaries

Notes:

1. All areas presented depict as-constructed conditions.
2. Orthophoto provided by Winnebago County, WI.
3. The horizontal control is referenced to the NAD83 Wisconsin State Plane Coordinate System (Wisconsin Southern Zone).

N

Foth Infrastructure & Environment, LLC

GW PARTNERS

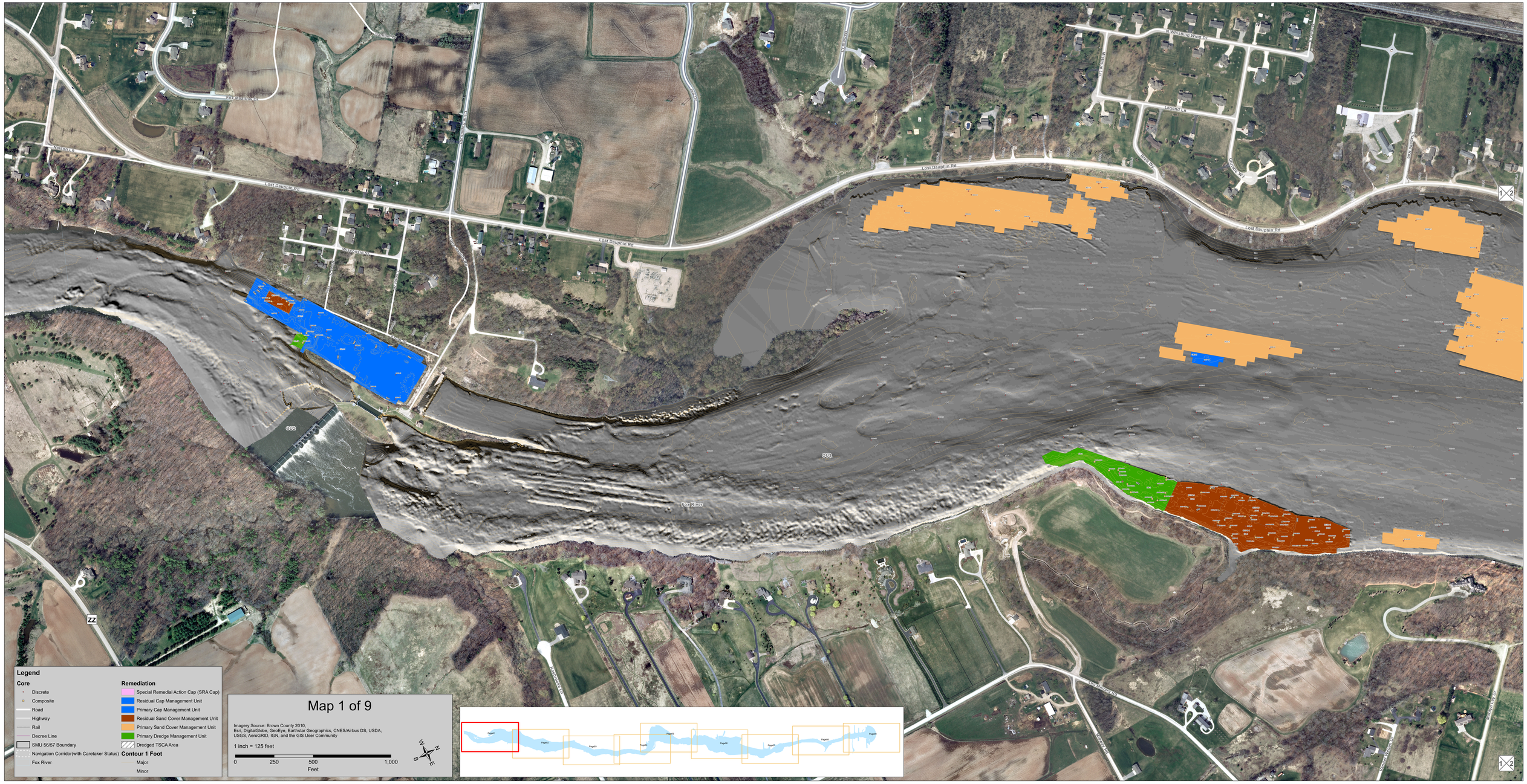
FIGURE 1-3
LOWER FOX RIVER OU1
LOCATION OF REMEDIAL ALTERNATIVES (NORTH)

Scale: 0 400 800 Feet

Date: AUGUST, 2010

Drawn By: DAT | Checked By: NRA | Scope: 08G007

X:\GB\IE\2008\08G007\GIS\mxd\RACR\RecharacterizationNorth.mxd



Legend

Core

- Discrete
- Composite
- Road
- Highway
- Rail
- Decree Line
- SMU 56/57 Boundary
- Navigation Corridor(with Caretaker Status)
- Fox River

Remediation

- Special Remedial Action Cap (SRA Cap)
- Residual Cap Management Unit
- Primary Cap Management Unit
- Residual Sand Cover Management Unit
- Primary Sand Cover Management Unit
- Primary Dredge Management Unit
- Dredged TSCA Area

Contour 1 Foot

- Major
- Minor

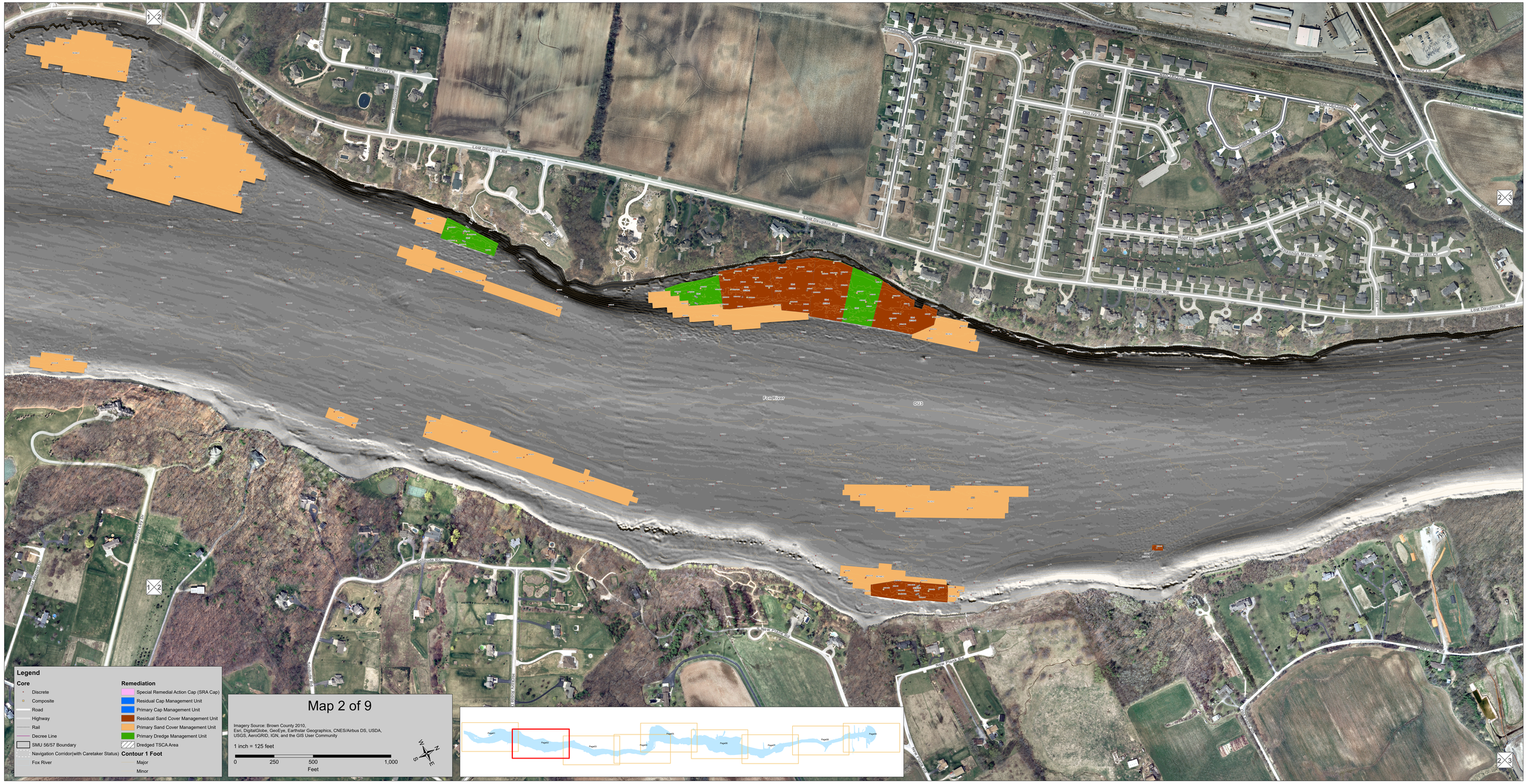
Map 1 of 9

Imagery Source: Brown County 2010,
Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,
USGS, AeroGRID, IGN, and the GIS User Community

1 inch = 125 feet

0 250 500 1,000
Feet

Document Path: F:\Final2020_WallMap\WallMap_2021_verFinal_scale1500_rot297_20210803_8.mxd 8/4/2021



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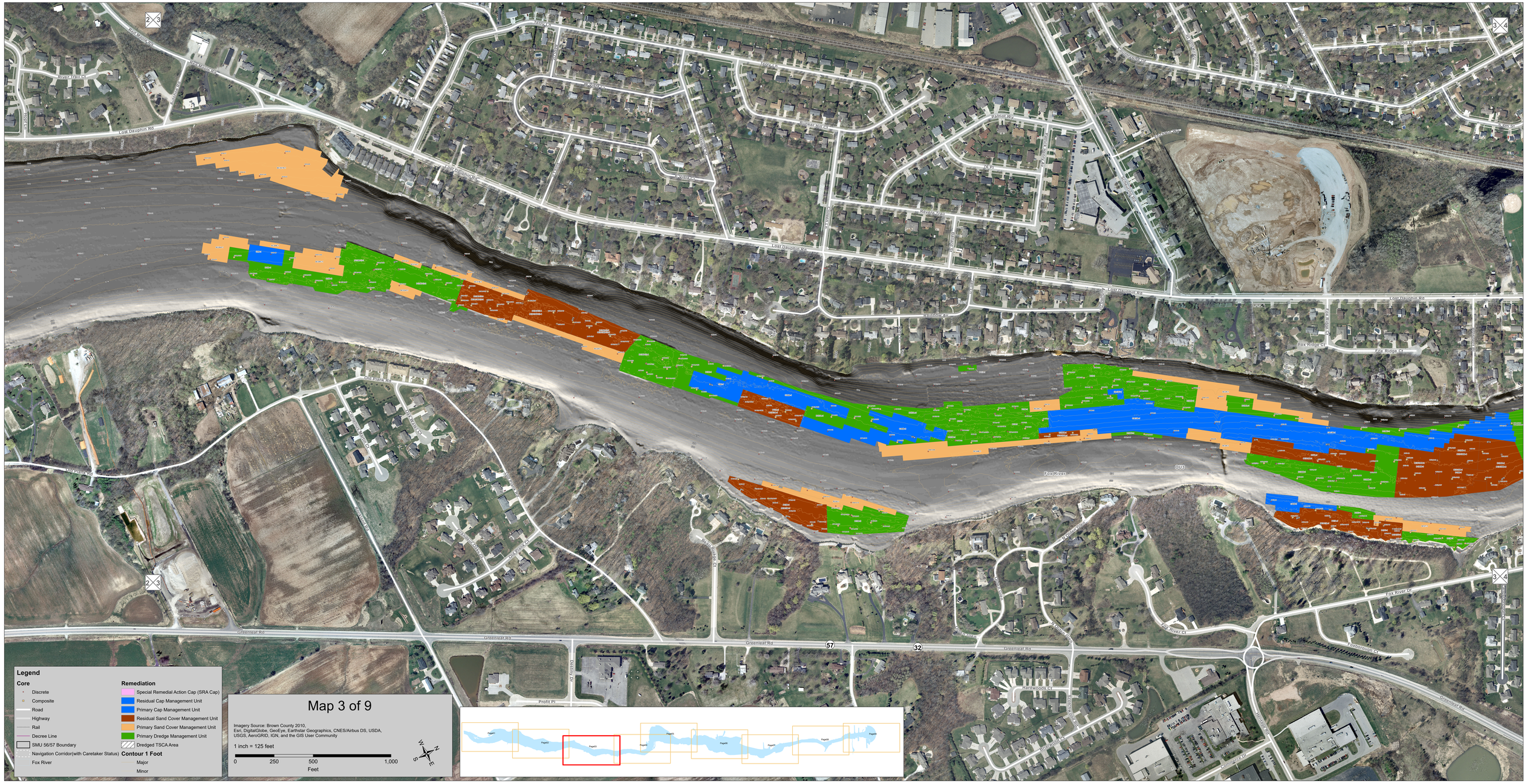

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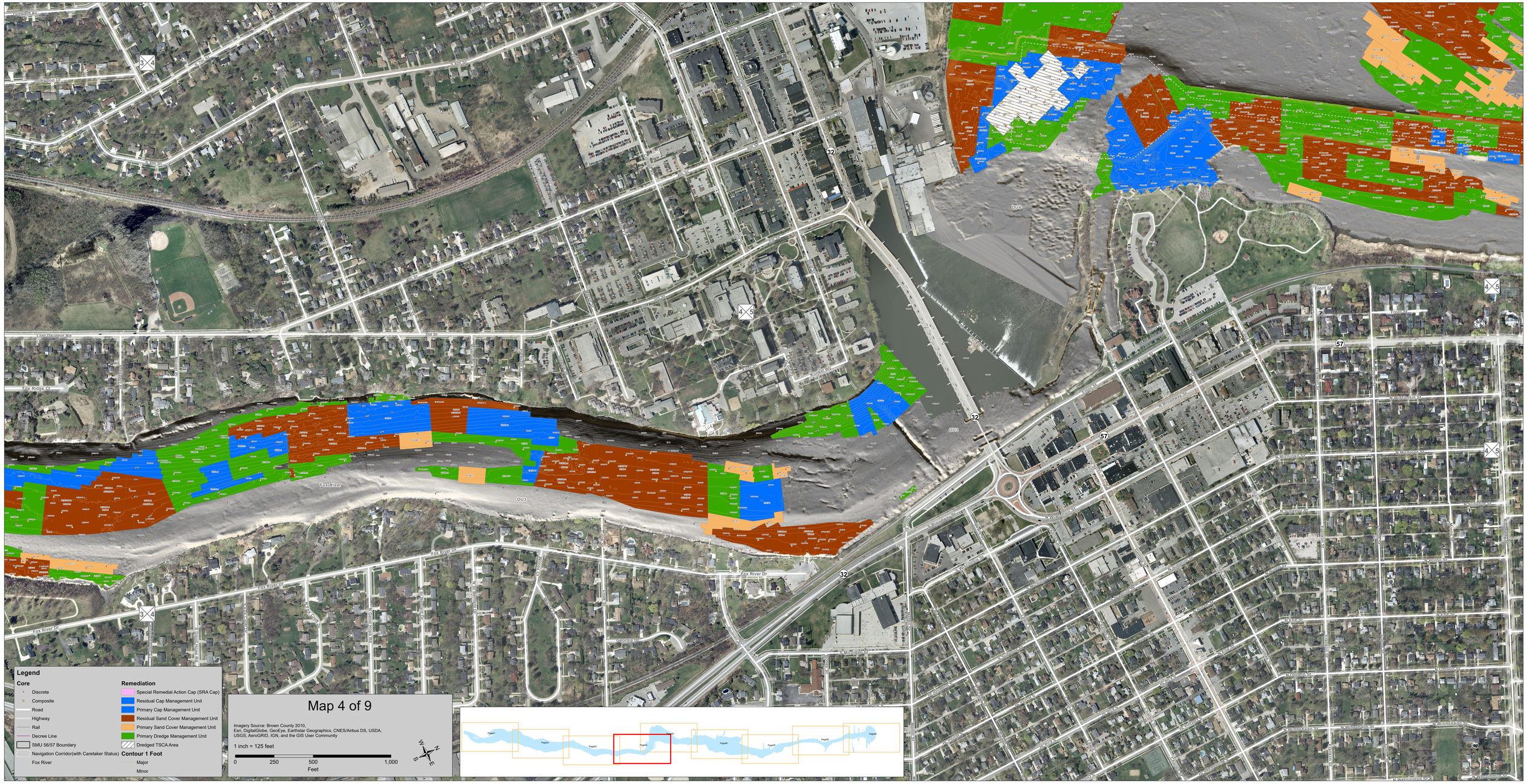

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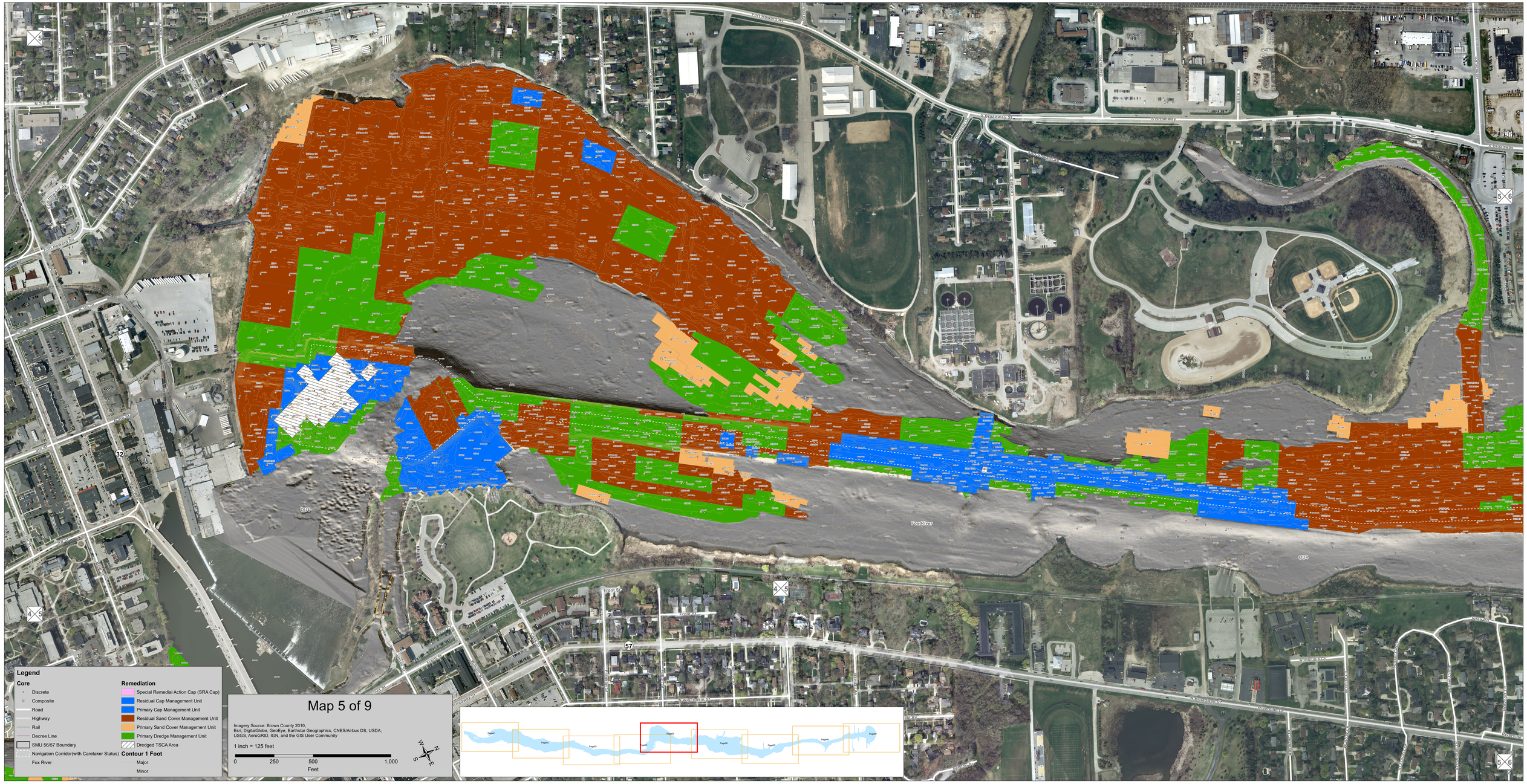

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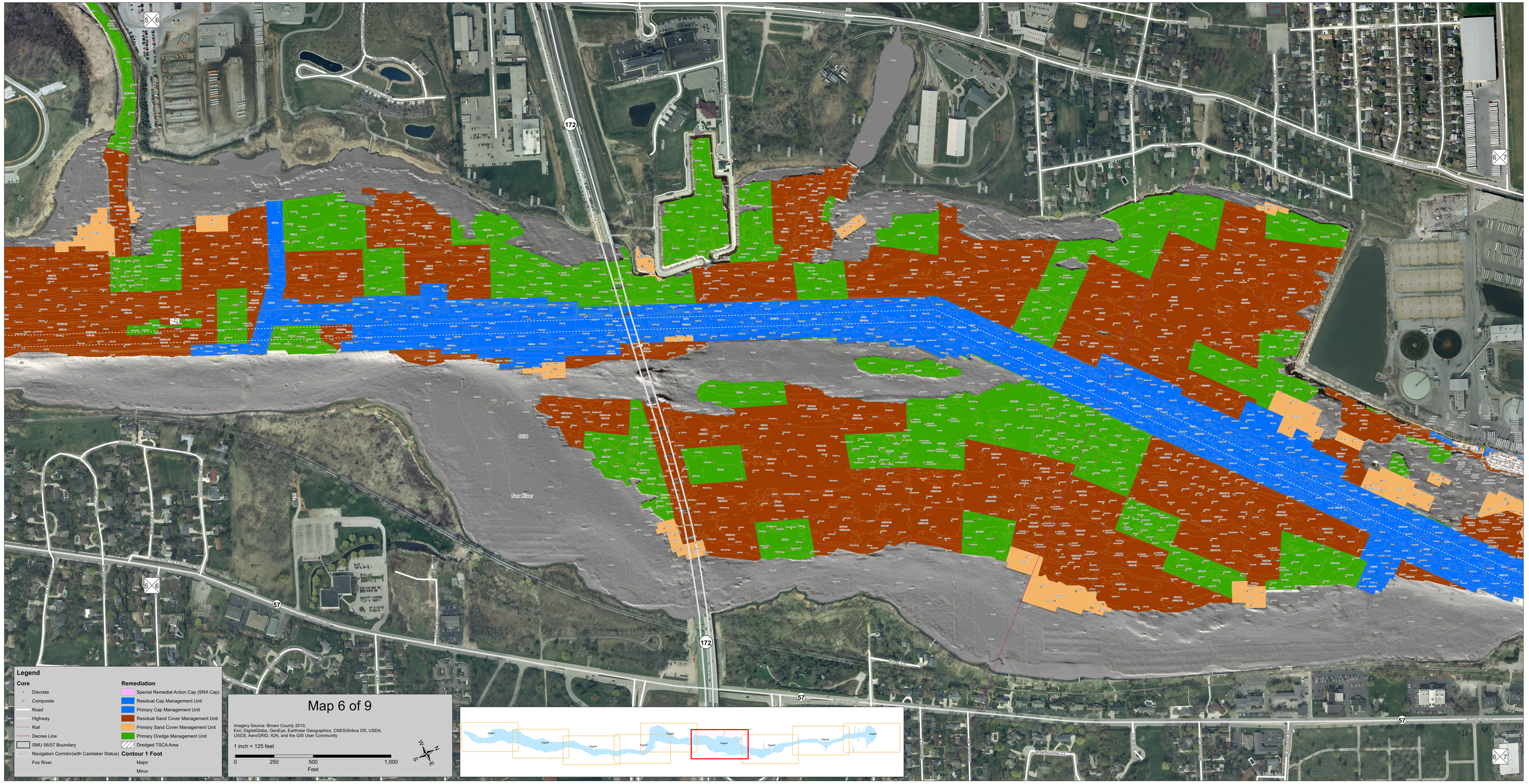

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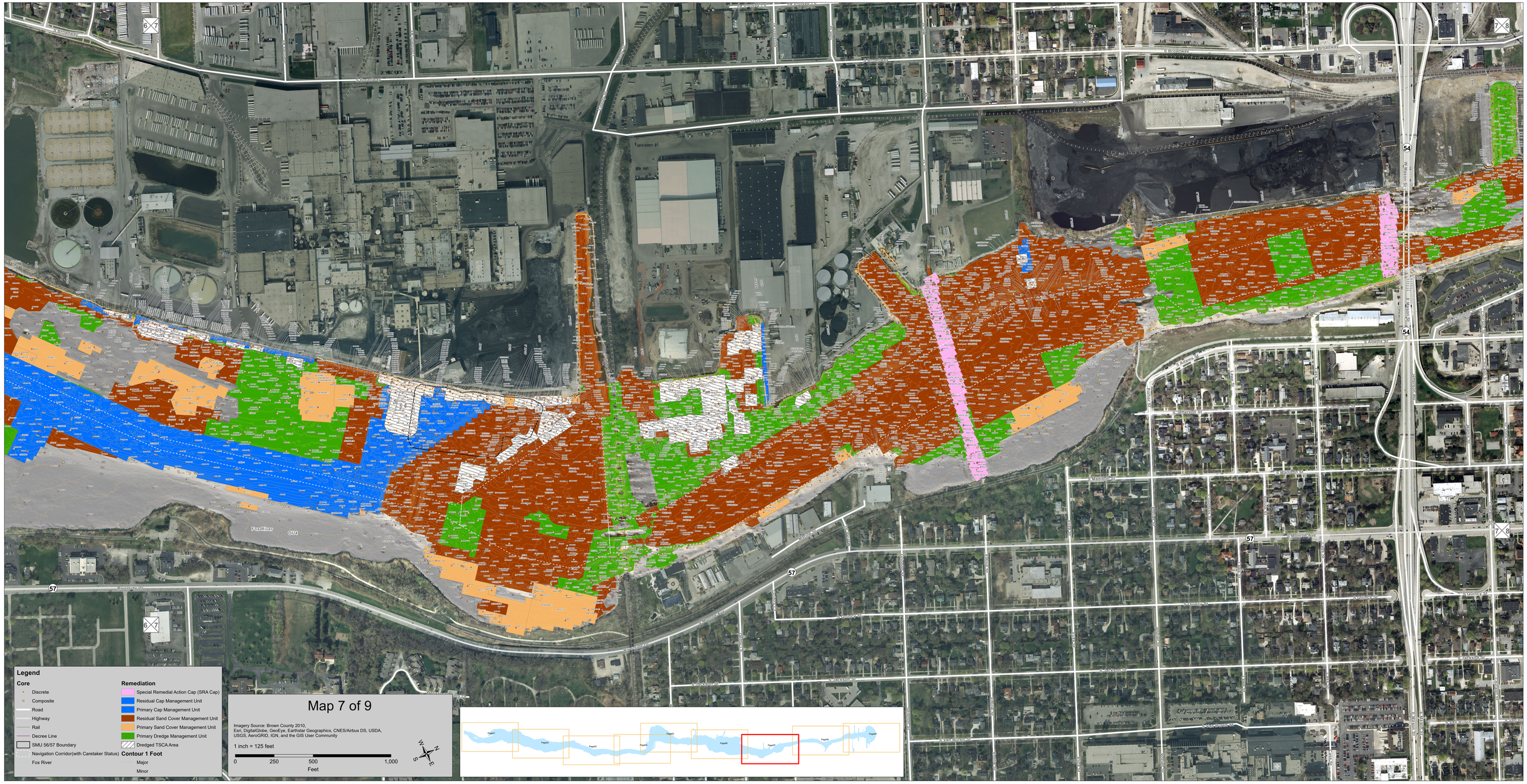
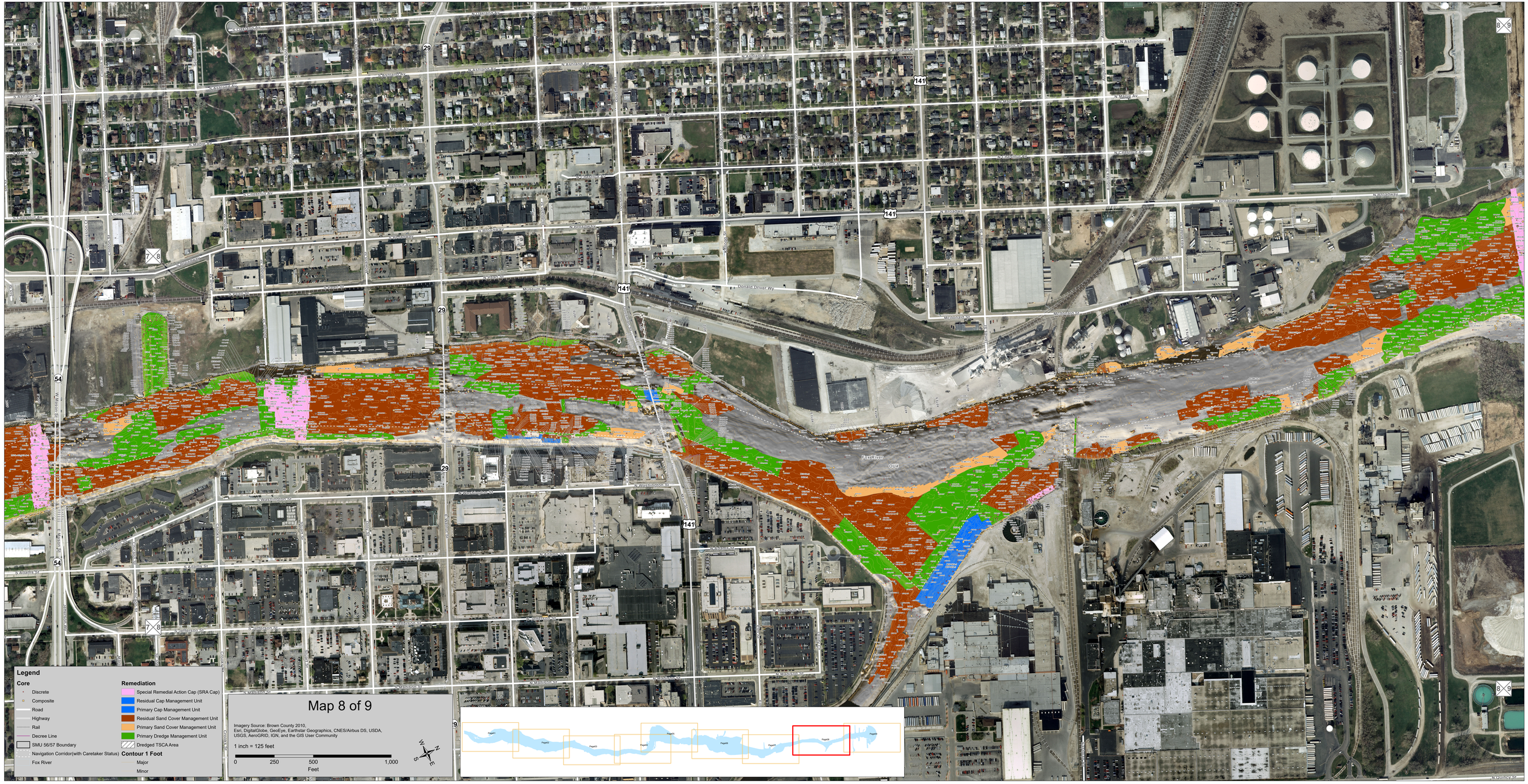

Legend
Core
Discrete
Composite
Road
Highway
Rail
Decree Line
SMU 56/57 Boundary
Navigation Corridor(with Caretaker Status)
Fox River
Remediation
Special Remedial Action Cap (SRA Cap)
Residual Cap Management Unit
Primary Cap Management Unit
Residual Sand Cover Management Unit
Primary Sand Cover Management Unit
Primary Dredge Management Unit
Dredged TSCA Area
Contour 1 Foot
Major
Minor
Map 7 of 9
Imagery Source: Brown County 2010,
Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA,
USGS, AeroGRID, IGN, and the GIS User Community
1 inch = 125 feet
0
250
500
1,000
Feet
Fox River
OU4
S Broadway
S Adams St
S Madison St
S Monroe Ave
S Quincy St
S Van Buren St
S Webster Ave
S Jefferson St
S Clay St
S Taylor St
S Lawe St
S Oneida St
S Walnut St
S Durkee St
S Superior St
S Ashland Ave
S Bellevue St
S Baird St
S Elmore Ave
S Irving Ave
S Roosevelt Ave
S Stuart Ave
S Dousman St
S Ontario St
S Webster Ave
S Van Buren St



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