

From: Byers, Harris <Harris.Byers@stantec.com>
Sent: Tuesday, September 4, 2018 4:03 PM
To: Choi, Christopher; Paul Braun (PBraun@manitowoc.org)
Cc: Kathleen McDaniel; Dan Koski; Beggs, Tauren R - DNR; Andrew Steimle
Subject: [WARNING: ATTACHMENT(S) MAY CONTAIN MALWARE]SSSAP for a Predemolition Survey at the former Railroad Property along North 10th and North 11th Streets
Attachments: SSSAP - Predemolition Inspection of 10th and 11th Street Properties.pdf

Team:

Attached is a site-specific sampling and analysis plan for a pre-demolition survey at the former railroad property located along North 10th and North 11th Streets in the City of Manitowoc.

This was in DRAFT form for a while; wanted to send over for final review/approval. Compared to other SSSAPs, this is low priority; though the results will assist greatly in future redevelopment.

Please review at your earliest convenience.

Sincerely,
Harris Byers
Brownfields Project Manager

Direct: 414 581-6476
Fax: 262 241-4901
Harris.Byers@stantec.com

Stantec



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Stantec Consulting Services Inc.
12075 Corporate Parkway, Suite 200 Mequon WI 53092

September 4, 2018

Attention: Mr. Chris Choi

Program Officer Brownfields Program
United States Environmental Protection Agency
Region 5 77 West Jackson Blvd.
Chicago, IL 60604-3590

**Reference: Site Specific Sampling and Analysis Plan – Pre-Demolition Lead-Based Paint and Asbestos-Containing Material Inspection and Restricted Waste Inventory
Former Railroad Property Along North 10th and North 11th Streets
Manitowoc, Wisconsin
USEPA Cooperative Agreement No. BF 00E02377-0 (pending)
Stantec Project No. 193706269**

Dear Mr. Choi:

As recommended in the Stantec Consulting Services (Stantec) 2018 *Phase I ESA*, and on behalf of the City of Manitowoc (City), Stantec has prepared this site-specific sampling and analysis plan for a pre-demolition lead-based paint and asbestos-containing material inspection and restricted waste inventory at the former railroad property located along North 10th Street and North 11th Street (herein referred to as the Property). The location of the Property relative to topographic features and illustrated on an orthophotograph from 2017 are illustrated on Figure 1 and Figure 2, respectively. The health and safety plan for oversight of the project by Stantec staff is provided in Attachment A. As described further below, sampling of building materials will be subcontracted to NorthStar Environmental Testing, LLC (NorthStar), who will prepare a health and safety plan for their staff. This work will be completed utilizing Brownfield site assessment grant funds provided to the City of Manitowoc by the United States Environmental Protection Agency in 2018 under cooperative agreement no. BF 00E02377-0 (pending).

BACKGROUND

The Stantec (2018) *Phase I ESA* of the Property identified the following recognized environmental conditions which warrants further evaluation by conducting a pre-demolition lead-based paint and asbestos-containing material inspection and restricted waste inventory at the Property:

REC 5 – Storage/Dumping by Adjacent Property Owners. Adjacent property occupants appear to have egressed onto the Property and are using the Property for vehicle storage/parking and storage of materials/dumping. Adjacent property occupants are storing large storage vessels (ex. ASTs, USTs, drums, totes, etc.) and various materials at the Property. Apparent dumping of debris is also apparent. This represents a REC. The storage vessels and all remaining materials/debris/waste/vehicles should be removed from the Site for proper disposal.

REC 1 – Prior Railroad Use and REC 2 – Prior Industrial Use. Although the historic use of the property for railroad and industrial uses dating to the late 19th Century is considered a REC with respect to soil and groundwater, all vacant buildings were previously removed from the Property. However, some infrastructure features remain (ex. railroad ties, turn table, etc) which may pose a limitation to redevelopment. Remaining infrastructure features will initially be evaluated during the



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proposed geophysical survey; however, further evaluation and potential sampling is likely warranted.

The Braun Building Center, Inc. leases the far northern portion of the property for use as a building truss manufacturing facility. As shown on Figure 2 and discussed in the Stantec (2018) *Phase I ESA*, the manufacturing facility consist of two storage barns/sheds, a former show room/storage building, and an active workshop. Historic records indicate these structures were constructed between 1951 and 1961 and are the only structures remaining at the Property. The use of the buildings is not considered a REC, HREC or CREC. However, Business Environmental Risks associated with potential lead-based paint, asbestos-containing materials, and restricted wastes may be encountered during future redevelopments and or renovations.

With the exception of the Braun Building Center, Inc. truss manufacturing facility currently occupying the northern portion of the Property, all historic aboveground structures of potential concern have been razed. If present, lead-based paint, asbestos, and/or other restricted wastes may require abatement and/or management during the demolition process. Therefore, the 2018 *Phase I ESA* recommends completing a pre-demolition inspection to determine if materials (ex. lead-based paint, asbestos-containing materials, and/or other restricted wastes) are present in the building or on the Property which require abatement or management prior to or during demolition of the structure.

PROPOSED REUSE AND PROBLEM STATEMENT

The City of Manitowoc executed a Letter of Intent on May 16, 2018 and anticipates acquiring the Property in Fall 2018. Following acquisition, the City will likely redevelop the property for mixed-use commercial/residential reuse with recreational use focused along the Manitowoc River.

However, it is possible lead-based paint, asbestos-containing materials, and/or other restricted materials may have been used in construction/maintenance of the building and/or may remain at the Property. Therefore, as described in Wisconsin Department of Natural Resources (WDNR) Publication WA-651 (provided in Attachment B), a pre-demolition lead-based paint and asbestos-containing material inspection and restricted waste inventory is warranted to identify remaining building/waste materials that require proper abatement/removal/disposal/recycling prior to building demolition and redevelopment of the Property for recreational reuse.

The proposed pre-demolition lead-based paint and asbestos-containing material inspection and restricted waste inventory will comply with the Occupational Safety and Health Administration (OSHA) Asbestos Construction Standard found in Title 29 of the Code of Federal Regulations, Part 1926.1101, the OSHA Lead Exposure in Construction Standard, and WDNR and Wisconsin Department of Health Services requirements for inspection of building materials prior to renovation and/or demolition under the National Emissions Standards for Hazardous Air Pollutants. The survey, including the sampling of building materials for lead-based paint and asbestos, will be completed



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by Aaron Stroud and/or Larry Pawlus of NorthStar. Detailed information regarding the proposed work is provided below.

PROPOSED SCOPE OF WORK

The proposed pre-demolition lead-based paint and asbestos-containing material inspection and restricted waste inventory will be performed by Aaron Stroud and/or Larry Pawlus of NorthStar to establish baseline conditions at the Property and to plan for abatement and building demolition. NorthStar’s survey will:

- Determine the presence, locations, and extent of lead-based paint;
- Determine the presence, location, types, and quantities of suspect asbestos-containing materials;
- Determine the location, type, and quantity of remaining restricted wastes;
- Identify, catalog, delineate areas of stained building materials for further evaluation/characterization prior to removal

The proposed survey will utilize Stantec SOP-06 (*Asbestos Bulk Sample Collection*), SOP-12 (*Paint Chip Sample Collection*), and SOP-25 (*Measurement of Lead in Painted Surfaces with Portable Energy Dispersive X-Ray Fluorescence Spectrometry*) which were included in the Stantec (2015) Quality Assurance Project Plan. During the survey, the inspector will obtain information to evaluate the presence and suspected location/quantity of suspected asbestos, lead-based paint, and restricted wastes. The inspector will visually assess all areas within the building for suspect materials and inventory the results using a room by room format. Suspect materials will be categorized and quantified.

Asbestos and Lead-Based Paint Sample Collection

Based on their professional judgement, NorthStar will collect bulk samples of suspect asbestos-containing materials utilizing Stantec SOP-06 to confirm/determine the location and quantities of remaining asbestos-containing materials. Samples will be submitted to CEI Labs, Inc. (Cary, NC) under chain of custody procedures for laboratory analysis. In addition to evaluating a bulk sample for layers, regulatory procedures require that a confirmatory “Point Counting” test be performed on all samples resulting in an initial positive PLM result of <1% asbestos content. Therefore, sample results will be provided for each distinct layer of each sample submitted for analysis.

The total number of samples to be collected and submitted for laboratory analysis will depend on Property conditions, which remain largely unknown. The following guide will be used to determine the approximate quantity of samples submitted for laboratory analysis.

Surface material (<1,000 square feet):	At least 3 samples
Surface material (1,000 to 5,000 square feet):	At least 5 samples
Surface material (>5,000 square feet):	At least 7 samples



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Thermal system insulation:

At least 3 samples

Other materials:

A sufficient number to evaluate material

The concentration of lead in painted surfaces will be measured with a portable energy-dispersive x-ray fluorescence spectrometer per Stantec SOP-25 by NorthStar. Confirmation paint chips will be collected by NorthStar at a rate of no less than 1:50 per the requirements of Stantec SOP-25 using procedures outlined in Stantec SOP-12 and submitted to TestAmerica Laboratories (Chicago, Illinois) under chain of custody procedures for laboratory analysis. Representative testing locations will be chosen for each type of painted substrate within each area of the building.

Data Evaluation and Report

A written summary report will be prepared and include the following:

- A tabular list of all suspect asbestos-containing materials identified in the building, including estimated quantities, condition, and friability of each type of material on a room by room basis,
- A tabular list of all lead-based paint sample locations and description (i.e. color/condition) of painted surfaces on a room by room basis,
- A tabular list of all restricted wastes identified at the Property,
- A diagram with building sketches showing all sampling locations,
- A copy of the inspector's certifications,
- A copy of the laboratory's current certification,
- Copies of the sample chain-of-custody form(s) and laboratory reports, and
- Recommendations and cost estimates for abatement/removal, if warranted.

SCHEDULE

The proposed pre-demolition lead-based paint and asbestos-containing material inspection and restricted waste inventory is tentatively scheduled to be conducted in September and is expected to take one day to complete. The final report documenting the results of the work will be available within 10 calendar days of the receipt of the laboratory data and documentation NorthStar.

We trust this information meets your needs. Please feel free to contact me at 414-581-6476 if you have any questions or concerns.

STANTEC CONSULTING SERVICES INC.

Harris L. Byers
Brownfields Project Manager

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STANTEC CONSULTING SERVICES INC.

Hiedi A. Waller, P.E.
Environmental Engineer

Hiedi.Waller@stantec.com



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STANTEC CONSULTING SERVICES INC.

Richard J. Binder, P.G., CPG

QA/QC Manager

Rick.Binder@stantec.com

LIMITATIONS

Stantec's observations, findings, and opinions should not be considered as scientific certainties, but only as opinion based on our professional judgment concerning the significance of the data reviewed in developing this site-specific sampling and analysis plan. Specifically, Stantec cannot represent that the Site does not contain any hazardous or toxic materials or other latent conditions beyond that observed by Stantec during the course of the investigation. Additionally, due to limitations of this investigation process and the necessary use of data furnished by others, Stantec and its subcontractors cannot assume liability if actual conditions differ from the information presented in this report.

Enclosures:

Figures

Attachments: A - Health and Safety Plan

B – WDNR Publication WA-651

FIGURES

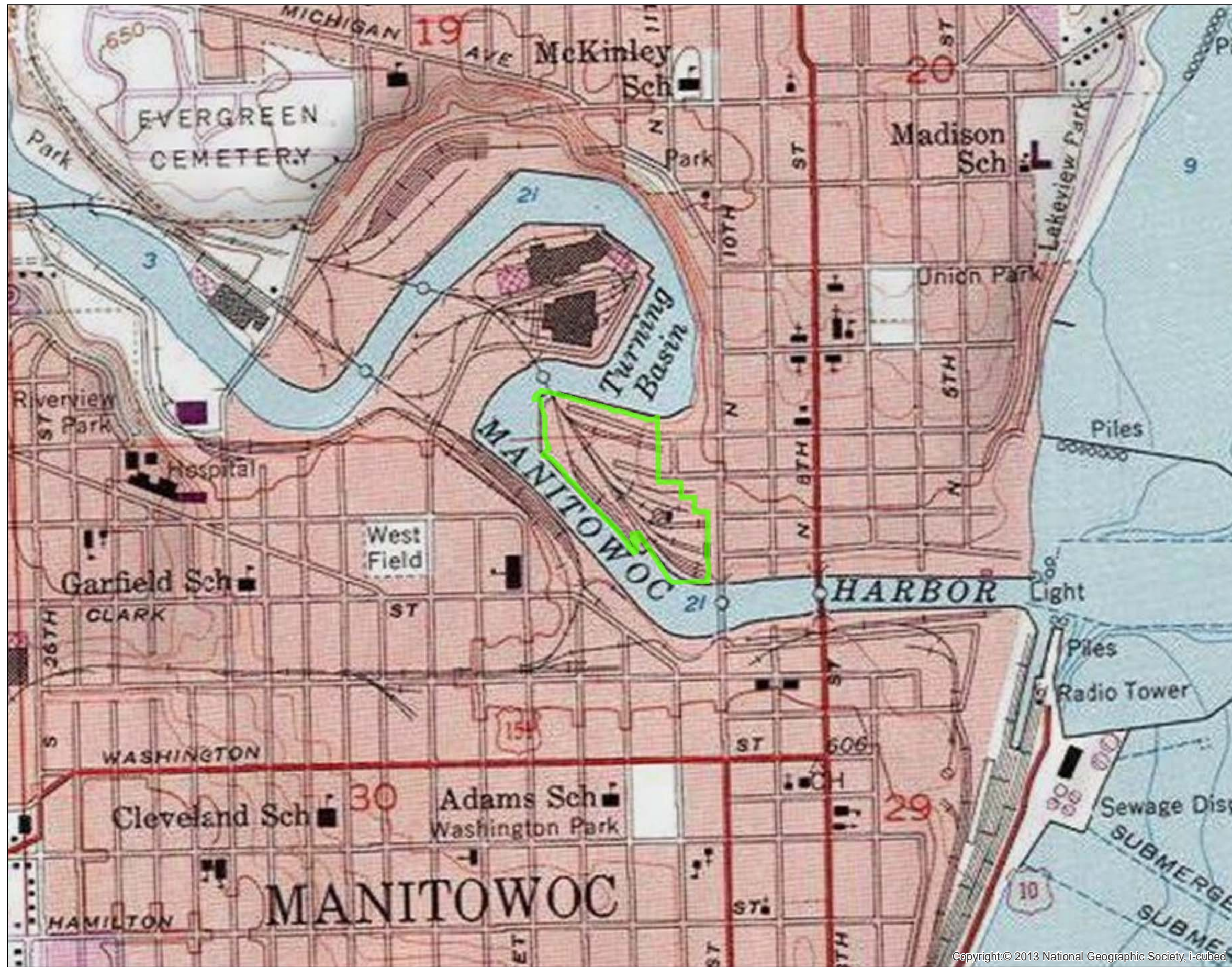


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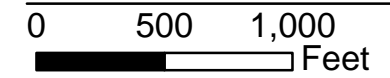
1

Title

Target Redevelopment Area and Topographic Map

Client/Project

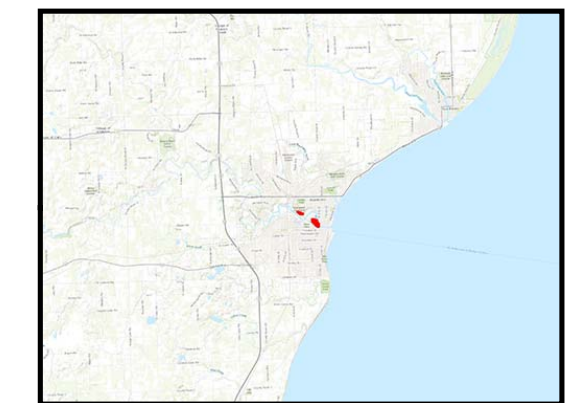
City of Manitowoc
USEPA Brownfield Assessment Grant



193703931
Prepared by HLB on 7/11/18

Legend

Target Property



Notes

1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet



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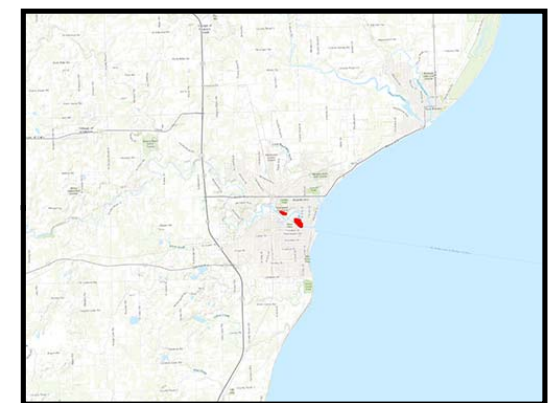
Figure No.
2
 Title
**Target Property and
 2017 Orthophotograph**

Client/Project
 City of Manitowoc
 USEPA Brownfield Assessment Grant

0 115 230
 Feet
 193703931
 Prepared by HLB on 7/11/18

Legend

- Target Property
- Target Parcels
- Nearby Parcels



Notes
 1. Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet



ATTACHMENT A

HEALTH AND SAFETY PLAN

Project: Maniwoc Brownfields
 Client: City of Maniwoc
 Location: Former RR Property Along 10th and 11th Streets

File No.
 Project No: 193706269

- **Where a project with fieldwork does not require a Health and Safety Plan (HASP), a Risk Management Strategy (RMS1) must be completed.**
- **If the scope of work for a project that originally did not involve field work changes to include field work, an RMS1 form must be completed and reviewed with employees before field work begins.**
- **Although the RMS1 is intended to be part of the desktop planning process for a project, please be aware that the RMS1 can be carried as a field resource as well, to complement use of the RMS2 – Field Level Risk Assessment.**

1. PROJECT SUMMARY:

Description of the work:

Oversee a pre-demolition inspection at the Property; **NO sampling by Stantec staff**

General

Does a Prime Contractor (Constructor) or Client HSE Program apply? Yes No

If yes, please identify.

If Client, Prime Contractor or Constructor provides Orientation and/or Training, attach a copy of the training record to the project file and provide a copy to the OSEC.

Does this project involve work outside of North America (International) Yes No

(If yes, you must contact international@stantec.com)

2. HAZARD RECOGNITION

Health Hazard (Check all appropriate categories)

Is this work where MSDSs are required? Yes No

If yes, copies of MSDSs must be available at project site and attached to this document.

Chemical	Physical	Ergonomic
<input type="checkbox"/> Acids or Caustics	<input type="checkbox"/> Driver Fatigue	<input type="checkbox"/> Force
<input checked="" type="checkbox"/> Asbestos	<input checked="" type="checkbox"/> Dust / Dusty environments	<input type="checkbox"/> Posture
<input type="checkbox"/> H ₂ S	<input checked="" type="checkbox"/> Flora or Fauna (type):Goldenrod	<input type="checkbox"/> Repetitive Motion
<input type="checkbox"/> Halogenated Organic Compounds	<input checked="" type="checkbox"/> Heat Stress / Sunburn	<input type="checkbox"/> Tools
<input checked="" type="checkbox"/> Heavy Metals	<input type="checkbox"/> Noise	<input type="checkbox"/> Workplace Design
<input checked="" type="checkbox"/> Metals	<input type="checkbox"/> Radiation (type):	<input type="checkbox"/> Other – specify:
<input type="checkbox"/> PCBs	<input checked="" type="checkbox"/> Remote Location	Biological
<input type="checkbox"/> Pesticides / Herbicides	<input checked="" type="checkbox"/> Rough Terrain/Heavy Brush	<input type="checkbox"/> Bacterial Control Cultures
<input checked="" type="checkbox"/> Petroleum Hydrocarbons	<input checked="" type="checkbox"/> Road / Trail Conditions	<input type="checkbox"/> Domestic Waste
<input type="checkbox"/> Poisonous Materials	<input type="checkbox"/> Vibration	<input type="checkbox"/> Medical Waste
<input type="checkbox"/> Solvents/Flammables	<input type="checkbox"/> Water	<input type="checkbox"/> Sewage / Wastewater
<input type="checkbox"/> Other – specify:	<input type="checkbox"/> Wildlife	<input checked="" type="checkbox"/> Other – specify:Ticks
Physical	<input type="checkbox"/> Working at Heights	<input type="checkbox"/> Not Applicable
<input type="checkbox"/> Cold Stress/Frostbite	<input type="checkbox"/> Other – specify:	
<input type="checkbox"/> Confined Space		

Safety Hazards (Check all appropriate categories)

Machine

- ATV
- Automobile
- Blades
- Chains / Cables / Ropes
- Crush Points
- Cutting Edges
- Free-Wheeling Point
- Heavy Equipment
- Helicopter
- Hydraulic Systems
- Levers
- Moving Parts
- Pinch Points
- Rotating Parts (i.e. auger)

Machine

- Shear Points
- Springs
- Wrap Points
- Other – specify:

Energy

- Chemical
- Electrical
- Hydraulic
- Mechanical
- Pneumatic
- Potential
- Thermal
- Other – specify:

Material Handling & Task Completion

- Bending
- Falling/Flying Objects
- Fatigue
- Heavy Load (> 50 pounds)
- Load (< 50 pounds)
- Repetitive
- Sharp/Rough Surface
- Twisting
- Other – specify:

Work Practices

- Deviation of SWP
- Not Applicable

3. HAZARD ASSESSMENT

Check off all SWPs that apply to job

- Unless required by client, printing SWPs is not required. However, review of all applicable SWPs before commencing work is mandatory. The most current version of each below is hyperlinked to allow review, and printing where desired.

100 Series – General HSE

- [102 – Workplace Violence Prevention Program](#)
- [103 – Workplace Hazardous Materials Information System \(WHMIS\)](#)
- [104 – Hazard Communication](#)
- [105 – Personal Protective Equipment \(PPE\)](#)
- [107 – First Aid](#)
- [108 – Bloodborne Pathogens](#)
- [111 – Medical Surveillance](#)
- [113 – Heat Stress](#)
- [114 – Working in Cold Environments](#)
- [115 – Material Handling and Safe Lifting](#)
- [116 – Office Safety](#)
- [118 – Working Alone in the Field](#)
- [124 – Safe Driving](#)
- [125 – Workstation Ergonomics](#)
- [126 – Using a Chainsaw](#)

- [130 – Rail Safety](#)

200 Series – Construction HSE

- [201 – Fall Protection/Working from Heights](#)
- [202 – Ladder Safety](#)
- [203 – Aerial Work Platforms](#)
- [205 – Scaffold Safety](#)
- [206 – Hand and Portable Power Tools](#)
- [208 – Hoisting and Lifting](#)
- [213 – Utility Clearance](#)
- [214 – Entering Excavations and Trenches](#)
- [215 – Supervision of Hydro-Excavation Activities](#)
- [216 – Working Near Mobile Equipment](#)
- [217 – Forklift Operation](#)

300 Series – Hazardous Materials

- [304 – Asbestos Safety](#)
- [305 – Benzene Safety](#)

300 Series – Hazardous Materials

- [308 – Working in Geotechnical and Materials Laboratories](#)
- [309 – Silica Awareness](#)
- [310 – Compressed Gas Cylinders](#)
- [311 – Working in Environmental Laboratories](#)
- [312 – Fueling Gasoline Engines](#)
- [314 – Working Around Hazardous Waste and Wastewater](#)
- [315 – Arsenic Safety](#)
- [319 – Hydrogen Fluoride/Hydrofluoric Acid Safety](#)

400 Series – Program Specific

- [406 – Electrical Safety Program](#)
- [407 – Traffic Control and Protection Planning](#)
- [408 – Lock, Tag & Try \(LTT\)](#)

400 Series – Program Specific

- [409 Respiratory Protection](#)
- [411 – Confined Space Entry](#)
- [414 – Hot Work](#)
- [416 – Supervision of Contracted Drilling Activities](#)

500 – PA/PC/Region Specific Programs

- [501 - Using the Spot Messenger System](#)
- [502 - Use and Handling of Nuclear Density Gauges](#)

500 – PA/PC/Region Specific Programs

- [504 - Backpack and Boat Mounted Electro-fishing](#)
- [507 – Aircraft Safety](#)
- [508 – Wildlife Encounters](#)
- [509 - Guideline for 2-way Radio Use on Radio Controlled Roads in BC](#)
- [510 – Working in Abandoned Buildings](#)
- [513 – Boat and Water Safety](#)

500 – PA/PC/Region Specific Programs

- [514 – Working On or Near Ice](#)
- [516 – Radiation Safety \(US\)](#)
- [517 – Safe Machete Use](#)
- [519 – Post-Disaster Building Entry](#)

Other SWPs not listed

- Select and list others here

SWP for this task being performed is not available – Quantified Hazard Assessment (RMS7) must be performed, please speak with Regional Safety Environment Coordinator (RSEC) for assistance.

4. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Based on hazard recognition and assessment as identified in the documents above, identify required PPE.

- | | |
|--|---|
| <input checked="" type="checkbox"/> Head Protection (CSA or ANSI) – Type: ANSI Z89.1 | <input type="checkbox"/> Hearing Protection – Type: |
| <input checked="" type="checkbox"/> Work Boots (CSA or ANSI) – Type: ANSI Z41.1-1991 | <input type="checkbox"/> Respiratory Protection – Type: |
| <input checked="" type="checkbox"/> Eye/Face Protection – Type: Glasses | <input checked="" type="checkbox"/> Coveralls – Type: D |
| <input checked="" type="checkbox"/> High Visibility Vest – Type: Class 2 | <input type="checkbox"/> Fall Protection – Type: |
| <input checked="" type="checkbox"/> Gloves – Type: Leather | <input type="checkbox"/> Other - |

5. JOB ADMINISTRATION

Training

Is there any training required outside that identified in the applicable SWPs? Yes No
If yes, please identify:

Do workers require site-specific orientation? Yes No

Emergency Planning

It is the responsibility of the Project Manager to prepare and communicate an Emergency Preparedness and Response plan to all field staff.

Site Emergency #	911	Fire Dept.	911
Ambulance	911	Police	911
OSEC	608-220-7768	Environment Dept.	
		Regional HR	614-486-4383x3024

Stantec Corporate HSE Representative: US Central – Wes Cline (916) 281-7459

Stantec Public Relations/Media Contact*: US Central – Laura Krinke (651-967-4697)

Project Contact Information:

Title	Name	Company	Phone Number
Stantec Office	Harris Byers	Stantec	414-581-6476
Project Manager	Same		
Project Site Safety	Same		
Client or Owner	Paul Braun	City of Manitowoc	920-686-6930
Stantec After-Hours Number	Harris Byers		414-581-6476
Other: (specify)			
Other: (specify)			

- First Aid facilities are located: Holy Family Memorial Hospital; 2300 Western Ave; Manitowoc
- First Aiders on site are: Stantec Staff
- Fire extinguishers are located: NA
- Fire alarms are located: NA
- SDSs are located: NA
- Eyewash station is located: NA
- Spill response equipment is: NA
- The nearest phone is: On Person

Medical Assistance (Contact to discuss non-emergency signs or symptoms of work-related injury or illness): WorkCare – 1-888-449-7787

Record site-specific information below (evacuation signal, muster points, routes/map to clinic/hospital, etc.): See Attached Maps

For any injury, the employee shall:

1. Initiate necessary first aid or medical treatment.
2. Immediately notify their supervisor.

6. REVIEW, APPROVAL AND DISTRIBUTION
Employee Review

All employees conducting field work on this project will review the Risk Management Strategy (RMS1) and sign below acknowledging that they have been advised of the hazards, controls, PPE, and other safety equipment required, and have reviewed the applicable SWPs. Employees in the field who identify additional hazards not listed above shall notify the project manager of the hazard, and prior to proceeding, will confirm the controls that will be used. Document any on-site changes and communications using the RMS2 as appropriate; see section 2.4 of the HSE Program Manual on Management of Change.

Please designate Team Lead for field activities below.

Reviewed by:	Harris Byers		
	Print Name (Team Lead Field)	Signature	Date
	Print Name	Signature	Date
	Print Name	Signature	Date
	Print Name	Signature	Date
	Print Name	Signature	Date

Approvals

By signing this approval, the Project Manager is acknowledging that (s)he has communicated the hazards, controls, required PPE and applicable SWPs to the employees working on this project. It also indicates that the Project Manager has verified that employees have all the equipment required to work safely, that the equipment is in working order, and that the employees have the knowledge required to operate/use this equipment.

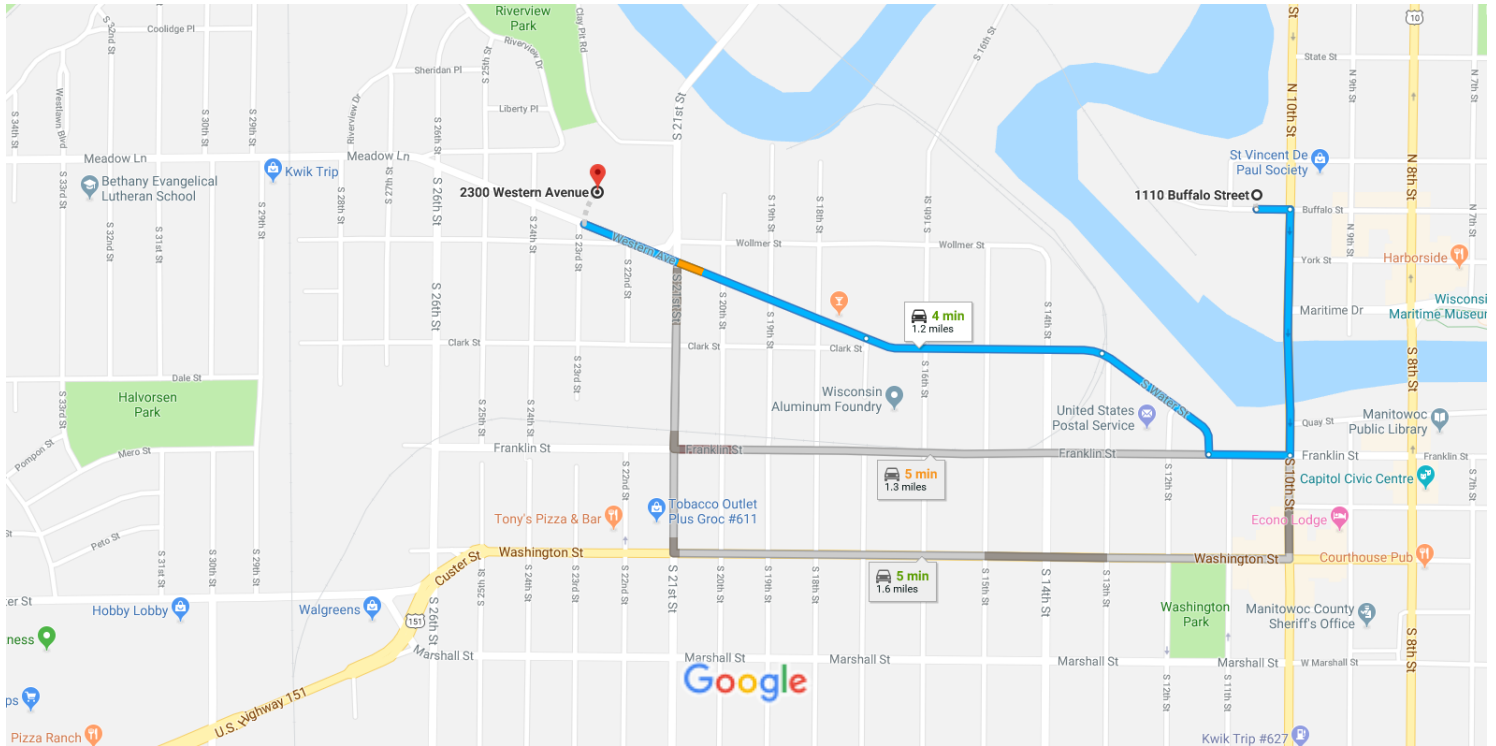
Prepared by:	Harris Byers		
	Print Name	Signature	Date
Approved by:	Richard Binder		
	Print Name (Project QA Manager)	Signature	Date

Distribution: Original: Project File
Copies: Field Staff



1110 Buffalo St, Manitowoc, WI 54220 to 2300 Western Ave, Manitowoc, WI 54220

Drive 1.2 miles, 4 min



Map data ©2018 Google 500 ft

1110 Buffalo St

Manitowoc, WI 54220

- ↑ 1. Head east on Buffalo St toward N 10th St 200 ft
- ↘ 2. Turn right at the 1st cross street onto N 10th St 0.3 mi
- ↘ 3. Turn right onto Franklin St 486 ft
- ↘ 4. Turn right onto S Water St 0.2 mi
- ↑ 5. Continue onto Clark St 0.3 mi
- ↑ 6. Continue onto Western Ave 0.3 mi
i Destination will be on the right

2300 Western Ave

Manitowoc, WI 54220

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

ATTACHMENT B
WDNR PUBLICATION WA-651



WA-651 (Revised 2013)

PLANNING YOUR DEMOLITION OR RENOVATION PROJECT:

A Guide to Hazard Evaluation, Recycling and Waste Disposal

(Formerly called Pre-Demolition Environmental Checklist)

INFORMATION ON IDENTIFYING, HANDLING AND PROPERLY DISPOSING OF HAZARDOUS MATERIALS

PLANNING YOUR PROJECT

- 1 Conduct a walk-through of the project building(s) and grounds to **identify items that contain harmful materials** and other site-related concerns.
- 2 **Identify and quantify harmful materials at your job site** with specialized inspectors or contractors, if necessary
- 3 **Notify the DNR of demolition or renovation activities** prior to starting any demolition or renovation work.
- 4 **Hire specialized consultants, contractors or transporters** to remove and properly manage harmful materials prior to starting your project.
- 5 **Request and file all receipts** for the disposal of harmful and non-harmful materials related to the project to avoid potential enforcement action.

Before beginning any demolition or renovation project, it is important to know about harmful materials that may be present on your project site.

This guide walks contractors and building owners through the steps to identify harmful materials commonly found at project sites and to handle and dispose of them safely. It also offers proper ways to manage recyclable and reusable materials and other wastes that are common in demolition and renovation projects.

The Resources section on the last page has links to websites with more information.

Note: This document is not intended as a substitute for reading the rules, regulations, and statues related to handling demolition and renovation debris. It is simply a guide to assist you in determining how they apply to your demolition or renovation project.

COMMON HARMFUL MATERIALS

Buildings can contain a number of harmful materials that may expose workers and the public to serious health risks and pollute the air, land and water if handled or disposed of in an unsafe way. Five of these harmful materials are common on project sites and need special care in identification and handling:

- ▶ **Asbestos**
- ▶ **CFCs (chlorofluorocarbons) and halons**
- ▶ **Lead**
- ▶ **Mercury**
- ▶ **PCBs (polychlorinated biphenyls)**

FIVE STEPS TO A SUCCESSFUL DEMOLITION OR RENOVATION PROJECT

STEP 1. Conduct a walk-through of the project building(s) and grounds to identify items that contain harmful materials and other site-related concerns.

Identifying hazardous materials before starting work on a project site protects worker health and safety, building occupants, and the financial viability of the project. Doing this up front can help you choose the appropriate inspectors, consultants and contractors and avoid costly change orders or project delays.

Before you begin any demolition or renovation project, thoroughly inspect and inventory the project site for the following items:

- **Appliances:** Appliances may contain CFCs, mercury or PCBs. Appliances that contain CFCs or PCBs must be processed by an appliance de-manufacturer registered with the DNR.
- **Building materials and fixtures that may contain asbestos:** All layers of materials, behind walls, ceiling spaces, etc., should be inspected and sampled unless they are assumed to contain asbestos. The following building components may contain asbestos, but this list is by no means all-inclusive:
 - **Caulking:** Used around windows, doors, corrugated roofing and other places where two materials are joined. PCBs have also been found in caulking materials. Schools and industrial buildings constructed or renovated between 1950 and 1979 are suspected to contain PCB-containing caulk.
 - **Ceilings:** Including acoustical tiles and adhesives, and the materials listed under “Interior and exterior walls” below. All ceiling layers and any spaces above the ceiling where drop ceilings are present should be checked. Insulation debris may also be lying on top of ceiling tiles.
 - **Electrical systems:** Insulators; spark arrestors and transite panels in electrical boxes; wiring insulation; ducts/conduits (transite pipe); and light fixtures.
 - **Flooring:** All sizes of vinyl floor tile, sheet flooring, and linoleum, and felt paper used under hardwood floors.
 - **HVAC systems:** Duct, pipe, and joint insulation because elbows/joints are often coated with asbestos; fiberglass insulation on the straight runs; forced air dampers; wall, floor and chimney penetrations; lining and mortar; fire brick; fire-proofing materials such as transite sheets or heavy paper; boiler insulation; flexible fabric connectors; packing/gaskets and adhesives; paper backing; mastic/adhesives (floor tile, carpet, etc.); and grout and felt paper under hardwood floors.
- **Insulation in ceilings and walls:** Blown-in, spray-applied, and block.
- **Interior and exterior walls:** Wall plaster; joint compound; patches; transite wallboard and siding; fire doors; window putty/glazing/caulking; mortar; asphalt shingles/siding; felt under siding, stucco, textured paint, and other spray-applied materials. Paint containing asbestos is rare except in commercial applications, where it was usually applied as a very thick, often silver-colored coating or added to textured paints.
- **Miscellaneous:** Appliances with a heating element, especially older models; fire curtains and blankets; laboratory tabletops; fume hood linings; blackboards; and fire-resistant clothing like gloves, hoods, aprons, etc.
- **Plumbing:** Pipe wrap, pipe joints, transite counter tops in bathrooms, faucets, packing gaskets, and adhesives.
- **Roofing:** Asphalt shingles; tar-type coatings which are often around vents, chimneys, etc.; transite shingles; roofing felts that are often under a layer of other material; flashings; and mag-block type material found under other material. Check all roof areas and roofing layers.
- **Lighting fixtures/ballasts and bulbs/lamps:** Switches for lighting may use mercury relays. Look for any control associated with exterior or automated lighting systems, such as “silent” wall switches. Several types of light bulbs or lamps contain mercury and must be properly legitimately recycled or disposed of as hazardous waste. These include:
 - **Fluorescent lights:** Even the newer lamps with green-colored ends contain mercury.
 - **High intensity discharge:** metal halide, high pressure sodium, mercury vapor.
 - **Neon**
- **Meters and switches:** Mercury may be found in thermometers, barometers, thermostats, blood-pressure devices, and fluorescent and other types of light bulbs. Any equipment used for measurement of vacuum, pressure, fluid level, temperature, or flow rate could contain mercury. These devices are

most commonly associated with commercial and industrial equipment systems, including tanks, boilers, furnaces, heaters, electrical systems, water cleaning systems, and systems for the movement or pumping of gas (air) or liquids (water). In addition, mercury containing devices are also common in certain agricultural operations such as dairy, and may be present in older model consumer appliances and residential properties, especially larger multi-unit properties.

- **Oil:** Used oil in containers or tanks, hydraulic oils in machinery, electrical transformers and capacitors, and elevator shafts. These oils may contain PCBs and may need to be tested to determine if the oil can be recycled or must be properly disposed of.
- **Paint:** Residential and industrial paints may contain lead, solvents or asbestos. Some industrial paints may contain PCBs.

In addition to the items listed above, be aware of these other site-related concerns:

- **Abandoned wells:** Unused and improperly abandoned wells are a significant threat to groundwater quality. If not properly filled, abandoned wells can directly channel contaminated surface water into the groundwater. State law requires that all wells and drill holes be properly filled prior to any demolition or construction work on the property.
- **Batteries (non-lead-containing):** Batteries may be found in smoke detectors, emergency lighting systems, elevator control panels, exit signs, security systems and alarms. Batteries should be separated from other wastes and taken to a recycling facility or a business that accepts batteries for recycling.
- **Computers and other electronics:** Most electronics are banned from Wisconsin landfills and must be recycled. These can contain hazardous materials such as lead, cadmium, chromium, and mercury and, if not recycled, may be regulated as hazardous waste.
- **Exit signs:** Many self-luminous exit signs contain tritium, a radioactive material. All self-luminous exit signs must have a permanent label that identifies it as containing radioactive material. The label will also include the name of the manufacturer, the product model number, the serial number, and the quantity of tritium contained. It is illegal to abandon or dispose of these signs except by sending them to the manufacturer or to others licensed by the U.S. Nuclear Regulatory Commission.

► HAZARDOUS AND UNIVERSAL WASTES

Some wastes, such as used or unused solvents, sanitizers, paint wastes, chemical wastes, pharmaceuticals, gas cylinders, aerosol cans and pesticides, may be hazardous waste and regulated by the EPA and DNR. Hazardous wastes must be removed from a project site prior to demolition or renovation and be disposed of according to specific rules. Read the DNR publication "Is Your Waste Hazardous?" (WA-1152) at <http://dnr.wi.gov/files/pdf/pubs/wa/wa1152.pdf> to determine if a waste is hazardous. *See Handling and Disposal Choices on page 7 for information on how to dispose of hazardous wastes on a project site.*

Universal wastes are hazardous wastes that can be collected and transported with fewer regulations. Universal wastes include hazardous waste batteries, certain pesticides, mercury thermostats and other mercury-containing equipment and some lamps (light bulbs). In Wisconsin, antifreeze can also be managed as a universal waste if it is recycled. See chapter NR 673 of Wisconsin Administrative Code for more details on recycling and reusing universal waste.

- **Painted concrete:** Walls and foundations often contain painted concrete. With prior DNR approval, contractors can grind the concrete and use it on-site or nearby under a new building or road.
- **Smoke detectors:** The smoke detectors that contain a small amount of radioactive material will be labeled and should be returned to the manufacturer for disposal. Otherwise, smoke detectors may go in the trash.
- **Soil contamination:** A qualified environmental consultant can conduct environmental property assessments including identification of contaminated soil.
- **Spills:** In Wisconsin, all spills of hazardous substances that negatively affect or threaten to negatively affect public health, welfare or the

► REUSE AND RECYCLING OF MATERIALS

Many materials, fixtures and components can be donated or sold for reuse or recycled prior to demolition. As you inventory the project site for harmful materials, take note of materials that can be reused or recycled and remove them from the project site before demolition work begins.

- The Wisconsin Business Materials Exchange is a web service that facilitates the reuse of surplus or unwanted items or materials among businesses, institutions, and organizations. You can use this tool to post items that are available and request an item you may need.
- Consider holding an auction as a way to reuse building materials, fixtures and components once all the harmful materials have been removed.
- Clean brick, building stone, concrete and asphalt can be stockpiled for crushing and reusing in future building projects.
- Clean, untreated wood can be recycled or chipped for mulch or ground cover.
- Many items such as appliances, electronics, paper and cardboard, glass containers and vehicle items are banned from Wisconsin landfills and must be recycled. For a complete list of these items, go to dnr.wi.gov and search “what to recycle.”
- The online Wisconsin Recycling Markets Directory contains a list of self-identifying businesses accepting recyclable materials. Make sure your chosen recycler meets local, state and federal regulatory requirements.
- Demolition debris may be taken to a construction and demolition recycling facility if all harmful materials, including all types of asbestos, are removed prior to demolition or renovation.

► OPEN BURNING

It is illegal to burn painted, treated or unclean wood, asphalt, plastics of any kind, oily substances, tires and other rubber products, garbage, recyclables, wet rubbish, and other materials. Demolition materials that cannot be burned include: roofing materials, all kinds of flooring materials, insulation, plywood and other composition board, electrical wiring, cabinetry and countertops, and plastic plumbing.

Burning of clean, unpainted and untreated wood is allowed with a DNR burning permit using DNR-approved methods. When burning this type of wood from demolition waste, you must separate out all of the illegal materials, including painted or treated wood, before any burning occurs. The DNR encourages chipping clean, untreated wood for mulch or ground cover.

If you do decide to burn clean, unpainted and untreated wood, it is your responsibility to know what restrictions apply in the area where you are burning. Remember, you must also follow local burning ordinances that may be more restrictive than state law. Contact your local fire department, town chairperson, or local municipal official for more information on local burning rules.

It is illegal to burn unwanted buildings in Wisconsin. The only exception is for a fire department training exercise. For more information on how to prepare a building for a fire department training exercise, contact the DNR asbestos program coordinator at (608) 266-3658.

environment *must* be immediately reported to the DNR via the Spills Hotline, 800-934-0003.

- **Tanks:** Chemical tanks (underground and aboveground) and septic tanks should be assessed, emptied and decommissioned.
- **Tires:** Tires should be reused or recycled. Your local landfill may collect them for recycling or you can check WisconsinRecyclingDirectory.com and search for “motor vehicle items” and then “tires.”

2 STEP 2. Identify and quantify harmful materials at your job site with specialized inspectors or contractors, if necessary

Asbestos and lead have specific requirements from the Department of Natural Resources and the Department of Health Services for their identification and testing on a project site. See the sections on asbestos and lead in this step for those requirements.

You can identify other harmful materials on a project site, such as CFCs and halons, mercury, and PCBs, by doing an inventory of the building systems and fixtures for the items listed here and in Step 1. You may need some testing to confirm the presence of these materials. The DNR recommends hiring an inspector or consultant who has sufficient experience identifying these materials and can collect samples, if necessary, that will help in identification.

If you have a large or complex project, it may make sense to hire a consultant to oversee the coordination of all waste identification and disposal activities.

► Asbestos

Health risks: Asbestos is a known human carcinogen that can cause serious health problems when disturbed and inhaled. Historically, asbestos was commonly used in industrial, commercial, and residential structures. Asbestos is still used today but to a lesser extent.

Location and/or materials: Asbestos is used in more than 3,000 building materials. Asbestos is commonly found in HVAC systems, electrical systems, interior and exterior walls, roofing materials, ceilings, plumbing, and flooring insulation. It is also found in appliances with a heating element, fire curtains and blankets, laboratory tabletops, fume hood lining, blackboards and fire resistant clothing. Refer to Step 1 for a detailed list of building materials and locations that may contain asbestos.

Identification and testing: The Department of Health Services requires licensed inspectors to identify asbestos. Inspectors can assume asbestos to be present, or they can identify it through testing. The DNR requires an asbestos inspection for certain projects and recommends it for others.

Required projects:

- Two or more contiguous single family homes
- Homes that are part of a larger demolition project
- Multi-family housing with five or more units
- Industrial, manufacturing or commercial buildings including bridges, farm buildings, and churches
- Any structure being prepped for a fire training exercise

Recommended projects:

- Single family homes
- Multi-family housing with 2–4 units

Inspection must be completed and asbestos materials must be removed before beginning any demolition or renovation activities.

► CFCs (chlorofluorocarbons) and halons

Health risks: CFCs and halons damage the earth's protective ozone layer high in the atmosphere, allowing greater exposure to the sun's dangerous ultraviolet rays. Some of the harmful effects of increased UV exposure include increased risk of skin cancer, eye cataracts, immune system deficiencies, and crop damage.

Location and/or materials: CFCs can be found in refrigerants in rooftop, room and central air conditioners, refrigerators, freezers, and chillers, dehumidifiers, heat pumps, water fountains and drinking coolers, walk-in coolers (refrigeration or cold storage areas), vending machines and food display cases. Halons are found in fire extinguishers and other fire control equipment.

► Lead

Health risks: Inhaling or swallowing lead dust can cause serious health effects, including kidney disease, neuropathy, infertility, heart and cardiovascular disease, stroke, memory problems, and Alzheimer's disease.

Location and/or materials: Lead plumbing and lead-based paint are commonly found in many older buildings. Lead may be found in paint on woodwork and metal equipment, leaded glass, lead window-sash weights, lead flashing molds, roof vents, lead pipes and solder. Lead is found in both indoor and outdoor applications. Lead is also found in lead-acid batteries associated with older lighting, exit signs, and security systems.

Identification and testing: The Department of Health Services requires licensed inspectors and risk assessors to identify lead paint. When building surfaces or components are being renovated in any residential and child-occupied buildings built before 1978 (such as private homes, rental units, day care centers, and schools), lead paint must be assumed to be present or identified through testing.

Lead paint sampling is recommended on commercial and industrial projects. The US discontinued manufacturing lead paint for residential use by 1978, but lead is still used in specialty paints in commercial and industrial applications. Most buildings have multiple layers of paint, and all layers should be considered.

► Mercury

Health risks: Liquid mercury evaporates slowly at room temperature and gives off harmful vapors that are invisible and odorless. Breathing these vapors causes the most harm to people, but mercury can also be harmful when it comes in contact with broken skin or when it is swallowed. Women and children are most at risk from mercury poisoning, which can cause brain and nerve damage, resulting in impaired coordination, blurred vision, tremors, irritability and memory loss. Mercury poisoning also causes birth defects.

Location and/or materials: Mercury may be found in thermometers, barometers, thermostats, dental offices, blood-pressure devices, and fluorescent and other types of light bulbs. Any equipment used for measurement of pressure, fluid level, temperature, or flow rate could contain mercury. These devices are most commonly associated with commercial and industrial equipment systems, including tanks, boilers, furnaces, heaters, electrical systems, water cleaning systems, and systems for the movement or pumping of gas (air) or liquid (water). In addition, mercury containing devices are common in certain agricultural operations such as dairy, and may be present in older model consumer appliances, vehicle light switches and residential properties, especially larger multi-unit

properties. Dental offices use mercury-containing amalgam that may be found in sink drain traps. Mercury can also be found as part of older wastewater treatment plant trickling filters.

► PCBs (polychlorinated biphenyls)

Health risks: PCBs may cause cancer in humans and can disrupt hormone and nervous system function. PCBs are persistent in the environment and stay in animals' and humans' systems. PCBs are a source of contamination in fish and have caused fish consumption advisories for humans.

Location and/or materials: PCBs can be found in electrical oils (e.g. transformers and capacitors in appliances) electronic equipment, heat transfer equipment, hydraulic fluids, light ballasts, industrial paints, specialty paints (e.g. swimming pools) and caulking materials. Sumps, oil traps and concrete flooring in facilities that used or manufactured PCBs may be contaminated with PCBs as well. Electrical devices manufactured prior to 1978 should be assumed to contain PCBs.

Identification and testing: You may be able to determine PCB concentrations in electrical equipment oil using identification labels, documents from the manufacturer indicating the PCB concentration at the time of manufacture, or service records showing the PCB concentration measured when the equipment was serviced. If a manufactured date and PCB content label are not found on a transformer or capacitor, the oil should be tested to determine the PCB content prior to dismantling and disposal. Oil-filled electrical equipment labeled "No PCBs" may still contain PCBs, but at a concentration lower than what the EPA regulates. The oils in this equipment should still be tested to see if they contain PCBs and then handled appropriately.

Testing of specialty paint, epoxies and caulks in buildings built or renovated between 1950 and 1979 is recommended. High levels of PCBs are being found in these materials across the country. Once testing is complete, boldly label all surfaces and items that were found to contain PCBs so they are handled appropriately during renovation or demolition.

STEP 3. Notify the DNR of demolition or renovation activities prior to starting any demolition or renovation work.

Notification to the DNR is required for all demolition projects meeting any of these categories:

- Two or more contiguous single-family homes
- Homes that are part of a larger demolition project
- Multi-family housing with five or more units
- Industrial, manufacturing or commercial buildings including bridges, farm buildings, and churches
- Any structure being prepped for a fire training exercise

DNR notification is also required for renovation projects meeting any of these criteria, if asbestos removal is involved.

For demolition projects

All demolition projects meeting the previously listed criteria require DNR notification 10 working days before the project work begins.

For renovation projects involving asbestos

All renovation projects meeting the previously listed criteria that involve asbestos require DNR notification 10 working days before the project begins.

Note: While plans to demolish or renovate a single-family home do NOT require DNR notification, it is recommended you take the precautionary steps outlined in this publication.

► HANDLING AND DISPOSAL CHOICES

You have a few options for handling and disposing of lead, mercury, PCBs and other wastes from your project site that qualify as hazardous waste. Identifying these options prior to beginning the project can help you schedule transportation and disposal and maintain the overall project schedule.

- **Hire a waste management contractor** to pick up and dispose of hazardous wastes. This takes the guess work out of handling these types of wastes. Contractors have properly trained personnel that will determine appropriate packaging, shipping and vehicle licensing and have established relationships with disposal facilities.

Other choices provide you with reduced regulation and may change depending on the amount of hazardous waste generated in a month. As a contractor, you may manage hazardous wastes you generate at temporary job sites only according to the following options. For more details on these options, see the DNR publication "Pilot Project for Management of Contractor Generated Hazardous Waste" (WA-654) at <http://dnr.wi.gov/files/pdf/pubs/wa/wa654.pdf>.

- **Hire a licensed hazardous waste transporter** to transport the hazardous waste to a licensed or permitted hazardous waste treatment, storage and disposal facility. In this case, you must follow the applicable generator requirements in chapters NR 660-679 of Wisconsin Administrative Code.
- **Leave containerized hazardous waste for the site owner to properly manage.** In this case, the site owner must follow the applicable generator requirements in chapters NR 660-679 of Wisconsin Administrative Code. If you choose this option, be sure to include this in your contract with the site owner.
- **Transport the containerized hazardous waste yourself** directly from the temporary job site to a Household and Very Small Quantity Generator (VSQG) Hazardous Waste Collection Facility. This includes county or municipal Clean Sweep locations. If the total quantity of hazardous waste generated by your company in one month is less than 220 lbs. (about half of a 55-gallon drum), you would be a VSQG and your hazardous waste may be taken to a Clean Sweep location for handling and disposal. Contact your local Clean Sweep coordinator for information on possible fees, accepted materials, and other details.
- **Transport the containerized hazardous waste yourself to your central business location.** This option is currently available under a pilot project. Waste handled in this manner is subject to the pilot project conditions. See the publication referenced above for more information.

STEP 4. Hire specialized consultants, contractors or transporters to remove and properly manage harmful materials prior to starting your project.

Hiring the right consultant, contractor or transporter is important to ensure safe handling practices and disposal options. This section will help you determine who to hire. Links to lists of licensed consultants, contractors and transporters are on the last page under Resources.

► Asbestos

Handling practices: Asbestos professionals trained and certified by DHS are required to perform asbestos removal in most multi-unit residential and all commercial, industrial, manufacturing and government buildings. Most types of asbestos-containing materials must be removed from the building prior to demolition or renovation.

Disposal: The asbestos removal contractor is responsible for disposing of the asbestos materials at a licensed landfill approved to accept asbestos waste. Not all landfills accept asbestos materials, so contractors should call the landfill to find out what materials are accepted and the hours of operation.

In some situations, non-friable asbestos materials (materials that are resistant to crushing), such as floor tile and roofing, may remain in place during the demolition activities. When this is done, the debris must be taken to a municipal or construction and demolition landfill. Debris containing non-friable asbestos materials may not be taken to a construction and demolition recycling facility.

► CFCs (chlorofluorocarbons) and halons

Handling practices: Keep units that contain refrigerants in place for a certified transporter to remove them. Moving them may cause an accidental release of refrigerants. Certified transporters include waste haulers, community recycling programs, and appliance salvage businesses. State law requires that anyone transporting salvaged refrigeration units must certify to the DNR that they will transport items in a way that prevents refrigerant releases. Technicians who remove refrigerants from units must be registered with the DNR and use approved equipment.

Check both portable and installed fire suppression systems for labels indicating halons. Trained technicians are also needed to remove halons. Contact local fire suppression equipment companies or the Halon Recovery Corporation for more information. Do not discharge halon fire extinguishers; intentionally releasing these substances is prohibited under federal regulations.

Disposal: Once the refrigerants are recovered, the unit may be taken to a metal scrap recycling facility. If you send halon-containing equipment offsite for disposal, it must be sent to a manufacturer, fire equipment dealer or recycler operating in accordance with National Fire Protection Association standards.

► Lead

Handling practices: DHS-certified lead-safe contractors are required for any renovations, repairs, painting or other paint-disturbing services on or in the regulated buildings that contain lead paint. These contractors must use lead-safe practices at these properties.

State law prohibits the sale or transfer of any fixture or other object that contains lead-bearing paint if children would have ready access to the fixture or object in its new location.

Disposal: Dispose of in a landfill any painted wood or building components that contain lead paint. Do not burn or chip wood that contains lead paint or use it for landscaping.

Lead paint waste, such as lead paint chips or lead paint removed from commercial or industrial buildings, must be tested to determine if it is a hazardous waste for disposal purposes.

See *Handling and Disposal Choices on page 7 for handling and disposal options.*

► Mercury

Handling practices: You may collect intact mercury-containing devices and bring them back to your primary business location or bring them directly to an off-site mercury recovery facility. Do not remove mercury ampoules or free liquids from the device. Store devices in a covered plastic container to prevent them from breaking. Label the container to assist proper handling and disposal.

If any mercury is spilled or released during handling, report the spill immediately by calling the DNR 24-hour Spills Hotline: (800) 934-0003. Mercury spreads quickly, and even a small spill can cause big cleanup costs in a short period of time.

Disposal: Trained professionals and specific equipment are needed for safe removal of mercury from ampoules and devices. Mercury must be transported by a licensed hazardous waste transporter to a mercury facility to be recycled or reclaimed.

See *Handling and Disposal Choices on page 7 for handling and disposal options.*

► PCBs (polychlorinated biphenyls)

Handling practices: The EPA recommends that caulk containing PCBs be removed during planned renovations and repairs (when replacing windows, doors, roofs, ventilation, etc.). It is important to ensure that PCBs are not released into the air during renovation or repair of affected buildings.

Oils with PCB content greater than 50 ppm are prohibited from being mixed with other materials to reduce the PCB content.

Disposal: PCBs must be transported either by your company, a licensed hazardous waste transporter or a full-service contractor. PCBs and PCB-containing wastes must be taken to a licensed disposal facility or directly to a licensed incineration facility. Arrangements for accepting PCBs must be made with these facilities ahead of time.

See *Handling and Disposal Choices on page 7 for handling and disposal options.*

STEP 5. Request and file all receipts for the disposal of harmful and non-harmful materials related to the project to avoid potential enforcement action.

As materials are removed from the project site, ask your contractors for disposal receipts to document the disposal or recycling of your wastes. This is an important step in protecting your company. If materials are illegally dumped, the DNR will investigate to determine where the materials came from. Part of the investigation process would be to identify projects in the area that may have been the source of the illegally dumped materials. Receipts show that your project wastes were disposed of appropriately and protect you from liability issues and fines and/or forfeitures.

► DEMOLITION AND RENOVATION WASTE

Disposal options for demolition and renovation wastes depend on the type of waste and, in some cases, the amount generated. Solid wastes such as trash, painted wood, and fiberglass insulation can be disposed of at solid waste transfer stations and landfills, including construction and demolition landfills.

If demolition wastes are going to a construction and demolition landfill, all non-building components, such as books, furniture and trash must be removed before you begin demolition (note that most of these non-building components can be reused or recycled). Non-building components may stay in the building if the demolition waste is going to a municipal solid waste landfill. Check with local landfills prior to demolition to determine how to manage your wastes.

Demolition debris may be taken to a construction and demolition recycling facility if all asbestos materials and other harmful materials have been removed prior to demolition or renovation.

To find a list of these facilities licensed in Wisconsin, go to dnr.wi.gov and search "licensed waste haulers and facilities."

Once the harmful materials have been removed from the project site and the notification to DNR is submitted with the appropriate dates of demolition, demolition may begin. This includes first removing materials for reuse or recycling. If all harmful materials, including all types of asbestos, have been removed from the building or structure before demolition, the resulting debris may be taken to a construction and demolition recycling facility.

RESOURCES

Asbestos

- DNR asbestos program requirements: dnr.wi.gov, search “asbestos”
- DHS Wisconsin Asbestos Program: www.dhs.wi.gov/asbestos/
- DHS-certified asbestos companies: at the link above, look for “certified company” in the left-hand margin

Brownfields

- DNR brownfields redevelopment: dnr.wi.gov, search “brownfield”

CFCs and halons

- DNR refrigerant recovery program: dnr.wi.gov, search “refrigerants”

Demolition debris, waste, transporters, landfills and other licensed facilities

- DNR demolition, construction & renovation information: dnr.wi.gov, search “demolition”
- DNR waste and materials management: dnr.wi.gov, search “waste”
- DNR list of licensed haulers and facilities: dnr.wi.gov, search “licensed waste haulers and facilities”
- Contact the DNR: 608-266-2111 or DNRWasteMaterials@wisconsin.gov

Hazardous and universal wastes

- DNR hazardous waste information: dnr.wi.gov, search “hazardous waste”
- “Is Your Waste Hazardous?” (DNR publication WA-1152): <http://dnr.wi.gov/files/pdf/pubs/wa/wa1152.pdf>
- Handling and disposal of hazardous wastes – “Pilot Project for Management of Contractor Generated Hazardous Waste” (DNR publication WA-654): <http://dnr.wi.gov/files/pdf/pubs/wa/wa654.pdf>.
- Wisconsin Administrative Code chapter NR 673 – Universal Waste Management Standards: http://docs.legis.wisconsin.gov/code/admin_code/nr/600/673/

Lead

- DHS Lead-Safe Wisconsin: www.dhs.wi.gov/lead/
- DHS-certified lead companies: at the link above, look for “certified company” in the left-hand margin
- DNR Application for Low Hazard Waste Exemption for Reuse of Concrete Coated with Lead-Bearing Paint -- Form 4400-274 (R 2/12) <http://dnr.wi.gov/files/pdf/forms/4400/4400-274.pdf>

Mercury

- EPA information on mercury: www.epa.gov/hg/consumer.htm

PCBs

- EPA information on PCBs: www.epa.gov/wastes/hazard/tsd/pcbs/
- Wisconsin Administrative Code chapter NR 157 – Management of PCBs and Products containing PCBs: docs.legis.wisconsin.gov/code/admin_code/nr/100/157/

Reuse & recycling

- DNR recycling program: dnr.wi.gov, search “recycling”
- WasteCapDIRECT – a centralized, online directory of construction and demolition recycling processors, haulers and end markets: www.wastecap.org
- Wisconsin Recycling Markets Directory: www.wisconsinrecyclingdirectory.com

Storage tanks

- Department of Safety and Professional Services storage tank database: <http://dsps.wi.gov/online-services/storage-tanks>

Wisconsin Administrative Code

- Wisconsin Legislative Documents: <http://docs.legis.wisconsin.gov>

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Publication WA-651
Revised July 2014

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