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June 24, 2021

Bill Fitzpatrick, P.E., P.G.  
Water Resources Engineer  
Remediation & Redevelopment Program  
Wisconsin Department of Natural Resources  
101 S. Webster Street  
P.O. Box 7921  
Madison, WI 53707-7921

**[sent electronically]**

**Re: Remedial Action Standards Documentation Report  
Hayton Area Remediation Project  
BRRTS 02-08-281506**

Dear Mr. Fitzpatrick:

On behalf of Tecumseh Products Company LLC ("Tecumseh"), enclosed is the *Remedial Action Standards Documentation Report* ("RASD") for Hayton Area Remediation Project ("HARP") prepared by TRC Environmental Corporation ("TRC").

The RASD was prepared in accordance with Sec. III (N) and Exhibit H of the Negotiated Agreement (BRRTS #02-08-281506) ("Negotiated Agreement") between WDNR, TRC and Tecumseh entered in November 2018. Tecumseh and WDNR completed the required OHWM Determination along the Site boundaries. The results of that OHWM determination was used to prepare this RASD to document that the remedial action standards in Wis. Admin. Code chs. NR 720 and 722 for soil and sediment have been achieved.

If you have any questions, please contact me at 312.800.5910 or via e-mail at [charvey@trccompanies.com](mailto:charvey@trccompanies.com).

Sincerely,

TRC

Chris Harvey, PE  
Principal

cc: William Nelson/WDNR – Madison, WI  
Carrie Williamson/Tecumseh Products Company LLC – Ann Arbor, MI  
S. Jason Smith/Tecumseh Products Company LLC – Ann Arbor, MI  
Curtis Toll/Greenberg Traurig LLP – Philadelphia, PA  
Marc Faecher/TRC – New Providence, NJ  
Ronald Bock/TRC – Irvine, CA  
David Crass/Michael Best & Friedrich LLP – Madison, WI

**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

Form 4400-237 (R 12/18)

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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 LLC
Mailing Address			City
5683 Hines Drive			Ann Arbor
			State
			MI
			ZIP Code
			48108
Phone # (include area code)	Fax # (include area code)	Email	
(731) 707-2889	(734) 352-3745	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:

Responsible Party

### 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 LLC
Mailing Address			City
5683 Hines Drive			Ann Arbor
			State
			MI
			ZIP Code
			48108
Phone # (include area code)	Fax # (include area code)	Email	
(731) 707-2889	(734) 352-3745	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) 800-5910	(312) 578-0877	charvey@trccompanies.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	

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

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### Section 2. Property Information

Property Name <b>Hayton Area Remediation Project</b>		FID No. (if known) <b>WID006116529</b>	
BRRTS No. (if known) <b>02-08-281506</b>	Parcel Identification Number <b>multiple</b>		
Street Address <b>3755 Weeks Road</b>	City <b>Chilton</b>	State <b>WI</b>	ZIP Code <b>53014</b>
County <b>Calumet</b>	Municipality where the Property is located <input type="radio"/> City <input checked="" type="radio"/> Town <input type="radio"/> Village of <b>Charlestown</b>	Property is composed of: <input type="radio"/> Single tax parcel <input checked="" type="radio"/> Multiple tax parcels	Property Size Acres <b>266</b>

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).

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

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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/Igu.html#tabx4](http://dnr.wi.gov/topic/Brownfields/Igu.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: Remedial Action Standards Documentation Report

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 LLC

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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\_\_\_\_\_  
Signature

6/24/2021

\_\_\_\_\_  
Date Signed

\_\_\_\_\_  
Principal

(312) 800-5910

\_\_\_\_\_  
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

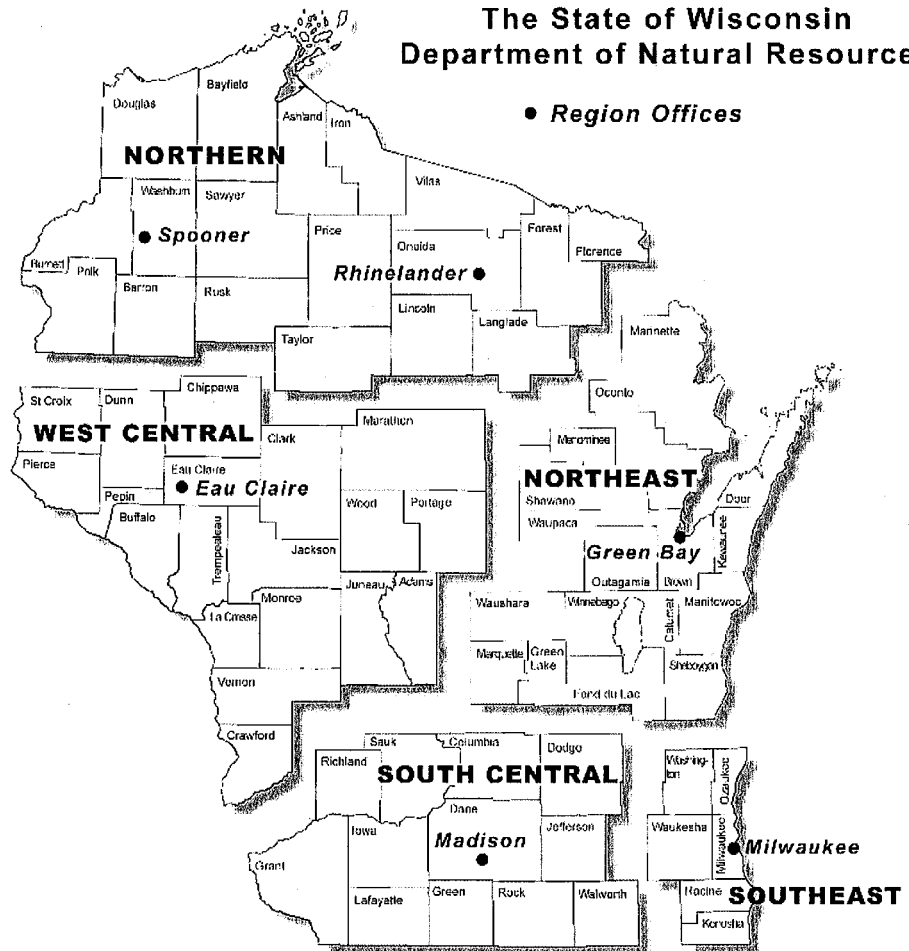
Attn: RR Program Assistant  
Department of Natural Resources  
3911 Fish Hatchery Road  
Fitchburg WI 53711

### 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		



# Remedial Action Standards Documentation Report

Hayton Area Remediation Project  
Chilton, Wisconsin

June 2021

**BRRTS No. 02-08-281506**

**Prepared For:**

Tecumseh Products Company LLC

**Prepared By:**

TRC Environmental Corporation  
230 W. Monroe Street, Suite 630  
Chicago, IL 60606





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## 1.0 Introduction

The Hayton Area Remediation Project (“HARP”) is located in Calumet County, Wisconsin, and has been divided into four operable units (“OUs”). An overview of HARP and the OUs is shown in Figure 1. Significant Response Actions and PCB source removal has been successfully completed since 2001 from OU1 through OU4/Lower, and no further action (NFA) letters have been received for OU1 through OU4/Lower.

This Remedial Action Standards Documentation Report (“Documentation Report”) for HARP provides an evaluation of the Response Actions taken to ensure that impacted soil and sediment have been appropriately remediated and that remedial action standards for both have been achieved. TRC utilized the Wisconsin Department of Natural Resources (“WDNR”)-approved ordinary high water mark (“OHWM”) in preparing this Documentation Report, which deals solely with OU1 through OU4/Lower since Response Actions have been successfully completed in these areas. The area Downstream of Hayton Dam (downstream of OU4/Lower; BRRTS 02-08-587108) is being addressed separately.

In November 2018, WDNR, Tecumseh Products Company LLC (“Tecumseh”), and TRC Environmental Corporation (“TRC”) [for limited purposes only] executed a Negotiated Agreement (BRRTS #02-08-281506) (“Negotiated Agreement”), in which Tecumseh agreed to certain response actions and obligations (WDNR, 2018). In accordance with Section III.N. and Exhibit H of the Negotiated Agreement, Tecumseh was required to submit to the Department a request for an OHWM Determination along the Site boundaries. The results of that OHWM determination is then to be used to prepare this Documentation Report to document that the remedial action standards in Wis. Admin. Code chs. NR 720 and 722 for soil and sediment have been achieved. See, Sec. III.N., Negotiated Agreement.

On January 26, 2021, TRC provided figures depicting the OHWM over the project. Based on the surveyed OHWM points, TRC has interpolated and extrapolated the OHWM between the WDNR-provided points. In an email dated February 12, 2021, the Department requested that the OHWM determination be submitted as a Technical Assistance Review through its Remediation and Redevelopment (RR) Program Submittal Portal and to provide specific details of the modeling and determination with proper certification. On February 19, 2021, TRC submitted the OHWM determination letter to WDNR. In a letter dated March 15, 2021, the Department approved the OHWM Determination and the use of the results to support the work for the Documentation Report.

### 1.1 Remedial Action Standards

The Remedial Action Standards applicable to this Documentation Report are specified as follows in Sec. III.H.(i) and (ii) in the Negotiated Agreement:

1. **Contaminated Soil.** Tecumseh shall perform the Response Actions required by this Agreement, relying on the Wis. Admin. Code § NR 720.05(5) land use classification of “non-industrial” for establishing cleanup standards for contaminated soil. All contaminated soil shall be responded to in a manner consistent with Wis. Admin. Code chs. NR 700-754, including state and federal laws. Tecumseh shall request that the Department determine the Ordinary High Water Mark such that a demarcation can be made between soil and sediment for the site, and that appropriate actions have been or will be taken to

ensure that public health safety, welfare and the environment are protective of all the pathways of exposure. The WDNR-approved removal actions have been based on a 5 ppm PCB Remedial Action goal.

2. **Contaminated Sediment.** Tecumseh shall perform the Response Actions required by this Agreement, relying on Wis. Admin. Code §§ NR 722.09(2) and (3) and ch. NR 726 for establishing cleanup standards for contaminated sediment. The Remedial Action goal for sediment is 1 ppm for PCBs, to be evaluated by the Department pursuant to the site-specific Three Tier Closure process as set forth in Exhibit D of the Negotiated Agreement.

## 1.2 Site History and Background

The Site includes 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). As mentioned above, the Documentation Report deals solely with OU1 through OU4/Lower as the downstream area (downstream of OU4/Lower; BRRTS 02-08-587108) is being addressed separately.

The investigation and remediation of HARP has included almost 10,000 investigation, pre-characterization, TSCA boundary, post-remediation verification, and post-monitoring sediment and soil samples.

Significant PCB source removal (greater than 96% mass removal) and restoration efforts have been completed in HARP OU1 through OU4/Lower. Each OU was methodically remediated in consideration of the investigation results, full removal of soft sediment in most of the OUs and reaches, impacts to wetland, net environmental benefit, post-remediation sediment monitoring results, and surface weighted average concentration (SWAC) evaluation. NFA letters have been received for OU1 through OU4/Lower. The WDNR-approved remediation actions were completed by removing in-channel sediment and overbank soil in the dry. The excavated toxic substances control act (TSCA) material was stabilized and disposed at a licensed landfill in Michigan. The non-TSCA excavated material was stabilized and disposed at a nearby landfill in Hilbert, Wisconsin. More than 140,000 tons of sediment and soil was removed and disposed. Post-remediation verification (PRV) samples were collected to confirm that the soil removal zones were successfully completed (remediation action goal of 5 ppm was attained). The majority of soft sediment was completely excavated and confirmed with soil samples (remediation goal of 1 ppm was attained) and/or visual documentation of removal to native material. Further documentation and confirmation of the successful Response Actions for OU1 through OU4/Upper was completed through post-remediation sediment sampling in accordance with the Three Tier Closure Process, Negotiated Agreement, Exhibit D.

The remediation areas were successfully restored to approximately pre-existing conditions. The Site will progress to monitored natural recovery in accordance with the Negotiated Agreement.

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## 2.0 Ordinary High Water Mark (OHWM) Determination

As part of the documentation of remedial action, the OHWM was evaluated for the study area and is presented on Figures 2 – 11. The OHWM is defined in Wisconsin statutes as “the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation or other easily recognized characteristic.” The OHWM does not change with temporary fluctuations in water levels, nor is it always at or near open water, as is the case with cattail marshes and bogs. Samples collected at locations within (below) the OHWM are defined as sediment samples (sec. 292.01(17g), Wis. Stats.); while samples collected at overbank locations outside (above) the OHWM are referred to as soil samples. TRC’s interpolation of the OHWM was submitted to WDNR and approved for use in this Documentation Report in a letter from WDNR, dated March 15, 2021.

### 3.0 Remedial Action Standards Attainment Determination

NFAs for each operable unit has been granted based on the Three-Tier Closure Process and the Negotiated Agreement agreed to among the parties (TRC, 2011; WDNR, 2012; Exhibit D, Negotiated Agreement, 2018). This Documentation Report presents the post-remedial action sampling results in relation to the OHWM determination and documents that remedial standards have been met and active remedial activities have been successfully completed. The site is in long-term natural recovery monitoring in accordance with sampling plans (Natural Recovery Monitoring Plan for Surface Water and Sediment (TRC, 2021b) and Natural Recovery Plan for Fish Tissue) under the Negotiated Agreement.

Figures 2 - 11 show the OHWM and the samples that exceed their respective remedial action standards in sediment and overbank soil. Samples collected within (below) the OHWM are compared to 1 mg/kg and samples that were collected outside (above) the OHWM are compared to 5 mg/kg. The sediment remediation goals were met pursuant to the site-specific Three Tier Closure process as set forth in Exhibit D of the Negotiated Agreement. On that basis, the site complies with the remediation action standards; see each of the OU NFA Letters. Samples collected from soil or sediment that was subsequently removed as part of remediation are not presented on these maps. The samples depicted in these Figures represent only a handful of soil and/or sediment samples out of thousands of samples and visual observations. Where multiple samples were collected over time for the evaluation of the trend in the SWAC, only the most recent sample is presented.

Samples that were collected within (below) the OHWM are identified as sediment and are included on these maps, however; samples where sediment was removed are not included on the maps. For in-channel sediment samples, where a series of co-located samples were collected (e.g. as part of the tiered closure process (*i.e.* trend evaluation)), only the most recent sample in the series is presented.

With the recently defined OHWM, some of the bank soil samples are currently mapped within (below) the OHWM. These soil sample locations were evaluated and addressed as overbank soil locations by TRC and the WDNR during soil investigation, remediation planning, remediation implementation and restoration stages. These historic bank samples have been covered by soil (in many locations) and bank erosion-protection matting/vegetation, so they are not exposed to flowing water or accessible to potential human or ecological receptors. Because the OHWM was interpolated between control points marked by WDNR using topography and water levels at the scale of available air photos, some of the bank samples identified within the OHWM may, in fact, be outside (above) the OHWM if each sample location were to be individually evaluated.

In addition to receiving NFA letters for each OU pursuant to the Three Tier Closure Process, the record clearly demonstrates that:

- Removal of PCB-impacted sediments and overbank material was successfully completed in each OU, in accordance with the WDNR and USEPA approved Scopes of Work
- PRV sample results demonstrate successful remediation to RALs
- Habitat restoration was completed with successful vegetative stabilization of the floodplain and bank areas

- Remedial action has been conducted to the extent practicable, as the term is defined in 292.11(3), Wis. Stats and NR 700.03(45), Wis. Admin. Code
- OU1 does not serve as on-going source of concern to the downstream reaches of Pine Creek
- Natural recovery will continue to lower PCB concentrations within the watershed

### 3.1 OU1

OU1 was issued an NFA letter under Tier 1 of the Three Tier criteria from WDNR, dated December 3, 2012. The SWAC from the post-remediation monitoring was 0.97 mg/Kg from the sampling conducted on October 22, 2012 (TRC 2012).

Eleven samples within the OHWM exceed 1 mg/kg, as presented in Table 1. These results range between 1.1 and 3.7 mg/kg. Of the 11 samples exceeding 1 mg/Kg,

- 5 are in-channel sediment samples used in developing the SWAC used for closure;
- 3 are PRV soil samples, collected in 2004; and
- 3 are investigative soil characterization samples collected in 2010.

No overbank samples remained in OU1 with a concentration greater than 5 mg/Kg.

### 3.2 OU2

OU2 was issued a NFA letter under Tier 2 of the Three Tier criteria from WDNR, dated November 23, 2015. The SWAC from the post-remediation monitoring was 2.09 mg/Kg from the sampling conducted in August 2014. The SWAC showed a stable to declining trend from October 2012 to August 2014 (TRC, 2014).

Twenty-one samples within the OHWM of OU2 exceed 1 mg/kg. These results range between 1.1 and 4.83 mg/kg, as shown on Table 2. Of the 20 samples exceeding 1 mg/Kg,

- 12 are in-channel sediment samples used in developing the SWAC used for closure;
- 1 is a PRV soil sample, collected in 2004; and
- 8 are investigative soil characterization samples collected in 2003 and 2004.

One overbank sample with a concentration of 5 mg/kg remained in OU2, as shown in Table 2.

### 3.3 OU3/Upper

OU3/Upper (Reaches H-J) was issued a NFA letter from WDNR, dated September 16, 2013. Due to the extensive removal work completed in Reaches H-J and the specific nature of the reaches, WDNR determined the removal work was complete.

OU3/Upper (Reaches K&L) was issued a NFA letter under Tier 2 of the Three Tier criteria from WDNR, dated January 23, 2019. The SWAC from the post-remediation monitoring was

2.29 mg/Kg from the sampling conducted in May 2015 (TRC, 2015). The SWAC showed a stable to declining trend from May 2014 to May 2015.

Twenty-five samples remained within the OHWM of OU3/Upper exceeding 1 mg/kg. These results range between 1.22 and 4.81 mg/kg, as shown on Table 3. Of the 25 samples exceeding 1 mg/Kg;

- 3 are in-channel sediment samples used in developing the SWAC used for closure;
- 2 are PRV soil samples;
- 19 are former bank samples (including multiple depths collected from the same boring); and
- 1 is an investigative soil characterization sample collected in 2005,

No overbank samples remained in OU3/Upper with a concentration greater than 5 mg/Kg.

### **3.4 OU3/Lower**

OU3/Lower (Reaches M-P) was issued a NFA letter under Tier 2 of the Three Tier criteria from WDNR, dated February 11, 2019. The SWAC from the post-remediation monitoring was 1.43 mg/Kg from the sampling conducted in November 2018 (TRC, 2018a). The SWAC showed a stable to declining trend from November 2017 to November 2018.

Thirty-two samples within the OHWM of OU3/Lower exceed 1 mg/kg. These results range between 1.04 and 5.01 mg/kg, as shown on Table 4. Of the 32 samples exceeding 1 mg/Kg;

- 3 are in-channel sediment samples used in developing the SWAC used for closure;
- 1 used for Reaches K-L closure documentation;
- 2 are PRV soil samples;
- 25 are former bank samples (including multiple depths collected from the same boring); and
- 1 is an investigative soil characterization sample, collected in 2005.

No overbank samples remained in OU3/Lower with a concentration greater than 5 mg/Kg.

### **3.5 OU4/Upper**

OU4/Upper was issued a NFA letter under Tier 1 of the Three Tier criteria from WDNR, dated February 11, 2019. The SWAC from the post-remediation monitoring was 0.88 mg/Kg from the sampling conducted in November 2018 (TRC 2018b).

Twenty-three samples within the OHWM of OU4/Upper exceed 1 mg/kg. These results range between 1.0 and 2.4 mg/kg, as shown on Table 5. Of the 23 samples exceeding 1 mg/Kg;

- 4 are in-channel sediment samples used in developing the SWAC used for closure;

- 9 are investigative sediment characterization samples collected in 2005; and
- 10 are investigative sediment characterization samples collected in 2013.

One overbank sample remained in OU4/Upper with a concentration of 5.03 mg/kg, as shown in Table 5.

### **3.6 OU4/Lower**

OU4/Lower was issued a NFA letter under Tier 2 of the Three Tier criteria from WDNR, dated February 2, 2021. The SWAC from sediment sampling conducted in 2016 was 1.09 mg/Kg (TRC 2021a).

Seventy samples within the OHWM of OU4/Lower exceed 1 mg/kg. These results range between 1.1 and 6.6 mg/kg, as shown on Table 6. Of the 70 samples exceeding 1 mg/Kg;

- 15 are in-channel samples used in developing the SWAC; 14 samples collected in 2016 and one sample collected in 2015;
- 51 are investigative sediment characterization samples collected in 2005; and
- 4 are investigative sediment characterization samples collected in 2013.

One overbank sample remained in OU4/Lower with a concentration of 6.06 mg/kg, as shown in Table 6.

### **3.7 OU4/Upper and /Lower PCB Concentration Reduction**

Consistent with the approved OU4/Upper and Lower scopes of work, targeted in-channel sediment removal zones were established to advance risk reduction while minimizing high-quality wetland disruption. Sediment removal zones were selected to remove locations with elevated PCBs and to maximize net environmental benefits and cost effectiveness if the sediment removal zone was near a proposed staging area or would not likely cause additional impacts. The targeted in-channel sediment in OU4 was excavated in the dry to hardpan (e.g. native clay), after flow diversion and dewatering sections of the stream. Further evaluation of historic data indicates that in OU4/Lower a significant decreasing trend was shown for analytical results of PCB concentrations in the top foot of sediment from 2005 to 2016. PCB concentrations ranged from 0.79 mg/kg to 7.1 mg/kg in 2005, with only one sample under 1 mg/kg. However, in 2016, PCB concentrations had a much more condensed PCB concentration range from 0.436 mg/kg to 3.25 mg/kg, with 17 or close to half of the samples coming in under 1 mg/kg (TRC, 2016). The SWAC in OU4/Lower also declined from 2.46 mg/Kg to 1.09 mg/Kg between 2005 and 2016.



## 4.0 Conclusion

This Documentation Report reveals that remedial action standards in Wis. Admin. Code chs. NR 720 and 722 and the Negotiated Agreement, which incorporated the Three Tier Closure Process for sediment, have been achieved. Each of the OUs has been individually issued a NFA and sampling has shown that the sediment and soil meets the requirements for being protective of human health and environmental receptors, as defined in and by the Negotiated Agreement. Sediment samples exceeding 1 mg/kg are shown on Figures 2 - 11. These samples include 1) those used for calculation of the SWAC to demonstrate closure of each OU under the three-tiered closure process, 2) historical characterization samples collected at locations that were not excavated, and 3) samples that were collected from the overbank that are now considered within the interpreted OHWM.

These results demonstrate that:

- The removal of PCB-impacted sediments and overbank material was successfully completed, in accordance with the WDNR and USEPA approved Scopes of Work and Addenda. The successful remediation is protective of public health, safety, welfare and the environment.
- Only two samples were identified outside (above) the OHWM that exceeded the soil remediation standard and one sample was identified that equaled the soil remedial action standard of 5 mg/kg. These locations were approved by WDNR/USEPA to remain in place based on logistics, geomorphology, distance from the creek, and restoration considerations.
- PRV sample results demonstrated successful removal to project RALs, in accordance with the WDNR and USEPA approved Scopes of Work and Addenda.
- Habitat restoration was completed with successful vegetative stabilization of the floodplain and bank areas. The restored and recovered environment has significantly improved the natural habitat, indicating that the overall system is recovering.
- The remedial action has been conducted to the extent practicable, as the term is defined in 292.11(3), Wis. Stats and NR 700.03(45), Wis. Admin. Code.
- OU1 – OU4 do not serve as an on-going source of concern to the downstream reaches of Pine Creek. No “hot spots” or areas of uncharacteristically high PCB concentrations were identified during this evaluation. The closure documentation sampling confirms the thoroughness of the removal actions.
- Concentrations in sediment have been shown to be decreasing on stream reaches where trend sampling has been performed. Based on these results, continued natural recovery of sediment will occur on the entire creek system and mill pond over time, given the significant source removal achieved.
- Additional sediment sampling is unlikely to generate results that vary from those described in this report and the results collected to date confirm the residual concentrations are stable and generally trending downward.

- 
- No discrete locations require additional investigation or remediation, since only low-level residual PCB concentrations are evident throughout OU1 – OU4, and comply with the standards set forth in the Negotiated Agreement and Three Tier Closure Process.
  - Additional removal is not necessary and furthermore would not provide a net environmental benefit (i.e., the trade-off between a small reduction in PCB concentrations as compared to the loss of restored habitat). Habitat preservation and enhancement is a performance standard that requires the protection and enhancement of listed species, and the protection and restoration of critical freshwater habitats.
  - Though some individual samples with residual PCB concentrations above 1 mg/kg remain within the OHWM, the results conform to the remedial action standards of the Negotiated Agreement which incorporates the Three Tier Closure Process. NFAs would not have been issued were that not the case. As such, there is no need to prepare and submit a Remedial Action Options Report as the remediation activities were successfully completed and closed in accordance with WDNR and USEPA approvals, are protective of public health, safety, welfare and the environment, and is undergoing monitored natural recovery.
  - The natural recovery is being monitored in accordance with sampling plans under the Negotiated Agreement – Natural Recovery Monitoring Plan for Surface Water and Sediment (TRC, 2021b) and Natural Recovery Plan for Fish Tissue.

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## 5.0 References

- TRC. 2012. Hayton Area Remediation Project – OU1 Closure Documentation Sampling Results Report. November 2012.
- TRC. 2014. Technical Memorandum – OU2 Closure Request – Technical Memorandum. December 17, 2014.
- TRC. 2015. OU3 Reaches K&L Closure Documentation Sampling Results Report – Two Additional Sampling Events. June 2015.
- TRC. 2016. OU4/Lower Phase IV Sampling Results Summary. Hayton Area Remediation Project. December 28, 2016.
- TRC. 2018a. OU3/Lower Closure Documentations Sampling Results Report – Two Additional Sampling Events. December 2018.
- TRC. 2018b. OU4/Upper Closure Documentation Sampling Results Report. December 2018.
- TRC. 2021a. OU4/Lower Remedial Documentation Report. January 4, 2021.
- TRC. 2021b. Natural Recovery Monitoring Plan for Surface Water and Sediment. April 15, 2021.

**Table 1: OU1 - Sample Locations**  
**HARP - Remedial Action Standards Documentation Report**

<b>Sample ID</b>	<b>Sample Date</b>	<b>Total PCB Concentration (mg/kg)</b>	<b>Top Sample Interval (in)</b>	<b>Bottom Sample Interval (in)</b>
PRV-S7-23+25-E10-0.0-0.5	8/1/2004	3.7	0	6
PRV-S7-46+50-SW2	8/1/2004	2.4	0	0
PRV-S7-47+75-SW3	8/1/2004	1.1	0	0
S6 101W 2A 0-6	4/30/2010	2.9	0	6
S6 104W 3A 0-6	6/5/2010	2.5	0	6
S4 1VW 1A 0-8	7/9/2010	1.9	0	8
OU1-IC-S02-C	10/22/2012	1.47	0	6
OU1-IC-S12-R	10/22/2012	1.51	0	6
OU1-IC-S10-L	10/22/2012	1.24	0	6
OU1-IC-S13-R	10/22/2012	2.52	0	6
OU1-IC-S04-R	10/22/2012	1.23	0	6

Checked by: A. Horrie

Approved by: J. Rice

**Table 2: OU2 - Sample Locations**  
**HARP - Remedial Action Standards Documentation Report**

Sample ID	Sample Date	Total PCB Concentration (mg/kg)	Top Sample Interval (in)	Bottom Sample Interval (in)
<b>Sediment Samples - Lower</b>				
E102 VW-2A 0-24	8/25/2008	3.7	0	24
F104 VF-1B 12-18	9/11/2008	1.6	12	18
G101 VW 1A 0-6	5/6/2009	4.8	0	0.5
OU2-IC-S06-R	8/1/2014	1.4	0	6
OU2-IC-S13-L	8/1/2014	4.83	0	6
OU2-IC-S11-R	8/1/2014	1.75	0	6
OU2-IC-S10-R	8/1/2014	3.11	0	6
OU2-IC-S12-L	8/1/2014	1.94	0	6
OU2-IC-S14-R	8/1/2014	1.72	0	6
OU2-IC-S08-L	8/1/2014	2.04	0	6
OU2-IC-S07-R	8/1/2014	1.3	0	6
<b>Sediment Samples - Upper</b>				
RB-72+20-N5	1/1/2003	2.9	0	0
RB-76+00-W5	1/1/2003	4.7	0	0
PRV-UOU2-88+50W-FL	1/1/2004	1.1	0	0
RB-64+10-E10	7/27/2004	3.9	0	3
RD-118+90-W5-Dup	7/28/2004	2.8	0	1.5
OU2-IC-S04-L	8/1/2014	2.1	0	6
OU2-IC-S03-R	8/1/2014	3.24	0	6
OU2-IC-S05-L	8/1/2014	1.52	0	6
OU2-IC-S02-R	8/1/2014	2.72	0	6
<b>Overbank Samples - Lower</b>				
G201 VW 1I 0-6	9/16/2009	5	0	6

Checked by: A. Horrie

Approved by: J. Rice

**Table 3: OU3/Upper - Sample Locations**  
**HARP - Remedial Action Standards Documentation Report**

<b>Sample ID</b>	<b>Sample Date</b>	<b>Total PCB Concentration (mg/kg)</b>	<b>Top Sample Interval (in)</b>	<b>Bottom Sample Interval (in)</b>
RK-256+00-E10	9/30/2005	3.4	0	6
RK 005L 0-6	5/5/2011	2.37	0	6
RK 006L 0-6	5/5/2011	1.88	0	6
RK 501 R 0-6	5/6/2011	3.33	0	6
RJ 543R 6-12	5/13/2011	1.62	6	12
RK 006L 12-18	5/18/2011	3.1	12	18
RK 006L 6-12	5/18/2011	2.36	6	12
RJ 580R 12-18	7/1/2011	1.23	12	18
RJ586R 0-6	8/16/2011	3.28	0	6
RK516R 0-6	8/18/2011	1.07	0	6
RK516R 6-12	8/18/2011	3.09	6	12
RK 028L 0-6	8/25/2011	1.67	0	6
RK 028L 6-12	8/25/2011	2.08	6	12
RL 014L 18-24	8/29/2011	3.74	18	24
RL 022L 12-18	8/29/2011	2.97	12	18
RL 022L 6-12	8/29/2011	4.58	6	12
RK032L 0-6	9/1/2011	1.22	0	6
RK034L 0-6	9/1/2011	1.14	0	6
RL 036L 6-12	9/8/2011	4.67	6	12
RK PRVW 523R 0-6	9/16/2011	4.81	0	6
RL 041L 6-12	9/27/2011	3.46	6	12
RK PRVF 518R 12-18	10/6/2011	3.43	12	18
OU3-IC-S02-R	5/13/2015	2.04	0	6
OU3-IC-S01-L	5/31/2015	2.69	0	6
OU3-IC-S03-L	5/31/2015	3.1	0	6

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Approved by: J. Rice

**Table 4: OU3/Lower - Sample Locations**  
**HARP - Remedial Action Standards Documentation Report**

<b>Sample ID</b>	<b>Sample Date</b>	<b>Total PCB Concentration (mg/kg)</b>	<b>Top Sample Interval (in)</b>	<b>Bottom Sample Interval (in)</b>
RM-285+50-E5	9/16/2005	3.8	0	6
RL 501 R 0-6	5/6/2011	2.99	0	6
RL 006L 0-6	5/9/2011	2.04	0	6
RL 006L 6-12	5/9/2011	3.53	6	12
RM 013L 0-6	5/10/2011	1.42	0	6
RM 013L 6-12	5/10/2011	3.89	6	12
RM 502R 0-6	5/10/2011	1.8	0	6
RM 505R 0-6	5/10/2011	1.26	0	6
RM 507R 0-6	5/10/2011	1.51	0	6
RL 501R 6-12	5/18/2011	1.09	6	12
RL509R 0-6	7/8/2011	3.21	0	6
RO 005L 0-6	7/8/2011	2.45	0	6
RM 515R 0-6	8/24/2011	2.22	0	6
RM 515R 6-12	8/24/2011	4.62	6	12
RP 010L 0-6	9/7/2011	3.15	0	6
RM 024L 0-6	9/14/2011	2.26	0	6
RM 024L 6-12	9/14/2011	1.36	6	12
RN 023L 0-6	9/20/2011	3.48	0	6
RM 517R 12-18	9/27/2011	1.72	12	18
RM 522R 6-12	10/1/2011	2.47	6	12
RL PRVF 513R 12-18	10/25/2011	3.62	12	18
RM PRVF 515R 6-12	10/25/2011	2.5	6	12
RN 023L 12-18	11/3/2011	1.04	12	18
RO 015L 6-12	11/3/2011	2.19	6	12
RP 023L 0-6	11/14/2011	1.81	0	6
RP 023L 6-12	11/14/2011	1.76	6	12
RO 005L 6-12	12/12/2011	2.24	6	12
RO 028L 0-6	12/30/2011	1.76	0	6
OU3--IC-S04-L	5/13/2015	1.41	0	6
OU3-IC-S12-L	11/1/2018	1.74	0	6
OU3-IC-S09-L	11/13/2018	5.01	0	6
OU3-IC-S07-L	11/13/2018	1.49	0	6

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Approved by: J. Rice

**Table 5: OU4/Upper - Sample Locations**  
**HARP - Remedial Action Standards Documentation Report**

<b>Sample ID</b>	<b>Sample Date</b>	<b>Total PCB Concentration (mg/kg)</b>	<b>Top Sample Interval (in)</b>	<b>Bottom Sample Interval (in)</b>
<b>Sediment Samples</b>				
RR-372+00-IC-03 0-12	1/1/2005	1.1	0	12
RS-385+00-IC-03	7/29/2005	1	0	12
RQ-343+20-IC-02	8/2/2005	1.8	0	6
RQ-343+20-IC-03	8/2/2005	1.4	0	13
RQ-353+00-IC-02	8/2/2005	1	0	11
RR-363+00-IC-03	8/2/2005	2.2	0	10
RR-363+00-IC-05	11/16/2005	2.3	0	8
RR-363+20-IC-01	11/16/2005	1	0	4
RS-384+50-IC-01 0 - 8	11/29/2005	2.1	0	8
RR-IC-903C	10/31/2013	1.3	0	0
RR-IC-901R	10/31/2013	1.87	0	0
RQ-IC-907L	10/31/2013	2.26	0	0
RQ-IC-906L	10/31/2013	1.37	0	0
RQ-IC-905L	10/31/2013	1.28	0	0
RS-IC-901R	11/1/2013	1.08	0	0
RS-IC-903R	11/1/2013	1.02	0	0
RQ-IC-904C	11/5/2013	2.28	0	0
RQ-IC-903C	11/5/2013	1.68	0	0
RQ-IC-900C	11/5/2013	2.4	0	0
OU4-IC-S03-L	11/14/2018	1.77	0	6
OU4-IC-S05-C	11/14/2018	1.03	0	6
OU4-IC-S02-L	11/14/2018	1.21	0	6
OU4-IC-S04-L	11/14/2018	1.61	0	6
<b>Overbank Samples</b>				
RQ-502R	11/5/2013	5.03	0	6

Checked by: A. Horrie

Approved by: J. Rice



**Table 6: OU4/Lower - Sample Locations**  
**HARP - Remedial Action Standards Documentation Report**

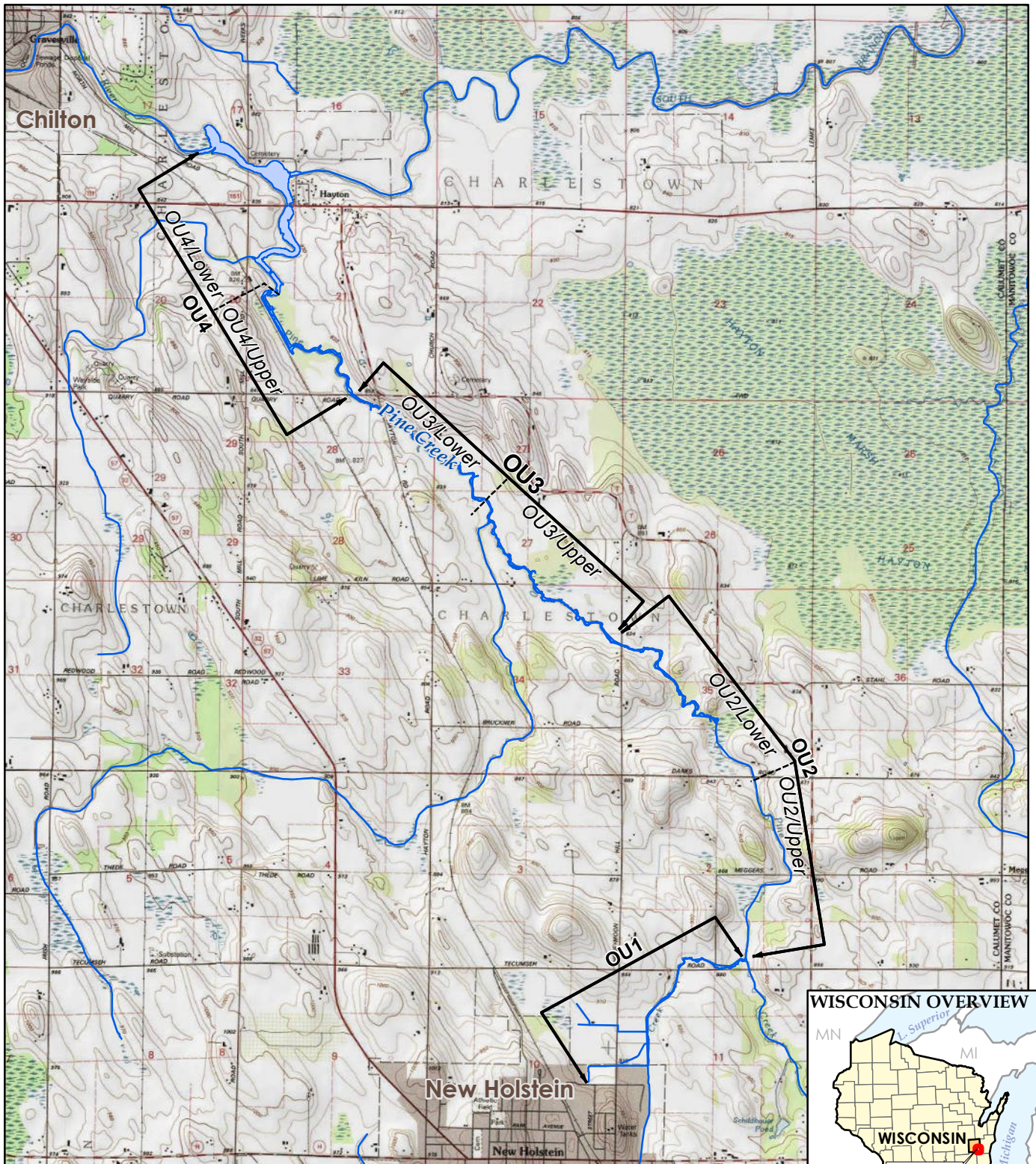
Sample ID	Sample Date	Total PCB Concentration (mg/kg)	Top Sample Interval (in)	Bottom Sample Interval (in)
<b>Sediment Samples</b>				
RU-2-B 0-12	1/1/2005	2.9	0	12
RU-2-C 0-12	1/1/2005	4.5	0	12
RU-2-D 0-12	1/1/2005	3.6	0	12
RU-4-B 0-12	1/1/2005	1.9	0	12
RU-4-B 12-18	1/1/2005	1.2	12	18
RU-4-B VC	1/1/2005	2.2	0	18
RU-4-C 0-12	1/1/2005	3	0	12
RU-4-C 12-18	1/1/2005	1.1	12	18
RU-4-C VC	1/1/2005	3.1	0	24
RU-4-D 0-12	1/1/2005	3	0	12
RU-4-D VC	1/1/2005	2.6	0	20
RU-5-B 0-12	1/1/2005	1.4	0	12
RU-5-F 0-12	1/1/2005	2.1	0	12
RU-6-B 0-12	1/1/2005	2.3	0	12
RS-399+80-IC-01 0-12	1/1/2005	1.9	0	12
RS-399+80-IC-02 0-15	1/1/2005	3.1	0	15
RS-399+80-IC-03 0-8	1/1/2005	2.1	0	8
RT-406+20-IC-02 0-12	1/1/2005	2	0	12
RT-406+20-IC-03 0-12	1/1/2005	2	0	12
RT-426+50-IC-01 0-12	1/1/2005	1.6	0	12
RS-399+80-IC-04 0 - 12	11/16/2005	3.9	0	12
RS-399+80-IC-05 0 - 12	11/16/2005	1.4	0	12
RT-401+00-IC-03 0 - 6	11/16/2005	3.5	0	6
RU-18A 0 - 12	11/21/2005	1.8	0	12
RU-18B 0 - 12	11/21/2005	1.5	0	12
RU-19B 0 - 12	11/21/2005	2.1	0	12
RU-19C 0 - 12	11/21/2005	1.3	0	12
RU-3B 0 - 12	11/21/2005	1.5	0	12
RU-3D 0 - 8	11/21/2005	1.1	0	8
RU-16A 0 - 7	11/22/2005	3.5	0	7
RU-16A 7 - 14	11/22/2005	1.5	7	14
RU-16B 0 - 3	11/22/2005	2.9	0	3
RU-16C 0 - 13	11/22/2005	3.3	0	13
RU-1A 0 - 9	11/22/2005	2.2	0	9
RU-20A 0 - 9	11/22/2005	1.9	0	9
RU-20C 0 - 12	11/22/2005	2.8	0	12
RT-430+20-IC-01 0 - 12	11/22/2005	3.2	0	12
RT-430+20-IC-02 0 - 12	11/22/2005	5.5	0	12
RT-430+20-IC-03 0 - 7	11/22/2005	1.3	0	7
RU-17B	11/22/2005	5.7	0	12
RU-20B	11/22/2005	6.6	0	12
RT-404+90-IC-02 0 - 12	11/29/2005	3	0	12

**Table 6: OU4/Lower - Sample Locations**  
**HARP - Remedial Action Standards Documentation Report**

<b>Sample ID</b>	<b>Sample Date</b>	<b>Total PCB Concentration (mg/kg)</b>	<b>Top Sample Interval (in)</b>	<b>Bottom Sample Interval (in)</b>
RT-411+20-IC-05 0 - 12	11/29/2005	2.4	0	12
RT-416+00-IC-01 0 - 7	11/30/2005	1.5	0	7
RT-416+00-IC-05 0 - 12	11/30/2005	4	0	12
RT-416+00-IC-06 0 - 4	11/30/2005	3.6	0	4
RT-422+00-IC-01 0 - 12	11/30/2005	1.4	0	12
RT-422+00-IC-02 0 - 12	11/30/2005	3.5	0	12
RT-422+00-IC-05 0 - 12	11/30/2005	3.4	0	12
RT-422+00-IC-06 0 - 12	11/30/2005	2.8	0	12
RT-426+50-IC-06 0 - 5	11/30/2005	3.3	0	5
RT-IC-900R	11/1/2013	2.51	0	0
RT-IC-901L	11/1/2013	2.34	0	0
RT-IC-902L	11/1/2013	1.55	0	0
RT-IC-903R	11/1/2013	3.02	0	0
MR5-IC-005L	8/18/2015	2.05	0	6
2016-RU-1D	10/24/2016	1.2	0	12
2016-RU-3C	10/24/2016	1.15	0	12
2016-RU-1B	10/24/2016	1.73	0	12
2016-RU-3C	10/24/2016	1.15	0	12
2016-RU-1C	10/24/2016	1.88	12	18
RT-404+90-IC-03	10/24/2016	1.82	0	12
RT-404+90-IC-04	10/24/2016	1.56	0	12
RT-404+90-IC-05	10/24/2016	1.15	0	12
RT-411+20-IC-02	10/24/2016	2.17	0	12
RT-411+20-IC-04	10/24/2016	1.73	0	12
RT-416+00-IC-03	10/24/2016	1.17	0	12
RT-422+00-IC-03	10/24/2016	1.54	0	12
RT-422+00-IC-04	10/24/2016	1.15	0	12
RT-426+50-IC-03	10/24/2016	1.1	0	12
<b>Overbank Samples</b>				
RS-007L	12:00:00 AM	6.06	0	6

Checked by: A. Horrie

Approved by: J. Rice



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES (1992-1993).



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**TECUMSEH & HARP  
 REMEDIAL ACTION STANDARDS REPORT  
 CALUMET COUNTY, WISCONSIN**

**SITE LOCATION MAP**

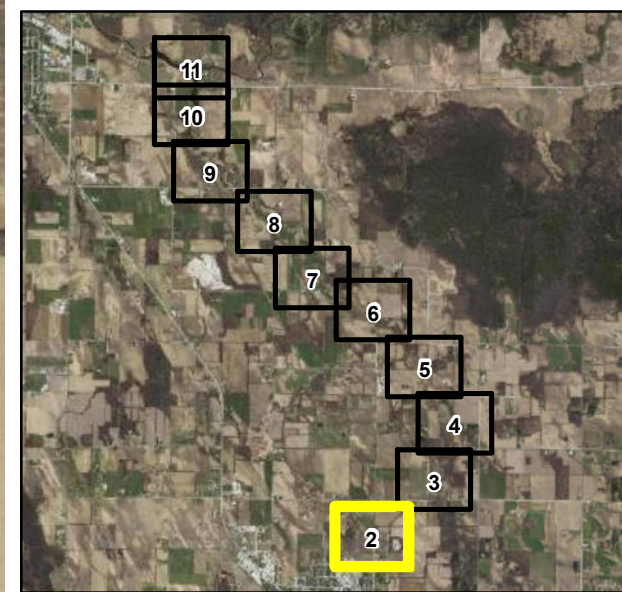
DRAWN BY:	A. HORRIE
APPROVED BY:	C. HARVEY
PROJECT NO:	107927
FILE NO.	197927-2019-002slm.mxd
DATE:	JUNE 2021

**FIGURE 1**



**LEGEND**

- IN CHANNEL SAMPLE LOCATION
- ESTIMATED OHWM 2014 (TRC)
- 1' MAJOR CONTOURS (CALUMET COUNTY)
- 1' MINOR CONTOURS (CALUMET COUNTY)



SOURCE: BASEMAP OBTAINED FROM CALUMET COUNTY (MAY 2014).  
OHWM ELEVATION POINTS OBTAINED FROM WISCONSIN DNR (2019).  
1 FT CONTOURS WERE PRODUCED FROM A RASTER DIGITAL ELEVATION MODEL (DEM) PROVIDED BY CALUMET COUNTY (2018).

OU1

0      300      600  
Feet

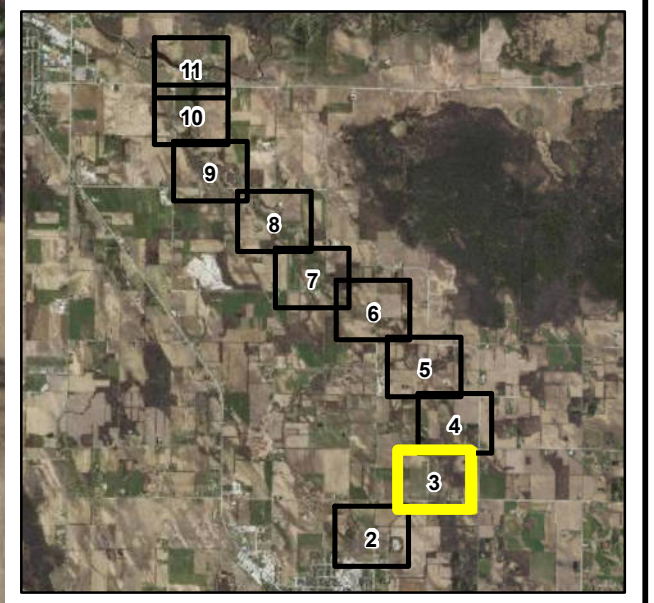
1" = 300'  
1:3,600

<b>PROJECT:</b>		<b>TECUMSEH &amp; HARP REMEDIAL ACTION STANDARDS REPORT CALUMET COUNTY, WISCONSIN</b>	
<b>TITLE:</b>		<b>OU1 - SAMPLE LOCATIONS</b>	
DRAWN BY:	R. SUEMNICHT	PROJ NO.:	107927
CHECKED BY:	J. RICE	<b>FIGURE 2</b>	
APPROVED BY:	C. HARVEY		
DATE:	JUNE 2021		
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FILE NO.:		107927-2019-001mb.mxd	



**LEGEND**

- IN CHANNEL SAMPLE LOCATION
- ESTIMATED OHWM 2014 (TRC)
- 1' MAJOR CONTOURS (CALUMET COUNTY)
- 1' MINOR CONTOURS (CALUMET COUNTY)
- OU ENDS

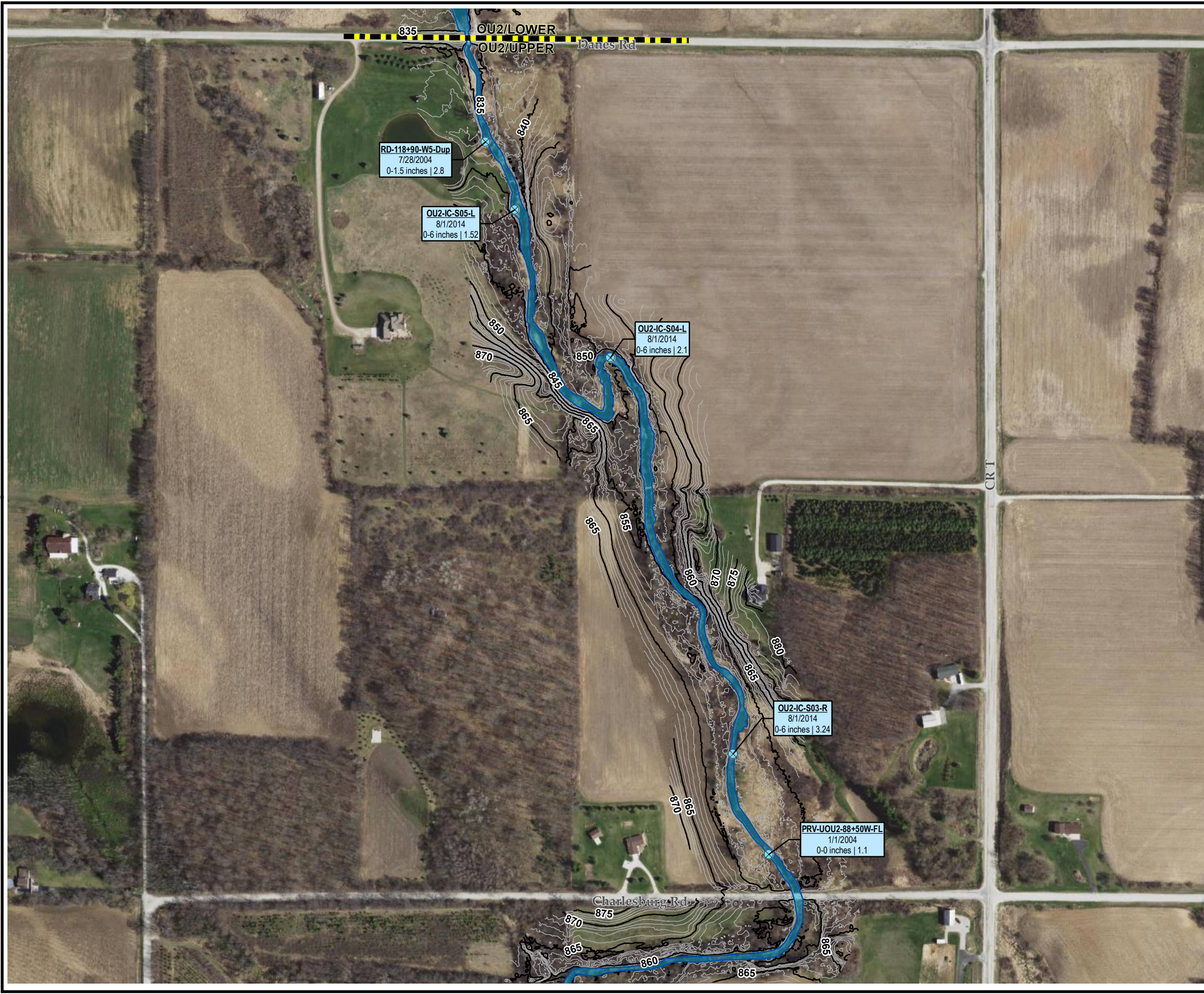


SOURCE: BASEMAP OBTAINED FROM CALUMET COUNTY (MAY 2014).  
OHWM ELEVATION POINTS OBTAINED FROM WISCONSIN DNR (2019).  
1 FT CONTOURS WERE PRODUCED FROM A RASTER DIGITAL ELEVATION MODEL (DEM) PROVIDED BY CALUMET COUNTY (2018).

OU1-OU2/UPPER

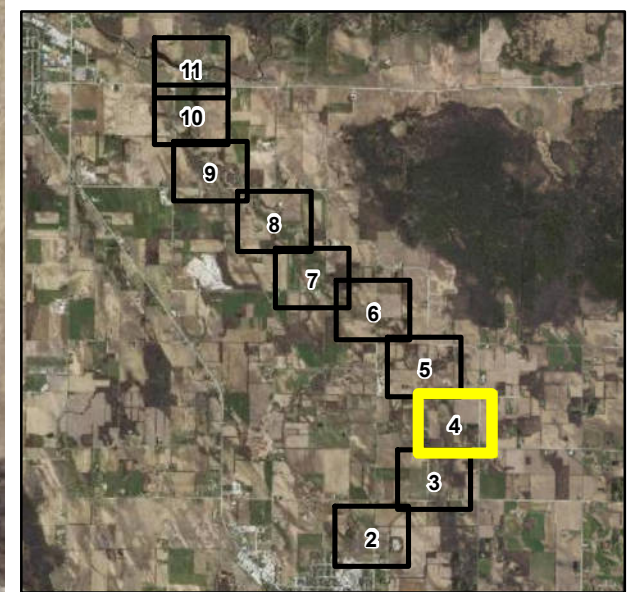
1" = 300'  
1:3,600

<b>PROJECT:</b>		<b>TECUMSEH &amp; HARP REMEDIAL ACTION STANDARDS REPORT CALUMET COUNTY, WISCONSIN</b>	
<b>TITLE:</b>		<b>OU1-OU2/UPPER - SAMPLE LOCATIONS</b>	
DRAWN BY:	R. SUEMNICHT	PROJ NO.:	107927
CHECKED BY:	J. RICE	<b>FIGURE 3</b>	
APPROVED BY:	C. HARVEY		
DATE:	JUNE 2021		
		505 East Huntland Drive, Suite 250 Austin, TX 78752 Phone: 512.329.6080 www.trcsolutions.com	
FILE NO.:		107927-2019-001mb.mxd	



**LEGEND**

- IN CHANNEL SAMPLE LOCATION
- ESTIMATED OHWM 2014 (TRC)
- 1' MAJOR CONTOURS (CALUMET COUNTY)
- 1' MINOR CONTOURS (CALUMET COUNTY)
- OU ENDS

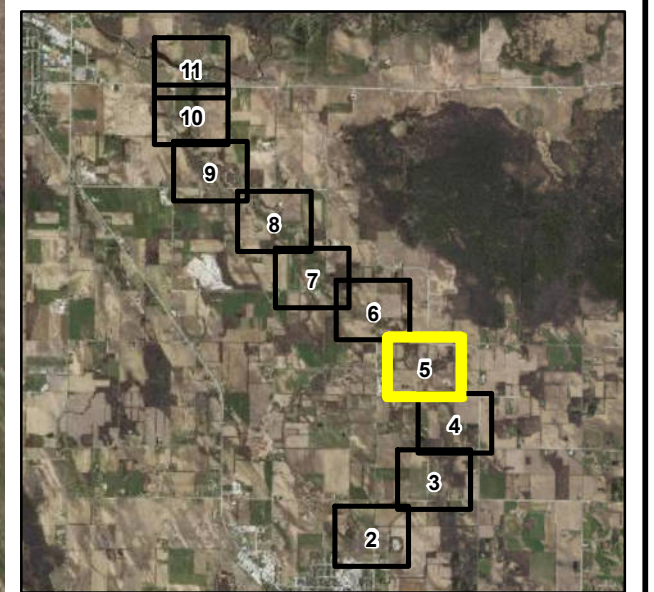
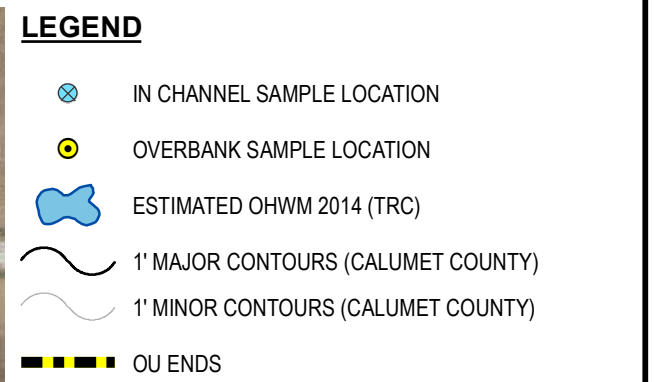
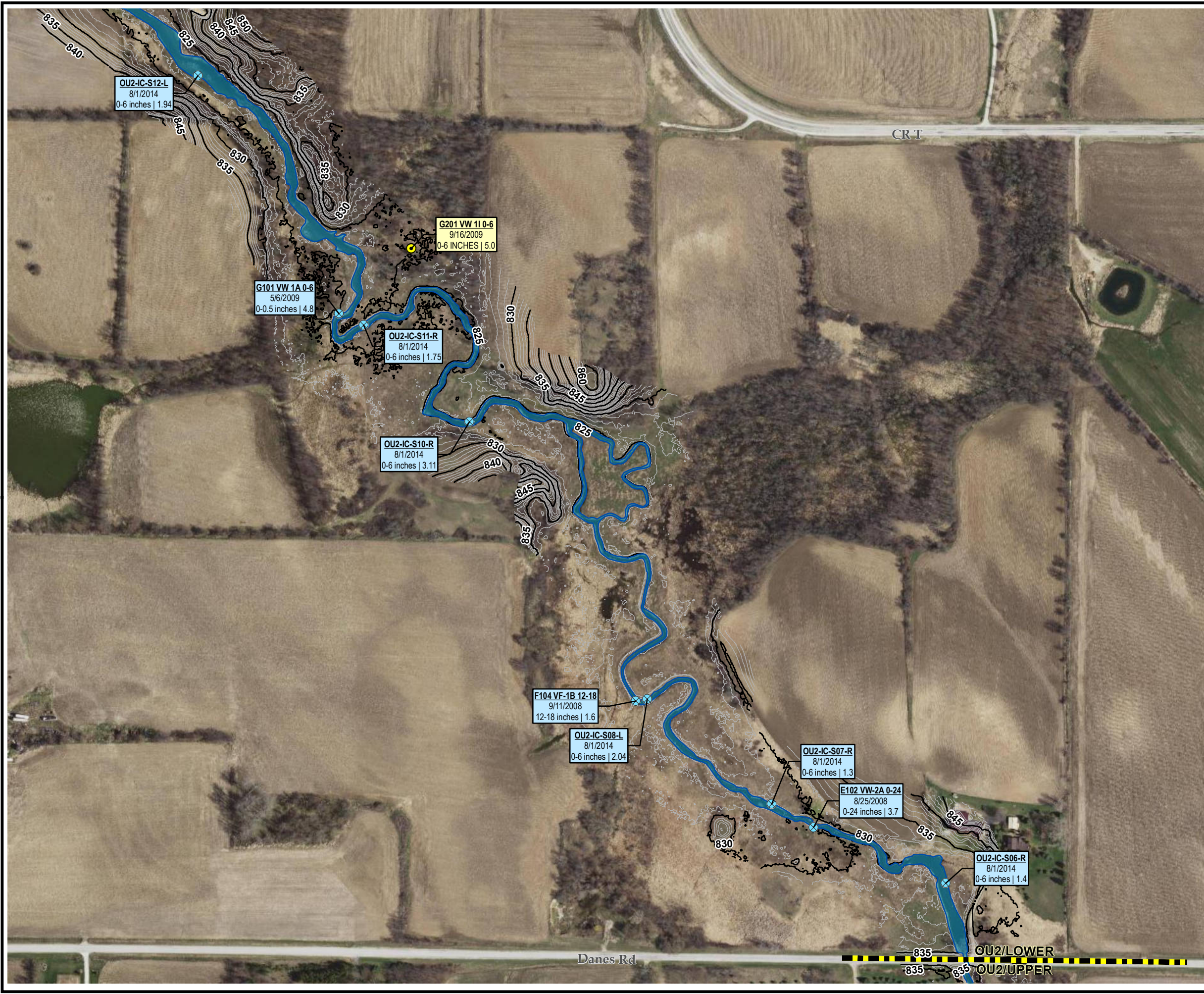


SOURCE: BASEMAP OBTAINED FROM CALUMET COUNTY (MAY 2014).  
OHWM ELEVATION POINTS OBTAINED FROM WISCONSIN DNR (2019).  
1 FT CONTOURS WERE PRODUCED FROM A RASTER DIGITAL ELEVATION MODEL (DEM) PROVIDED BY CALUMET COUNTY (2018).

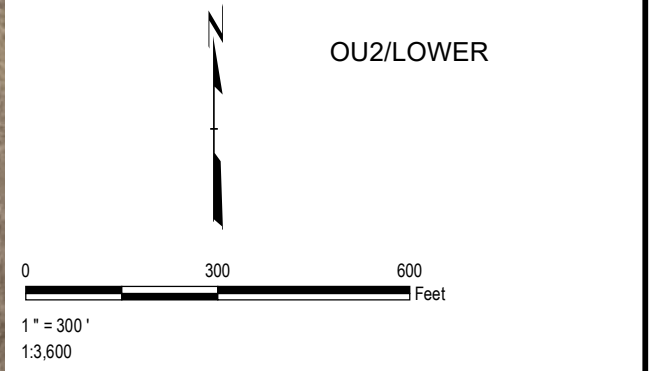
OU2/UPPER-OU2/LOWER

1" = 300'  
1:3,600

<b>PROJECT:</b>	
<b>TECUMSEH &amp; HARP REMEDIAL ACTION STANDARDS REPORT CALUMET COUNTY, WISCONSIN</b>	
<b>TITLE:</b>	
<b>OU2/UPPER-OU2/LOWER - SAMPLE LOCATIONS</b>	
DRAWN BY: R. SUEMNICHT	PROJ NO.: 107927
CHECKED BY: J. RICE	<b>FIGURE 4</b>
APPROVED BY: C. HARVEY	
DATE: JUNE 2021	
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FILE NO.: 107927-2019-001mb.mxd	



SOURCE: BASEMAP OBTAINED FROM CALUMET COUNTY (MAY 2014).  
OHWM ELEVATION POINTS OBTAINED FROM WISCONSIN DNR (2019).  
1 FT CONTOURS WERE PRODUCED FROM A RASTER DIGITAL ELEVATION MODEL (DEM) PROVIDED BY CALUMET COUNTY (2018).

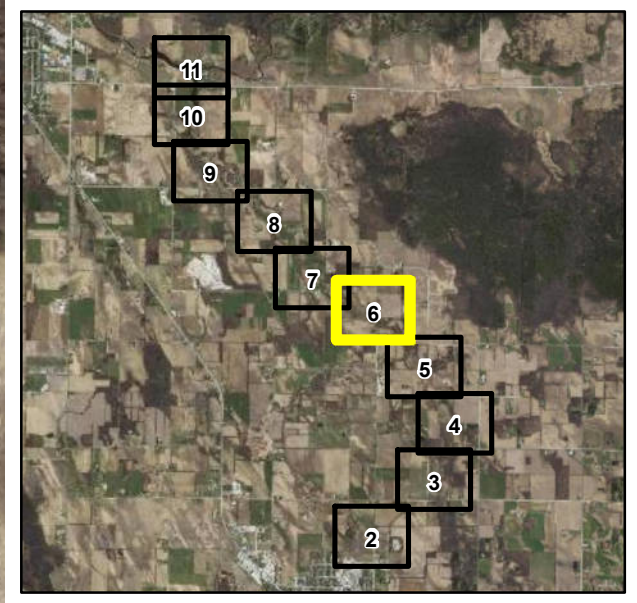


PROJECT:		<b>TECUMSEH &amp; HARP REMEDIAL ACTION STANDARDS REPORT CALUMET COUNTY, WISCONSIN</b>	
TITLE:		<b>OU2/LOWER - SAMPLE LOCATIONS</b>	
DRAWN BY:	R. SUEMNICHT	PROJ NO.:	107927
CHECKED BY:	J. RICE	<b>FIGURE 5</b>	
APPROVED BY:	C. HARVEY		
DATE:	JUNE 2021		
		505 East Huntland Drive, Suite 250 Austin, TX 78752 Phone: 512.329.6080 www.trcsolutions.com	
FILE NO.:	107927-2019-001mb.mxd		



**LEGEND**

- IN CHANNEL SAMPLE LOCATION
- ESTIMATED OHWM 2014 (TRC)
- 1' MAJOR CONTOURS (CALUMET COUNTY)
- 1' MINOR CONTOURS (CALUMET COUNTY)
- OU ENDS



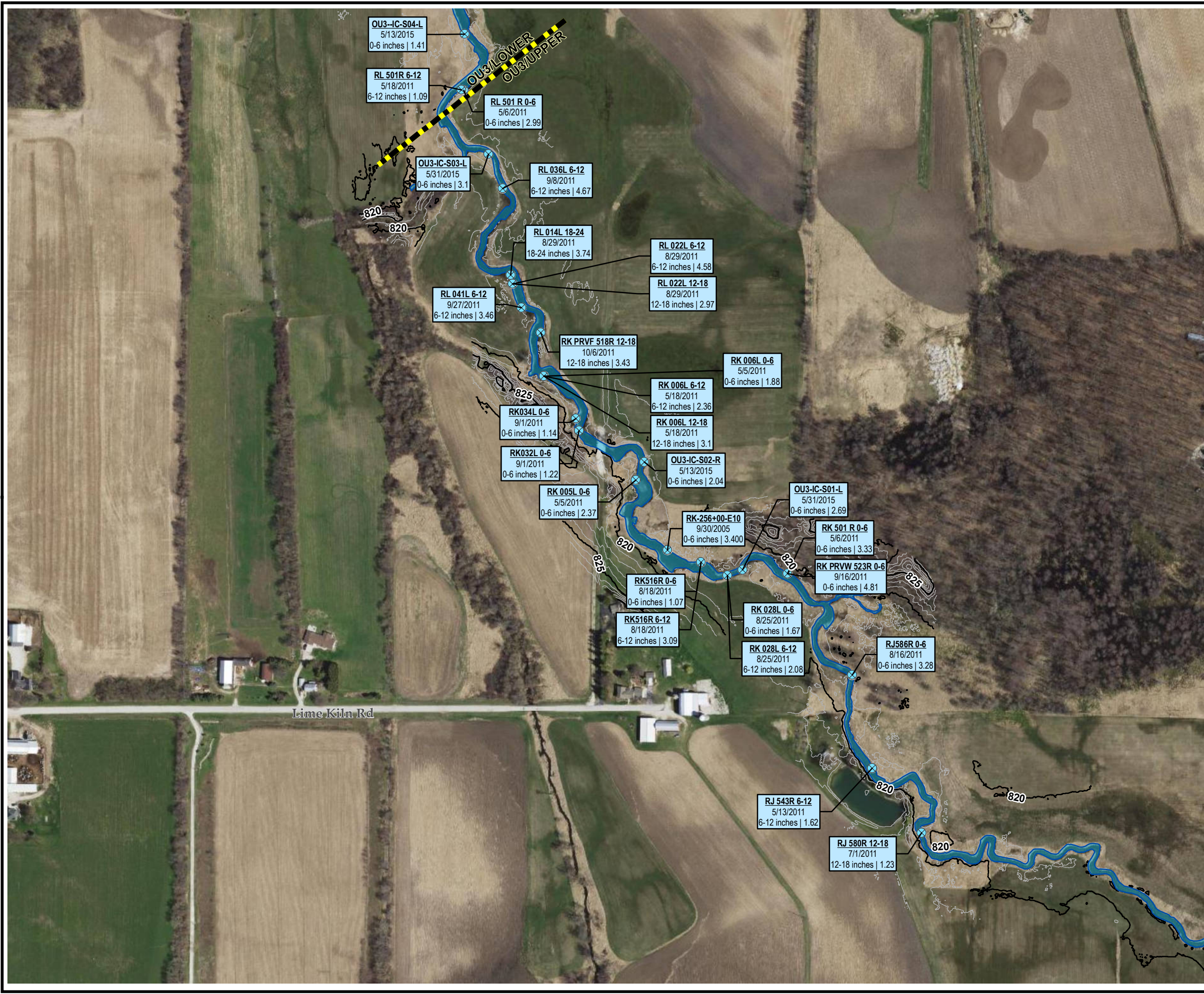
SOURCE: BASEMAP OBTAINED FROM CALUMET COUNTY (MAY 2014).  
OHWM ELEVATION POINTS OBTAINED FROM WISCONSIN DNR (2019).  
1 FT CONTOURS WERE PRODUCED FROM A RASTER DIGITAL ELEVATION MODEL (DEM) PROVIDED BY CALUMET COUNTY (2018).

OU2/LOWER-OU3/UPPER

1" = 300'  
1:3,600

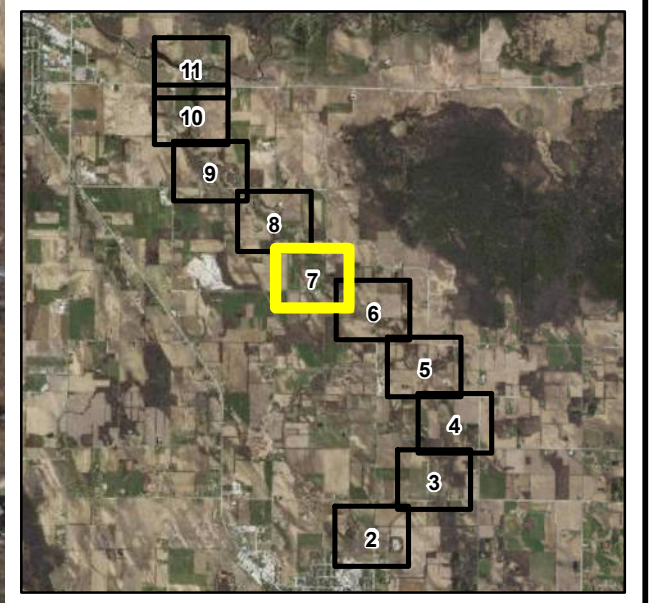
<b>PROJECT:</b>	
<b>TECUMSEH &amp; HARP REMEDIAL ACTION STANDARDS REPORT CALUMET COUNTY, WISCONSIN</b>	
<b>TITLE:</b>	
<b>OU2/LOWER-OU3/UPPER - SAMPLE LOCATIONS</b>	
<b>DRAWN BY:</b> R. SUEMNICHT	<b>PROJ NO.:</b> 107927
<b>CHECKED BY:</b> J. RICE	<b>FIGURE 6</b>
<b>APPROVED BY:</b> C. HARVEY	
<b>DATE:</b> JUNE 2021	
505 East Huntland Drive, Suite 250 Austin, TX 78752 Phone: 512.329.6080 www.trcsolutions.com	
<b>FILE NO.:</b>	107927-2019-001mb.mxd





**LEGEND**

- IN CHANNEL SAMPLE LOCATION
- ESTIMATED OHWM 2014 (TRC)
- 1' MAJOR CONTOURS (CALUMET COUNTY)
- 1' MINOR CONTOURS (CALUMET COUNTY)
- OU ENDS



SOURCE: BASEMAP OBTAINED FROM CALUMET COUNTY (MAY 2014).  
OHWM ELEVATION POINTS OBTAINED FROM WISCONSIN DNR (2019).  
1 FT CONTOURS WERE PRODUCED FROM A RASTER DIGITAL ELEVATION MODEL (DEM) PROVIDED BY CALUMET COUNTY (2018).

0 300 600 Feet

1" = 300'  
1:3,600

PROJECT: **TECUMSEH & HARP  
REMEDIAL ACTION STANDARDS REPORT  
CALUMET COUNTY, WISCONSIN**

TITLE: **OU3/UPPER-OU3/LOWER - SAMPLE LOCATIONS**

DRAWN BY: R. SUEMNICHT PROJ NO.: 107927

CHECKED BY: J. RICE

APPROVED BY: C. HARVEY

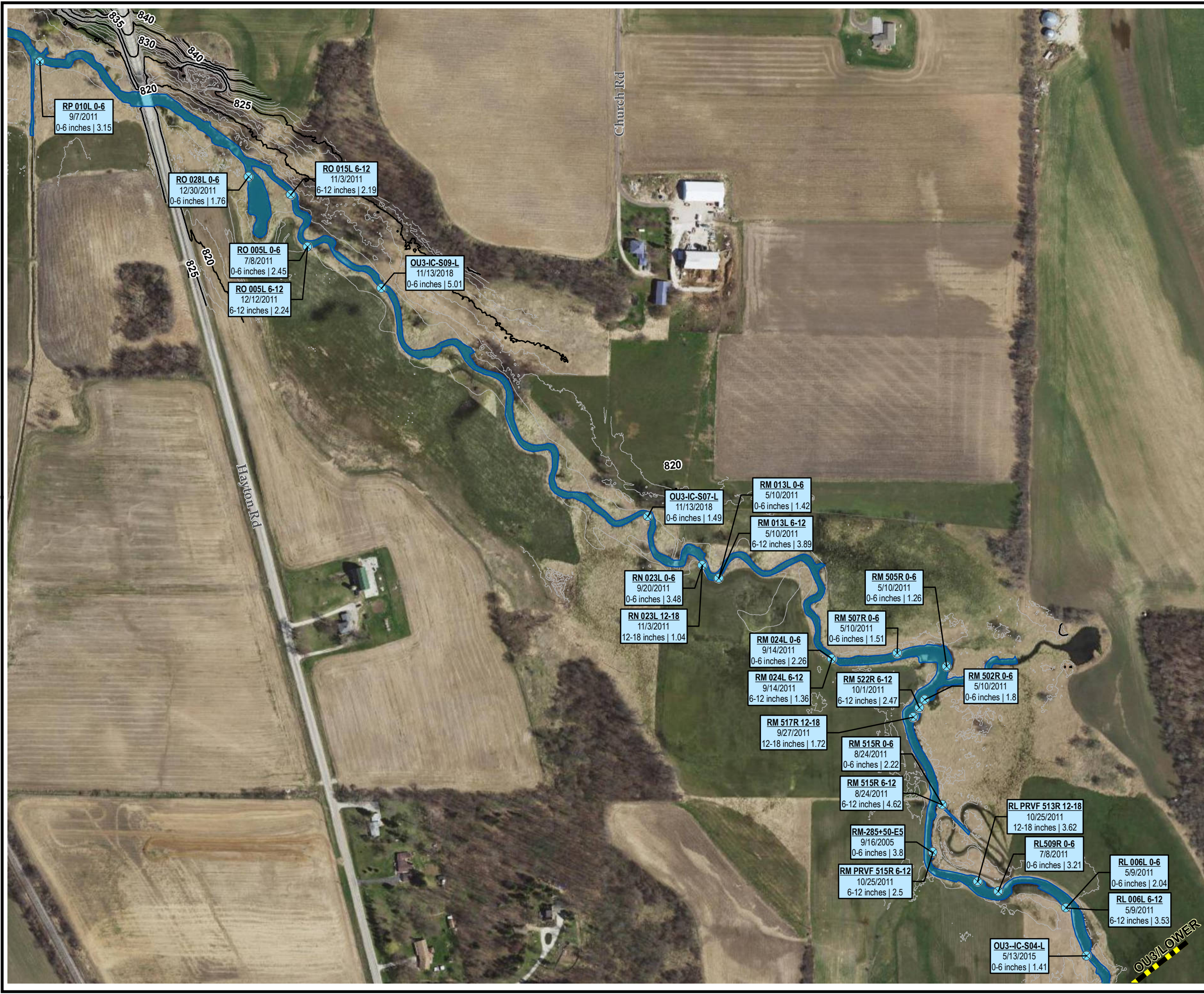
DATE: JUNE 2021

**FIGURE 7**

TRC

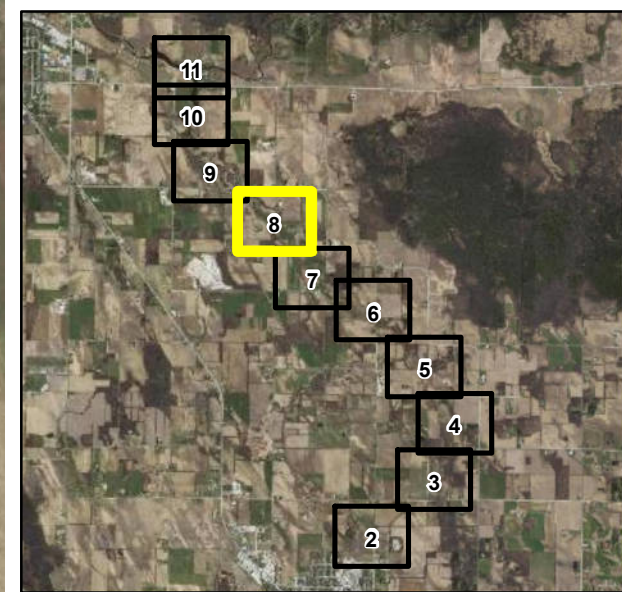
505 East Huntland Drive, Suite 250  
Austin, TX 78752  
Phone: 512.329.6080  
www.trcsolutions.com

FILE NO.: 107927-2019-001mb.mxd



**LEGEND**

- IN CHANNEL SAMPLE LOCATION
- ESTIMATED OHWM 2014 (TRC)
- 1' MAJOR CONTOURS (CALUMET COUNTY)
- 1' MINOR CONTOURS (CALUMET COUNTY)
- OU ENDS

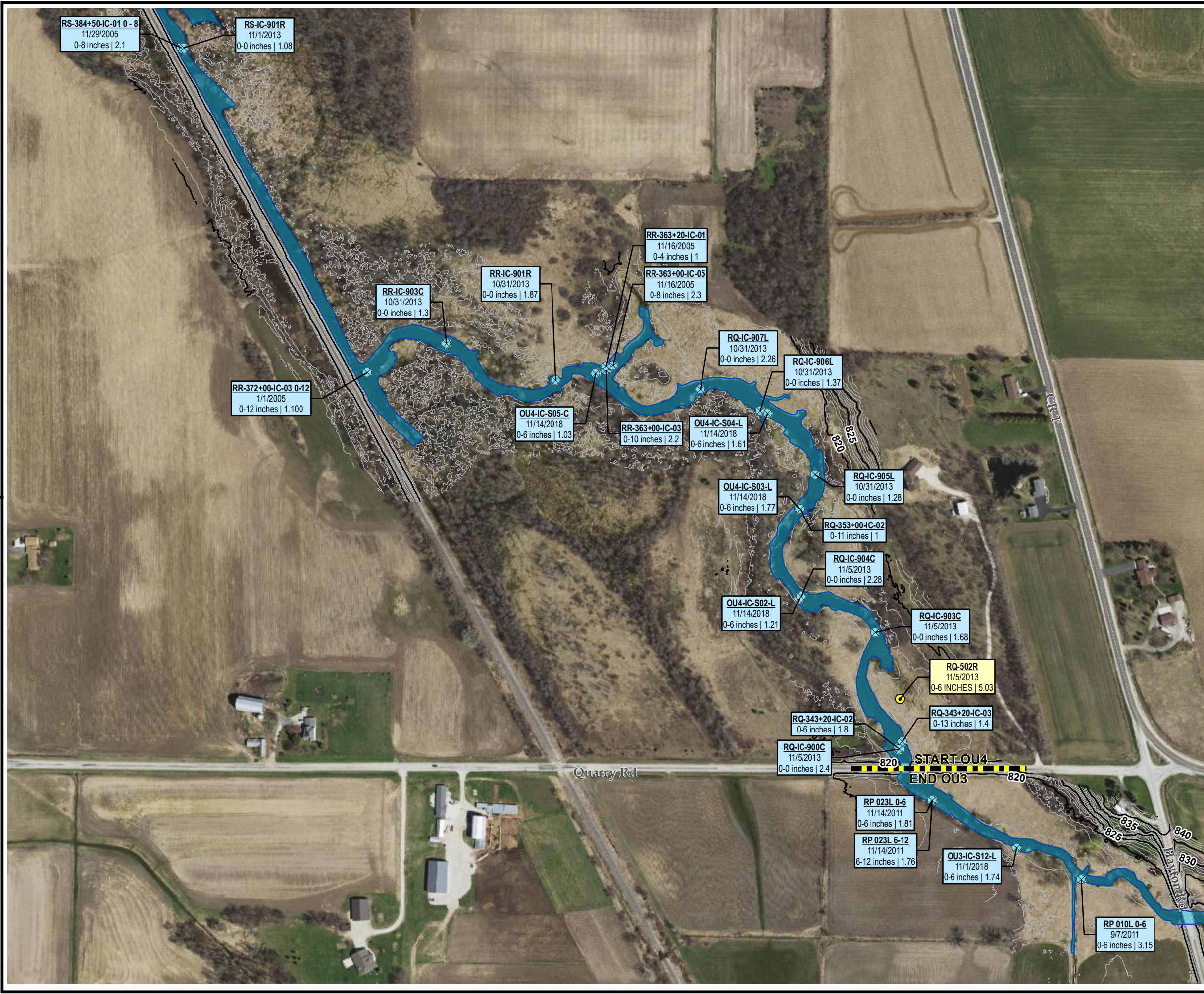


SOURCE: BASEMAP OBTAINED FROM CALUMET COUNTY (MAY 2014).  
OHWM ELEVATION POINTS OBTAINED FROM WISCONSIN DNR (2019).  
1 FT CONTOURS WERE PRODUCED FROM A RASTER DIGITAL ELEVATION MODEL (DEM) PROVIDED BY CALUMET COUNTY (2018).

OU3/LOWER

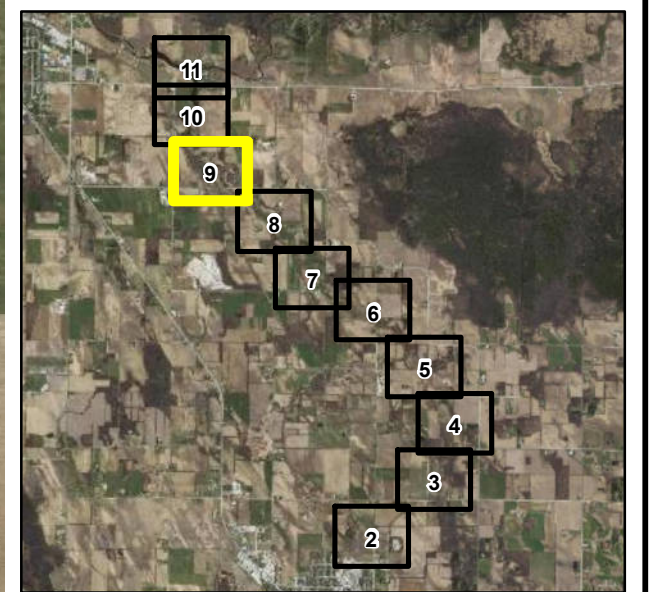
1" = 300'  
1:3,600

<b>PROJECT:</b>	
<b>TECUMSEH &amp; HARP REMEDIAL ACTION STANDARDS REPORT CALUMET COUNTY, WISCONSIN</b>	
<b>TITLE:</b>	
<b>OU3/LOWER - SAMPLE LOCATIONS</b>	
DRAWN BY: R. SUEMNICHT	PROJ NO.: 107927
CHECKED BY: J. RICE	
APPROVED BY: C. HARVEY	<b>FIGURE 8</b>
DATE: JUNE 2021	
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FILE NO.:	107927-2019-001mb.mxd



**LEGEND**

- IN CHANNEL SAMPLE LOCATION
- OVERBANK SAMPLE LOCATION
- ESTIMATED OHWM 2014 (TRC)
- 1' MAJOR CONTOURS (CALUMET COUNTY)
- 1' MINOR CONTOURS (CALUMET COUNTY)
- OU ENDS



SOURCE: BASEMAP OBTAINED FROM CALUMET COUNTY (MAY 2014).  
OHWM ELEVATION POINTS OBTAINED FROM WISCONSIN DNR (2019).  
1 FT CONTOURS WERE PRODUCED FROM A RASTER DIGITAL ELEVATION MODEL (DEM) PROVIDED BY CALUMET COUNTY (2018).

0 300 600 Feet

1" = 300'  
1:3,600

0U3/LOWER-OU4/UPPER

PROJECT: **TECUMSEH & HARP  
REMEDIAL ACTION STANDARDS REPORT  
CALUMET COUNTY, WISCONSIN**

TITLE: **OU3/LOWER-OU4/UPPER - SAMPLE LOCATIONS**

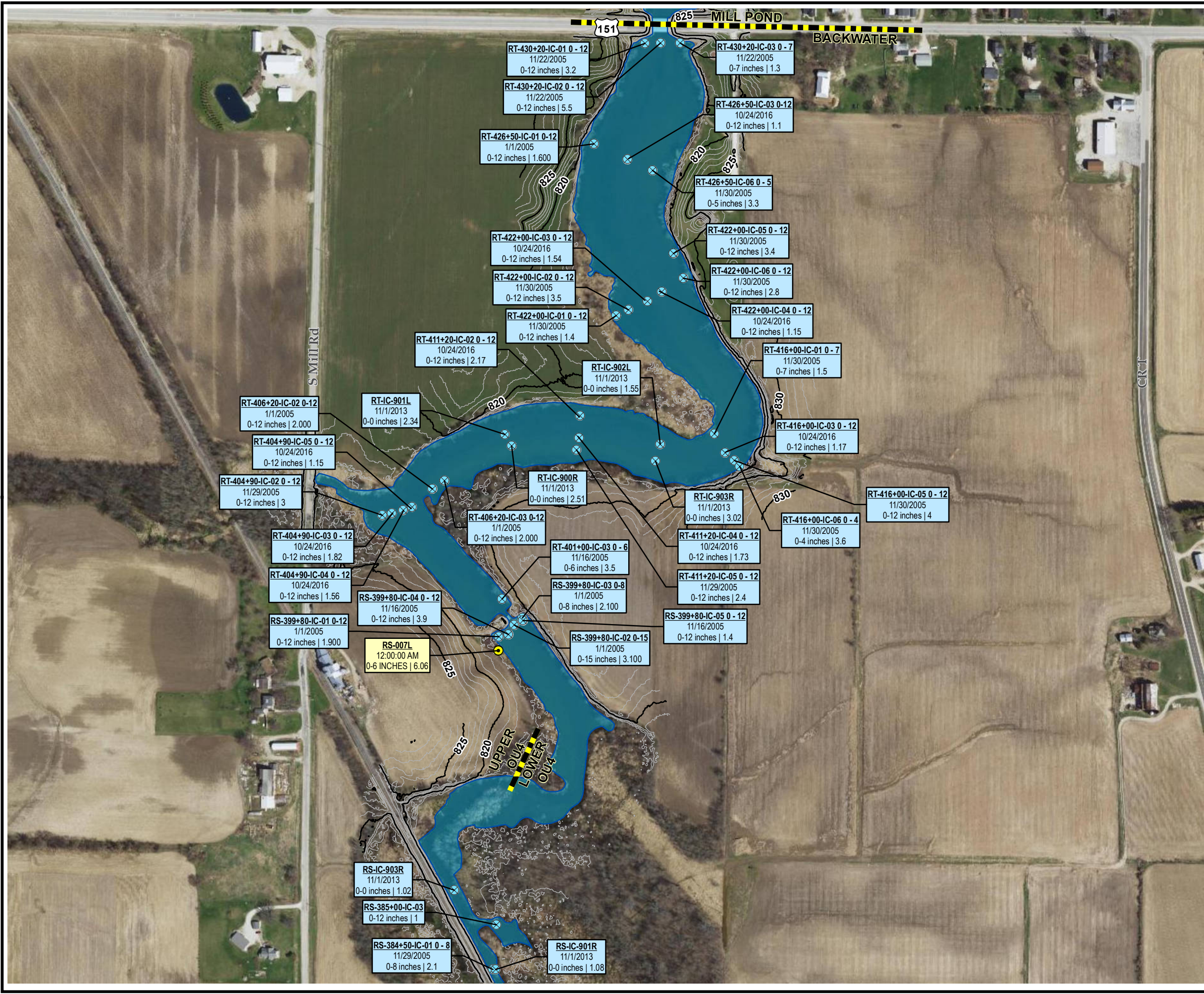
DRAWN BY: R. SUEMNICHT	PROJ NO.: 107927
CHECKED BY: J. RICE	
APPROVED BY: C. HARVEY	
DATE: JUNE 2021	

**FIGURE 9**

**TRC**

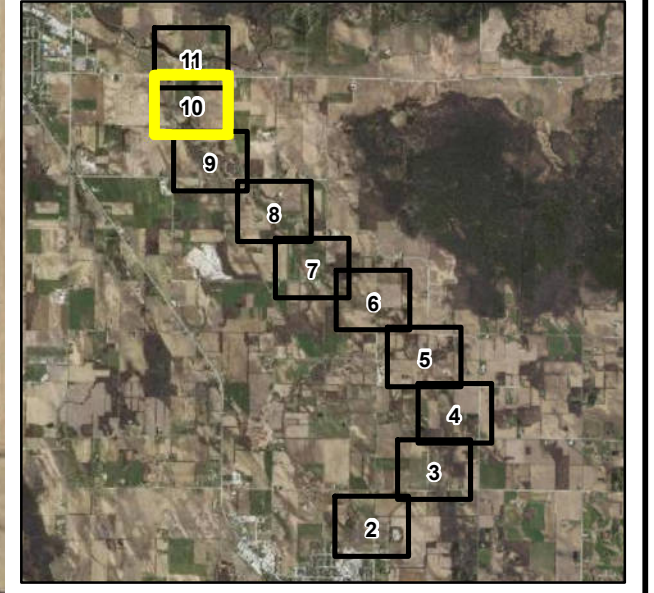
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Austin, TX 78752  
Phone: 512.329.6080  
www.trcsolutions.com

FILE NO.: 107927-2019-001mb.mxd



**LEGEND**

- IN CHANNEL SAMPLE LOCATION
- OVERBANK SAMPLE LOCATION
- ESTIMATED OHWM 2014 (TRC)
- 1' MAJOR CONTOURS (CALUMET COUNTY)
- 1' MINOR CONTOURS (CALUMET COUNTY)
- OU ENDS



SOURCE: BASEMAP OBTAINED FROM CALUMET COUNTY (MAY 2014).  
OHWM ELEVATION POINTS OBTAINED FROM WISCONSIN DNR (2019).  
1 FT CONTOURS WERE PRODUCED FROM A RASTER DIGITAL ELEVATION MODEL (DEM) PROVIDED BY CALUMET COUNTY (2018).

OU4/UPPER-OU4/LOWER

1" = 300'  
1:3,600

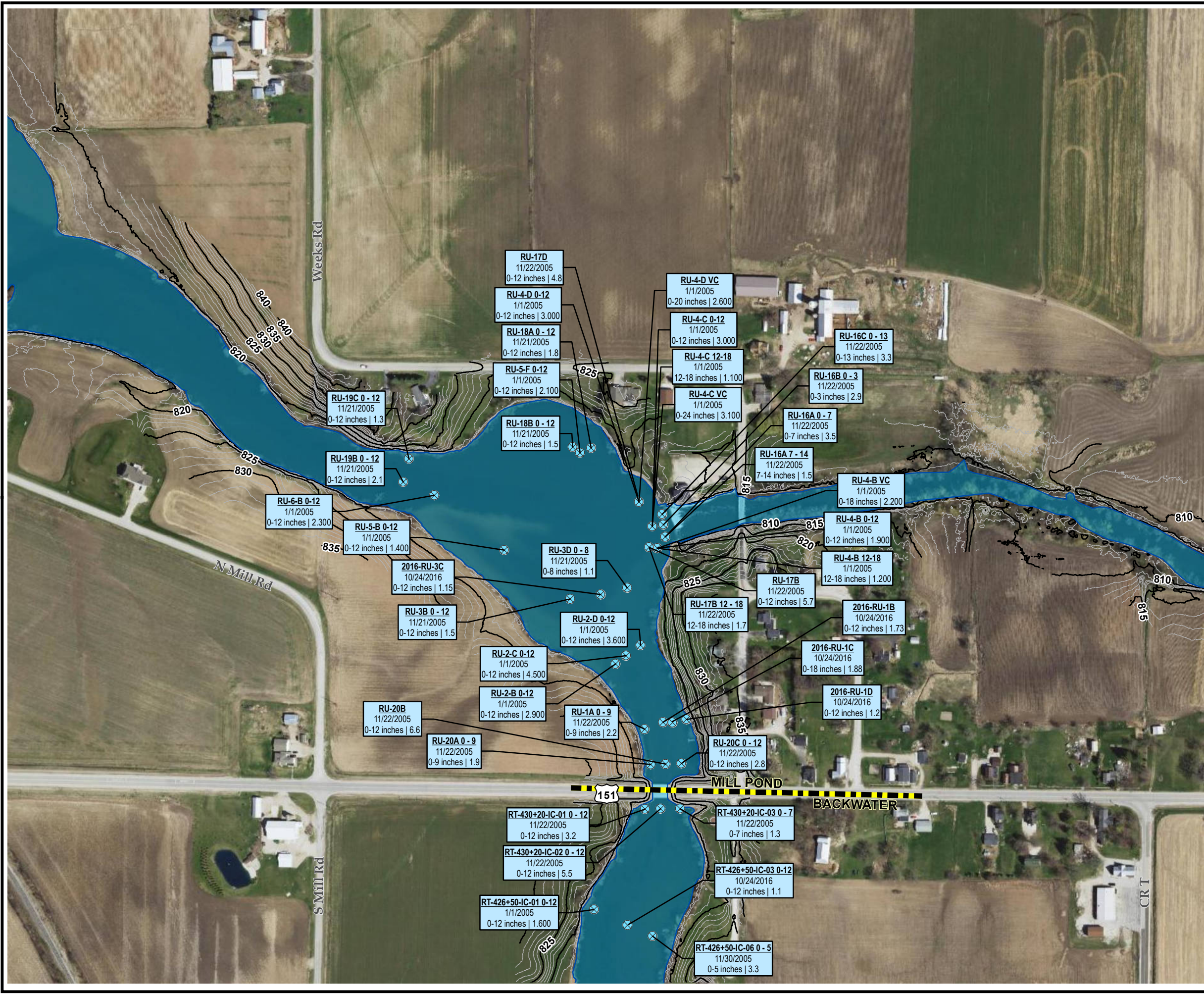
PROJECT: **TECUMSEH & HARP  
REMEDIAL ACTION STANDARDS REPORT  
CALUMET COUNTY, WISCONSIN**

TITLE: **OU4/UPPER-OU4/LOWER - SAMPLE LOCATIONS**

DRAWN BY:	R. SUEMNICHT	PROJ NO.:	107927
CHECKED BY:	J. RICE	<b>FIGURE 10</b>	
APPROVED BY:	C. HARVEY		
DATE:	JUNE 2021		

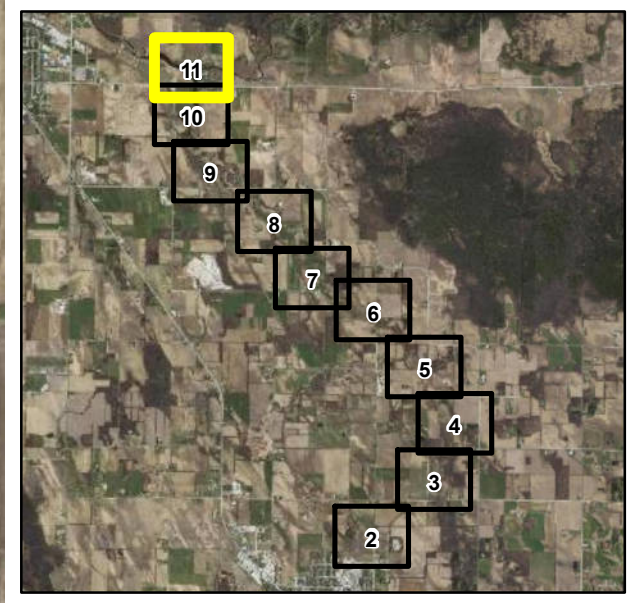
505 East Huntland Drive, Suite 250  
Austin, TX 78752  
Phone: 512.329.6080  
www.trcsolutions.com

FILE NO.: 107927-2019-001mb.mxd



**LEGEND**

- IN CHANNEL SAMPLE LOCATION
- ESTIMATED OHWM 2014 (TRC)
- 1' MAJOR CONTOURS (CALUMET COUNTY)
- 1' MINOR CONTOURS (CALUMET COUNTY)
- OU ENDS



SOURCE: BASEMAP OBTAINED FROM CALUMET COUNTY (MAY 2014).  
OHWM ELEVATION POINTS OBTAINED FROM WISCONSIN DNR (2019).  
1 FT CONTOURS WERE PRODUCED FROM A RASTER DIGITAL ELEVATION MODEL (DEM) PROVIDED BY CALUMET COUNTY (2018).

OU4/LOWER

1" = 300'  
1:3,600

PROJECT:		<b>TECUMSEH &amp; HARP REMEDIAL ACTION STANDARDS REPORT CALUMET COUNTY, WISCONSIN</b>	
TITLE:			
<b>OU4/LOWER - SAMPLE LOCATIONS</b>			
DRAWN BY:	R. SUEMNICHT	PROJ NO.:	107927
CHECKED BY:	J. RICE	<b>FIGURE 11</b>	
APPROVED BY:	C. HARVEY		
DATE:	JUNE 2021		
		505 East Huntland Drive, Suite 250 Austin, TX 78752 Phone: 512.329.6080 www.trcsolutions.com	
FILE NO.:	107927-2019-001mb.mxd		