

**Notice:** Use this form to request a **written response (on agency letterhead)** from the Department of Natural Resources (DNR) regarding technical assistance, a post-closure change to a site, a specialized agreement or liability clarification for Property with known or suspected environmental contamination. A fee will be required as is authorized by s. 292.55, Wis. Stats., and NR 749, Wis. Adm. Code., unless noted in the instructions below. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

### Definitions

**"Property"** refers to the subject Property that is perceived to have been or has been impacted by the discharge of hazardous substances.

**"Liability Clarification"** refers to a written determination by the Department provided in response to a request made on this form. The response clarifies whether a person is or may become liable for the environmental contamination of a Property, as provided in s. 292.55, Wis. Stats.

**"Technical Assistance"** refers to the Department's assistance or comments on the planning and implementation of an environmental investigation or environmental cleanup on a Property in response to a request made on this form as provided in s. 292.55, Wis. Stats.

**"Post-closure modification"** refers to changes to Property boundaries and/or continuing obligations for Properties or sites that received closure letters for which continuing obligations have been applied or where contamination remains. Many, but not all, of these sites are included on the GIS Registry layer of RR Sites Map to provide public notice of residual contamination and continuing obligations.

### Select the Correct Form

This form should be used to request the following from the DNR:

- Technical Assistance
- Liability Clarification
- Post-Closure Modifications
- Specialized Agreements (tax cancellation, negotiated agreements, etc.)

Do **not** use this form if one of the following applies:

- Request for an **off-site liability exemption or clarification** for Property that has been or is perceived to be contaminated by one or more hazardous substances that originated on another Property containing the source of the contamination. Use DNR's Off-Site Liability Exemption and Liability Clarification Application Form 4400-201.
- Submittal of an Environmental Assessment for the **Lender Liability Exemption**, s 292.21, Wis. Stats., **if no response or review by DNR is requested**. Use the Lender Liability Exemption Environmental Assessment Tracking Form 4400-196.
- Request for an **exemption to develop on a historic fill site** or licensed landfill. Use DNR's Form 4400-226 or 4400-226A.
- **Request for closure** for Property where the investigation and cleanup actions are completed. Use DNR's Case Closure - GIS Registry Form 4400-202.

All forms, publications and additional information are available on the internet at: [dnr.wi.gov/topic/Brownfields/Pubs.html](http://dnr.wi.gov/topic/Brownfields/Pubs.html).

### Instructions

1. Complete sections 1, 2, 6 and 7 for all requests. Be sure to provide adequate and complete information.
2. Select the type of assistance requested: Section 3 for technical assistance or post-closure modifications, Section 4 for a written determination or clarification of environmental liabilities; or Section 5 for a specialized agreement.
3. Include the fee payment that is listed in Section 3, 4, or 5, unless you are a "Voluntary Party" enrolled in the Voluntary Party Liability Exemption Program **and** the questions in Section 2 direct otherwise. Information on to whom and where to send the fee is found in Section 8 of this form.
4. Send the completed request, supporting materials and the fee to the appropriate DNR regional office where the Property is located. See the map on the last page of this form. A paper copy of the signed form and all reports and supporting materials shall be sent with an electronic copy of the form and supporting materials on a compact disk. For electronic document submittal requirements see: <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>

The time required for DNR's determination varies depending on the complexity of the site, and the clarity and completeness of the request and supporting documentation.

## Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

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### Section 1. Contact and Recipient Information

#### Requester Information

This is the person requesting technical assistance or a post-closure modification review, that his or her liability be clarified or a specialized agreement and is identified as the requester in Section 7. DNR will address its response letter to this person.

Last Name	First	MI	Organization/ Business Name
Smith	Jason		Tecumseh Products Company
Mailing Address			City
2700 West Wood Street			Paris
			State
			TN
			ZIP Code
			38242
Phone # (include area code)	Fax # (include area code)	Email	
(731) 644-8127	(731) 644-8156	jason.smith@tecumseh.com	

The requester listed above: (select all that apply)

- Is currently the owner
  Is considering selling the Property  
 Is renting or leasing the Property
  Is considering acquiring the Property  
 Is a lender with a mortgagee interest in the Property  
 Other. Explain the status of the Property with respect to the applicant:

Site - portion downstream of the Hayton Millpond Dam

#### Contact Information (to be contacted with questions about this request)

Select if same as requester

Contact Last Name	First	MI	Organization/ Business Name
Smith	Jason		Tecumseh Products Company
Mailing Address			City
2700 West Wood Street			Paris
			State
			TN
			ZIP Code
			38242
Phone # (include area code)	Fax # (include area code)	Email	
(731) 644-8127	(731) 644-8156	jason.smith@tecumseh.com	

#### Environmental Consultant (if applicable)

Contact Last Name	First	MI	Organization/ Business Name
Harvey	Chris		TRC Environmental Corporation
Mailing Address			City
230 West Monroe St., Suite 630			Chicago
			State
			IL
			ZIP Code
			60606
Phone # (include area code)	Fax # (include area code)	Email	
(312) 578-0870	(312) 578-0877	charvey@trcsolutions.com	

#### Property Owner (if different from requester)

Contact Last Name	First	MI	Organization/ Business Name
NA			
Mailing Address			City
			State
			ZIP Code
Phone # (include area code)	Fax # (include area code)	Email	

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## Section 2. Property Information

Property Name <b>Downstream of Hayton Millpond Dam</b>		FID No. (if known)	
BRRTS No. (if known) <b>02-08-281506</b>		Parcel Identification Number <b>NA</b>	
Street Address		City <b>Chilton</b>	State   ZIP Code <b>WI</b>
County <b>Calumet</b>	Municipality where the Property is located <input type="radio"/> City <input type="radio"/> Town <input type="radio"/> Village of	Property is composed of: <input type="radio"/> Single tax parcel <input type="radio"/> Multiple tax parcels	Property Size Acres

1. Is a response needed by a specific date? (e.g., Property closing date) Note: Most requests are completed within 60 days. Please plan accordingly.

No  Yes

Date requested by: \_\_\_\_\_

Reason: \_\_\_\_\_

2. Is the "Requester" enrolled as a Voluntary Party in the Voluntary Party Liability Exemption (VPLE) program?

No. **Include the fee that is required for your request in Section 3, 4 or 5.**

Yes. **Do not include a separate fee.** This request will be billed separately through the VPLE Program.

**Fill out the information in Section 3, 4 or 5 which corresponds with the type of request:**

**Section 3. Technical Assistance or Post-Closure Modifications;**

**Section 4. Liability Clarification; or Section 5. Specialized Agreement.**

## Section 3. Request for Technical Assistance or Post-Closure Modification

Select the type of technical assistance requested: **[Numbers in brackets are for WI DNR Use]**

- No Further Action Letter (NFA) (Immediate Actions) - NR 708.09, [183] - **Include a fee of \$350.** Use for a written response to an immediate action after a discharge of a hazardous substance occurs. Generally, these are for a one-time spill event.
- Review of Site Investigation Work Plan - NR 716.09, [135] - **Include a fee of \$700.**
- Review of Site Investigation Report - NR 716.15, [137] - **Include a fee of \$1050.**
- Approval of a Site-Specific Soil Cleanup Standard - NR 720.10 or 12, [67] - **Include a fee of \$1050.**
- Review of a Remedial Action Options Report - NR 722.13, [143] - **Include a fee of \$1050.**
- Review of a Remedial Action Design Report - NR 724.09, [148] - **Include a fee of \$1050.**
- Review of a Remedial Action Documentation Report - NR 724.15, [152] - **Include a fee of \$350**
- Review of a Long-term Monitoring Plan - NR 724.17, [25] - **Include a fee of \$425.**
- Review of an Operation and Maintenance Plan - NR 724.13, [192] - **Include a fee of \$425.**

Other Technical Assistance - s. 292.55, Wis. Stats. [97] (For request to build on an abandoned landfill use Form 4400-226)

- Schedule a Technical Assistance Meeting - **Include a fee of \$700.**
- Hazardous Waste Determination - **Include a fee of \$700.**
- Other Technical Assistance - **Include a fee of \$700.** Explain your request in an attachment.

Post-Closure Modifications - NR 727, [181]

- Post-Closure Modifications: Modification to Property boundaries and/or continuing obligations of a closed site or Property; sites may be on the GIS Registry. This also includes removal of a site or Property from the GIS Registry. **Include a fee of \$1050, and:**
  - Include a fee of \$300 for sites with residual soil contamination; and
  - Include a fee of \$350 for sites with residual groundwater contamination, monitoring wells or for vapor intrusion continuing obligations.

Attach a description of the changes you are proposing, and documentation as to why the changes are needed (if the change to a Property, site or continuing obligation will result in revised maps, maintenance plans or photographs, those documents may be submitted later in the approval process, on a case-by-case basis).

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Skip Sections 4 and 5 if the technical assistance you are requesting is listed above and complete Sections 6 and 7 of this form.

**Section 5. Request for a Specialized Agreement**

Select the type of agreement needed. Include the appropriate draft agreements and supporting materials. Complete Sections 6 and 7 of this form. More information and model draft agreements are available at: [dnr.wi.gov/topic/Brownfields/lgu.html#tabx4](http://dnr.wi.gov/topic/Brownfields/lgu.html#tabx4).

Tax cancellation agreement - s. 75.105(2)(d), Wis. Stats. [654]

❖ Include a fee of \$700, and the information listed below:

- (1) Phase I and II Environmental Site Assessment Reports,
- (2) a copy of the Property deed with the correct legal description.

Agreement for assignment of tax foreclosure judgement - s.75.106, Wis. Stats. [666]

❖ Include a fee of \$700, and the information listed below:

- (1) Phase I and II Environmental Site Assessment Reports,
- (2) a copy of the Property deed with the correct legal description.

Negotiated agreement - Enforceable contract for non-emergency remediation - s. 292.11(7)(d) and (e), Wis. Stats. [630]

❖ Include a fee of \$1400, and the information listed below:

- (1) a draft schedule for remediation; and,
- (2) the name, mailing address, phone and email for each party to the agreement.

**Section 6. Other Information Submitted**

Identify all materials that are included with this request.

Send both a paper copy of the signed form and all reports and supporting materials, and an electronic copy of the form and all reports, including Environmental Site Assessment Reports, and supporting materials on a compact disk.

Include one copy of any document from any state agency files that you want the Department to review as part of this request. The person submitting this request is responsible for contacting other state agencies to obtain appropriate reports or information.

Phase I Environmental Site Assessment Report - Date: \_\_\_\_\_

Phase II Environmental Site Assessment Report - Date: \_\_\_\_\_

Legal Description of Property (required for all liability requests and specialized agreements)

Map of the Property (required for all liability requests and specialized agreements)

Analytical results of the following sampled media: Select all that apply and include date of collection.

Groundwater     Soil     Sediment     Other medium - Describe: \_\_\_\_\_

Date of Collection: \_\_\_\_\_

A copy of the closure letter and submittal materials

Draft tax cancellation agreement

Draft agreement for assignment of tax foreclosure judgment

Other report(s) or information - Describe: Downstream Hayton Mill Pond Dam, Sampling and Analysis Plan

For Property with newly identified discharges of hazardous substances only: Has a notification of a discharge of a hazardous substance been sent to the DNR as required by s. NR 706.05(1)(b), Wis. Adm. Code?

Yes - Date (if known): \_\_\_\_\_

No

Note: The Notification for Hazardous Substance Discharge (non-emergency) form is available at: [dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf](http://dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf).

**Section 7. Certification by the Person who completed this form**

I am the person submitting this request (requester)

I prepared this request for: Tecumseh Products Company

Requester Name

I certify that I am familiar with the information submitted on this request, and that the information on and included with this request is true, accurate and complete to the best of my knowledge. I also certify I have the legal authority and the applicant's permission to make this request.

**Technical Assistance, Environmental Liability  
Clarification or Post-Closure Modification Request**

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CDH

1/11/2019

Signature

Date Signed

Principal

(312) 578-0870

Title

Telephone Number (include area code)

# Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

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## Section 8. DNR Contacts and Addresses for Request Submittals

Send or deliver one paper copy and one electronic copy on a compact disk of the completed request, supporting materials, and fee to the region where the property is located to the address below. Contact a DNR regional brownfields specialist with any questions about this form or a specific situation involving a contaminated property. For electronic document submittal requirements see: <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

### DNR NORTHERN REGION

Attn: RR Program Assistant  
Department of Natural Resources  
223 E Steinfest Rd Antigo, WI 54409

### DNR NORTHEAST REGION

Attn: RR Program Assistant  
Department of Natural Resources  
2984 Shawano Avenue  
Green Bay WI 54313

### DNR SOUTH CENTRAL REGION

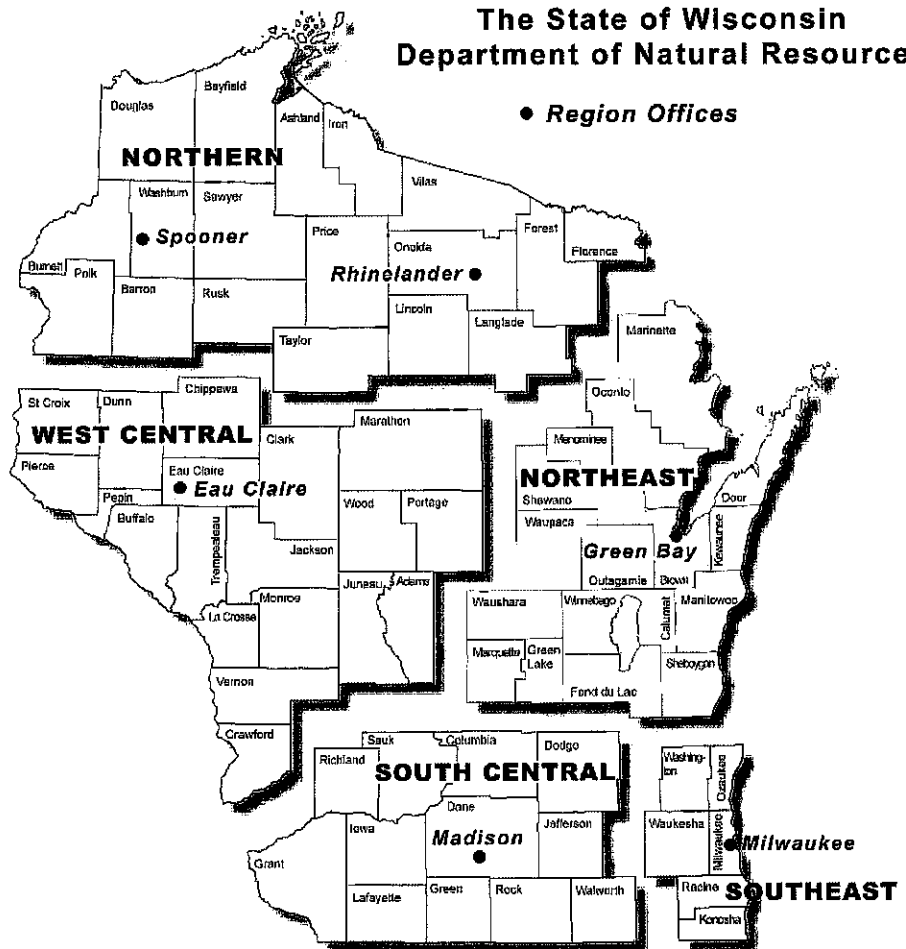
Attn: RR Program Assistant  
Department of Natural Resources  
3911 Fish Hatchery Road  
Fitchburg WI 53711

### DNR SOUTHEAST REGION

Attn: RR Program Assistant  
Department of Natural Resources  
2300 North Martin Luther King Drive  
Milwaukee WI 53212

### DNR WEST CENTRAL REGION

Attn: RR Program Assistant  
Department of Natural Resources  
1300 Clairemont Ave.  
Eau Claire WI 54702



*Note: These are the Remediation and Redevelopment Program's designated regions. Other DNR program regional boundaries may be different.*

DNR Use Only			
Date Received	Date Assigned	BRRTS Activity Code	BRRTS No. (if used)
DNR Reviewer		Comments	
Fee Enclosed? <input type="radio"/> Yes <input type="radio"/> No	Fee Amount \$	Date Additional Information Requested	Date Requested for DNR Response Letter
Date Approved	Final Determination		



230 W. Monroe Street  
Suite 630  
Chicago, IL 60606

312.800.5912 PHONE  
312.578.0877 FAX

www.trcsolutions.com

January 8, 2019

William Fitzpatrick  
Wisconsin Department of Natural Resources  
PO Box 7921  
Madison WI 53707-7921

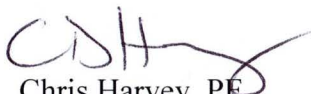
**Subject: Additional Investigation Sampling Plan Downstream of Hayton Millpond Dam**

Dear Mr. Fitzpatrick:

On behalf of Tecumseh Products Company ("Tecumseh"), TRC Environmental Corporation ("TRC") enclosed a Sampling and Analysis Plan ("Sampling Plan") for approximately two river miles of the South Branch of the Manitowoc River downstream of the Hayton Millpond Dam ("Downstream Area").

The Sampling Plan was prepared in accordance with Section III.K. of the Negotiated Agreement ("Agreement") between WDNR, TRC and Tecumseh entered in November 2018. This Sampling Plan is consistent with the document protocol for materials prepared for the Hayton Area Remediation Project ("HARP") site.

Sincerely,

  
Chris Harvey, PE  
Principal

cc: Darsi Foss/WDNR – Madison  
Kevin McKnight/WDNR – Green Bay  
S. Jason Smith/Tecumseh Products Co. - Paris , TN (electronic copy)  
Curtis Toll/Greenberg Traurig LLP - Philadelphia (electronic copy)  
Marc Faecher/TRC - New Providence, NJ (electronic copy)  
Ronald Bock/TRC - Irvine (electronic copy)  
Stacy McAnulty/TRC - Madison (electronic copy)  
David Crass/Michael Best & Friedrich LLP - Madison

# **Downstream Hayton Mill Pond Dam, Sampling and Analysis Plan – Additional Site Investigation**



**January 2019**

**Prepared by:**



**Chicago, Illinois**



# **Downstream Hayton Mill Pond Dam, Sampling and Analysis Plan – Additional Site Investigation**

**Prepared by:**



**230 West Monroe Street, Suite 630  
Chicago, Illinois 60606**

**TRC Project No. 320928**

**January 2019**

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## 1.0 INTRODUCTION

On behalf of Tecumseh Products Company (Tecumseh), this Sampling and Analysis Plan – Additional Site Investigation (SAP) presents the proposed sampling approach to conduct the Wisconsin Department of Natural Resources (WDNR) requested site characterization downstream of the Hayton Mill Pond Dam. This SAP outlines TRC's scope of work to conduct additional investigation downstream of the dam. This additional investigation will expand on the reconnaissance study that was completed in August 2015.

In November 2018, WDNR, Tecumseh and TRC Environmental Corporation (TRC) executed a Negotiated Agreement (BRRTS #02-08-281506) (Agreement), in which Tecumseh agreed to certain response actions and obligations (WDNR, 2018). In accordance with Section III.K. of the Agreement, within 60 days of the Agreement, Tecumseh shall submit a sampling plan to characterize the nature and extent of polychlorinated biphenyls (PCBs) below the Hayton Mill Pond Dam. This SAP is to be submitted to WDNR by January 11, 2019.

The Site includes the Hayton Area Remediation Project (HARP) and areas downstream of the dam at the Hayton Millpond where hazardous substances attributable to the former Tecumseh manufacturing facility may have migrated (WDNR, 2018). This SAP deals solely with the proposed investigation area downstream of the dam and does not address the Site as a whole. Figure 1 shows the location of the proposed investigation area downstream of the Hayton Millpond Dam.

### 1.1 Background

In August 2015, Tecumseh completed a reconnaissance study downstream of the dam at the request of the WDNR in its letter dated January 15, 2015 (WDNR, 2015). The methods and means used in this reconnaissance study were established in a WDNR-approved SAP (WDNR, 2013).

The reconnaissance study area extended from the Hayton Millpond Dam to approximately 1.5 miles downstream of the Dam in the South Branch of the Manitowoc River. Seven transects, each with three sample locations (right, left, and center of the channel looking downstream) were selected for the reconnaissance investigation. As requested by WDNR, stream sections likely to have soft sediment deposits (i.e. slow-moving sections and inside stream bends) were targeted.

On August 18, 2015, TRC collected sediment samples at each of the seven transect locations with oversight from a WDNR representative. Once a sampling transect was located, TRC and WDNR probed sediment within the river to find adequate soft sediment for sampling. All sampling locations were approved by WDNR during the investigation.

The sampling locations were biased towards areas with soft sediment accumulation and did not include fast flowing portions of the river or areas dominated by sand, gravel, or sand and soft sediments combined.

Adequate soft sediment for sample collection was recovered at 20 of the 21 sampling locations. Only soft sediment (not gravel or clay) was collected for sample analyses. In cores where discernable layers were identified within soft sediment, care was taken to collect discrete samples representing each zone. In cores without discernable soft sediment layers, all soft sediment was collected for sampling. Soft sediment sampling zones ranged in thickness from the top 1.8 inches to 12.0 inches of sediment within the core tubes.

The total PCB concentrations from the August 18, 2015 sampling event ranged from non-detect with a 0.0286 mg/kg reporting limit (MR1-IC-901C) to 3.67 mg/kg (MR3-IC-003L). Only 5 of 20 samples had total PCB concentrations above 1 mg/kg, and only 2 samples had PCB concentrations above 2 mg/kg. A surface-area weighted average concentration (SWAC) of 0.53 mg/kg was calculated for the study area. Figure 1 in the Attachment illustrates the sample locations, SWAC segments, and the data associated with generating the SWAC. This SWAC is biased high and is conservative, as sampling areas were focused on portions of the river having the greatest soft sediment accumulation and the sample cores did not include any native underlying material (e.g., hardpan clay).

The distribution and range of results indicated low levels of PCBs below the Hayton Millpond Dam. The sampling methodology did not “dilute” any sample results or otherwise bias the results. The SWAC confirmed the effectiveness of the upstream HARP remediation program, that there is no on-going source of contamination, and that there is little PCB-associated risk downstream of the dam.

## **1.2 Sampling and Analysis Plan Overview**

This SAP describes the additional site investigation and the work that will be performed to characterize the nature and extent of potential PCBs downstream from the Hayton Mill Pond Dam. The investigation area extends from the Hayton Mill Pond Dam to approximately two miles downstream in the South Branch of the Manitowoc River. Refer to Figure 2 showing the investigation area. The methods and protocols that will be used to complete this investigation downstream of the dam are consistent with those used for HARP and have previously been described in the May 2012 South Branch of the Manitowoc River, Reconnaissance Study Sampling and Analysis Plan, the August 2016 OU4/Lower Phase IV Sampling and Analysis Plan, the September 2016 Addendum

Number 1 - OU4/Lower Phase IV Sampling and Analysis Plan, and the October 2017 Quality Assurance Project Plan (QAPP). These documents will be cited accordingly.

The investigation area has specific geomorphic characteristics that will be evaluated by the proposed sampling event. The sample locations proposed in this SAP are based on the river environment and reasonable sampling density to further evaluate the nature and extent of PCBs and the nature of the sediment and overbank soils downstream of the Hayton Mill Pond Dam. The sample locations were selected to be representative of a portion of the river such that data can be extrapolated to adjacent geomorphic settings. Channel gradient, meander bends, and depositional setting are parameters that have also been considered in the sample location selection process.

This SAP presents the sampling objectives, quality assurance and safety plans, sample locations and procedures to collect sediment samples below the Hayton Mill Pond Dam, and reporting.

### **1.3 Sampling Objectives**

The objectives of the sampling event are as follows:

- To characterize the nature and extent of PCBs approximately two miles below Hayton Mill Pond Dam.
- To expand the reconnaissance level study completed by Tecumseh in August 2015, by integrating the data from this additional study.
- To assess the depth of water and sediment and the depositional environment in the South Branch of the Manitowoc River downstream from the Hayton Mill Pond Dam.

## **2.0 QUALITY ASSURANCE PROJECT PLAN**

The sampling will adhere to the QAPP that was developed by TRC for HARP (TRC, 2017). The HARP QAPP includes information on project organization, responsibilities, sampling procedures, quality control checks, data management, and reporting. The QAPP is updated regularly based on the work to be performed. The HARP QAPP is incorporated into this SAP by reference.

### **2.1 Decontamination Procedures**

The decontamination procedures to be used at the site are the same as those referenced in the HARP QAPP. Generally, dedicated sampling equipment is used. Any non-disposable and non-dedicated sampling equipment will be decontaminated prior to initial use, between sample intervals, between sampling locations, and at the end of the sampling event. Decontamination procedures will include washing and scrubbing with a laboratory grade soap solution (such as Alconox), triple rinsing (tap water followed by two deionized or distilled water rinses), and air dried.

### **2.2 Laboratory Quality Assurance**

Analysis of the environmental samples will be performed by Pace Analytical Services laboratory in Green Bay, Wisconsin, which is a WDNR-certified laboratory. Quality Control (QC) samples include field blanks and sample duplicates to evaluate the possible introduction of contamination during the sampling process and to assess reproducibility of results or concentration variability in sediments. These samples will be collected and labeled in accordance with methods described in the HARP QAPP.

### **2.3 Data Quality Objectives and Requirements**

The overall Quality Assurance and Quality Control (QA/QC) objective during sampling is the use and implementation of procedures for sample collection, field documentation, sample custody, analytical methodology, field and laboratory QA/QC, and reporting that provide results which are legally defensible and based on sound engineering and science. The overall QA/QC objective of the laboratory analytical program is to generate data that is scientifically defensible and of known precision and accuracy. Laboratory Data Quality Objectives (DQO), expressed in terms of precision, accuracy, and completeness are the same as given in the HARP QAPP.

Sampling precision and bias will be assessed through the collection of field duplicate samples. In general, one (1) field duplicate per twenty (20) environmental samples or a minimum of one (1) per sampling event will be submitted to the laboratory. The target variation between field duplicate results should be less than  $\pm 50$  percent for conventional parameters, with consideration of the variability of sediment matrices.

Accuracy in the field will be assessed by analysis of equipment blank rinsate samples. In general, one (1) rinsate sample for every (20) environmental samples or a minimum of one (1) per sampling event will be collected and submitted to the laboratory. Equipment rinsate blanks which consist of deionized water rinsates of sampling equipment or containers, will be analyzed to indicate potential sample contamination from contaminated equipment. At least one equipment rinsate blank will be taken per sampling event.



### **3.0 HEALTH AND SAFETY PLAN**

The sampling activities will adhere to the Health and Safety Plan (HASP) that was developed by TRC for HARP activities (TRC, 2015a). The HARP HASP includes safety precaution information and emergency procedures. The HARP HASP is updated as needed based on the work to be performed. The HARP HASP is incorporated into this SAP by reference.

## 4.0 SAMPLING PROCEDURES

Prior to site mobilization and sampling, the site will be cleared through Diggers Hotline and the site will be marked to indicate identified underground utilities that cross the river. Riparian landowners that will be accessed along the investigation area will be contacted prior to field activities.

### 4.1 In-Channel Sediment Sampling

TRC will collect 21 soft sediment samples, one sample from each of the river transect locations as shown in Figure 2. TRC will collect the samples in general accordance with the methods consistently implemented on this project and further described below. At each transect location, three sediment cores will be collected and physically logged. At each transect, one core will be collected from within 10 feet of the left (looking downstream) bank of the river, one core from the approximate center of the river, and one core from within 10 feet of the right bank of the river. The sediment core that is recovered with the thickest soft sediment deposit will be the location where the sample is collected and analyzed for PCBs.

Consistent with the sample methodology implemented throughout this project, sediment core samples will be collected using 2-inch diameter clear plastic (PVC, lexan, or equivalent) core tubes that are pushed into the sediment. The core tube will be pushed by hand through the entire thickness of soft sediment and into the underlying soil until refusal is encountered. The sample core will be extracted from the sediment, capped, labeled, maintained in a vertical orientation, and transported to shore for processing.

The sediment core tube will be advanced through the full thickness of soft sediment or up to a maximum of 3 feet at each sample location. If 12 inches or more of soft sediment is present at a sample location, the upper 12 inches of the sediment core will be composited and placed in a sample jar. If less than 12 inches of soft sediment is present at a sample location, the full thickness of soft sediment will be composited and placed in a sample jar. If soft sediment is not present, up to three attempts will be made at the sample location to collect a soft sediment sample.

Each sediment sample will be analyzed for the following:

- Total PCBs (USEPA Method 8082-WIS); and

Physical data collected at each location will include the following:

- The water depth;
- The distance that the core is pushed into the sediments;

- The thickness of soft sediment;
- The conditions of refusal (physical impediment or resistance);
- The visual description of the deposit; and
- The recovery length.

### **Overbank Soil Sampling**

TRC will collect 16 overbank soil samples (one sample on either side of the river at eight transect locations, shown on Figure 2) within the first approximately 4,000 feet below the Hayton Mill Pond Dam. These samples will be collected to evaluate the overbank soil conditions and potential source areas. A sample will be collected at each overbank location, using either a spade, hand-auger or push-sampler. The overbank samples will be collected approximately five feet from the edge of the riverbank. Each soil sample will be collected from the ground surface to a depth of 6 inches below ground surface (bgs) to evaluate the soil conditions. The surface soil sample will be homogenized and placed into a container for analysis. Subsequent samples may be collected and analyzed laterally or at other depth intervals based on the results from the initial samples.

Sample descriptions will be completed for each sampling location. The USCS soil texture, color, moisture, root content, mottling, and other features (such as odor, presence of shell fragments, or sand or gravel lenses) will be recorded. Descriptions will be completed of the material recovered at each of the sampling locations on WDNR boring log forms.

## **4.2 Sample Nomenclature**

The sample locations in this additional investigation will use the following naming system:

### **4.2.1 In-Channel Sediment Samples**

In-channel samples will have the prefix “IC” following the location ID.

For in-channel samples on the left side of the river:

MR IC [#010-499]L

Example: MR IC 012L

For in-channel samples on the right side of the river:

MR IC [#510-899]R

Example: MR IC 512R

For in-channel samples (center of the river):

MR IC [#910-999]C

Example: RQ IC 912C

#### **4.2.2 Overbank Samples**

Overbank characterization samples on the left side of the river will be named as follows:

MR [#010-499]L [*interval*]

Example: MR 012L 0-6”

And on the right side of the river:

MR [#510-899]R [*interval*]

Example: RR 512R 0-6”

The 3-digit sample number will be unique within a given location. The ground surface will be used as the 0” reference for the sample interval. In addition, where sample interval potentially become deeper than 6”, additional samples will be collected in 12” intervals.

#### **4.2.3 Sample Handling**

Once retrieved from the sample location, samples will be homogenized to visible uniformity in a re-usable aluminum bowl, disposable aluminum pan, disposable plastic bag, or similar, and transferred to the appropriate sampling containers. Following containerization, the samples will be labeled appropriately and placed on ice to keep them cool for transport to a certified laboratory for analysis. Reusable sampling equipment will be decontaminated in between uses.

#### **4.3 Sample Location and Field Positioning**

The sample locations will be determined in the field using a hand-held global positioning system (GPS) unit with sub-meter accuracy. Prior to mobilizing to the field, the coordinate locations of the sediment transects and overbank soil sampling locations will be pre-programmed into the GPS.

## 5.0 SAMPLE LOCATION RATIONALE

TRC will collect 21 total sediment samples (one from each of the 21 sampling transects). TRC will collect 16 overbank soil samples (one sample on either side of the river at eight transect locations, shown on Figure 2) from the first eight sampling transects within the first approximately 4,000 feet below the Hayton Mill Pond Dam to evaluate the overbank soil conditions and potential source areas. Figure 2 shows the sampling transect locations. The locations of the proposed samples were determined using the following guidelines:

- To characterize the nature and extent of potential low-level PCB impacts, samples are based on a grid of approximately 500 feet transect interval.
- Each transect location was evaluated and slightly modified to account for geomorphological characteristics and the results of previous investigations. A transect location was slightly modified to a river bend or wider section of the river that may have higher rates of sediment accumulation. Channel gradient, proximity to the river channel and meander bends, surface elevation, depositional setting, and number of similar surfaces were factors considered in the sample location selection process.
- A transect location was slightly modified if it was near a previous sediment sample location with slightly higher PCB concentrations to confirm those previous sample results.
- Based on WDNR's concerns that there is a potential source area in the floodplain downstream of the Hayton Mill Pond Dam, TRC proposes to collect overbank soil samples from each transect within 4,000 feet of the dam. This distance correlates to the higher PCB concentrations detected in previous sediment sample events.
- The overbank soil samples will be collected approximately five feet from the top of the river bank.

## **6.0 DATA REVIEW AND TECHNICAL MEMORANDUM**

Following the field investigation and receipt of laboratory analytical results, the data will be compiled, analyzed, and incorporated into a technical memorandum. The technical memorandum will document the investigative activities conducted and will describe the methods employed during the investigation.

The report will also include a computed SWAC for the investigation area using the in-channel sediment samples from this sampling effort and the 2015 reconnaissance sampling event. The SWAC approach has been used at numerous sediment remediation sites in the U.S. and specifically in Wisconsin to evaluate risk reduction (e.g, Reible, et al., 2003). The SWAC represents the area of exposure across a river or creek system and is the widely accepted methodology used to evaluate potential risk and to guide remediation. The SWAC approach has also been used to confirm closure for upstream OUs of HARP.

As requested by the WDNR in previous Reaches of HARP, the SWAC will be calculated using the actual width of the stream at the sampling locations. The SWAC analysis zones have been set to start and end at the mid-points between adjacent sample/transect locations.

The technical memorandum will include a base map that shows the sampling locations. The analytical and physical results will be presented on figures and tables attached to the technical memorandum. The logs for sediment sampling locations, as well as laboratory analytical reports, will be appended to the technical memorandum. In addition, other appropriate data collected during the field investigation will be appended to the memorandum to document the quality of work performed.

## **7.0 SCHEDULE**

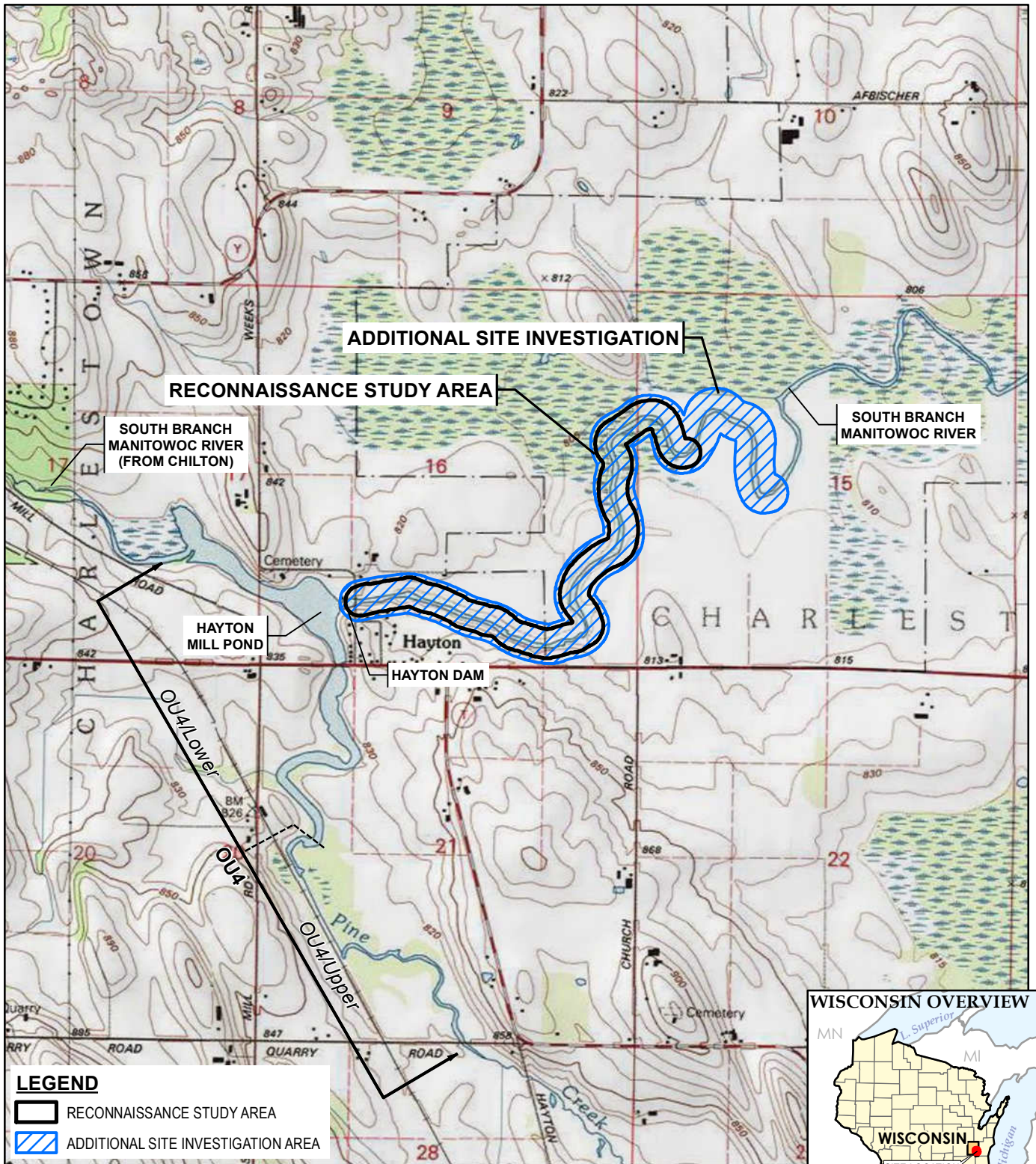
Pending WDNR and USEPA approval of this SAP, as well as landowner access approvals, the investigation activities are scheduled to start in late spring/early summer 2019. The results will be submitted to WDNR in the technical memorandum within 90 days of completion of the investigation.

## 8.0 REFERENCES

- Reible, *et. al.* 2003. Reible, D.D., Hayes, D., Lue-Hing, C., Patterson, J., Bhowmik, N., Johnson, M., and Teal J. “Comparison of the long-term risks of removal and In-Situ management of contaminated sediments in the Fox River,” *Journal of Soil and Sediment Contamination*, 12(3) 325-344
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- TRC. 2015a. *Site-Specific Health and Safety Plan. Sediment Investigations. South Branch of the Manitowoc River, Downstream of the Hayton Millpond, Calumet County, Wisconsin*. June 2015.
- TRC. 2015b. *Results Reporting – South Branch of the Manitowoc River Reconnaissance Study*. October 7, 2015.
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- TRC. 2017. *Quality Assurance Project Plan for Remedial Investigation. Hayton Area Remediation Project, Operable Units 3/Lower and 4, Chilton, Calumet County, Wisconsin*. Revision 3. October 2017
- WDNR, Tecumseh Products and TRC. 2004. Consent Order No. 2004-COEE-010; Facility ID No. WID006116529.
- WDNR. 2013. Letter from WDNR to Tecumseh, Conditional Approval of Hayton Area Remediation Project Reconnaissance Sampling Plan Downstream of Hayton Millpond Dam. July 1, 2013.
- WDNR. 2015. Letter from WDNR to Tecumseh, PCB Sampling Downstream of Hayton Mill Pond Dam, Hayton Area Remediation Project. January 15, 2015.
- WDNR, Tecumseh Products and TRC. 2018. Negotiated Agreement; BRRTS #02-08-281506.



## FIGURES



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.



**LEGEND**

- RECONNAISSANCE STUDY AREA
- ADDITIONAL SITE INVESTIGATION AREA



708 Heartland Trail  
Suite 3000  
Madison, WI 53717  
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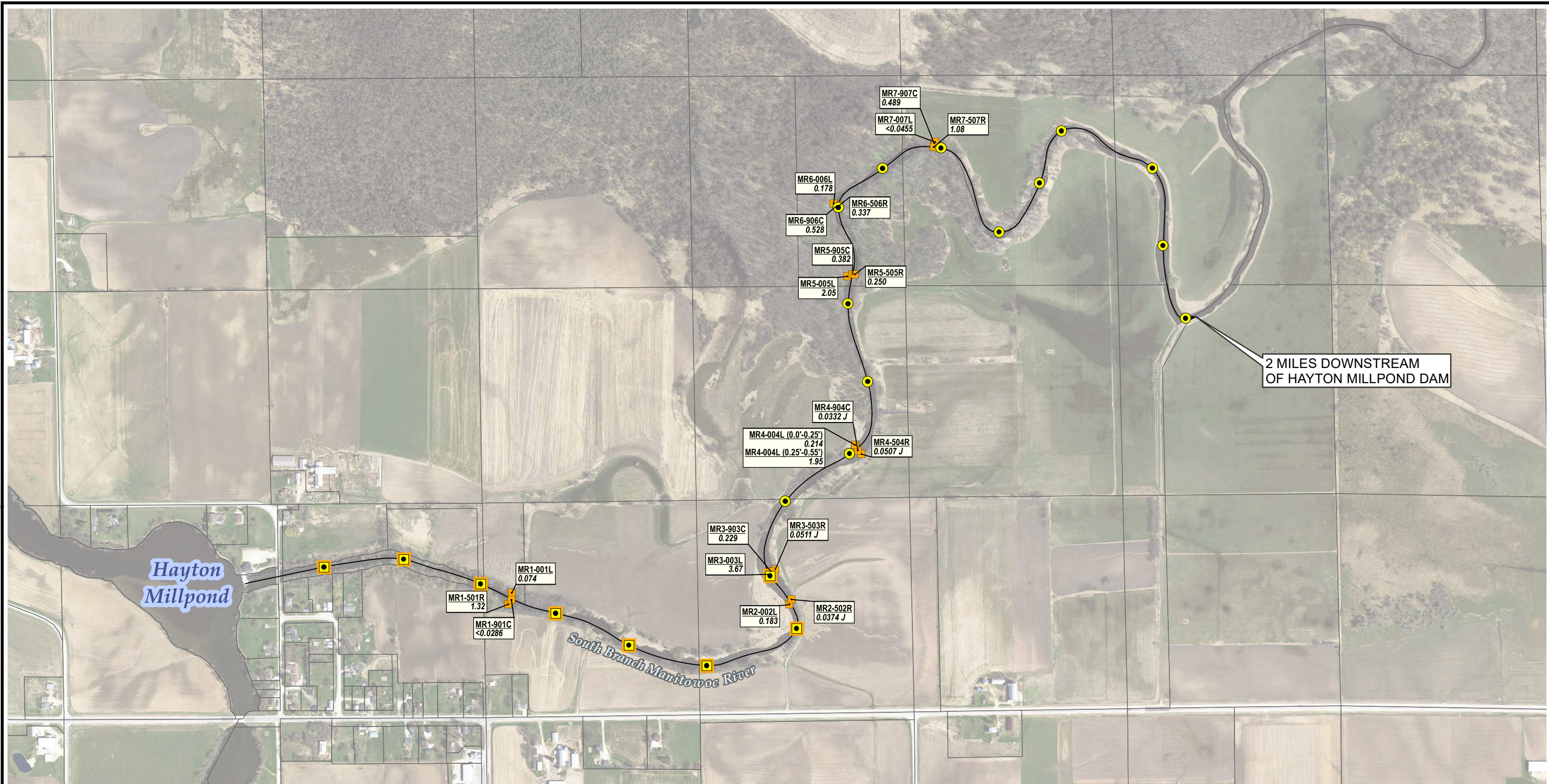
**DOWNSTREAM HAYTON MILL POND DAM  
ADDITIONAL SITE INVESTIGATION**

**SITE LOCATION MAP**

DRAWN BY:	J. PAPEZ
APPROVED BY:	C. HARVEY
PROJECT NO:	320928
FILE NO:	320928-002.mxd
DATE:	JANUARY 2019

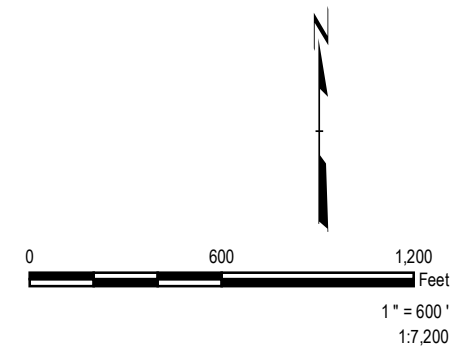
**FIGURE 1**






- LEGEND**
- TRC SEDIMENT SAMPLING/TRANSECT LOCATION (AUGUST 2015)
  - IN-CHANNEL TRANSECT LOCATION
  - TRANSECT WITH OVERBANK SOIL SAMPLES

- NOTES**
1. BASE MAP IMAGERY FROM CALUMET COUNTY 2014.



PROJECT: <b>DOWNSTREAM HAYTON MILL POND DAM ADDITIONAL SITE INVESTIGATION</b>	
TITLE: <b>DOWNSTREAM SAMPLING</b>	
DRAWN BY: J. PAPEZ	PROJ NO.: 320928
CHECKED BY: J. RICE	<b>FIGURE 2</b>
APPROVED BY: C. HARVEY	
DATE: DECEMBER 2018	
	
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FILE NO:	320928-001.mxd