

*** All present are expected to conduct themselves in accordance with our City's Core Values ***



OFFICIAL NOTICE AND AGENDA

of a meeting of a City Board, Commission, Department Committee, Agency, Corporation, Quasi-Municipal Corporation or Sub-unit thereof.

Notice is hereby given that the Park and Recreation Committee of the City of Wausau, Wisconsin will hold a regular or special meeting on the date, time and location shown below.

Meeting of the: **PARKS AND RECREATION COMMITTEE OF THE CITY OF WAUSAU**
Date/Time: **Monday, April 3, 2023 at 4:30pm**
Location: **1703 Cherry Street for EAB review then to City Hall (407 Grant St, Wausau WI 54403) - Council Chambers**
Members: **Dawn Herbst, Carol Lukens, Tom Kilian, Lou Larson, Sarah Watson**

AGENDA ITEMS FOR CONSIDERATION (All items listed may be acted upon)

- 1 Call the Meeting to Order
- 2 Emerald Ash Borer review - 1703 Cherry Street for EAB Review
Recess to move to City Hall
Reconvene
- 3 Public Comment or Suggestions
- 4 Approve Minutes - February 6, 2023
- 5 Discussion and Possible Action to Apply for Wisconsin Assessment Monies (WAM) for 218 S 4th St and Enter Into Agreement with Property Owner for Access
- 6 Educational Items
A. Park Updates (Barker Stewart Island Bridge, Water Systems, Playground Inspection, Riverlife Door Locks, Athletic Park Video Board, Boileau Field Fence)
B. Riverside Park Remediation Update
- 7 Future Agenda Items -
- 8 Next Meeting Date - May 1, 2023, 4:30pm, 407 Grant St, Wausau WI 54403 - Council Chambers
- 9 Adjournment

Jamie Polley, Director

Members of the public who do not wish to appear in person may view the meeting live over the internet on the City of Wausau's YouTube Channel <http://www.tinyurl.com/WausauCityCouncil>, live by cable TV, Channel 981, and a video is available in its entirety and can be accessed at <https://tinyurl.com/WausauCityCouncil>. Any person wishing to offer public comment who does not appear in person to do so, may e-mail Jamie.polley@co.marathon.wi.us with "Parks Committee public comment" in the subject line prior to the meeting start. All public comment, either by email or in person, if agendaized, will be limited to items on the agenda at this time. The messages related to agenda items received prior to the start of the meeting will be provided to the Chair.

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 (ADA), the City of Wausau will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs or activities. If you need assistance or reasonable accommodations in participating in this meeting or event due to a disability as defined under the ADA, please call the ADA Coordinator at (715) 261-6622 or ADAServices@ci.wausau.wi.us to discuss your accessibility needs. We ask your request be provided a minimum of 72 hours before the scheduled event or meeting. If a request is made less than 72 hours before the event the City of Wausau will make a good faith effort to accommodate your request.

This Notice was posted at City Hall and transmitted to the Daily Herald newsroom on 3/31/2023 @ 11:15 a.m. Questions regarding this agenda may be directed to Jodi Luebke, Park Office (715) 261-1560.

Distribution List: City Website, Media, WSD-Admin, Alderpersons, Mayor, Polley, Dept. Staff, Maryanne Groat, Brad Lenz, Eric Lindman, Lance Leonhard, Wisconsin Woodchucks, Wausau Events, Public Access, Wausau River District

March Update

2. Emerald Ash Borer Review – The committee is asked to meet at an infected site, **1703 Cherry St.** for staff to illustrate the effects of the Emerald Ash Borer beetle. The committee will also see how to identify EAB. This winter twelve more trees have been confirmed with EAB infestation, mostly on the west side of Wausau. Emerald Ash Borer has now been confirmed in all areas of the City and is becoming more frequently identified. We anticipate that the city will see the significant effects of EAB within the next three years. Staff is doing what we can with the funding allocated to remove hazardous trees first and other infected trees second. We also continue to treat trees that are scheduled for treatment. With the number of trees that are planned to be removed it will be difficult for staff to keep up with the planned plantings. Staff will be assessing other options and presenting these options to the committee if needed.

Attached is an updated list of the known EAB infested trees in the city. The City Forester will continue to add to the list as trees are identified. Note that there were likely several more trees that had early infestations and there were likely additional in parks that were not inspected when the big removal project happened in winter 20-21. This gives you an idea of how we are ramping up into the thick of the infestation and how quickly that happens. This was expected at some point and it happens to be now.

5. Discussion and Possible Action to Apply for Wisconsin Assessment Monies (WAM) for 218 S 4th St and Enter Into Agreement with Property Owner for Access – Earlier this month the DNR reached out to the City with information about programs that may be available to partially off-set some of the costs of site investigation and clean up for the site adjacent to the Two Hearts Dog Park. A meeting was held on Monday, February 26th between members of the DNR Green Team, the City Environmental Engineer and me to discuss the property at 218 S 4th St. This property is currently under private ownership, is an active open WDNR BRRTS Site and has known soil contamination. In the past the city has discussed this property as a potential future addition to the Two Hearts Dog Park if it were remediated and the site closed out. The owner or responsible party has been contacted by the DNR and has not completed the soil remediation nor has been cooperative in completing the initial site investigation work in order to define what remediation and clean-up would be necessary at the site to achieve site closure. It was determined that the site does not pose a high enough risk to justify judicial action on the part of WDNR and DOJ, and therefore, could not be forwarded to the Department of Justice to enforce remediation. The property currently also has a lien placed on it that will flag it for any future buyer to make them aware of the situation and the associated requirements and restrictions on the site.

In order to increase the chances of the available funding being approved, the WDNR suggested that the application come from the city. This funding would potentially cover the cost to complete a full assessment of the site identifying the limits of and existing levels and types of contamination, and this site assessment could then be used to develop a remediation plan and cost estimates for clean-up and site closure. In order to complete the application a written statement from the property owner is required granting permission to access the property and do the physical work required to complete the site assessment. The DNR has contacted the property owner to discuss remediation or their willingness to allow access. The property owner is willing to discuss access however they would require a waiver/hold harmless agreement, indemnifying their company from any and all liability for allowing said access. The hold harmless agreement would cover liability associated with physically being on the property and doing the actual site assessment investigation work, however this liability indemnification would not extend to the actual contamination found at the site itself, as because they are the property owners and current responsible party, any contamination identified would still be their issue and responsibility. This legal liability and clean-up responsibility (and all costs and requirements associated with it) would transfer to any other party who acquired the property (through sale or donation) if, and when, that occurred.

March Update

The Committee is asked to provide staff with direction on whether to proceed with access discussions with the property owner. If the Committee chooses to proceed with these discussions that Committee is also asked to direct staff to apply for the WAM funding for the site assessment.

6A. Park Updates

- Barker-Stewart bridge decking replacement is underway.
- Some of our water systems are being put together for the spring start up.
- Playground inspections have begun.
- New timed door locks have been installed at the Riverlife concession building.
- Video board at Athletic was installed.
- Outfield fence reconstruction at Boileau field will take place now that the video board is installed.

6B. Riverside Park Remediation Update – The documents for bidding the remediation work have been completed. The City had the Request for Bids posted and uploaded to the bidding software, Quest. Attached are the figures for remediation.

Bids will open on April 18, 2023 at Board of Public Works. Staff will bring forward a budget request sometime in April to the Finance Committee with City Council approval to follow. We will not have a construction schedule until a contract is established and the contractor prepares a construction schedule.

DRAFT

CITY OF WAUSAU – PARK AND RECREATION COMMITTEE MEETING MINUTES

Date/Time: February 6, 2023 at 4:30 p.m. Location: Council Chambers, City Hall

Members Present: Dawn Herbst (c), Carol Lukens, Sarah Watson, Lou Larson, Tom Kilian

Others Present: Jamie Polley-Parks Director

1. In accordance with Chapter 19, Wisc. Statutes, notice of this meeting was posted and sent to the Daily Herald in the proper manner. A quorum was present and the meeting was called to order by Chair Herbst at 4:30pm.
2. Public Comment or Suggestions – none brought forward
3. Approve Minutes – December 5, 2022 – **Motion** by Larson, second by Kilian to approve the Park and Recreation Committee draft December 5, 2022 minutes. Motion **carried** by voice vote, vote reflected as 5-0.
4. Discussion and Review of the 2022 Parks, Recreation & Forestry Department's year in Review – Polley discussed some of last year's accomplishments which include a first successful easter egg hunt, secured a five-year sponsorship for the playground at People's Sports Complex, planted and removed non-ash and ash trees, treated ash trees, planted new trees, installed new playgrounds, involvement with the Rib Mountain State Park Master Plan, successful County forest timber sale year, season pass sales and camping numbers increased, new 3.4 miles of road at Big Eau Pleine Park, worked on Westside Master Plan, vegetation management at Barker Stewart Island, completed dog park shelter, installed memorial benches, participated in Movin with the Mayor and pop-up splashpad events, fixed pillars and installed listening devices at the 400 Block, installed CO2 injector systems at pools, removed invasive species, work at ice arena, paved Mission Lake Park road, acquired park land, replaced roof at Cattle Barns, installed memorials and implemented fat tire bike season at Nine Mile Forest.
5. Discussion and Review of the 2023 Parks, Recreation & Forestry Work Plan – Polley reported that some of the work will include DC Everest Park restroom replacement, paving parking lots Dells of Eau Claire Park and Big Eau Pleine Park, redesign and build the skatepark and replace the Oak Island restroom, Bluegill Bay Park dock replacement/redesign, Dells of Eau Claire Park group campground shelter removal and manager cabin update, multipurpose building lighting update, extend cart path at People's Sports Complex, River Edge Trail paving and culvert replacements, 3M Park trail construction, Stewart Park west wall tuckpointing, Pleasantview Park shelter roof, Riverlife sign installation and playground surface sealing, install final signage at dog park, new drinking fountains, new well at Big Eau Pleine Park, continued ash tree removal and treatment, playground replacements, expand recreation program and events, press box replacements at Sunnyvale and Brockmeyer Parks, administration of timber sales, site preparation for red pine planting, evaluate trial season of fat tire winter biking at Nine Mile, plan department consolidation, complete sustainability plan, work on Rib Falls Park Master Plan, and work on ice arena/indoor sports feasibility capital improvement project request.
6. Educational Items
 - A. Park Updates – Eau Claire River Conservancy – Two of the three boardwalks have been installed. Ice Rinks – Ice rinks at 400 Block and Thom Field are open and in good condition Sylvan Tubing – Sylvan tubing in good condition. Continued staffing difficulties. Urban Forestry – Cleaned up from ice damage in December. Additional Emerald Ash Borer finds, primarily on the west side of Wausau, finding evidence of treatment working. Have removed healthy trees that were treated and found evidence of old borer damage. Yawkey Park – Cleaning statue.
 - B. Riverside Park Remediation Update – The area of needed remediation has been fully delineated, both vertically and horizontally. REI is preparing the plans and specifications for bidding the remediation work. Work will include clearing and grubbing of all trees and brush within the delineated area, removal of contaminated soil to the landfill, removal of the stormwater culvert, use of clean fill for backfilling and landscaping, necessary riprap and seeding and mulching. Once this plan is prepared and approved by the WDNR, the plan will need to be brought to Finance Committee and Council for budget modification and approval. At this time there is no timeline from REI or the DNR, however it is anticipated bidding this project in the spring.

C. Skate Park Design Survey Open Until February 20, 2023 – An online design survey is available to the public until Monday February 20th. The website link is available in the agenda packet, on Facebook and on the Department's website.

7. Future Agenda Items – tour of invasive species, discussion on land north of dog park

8. Next Meeting Date – The next regular scheduled meeting will be Monday, March 6, 2023 at 4:30pm in Council Chambers at City Hall, 407 Grant St., Wausau WI 54403.

9. Adjournment – **Motion** by Kilian, second by Larson to adjourn at 5:00 pm. Motion **carried** by voice vote, vote reflected as 5-0.

List of Known Emerald Ash Borer Infestations On Public Owned Ash Trees

<i>Address</i>	<i># Trees</i>	<i>Date Confirmed</i>
612 Washington St	1	11/9/2020
2611 N 13th St	4	1/27/2022
2805 N 13th St	1	1/27/2022
2809 N 13th St	2	3/4/2022
1219 Brown St	2	3/4/2022
3101 N 13th St	4	3/4/2022
Alexander Park	1	3/11/2022
1717 Cherry St	1	9/1/2022
1725 Cherry St	1	9/1/2022
1723 Cherry St	1	9/1/2022
1700 Stewart Ave	2	10/31/2022
1417 Sherman St	1	12/1/2022
107 S 36th Ave	1	1/3/2023
301 S 36th Ave	1	1/3/2023
2403 Ridgeview Dr	1	1/13/2022
720 S 6th Ave	3	1/27/2023
1315 Sherman St	1	2/9/2023
1317 Sherman St	1	2/9/2023
2909 Wildwood Ln	1	2/15/2023
503 N 4th Ave	1	2/28/2023
600 Stevens Dr	1	2/28/2023
2000 Westwood Dr	2	3/2/2023
511 Bellis St	1	3/6/2023
1438 Burek Ave	1	3/7/2023
2305 Ridgeview Dr	2	3/8/2023
2311 Ridgeview Dr	1	3/8/2023
1703 Cherry St	3	3/9/2023
1707 Chery St	1	3/9/2023
1720 Cherry St	2	3/9/2023

Total 45

Note: Unmaintained areas are not tallied, additional trees may have had early infestations that we did not search for.

SUPERFUND PRELIMINARY ASSESSMENT

Undeveloped Rosemurgy Property

City of Wausau, Wisconsin

U.S. EPA ID: WIN000520252

(BRRTS ID #: 02-37-548031)

Prepared by:

Wisconsin Department of Natural Resources
West Central Region - Eau Claire

April 6, 2021

Prepared by:



Date: April 6, 2021

Matthew Vitale, Hydrogeologist
Regional Site Assessment Coordinator
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources



Reviewed by:

Date: April 6, 2021

John Sager
Site Assessment Team Leader, Madison Office
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources

Approved by:



Date: 4/13/21

Site Assessment Manager Region 5
Division of Superfund
U.S. Environmental Protection Agency

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Appendix A - Figures

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Figure 3	Site Map
Figure 4	Sample Location Map
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Figure 6	Undeveloped Rosemurgy Property – 1 Mile Radius Map
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Appendix B - Tables

Table 1	Soil Analytical Data
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Appendix C - EPA PCS Form

Appendix D - Site Photographs

Appendix E - Reference Documents

ABBREVIATIONS / ACRONYMS:

BRRTS	= WDNR Bureau for Remediation and Redevelopment Tracking System
EPA	= U.S. Environmental Protection Agency
ERP	= WDNR Environmental Repair Program
ESA	= Environmental Site Assessment
GIS Registry	= WDNR's Geographical Information Systems Registry
gpm	= gallons per minute
ISCO	= In-Situ Chemical Oxidation
mg/kg	= milligrams/kilogram
MCL	= EPA Maximum Contaminant Level (for drinking water)
PA	= Preliminary Assessment
PAHs	= polycyclic aromatic hydrocarbons
PCBs	= polychlorinated biphenyls
PCE	= Tetrachloroethylene (aka Perchloroethylene)
PCS	= Pre-CERCLIS Screening
ppm	= parts per million
RSL	= Federal Regional Screening Levels
TCE	= Trichloroethylene
TCLP	= Toxicity Characteristics Leaching Procedure
TSCA	= Toxic Substances Control Act
µg/L	= micrograms per Liter
VC	= vinyl chloride
VOCs	= Volatile Organic Compounds
WCRs	= Well Constructor's Report
WDHS	= Wisconsin Department of Health Services
WDNR	= Wisconsin Department of Natural Resources

1.0 INTRODUCTION

Under authority of the Comprehensive Environmental Response Compensation Liability Act of 1980 (CERCLA), and the Superfund Amendments and Reauthorization Act of 1986 (SARA), the Wisconsin Department of Natural Resources (WDNR) was tasked by the U.S. Environmental Protection Agency (EPA) to conduct a Pre-CERCLIS Screening (PCS) and a Preliminary Assessment (PA) at the Undeveloped Rosemurgy Property site in Marathon, Wisconsin as part of the fiscal year 2020-2021 Cooperative Agreement. The PCS form is included in [Appendix C](#). The purpose of this PA was to collect information concerning conditions at the Undeveloped Rosemurgy Property sufficient to assess the threat posed to human health and the environment and to determine the need for additional CERCLA/SARA or other appropriate action. The scope of the PA included review of available file information, a comprehensive target survey, and a site reconnaissance.

2.0 SITE BACKGROUND

2.1 Location

The Undeveloped Rosemurgy Property is located at 218 S 4th St., in a light industrial area of Wausau, Marathon County, Wisconsin (Site) ([Figure 1](#)). The geographic coordinates for the center of the Site are 44.95565 North latitude and -89.62783 West longitude ([Reference 1](#)). The Site is a 1.03-acre parcel located in the SW and SE ¼s of the NW ¼ of section 36, T29N, R07E. To reach the Site from Interstate Highway 39, take exit 192 and merge onto WI-52 E. Continue into the city of Wausau, and turn right onto 1st Street. This will transition into Forest Street. Then take another right onto S 4th St. Down the hill, the Site will be on the right. The Parcel ID number is 291-2907-362-0997 ([Figure 2](#) and [Reference 2](#)).

The climate of Marathon County is continental and characterized by cold to very cold winters and mild to warm summers. The average January temperatures range from 6° to 23° F and average July temperatures range from 59° to 80° F. The average annual precipitation is approximately 32.4 inches ([Reference 3](#)).

2.2 Site Description

The Site is a vacant 1.03-acre lot with unrestricted access ([see photos in Appendix D](#)). A crushed-stone lot is centrally located, surrounded by young trees and brush around the site perimeter ([Figure 2](#)).

The Site is relatively flat and is in an urban area of the city of Wausau ([Reference 1](#)). Based on the estimated direction of groundwater flow, groundwater in this area discharges to Mill Creek approximately one mile southeast of the site ([Reference 1](#)).

The Site is physically bounded to the north by an escarpment leading up to a parking lot for the United States Postal Service facility further north. The Site is bounded to the south and west by a grassy lot undergoing development as a dog park, and to the east by South 4th Street ([Figures 2 and 3](#)). The closest residential property is located approximately 200 ft northeast of the site ([see Appendix D](#)). The Site is readily accessible via South 4th Street.

2.3 Operational History and Waste Characteristics

Records describing past land uses of the Site were reviewed in a 2002 Phase I Environmental Site Assessment (ESA) of the Bocaner Property adjacent to the south ([Reference 4](#)). The 1938 aerial photo ([Reference 5](#)) suggests that the two properties were used together in the past. Past land uses

of the Site may have included lumber yards, livestock sales, junk storage and reclamation, and auto parking/storage. The 1923-1953 Sanborn Fire Insurance Map identified a gasoline tank on the property, which may have also contributed to contaminated soil ([Reference 6](#)).

2.4 Regulatory Status

The Site is the location of an open WDNR Environmental Repair Program (ERP) case, Bureau for Remediation and Redevelopment Tracking System (BRRTS) No. 02-37-548031 ([Reference 7](#)). The case file contains the 2006, Phase II ESA for the property, correspondence between the WDNR and the current property owner, and documentation of a Notice of Contamination filed in the property deed ([Reference 8](#)). The Bocaner Property to the south is the location of a closed ERP case, BRRTS # 02-37-547992 ([Reference 4](#)).

2.5 Past Environmental Investigations

A Phase II ESA was completed in 2006 for the Site ([Reference 6](#)). Ten soil borings were installed at the Site, with additional borings on the adjacent Bocaner Property ([Figure 1](#)). Tetrachloroethylene (PCE), Trichloroethylene (TCE), Polychlorinated biphenyls (PCB's), metals, and Polynuclear Aromatic Hydrocarbon (PAH) compounds were detected across the Site. Several soil borings contained contaminant concentrations exceeding Federal Regional Screening Levels (RSLs) in surficial soils and at depth, above the water table ([Table 1](#)). Surficial soil samples collected from borings SB-5, SB-7A, and MW-5 contained RSL exceedance for residential direct contact exposure for PAHs, arsenic, and/or lead. The concentration of benzo[a]pyrene in SB-5 exceeded the industrial direct contact exposure RSL for industrial settings in the sample collected at 4ft. Deeper samples from MW-3, MW-5, and SB-5 contain elevated levels of PAHs and metals as well. Soil sampling at the Bocaner Property identified similar concentrations of metals, but only soil from MW-2 contained elevated PAH concentrations ([Table 1 and Reference 4](#)). No additional soil samples have been collected at the site since the 2006 investigation.

A network of five monitoring wells were installed across the Site in 2006. Two (MW-3 and MW-5) were installed on the western portion of the Site and the remaining three were installed downgradient to the southwest on the Bocaner Property ([Figure 4](#)). In 2006, groundwater samples collected from MW-3 and MW-5 contained petroleum-VOCs, PAHs, and/or dissolved metals at concentrations below the Federal Maximum Contaminant Level (MCL) for all analyzed parameters ([Table 2 and Reference 6](#)).

The downgradient monitoring wells (MW-1, MW-2, and MW-4) were sampled 6 – 7 times between 2006 and 2016 as part of the adjacent Bocaner Property site investigation ([Table 2 and Reference 4](#)). Contaminant concentrations in downgradient monitoring wells on the adjacent Bocaner Property have been consistently below the detection limit for all VOCs except PCE. In MW-1, PCE was detected below the MCL in the first two monitoring rounds and has been below detection for the last five rounds. In MW-4, PCE was detected below the MCL in four of the six monitoring rounds, with no detects in the 2016 sampling event. Low level detects for PAHs and metals were also present in the three monitoring wells.

3.0 FIELD INSPECTION ACTIVITIES

Matthew Vitale from the WDNR performed a reconnaissance of the Site on October 30, 2020. At the time of the inspection, the Site was vacant ([see photos, Appendix D](#)). The entrance from South 4th Street connects a gravel lot that extends across the majority of the Site. The two onsite monitoring wells were not located. No stained soil or evidence of the former automobile storage seen in the 2006 Phase II ESA was found. Around the base of the escarpment on the northern property boundary contained debris piles consisting of concrete, asphalt, wood, tires, and brick, covered by thick vegetation. The slope of

the escarpment is covered with concrete debris and vegetation. The top of the escarpment is a parking lot for the USPS facility further north. A tree line along the southern property line is followed by a slight rise in elevation on the adjacent Bocaner property. The western site boundary with the Bocaner property has the same elevation increase and fence.

4.0 GROUNDWATER PATHWAY

4.1 Hydrogeologic Setting

Marathon County is in the Central Wisconsin River Basin ([Reference 9](#)). The Site is located on Glacial Meltwater-stream sediments consisting of noncalcareous sand, gravelly sand, and sandy gravel deposited by meltwater streams during the last part of the Wisconsin Glaciation. The deposits average about 100 feet in thickness (and up to 250 feet thick) and generally follow the Rib and Wisconsin River Valleys ([Reference 10](#)).

The upland area away from the river valleys is characterized by the Marathon Formation. The Marathon Formation contains material interpreted to be predominantly hillslope sediment derived from the weathering of Cambrian and Precambrian rock and some areas of glacial till ([Reference 10](#)). The material is typically less than 6 feet thick or absent but in places up to 49 ft thick and follows the topography of the underlying Precambrian crystalline bedrock ([Reference 10](#)).

The thick glacial outwash deposits are locally important to production from some most municipal wells for Wausau and the surrounding municipalities. Domestic wells outside the river valleys are almost exclusively drilled into the Precambrian bedrock where yield is dependent upon irregularly distributed fractures and weathered zones. WDNR was able to locate 37 Well Constructor's Reports (WCRs) for current and historical wells within one mile of the site. The reports verify the spatial extents of thick outwash deposits and thinner Marathon Formation overlying granite bedrock as shown in ([References 11 and 12](#)).

Boring Logs completed during the 2006 Phase II ESA identified sandy fill material with wood, concrete, brick, and other non-native materials approximately 8 feet thick along the northern property boundary and increasing in depth towards the south of the site. The native sand aquifer was identified in borings beneath the fill ([Reference 6](#)).

WDNR was able to locate a total of 88 Well Constructor's reports containing detailed geologic information for wells within two miles of the Site ([References 11 and 12](#)). Potable wells terminating in the outwash deposits within 2 miles of the Site range from approximately 40 to 160 feet in depth, and water is produced at rates ranging from approximately 2 gpm to 3600 gpm. Potable wells terminating in the Precambrian bedrock aquifer within 2 miles of the Site range from approximately 40 to 457 feet in depth, and water is produced at rates ranging from 0.5 gpm to 106 gpm.

Regionally, groundwater flow is influenced by the two dams north and south of the Site, that form Lake Wausau on the Wisconsin River. The direction of shallow groundwater flow was documented to be toward the southwest, based upon groundwater elevations measured at monitoring wells at the site ([Figure 5](#)). The depth to groundwater at the Undeveloped Rosemurgy Property monitoring wells is approximately 6 to 9 feet below grade ([Reference 6](#)).

4.2 Groundwater Targets

The population within a 4-mile radius relies on both municipal and private water supplies taken from groundwater.

MUNICIPAL WELLS

There are six municipal systems within a 4-mile radius of the Site, with a total of 19 active wells ([References 13, 14, 15, 16, 17 and 18](#)). Well depths range from 53 to 95 feet ([Reference 11](#)).

Each entry point for the municipal systems is regularly sampled for VOCs. In 2020, no VOCs other than trihalomethanes attributed to chlorination were detected ([Reference 19](#)). Historical sampling data shows inconsistent low-level detects of TCE, PCE, and other VOCs, with no trends in their concentrations.

Municipality	Population Served	# Residential Connections	Wells	Well Location Description
Wausau Waterworks	39,106	14,032	6	All North (upgradient of Site), one at 1-2 miles, five at 2-3 miles
Maine Water Utility	140	63	0	All water purchased from Wausau Waterworks
Rothschild Waterworks	3,190	1,149	4	All South, downgradient, 3-4 miles, west side of river/lake
Schofield Waterworks	2,117	8,94	3	3 wells, all south, 3-4 miles, south east river/lake and flowage
Rib Mountain Sanitary District	5,850	2,277	4	4 wells, all south, downgradient, 3-4 miles, west side of river/lake
Weston Municipal Utilities	15,045	5,288	6	6 wells, all south, downgradient, east side of river, two are within 3-4 miles

The population served by the municipal wells within the 4-mile limit requires apportionment for two reasons:

- 1) Several municipalities operate wells located in more than one distance category, and
- 2) Several municipalities have water service areas that extend beyond the 4-mile radius

The Apportioned Population is calculated as a percentage of the total population served equal to the wells yield as a percent of the total system yield:

Municipal System	WI Unique Well #	2019 Yield (gal/day)	% Total System Yield	Apportioned Population	Distance Category
Wausau Waterworks + Maine Water Utility	BG326	312,020	16.4%	6,446.06	1-2
	BG328	443,083	23.3%	9,153.71	1-2
	AR650	502,178	26.4%	10,374.56	2-3
	MK460	290,336	15.3%	5,998.09	2-3
	BG329	232,668	12.2%	4,806.72	2-3
	BG331	119,407	6.3%	2,466.85	2-3
Schofield Waterworks	*PG983	936,000	*0.0%	-	2-3
	BG310	1,080,000	48.4%	1,024.35	3-4
	BG312	1,152,000	51.6%	1,092.65	3-4
Rothschild Waterworks	VX783	1,368,000	28.6%	912.95	3-4
	VX773	1,144,000	23.9%	763.46	3-4
	BG308	1,548,000	32.4%	1,033.08	3-4
	VX772	720,000	15.1%	480.50	3-4

Rib Mountain Sanitary District Rib Mountain San. Dist. (Cont'd)	VX778	684,000	29.7%	1,736.72	3-4
	DG454	720,000	31.3%	1,828.13	3-4
	DG455	540,000	23.4%	1,371.09	3-4
	MZ701	360,000	15.6%	914.06	3-4
Weston Municipal Utilities	BG313	864,000	14.8%	2,221.27	3-4
	OH869	1,296,000	22.1%	3,331.91	3-4
	**BG315	1,440,000	24.6%	-	N/A
	**WH967	812,000	13.9%	-	N/A
	**BG316	1,440,000	24.6%	-	N/A
	***BG314	1,000,000	0.0%	-	N/A

* Well not in use ([Reference 20](#)).

** Well outside 4-mile distance limit

*** BG314 is a self-standing system, serving only two non-residential customers ([Reference 21](#)).

PRIVATE WELLS

Initially, DNR was able to locate 880 database entries for active (not abandoned) non-municipal water supply wells within four miles of the Undeveloped Rosemurgy Property Site by searching the WDNR Drinking Water and Groundwater program's internal WDNR Well Construction Information System database and Groundwater Retrieval Network ([Reference 11 and 12](#)). Of these, 589 were identified as being used for potable water supplies, either "private potable," "non-community," or "other-than-municipal community." The other 264 wells were identified as being non-potable, either "non-potable private" or "various/miscellaneous."

Active Wells near Undeveloped Rosemurgy Property	Distance from Site						Grand Total
	0-0.25 Mile	0.25-0.5 Mile	0.5-1 Mile	1-2 Miles	2-3 Miles	3-4 Miles	
Private Potable	0	0	1	65	177	303	546
Community – OTM	0	0	0	0	0	8	8
Non-Community	0	0	0	0	0	2	2
Non-Transient Non-Community	0	0	0	0	7	0	7
Transient Non-Community	0	0	0	11	17	13	41
Subtotal							604
Various/Miscellaneous	2	1	7	136	59	46	251
Non-Potable Private	1	0	0	5	8	11	25
Grand Total	3	1	8	217	268	384	880

Additional database information categorized the intended use of potable water supplies for homes, farms, churches, office buildings, greenhouses, restaurants, and workshops. Filtering out the total potable wells intended for residences within 4 miles resulted in 499 wells. Using an average number of persons per household appropriate for each distance category ([Reference 22](#)), the total population of persons served by potable water supply wells is approximately **1,138** persons within the four-mile distance limit.

Radius (miles)	0-0.25	0.25-0.5	0.5-1	1-2	2-3	3-4	Total
Potable Water Supply Wells	0	0	1	62	158	278	499
				63*	221*	499*	
Average Household Size	2.46	1.91	2.47	2.38	2.32	2.25	
Pop. Served by Private Wells	0	0	2	148	367	624	1,138
				150*	514*	1138*	

* Running wells/population total

Based upon the existence of an additional 2,717 historical (pre-1988) WCRs from the area, there could be other potable wells near the Site ([Reference 11](#)). However, WDNR was unable to determine which of these wells still exist and most of them are believed to be abandoned since they couldn't be verified by other sources.

TOTAL GROUNDWATER TARGETS

Radius (miles)	0-0.25	0.25-0.5	0.5-1	1-2	2-3	3-4	Total
Pop. Served by Municipal Wells	0	0	0	15,600	23,646	15,900	55,146
Pop. Served by Private Wells	0	0	2	148	367	624	1,141
Total GW Targets	0	0	2	15,748	24,013	16,524	56,287

Note that due to location of four Weston wells and several service areas extending outside the 4-mile radius, apportionment of the other 19 wells results in a total groundwater use population within 4 miles of approximately **56,287** persons.

The population within the four-mile radius of the Site is 50,329 people, with 11,912 people within the one-mile radius. A summary of the estimated 2020 census population data ([Reference 22](#)) is shown below. Associated maps are attached as [Figures 6 and 7](#).

Radius (miles)	0-0.25	0.25-0.5	0.5-1	1-2	2-3	3-4	Total
2020 Population Estimate	470	1,683	9,759	17,913	9,713	10,791	50,329
	470*	2,153*	11,912*	29,825*	39,538*	50,329*	
Modified Groundwater Population	0	0	2	15,748	24,013	16,524	56,287
	0	0	2*	15,750*	39,763*	56,287*	

* Running population/household total

The closest well that is known to be used as a drinking water source is approximately one-half mile from the Site (WI Unique Well No. EN668); no residences rely on private wells within a 0.5-mile radius of the site ([Reference 11](#)).

4.3 Groundwater Conclusions

A release of hazardous substances from the Undeveloped Rosemurgy Site to the sand and gravel aquifer is suspected due to the detection of PCE, PAHs, and metals in the on-site and downgradient monitoring wells, as discussed in Section 2.5 ([References 4 and 6](#)). Due to the low concentrations detected in groundwater samples, the potential for widespread migration of contaminants is low. No residents within 0.5 miles are considered prime targets due to the lack of private wells in the city.

5.0 SURFACE WATER PATHWAY

5.1 Hydrologic Setting

The Undeveloped Rosemurgy Property is situated within the Wisconsin River Valley, in an area of terraced glacial meltwater stream sediment ([Reference 10](#)). The Site is at the base of a 20-ft high escarpment along the northern property boundary. The area south and west of the site is relatively flat, southwest sloping, towards the Wisconsin River. At the top of the escarpment to the north and east of the site, the topography is also relatively flat. Overland drainage from the site flows south towards the Wisconsin River via stormwater sewers on South 4th Street ([Reference 23](#)). This section of the Wisconsin River is controlled by a dam further south in Rothschild, creating Lake Wausau.

The surficial soils on the property are mapped primarily as Udorthents, Loamy, with 0 to 6 percent slopes and are described as well-drained fine sandy loam, ([Reference 24](#)). In addition, the majority of the Site is covered by a compacted gravel lot ([see photos, Appendix D](#)). The Site is mapped by FEMA as being outside the 0.2% annual chance floodplain ([Reference 25](#)).

5.2 Surface Water Targets

There are no drinking water intakes located within 15 downstream miles of the Site. All surface-water intakes downstream along the Wisconsin River are used for industrial uses or golf course irrigation ([Reference 26 and Figure 8](#)).

Aquatic species commonly caught in Lake Wausau and the interconnected Big Rib River include northern pike, largemouth bass, small mouth bass, walleye, yellow perch, channel catfish, bluegill, black crappie ([Reference 27](#)).

There are over 100 wetlands with over 6 miles of river frontage, located within 15 downstream miles of the Site, along the islands and banks of Lake Wausau and the Wisconsin River ([Figure 9, Reference 28](#)). The nearest wetland (0.10 acres) is located approximately 300 feet west from the site. Wetlands also occupy the islands along the Wisconsin River directly downstream of the stormwater sewer outfall.

There are no federally designated endangered species that can be found in Marathon County ([Reference 29](#)).

5.3 Surface Water Conclusions

There are no indications of a release of contaminants to surface water. There are no drinking water intakes within 15 miles downstream of the site. Lake Wausau is home to a large number of fish species. There are over 100 wetlands within 15 miles downstream of the site and no Federally designated endangered species found in Marathon County. Primary targets include the human food chain via fishing, and the downstream wetland environments.

6.0 SOIL EXPOSURE, SUBSURFACE INTRUSION, AND AIR PATHWAYS

6.1 Physical Conditions

Surface cover at the Site consists of the gravel parking lot and the grass and brush around the perimeter on the south, west, and northern edges of the property. Surficial soils at the Site were characterized by soil borings from the 2006 Phase II ESA and generally consist of up to 8 ft of fill material, over sandy soil down to the termination depths of the borings. Metals and PAHs are present

in the surficial and deeper soils in the western half of the site at concentrations that exceed Federal RSLs ([Reference 6](#)).

6.2 Soil, Subsurface Intrusion, and Air Targets

There are no workers or residents on Site. The presence of the dog park adjacent to the Site may lead to an increased use of the Site for unofficial parking. The nearest residence is 250 feet to the northeast, at the top of the escarpment. Additionally, an apartment complex is located 500 feet to the southwest. ([Reference 2](#)). There are 470 residents within 0.25 miles of the site. The total population within a 1-mile radius of the site is 11,912 ([Reference 22](#)).

6.3 Soil Exposure, Subsurface Intrusion, and Air Conclusions

The soil exposure and subsurface intrusion pathway appears to pose a significant threat due to elevated levels of arsenic, lead, and PAHs in surficial soils. A release to the air is unlikely because the facility is no longer active and the soils are covered by the gravel parking lot and vegetation around the perimeter. In addition, during the perimeter survey, no odors were detected and there was no indication of blowing dust or soil.

7.0 SUMMARY AND CONCLUSIONS

The Site was the site of various light industrial activities in the city of Wausau, Marathon County, WI throughout the 1900s. A 2006 Phase II ESA reported PCE, TCE, PCBs, metals, and PAHs in soils across the site, including RSL exceedances of PAHs, arsenic, and lead. Groundwater sampling in the on-site and downgradient monitoring wells detected Benzene, PCE, PAHs, arsenic, and lead below the groundwater MCL.

The Site contamination is a low threat to drinking water supplies via the groundwater pathway because of the low contaminant concentrations and lack of potable wells within 1 mile downgradient of the Site.

The contamination also poses a low threat to people via the subsurface intrusion component of the soil exposure-subsurface intrusion (SESI) pathway due to the lack of occupancy and buildings on the site and downgradient properties.

The arsenic, lead, and PAH contamination in surficial soils continues to pose a potential threat via the soil exposure (direct-contact) component of the SESI pathway due to high contaminant concentrations near the surface and a lack of impermeable surface cover to interrupt the exposure pathway.

There are no indications of a release of contaminants to surface water from the Site. No release to the air is suspected due to lack of any odors or blowing particulates during the site reconnaissance.

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*References too voluminous to attach; available at WDNR-West Central Regional Headquarters, Eau Claire.

APPENDIX A

FIGURES

Figure 1. Site Location
Undeveloped Rosemurgy Property
218 S 4th St, Wausau, WI

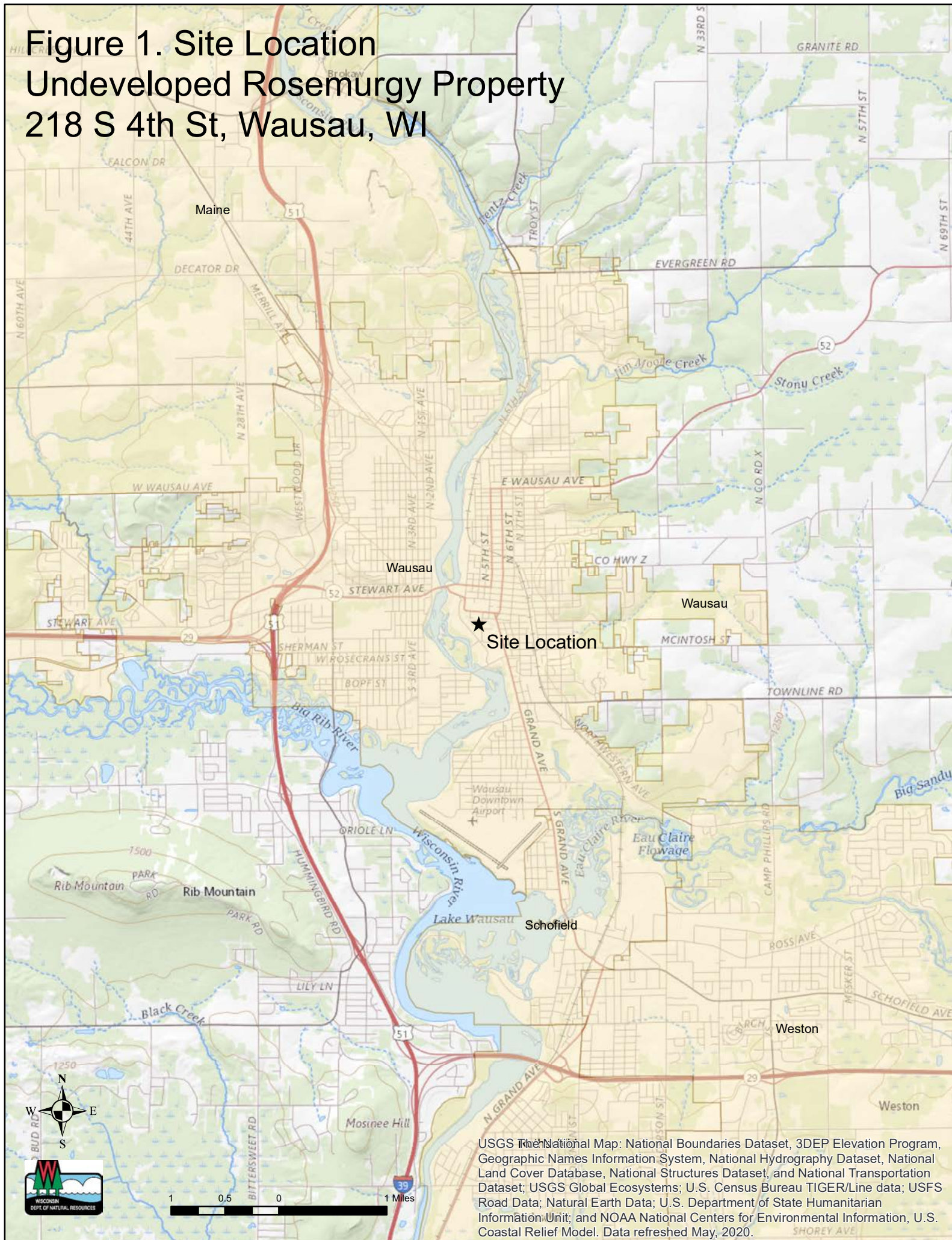
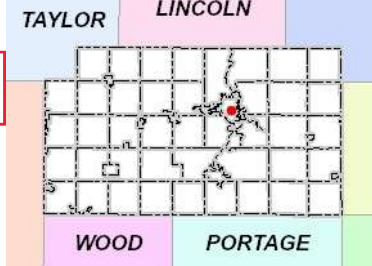


Figure 2. Undeveloped Rosemurgy Property Parcel Boundaries



Legend

- Road Names
- Owner Last Names
- Parcel ID
- Parcels
- Parcel Lot Lines
- Land Hooks
- Section Lines/Numbers
- Right Of Ways
- Named Places
- Municipalities
- 2020 Orthos Countywide
- Red: Band_1
- Green: Band_2
- Blue: Band_3

72.08 0 72.08Feet



NAD_1983_HARN_WISCRS_Marathon_County_Feet

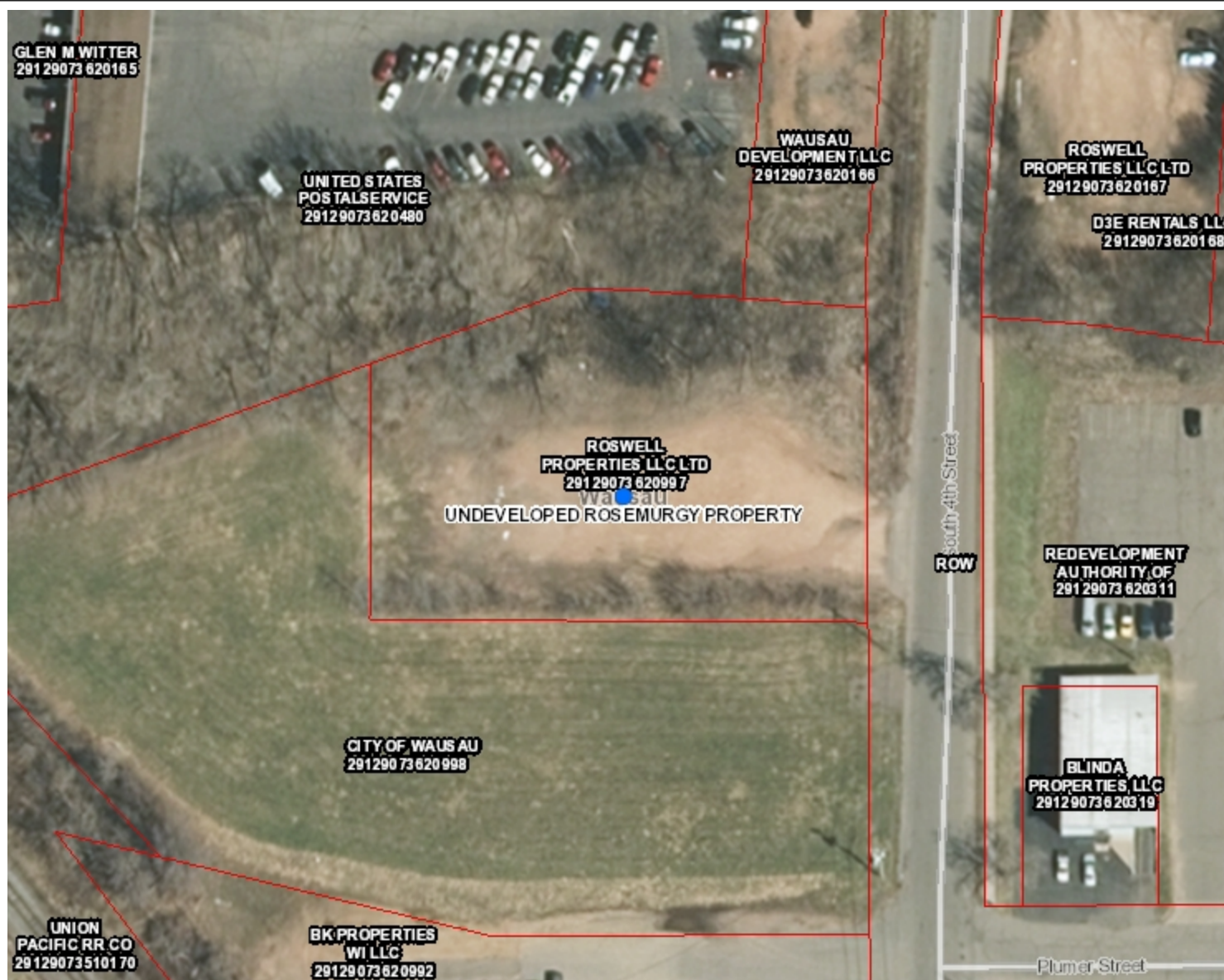
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Notes

218 S 4th St, Wausau, WI
Parcel ID: 29129073620997



Figure 3. Site Map



Legend

- Open Site
- County Tax Parcels



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Note: Not all sites are mapped.

Notes

DRAWING FILE: P:\4200-4299\4213-BOCANER.DWG\4213-Post-Fill.DWG LAYOUT: Post PLOTTED: Nov 13, 2013 - 11:29AM PLOTTED BY: TODD W

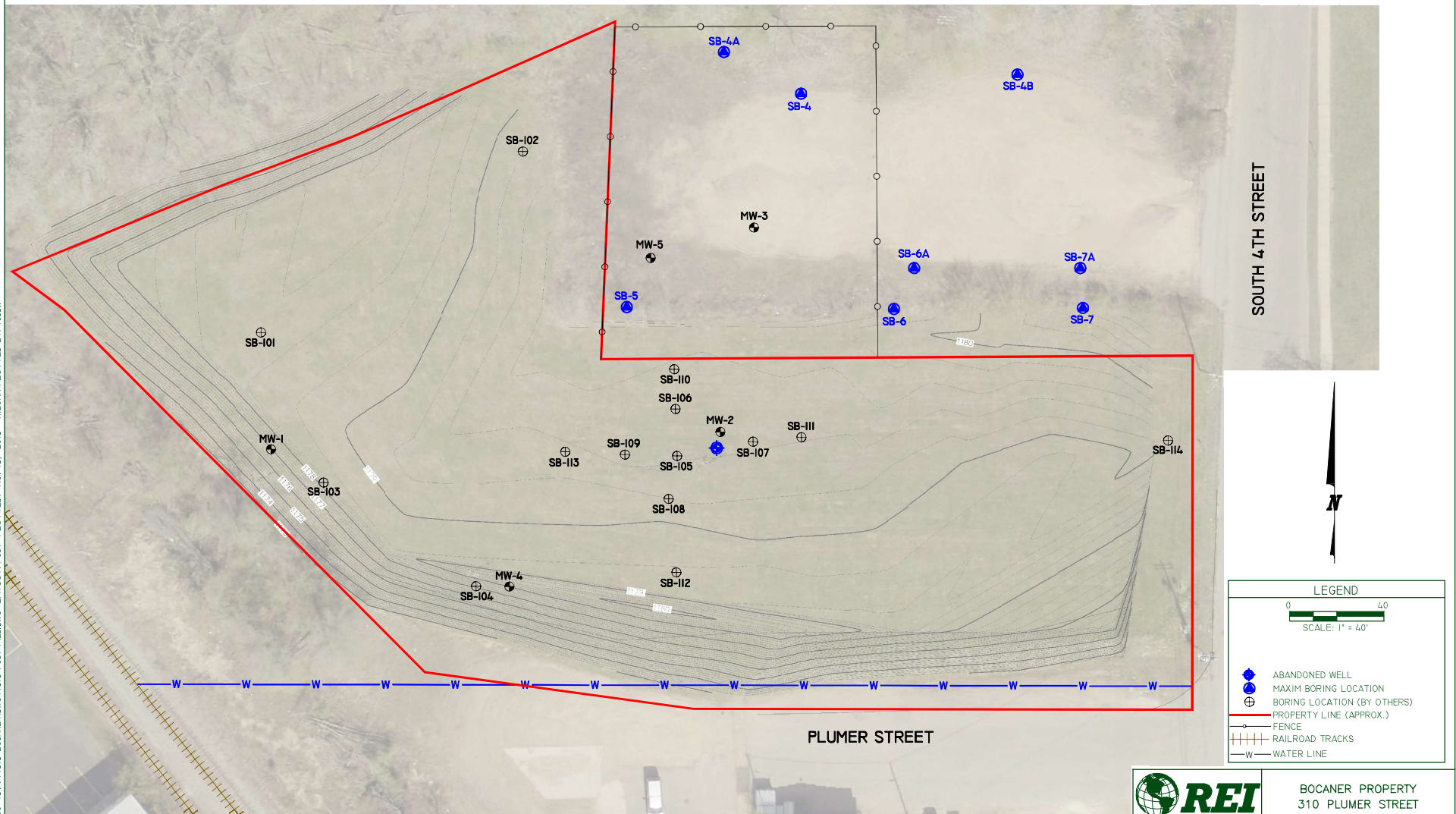


Figure 4. Sample Location Map (Reference 4)

The site was then subsequently capped with clean material.

INFORMATION PROVIDED BY TERRACON & MAXIM TECHNOLOGIES



BOCANER PROPERTY
310 PLUMER STREET
WAUSAU, WISCONSIN

FIGURE D.1 : EXISTING SURFACE ELEVATIONS (POST-FILL)

PROJECT No.	DRAWN BY:	DATE:
4313	TAW	11/13/2013

REI Engineering, INC.

Figure 5. Groundwater Flow Direction Map (Reference 4)

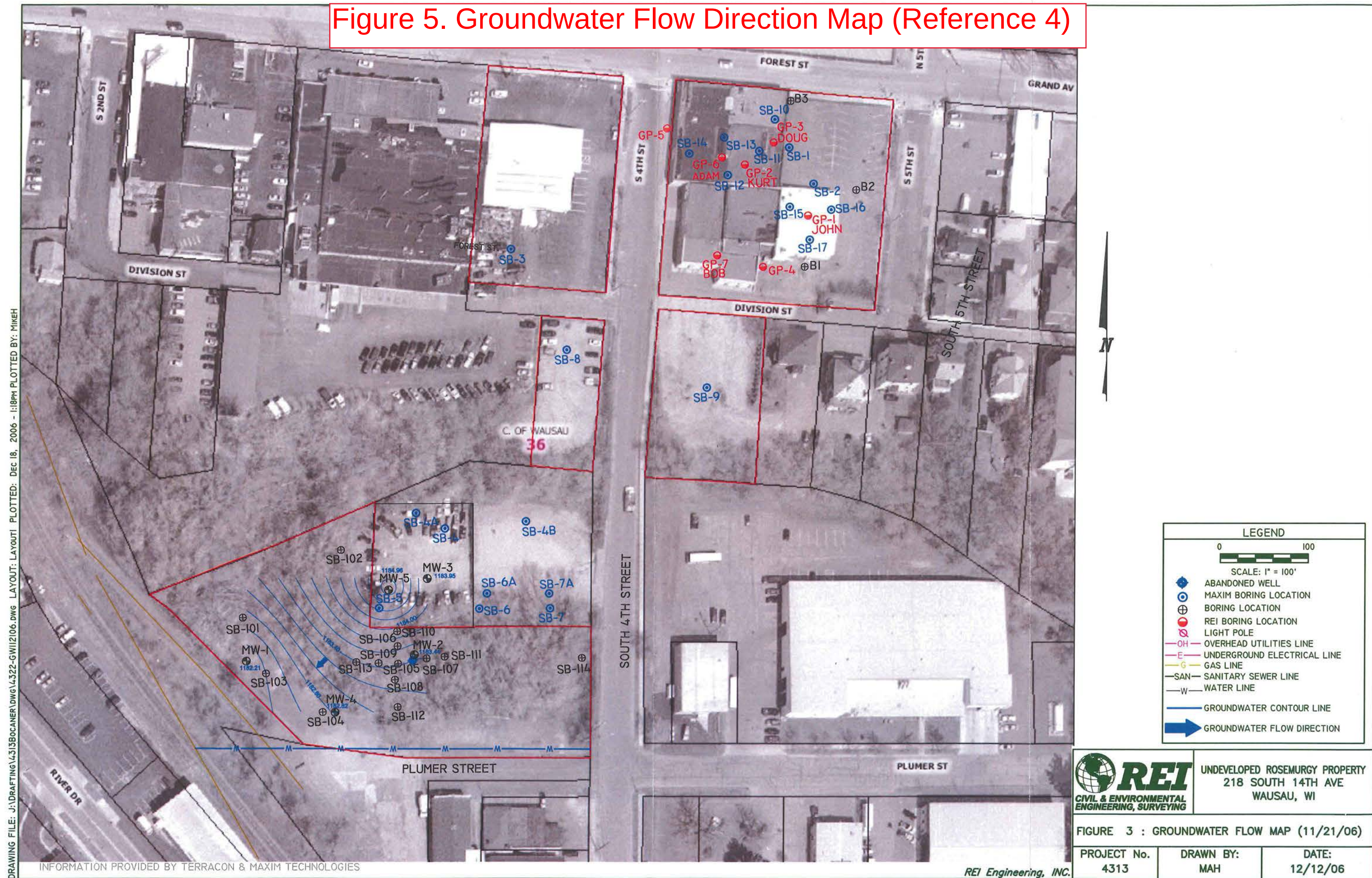


Figure 6. Undeveloped Rosemurgy Property – 1 Mile Radius



Distance	2020 Population	2020 Households
0 - 0.25 mi	470	191
0.25 - 0.5 mi	1,683	880
0.5 - 1 mi	9,759	3,955
1 - 2 mi	17,913	7,518
2 - 3 mi	9,713	4,180
3 - 4 mi	10,791	4,806

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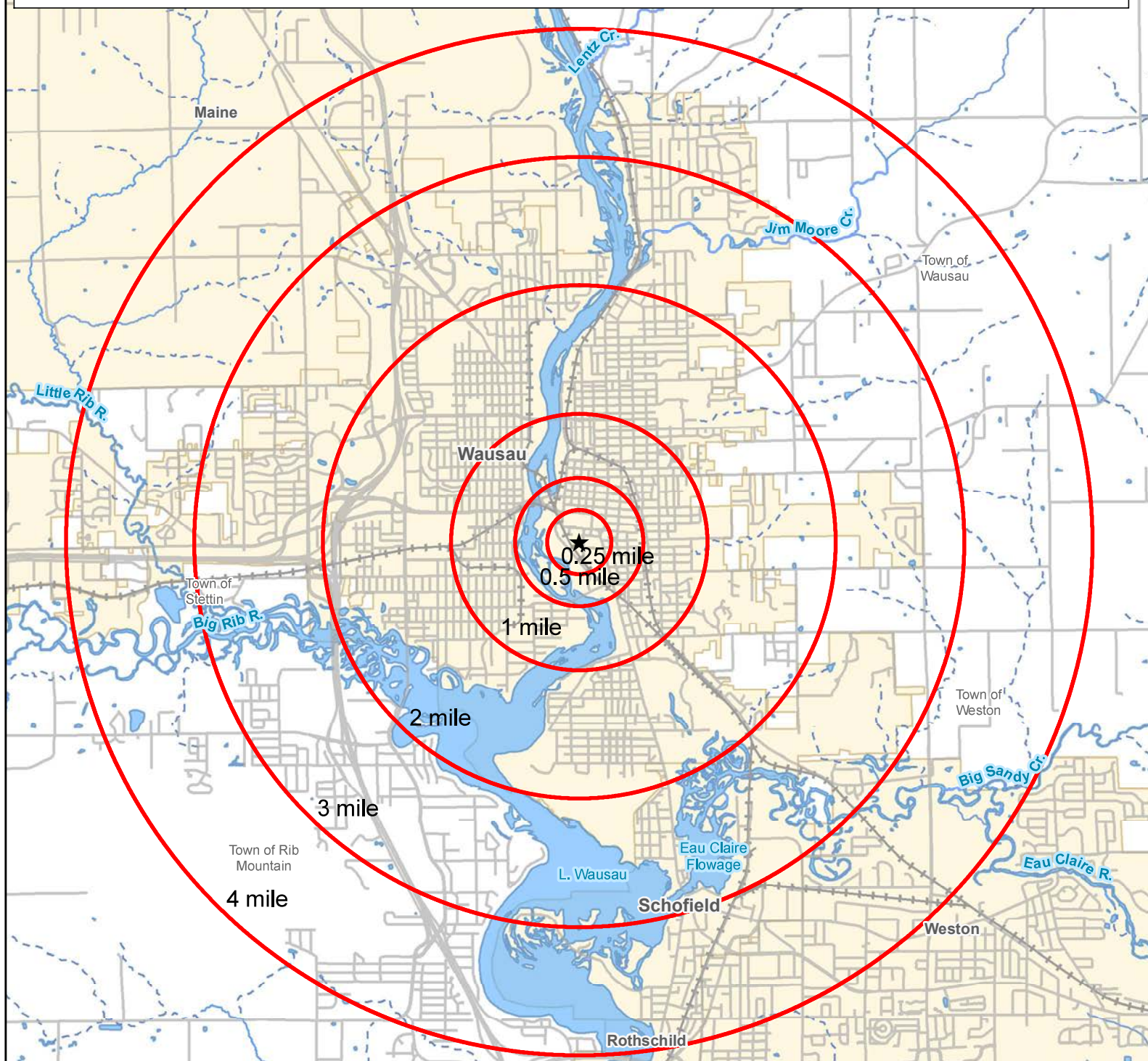
Source: ESRI Forecasts for 2020

Map Created By Matthew Vitale
Bureau of Remediation and Redevelopment
Division of Environmental Services
October 2020

0.3 0.15 0 0.3 Miles



Figure 7. Undeveloped Rosemurgy Property – 4 Mile Radius



Distance	2020 Population	2020 Households
0 - 0.25 mi	470	191
0.25 - 0.5 mi	1,683	880
0.5 - 1 mi	9,759	3,955
1 - 2 mi	17,913	7,518
2 - 3 mi	9,713	4,180
3 - 4 mi	10,791	4,806

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Source: ESRI Forecasts for 2020

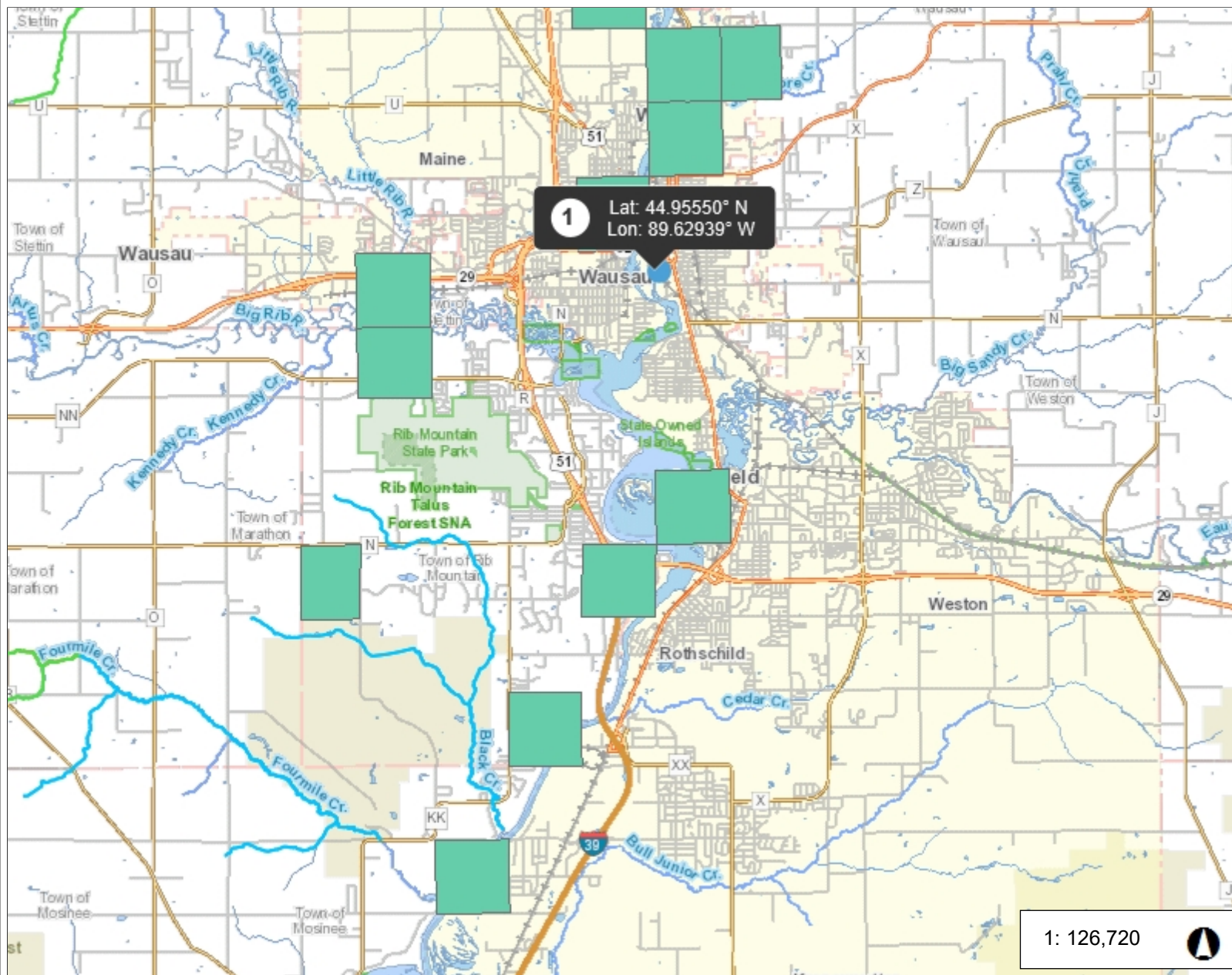
Map Created By Matthew Vitale
Bureau of Remediation and Redevelopment
Division of Environmental Services
October 2020

1 0.5 0 1 Miles





Figure 8. Downstream Surface Water Intakes



Legend

- Surface Water Withdrawal Loc
- Trout Streams
 - Class 1
 - Class 2
 - Class 3
- Outstanding/Exceptional Reso
- Surveyed Springs ≥ 1 CFS
- Municipality
 - City or Village
 - Township
- State Boundaries
- County Boundaries
- Major Roads
 - Interstate Highway
 - State Highway
 - US Highway
- County and Local Roads
 - County HWY
 - Local Road
- Railroads
- Rivers and Streams
- Intermittent Streams
- Open Water
- Tribal Lands
- County Forests

1: 126,720



4.0 0 2.00 4.0 Miles

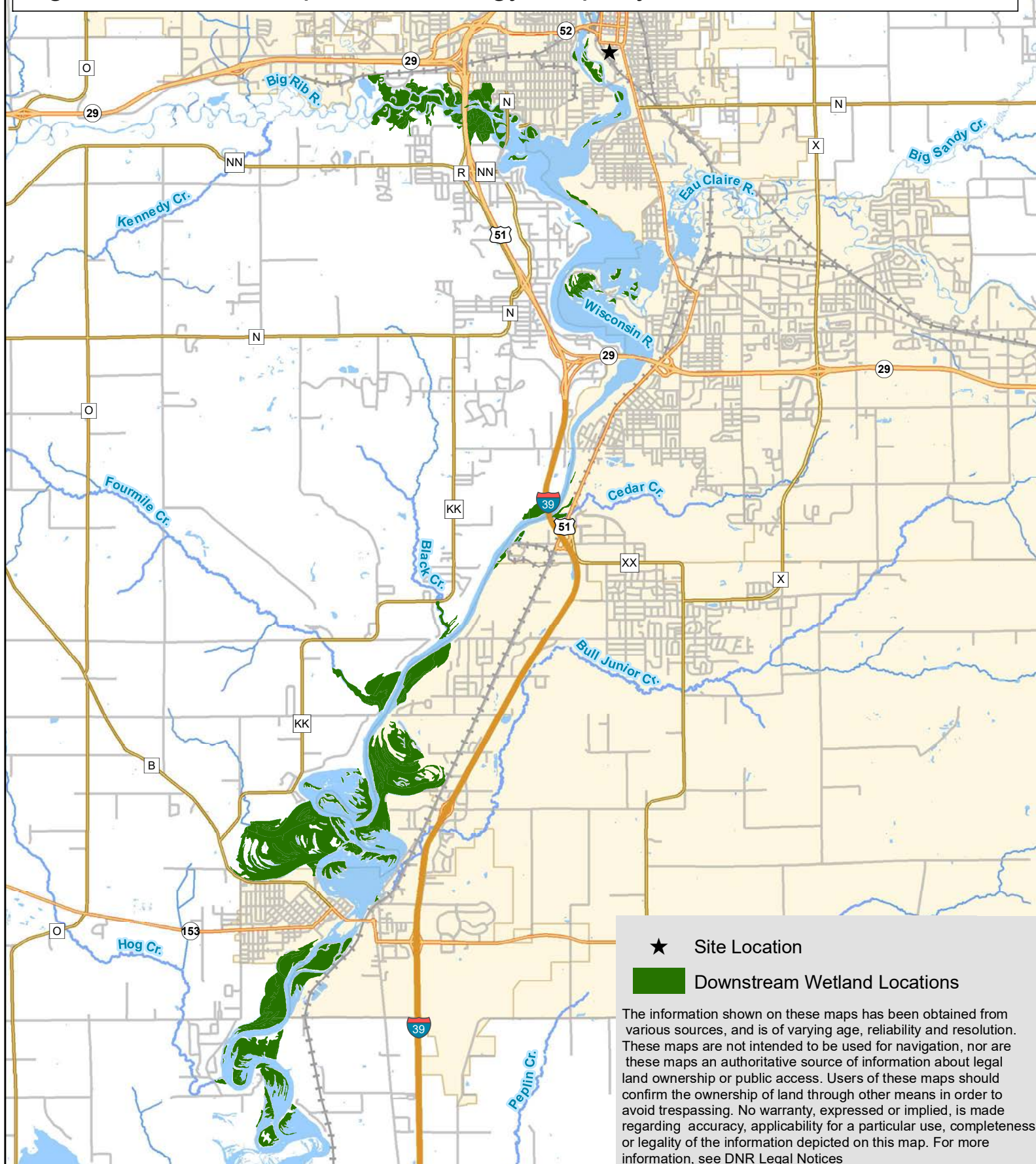
NAD_1983_HARN_Wisconsin_TM

Map created: 3/15/2021

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This map was created for use by the general public to view the locations and volumes of high capacity well and surface water withdrawals. It also provides a means for the general public to view pending high capacity well applications and recently approved wells. As required by Wisconsin law, these locations are generalized to display at the public land survey section level. Therefore, any well or surface water intake is symbolized by the section in which it is located.

Figure 9. Undeveloped Rosemurgy Property - Downstream Wetlands



Source: Wisconsin Wetland Inventory Database 2020

Map Created By Matthew Vitale
Bureau of Remediation and Redevelopment
Division of Environmental Services
February 2021

2 1 0 2 Miles



APPENDIX B

TABLES

TABLE 1
PHASE II ENVIRONMENTAL SITE ASSESSMENT SOIL ANALYTICAL RESULTS
UNDEVELOPED ROSEMURGY PROPERTY
218 SOUTH 14TH STREET
WAUSAU, WI

Date-->	7/11/06	7/11/06	11/21/06	11/21/06	11/21/06	11/21/06	11/21/06	11/21/06	11/21/06
Sample-->	MW-3	MW-3	MW-5	MW-5	SB-4A	SB-4B	SB-4B	SB-6A	SB-7A
Sample Depth--(Feet)-->	7.5-9.5'	12.5-14.5'	2-4'	8-10'	2-4'	0-2'	6-8'	2-4'	0-2'
Sampler-->	MR	MR	JS	JS	JS	JS	JS	JS	JS
Detected VOC's (ug/kg)	RCL								
Benzene	5.5	88	<25	<18	52	<17	<16	<17	<18
Ethylbenzene	2,900	230	<25	<20	109	39	<18	<19	<20
Toluene	1,500	290	46	<19	145	<18	<17	<18	<19
Xylenes (Total)	4,100	1540	<50	74	338	164	51	<23	<24
Methyl tert Butyl Ether	NS	<25	<25	<12	<12	<12	<11	<12	<12
1,2,4-Trimethylbenzene	NS	540	<25	<14	312	44	<13	<14	<15
1,3,5-Trimethylbenzene	NS	220	<25	<20	<19	<19	<18	<19	<20
Naphthalene	400	220	<25	<20	256	<19	<18	<19	<20
Isopropylbenzene	NS	59	<25	<19	<18	<18	<17	<18	<19
n-Propylbenzene	NS	82	<25	<23	99	<22	<21	<23	<24
p-Isopropyltoluene	NS	92	<25	<26	<26	<26	<24	<26	<27
s-Butylbenzene	NS	42	<25	<23	<22	<22	<21	<23	<24
Tetrachloroethene	NS	<25	<25	<25	37	<25	<23	<25	<26
Trichloroethene	NS	<25	<25	<25	<25	<25	<23	<25	<26
PAH's (ug/kg)	GW	DC							
1-Methyl Naphthalene	23,000	1,100,000	260	4.2	<43.2	<25	<43.1	<3.9	<4.1
2-Methyl Naphthalene	20,000	600,000	330	6.3	<47.9	<27.7	<47.7	<4.3	<4.5
Acenaphthene	38,000	900,000	160	9.7	<54.9	<31.8	<54.7	<4.9	<5.1
Acenaphthylene	700	18,000	230	<3.8	<77.1	<44.7	<76.8	<6.9	<7.2
Anthracene	3,000,000	5,000,000	620	54	<37.4	<21.7	166	<3.4	<3.5
Benzo (a) Anthracene	17,000	8.8	1700	140	246	<27.7	614	16.5	26.8
Benzo (a) Pyrene	48,000	8.8	2100	130	357	<15.6	<26.8	39.4	56.4
Benzo (b) Fluoranthene	360,000	88	2000	130	385	355	608	34.0	49.8
Benzo (g,h,i) Perylene	6,800,000	1,800	1100	73	300	255	437	42.4	56.9
Benzo (k) Fluoranthene	870,000	880	1900	110	186	182	271	16.7	25.0
Chrysene	37,000	8,800	2200	160	431	631	725	31.0	48.6
Dibenzo (a,h) Anthracene	38,000	8.8	340	22	<31.5	<18.3	<31.4	<2.8	<3.0
Fluoranthene	500,000	600,000	4500	370	1300	<17.6	1690	54.0	146
Fluorene	100,000	600,000	280	12	<38.6	<22.3	<38.4	<3.5	<3.6
Ideno (1,2,3-cd) Pyrene	680,000	88	880	66	241	157	329	32.2	43.6
Naphthalene	400	20,000	310	11	<53.7	64.5	<53.6	<4.8	<5.0
Phenanthrene	1,800	18,000	2400	150	508	815	1020	12.0	18.6
Pyrene	8,700,000	500,000	3700	280	341	<19.1	309	35.5	65.9
Metals (mg/kg)									
Arsenic	0.039		150	3.5	5.22	20.6	3.36	3.84	2.52
Barium	NS		390	61	314	391	94.5	56.6	86.9
Cadmium	8		23	1.3	0.911	19.1	0.631	<0.593	<0.062
Chromium	16,000		60	20	15.9	52.4	12.7	4.95	3.55
Lead	50		1200	110	652	1660	112	9.23	11.6
Mercury	NS		2.1	0.099	0.131	2.99	0.128	<0.033	<0.033
Selenium	NS		<9.1	<1.1	<0.700	1.1	<0.697	<0.627	<0.656
Silver	NS		0.90	<0.32	1.04	1.26	<0.233	<0.209	<0.219

Notes:

RCL - NR 720 Soil Residual Contaminant Level

RCL for PAHs = "Suggested" Groundwater Pathway Standard

< - Concentration below listed laboratory detection limit

RCL exceedences are bold

PVOCs - Petroleum Volatile Organic Compounds

PAHs - Polynuclear Aromatic Compounds

NS= no standard

Bold



TABLE 1
SOIL ANALYTICAL RESULTS (05/18/2006)
ROSEMURGY PROPERTIES
MAXIM #6340174



TETRA TECH, INC.

LOCATION	#1 -1.5 Feet	#1 -10 Feet	#2 -1.0 Feet	#2 -10 Feet	#3 -1.0 Feet	#3 -10 Feet	#4 -4 Feet	#4 -10 Feet	#5 -4 Feet	#5 -12 Feet	#6 -4 Feet	Direct Contact RCL	GW Pathway RCL
METALS (PPM)													
Arsenic	na	1.04	na	0.851	na	0.888	3.23	2.51	5.68	34.2	2.71	5.0	ns
Barium	na	13.8	na	18.0	na	24.7	59.6	77.8	48.1	748	90.7	ns	ns
Cadmium	na	<0.0596	na	<0.0596	na	<0.0596	0.0722	<0.0676	4.63	17.3	0.0947	8	ns
Chromium	na	6.19	na	7.46	na	6.53	2.92	3.37	11.6	67.2	1.90	14	ns
Lead	na	0.673	na	0.681	na	1.69	7.62	11.6	29.7	2280	7.89	50	ns
Silver	na	<0.211	na	<0.211	na	<0.211	<0.218	<0.239	<0.218	0.915	<0.222	ns	ns
Mercury	na	<0.016	na	<0.017	na	<0.016	<0.016	<0.017	0.124	3.09	0.026	ns	ns
VOLATILE ORGANIC COMPOUNDS (PPM)													
Benzene	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	0.022	<0.016	1.1	0.0055
Ethylbenzene	0.02	0.02	0.021	0.019	0.022	0.020	0.020	0.022	0.017	0.034	0.017	ns	2.9
Toluene	<0.017	<0.017	0.018	0.017	0.022	0.017	0.018	0.019	0.018	0.031	0.018	ns	1.5
Xylenes	<0.037	<0.037	<0.037	<0.037	<0.037	<0.037	<0.037	<0.037	<0.037	0.128	<0.037	ns	4.1
Isopropylbenzene	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	0.107	ns	ns
n-Propylbenzene	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	0.136	ns	ns
p-Isopropyltoluene	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	0.074	ns	ns
1,2,4-trimethylbenzene	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.046	<0.013	ns	ns
Tetrachloroethene	<0.023	<0.023	0.132	<0.023	<0.023	<0.023	<0.023	<0.023	3.02	0.116	<0.023	ns	*0.003
Trichloroethene	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	0.160	<0.023	<0.023	ns	*0.003
POLYCYCLIC AROMATIC HYDROCARBONS (PPM)													
Anthracene	na	<0.0034	na	<0.0034	na	<0.0034	<0.0034	0.0087	2.54	na	<0.0034	5000	3000
Benzo(a)anthracene	na	<0.0043	na	<0.0043	na	<0.0043	<0.0043	0.0248	3.18	na	<0.0043	0.88	17
Benzo(a)pyrene	na	<0.0024	na	<0.0024	na	<0.0024	0.0043	0.0328	2.73	na	<0.0024	0.0088	48
Benzo(b)fluoranthene	na	<0.0022	na	<0.0022	na	0.0048	<0.0022	0.0143	2.22	na	<0.0022	0.088	360
Chrysene	na	<0.0024	na	<0.0024	na	0.0061	<0.0024	0.0293	2.99	na	<0.0024	8.8	37
Fluoranthene	na	<0.0027	na	<0.0027	na	0.0196	<0.0027	0.0940	12.2	na	<0.0027	600	500
Fluorene	na	<0.0035	na	<0.0035	na	<0.0035	<0.0035	<0.0035	0.921	na	<0.0035	600	100
Indeno(1,2,3-cd)pyrene	na	<0.0023	na	<0.0023	na	0.0041	<0.0023	0.0248	1.14	na	<0.0023	0.088	680
Naphthalene	na	<0.0048	na	<0.0048	na	<0.0048	<0.0048	<0.0048	<0.0502	na	<0.0048	20	0.4
Phenanthrene	na	<0.0043	na	<0.0043	na	0.0135	<0.0043	0.0324	5.40	na	<0.0043	18	1.8
Pyrene	na	<0.0030	na	<0.0030	na	0.0049	<0.0030	0.0591	4.03	na	<0.0030	500	8700
POLYCHLORONATED BIPHENYLS (PPM)													
PCBs	na	<31.20 ppb	na	<32.8 ppb	na	<31.6 ppb	<31.9 ppb	<32.8 ppb	<25.5ppb	na	<32.8 ppb	ns	ns

Soil boring locations are shown on Figure 2;

ns-Indicates no standard;

na-Indicates parameter not analyzed

*- Determined using EPA Soil Screening Level Algorithm



TABLE 1 (cont.)
SOIL ANALYTICAL RESULTS (05/18/2006)
ROSEMURGY PROPERTIES
MAXIM #6340174



TETRA TECH, INC.

LOCATION	#6 -12 Feet	#7 -10 Feet	#8 -4 Feet	#8 -10 Feet	#9 -4 Feet	#9 -10 Feet	#10 -1 Foot	#10 -10 Feet	#11 -1 Foot	#11 -10 Feet	#12 -2 Feet	Direct Contact RCL	GW Pathway RCL
METALS (PPM)													
Arsenic	1.88	2.52	na	0.845	na	1.14	na	1.02	na	1.48	na	5.0	ns
Barium	87.8	142	na	30.1	na	16.5	na	15.5	na	21.1	na	ns	ns
Cadmium	0.972	<0.0752	na	<0.0616	na	<0.0576	na	<0.0598	na	<0.0591	na	8	ns
Chromium	7.83	0.488	na	8.49	na	10.2	na	3.91	na	9.31	na	14	ns
Lead	6.25	5.65	na	1.29	na	0.918	na	<0.563	na	1.69	na	50	ns
Silver	<0.235	<0.266	na	<0.217	na	<0.203	na	<0.211	na	<0.209	na	ns	ns
Mercury	<0.018	<0.022	na	0.021	na	<0.015	na	<0.017	na	0.019	na	ns	ns
VOLATILE ORGANIC COMPOUNDS (PPM)													
Benzene	0.02	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	1.1	0.0055
Ethylbenzene	0.026	<0.018	<0.018	<0.018	<0.018	<0.018	0.020	<0.018	<0.018	<0.018	<0.018	ns	2.9
Toluene	0.029	0.023	<0.017	<0.017	<0.017	<0.017	0.018	<0.017	<0.017	<0.017	<0.017	ns	1.5
Xylenes	0.052	<0.037	<0.037	<0.037	<0.037	<0.037	<0.037	<0.037	<0.037	<0.037	<0.037	ns	4.1
Isopropylbenzene	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	ns	ns
n-Propylbenzene	<0.012	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021	ns	ns
p-Isopropyltoluene	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	<0.024	ns	ns
1,2,4-trimethylbenzene	0.042	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	ns	ns
Tetrachloroethene	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	0.185	<0.023	0.313	<0.023	0.309	ns	*0.003
Trichloroethene	0.045	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023	ns	*0.003
POLYCYCLIC AROMATIC HYDROCARBONS (PPM)													
Anthracene	<0.0376	<0.0034	na	<0.0034	na	<0.0034	na	<0.0034	na	<0.0034	na	5000	3000
Benzo(a)anthracene	0.262	<0.0043	na	<0.0043	na	<0.0043	na	<0.0043	na	<0.0043	na	0.88	17
Benzo(a)pyrene	0.376	<0.0024	na	<0.0024	na	<0.0024	na	<0.0024	na	<0.0024	na	0.0088	48
Benzo(b)fluoranthene	0.365	<0.0022	na	<0.0022	na	<0.0022	na	<0.0022	na	<0.0022	na	0.088	360
Chrysene	0.455	<0.0024	na	<0.0024	na	<0.0024	na	<0.0024	na	<0.0024	na	8.8	37
Fluoranthene	0.932	<0.0027	na	<0.0027	na	<0.0027	na	<0.0027	na	<0.0027	na	600	500
Fluorene	<0.0388	<0.0035	na	<0.0035	na	<0.0035	na	<0.0035	na	<0.0035	na	600	100
Indeno(1,2,3-cd)pyrene	0.206	<0.0023	na	<0.0023	na	<0.0023	na	<0.0023	na	<0.0023	na	0.088	680
Naphthalene	<0.0541	<0.0048	na	<0.0048	na	<0.0048	na	<0.0048	na	<0.0048	na	20	0.4
Phenanthrene	0.289	<0.0043	na	<0.0043	na	<0.0043	na	<0.0043	na	<0.0043	na	18	1.8
Pyrene	<0.0310	<0.0030	na	<0.0030	na	<0.0030	na	<0.0030	na	<0.0030	na	500	8700
POLYCHLORONATED BIPHENYLS (PPB)													
PCBs	135.6 ppb	<35.10 ppb	na	<31.3 ppb	na	<30.2 ppb	na	<31.3 ppb	na	<34.5 ppb	na	ns	ns

Soil boring locations are shown on Figure 2;

ns-Indicates no standard; na-Indicates parameter not analyzed

*- Determined using EPA Soil Screening Level Algorithm

path:shared\env\Water Works\Rosemurgy Motors\Soil Analytical Results SUMMARY 061306

TABLE 1
PHASE II ENVIRONMENTAL SITE ASSESSMENT SOIL ANALYTICAL RESULTS
BOCANER PROPERTY
PLUMER STREET
WAUSAU, WI

Date-->			7/11/06	7/11/06	7/11/06	7/11/06	10/2/06	10/2/06
Sample-->			MW-1	MW-1	MW-2	MW-2	MW-4	MW-4
Sample Depth--(Feet)>			5-7'	7.5-9.5'	2.5-4.5'	7.5-9.5'	5-7'	7.5-9.5'
Borehole Column Location			Interface	Saturated	Vadose	Saturated	Interface	Saturated
Sampler-->			MR	MR	MR	MR	MR	MR
Detected VOC's (ug/kg)	GW RCL	DC RCL						
Benzene	5.1	1,490	<25	<25	<25	<25	<16	<16
Ethylbenzene	1,570	7,470	<25	<25	34	<25	<18	<18
Toluene	1,107	818,000	<25	30	66	<25	<17	<17
Xylenes (Total)	3,940	258,000	<50	<50	138	<50	<21	<21
Methly tert Butyl Ether	27	5,940	<25	<25	<25	<25	<11	<11
1,2,4-Trimethylbenzene	1,379	8,980	<25	<25	54	<25	<13	<13
1,3,5-Trimethylbenzene		182,000	<25	<25	32	<25	<13	<18
Naphthalene	658.7	5,150	<25	<25	32	<25	<18	<18
Isopropylbenzene	NS	NS	<25	<25	<25	<25	<17	<17
n-Propylbenzene	NS	NS	<25	<25	<25	<25	<21	<21
p-Isopropyltoluene	NS	NS	<25	<25	<25	<25	<24	<24
s-Butylbenzene	NS	NS	<25	<25	<25	<25	<24	<21
PAH's (ug/kg)								
1-Methyl Naphthalene	NS	15,600	<3.5	14	34	<4.0	<4.5	<5.0
2-Methyl Naphthalene	NS	229,000	<3.7	23	49	<4.1	<5.0	<5.6
Acenaphthene	NS	3,440,000	<3.5	<3.3	34	<3.9	<5.8	<6.4
Acenaphthylene	NS	NS	<3.4	6.2	35	<3.8	<8.1	<9.0
Anthracene	196,744	17,200,000	<4.2	6.2	120	<4.7	<3.9	13.1
Benzo (a) Anthracene	NS	148	<6.2	20	250	<6.9	<5.0	<5.6
Benzo (a) Pyrene	470	15	3.9	24	290	<3.8	<2.8	<3.1
Benzo (b) Fluoranthene	480	148	3.9	28	310	<3.7	<2.6	75.2
Benzo (g,h,i) Perylene	NS	NS	<4.2	18	110	<4.7	<4.9	<5.4
Benzo (k) Fluoranthene	NS	1,480	3.9	23	280	<4.0	<3.6	<3.9
Chrysene	1,451	14,800	<5.1	30	340	<5.7	<2.8	75.4
Dibenzo (a,h) Anthracene	NS	15	<3.2	4.9	38	<3.6	<3.3	<3.7
Fluoranthene	88,818	2,290,000	5.5	36	740	<3.8	<3.2	180
Fluorene	14,815	2,290,000	<4.0	<3.8	84	<4.5	<4.1	<4.5
Ideno (1,2,3-cd) Pyrene	NS	148	<2.9	14	100	<3.3	<2.7	<3.0
Naphthalene	659	5,150	<4.7	13	58	<5.2	<5.7	<6.2
Phenanthrene	NS	NS	<3.5	20	510	<3.9	<5.0	84.8
Pyrene	54,473	1,720,000	4.9	32	520	<3.2	<3.5	47.6
Metals (mg/kg)								
Arsenic	0.584	0.390	1.5	2.1	5.4	1.3	0.921	5.58
Barium	165	15,300	31	88	130	20	23.2	119
Cadmium	0.752	70	0.33	0.99	3.3	0.24	<0.0695	1.18
Chromium (Total)	360,000	NS	16	31	19	12	8.98	15.5
Lead	27	400	6.9	39	360	3.5	5.53	66.5
Mercury	0.208	3.13	0.015	0.024	0.27	0.0051	<0.019	0.199
Selenium	0.52	391	<0.95	<0.91	<0.92	<1.1	<0.736	<0.813
Silver	0.85	NS	<0.28	<0.27	0.35	<0.31	<0.245	<0.271

Notes:

GW RCL -Groundwater Pathway Residual Contaminant Level from EPA Web Calculator

DC RCL = Non-industrial Direct Contact Residual Contaminant Level from EPA Web Calculator

< - Concentration below listed laboratory detection limit

RCL exceedences are bold

PVOCs - Petroleum Volatile Organic Compounds

PAHs - Polynuclear Aromatic Compounds

NS= no standard

Bold

Table 1. Soil Analytical Data Summary - Metals, PCBs, VOCs, PAHs

Wausau Downtown River Corridor Brownfield Pilot Project
Site 39, 310 Plumer Street, Wausau, WI
Terracon Project Number 38027005

ANALYSES	RCL Direct Contact Non- Industrial	RCL Direct Contact Industrial	RCL Groundwater	SSL	SSRCL - Ingest/ Inhale	SSRCL to GW	SAMPLES										SAMPLES
							101	102	103	103	104	104	104R	105	105	105	106
Depth							0.5ft	0.5ft	0.5ft	2ft	0.5ft	2ft	0.5ft	0.5ft	2ft	2ft	
Date Collected							6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003
pH (EPA 9045)	NE	NE	NE	NE	NE	NE	7.50	7.23	7.88	6.17	6.30	6.06	6.82	7.51	7.90	-	-
Metals - EPA 6010 (mg/kg)																	
Arsenic	0.039	1.6	NE	NE	NE	NE	2.97	2.83	2.77	5.74	5.15	5.75	3.05	63.9	4.20	-	-
Barium	NE	NE	NE	NE	71,500	330	71.5	54.4	63.5	-	89.5	-	68.2	1,020	78.6	-	-
Cadmium	8	510	NE	NE	NE	NE	0.149	0.32	0.313	-	0.575	-	0.233	29.3	1.96	-	-
Chromium (total)	16,000	NE	NE	NE	NE	NE	14.1	7.78	9.58	-	11.7	-	6.69	67.9	17.4	-	-
Chromium (hexavalent)	14	200	NE	NE	NE	NE	-	-	-	-	-	-	-	-	-	-	-
Lead	50	500	NE	NE	NE	NE	19.7	41.1	84.9	38.1	151	356	52.7	7,410	309	-	-
Mercury	NE	NE	NE	NE	2.6	0.42	0.0429	0.136	0.0884	-	0.103	-	0.0777	3.49	0.114	-	-
PCBs - EPA 8082 (ug/kg)																	
PCB - 1016	NE	NE	NE	NE	NE	NE	<1.55	<1.61	<1.51	-	<145	-	-	-	<3.05	<161	-
PCB - 1221	NE	NE	NE	NE	NE	NE	<3.10	<3.22	<3.02	-	<291	-	-	-	<6.09	<323	-
PCB - 1223	NE	NE	NE	NE	NE	NE	<5.36	<5.58	<5.23	-	<503	-	-	-	<10.5	<559	-
PCB - 1242	NE	NE	NE	NE	NE	NE	<1.19	<1.24	<1.16	-	<112	-	-	-	<2.34	<124	-
PCB - 1248	NE	NE	NE	NE	NE	NE	<3.69	<3.84	<3.60	-	<347	-	-	-	<7.26	<385	-
PCB - 1254	NE	NE	NE	NE	NE	NE	<1.07	<1.12	55.6	-	<101	-	-	-	<2.11	<112	-
PCB - 1260	NE	NE	NE	NE	NE	NE	<1.67	<1.73	<1.63	-	<157	-	-	-	20.2	<174	-
VOC - EPA 8021 (mg/kg)																	
Benzene	1.10	1.10	0.0055	8.5	2.6	0.0046	<0.025	<0.025	<0.025	-	<1.00	-	<0.4	-	<0.025	<0.2	-
n-Butylbenzene	NE	NE	NE	NE	NE	NE	<0.025	<0.025	<0.025	-	2.82	-	8.84	-	<0.025	<0.2	-
Ethylbenzene	NE	NE	NE	4.6	14,000	1.5	<0.025	<0.025	<0.025	-	<1.00	-	<0.4	-	<0.025	<0.2	-
Isopropylbenzene	NE	NE	NE	NE	NE	NE	<0.025	<0.025	<0.025	-	<1.00	-	<0.4	-	<0.025	<0.2	-
p-Isopropyltoluene	NE	NE	NE	NE	NE	NE	<0.025	<0.025	<0.025	-	<1.00	-	<0.4	-	<0.025	<0.2	-
Naphthalene	NE	NE	NE	2.7	440	6.2	<0.025	<0.025	<0.025	-	<1.00	-	<0.4	-	0.159	6.38	-
n-Propylbenzene	NE	NE	NE	NE	NE	NE	<0.025	<0.025	<0.025	-	<1.00	-	<0.4	-	<0.025	<0.2	-
Toluene	NE	NE	NE	38	4,200	1.4	<0.025	<0.025	<0.025	-	<1.00	-	<0.4	-	<0.025	<0.2	-
1,2,4-Trimethylbenzene	NE	NE	NE	83	320	28	<0.025	<0.025	<0.025	-	<1.00	-	<0.4	-	0.0448	0.317	-
1,3,5-Trimethylbenzene	NE	NE	NE	11	190	13	<0.025	<0.025	<0.025	-	<1.00	-	2.08	-	<0.025	<0.2	-
o-Xylene	NE	NE	NE	NE	NE	21	<0.025	<0.025	<0.025	-	<1.00	-	<0.4	-	<0.025	<0.2	-
m,p-Xylene	NE	NE	NE	NE	1,600	23	<0.025	<0.025	<0.025	-	<1.00	-	<0.4	-	<0.025	0.267	-
Xylene (total)	NE	NE	NE	42	NE	NE	<0.05	<0.05	<0.05	-	<2.00	-	<0.8	-	<0.05	0.267	-
Polycyclic Aromatic Hydrocarbons (PAH) - EPA 8310 (mg/kg)																	
Benzo(a)anthracene	0.088	3.9	17	NE	NE	NE	<0.477	<0.991	<0.93	-	<8.95	-	-	-	<9.37	19.4	-
Benzo(a)pyrene	0.0088	0.39	48	NE	NE	NE	<0.596	<1.24	<1.16	-	<11.2	-	-	-	<11.7	15.9	-
Benzo(k)fluoranthene	0.88	39	870	NE	NE	NE	<0.596	<1.24	<1.16	-	<11.2	-	-	-	<11.7	26.0	-
Chrysene	8.8	390	37	NE	NE	NE	<0.477	<0.991	<0.93	-	<8.95	-	-	-	<9.37	22.4	-
D,n-butylphthalate	NE	NE	NE	NE	NE	NE	<0.238	<0.496	<0.465	-	<4.47	-	-	-	<4.69	33.4	-
Fluoranthene	600	40,000	500	NE	NE	NE	<0.298	<0.62	<0.581	-	<5.59	-	-	-	14.9	45.1	-
Indeno(1,2,3-cd)pyrene	0.088	3.9	680	NE	NE	NE	<0.417	<0.867	<0.814	-	<7.83	-	-	-	<8.20	12.5	-
Naphthalene	20	110	0.4	NE	NE	NE	<0.238	<0.496	<0.465	-	<4.47	-	-	-	<4.69	5.48	-
Phenanthrene	18	390	1.8	NE	NE	NE	<0.238	<0.496	<0.465	-	<4.47	-	-	-	11.5	36.0	-
Pyrene	500	30,000	8700	NE	NE	NE	<0.238	<0.496	<0.465	-	<4.47	-	-	-	12.3	42.2	-
Ammonia - EPA 350.2 (mg/kg)																	
Nitrate - EPA 9056 (mg/kg)							-	61.1	-	-	-	-	-	-	-	-	-
							-	<1.24	-	-	-	-	-	-	-	-	-

Explanation

< - less than

- Indicates this compound not analyzed

* - Duplicate Sample

mg/kg - milligrams per kilogram

NE - Indicates Generic RCL Not Established

PAH - Polycyclic Aromatic Hydrocarbons

PVOG - Petroleum Volatile Organic Compounds

RCL - Residual Contaminant Level (industrial & non-industrial) for direct contact per

NR720.11, NR746.06, and WDNR Soil Cleanup Levels for Polycyclic Aromatic

Hydrocarbons (PAHs) interim Guidance, April 1997

RCL Groundwater - Residual Contaminant Level for soil to groundwater route for PVOGs

per NR720.09, and WDNR Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons

(PAHs) interim Guidance, April 1997

SSL - Soil Screening Level for PVOGs per NR746.06

SSRCL Ingest/Inhale - Site Specific Residual Contaminant Levels for Ingestion or

Inhalation - industrial (see Appendices)

SSRCL to GW - Site Specific Residual Contaminant Levels to Groundwater - industrial

(see Appendices)

ug/kg - micrograms per kilogram

Concentration exceeds the RCL or SSRCL

Table 1. Soil Analytical Data

Page 6 of 6

Table 1. Soil Analytical Data Summary - Metals, PCBs, VOCs, PAHs

Wausau Downtown River Corridor Brownfield Pilot Project
Site 39, 310 Plumer Street, Wausau, WI
Terracon Project Number 38027005

ANALYSES	RCL Direct Contact Non- Industrial	RCL Direct Contact Industrial	RCL Groundwater	SSL	SSRCL - Ingest/Inhale	SSRCL to GW	SAMPLES									
							106R	108	108	110	110	110	111	111	112	112
Depth							2ft	0.5ft	2ft	0.5ft	2ft	4ft	0.5ft	2ft	0.5ft	2ft
Date Collected							6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003	6/12/2003
pH (EPA 9045)	NE	NE	NE	NE	NE	NE	-	7.82	7.70	7.17	7.79	7.62	7.31	7.94	6.51	8.14
Metals - EPA 6010 (mg/kg)																
Arsenic	0.039	1.6	NE	NE	NE	NE	-	18.0	15.6	59.3	36.1	5.6	12.3	20.4	3.45	3.62
Barium	NE	NE	NE	NE	71,500	330	-	438	-	1,560	926	-	340	621	102	-
Cadmium	8	510	NE	NE	NE	NE	-	11.9	4.69	29.0	20.1	0.866	17.7	17.8	0.848	-
Chromium (total)	16,000	NE	NE	NE	NE	NE	-	40.7	-	121	67.5	-	41.7	48.2	10.9	-
Chromium (hexavalent)	14	200	NE	NE	NE	NE	-	-	-	-	-	-	-	-	-	-
Lead	50	500	NE	NE	NE	NE	-	978	584	5,700	4,290	154	3,380	2,210	84.2	129
Mercury	NE	NE	NE	NE	2.6	0.42	-	1.43	-	3.21	1.42	-	1.19	1.48	0.486	-
PCBs - EPA 8082 (ug/kg)																
PCB - 1016	NE	NE	NE	NE	NE	NE	<82.8	-	-	-	<79.7	-	-	-	-	-
PCB - 1221	NE	NE	NE	NE	NE	NE	<166	-	-	-	<159	-	-	-	-	-
PCB - 1223	NE	NE	NE	NE	NE	NE	<287	-	-	-	<276	-	-	-	-	-
PCB - 1242	NE	NE	NE	NE	NE	NE	<63.7	-	-	-	<61.3	-	-	-	-	-
PCB - 1248	NE	NE	NE	NE	NE	NE	<197	-	-	-	<190	-	-	-	-	-
PCB - 1254	NE	NE	NE	NE	NE	NE	<57.3	-	-	-	<27.6	-	-	-	-	-
PCB - 1260	NE	NE	NE	NE	NE	NE	<89.2	-	-	-	<42.9	-	-	-	-	-
VOC - EPA 8021 (mg/kg)																
Benzene	1.10	1.10	0.0055	8.5	2.6	0.0046	-	-	-	-	0.246	-	-	-	-	-
n-Butylbenzene	NE	NE	NE	NE	NE	NE	-	-	-	-	0.185	-	-	-	-	-
Ethylbenzene	NE	NE	NE	4.6	14,000	1.5	-	-	-	-	1.08	-	-	-	-	-
Isopropylbenzene	NE	NE	NE	NE	NE	NE	-	-	-	-	0.231	-	-	-	-	-
p-Isopropyltoluene	NE	NE	NE	NE	NE	NE	-	-	-	-	0.333	-	-	-	-	-
Naphthalene	NE	NE	NE	2.7	440	6.2	-	-	-	-	0.841	-	-	-	-	-
n-Propylbenzene	NE	NE	NE	NE	NE	NE	-	-	-	-	0.285	-	-	-	-	-
Toluene	NE	NE	NE	38	4,200	1.4	-	-	-	-	0.842	-	-	-	-	-
1,2,4-Trimethylbenzene	NE	NE	NE	83	320	28	-	-	-	-	1.49	-	-	-	-	-
1,3,5-Trimethylbenzene	NE	NE	NE	11	190	13	-	-	-	-	0.739	-	-	-	-	-
o-Xylene	NE	NE	NE	NE	NE	21	-	-	-	-	0.985	-	-	-	-	-
m,p-Xylene	NE	NE	NE	NE	1,600	23	-	-	-	-	1.94	-	-	-	-	-
Xylene (total)	NE	NE	NE	42	NE	NE	-	-	-	-	2.925	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAH) - EPA 8310 (mg/kg)																
Benzo(a)anthracene	0.088	3.9	17	NE	NE	NE	17.7	-	-	-	<9.80	-	-	-	-	-
Benzo(a)pyrene	0.0088	0.39	48	NE	NE	NE	15.9	-	-	-	<12.3	-	-	-	-	-
Benzo(k)fluoranthene	0.88	39	870	NE	NE	NE	17.3	-	-	-	<12.3	-	-	-	-	-
Chrysene	8.8	390	37	NE	NE	NE	20.9	-	-	-	<9.80	-	-	-	-	-
Di-n-butylphthalate	NE	NE	NE	NE	NE	NE	<5.10	-	-	-	<4.90	-	-	-	-	-
Fluoranthene	600	40,000	500	NE	NE	NE	40.4	-	-	-	10.9	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	0.088	3.9	680	NE	NE	NE	11.8	-	-	-	<8.58	-	-	-	-	-
Naphthalene	20	110	0.4	NE	NE	NE	<5.10	-	-	-	<4.90	-	-	-	-	-
Phenanthrene	18	390	1.8	NE	NE	NE	29.4	-	-	-	9.03	-	-	-	-	-
Pyrene	500	30,000	8700	NE	NE	NE	36.7	-	-	-	10.4	-	-	-	-	-
Ammonia - EPA 350.2 (mg/kg)							-	-	-	-	-	-	-	-	-	-
Nitrate - EPA 9056 (mg/kg)							-	-	-	-	-	-	-	-	-	-

Explanation

< - less than

- Indicates this compound not analyzed

* - Duplicate Sample

mg/kg - milligrams per kilogram

NE - Indicates Generic RCL Not Established

PAH - Polycyclic Aromatic Hydrocarbons

PVOC - Petroleum Volatile Organic Compounds

RCL - Residual Contaminant Level (industrial & non-industrial) for direct contact per

NR720.11, NR746.06, and WDNR Soil Cleanup Levels for Polycyclic Aromatic

Hydrocarbons (PAHs) interim Guidance, April 1997

RCL Groundwater - Residual Contaminant Level for soil to groundwater route for PVOCs

per NR720.09, and WDNR Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons

(PAHs) interim Guidance, April 1997

SSL - Soil Screening Level for PVOCs per NR746.06

SSRCL Ingest/Inhale - Site Specific Residual Contaminant Levels for Ingestion or

inhalation - industrial (see Appendices)

SSRCL to GW - Site Specific Residual Contaminant Levels to Groundwater - industrial

(see Appendices)

ug/kg - micrograms per kilogram

Concentration exceeds the RCL or SSRCL

TABLE 2a
GROUNDWATER ANALYTICAL TABLE
BOCANER PROPERTY
PLUMER STREET
WAUSAU, WI

		MW-1							
		Date-->	7/13/06	10/2/06	5/19/08	8/12/08	11/20/08	2/25/09	3/10/16
		Sampler-->	REI	REI	REI	REI	REI	REI	REI
	ES	PAL							
VOC Parameters									
Benzene	5	0.5	<0.41	<0.31	<0.20	<0.20	<0.20	<0.20	<0.50
Ethylbenzene	700	140	<0.54	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50
Toluene	1,000	200	<0.67	<0.30	<0.40	<0.40	<0.40	<0.40	<0.50
Methyl tert Butyl Ether	60	12	<0.61	<0.30	<0.50	<0.50	<0.50	<0.50	<0.17
Total Xylenes	10,000	1,000	<1.8	<0.62	<0.40	<0.40	<0.40	<0.40	<1.50
Total Trimethylbenzenes	480	96	<0.97	<0.40	<0.20	<0.20	<0.20	<0.20	<1.00
Naphthalene	100	10	<0.74	<0.80	<1.00	<1.00	<1.00	<1.00	<2.5
Tetrachloroethene	5	0.5	0.77	0.83	<0.30	<0.30	<0.30	<0.30	<0.50
cis-1,2-Dichloroethylene	70	7	<0.83	<0.40	0.39	0.51	0.43	0.50	<0.26
Vinyl chloride	0.2	0.02	<0.18	<0.20	<0.20	0.22	<0.20	<0.20	<0.18
trans-1,2-Dichloroethylene			<0.20	<0.20	<0.20	<0.20	0.22	<0.20	<0.26
PAH Parameters									
Acenaphthene			<0.0082	<0.056	<0.060	<0.060	NA	NA	<0.0047
Acenaphylene			<0.0081	<0.056	<0.060	<0.060	NA	NA	<0.0047
Anthracene	3000	600	<0.012	<0.085	<0.090	<0.090	NA	NA	0.0059 J
Benzo(a) Anthracene			<0.016	<0.094	<0.100	<0.100	NA	NA	<0.0048
Benzo (a) Pyrene	0.2	0.02	<0.018	<0.019	<0.020	<0.020	NA	NA	<0.0042
Benzo (b) Fluoranthene	0.2	0.02	<0.016	<0.019	<0.020	<0.020	NA	NA	<0.0050
Benzo(ghi) Perylene			<0.019	<0.056	<0.060	<0.060	NA	NA	<0.0033
Benzo (k) Fluoranthene			<0.019	<0.066	<0.070	<0.070	NA	NA	<0.0053
Chrysene	0.2	0.02	<0.019	<0.019	<0.020	<0.020	NA	NA	<0.0040
Dibenzo(a,h)Anthracene			<0.019	<0.103	<0.110	<0.110	NA	NA	<0.0052
Fluoranthene	400	80	<0.015	<0.113	<0.120	<0.120	NA	NA	<0.0089
Fluorene	400	80	<0.0091	<0.113	<0.120	<0.120	NA	NA	<0.0038
Indeno(1,2,3-cd)Pyrene			<0.019	<0.113	<0.120	<0.120	NA	NA	<0.0034
1-Methyl Naphthalene			0.031	<0.075	<0.080	<0.080	NA	NA	0.0041 J
2-Methyl Naphthalene			0.064	<0.103	<0.110	<0.110	NA	NA	0.0053 J
Naphthalene	40	8	0.030	<0.103	<0.110	<0.110	NA	NA	0.010 J
Phenanthrene			<0.011	<0.103	<0.110	<0.110	NA	NA	<0.0072
Pyrene	250	50	<0.015	<0.094	<0.100	<0.100	NA	NA	<0.0073
Metals (ug/L)									
Arsenic	50	5	<0.40	<0.60	4.55	4.31	4.83	5.32	<7.2
Barium	2,000	400	170	142	123	129	119	98	112
Cadmium	5	0.5	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60
Chromium	100	10	1.3	<1.60	<1.60	<1.60	<1.60	<1.60	<2.1
Lead	15	1.5	<0.40	<0.30	<0.30	<0.30	<0.30	<0.30	<3.0
Mercury	2	0.2	<0.072	<0.070	<0.070	<0.070	0.107	<0.070	<0.10
Selenium	50	10	<4.0	<0.60	<0.60	<0.60	<0.60	<0.60	<6.7
Silver	50	10	<0.40	<0.20	<0.20	7.62	<0.20	<0.20	<2.7

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR 140.10 Preventative Action Limits

X = Not Detected

NA = Not Analyzed

PAL Exceeded =

ES exceeded =

Bold**Bold**

TABLE 2b
GROUNDWATER ANALYTICAL TABLE
BOCANER PROPERTY
PLUMER STREET
WAUSAU, WI

		MW-2							
		Date-->	7/13/06	10/2/06	5/19/08	8/12/08	11/20/08	2/25/09	3/10/16
		Sampler-->	REI	REI	REI	REI	REI	REI	REI
	ES	PAL							
VOC Parameters									
Benzene	5	0.5	<0.41	<0.31	<0.20	<0.20	<0.20	<0.20	<0.50
Ethylbenzene	700	140	<0.54	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50
Toluene	1,000	200	<0.67	<0.30	<0.40	<0.40	<0.40	<0.40	<0.50
Methyl tert Butyl Ether	60	12	<0.61	<0.30	<0.50	<0.50	<0.50	<0.50	<0.17
Total Xylenes	10,000	1,000	<1.8	<0.62	<0.40	<0.40	<0.40	<0.40	<1.50
Total Trimethylbenzenes	480	96	<0.97	<0.40	<0.20	<0.20	<0.20	<0.20	<1.00
Naphthalene	100	10	<0.74	<0.80	<1.00	<1.00	<1.00	<1.00	<2.5
cis-1,2-Dichloroethylene	70	7	<0.83	<0.40	<0.30	<0.30	<0.30	0.30	<0.26
Tetrachloroethene	5	0.5	<0.45	<0.71	<0.30	<0.30	<0.30	<0.30	<0.50
PAH Parameters									
Acenaphthene			0.016	<0.056	<0.060	<0.060	NA	NA	0.087
Acenaphylene			<0.0081	<0.056	<0.060	<0.060	NA	NA	0.014 J
Anthracene	3000	600	0.024	<0.085	<0.090	<0.090	NA	NA	0.052
Benzo(a) Anthracene			<0.016	<0.094	<0.100	<0.100	NA	NA	0.0093 J
Benzo (a) Pyrene	0.2	0.02	<0.018	<0.019	<0.020	<0.020	NA	NA	<0.0042
Benzo (b) Fluoranthene	0.2	0.02	<0.016	<0.019	<0.020	<0.020	NA	NA	0.0086 J
Benzo(ghi) Perylene			<0.019	<0.056	<0.060	<0.060	NA	NA	0.0039 J
Benzo (k) Fluoranthene			<0.019	<0.066	<0.070	<0.070	NA	NA	<0.0054
Chrysene	0.2	0.02	<0.019	<0.019	<0.020	<0.020	NA	NA	0.011 J
Dibenzo(a,h)Anthracene			<0.019	<0.103	<0.110	<0.110	NA	NA	<0.0053
Fluoranthene	400	80	0.069	<0.113	<0.120	<0.120	NA	NA	0.047 J
Fluorene	400	80	0.020	<0.113	<0.120	<0.120	NA	NA	0.084
Indeno(1,2,3-cd)Pyrene			<0.019	<0.113	<0.120	<0.120	NA	NA	<0.0034
1-Methyl Naphthalene			0.034	<0.075	<0.080	<0.080	NA	NA	0.110
2-Methyl Naphthalene			0.051	<0.103	<0.110	<0.110	NA	NA	0.051
Naphthalene	40	8	0.042	<0.103	<0.110	<0.110	NA	NA	0.240
Phenanthrene			0.087	<0.103	<0.110	<0.110	NA	NA	0.078
Pyrene	250	50	0.054	<0.094	<0.100	<0.100	NA	NA	0.046 J
Metals (ug/L)									
Arsenic	50	5	1.4	0.87	<0.60	0.7	2.62	1.56	<7.2
Barium	2,000	400	170	128	574	217	196	203	1,230
Cadmium	5	0.5	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60
Chromium	100	10	3.3	<1.60	<1.60	<1.60	<1.60	<1.60	<2.1
Lead	15	1.5	<0.40	<0.30	<0.30	<0.30	<0.30	<0.30	<3.0
Mercury	2	0.2	<0.072	0.316	<0.070	<0.070	0.097	<0.070	<0.10
Selenium	50	10	<4.0	<0.60	<0.60	<0.60	<0.60	<0.60	<6.7
Silver	50	10	<0.40	<0.20	0.22	7.43	<0.20	<0.20	<2.7

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR 140.10 Preventative Action Limits

X = Not Detected

NA = Not Analyzed

PAL Exceeded =

ES exceeded =

Bold**Bold**

TABLE 2c
GROUNDWATER ANALYTICAL RESULTS
UNDEVELOPED ROSEMURGY PROPERTY
218 SOUTH 14TH AVENUE
WAUSAU, WI

MW-3

		Date-->	5/12/06	10/2/06	
		Sampler-->	MR	MR	
	ES	PAL			
VOC Parameters					
Benzene	5	0.5	<0.41	<0.31	
Ethylbenzene	700	140	<0.54	<0.50	
Toluene	1,000	200	<0.67	<0.30	
Methyl tert Butyl Ether	60	12	<0.61	<0.30	
Total Xylenes	10,000	1,000	<1.8	<0.62	
Total Trimethylbenzenes	480	96	<0.97	<0.40	
Naphthalene	40	8	<0.74	<0.80	
Tetrachloroethene	5	0.5	<0.45	<0.71	
PAH Parameters					
Acenaphthene			0.013	<0.056	
Acenaphylene			<0.0081	<0.056	
Anthracene	3000	600	0.046	<0.085	
Benzo(a) Anthracene			0.042	<0.094	
Benzo (a) Pyrene	0.2	0.02	0.031	<0.019	
Benzo (b) Fluoranthene	0.2	0.02	0.033	<0.019	
Benzo(ghi) Perylene			0.026	<0.056	
Benzo (k) Fluoranthene			0.029	<0.066	
Chrysene	0.2	0.02	0.036	<0.019	
Dibenzo(a,h)Anthracene			<0.019	<0.103	
Fluoranthene	400	80	0.11	<0.113	
Fluorene	400	80	0.015	<0.113	
Indeno(1,2,3-cd)Pyrene			0.023	<0.113	
1-Methyl Naphthalene			0.023	<0.075	
2-Methyl Naphthalene			0.027	<0.103	
Naphthalene	40	8	0.038	<0.103	
Phenanthrene			0.073	<0.103	
Pyrene	250	50	0.081	<0.094	
Metals (ug/L)					
Arsenic	50	5	<0.40	<0.60	
Barium	2,000	400	570	805	
Cadmium	5	0.5	<0.40	<0.20	
Chromium	100	10	1.4	<1.60	
Lead	15	1.5	<0.40	<0.30	
Mercury	2	0.2	<0.072	<0.070	
Selenium	50	10	<4.0	<0.60	
Silver	50	10	<0.40	<0.20	

Notes:

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR 140.10 Preventative Action Limits

X = Not Detected

NA = Not Analyzed

PAL Exceeded =

ES exceeded =

Bold**Bold**

TABLE 2c
GROUNDWATER ANALYTICAL TABLE
BOCANER PROPERTY
PLUMER STREET
WAUSAU, WI

		MW-4						
		Date-->	10/2/06	5/19/08	8/12/08	11/20/08	2/25/09	3/10/16
		Sampler-->	REI	REI	REI	REI	REI	REI
	ES	PAL						
VOC Parameters								
Benzene	5	0.5	<0.31	<0.20	<0.20	<0.20	<0.20	<0.50
Ethylbenzene	700	140	<0.50	<0.20	<0.20	<0.20	<0.20	<0.50
Toluene	1,000	200	<0.30	<0.40	<0.40	<0.40	<0.40	<0.50
Methyl tert Butyl Ether	60	12	<0.30	<0.50	<0.50	<0.50	<0.50	<0.17
Total Xylenes	10,000	1,000	<0.62	<0.40	<0.40	<0.40	<0.40	<1.50
Total Trimethylbenzenes	480	96	<0.40	<0.20	<0.20	<0.20	<0.20	<1.00
Naphthalene	100	10	<0.80	<1.00	<1.00	<0.20	<0.20	<2.5
Tetrachloroethene	5	0.5	1.00	<0.30	0.95	0.93	1.03	<0.50
PAH Parameters								
Acenaphthene			<0.056	<0.060	<0.060	NA	NA	<0.0047
Acenaphylene			<0.056	<0.060	<0.060	NA	NA	<0.0047
Anthracene	3000	600	<0.085	<0.090	<0.090	NA	NA	<0.0038
Benzo(a) Anthracene			<0.094	<0.100	<0.100	NA	NA	<0.0049
Benzo (a) Pyrene	0.2	0.02	<0.019	<0.020	<0.020	NA	NA	<0.0042
Benzo (b) Fluoranthene	0.2	0.02	<0.019	<0.020	<0.020	NA	NA	<0.0051
Benzo(ghi) Perylene			<0.056	<0.060	<0.060	NA	NA	<0.0033
Benzo (k) Fluoranthene			<0.066	<0.070	<0.070	NA	NA	<0.0054
Chrysene	0.2	0.02	<0.019	<0.020	<0.020	NA	NA	<0.0040
Dibenzo(a,h)Anthracene			<0.103	<0.110	<0.110	NA	NA	<0.0053
Fluoranthene	400	80	<0.113	<0.120	<0.120	NA	NA	<0.0090
Fluorene	400	80	<0.113	<0.120	<0.120	NA	NA	<0.0038
Indeno(1,2,3-cd)Pyrene			<0.113	<0.120	<0.120	NA	NA	<0.0034
1-Methyl Naphthalene			<0.075	<0.080	<0.080	NA	NA	0.0036 J
2-Methyl Naphthalene			<0.103	<0.110	<0.110	NA	NA	0.0053 J
Naphthalene	40	8	<0.103	<0.110	<0.110	NA	NA	0.010 J
Phenanthrene			<0.103	<0.110	<0.110	NA	NA	<0.0073
Pyrene	250	50	<0.094	<0.100	<0.100	NA	NA	<0.0073
Metals (ug/L)								
Arsenic	50	5	<0.60	<0.60	<0.60	1.4	0.82	<7.2
Barium	2,000	400	58.8	224	52.4	40.1	36.9	48.3
Cadmium	5	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.60
Chromium	100	10	<1.60	<1.60	<1.60	<1.60	<1.60	<2.1
Lead	15	1.5	<0.30	<0.30	<0.30	<0.30	<0.30	<3.0
Mercury	2	0.2	<0.70	<0.070	<0.070	0.119	<0.070	<0.10
Selenium	50	10	<0.60	<0.60	<0.60	<0.60	<0.60	<6.7
Silver	50	10	<0.20	0.26	2.78	<0.20	<0.20	<2.7

Notes:

ES = NR140.10 Enforcement Standards

PAL = NR 140.10 Preventative Action Limits

X = Not Detected

NA = Not Analyzed

PAL Exceeded =

Bold

ES exceeded =

Bold

TABLE 2e
GROUNDWATER ANALYTICAL RESULTS
UNDEVELOPED ROSEMURGY PROPERTY
218 SOUTH 14TH AVENUE
WAUSAU, WI

		MW-5			
		Date-->	11/21/06		
		Sampler-->	JS		
	ES	PAL			
VOC Parameters					
Benzene	5	0.5	2.26		
Ethylbenzene	700	140	3.10		
Toluene	1,000	200	3.74		
Methyl tert Butyl Ether	60	12	<0.30		
Total Xylenes	10,000	1,000	25.8		
Total Trimethylbenzenes	480	96	14.1		
Naphthalene	40	8	3.25		
Tetrachloroethene	5	0.5	<0.71		
PAH Parameters					
Acenaphthene			1.40		
Acenaphylene			<0.056		
Anthracene	3000	600	<0.085		
Benzo(a) Anthracene			<0.094		
Benzo (a) Pyrene	0.2	0.02	<0.019		
Benzo (b) Fluoranthene	0.2	0.02	3.66		
Benzo(ghi) Perylene			3.20		
Benzo (k) Fluoranthene			2.59		
Chrysene	0.2	0.02	<0.019		
Dibenzo(a,h)Anthracene			<0.103		
Fluoranthene	400	80	<0.113		
Fluorene	400	80	<0.113		
Indeno(1,2,3-cd)Pyrene			1.89		
1-Methyl Naphthalene			1.04		
2-Methyl Naphthalene			1.33		
Naphthalene	40	8	<0.103		
Phenanthrene			3.87		
Pyrene	250	50	<0.094		
Metals (ug/L)					
Arsenic	50	5	5.07		
Barium	2,000	400	622		
Cadmium	5	0.5	<0.20		
Chromium	100	10	<1.60		
Lead	15	1.5	10.3		
Mercury	2	0.2	<0.070		
Selenium	50	10	6.92		
Silver	50	10	<0.20		

Notes:**Notes:**

ES = NR140.10 Enforcement Standards

PAL = NR 140.10 Preventative Action Limits

X = Not Detected

NA = Not Analyzed

PAL Exceeded =

ES exceeded =

Bold**Bold**

APPENDIX C

EPA PCS Form

Pre-CERCLA Screening Checklist/Decision Form

This form is used in conjunction with a site map and any additional information required by the EPA Region to document completion of a Pre-CERCLA Screening (PCS). The form includes a decision on whether a site should be added to the Superfund program's active site inventory for further investigation. This checklist replaces Attachment A in the December 2016 PCS Guidance document. A current version of the PCS checklist and additional information is available at: <https://www.epa.gov/superfund/pre-cercla-screening>.

Region: 5 State/Territory: WI Tribe: _____ EPA ID No. (If Available) _____

Site Name: Undeveloped Rosemurgy Property

Other Site Name(s): _____

Site Location: 218 S 4th St
(Street)

7 Wausau WI Marathon 54403 ☐
Congressional (City) (State/Terr.) (County) (Zip+4) (No Zip Available)

If no street address is available: _____
(Township-Range) (Section)

Checklist Preparer: Matthew Vitale, Hydrogeologist 08/14/2020
(Name / Title) (Date)

Wisconsin Department of Natural Resources (715) 492-1222
(Organization) (Phone)

1300 W Clairemont Ave matthew.vitale@wisconsin.gov
(Street) e-Mail

Eau Claire WI Eau Claire 54701-
(City) (State/Terr.) (County) (Zip+4)

Site Contact Info/Mailing Address: Rosewell Properties LLC LTD, 100 N Center St
Newton Falls, OH 44444-1321

CERCLA 105d Petition for Preliminary Assessment? No If Yes, Petition Date (mm/dd/yyyy): _____

RCRA Subtitle C Site Status: Is site in RCRA Info? No If Yes, RCRA Info Handler ID #: _____

Ownership Type: Private Additional RCRA Info ID #(s): _____

Site Type: Other State ID #(s): 02-37-548031

Site Sub-Type: Unknown Other ID #(s): _____

Federal Facility? No Federal Facility Owner: (Make selection)

Formerly Used Defense Site (FUDS)? Undetermined

Federal Facility Docket? No If Yes, FF Docket Listing Date (mm/dd/yyyy): _____

Federal Facility Docket Reporting Mechanism: (Make selection)

Native American Interest? (Make selection) If Yes, list Tribe: _____

Additional Tribe (s): (Make Selection)

Additional Tribe (s): (Make Selection)

Site Description

Use this section to briefly describe site background and conditions if known or (easily) available, such as: operational history; physical setting and land use; site surface description, soils, geology and hydrogeology; source and waste characteristics; hazardous substances/contaminants of concern; historical releases, previous investigations and cleanup activities; previous regulatory actions, including permitting and enforcement actions; institutional controls; and community interest.

The subject parcel is an undeveloped gravel parking lot, approximately 1.03 acres in size. Past land uses of the subject parcel include residential, livestock sales, auto parking, postal service and an automobile dealership.

The presence of a gasoline tank in the 1923-1953 Sanborn Fire Insurance Map, 218 S 4th St along with the potential automobile repair activities and adjacent land uses (junk storage and reclamation which included automobiles and batteries) are likely contributors to the on site soil contamination.

A steep incline in land surface elevations occurs along the northern property boundary up towards the adjacent property.



Geospatial Information

Latitude: 44.95565 **Longitude:** -89.62783
Decimal Degree North (e.g., 38.859156) Decimal Degree West (e.g., 77.036783)

Provide 4 significant digits at a minimum, more if your collection method generates them.

Except for certain territories in the Pacific Ocean, all sites in U.S. states and territories are located within the northern and western hemispheres and will have a positive latitude sign and negative longitude sign. Coordinate signs displayed above are based on the State/Territory entry on page A-1. Geospatial data tips from the PCS Guidance document are available [here](#).

Point Description: Select the option below that best represents the site point for future reference and to distinguish it from any nearby sites. See additional information [here](#).

- ☐ Geocoded (address-matched) Site Address
☐ Site Entrance (approximate center of curb-cut)
☒ Approximate Center of Site
☐ Other Distinguishing Site Feature (briefly describe):

Point Collection Method: Check the method used to collect the coordinates above and enter the date of collection. See additional information [here](#).

- ☒ Online Map Interpolation
☐ GPS (handheld, smartphone, other device or technology with accuracy range < 25 meters)
☐ GPS Other (accuracy range is ≥ 25 meters or unspecified)
☐ Address Matching: Urban
☐ Address Matching: Rural
☐ Other Method (briefly describe below):

Collection Date (mm/dd/yyyy): _____

POINT-SELECTION CONSIDERATIONS

- Often the best point is a feature associated with the environmental release or that identifies the site visually.
- Use the curb cut of the entrance to the site if there is a clear primary entrance and it is a good identifier for the overall location.
- The approximate center of the site (a guess at the centroid) is useful for large-area sites or where there are no appropriate distinguishing features.
- Use the geocoded address if that is the only or best option available, but if possible use something more representative for sites larger than 50 acres.

Complete this checklist to help determine if a site should be added to the Superfund Active site inventory. See Section 3.6 of the PCS guidance for additional information.

	YES	NO	Unknown
1. An initial search for the site in EPA's Superfund active, archive and non-site inventories should be performed prior to starting a PCS. Is this a new site that does not already exist in these site inventories?	☒	☐	☐
2. Is there evidence of an actual release or a potential to release?	☒	☐	☐
3. Are there possible targets that could be impacted by a release of contamination at the site?	☒	☐	☐
4. Is there documentation indicating that a target has been exposed to a hazardous substance released from the site?	☐	☒	☐
5. Is the release of a naturally occurring substance in its unaltered form, or is it altered solely through naturally occurring processes or phenomena, from a location where it is naturally found?	☐	☒	☐
6. Is the release from products which are part of the structure of, and result in exposure within, residential buildings or business or community structures?	☐	☒	☐
7. If there has been a release into a public or private drinking water supply, is it due to deterioration of the system through ordinary use?	☐	☒	☐
8. Are the hazardous substances possibly released at the site, or is the release itself, excluded from being addressed under CERCLA?	☐	☒	☐
9. Is the site being addressed under RCRA corrective action or by the Nuclear Regulatory Commission?	☐	☒	☐
10. Is another federal, state, tribe or local government environmental cleanup program other than site assessment actively involved with the site (e.g., state voluntary cleanup program)?	☐	☒	☐
11. Is there sufficient documentation or evidence that demonstrates there is no likelihood of a significant release that could cause adverse environmental or human health impacts?	☐	☒	☐
12. Are there other site-specific situations or factors that warrant further CERCLA remedial/integrated assessment or response?	☐	☒	☐

Preparer's Recommendation: ☒ Add site to the Superfund Active site inventory.
☐ Do not add site to the Superfund Active site inventory.

Please explain recommendation below:

PCS Summary and Decision Rationale

Use this section to summarize PCS findings and support the decision to add or not add the site to the Superfund active site inventory for further investigation. Information does not need to be specific but, where known, can include key factors such as source and waste characteristics (e.g., drums, contaminated soil); evidence of release or potential release; threatened targets (e.g., drinking water wells); key sampling results (if available); CERCLA eligibility; involvement of other cleanup programs; and other supporting factors. Attach additional pages as necessary.

Analytical results from a 2006 Phase II Environmental Site Assessment indicate that elevated levels of metals and Polynuclear Aromatic Hydrocarbon (PAH) compounds are present in shallow soils at the site. The property is currently vacant with no site controls to prevent trespassing or potential exposure.

In 2008 a Notice of Contamination was recorded with the Marathon County Register of Deeds following enforcement action against the current property owner.

Matthew Vitale

State staff/State contractor

08/14/2020

Checklist Preparer Name

Checklist Preparer Organization

Date

EPA Regional Review and Pre-CERCLA Screening Decision

Add site to the Superfund active site inventory for completion of a:

- ☒ Standard/full preliminary assessment (PA)
☐ Abbreviated preliminary assessment (APA)
☐ Combined preliminary assessment/site inspection (PA/SI)
☐ Integrated removal assessment and preliminary assessment
☐ Integrated removal assessment and combined PA/SI
☐ Other: _____

Do not add site to the Superfund active site inventory. Site is:

- ☐ Not a valid site or incident
☐ Being addressed by EPA's removal program
☐ Being addressed by a state cleanup program
☐ Being addressed by a tribal cleanup program
☐ Being addressed under the Resource Conservation and Recovery Act
☐ Being addressed by the Nuclear Regulatory Commission
☐ Other: _____

Optional- Print name of EPA Site Assessor making this decision: Erica Aultz, Site Assessment Manager

EPA Regional Approval: (Enter Date and then click this box to initiate digital signature stamp)

Digitally signed by ERICA
AULTZ
Date: 2020.09.04 15:37:34
-05'00'

Date

09/04/2020

Site Description*(All text as entered on page A-2)*

The subject parcel is an undeveloped gravel parking lot, approximately 1.03 acres in size. Past land uses of the subject parcel include residential, livestock sales, auto parking, postal service and an automobile dealership.

The presence of a gasoline tank in the 1923-1953 Sanborn Fire Insurance Map, 218 S 4th St along with the potential automobile repair activities and adjacent land uses (junk storage and reclamation which included automobiles and batteries) are likely contributors to the on site soil contamination.

A steep incline in land surface elevations occurs along the northern property boundary up towards the adjacent property.

Site geology consists of a fine to medium grained sand with silt and trace gravel.

Depth to groundwater at the site is approximately 8 feet below ground surface. The direction of groundwater flow is southwest with natural discharge to the Wisconsin River.

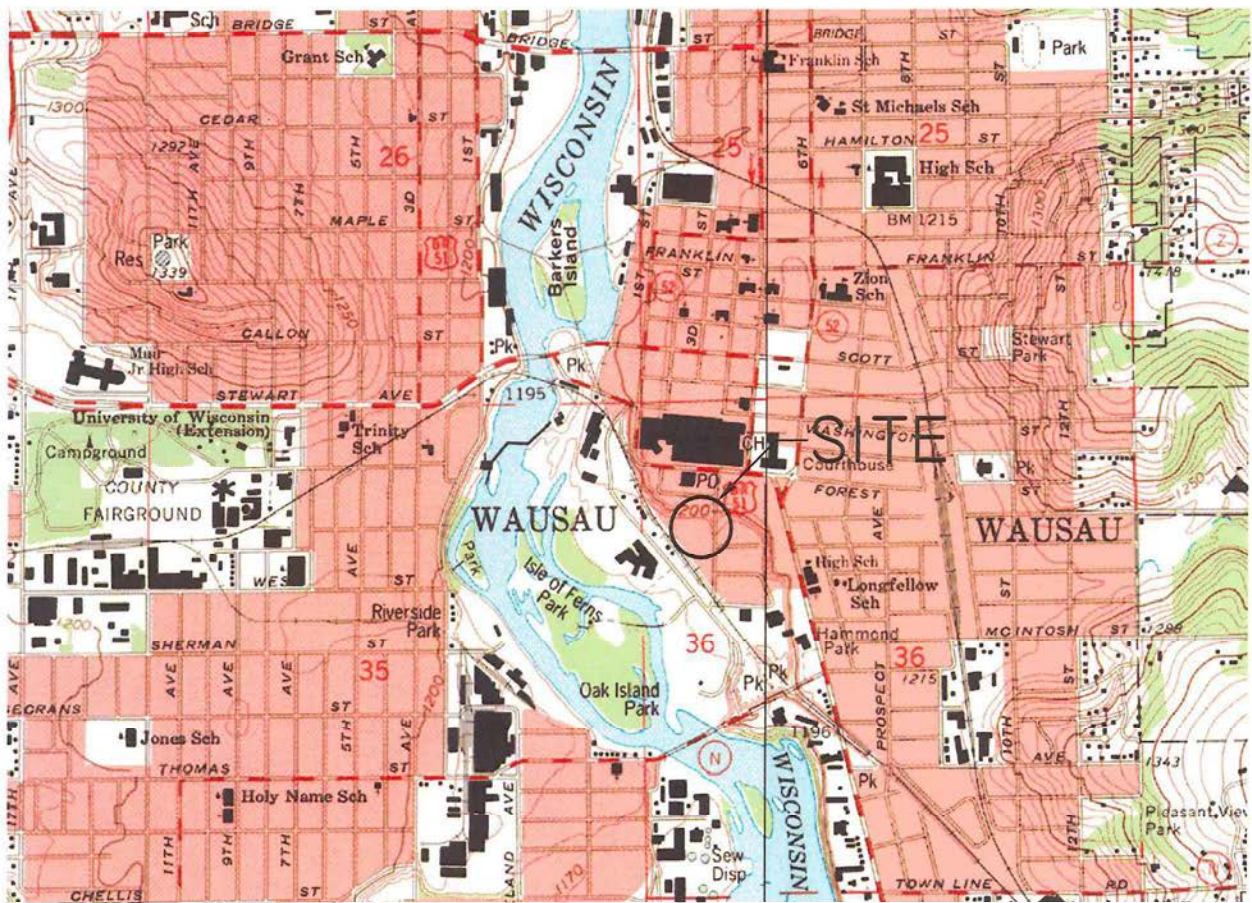
Analytical results from a 2006 Phase II Environmental Site Assessment indicate that elevated levels of metals and Polynuclear Aromatic Hydrocarbon (PAH) compounds are present in shallow soils at the site. Samples collected from groundwater monitoring wells contained detections of Volatile organic compounds (VOCs), PAHs, and metals.

In 2008 a Notice of Contamination was recorded with the Marathon County Register of Deeds following enforcement action against the current property owner.

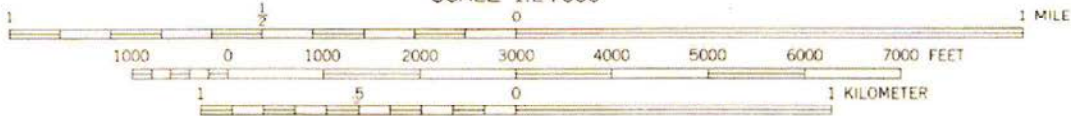
PCS Summary and Decision Rationale*(All text as entered on page A-4)*

Analytical results from a 2006 Phase II Environmental Site Assessment indicate indicate that elevated levels of metals and Polynuclear Aromatic Hydrocarbon (PAH) compounds are present in shallow soils at the site. The property is currently vacant with no site controls to prevent trespassing or potential exposure.

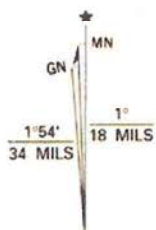
In 2008 a Notice of Contamination was recorded with the Marathon County Register of Deeds following enforcement action against the current property owner.



SCALE 1:24 000



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929



UTM GRID AND 1993 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

WAUSAU WEST, WIS.

NW/4 WAUSAU 15' QUADRANGLE
44089-H6-TF-024

1993

DMA 3073 1 NW - SERIES V861



QUADRANGLE LOCATION

REI Engineering, INC.

UNDEVELOPED ROSEMURGY PROPERTY
218 S. 4TH STREET
WAUSAU, WI

FIGURE 1 : SITE VICINITY MAP

PROJECT NO.	4322	DRAWN BY:	MAH	DATE:	12/15/06
-------------	------	-----------	-----	-------	----------

APPENDIX D

Site Photographs

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Undeveloped Rosemurgy Property**

LOCATION: 218 S 4th Street, Wausau, WI

U.S. EPA ID: WIN000520252

WDNR BRRTS ID#: 02-37-548031



DATE: 10/30/2020

TIME: 1020

DIRECTION OF PHOTOGRAPH: NW

PHOTOGRAPHED BY: M. Vitale

WEATHER CONDITIONS: Sunny, 40° F

DESCRIPTION: Entrance to site from S 4th Street, from the right of photograph

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Undeveloped Rosemurgy Property**

LOCATION: 218 S 4th Street, Wausau, WI

U.S. EPA ID: WIN000520252

WDNR BRRTS ID#: 02-37-548031



DATE: 10/30/2020

TIME: 1025

DIRECTION OF PHOTOGRAPH: W

PHOTOGRAPHED BY: M. Vitale

WEATHER CONDITIONS: Sunny, 40° F

DESCRIPTION: Western site boundary, gravel lot turns to grass before increase in elevation and fencing on adjacent Bocaner property

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Undeveloped Rosemurgy Property**

LOCATION: 218 S 4th Street, Wausau, WI

U.S. EPA ID: WIN000520252

WDNR BRRTS ID#: 02-37-548031



DATE: 10/30/2020

TIME: 1026

DIRECTION OF PHOTOGRAPH: N

PHOTOGRAPHED BY: M. Vitale

WEATHER CONDITIONS: Sunny, 40° F

DESCRIPTION: Northern property boundary at base of escarpment, grown in with trees and tall grass

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Undeveloped Rosemurgy Property**

LOCATION: 218 S 4th Street, Wausau, WI

U.S. EPA ID: WIN000520252

WDNR BRRS ID#: 02-37-548031



DATE: 10/30/2020

TIME: 1027

DIRECTION OF PHOTOGRAPH: NE

PHOTOGRAPHED BY: M. Vitale

WEATHER CONDITIONS: Sunny, 40° F

DESCRIPTION: Debris pile along northern property boundary, containing concrete, asphalt, wood, and brick

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Undeveloped Rosemurgy Property**

LOCATION: 218 S 4th Street, Wausau, WI

U.S. EPA ID: WIN000520252

WDNR BRRTS ID#: 02-37-548031



DATE: 10/30/2020

TIME: 1027

DIRECTION OF PHOTOGRAPH: N

PHOTOGRAPHED BY: M. Vitale

WEATHER CONDITIONS: Sunny, 40° F

DESCRIPTION: Concrete debris on slope of escarpment

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Undeveloped Rosemurgy Property**

LOCATION: 218 S 4th Street, Wausau, WI

U.S. EPA ID: WIN000520252

WDNR BRRTS ID#: 02-37-548031



DATE: 10/30/2020

TIME: 1050

DIRECTION OF PHOTOGRAPH: S

PHOTOGRAPHED BY: M. Vitale

WEATHER CONDITIONS: Sunny, 40° F

DESCRIPTION: Tree line along southern property boundary

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Undeveloped Rosemurgy Property**

LOCATION: 218 S 4th Street, Wausau, WI

U.S. EPA ID: WIN000520252

WDNR BRRTS ID#: 02-37-548031



DATE: 10/30/2020

TIME: 1055

DIRECTION OF PHOTOGRAPH: W

PHOTOGRAPHED BY: M. Vitale

WEATHER CONDITIONS: Sunny, 40° F

DESCRIPTION: USPS parking lot atop escarpment along northern site boundary

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Undeveloped Rosemurgy Property**

LOCATION: 218 S 4th Street, Wausau, WI

U.S. EPA ID: WIN000520252

WDNR BRRTS ID#: 02-37-548031



DATE: 10/30/2020

TIME: 1040

DIRECTION OF PHOTOGRAPH: W

PHOTOGRAPHED BY: M. Vitale

WEATHER CONDITIONS: Sunny, 40° F

DESCRIPTION: Bocaner Property south of the Site

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Undeveloped Rosemurgy Property**

LOCATION: 218 S 4th Street, Wausau, WI

U.S. EPA ID: WIN000520252

WDNR BRRTS ID#: 02-37-548031



DATE: 10/30/2020

TIME: 1020

DIRECTION OF PHOTOGRAPH: E

PHOTOGRAPHED BY: M. Vitale

WEATHER CONDITIONS: Sunny, 40° F

DESCRIPTION: Property across S 4th Street from Site entrance

APPENDIX E

Reference Documents
(or portions of)



Undeveloped Rosemurgy Property



Legend

- Open Site
- Closed Site
- Continuing Obligations Apply
- Facility-wide Site
- County Tax Parcels

0.0 0 0.02 0.0 Miles

NAD_1983_HARN_Wisconsin_TM

1: 990



DISCLAIMER: The information shown on these maps has been obtained from various sources, and are of varying age, reliability and resolution. These maps are not intended to be used for navigation, nor are these maps an authoritative source of information about legal land ownership or public access. No warranty, expressed or implied, is made regarding accuracy, applicability for a particular use, completeness, or legality of the information depicted on this map. For more information, see the DNR Legal Notices web page: <http://dnr.wi.gov/org/legal/>

Note: Not all sites are mapped.

Notes

Reference 1

Reference 3



[Home](#) < [Counties](#) < [Marathon](#) < Climate

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[Find Events](#)
[FAQ](#)

[Attractions](#) | [Almanac](#) | [Local Information](#) | [Wisconsin](#) | [Store](#) | [Lodging](#) | [Maps](#) | [Weather](#)

county location



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Climate Data for Marathon County, Wisconsin

Climate Normals and Growing Season Summary

More Local Information

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[Local Events](#)

[Local Attractions](#)

[County Map](#)

[Climate Table](#)

[Data Reports](#)

[Wisconsin Hospitals](#)

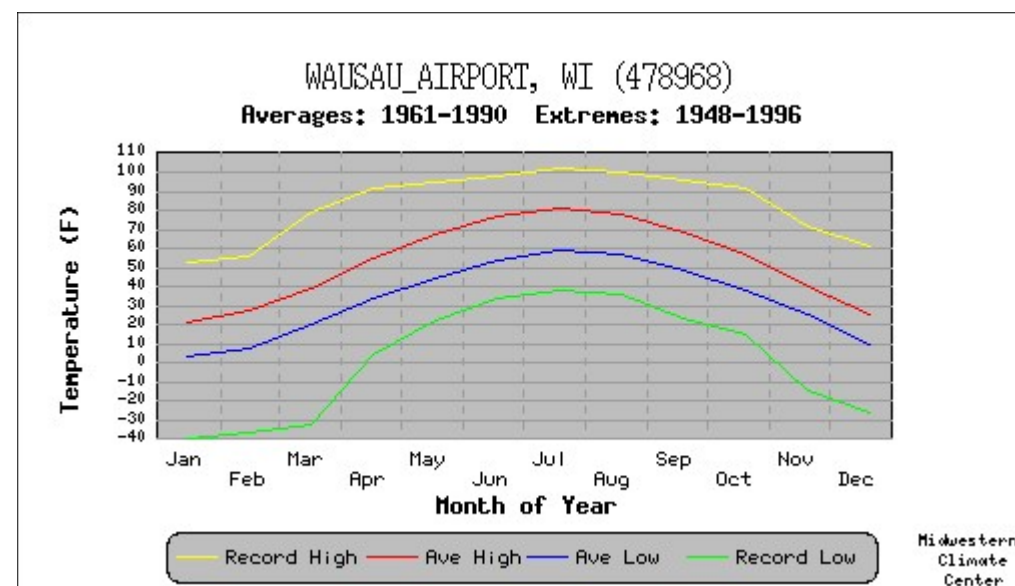


Chart courtesy of the [Midwestern Regional Climate Center](#).

Growing Season Summary:

Median date of last frost in the spring: May 8. [Last Spring Frost Zones](#).

Reference 3

(The last frost occurs on or after May 23 in 10 percent of the years.)

Median date of first frost in the fall: October 2. [First Fall Frost Zones](#).

(The first frost occurs on or before September 21 in 10 percent of the years.)

Median growing season: 150 days. **Range:** 128 to 171 days.

For perennials, landscape plantings and fruit trees, see our [Map of USDA Plant Hardiness Zones for Wisconsin](#).

Climate Normals	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Ave Daily High (F°)	21.3	27.0	38.4	54.0	67.4	76.0	80.8	77.6	67.9	56.1	39.9	25.5
Ave Daily Low (F°)	2.8	6.8	19.4	33.3	44.4	53.5	59.1	56.8	48.0	37.7	25.1	9.8
Growing Degree Days	0	1	16	111	295	460	610	537	308	129	18	1
Heating Degree Days	1643	1349	1119	639	313	85	18	44	217	561	975	1466
Cooling Degree Days	0	0	0	0	31	79	173	112	7	0	0	0
Ave Precipitation (")	0.94	0.87	1.96	2.75	3.62	4.01	3.89	4.38	4.33	2.64	2.00	1.43
Ave Snowfall (")	11.7	8.2	10.3	2.3	0.1	0.0	0.0	0.0	0.0	0.8	5.4	13.2

Data from the weather station at Wausau FAA Airport, latitude 44°55' N, longitude 89°37' W, elevation 1196 ft.

[Climate Notes](#)

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State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
1300 W. Clairemont Ave.
Eau Claire WI 54701

Scott Walker, Governor
Daniel L. Meyer, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



July 23, 2018

Kevin Fabel
City of Wausau
407 Grant Street
Wausau, WI 54403

Subject: Final Case Closure with Continuing Obligations
Bocaner Property, 310 Plumer Street, Wausau, WI
DNR BRRTS Activity #: 02-37-547992

Dear Mr. Fabel:

The Department of Natural Resources (DNR) considers the former Bocaner Property closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners and occupants must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter to anyone who purchases, rents or leases this property from you.

This final closure decision is based on the correspondence and data provided, and is issued under chs. NR 726 and 727, Wis. Adm. Code. The West Central Region (WCR) Closure Committee reviewed the request for closure on January 11, 2018. The Closure Committee reviewed this environmental remediation case for compliance with state laws and standards. A request for remaining actions needed was issued by the DNR on January 18, 2018, and documentation that the conditions in that letter were met was received on July 9, 2018.

Contamination at the former Bocaner Property was discovered during a Phase II Environmental Assessment performed in 1992. It was believed that a junkyard, lumber yard, and other light industrial activities took place at the site. Soil from the response action site Former Seig Auto Property, DNR BRRTS # 02-37-546877, was placed at this site in accordance with the 'Offsite Disposal of Contaminated Soil at a Response Action Site Plan' submitted to the department in October 2006. The conditions of closure and continuing obligations required were based on the property being used for non-industrial purposes.

Continuing Obligations

The continuing obligations for this site are summarized below. Further details on actions required are found in the section Closure Conditions.

- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- A soil cover must be maintained over contaminated soil and the DNR must be notified and approve any changes to this barrier.

The DNR fact sheet "Continuing Obligations for Environmental Protection," RR-819, helps to explain a property owner's responsibility for continuing obligations on their property. The fact sheet may be obtained at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>.

GIS Registry

This site will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web) at <http://dnr.wi.gov/topic/Brownfields/rrsm.html>, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Sites Map (RRSM), a map view, under the Geographic Information System (GIS) Registry layer, at the same web address.

DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at <http://dnr.wi.gov/topic/wells/documents/3300254.pdf>.

All site information is also on file at the WCR Regional DNR office, at 1300 West Clairemont Avenue, Eau Claire, WI 54701. This letter and information that was submitted with your closure request application, including any maintenance plan and maps, can be found as a PDF in BRRTS on the Web.

Compliance with the requirements of this letter is a responsibility to which the current property owner, and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter are met. If these requirements are not followed, the DNR may take enforcement action under s. 292.11, Wisconsin Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property.

Please send written notifications in accordance with the following requirements to:

Department of Natural Resources
Attn: Remediation and Redevelopment Program Environmental Program Associate
1300 West Clairemont Avenue
Eau Claire, WI 54701

Residual Soil Contamination (ch. NR 718, or ch. 289, Stats.; chs. 500 to 536, Wis. Adm. Code)

Soil contamination remains across the entirety of the site as indicated on the attached map, "Figure B.2.b, Residual Soil Contamination, 11/13/2013". If soil in the specific locations described above is excavated in the future, the property owner at the time of excavation must sample and analyze the excavated soil to determine if contamination remains. If sampling confirms that contamination is present, the property owner at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable standards and rules. Contaminated soil may be managed in accordance with ch. NR 718, Wis. Adm. Code, with prior DNR approval.

In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans.

Depending on site-specific conditions, construction over contaminated soils or groundwater may result in vapor migration of contaminants into enclosed structures or migration along newly placed underground utility lines. The potential for vapor inhalation and means of mitigation should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the site.

Cover or Barrier (s. 292.12 (2) (a), Wis. Stats., s. NR 726.15, s. NR 727.07 Wis. Adm. Code)

The soil cover that exists in the location shown on the attached map, "Figure D.1, Existing Surface Elevations (Post-fill)", shall be maintained in compliance with the attached maintenance plan in order to prevent direct contact with residual soil contamination that might otherwise pose a threat to human health.

A request may be made to modify or replace a cover or barrier. Before removing or replacing the cover, you must notify the DNR at least 45 days before taking an action. The replacement or modified cover or barrier must be protective of the revised use of the property, and must be approved in writing by the DNR prior to implementation. A cover or barrier for industrial land uses, or certain types of commercial land uses may not be protective if the use of the property were to change such that a residential exposure would apply. This may include, but is not limited to single or multiple family residences, a school, day care, senior center, hospital or similar settings. In addition, a cover or barrier for multi-family residential housing use may not be appropriate for use at a single family residence.

The attached maintenance plan and inspection log (DNR form 4400-305) are to be kept up-to-date and on-site. Inspections shall be conducted annually, in accordance with the attached maintenance plan. Submit the inspection log to the DNR only upon request.

In Closing

Please be aware that the case may be reopened pursuant to s. NR 727.13, Wis. Adm. Code, for any of the following situations:

- if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment,
- if the property owner does not comply with the conditions of closure, with any deed restrictions applied to the property, or with a certificate of completion issued under s. 292.15, Wis. Stats, or
- a property owner fails to maintain or comply with a continuing obligation (imposed under this closure approval letter).

The DNR appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Matt Thompson at 715-839-3750, or at MatthewA.Thompson@wisconsin.gov.

Sincerely,

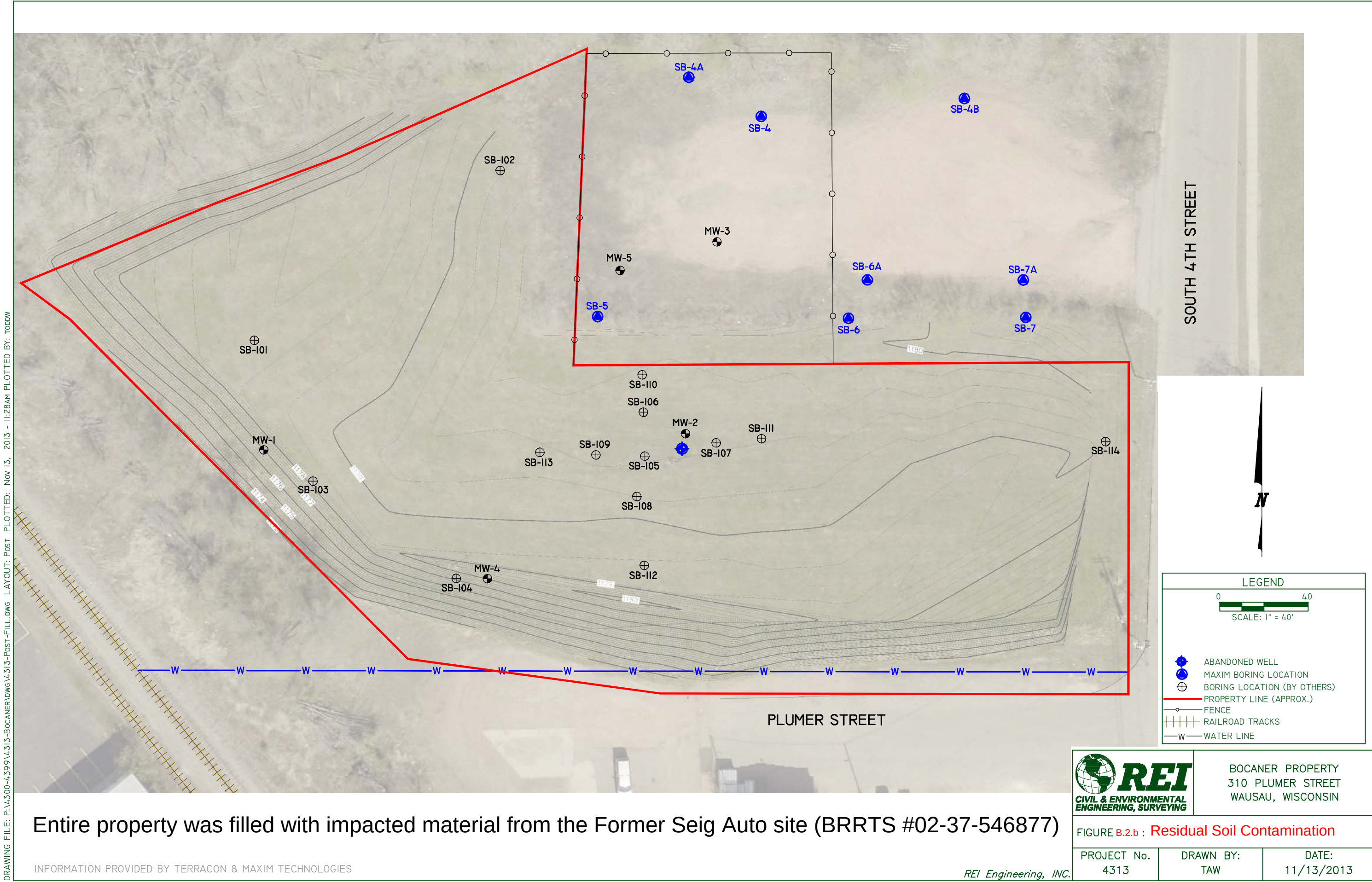


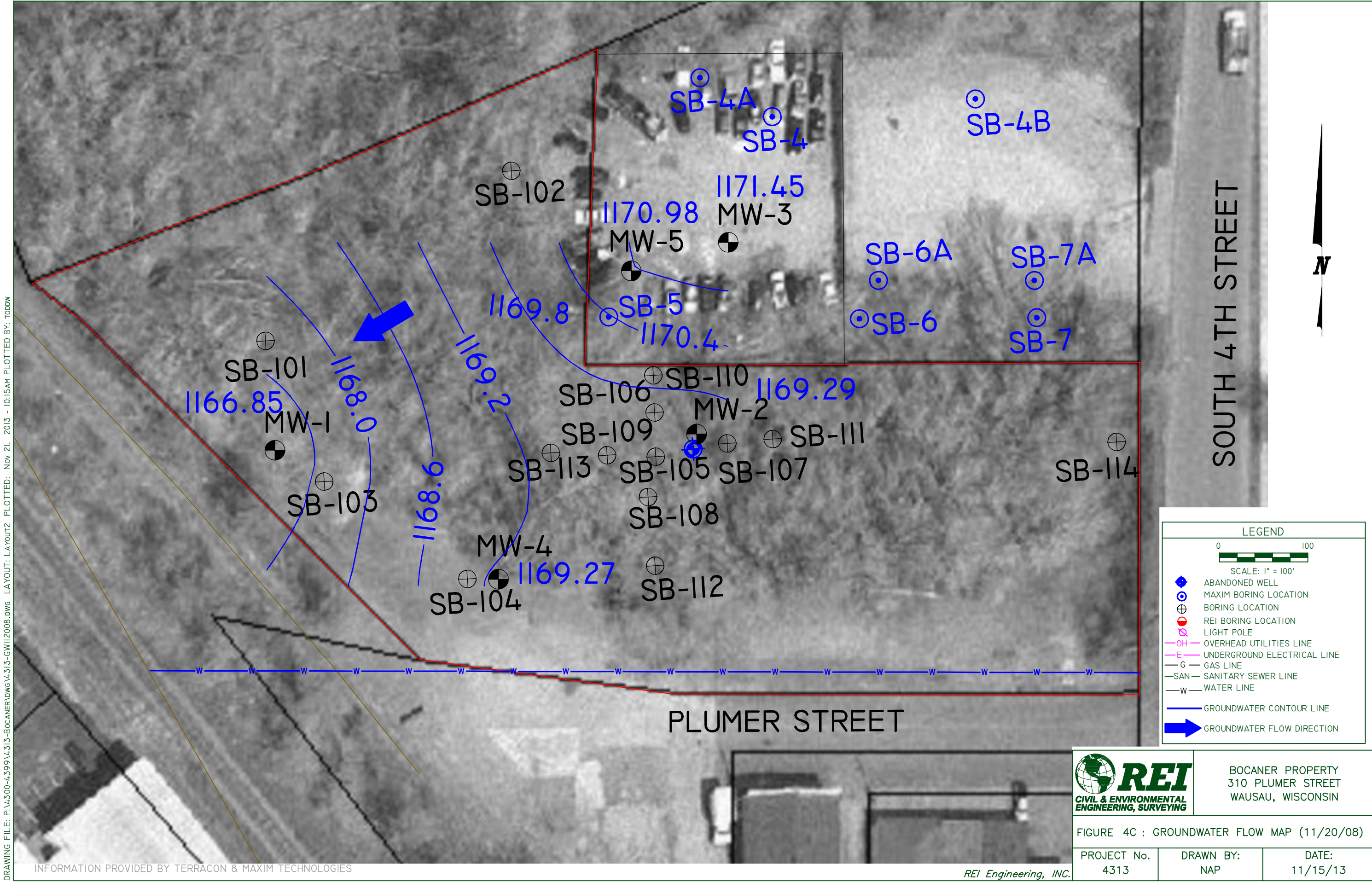
Dave Rozeboom
West Central Region Team Supervisor
Remediation & Redevelopment Program

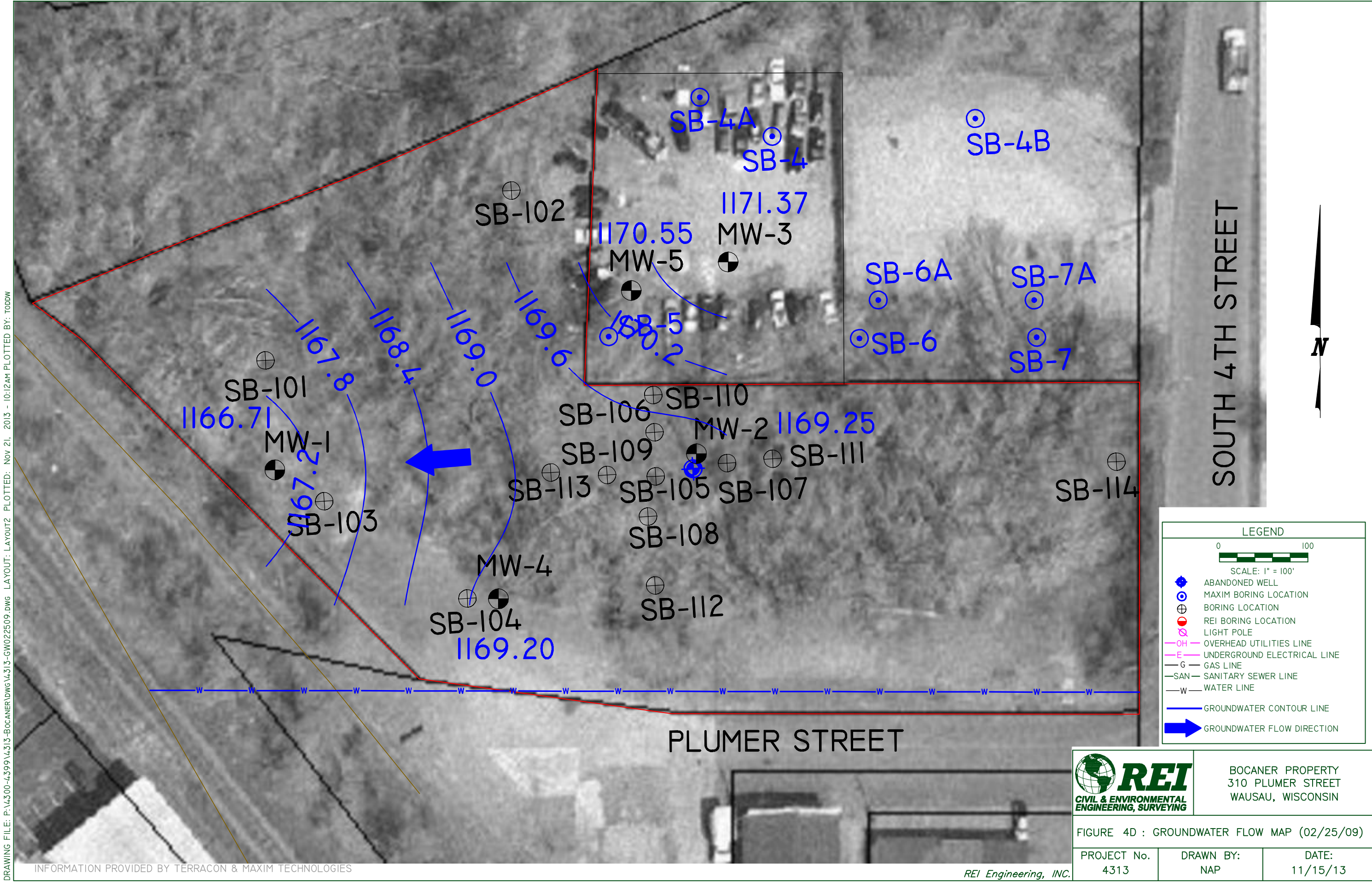
Attachments:

- Figure B.2.b, Residual Soil Contamination, 11/13/2013
- (Cap) Maintenance Plan Attachment D

cc: Jed Kosch, REI







Bocaner Property
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January 28, 2002

Terracon

Historical Aerial Photographs

Date, Source, & Photo ID #	Direction	Description
1879 MCHS Hand Drawn	Site	Not mapped.
	North	Not mapped.
	East	Not mapped.
	South	Not mapped.
	West	Not mapped.
1891 MCHS Hand Drawn	Site	Lumber yard.
	North	Various residential.
	East	Roadway, then vacant land.
	South	Tremont house – saloon and boarding.
	West	Lake Shore and Western Railroad Depot
1938 MCLCD BHZ-6-80	Site	Vacant land.
	North	Various residential.
	East	Vacant land.
	South	Roadway, then one industrial building with three ASTs on the western border, one residence on the eastern border.
	West	Railroad tracks, then vacant land.
1948 MCLCD BHZ-3E-73	Site	One industrial building and vacant land.
	North	Various residential.
	East	Roadway, then vacant land
	South	Three industrial buildings with six ASTs on the western boarder.
	West	Railroad tracks, then two industrial buildings
1958 WCH 1-04-131	Site	Five buildings and a lot with automobiles – three industrial buildings on the southern portion of the property and two sheds on the western portion of the property.
	North	Paved parking lot with cars, two large industrial buildings on the eastern boarder and seven small buildings on the western boarder.
	East	Road, then one small building.
	South	Roadway, then three industrial buildings with six ASTs on the western boarder.
	West	Railroad tracks, then five buildings – three industrial buildings and two warehouses.

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Date, Source, & Photo ID #	Direction	Description
1968 MCLCD BHZ-1JJ- 250	Site	Five buildings – three industrial buildings on the southern portion of the property and two sheds on the western portion of the property.
	North	Paved parking lot with cars and three large industrial buildings.
	East	Roadway, then one small building.
	South	Roadway, then three industrial buildings with six ASTs on the western boarder.
	West	Railroad tracks, then five buildings – three industrial buildings and two warehouses.
1974 WCH 15-256	Site	Three buildings on the southern portion of the property with vacant land on the northern portion of the property.
	North	Paved parking lot with cars and three large industrial buildings.
	East	Roadway, then one small building.
	South	Roadway, then three industrial buildings with six ASTs on the western boarder.
	West	Railroad tracks, then five buildings – three industrial buildings and two warehouses.
1990 MCPD 153.69 12-41	Site	Two building on the southern portion of the property with vacant land on the northern portion of the property.
	North	Gravel parking lot with cars on the eastern border, then a paved parking lot and three large industrial buildings.
	East	Roadway, then one small building.
	South	Roadway, then three industrial buildings with six ASTs on the western boarder.
	West	Railroad tracks, then one industrial building with a paved parking lot.

Review of the historical hand-drawn map from 1891 indicates that there was a railroad depot west of the subject site at that time. Because of the proximity of this former freight storage and transportation operation and the nature of the activities that may have taken place to the west of the subject site, the potential for RECs may exist. Review of historical aerial photos indicate that there have been between three (3) and six (6) ASTs present to the south of the subject site from at least 1938 to 1990. The ASTs are believed to have been located on the western side of the southern border of the subject site. Based on the location of these ASTs in relation to the subject site, potential for RECs may exist.

4.3 Historical City Directories

The Wright and Polk city directories used in this study were made available through the Marathon County Historical Society (selected years reviewed: 1883 to 1927) and Marathon

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County Public Library (selected years reviewed: 1929 to 2001) and were reviewed at approximate three year intervals, if readily available. Since these references are copyright protected, reproductions are not provided in this report. The street address for the subject site was listed in city directories as 313 Plumer Street in various years ranging between 1942 to 1984.

Historical City Directories

Property	Address/Listings from Historical City Directories
Site	No listings (1883 to 1940) 313 Plumer Street – H&M Libman Junk Storage (1942 to 1950); Valley Plumbing and Supply (1952 to 1963); Wisconsin Valley Distributing-Plumbing and Heating (1965); General Distributing-Plumbing and Heating (1971 to 1984).
North	303, 305, 307, 309 Division Street – Various residential (1883 to 1956) 202 S 4th Street – Various residential (1883 to 1905); Strachota and Sons-Livestock Dealers (1914 to 1963) 213 Division Street – Municipal Parking Lot (1960 to 1968); U.S. Postal Service (1969 to 1975) 214 Division Street – U.S. Postal Service (1980) 212 Division Street – U.S. Postal Service (1985 to 1990) 205 Division Street – U.S. Postal Service (1995 to 2001) 415 Division Street – Rosemurgy Motors (1985 to 2001)
East	402 Plumer Street – Peter Wirth-Copper (1883) No listings (1888 to 1963) 406 Plumer Street – Various residential (1965 to 1971); Warehouse (1972); Gustave-Larson Electric (1973 to 1992); Bob & Buck's Electric (1995 to 2001).
South	No listings (1883, 1888). S. 4th Street(no street number) – Tremont House-Saloon and Boarding (1893, 1898). 304 S. 4th Street – Various residential (1905 to 1929). 309 Plumer Street – Morley-Murphy Company-Hardware (1922 to 1931); vacant (1936, 1938); H&M Libman Junk Storage (1940). 300 Plumer Street – Northland Petroleum (1942, 1945); Egdahl's Oil and Lubricants (1947 to 1973); Carlson-Thaler Oil Company (1974 to 1992). 311 Plumer Street – Valley Plumbing and Supply (1952 to 1963). 302 S. 4th Street – Malbritt Heating & Cooling (1965 to 1975); Wausau Cab Inc. (1988 to 1998); Badger Taxi (1999 to 2001). 310 S. 4th Street – Malbritt Heating & Cooling (1977 to 2001). 333 Plumer Street – Impact Industries-Fiberglass Manufacturers (1987 to 2001). 303 Plumer Street – Carlson-Thaler Oil Company (1995 to 2000).
West	No listings (1883 to 1948). 221 River Drive – Heiser Ready Mix Company (1950 to 1971); Wausau Materials Corporation (1972 to 1974). River Drive(no street number) – Bill Gumz Fuel Oil Company-Coal Dealers (1952 to 1966). 399 S. River Drive – Hadley Office Products (1977 to 2001). 413 S. River Drive – Viking Electric Supply Company (1980 to 1988).

Based on review of the above listed city directories H&M Libman Junk Storage (1942 to 1950) has been located on the subject site in the past. Based on the nature of the activities that may have been conducted on site during the operation of this business the potential for RECs may exist.

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Based on review of the above listed city directories the following businesses have been located north of the site: U.S. Postal Service (1969 to 2001) and Rosemurgy Motors (1985 to 2001). Because automotive repair operations and storage of petroleum products could have potentially taken place at these facilities, the potential for RECs may exist.

Based on review of the above listed city directories the following business may have been located east of the subject site: Peter Wirth-Copper (1883). Because metal manufacturing operations are associated with degreasing, grinding, shearing, and painting operations, the copper manufacturing could have adversely affected the subject site, and the potential for RECs may exist.

Based on review of the above listed city directories the following businesses may have been located south of the subject site: H&M Libman Junk Storage (1940), Northland Petroleum (1942, 1945), Egdahl's Oil and Lubricants (1947 to 1973), Carlson-Thaler Oil Company (1974 to 1992), Wausau Cab Inc., and Badger Taxi (1999 to 2001). Because of the nature of the junk storage, bulk petroleum storage, and automotive operations that are believed to have taken place south of the subject site in the past, the potential for RECs exists.

Based on review of the above listed city directories the following businesses may have been located west of the subject site: Heiser Ready Mix Company (1950 to 1971), Wausau Materials Corporation (1972 to 1974), and Bill Gumz Fuel Oil Company-Coal Dealers (1952 to 1966). Because of the of gasoline storage and usage and coal storage may have taken place at these facilities in the past, the potential for RECs exists.

4.4 Historical Fire Insurance Maps

In the late nineteenth century, the Sanborn Company began preparing maps of central business districts for use by fire insurance companies. These maps were updated and expanded geographically periodically through the twentieth century. The Sanborn maps often indicate construction materials of specific building structures and the location of gasoline storage tanks.

Based upon review of Sanborn map indexes at the Marathon County Historical Society (MCHS), Sanborn maps were available from 1898, 1912, and 1923 to 1935. At the Wausau City Hall (WCH) two (2) Sanborn map indexes were reviewed. Sanborn maps were reviewed for the years 1923 to 1967. Because it was difficult to identify which structures were present during specific years due to the overlaying of Sanborn map updates, the Wausau City Hall Sanborn maps were treated as ranges of years. One Sanborn map index ranged from 1923 to 1952, and the other Sanborn map index ranged from 1954 to 1967. The table below summarizes the review of the maps provided:

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Historical Fire Insurance Maps

Date, Source, and Map ID#	Property	Address/Listings from Historical Fire Insurance Maps
1898 MCHS	Site	Lumber yard.
	Adjoining North	303, 307, 309 Division Street: ten buildings (four houses and six sheds).
	Adjoining East	400 Plumer Street: Copper Shop – one building.
	Adjoining South	Tremont House-Saloon and Boarding – four buildings (one saloon and boarding house, one warehouse, and two sheds).
	Adjoining West	Central and Northwest Railroad Depot – five buildings (one depot, one round house, one ice house, one lime house, one lumber shed)
1912 MCHS	Site	Lumber yard.
	Adjoining North	303, 307, 309 Division Street: eight buildings (four houses and four sheds).
	Adjoining East	400 Plumer Street: vacant.
	Adjoining South	302 S. 4 th Street: five buildings (one residence, two warehouses, and two sheds).
	Adjoining West	Railroad tracks, then one ice house and one lumber shed.
1923 to 1935 MCHS	Site	Lumber yard.
	Adjoining North	303, 307, 309 Division Street: eight buildings (four houses and four sheds).
	Adjoining East	400 Plumer Street: vacant.
	Adjoining South	300's Plumer Street: R.E. Kell Gasoline Bulk Station with a gasoline pump house and two gasoline tanks on the western border, and six buildings on the eastern border (one hardware warehouse, one residence, and four sheds).
	Adjoining West	Railroad tracks, then one ice house and one lumber shed.
1923 to 1952 WCH	Site	312, 314, 316 Plumer Street: Lumber yard, then converted to CB Plumbing with two buildings (one plumbing shop with storage building) on the southern portion of the property and H&M Libman Junk Storage with two buildings (one hide storage and one bailing house) on the northern and western portions of the property.
	Adjoining North	303, 307, 309 Division Street, 202 S. 4 th Street: Parking lot and six buildings (three residences and three sheds) with a gasoline tank on the eastern boarder.
	Adjoining East	400 Plumer Street: vacant.
	Adjoining South	305, 307, 309 Plumer Street: One gasoline bulk storage building with an oil warehouse, pump house, and three gasoline ASTs on the western boarder and H&M Libman Junk Storage with a junk and paper storage warehouse and a garage on the eastern border.
	Adjoining West	221 River Drive: Heiser Ready Mix Company with five buildings (one truck repair, one cement stage, one gasoline pump house, one office, and one cement plant with a boiler room and a coal room) and Bill Gumz Fuel Oil Company with two buildings on the southern portion of the site (one coal warehouse and one office).

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Date, Source, and Map ID#	Property	Address/Listings from Historical Fire Insurance Maps
1954 to 1967 WCH	Site	312, 314, 316 Plumer Street: CB Plumbing with three buildings (one plumbing supplies building and two wire and pipe warehouses) on the southern portion of the property and H&M Libman Junk Storage with two buildings (two warehouses) on the northern and western portions of the property.
	Adjoining North	303, 307, 309 Plumer Street: One residence and auto parking.
	Adjoining East	400 Plumer Street: one residence.
	Adjoining South	305, 307, 309 Plumer Street: One gasoline bulk storage building with an oil warehouse and six gasoline ASTs on the western boarder and two buildings (one sheet metal warehouse and one plumbing supplies) on the eastern border.
	Adjoining West	221 River Drive – Heiser Ready Mix Company with seven buildings (two garages, one cement plant, one gasoline pump house, one office, one warehouse, and one gravel loader) and Bill Gumz Fuel Oil Company with three buildings (one coal plant, one coal warehouse, and one office).

Based on review of the above listed Sanborn maps the following businesses have been located on the subject site in the past: a lumber yard and H&M Libman Junk Storage with a bailing house (1923 to 1952). Based on the nature of the activities that may have been conducted on site during the operation of these businesses the potential for RECs may exist.

Based on review of the above listed Sanborn maps the following has been located to the north of the subject site: one residence with a gasoline tank (1923 to 1952); the following business may have been located to the east of the subject site: Copper Shop (1898); the following businesses may have been located to the south of the subject site: various gasoline bulk storage facilities (1923 to 1935, 1923 to 1952, and 1954 to 1967), H&M Libman Junk Storage (1923 to 1952), and the following businesses may have been located west of the subject site: Central and Northwest Railroad Depot (1898), Heiser Ready Mix Company with a gasoline pump house, truck repair garage, and coal room (1923 to 1952 and 1954 to 1967), and the Bill Gumz Fuel Oil Company with a coal warehouse (1923 to 1952 and 1954 to 1967). Based on the nature of the activities that may have been conducted on site during the operation of these businesses the potential for RECs may exist.

4.5 Ownership Information

Land title records were not reviewed as part of the scope of services. Mr. Marvin Bocaner currently owns the property.

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Assessment report, Mr. Erickson indicated that a monitoring well was located on the subject site; it may have been used to investigate ground water quality by the Carlson Oil Company. Although the well may have been placed as part of a ground water investigation, ground water analytical data from the monitoring well was not available for review, if any was available. A well in and of itself is not an environmental issue unless it was improperly abandoned. The monitoring well does not appear to represent a potential REC at this time

- During site reconnaissance, trash and debris, such as scrap metal, furniture, and abandoned automobiles littered the site. The junk constitutes a REC because of the unknown origin the trash and debris. Construction debris, such as concrete, littered the subject site at the time of site reconnaissance. The construction debris are of an unknown origin and could potentially have asbestos containing material, and therefore constitute a REC.

9.2 Recommendations

Based on the findings of this assessment, Terracon recommends that additional assessment be conducted. Soil and/or groundwater at the site may have been affected by potential releases from the following historical uses of the site:

- REC #1: Site Conditions – Trash and debris**

Trash and debris, such as abandoned automobiles, scrap metal, and furniture littered the ground surface of the subject site. Potential contaminants are listed below.

Condition	Address	Potential Contaminants
Trash and Debris(such at abandoned automobiles, scrap metal, and furniture)	310 Plumer Street	VOCs, SVOCs/PAHs, Total Metals, DRO, GRO

- REC #2: Site Conditions – Construction Debris**

Construction debris, such as broken concrete and rubble, littered the site. Potential contaminants are listed below.

Condition	Address	Potential Contaminants
Construction Debris(broken concrete)	310 Plumer Street	VOCs, Total Metals, DRO, GRO, Asbestos

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- REC #3: Previous Site Conditions – Stressed Vegetation**

Stressed vegetation was observed on the subject site during a Phase I Environmental Assessment conducted by the City of Wausau in July of 1992. Potential contaminants are listed below.

Condition	Address	Potential Contaminants
Stressed Vegetation	310 Plumer Street	VOCs, SVOCs/PAHs, Total Metals, DRO, GRO

- REC #4: Previous Site Usage – Junk Storage**

Historical records indicate H&M Libman Junk Storage, 313 Plumer Street, was located on the subject site from at least 1940 to 1950. Historical records also indicate that a bailing house was located on west-central portion of the site. The bailing house is believed to have been used for the demolition of automobiles. Other materials stored at H&M Libman Junk Storage may have adversely affected the subject site. Potential contaminants are listed below.

Facility	Address	Years on site	Potential Contaminants
H&M Libman Junk Storage	313 Plumer Street	At least 1940 to 1950	VOCs, SVOCs/PAHs, Total Metals, DRO, GRO, pH

- REC #5: Previous Site Usage – Light Industrial Activities**

Historical records indicated that lumber yards were present to the north, east, south, east, and west of the subject site in the late 1800s and early 1900s. Lumber treatment and staining operations likely took place at these lumber yards and could potentially have adversely affected the subject site. Potential contaminants are listed below.

Facility	Address	Years on site	Potential Contaminants
Various lumber yards	No address	Late 1800s and early 1900s	VOCs, SVOCs(w/ PCP), PAHs, Total Metals

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- REC #6: Current Adjacent Site Usage – Automotive Repair**

The U.S. Postal Service, located at 205 Division Street and 235 Forest Street, to the north of the subject site, potentially has stored petroleum products and serviced automobiles. Potential contaminants are listed below.

Facility	Address	Years on site	Direction from site	Potential Contaminants
U.S. Postal Service	205 Division Street and 235 Forest Street	1969 to present	North	VOCs, SVOCs/PAHs, Total Metals, DRO, GRO

- REC #7: Current Adjacent Site Usage – Automotive Repair**

Rosemurgy Motors, located at 415 Division Street and 409 Forest Street, to the north of the subject site, potentially has stored petroleum products and serviced automobiles. Potential contaminants are listed below.

Facility	Address	Years on site	Direction from site	Potential Contaminants
Rosemurgy Motors	415 Division Street and 409 Forest Street	1985 to present	North	VOCs, SVOCs/PAHs, Total Metals, DRO, GRO

- REC #8: Current Adjacent Site Usage – Automotive Repair**

Wausau Cab and Badger Taxi, located at 302 S. 4th Street, to the south of the subject site. Operations at the facility likely included service of automobiles. Potential contaminants are listed below.

Facility	Address	Years on site	Direction from site	Potential Contaminants
Wausau Cab	302 S. 4 th Street	1988 to 1997	South	VOCs, SVOCs/PAHs, Total Metals
Badger Taxi		1998 to present		

- REC #9: Previous Adjacent Site Usage – Gasoline Station**

Historical records indicate that the R.E. Kell Bulk Petroleum Facility, Northland Petroleum, Egdahl's Oil and Lubricants, and the Carlson-Thaler Oil Company have been present to the south of the subject site from 1935 to 2000. The petroleum

Reference 5. Wisconsin Historic Aerial Imagery Finder



*Phase II Site Investigation
Undeveloped Rosemurgy Property, 218 South 4th Street, Wausau, WI
December 2006*

The geology and water resources of the basin as described by Devaul and Green (1971), indicate that surficial geology consists of unpitted glacial outwash deposits. These deposits are typically stratified sands and gravel with some silts and clays. The bedrock in the area consists of Precambrian crystalline rock. The depth to bedrock is anticipated at being less than 50 feet bls (Trotta and Cotter, 1973).

Soil permeabilities for the surficial sands are 2.5 to 5.0 inches per hour. The average annual precipitation in the area is about 30.9 inches. The typical evapotranspiration rate is about 20 inches per year, leaving about 10.9 inches per year for both groundwater recharge and surface runoff Devaul and Green (1971). The groundwater recharge rate will be assumed to be the NR 720.09(3) default rate of 10.0 inches per year.

4.2 Site Specific Geology and Hydrogeology

Analysis of the soil from the nine (9) soil borings indicate site geology consists of a fine to medium grained sand with silt and trace gravel. Figure 2 shows the locations of the nine (9) hollow stem auger borings installed during the site investigation.

Depths to groundwater at the site are approximately 8 feet bls. The direction of groundwater flow, based on groundwater flow data, is southwest with natural discharge to the Wisconsin River.

The reported hydraulic conductivity of the Wausau Aquifer ranges from approximately 1 ft/day to 100 ft/day (Kendy and Bradbury, 1988). The typical porosity of the Wausau Aquifer is approximately 35 percent (Kendy and Bradbury, 1988). Groundwater and contaminant velocities will be relatively high based on hydraulic conductivity and porosity values. Kendy and Bradbury (1988, p. 26) estimated the typical groundwater velocity in the Rothschild area at 90 ft/yr. The Rothschild area also is underlain by the Wausau Aquifer and the groundwater velocities should be similar. Contamination in groundwater will move more slowly than the water itself, depending on the retardation factor of each contaminant.

*Phase II Site Investigation
Undeveloped Rosemurgy Property, 218 South 4th Street, Wausau, WI
December 2006*

4.3 Nature and Extent of Soil Contamination

Soil contamination as defined in NR 718.03(4) "means soil which has one or more hazardous substances or environmental pollution and which is not hazardous waste as defined in s. NR 600.03(87) or USC 6901-6991, as amended". Soil contamination is confined to discharges of a hazardous substance, or where environmental pollution exists within unsaturated organic material, derived from vegetation and unsaturated, loose, incoherent rock material, of any origin, resting on bedrock.

Analytical results from these samples indicate that soils at the Undeveloped Rosemurgy Property site are contaminated with Tetrachloroethene (PCE), Trichloroethene (TCE) and Polychlorinated biphenyls (PCB's), metal and Polynuclear Aromatic Hydrocarbon (PAH) compounds (Table 1a-b). Analytical results from nearly every boring location reported detectable contaminant concentrations. Only SB-6 showed levels of PCB's above the laboratory detection limit. The complete soil analytical results for the samples are presented in Appendix D.

The extent of the soil contamination extends off site on to the Bocaner Property (BRRTS # 02-37-547992). Soil contamination was reported in the shallow soils, and at depth. Analytical results from the soil sample collected at SB-5, from 4 feet below land surface (bls), reported a PCE concentration of 3,020 µg/kg. The sample from MW-5 from 8-10 feet bls soils were impacted with PCE. The PCE contamination appears to be confined to the area surrounding MW-5 and SB-5.

The horizontal extent of soil contamination has been defined to the extent practical. Further definition of the soil contamination to the north is not feasible due to the presence of the steep slope, which was also observed to contain various large pieces of debris consisting mainly of concrete.

4.4 Nature and Extent of Groundwater Contamination

Groundwater samples were collected from MW-3 on two (2) occasions and MW-5 once. Depth to groundwater has been determined to be approximately 8 feet bls. The calculated groundwater flow direction is southwesterly.

*Phase II Site Investigation
Undeveloped Rosemurgy Property, 218 South 4th Street, Wausau, WI
December 2006*

Both groundwater samples collected from MW-3 reported concentrations for PAH and metals below the PAL for all analyzed parameters. The one groundwater sample collected from MW-5 exceeded the PAL for Benzene, Benzo (b) fluoranthene, Arsenic and Barium.

Potential improper handling of parts cleaner/degreaser liquids, known to contain Tetrachloroethene (PCE), may be the source for the PCE impacted soil. The volume of PCE released to the environment has not been observed in the on site monitoring wells, but concentrations of PCE above the PAL have been observed in MW-1 located downgradient on the adjacent Bocaner Property.

4.5 Contaminated Soil Hazard Determination

REI has determined that a release of both tetrachloroethene, PAH's and PCB's has occurred on the property. The State of Wisconsin recognizes the U.S. Environmental Protection Agency (EPA) soil screening guidance in determining the potential threat of the reported contamination. The soil screening level for tetrachloroethene is calculated 2.1 ppb. The maximum reported concentration at the Rosemurgy Motors Property was 3,020 ppb (Maxim Boring SB-5 @ 4').

REI has also completed the calculations to determine if the reported soil contamination is a hazardous waste. Soil sample SB-5 @ 4', the soil sample with the highest detectable PCE concentration, collected at 4 feet below grade reported a combined halogenated chlorinated concentration of 3.18 ppm, which is below the 10,000 ppm threshold and can be remediated ex-situ and handled as a "contained-out" waste thus allowing the soil to be handled as a solid waste under Wisconsin Administrative Code NR 718. Unless subsequent soil sample results report a combined halogenated chlorinated concentration in excess of 10,000 ppm, the soil should be handled as a solid waste. The complete soil hazard determination and human health evaluation has been completed and is presented in Appendix E.

5.0 CONCLUSION AND RECOMMENDATIONS

Within the scope of work completed for this Phase II Site Investigation Report laboratory analytical results document that a release of chlorinated compounds and PAH's has occurred on the subject property. The chlorinated release has impacted the shallow soils in the vicinity of

Phase II Site Investigation
Undeveloped Rosemurgy Property, 218 South 4th Street, Wausau, WI
December 2006

SB-5 and at depth near SB-6. The highest PAH concentrations were observed near MW-3 with a significant decrease in concentrations with depth. The depth to groundwater at the site is approximately 8 feet bls. Both groundwater samples collected from MW-3 reported concentrations for PAH and metals below the PAL for all analyzed parameters. The one groundwater sample collected from MW-5 exceeded the PAL for Benzene, Benzo (b) fluoranthene, Arsenic and Barium.

REI has determined that a release of both tetrachloroethene and trichloroethylene has occurred on the property. The State of Wisconsin recognizes the EPA soil screening guidance in determining the potential threat of the documented contamination. The soil screening level for tetrachloroethene is 2.1 ppb. The maximum reported concentration at the Former Rosemurgy Motors Property was 3,020 ppb.

REI is recommending the over excavation of PCE and TCE impacted soils in conjunction with site redevelopment activities. The most highly impacted PAH contaminated soils surrounding MW-3 should also be excavated and properly disposed of.

6.0 REMEDIAL ALTERNATIVES

Remedial alternatives for this site are limited. A total of three (3) remedial alternatives were reviewed to address the VOC and PAH soil contamination. Due to the relatively low concentrations and limited extent of PCB contamination, any material impacted with PCB's will be left in place. The three (3) alternatives investigated and their feasibility are as follows:

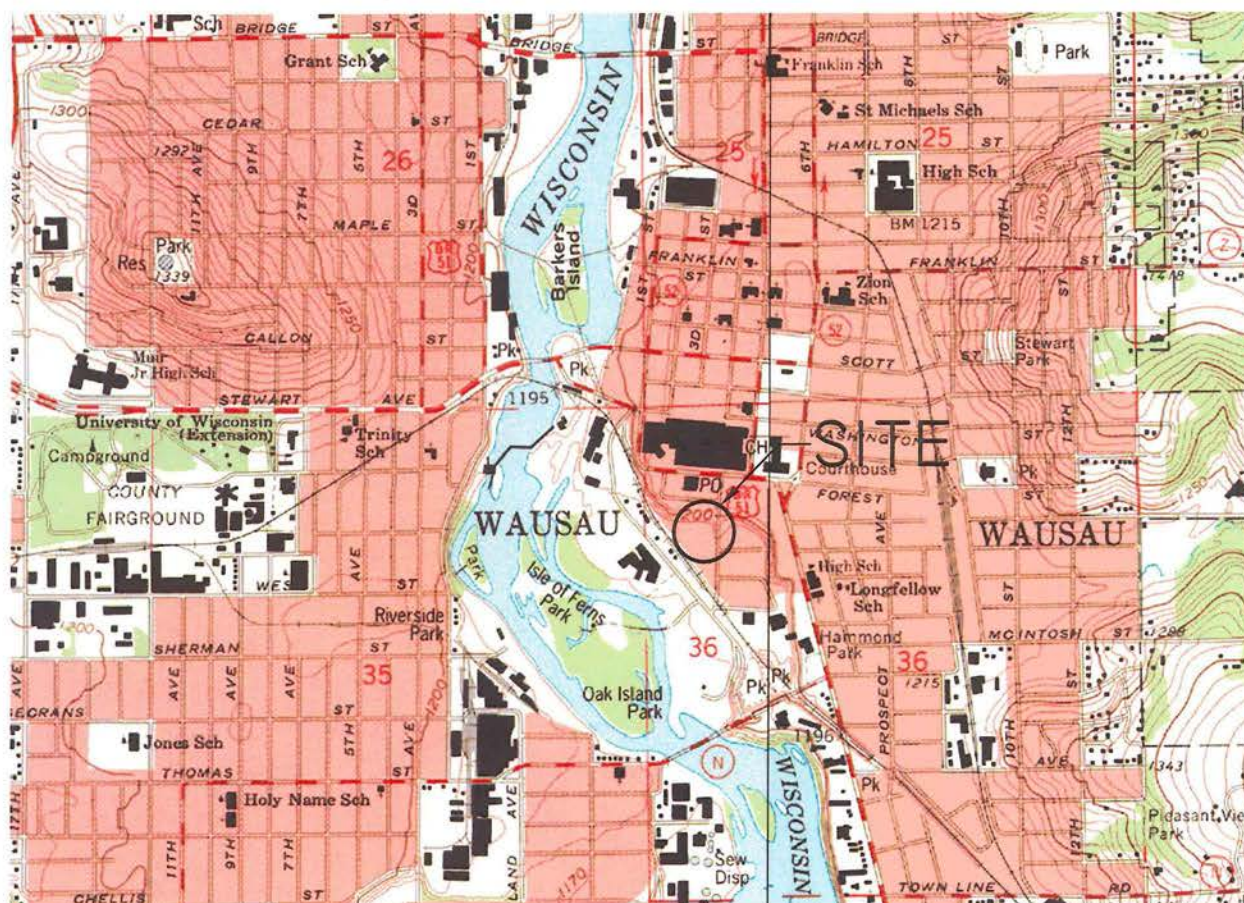
- 1) *Leave the existing gravel parking lot in place.* This option is not practical or protective of human health due to the shallow nature of the contamination, the possibility for direct contact conditions upon redevelopment is a possibility if contaminated soils are left in place.
- 2) *Excavate VOC and PAH contaminated soil.* This option is the most economically feasible along with protecting human health. This option also yields the most timely and cost effective path to closure. Upon completion of the soil excavation, confirmatory soil samples could be collected. The site subsequently could be

submitted for closure with a GIS registry for any remaining soil contamination following the removal of the majority of the impacted soil.

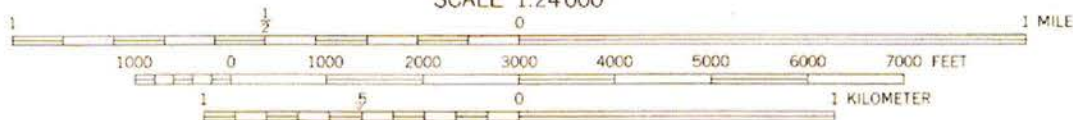
- 3) *Install and operate a Soil Vapor Extraction System.* This would easily be the remedial option exhibiting the highest cost and length of time to closure. System design, installation and monthly operation and maintenance costs make this option economically unfeasible.

7.0 REFERENCES

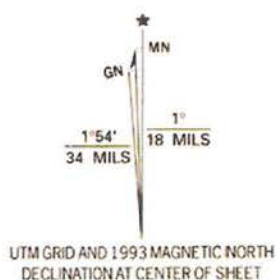
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- Kendy, E. and K. R. Bradbury, 1988, Hydrogeology of the Wisconsin River Valley in Marathon County, Wisconsin, Wisconsin Geological and Natural History Survey Information Circular 64, 66p.
- Montgomery, J. H. and Welkom, L. M., 1990, Groundwater Chemicals Desk Reference, Lewis Publishers, Chelsea, 640 pp.
- Schroeder, P.R., Dozier, T.S., Zappi, P.A., McEnroe, B.M., Sjostrom, J.W., and Peyton, R.L., 1994, The Hydrologic Evaluation of Landfill Performance (HELP) Model, Engineering Documentation for Version 3, EPA/600/R-94/168a, U.S. Environmental Protection Agency Risk Reduction Engineering Laboratory, Cincinnati, Ohio
- Trotta, L.C., and Cotter, R.D., 1973, Depth to Bedrock in Wisconsin, University of Wisconsin - Extension Geological and Natural History Survey, Madison, Wisconsin.
- US EPA, 1996, Soil Screening Guidance. Technical Background Document. Office of Solid Waste and Emergency Response. United States Environmental Protection Agency, EPA/540/R-95/128
- Terracon, January 28, 2002, Phase I Environmental Site Assessment, EPA Brownfields Assessment Demonstration Pilot, Downtown River Corridor Project, Bocaner Property, Wausau Site #39, 310 Plumer Street, Wausau, Marathon County, Wisconsin.



SCALE 1:24 000



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929



WAUSAU WEST, WIS.

NW/4 WAUSAU 15' QUADRANGLE
44089-H6-TF-024

1993

DMA 3073 1 NW - SERIES V861



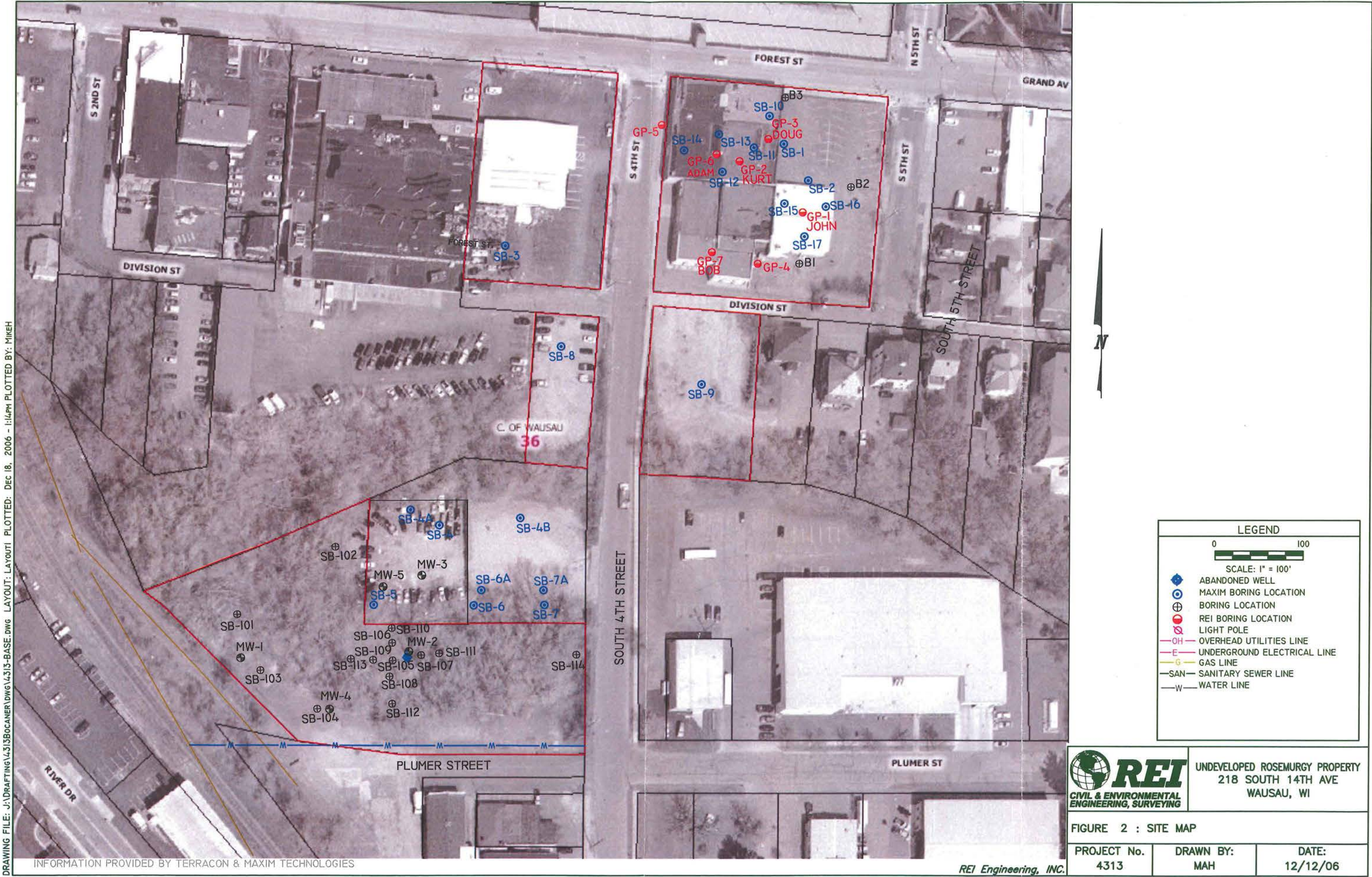
REI Engineering, INC.

UNDEVELOPED ROSEMURGY PROPERTY
218 S. 4TH STREET
WAUSAU, WI

FIGURE 1 : SITE VICINITY MAP

PROJECT NO.	4322	DRAWN BY:	MAH	DATE:	12/15/06
-------------	------	-----------	-----	-------	----------

DRAWING FILE: J:\DRAFTING\4322-ROSEMURGY\DWG\PLANS\4322-VICINITY.DWG LAYOUT: MODEL PLOTTED BY: MIKEH DEC 18, 2006 - 1:12PM



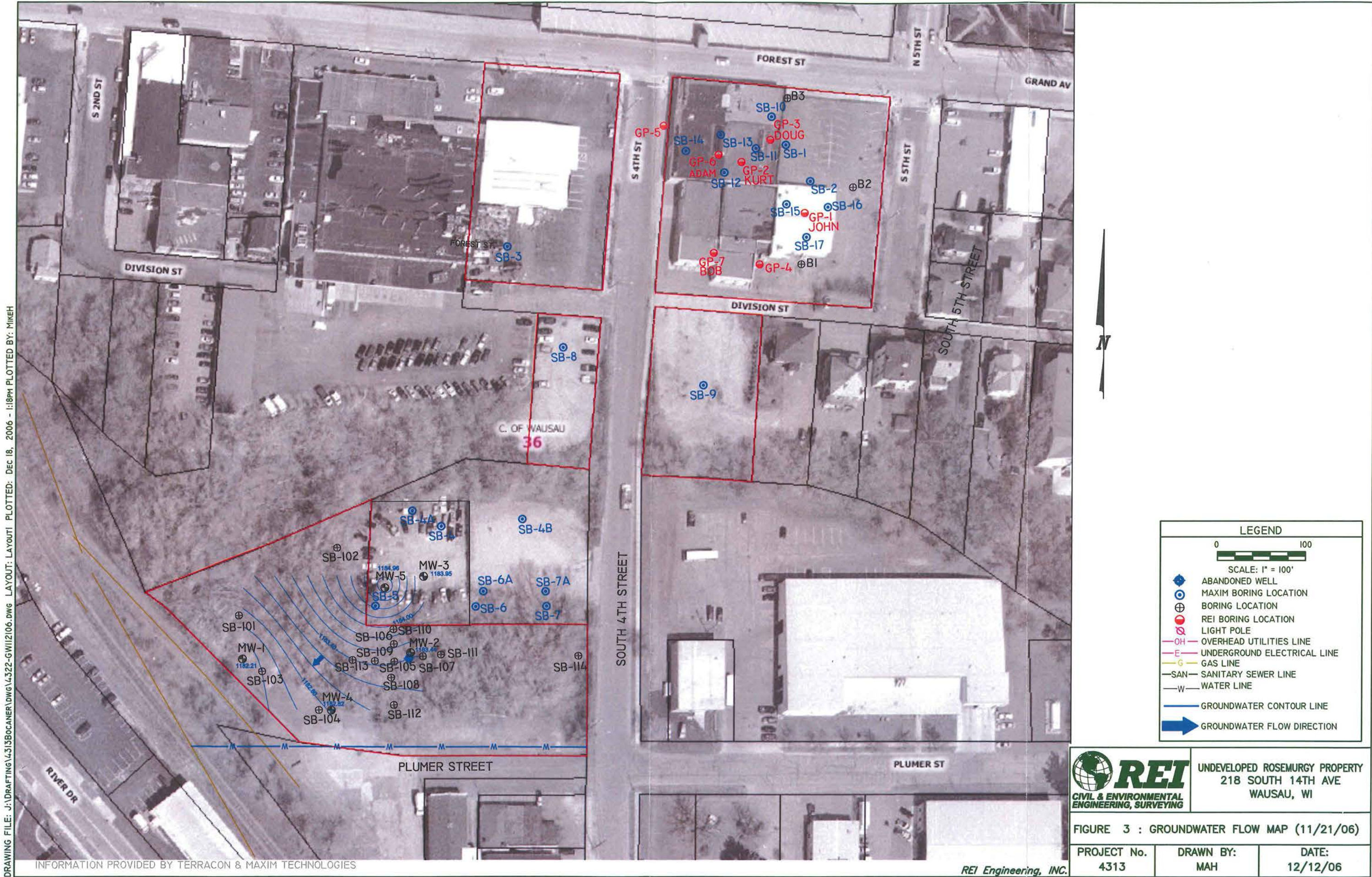


Table 3
Groundwater Elevation Summary
Undeveloped Rosemurgy Property
218 South 4th Avenue
Wausau, WI

	MW-1	MW-2	MW-3	MW-4	MW-5
Top of Casing Elevation	1188.51	1190.34	1192.80	1188.75	1192.65
Ground Surface Elevation	1185.93	1187.21	1193.28	1186.19	1193.07

Depth to Water (feet)

7/13/2006	6.60	7.41	9.11	NI	NI
10/2/2006	6.36	7.14	8.91	6.04	NI
11/21/2006	6.30	6.90	8.85	5.93	7.69

Ground Water Elevation

7/13/2006	1181.91	1182.93	1183.69	NI	NI
10/2/2006	1182.15	1183.20	1183.89	1182.71	NI
11/21/2006	1182.21	1183.44	1183.95	1182.82	1184.96

NM = Not Measured

NI = Not Installed

Reference 7



ENVIRONMENTAL CLEANUP & BROWNFIELDS REDEVELOPMENT BRRTS ON THE WEB


[>> SEARCH](#) >> [ACTIVITY](#)

Click the Location Name or FID below to view the Location Details page. If additional Activities are present at this location, they may be accessed from Location Details.

ACTIVITY DETAILS

LIEN OR DEED AFFIDAVIT/NOTICE EXISTS ON PROPERTY

The State has placed a lien or deed affidavit/notice at this site associated with environmental cleanup obligations and/or costs. Click on the Location Name below to view information related to the lien or deed affidavit/notice.

02-37-548031 UNDEVELOPED ROSEMURGY PROPERTY

Status	Activity Type			Jurisdiction	
OPEN	ERP			DNR RR	
Location Name			County	DNR Region	
UNDEVELOPED ROSEMURGY PROPERTY			MARATHON	WEST CNTRL	
Address			Municipality		
218 S 4TH ST			WAUSAU		
PLSS Description		Latitude (WGS84)	Longitude (WGS84)	Google Maps [exit DNR]	RR Sites Map
NW 1/4 of the NW 1/4 of Sec 36, T29N, R07E		44.9556495	-89.6278339	CLICK TO VIEW	CLICK TO VIEW
Additional Location Description					Acres
					UNKNOWN
Facility ID	PECFA No.	EPA ID	Start Date	End Date	Date of Last Action
737211090			2006-08-23		2020-09-04

Characteristics

PECFA Funds Eligible	EPA Superfund	EPA NPL Site	Above Ground Petrol Tank	Underground Petrol Tank	Drycleaner	PFAS	Sediments	WI DOT Site

28 Actions and 9 Documents

Records related to the site are documents that were available at the time the scanned paper or electronic file was uploaded. Records withheld by the department due to confidentiality, attorney-client privilege, and other sensitive records, as well as lab data, may not be included. Additional records associated with the site may or may not be accessible through an open records request through DNR or another state agency (see Jurisdiction above).

Reference 7

Date	Code	Name	File	Comment
2006-08-23	1	<u>Notification of Hazardous Substance Discharge</u>		FROM DAVE ERICKSON, CITY OF WAUSAU
2006-08-23	99	<u>Miscellaneous</u>		LIMITED SUBSURFACE INVESTIGATION REPORT
2006-09-19	2	<u>Responsible Party (RP) letter sent</u>		
2006-12-20	37	<u>Site Investigation Report (SIR) Received (non-fee)</u>		
2009-04-15	200	<u>Push Action Taken</u>		
2009-04-27	2	<u>Responsible Party (RP) letter sent</u>		RP & STATUS REQUEST SENT TO NEW PROPERTY OWNER.
2011-09-07	130	<u>DNR Regulatory Reminder Sent</u>		Vapor Intrusion (VI) Assessment Notification Ltr Sent
2011-10-12	200	<u>Push Action Taken</u>		
2011-10-13	99	<u>Miscellaneous</u>		RP STATES HE ISN'T RESPONSIBLE. DNR SENT HIM A COPY OF RP LETTER & 292.11
2013-06-13	99	<u>Miscellaneous</u>		REQUEST FOR SITE DATA FULFILLED. GW DATA SENT TO CONSULTANT
2013-07-18	99	<u>Miscellaneous</u>		FILE REVIEW
2014-08-06	195	<u>Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met</u>		Period: 1/1/2014 - 6/30/2014
2015-01-07	99	<u>Miscellaneous</u>		NO ADDITIONAL WORK COMPLETED
2015-01-07	195	<u>Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met</u>		Period: 7/1/2014 - 12/31/2014
2015-07-21	195	<u>Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met</u>		Period: 1/1/2015 - 6/30/2015
2016-01-15	195	<u>Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met</u>		Period: 7/1/2015 - 12/31/2015
2016-07-29	195	<u>Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met</u>		Period: 1/1/2016 - 6/30/2016
2017-07-11	195	<u>Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met</u>		Period: 1/1/2017 - 6/30/2017
2018-01-02	195	<u>Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met</u>		Period: 7/1/2017 - 12/31/2017
2018-02-27	2	<u>Responsible Party (RP) letter sent</u>		
2018-07-02	195	<u>Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met</u>		Period: 1/1/2018 - 6/30/2018
2018-07-18	3	<u>Notice of Noncompliance (NON) Issued</u>		
2018-08-28	99	<u>Miscellaneous</u>		REQUESTED UPDATE ON NON
2018-10-18	15	<u>Notice of Intent to File Deed Affidavit for Contamination</u>		
2018-11-01	99	<u>Miscellaneous</u>		DEED NOTICE CERTIFIED MAIL AND RETURN RECEIPT RECEIVED

Reference 7

Date	Code	Name	File	Comment
2018-12-27	53	<u>Deed Affidavit for Contamination (NR 728) Recorded</u>		NOTICE OF CONTAMINATION FILED
2020-08-17	130	<u>DNR Regulatory Reminder Sent</u>		EMERGING CONTAMINANTS REMINDER LETTER
2020-09-04	313	<u>Superfund Site Assessment Pre-CERCLA Screening (PCS)</u>		

Relationships to Other Activities

Click Activity Below to View Details

Relationship Type	Activity No and Name
ERP to Grant/Loan	<u>07-37-581247 UNDEVELOPED ROSEMURGY PROPERTY</u>

Substances

Substance	Type	Amt Released	Units
Arsenic	Metals		
Chromium	Metals		
Lead (Pb)	Metals		
Mercury	Metals		
Metals	Metals		
Polynuclear Aromatic Hydrocarbons	Petroleum		
Petroleum - Unknown Type	Petroleum		
Volatile Organic Compounds	VOC		
Polychlorinated Biphenyl	PCB		

Who

Click on Project Manager Email Address Below to Send Email

Role	Name/Address
Project Manager	MATT THOMPSON 1300 W CLAIREMONT AVE EAU CLAIRE, WI 54701 matthewa.thompson@wisconsin.gov
Responsible Party	ROSWELL PROPERTIES LLC LTD 100 N CENTER ST, NEWTON FALLS, OH 44444

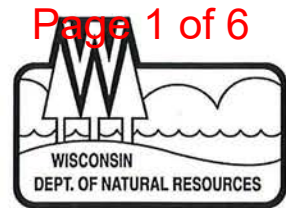
BRRTS data comes from various sources, both internal and external to DNR. There may be omissions and errors in the data and delays in updating new information.

BOTW Release 3.0.2 | 03/12/2021 | [Release Notes](#) [Help](#) [Disclaimers](#) [Glossary of Terms](#)

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State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
1300 W. Clairemont Ave.
Eau Claire WI 54701

Scott Walker, Governor
Daniel L. Meyer, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



October 17, 2018

CERTIFIED MAIL

Roswell Properties L.L.C., Ltd
Attention: Mitch Brazin
100 N Center St
Newton Falls, OH 44444-1321

SUBJECT: Deed Affidavit for Environmental Contamination Found at:
Undeveloped Rosemurgy Property, 218 South 4th Street, Wausau, WI
BRRTS #: 02-37-548031

Dear Mr. Brazin:

The Department of Natural Resources ("the Department") Roswell Properties L.L.C., LTD. a letter on August 28, 2018 indicating that the Department would proceed with enforcement, to include the filing of an affidavit for your property at the Marathon County Register of Deeds Office, unless you acted as specified in the letter. The Department has determined that the recording of an affidavit is necessary since you have not responded. A copy of the affidavit we intend to record is attached for your reference.

The Department has found that tetrachloroethene and petroleum contaminants discharged to your property, located at 218 South 4th Street, Wausau, WI 54403 ("the Property"), are the source of soil contamination and groundwater contamination in the vicinity. The Department has concluded that tetrachloroethene and petroleum products and their constituents are "hazardous substances" as defined in s. 292.01(5), Stats.

Monitoring of the Property and treatment of contaminated soil and groundwater are required under the authority of s. 292.11(3), Stats. The contamination at the Property will continue to discharge into the environment, and subsequent purchasers of the Property could become liable for remediation costs. Consequently, the recording of this affidavit is necessary to notify future purchasers of the Property of their potential liability.

The Department will record the affidavit unless we receive a written response from you within thirty (30) days of receiving this letter, certifying that the Property will be promptly investigated and remediated in compliance with chs. NR 700-754, Wis. Adm. Code, and ch. 292, Stats.

Best regards,

Matt Thompson
Hydrogeologist
Remediation and Redevelopment Program

Encl: Draft Notice of Contamination

CC: Dave Rozeboom, DNR

Document Number

Wis. Admin. § NR 728.11
NOTICE OF CONTAMINATION

Legal Description of the Property:

See Exhibit A attached hereto and made a part hereof

STATE OF WISCONSIN

COUNTY OF Eau Claire

Recording Area

Name and Return Address:

Matthew Thompson
WDNR
1300 W. Clairemont Ave.
Eau Claire, WI 54701

I, David B. Rozeboom, being first duly sworn, state that:

1. I am a Remediation and Redevelopment Program Supervisor, employed by the Wisconsin Department of Natural Resources (hereinafter "the department"). 291-2907-362-0997
Parcel Identification Number (PIN)
2. Matthew A. Thompson, Hydrogeologist, Wisconsin Department of Natural Resources, Eau Claire, Wisconsin has personal knowledge of the facts herein set forth and believe the same to be true.
3. The department was notified of petroleum and tetrachloroethene contaminants discharged at the property located at 218 South Fourth Street, map attached as Exhibit B, in the City of Wausau, County of Marathon and which has the above legal description. The property is also known as the Undeveloped Rosemurgy Property, BRRTS# 02-37-548031.
4. The removal or treatment of the contamination is required on the property under the authority of Wis. Stats. § 292.11.
5. On February 27, 2018, the Department of Natural Resources send a letter to Roswell Properties L.L.C. LTD., advising them of the statutory requirement to restore the environment at that location.
6. On July 18, 2018 the department sent a letter, by certified mail, to Mitch Brazin, REO Manager, The Cadle Company & Affiliates, 100 North Center Street, Newton Falls, Ohio 44444 advising them of the statutory requirement to restore the environment at that location, and that a notice of contamination may be recorded if satisfactory action to restore the environment did not commence. That letter requested a response within 30 days from the date the letter was received. An inadequate response to that letter was received by the department, by August 20, 2018.

7. On October 18, 2018 the department sent a second letter, by certified mail, to Mitch Brazin, REO Manager, Roswell Properties, L.L.C., LTD, 100 North Center Street, Newton Falls, Ohio 44444 advising that the department has made the decision to record a notice of contamination for the above-described property at the county Register of Deeds office. The 30-day deadline specified in the letter has expired. The 15 day waiting period since that deadline, required by Wis. Adm. Code § NR728.11 (2)(c), has passed without an acceptable response.
8. Because the department believes that petroleum and tetrachloroethene contamination currently found in the on the property with the above legal description will continue to discharge into the environment, subsequent purchasers of the property could be held responsible for investigation and cleanup costs under Wis. Stats. § 292.11(3). Subsequent purchasers may contact the Wisconsin Department of Natural Resource's Remediation and Redevelopment Program, West Central Regional Program Associate for information regarding contamination at the property.

David B. Rozeboom
Remediation and Redevelopment Program Supervisor

Subscribed and sworn to before me this _____ day of _____, 20____.

Notary Public, State of Wisconsin

My commission expires on: _____

This document was drafted by the Wisconsin Department of Natural Resources.

Exhibit A

All that part of Government Lot 1 in Section 36, Township 29 North, Range 7 East, in the City of Wausau, Marathon County, Wisconsin, described as follows:

Commencing at the Northeast corner of Lot 1 in Block 5 of B. Williams Addition to the City of Wausau; and running thence North 1° 48' East, 212.20 feet along the West line of Fourth Street to the point of beginning; thence North 88° 06' West, 190 feet; thence North 1° 48' East, 164.75 feet; thence North 70° 43' East, 28.25 feet; thence South 76° 49' East, 100.55 feet to the Southwest corner of Lot 21 in Stewart, Manson & Hinton's Addition to the City of Wausau; thence Southeasterly, along the Southerly line of said Lot 21 in said Stewart, Manson & Hinton's Addition to the City of Wausau, to the West line of Fourth Street; and thence South, along the West line of Fourth Street, 150 feet to the point of beginning.

AND

That part of Government Lot 1 in Section 36, Township 29 North, Range 7 East, in the City of Wausau, Marathon County, Wisconsin, described as follows:

Commencing at the Northeast corner of Lot 1 in Block 5 of B. Williams Addition to the City of Wausau; running thence North 1° 48' East, 212.2 feet, along the West line of Fourth Street; thence North 88° 06' West, 190 feet to the point of beginning; thence North 88° 06' West, 100 feet; thence North 1° 48' East to the Southerly line of the land described in Certified Survey Map recorded in the office of the Register of Deeds for Marathon County, Wisconsin, in Volume 1 of Certified Survey Maps on Page 33; thence North 70° 43' East, along the Southerly line of said Certified Survey Map, to the Northwest corner of the parcel described in deed recorded in said Register's office in Deed Book 501 on Page 584; and thence South along the West line of the parcel of land described in Deed Book 501 on Page 584, 164.75 feet to the point of beginning.

PIN: 37.291.4.2907.362.0997 ✓

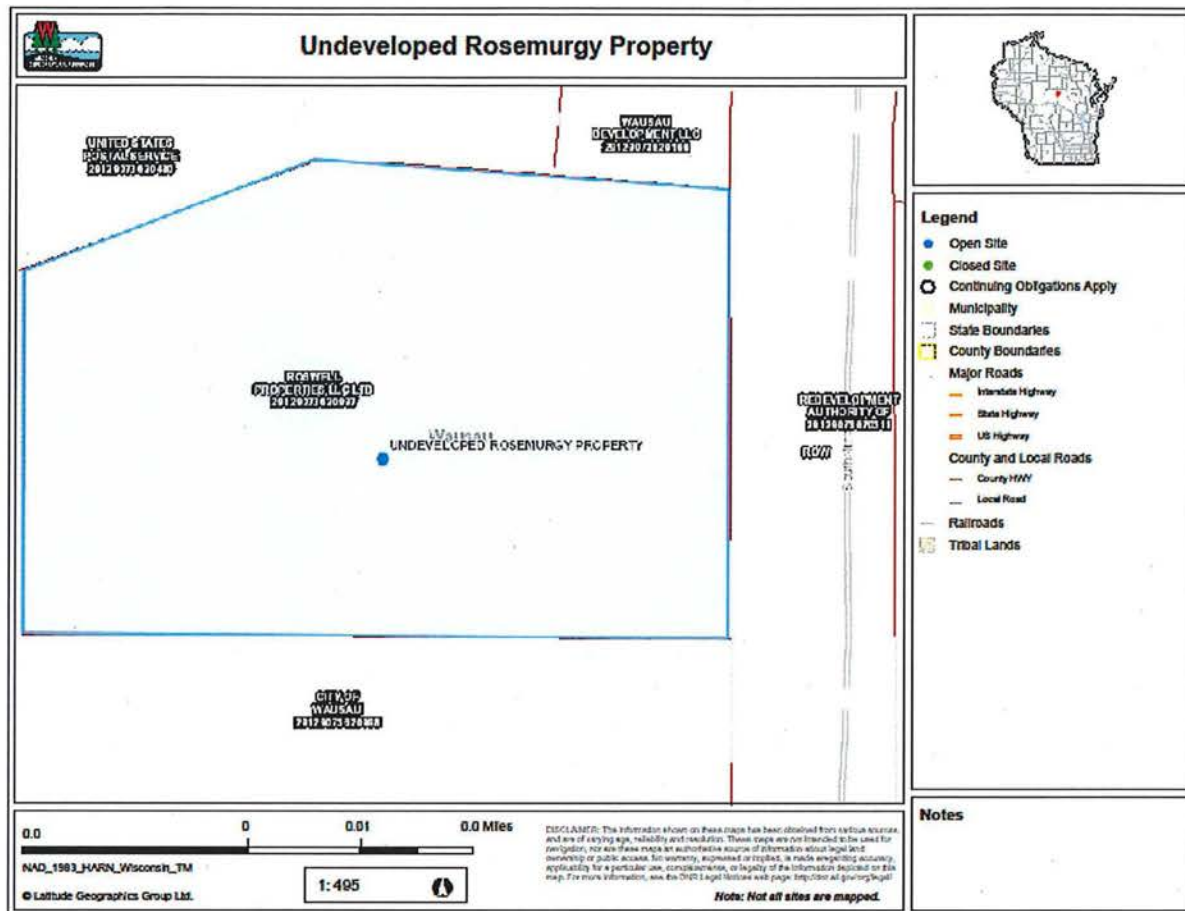
Tax ID No.: 2907.362.997

Property Address: 218 S. 4th Street, Wausau, WI 54403

Sub Lot 1

DEED

Exhibit B



SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Roswell Properties C.C.C.LTD.
Attn: Mitch Brazin
100 N. Center St
Newton Falls OH 44444-1321



9590 9402 2709 6351 3112 59

2. Article Number (Transfer from service label)

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

- ☐ Agent
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

- ☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Insured Mail
☐ Insured Mail Restricted Delivery (over \$500)
- ☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

Page 6 of 6

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

Sent To
Mr. Mitch Brazin, Roswell Properties LLC
City, State, ZIP+4®
100 N. Center St
Newton Falls OH 44444-1321

Total Postage and Fees \$

Postage \$

- Extra Services & Fees (check box, add fee as appropriate)
- ☐ Adult Signature Restricted Delivery \$
☐ Adult Signature Required \$
☐ Certified Mail Restricted Delivery \$
☐ Return Receipt (electronic) \$
☐ Return Receipt (hardcopy) \$

Certified Mail Fee \$

Postmark
Here

For delivery information, visit our website at www.usps.com®

U.S. Postal Service
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

7017 0530 0000 6059 4582
7017 0530 0000 6059 4582



CERTIFIED MAIL®

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT
OF THE RETURN ADDRESS. FOLD AT DOTTED LINE

7017 0530 0000 6059 4582

PLEISTOCENE GEOLOGY OF MARATHON COUNTY, WISCONSIN

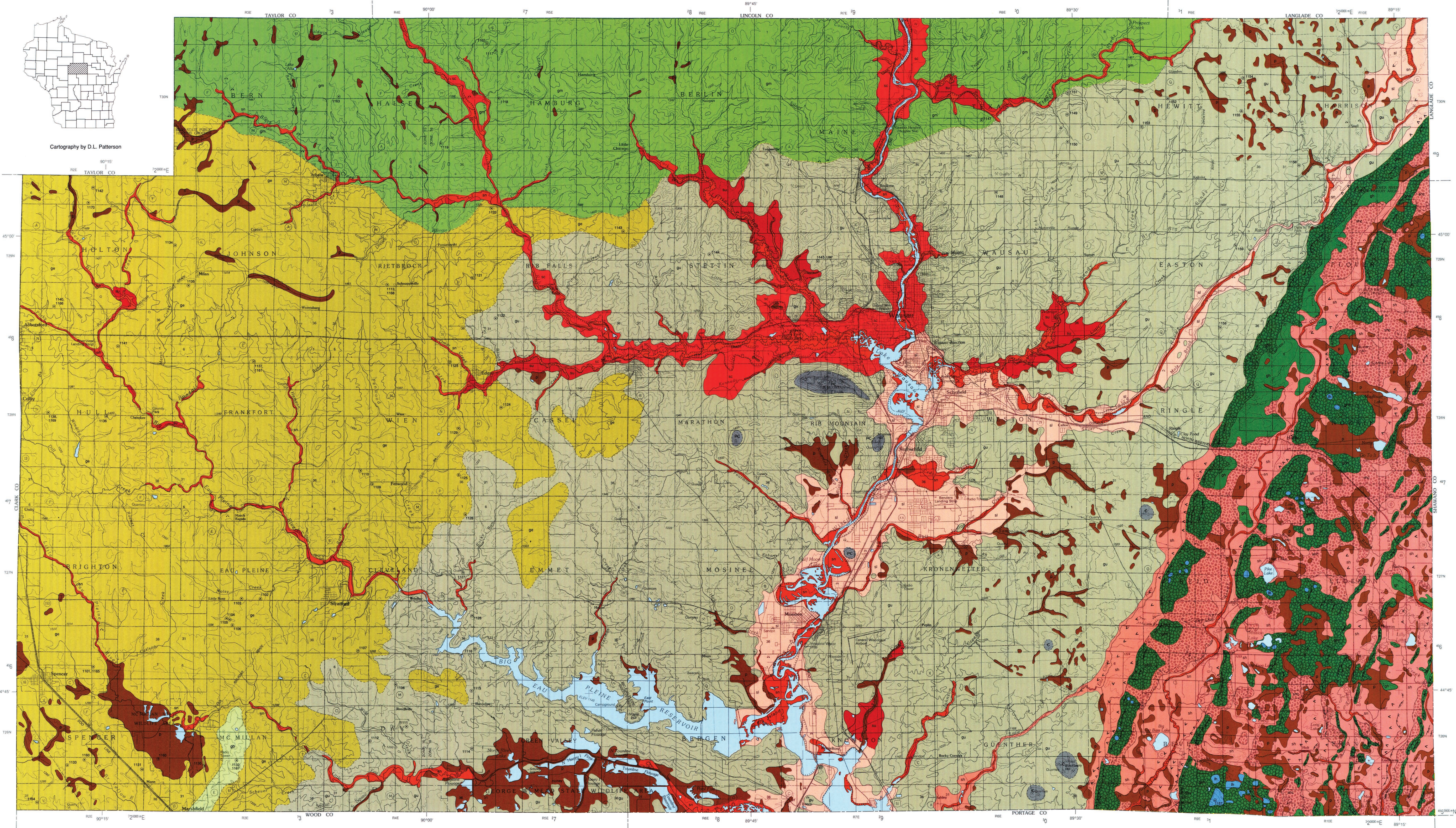
John W. Attig and Maureen A. Muldoon, 1989

University of Wisconsin-Extension
Published by and available from
Wisconsin Geological and Natural History Survey
3817 Mineral Point Road, Madison, WI 53705
M.E. Ostrom, Director and State Geologist

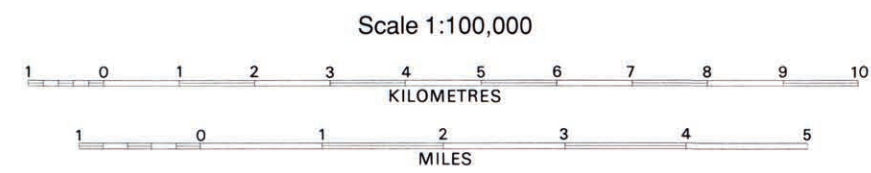
Information Circular 65
Pleistocene Geology of Marathon County, Wisconsin
Plate 1: Geologic map (Map 89-1)



Cartography by D.L. Patterson



Base on U.S. Geological Survey County Map Series (Topographic), 1966.



Explanation

WETLAND SEDIMENT

Peat and muck. Sediment deposited in bogs, swamps, and marshes; typically less than 2 m thick.

STREAM SEDIMENT

Meltwater-stream sediment of the Horicon Formation. Dolomitic sand, gravelly sand, and sandy gravel deposited by meltwater streams from the Green Bay Lobe during the last part of the Wisconsin Glaciation; typically leached of carbonate to a depth of 5 to 10 m. Unit **sh** is shown where the original depositional surface has been destroyed by collapse due to melting of buried ice.

Meltwater-stream sediment of the Copper Falls Formation. Noncalcareous sand, gravelly sand, and sandy gravel deposited by meltwater streams from the Langlade, Wisconsin Valley, and Chippewa Lobes during the last part of the Wisconsin Glaciation.

Meltwater-stream sediment of the Horicon and Copper Falls Formations, undifferentiated. Sand, gravelly sand, and sandy gravel deposited by meltwater streams from the Green Bay, Langlade, Wisconsin Valley, and Chippewa Lobes during the last part of the Wisconsin Glaciation.

GLACIAL SEDIMENT

Till of the Mapleview Member of the Horicon Formation. Brown, gravelly to slightly gravelly, clayey, silty sand deposited by the Green Bay Lobe during the last part of the Wisconsin Glaciation; dolomite clasts are abundant below a depth of several metres; typically 10 m or more thick; occurs at the surface in ice-marginal deposits, broad areas of hummocky topography, and in drumlins. Unit **gh** is shown in areas of gently rolling topography; unit **gth** is shown in areas of hummocky topography.

Till of the Merrill Member of the Lincoln Formation. Noncalcareous, reddish brown, slightly gravelly, clayey, silty sand occurring in an area of subdued glacial topography in the northern part of the county; typically less than 5 m thick and patchy near its southern limit.

Till of the Bakerville Member of the Lincoln Formation. Noncalcareous, reddish brown, slightly gravelly, clayey, silty sand occurring in a broad ridge in the southwestern part of the county; typically 3 to 5 m thick; underlain by gravelly sand and sandy gravel and till of the Edgar Member.

Till of the Edgar Member of the Marathon Formation. Brown, calcitic, slightly gravelly, sandy, clayey silt underlying broad, nearly flat upland areas in the western part of the county; typically 5 to 20 m thick; includes small patches of till of the Bakerville Member in the western part of the area.

Marathon Formation, undifferentiated. Patchy, gravelly, clayey, sandy silt, most deposited by hillslope processes; derived from residuum from Paleozoic and Precambrian rock and younger stream and glacial sediment, including till of the Wausau and Edgar Members of the Marathon Formation; most surface stones are of the same lithology as the underlying Cambrian or Precambrian rock; may include patches of the Wausau Member throughout the area and patches of till of the Edgar Member in the western part of the area; typically less than 2 m thick or absent but in places up to 15 m thick.

LAKE SEDIMENT

Offshore lake sediment of the Horicon Formation. Fine sand and silty fine sand, some slightly gravelly, in ice-walled-lake plains.

PRE-PLEISTOCENE ROCK

Large areas of outcrop of Precambrian (PC) or Cambrian (C) rock where Pleistocene sediment has been nearly completely eroded.

Symbols

Geologic contact. Solid line where position shown on map is judged to be within 0.1 km of true contact in most places; dashed line where position shown on map is judged to be more than 0.1 km from true contact in many places.

Drumlin

Stream-cut bank

Ice-marginal ridge

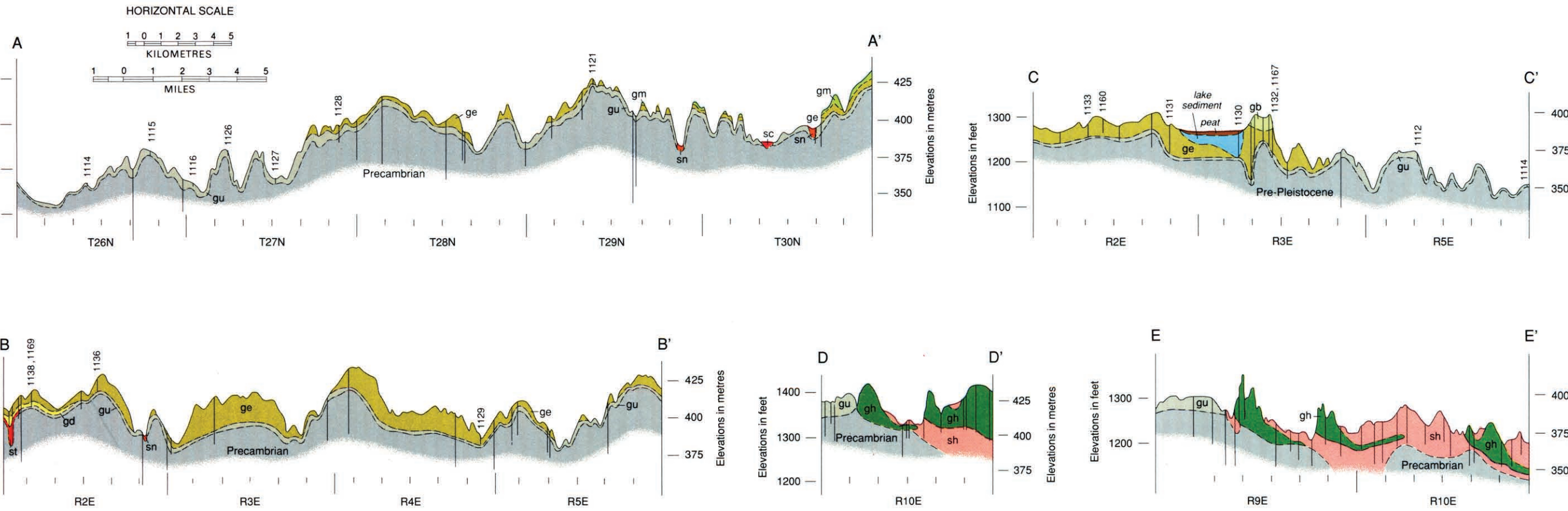
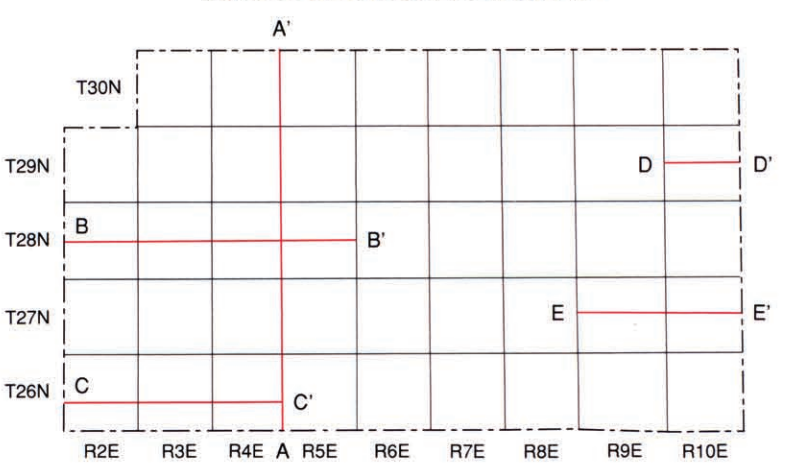
Test hole location and WGNHS Geologic Log number

Flow direction on fluvial surface

GEOLOGIC CROSS SECTIONS

Sections A-A' through E-E' show the generalized vertical relationships between geologic units. They are based on the surface distribution of materials, logs of holes drilled as a part of this study, and logs of other drillholes that are on file at the Wisconsin Geological and Natural History Survey in Madison. The unit designations are the same as those used on the map with the following additions: unit **gd**, till of the Medford Member of the Marathon Formation, a unit that does not occur at the surface in Marathon County, and unit **st**, undifferentiated meltwater and nonglacial stream sediment of various ages. The contacts between units are judged to be within 3 m of the true contact in most places. The vertical exaggeration is about 84 times.

CROSS-SECTION LOCATIONS



Pleistocene Geology of Marathon County, Wisconsin

John W. Attig and Maureen A. Muldoon

Mountain

River

Wisconsin

Hancock moraine

Almond moraine

Elkton moraines

Wisconsin Geological and Natural History Survey

Pleistocene Geology of Marathon County, Wisconsin

John W. Attig and Maureen A. Muldoon

Abstract

East-central and southeastern Marathon County was glaciated during the last part of the Wisconsin Glaciation. The remainder of the county was glaciated earlier in the Pleistocene or during the late Pliocene. Most glacial sediment has been eroded from the central part of Marathon County; there, the only remaining indications of glaciation are till or till-like material of the Marathon Formation and scattered glacially transported clasts mixed with weathering products from the underlying Cambrian and Precambrian rock. In the western part of the county two members of the Marathon Formation are recognized. The gray, silty, calcitic till of the Medford Member was deposited during the Stetsonville Phase; the brown, silty, calcitic till of the Edgar Member, during the Milan Phase. The lithology of the Medford and Edgar Members indicates a northwest source area. The till of the Bakerville Member was deposited in the southwestern part of the county during the Nasonville Phase; the till of the Merrill Member, in the northern part of the county during the Hamburg Phase. The till of these members, both of the Lincoln Formation, is red, sandy, noncalcareous, and derived from a northern source area. The brown, sandy, dolomitic till of the Mapleview Member of the Horicon Formation was deposited in the eastern part of the county during the Hancock, Almond, and Elderon Phases.

Field measurements of hydraulic conductivity indicate that the Medford and Edgar Members form a distinct hydrogeologic unit, as do the Bakerville and Merrill Members.

Introduction

Marathon County is located in central Wisconsin and covers about 4,100 km² (fig. 1). The east-central and southeastern areas of the county were glaciated during the last part of the Wisconsin Glaciation, between about 25,000 and 13,000 years ago. The remainder of the county was glaciated earlier in the Pleistocene or during the late Pliocene.

In this report we discuss the nature, distribution, and history of Pleistocene material in Marathon County and the hydrogeologic properties of the till units in the western part of the county. We based our report on field and laboratory studies completed during 1984, 1985, and 1986. We conducted field work using standard field techniques, including drilling with a truck-mounted drill that allowed samples to be collected from either continuous-flight augers or a split-spoon sampler. Fifty-nine holes (holes MR-1101 to MR-1159) were drilled to determine the stratigraphy of Pleistocene material. Samples were collected from the drill bit about every 1.5 m. On

the basis of the logs of holes MR-1101 to MR-1159, we chose sites for holes MR-1160 to MR-1170, in which piezometers were installed and from which continuous core was collected. The physical and hydrogeologic properties of selected sediment samples were determined in laboratories at the University of Wisconsin-Madison. The number and location of the holes drilled as part of this study are shown on plate 1, and a geologic log for each of these holes is available from the Wisconsin Geological and Natural History Survey (WGNHS) (fig. 2). A complete list of laboratory data from analyses of sediment samples is given by Muldoon (1987).

Acknowledgments

We thank Lee Clayton, William N. Mode, Robert W. Baker, and Frederick W. Madison for reviewing a preliminary version of this report and providing many helpful suggestions. We thank Lee

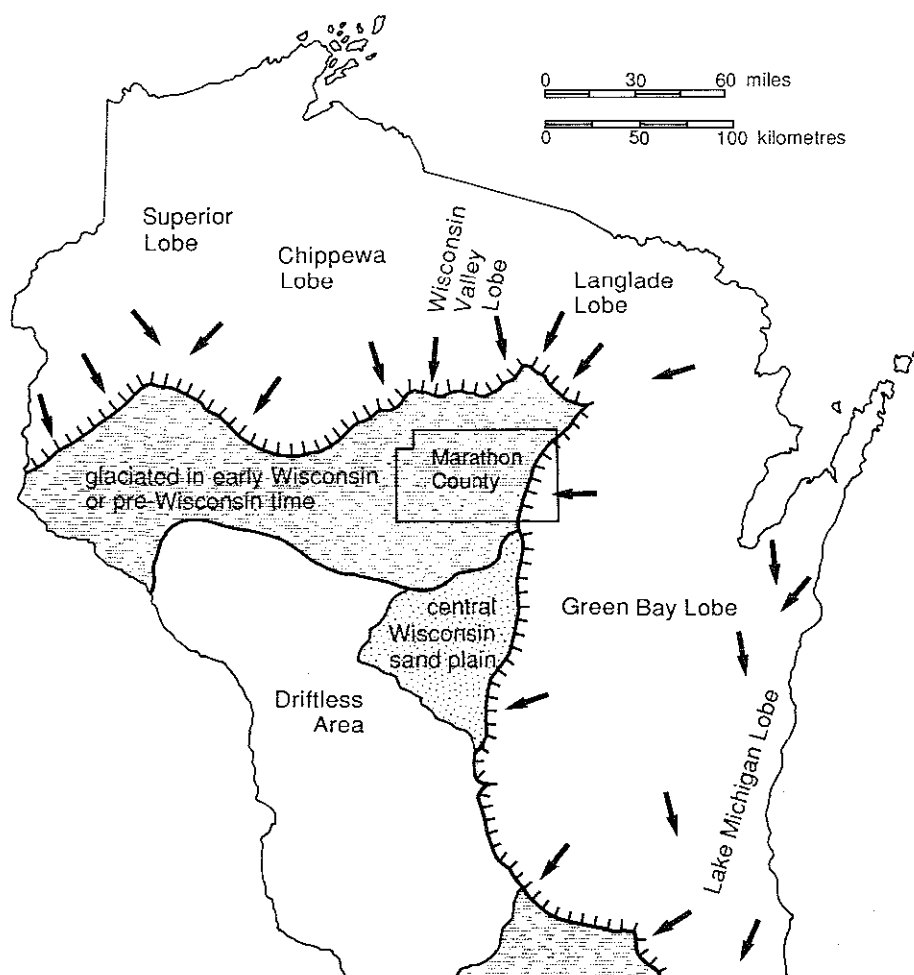


Figure 1. Location of Marathon County and the extent of glaciation in Wisconsin. The arrows show the direction of late Wisconsin ice flow.

Clayton, William N. Mode, Robert W. Baker, and William Fiala for visiting the field area and providing thought-provoking discussions throughout the course of our research. Randy Boness logged stratigraphic holes and performed clay-mineral analyses; William Fiala (U.S. Soil Conservation Service) made unpublished soil maps available for our use.

Precambrian and Cambrian rock

Exposures of Precambrian rock are common in central Marathon County, where the typical thickness of overlying material is 2 m or less (area of map unit *gu* on plate 1). In the remainder of the

county, where the material overlying Precambrian rock is typically 2 m or more thick, exposures of Precambrian rock are less common. The Precambrian rock consists of Archean and lower and middle Proterozoic metavolcanic, metasedimentary, and intrusive rock (LaBerge and Myers, 1983). The Middle Proterozoic Wolf River batholith, a large body of coarse-grained, porphyritic quartz monzonite, underlies a large part of eastern Marathon County. Several large syenite plutons occur in central Marathon County; Rib Mountain, the highest point in the county (summit elevation, 586 m), is a quartzite inclusion in one of these plutons. LaBerge and Myers (1983) gave a detailed description of the Precambrian geology of Marathon County; their report in-

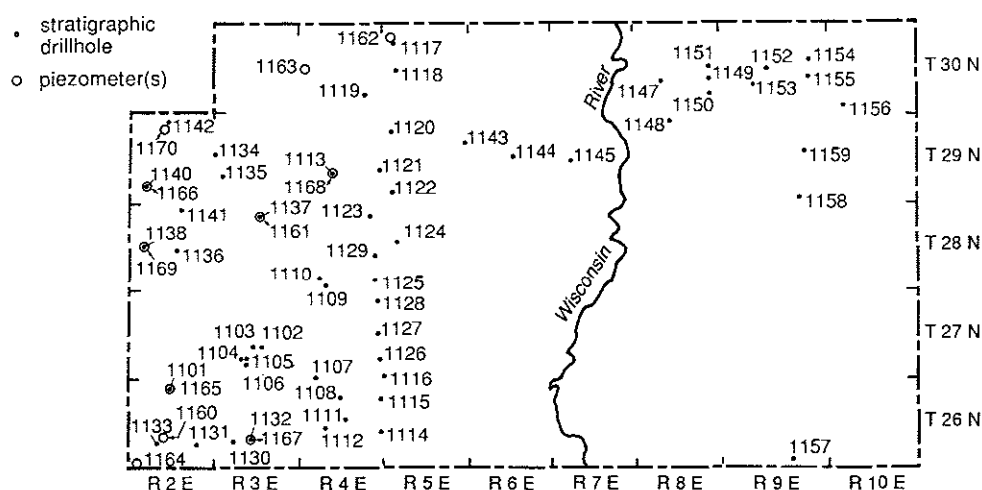


Figure 2. Location of holes drilled to sample sediment and install piezometers.

cludes a 1:100,000 map (the same scale as plate 1).

Cambrian sandstone overlies Precambrian rock in several areas in southern and western Marathon County. Well cemented, medium- to coarse-grained sandstone with ripple-marked bedding planes underlies two prominent hills in T26N, R8E, and crops out in a quarry in SW1/4 sec. 33, T26N, R2E. LaBerge and Myers (1983, p. 67) reported several other exposures of sandstone in the south-central part of the county. Construction logs of some water wells report sandstone in the subsurface in the western part of T28N, R2E; in most of T26N, R2E; and in the southern parts of T26N, R3E, 4E, 5E, 6E, and 7E.

The Cambrian sandstone and later Paleozoic rock, which once were more extensive in central Wisconsin, have mostly been eroded away. A few fragments of oolitic chert found in the central part of the county may be residual from the Ordovician carbonate rock that formerly extended over the area. Little is known about the geologic history of the area for the period between the deposition of the sandstone (about 500 million years ago) and the deposition of the oldest glacial deposits in the area (possibly about 2 million years ago).

The surface of the Precambrian and Cambrian rock has been extensively weathered. In the central part of the county, where Pleistocene sediment is thin or absent, coarse-grained Precambrian rock may be disaggregated to depths of tens of metres (LaBerge and Myers, 1983). The weathering of fine-grained Precambrian and Cambrian

rock produced clay-rich material. This material is a major component of map unit **gu** on plate 1 and is encountered in most drillholes that penetrate to the rock surface in other parts of the county (that is, in areas not shown as map unit **gu**). This clay-rich material was used for making bricks in several parts of the county (Buckley, 1901) and is now used as a low-permeability liner for landfills. The disaggregated coarse-grained rock is used for landscaping and construction material.

Pleistocene geology

The uplands of Marathon County can be divided into five areas that correspond to map units **gu**, **ge**, **gb**, and **gm** on plate 1 and the area east of the Hancock moraine (mainly map units **gh** and **sh**). The Pleistocene material in Marathon County, as in other areas of Wisconsin, has been divided into lithostratigraphic units on the basis of color, grain-size distribution, mineralogy, magnetic susceptibility, and stratigraphic position (fig. 3). (Mickelson and others, 1984; Attig and others, 1988).

Marathon Formation

Marathon Formation, undifferentiated

Material that is included in the Marathon Formation but not designated as a member covers much of central Marathon County (map unit **gu** on

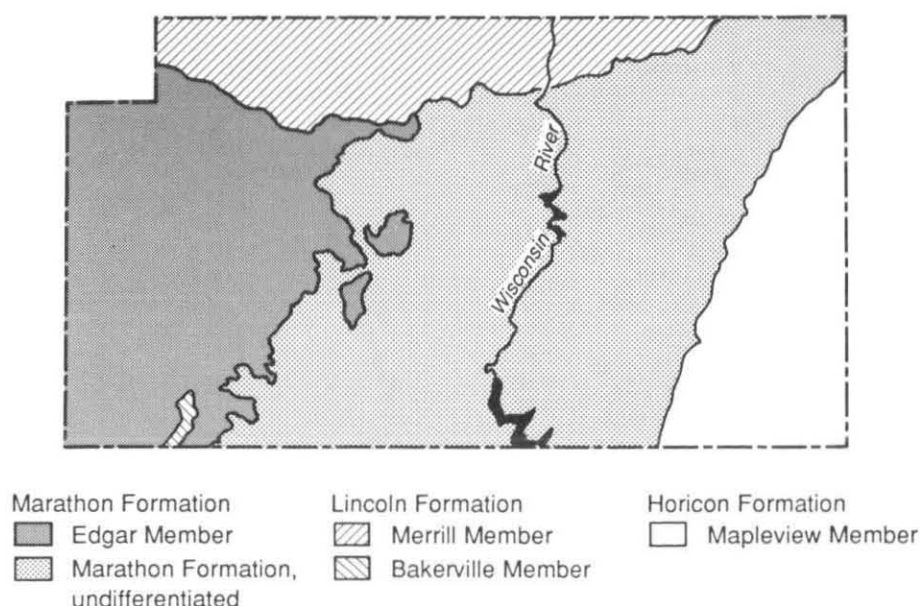


Figure 3. General distribution of lithostratigraphic units in Marathon County.

plate 1). Material included in map unit **gu** overlies Precambrian rock and contains material interpreted to be predominantly hillslope sediment derived from the weathering of Cambrian and Precambrian rock; this unit also includes some glacially transported material. Map unit **gu** is similar to map unit **h** of Clayton (1986) in adjacent Portage County and map unit **hp** of Clayton (in press) in adjacent Wood County.

The thickness of the undifferentiated Marathon Formation is typically about 2 m or less throughout most of central Marathon County but reaches 15 m in places. Throughout the area mapped as **gu**, the surface topography is nearly the same as that of the underlying rock and exposures of Precambrian rock are numerous. In a few places, there are large areas of Precambrian or Cambrian rock (units **PC** and **€** on plate 1). The material included in the undifferentiated Marathon Formation is typically thin and poorly exposed. As a result, it is impossible to separate till from hillslope sediment or residuum. Many of the small exposures that we examined show at least some crude stratification, and the contact with the underlying rock is typically sharp. The sharp contact indicates that although the weathered material is locally derived, it is not in place; the crude stratification indicates that in most places slope processes have mixed and transported the

glacial and residual components of the material shown as map unit **gu** on plate 1.

Map unit **gu** includes the Wausau Member of the Marathon Formation. The Wausau Member, first recognized and informally named the "Wausau drift" by LaBerge and Myers (1983 and earlier progress reports), was later formally named in Mickelson and others (1984). We recognized till-like material, possibly of the Wausau Member, in some areas; however, its extent could not be determined and shown on plate 1. Map unit **gu** also includes small, thin outliers of the Edgar Member of the Marathon Formation in the west-central part of the county. The area mapped as **gu** corresponds approximately to the area interpreted by Weidman (1907) to be unglaciated.

Our eighty samples of undifferentiated material from the Marathon Formation had an average ratio of sand:silt:clay of 39:44:17 for the finer-than-2-mm fraction (fig. 4; table 1). These results are similar to those given by Mode (1976) from 15 Marathon County samples of the Wausau Member of the Marathon Formation; he reported a ratio of sand:silt:clay of 43:34:23. Mickelson (1986) reported a sand:silt:clay ratio of 52:34:14 for till of the Wausau Member in adjacent Langlade County. Our results from the samples of Marathon Formation, undifferentiated, show variability in grain-size distribution (figs. 4 and 5),

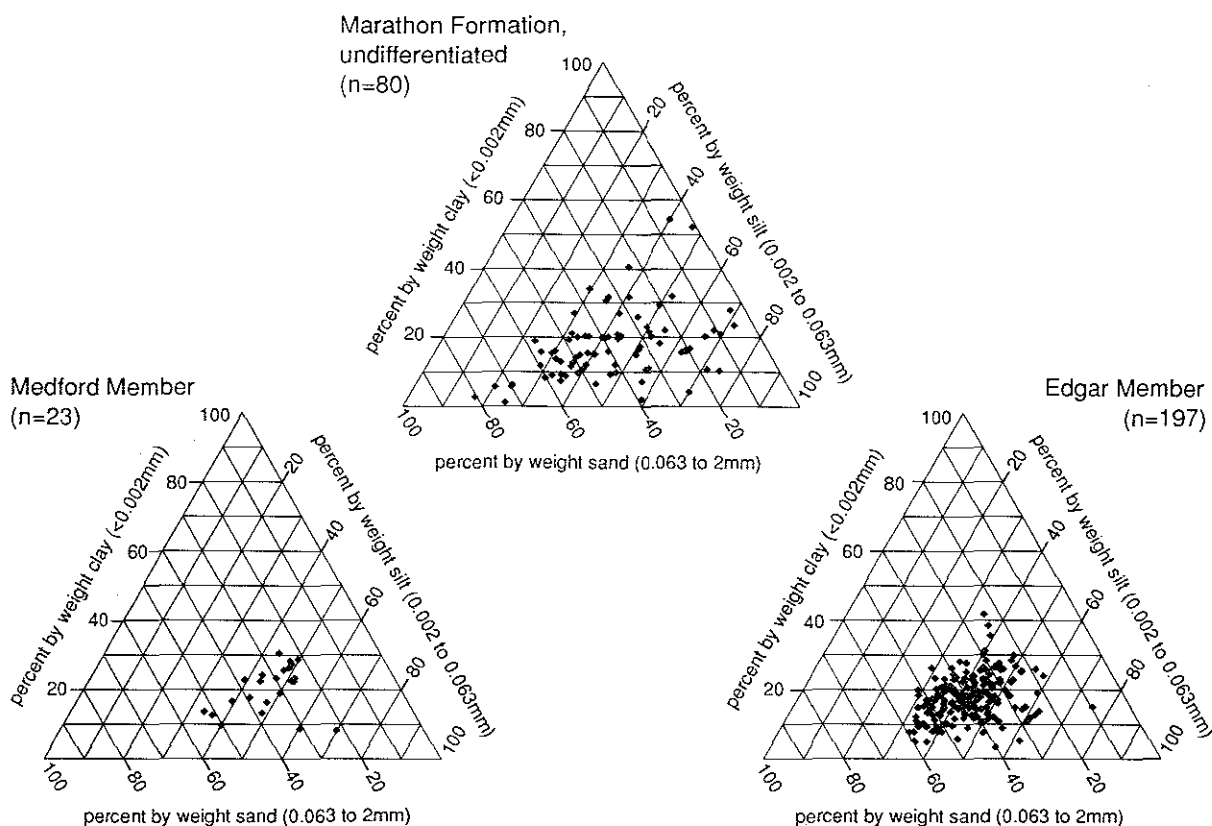


Figure 4. Grain-size distribution of the finer-than-2-mm fraction of samples from the Marathon Formation. The plots showing data for the Edgar and Medford Members show only results from samples of till. The plot for the undifferentiated Marathon Formation includes samples that may be from till, residuum, or hillslope sediment.

Table 1. Summary of the lithologic properties of till units deposited prior to late Wisconsin time. The percentages of sand, silt, and clay have been determined for the finer-than-2-mm fraction of the sample.

Lithostratigraphic unit	Number of samples	Sand (%)	Silt (%)	Clay (%)	Median diameter (mm)	Magnetic susceptibility
Marathon Formation						
Undifferentiated	80	38.7	43.8	17.5	0.043	7.3×10^{-4}
Medford Member	23	32.8	47.1	20.1	0.023	1.4×10^{-3}
Edgar Member	197	39.2	42.9	17.9	0.039	1.3×10^{-3}
Lincoln Formation						
Bakerville Member	8	56.7	30.2	13.1	0.114	1.8×10^{-3}
Merrill Member	11	49.0	38.5	12.5	0.074	1.3×10^{-3}

presumably because several types of sediment are included in the unit. The undifferentiated material in the Marathon Formation is noncalcareous and field color ranges from reddish brown (5YR

4/4) to olive (5Y 4/3). Typically, the material is dark brown or brown (10YR 4/3) to olive brown (2.5Y 4/4). The magnetic susceptibility of samples of the Marathon Formation, undifferentiated,

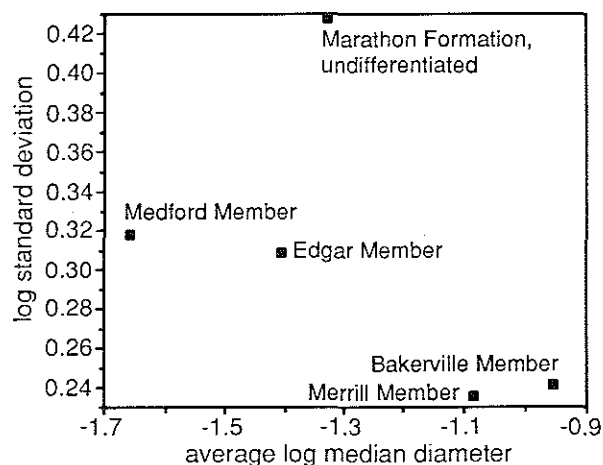


Figure 5. Grain-size variation of the till units deposited prior to late Wisconsin time. The median diameter of a sample is used to characterize grain-size distribution. The diagram shows a plot of the $\log_{10}$ average median diameter of each unit against the $\log_{10}$ standard deviation around that diameter.

ranges from 7.2×10^{-5} to 7.8×10^{-3} (S.I. units); this is the greatest range of any of the units. The median magnetic susceptibility of samples is 7.3×10^{-4} (S.I. units) (see table 1). The variation in magnetic susceptibility is probably related to the characteristics of the underlying rock and the degree of weathering of magnetic minerals.

Till of the Medford Member

The gray, slightly gravelly, silty, calcitic till of the Medford Member of the Marathon Formation (Attig and Muldoon, 1988) is not known to be exposed at the surface in Marathon County. The areal extent of this unit is poorly known. This till unit has been observed in one outcrop along the south bank of the Little Black River in the SE1/4 NE1/4 SE1/4, sec. 3, T30N, R1E in adjacent southeastern Taylor County, and as far west as Gilman in Taylor County. Several drillholes in northwestern Marathon County penetrate till of the Medford Member (WGNHS Geologic Logs MR-1135, MR-1138, MR-1169, MR-1140, and MR-1166; cross-section unit gd on section B-B', plate 1).

Data from drillholes indicate that the till of the Medford Member is typically about 6 m thick. Twenty-three samples of till of the Medford Member showed an average ratio of sand:silt:clay of

33:47:20 for the finer-than-2-mm fraction (figs. 4 and 5; table 1). Coarse sand grains composed of siliceous limestone are common in the Medford Member, and samples of Medford till effervesce strongly when treated with dilute hydrochloric acid. Very coarse sand and pebble-size fragments of limestone in the Medford till contain fossils too poorly preserved to be identified. The limestone fragments are typically leached from the upper several metres of Medford till. In the field this till is typically gray (10YR 3/1 to 2.5Y 5/1), although the color ranges to grayish brown (2.5Y 5/3). Small fragments of gray shale are also quite common in the Medford Member; incorporation of this shale may account for the color of the unit. The median magnetic susceptibility of samples taken from the till of the Medford Member is 1.4×10^{-3} (S.I. units) (see table 1).

Till of the Edgar Member

The till of the Edgar Member of the Marathon Formation (Mode, 1976; Mickelson and others, 1984) underlies much of western Marathon County (map unit ge on plate 1). The landscape underlain by the Edgar till consists of broad uplands and deeply incised valleys. The Edgar till is usually overlain by about 1 m of wind-blown sandy silt. Edgar till is yellowish brown, slightly gravelly, silty, and calcitic. Red and orange iron-oxide staining and black manganese oxide staining are quite common.

The till of the Edgar Member is typically 6 to 15 m thick and in places is up to 25 m thick. The Edgar till thins and becomes patchy eastward; originally this unit extended farther eastward (plate 1). The ratio of sand:silt:clay in the finer-than-2-mm fraction of our 197 samples of Edgar till averaged 39:43:18 (fig. 4; table 1). The till typically contains less than 10 percent gravel-size particles. On the basis of 17 samples from Marathon County, Mode (1976) found an average ratio of sand:silt:clay of 33:43:24. Clayton (in press) reported that the Edgar till in Wood County contains 20 to 55 percent sand, 30 to 45 percent silt, and 10 to 35 percent clay. The median diameter of samples from the Edgar till in Marathon County is variable (fig. 5). Field color is typically dark yellowish brown (10YR 4/4) to brown or dark brown (7.5YR 4/4).

The physical characteristics of the Edgar Member show considerable down-section vari-

**WATER, ELECTRIC, OR JOINT UTILITY
ANNUAL REPORT**

OF

WAUSAU WATER UTILITY

407 GRANT ST
WAUSAU, WI 54403-4737

For the Year Ended: DECEMBER 31, 2019

TO

PUBLIC SERVICE COMMISSION OF WISCONSIN

P.O. Box 7854
Madison, WI 53707-7854
(608) 266-3766

This form is required under Wis. Stat. § 196.07. Failure to file the form by the statutory filing date can result in the imposition of a penalty under Wis. Stat. § 196.66. The penalty which can be imposed by this section of the statutes is a forfeiture of not less than \$25 nor more than \$5,000 for each violation. Each day subsequent to the filing date constitutes a separate and distinct violation. The filed form is available to the public and personally identifiable information may be used for purposes other than those related to public utility regulation.

Filed: 05/28/2020
Refiled: 08/31/2020

Water Service Started Date: 01/01/1885

DNR Public Water System ID: 73701023

Safe Drinking Water Information System (SDWIS) Total Population Served: 39106

I **Valerie Swanborg, City of Wausau Accountant** of **WAUSAU WATER UTILITY**, certify that I am the person responsible for accounts; that I have examined the following report and, to the best of my knowledge, information and belief, it is a correct statement of the business and affairs of said utility for the period covered by the report in respect to each and every matter set forth therein.

Date Signed: **8/31/2020**

Sources of Water Supply - Well Information

- Enter characteristics for each of the utility's functional wells (regardless of whether it is "in service" or not).
- Do not include abandoned wells on this schedule.
- All abandoned wells should be retired from the plant accounts and no longer listed in the utility's annual report.
- Abandoned wells should be permanently filled and sealed per Wisconsin Administrative codes Chapters NR811 and NR812.

Utility Name/ID for Well (a)	DNR Well ID (b)	Depth (feet) (c)	Casing Diameter (inches) (d)	Yield Per Day (gallons) (e)	In Service? (f)	
Well 10	10	164	30	502,178	Yes	1
Well 11	11	165	30	290,336	Yes	2
Well 3	3	100	18	312,020	Yes	3
Well 6	6	100	24	443,083	Yes	4
Well 7	7	100	24	232,668	Yes	5
Well 9	9	100	20	119,407	Yes	6
				1,899,692		7

Meters

- Include in Columns (b-f) meters in stock as well as those in service.
- Report in Column (c) all meters purchased during the year and in Column (d) all meters junked, sold or otherwise permanently retired during the year.
- Use Column (e) to show correction to previously reported meter count because of inventory or property record corrections
- Totals by size in Column (f) should equal same size totals in Column (s).
- Explain all reported adjustments as schedule footnote.
- Do not include station meters in the meter inventory used to complete these tables.

Number of Utility-Owned Meters

Classification of All Meters at End of Year by Customers

Size of Meter	First of Year	Added During Year	Retired During Year	Adjust. Increase or Decrease	End of Year	Tested During Year	Residential	Commercial	Industrial	Public Authority	Multifamily Residential	Irrigation	Wholesale	Inter-Departmental	Utility Use	Additional Meters	In Stock	Total	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	
5/8	13,829	5	844	6	12,996	846	11,831	499	9	15	48	201					393	12,996	1
3/4	2,348	98	125	3	2,324	125	1,803	218	18	5	23	89					168	2,324	2
1	708		43	(1)	664	43	161	240	13	8	27	65					150	664	3
1 1/2	309	18	41		286	74	7	178	14	12	22	27					26	286	4
2	242	12	38	2	218	54		113	10	32	5	22					36	218	5
3	52	2	1	(1)	52	1		24	4	15	3	2					4	52	6
4	41	1	1	1	42	0		15	7	13	1	2					4	42	7
6	6				6	6		2	3								1	6	8
8	1				1	1				1								1	9
Total	17,536	136	1,093	10	16,589	1,150	13,802	1,289	78	101	129	408					782	16,589	10

**WATER, ELECTRIC, OR JOINT UTILITY
ANNUAL REPORT**

OF

MAINE WATER UTILITY

6111 N 44TH AVE
WAUSAU, WI 54401

For the Year Ended: DECEMBER 31, 2019

TO

PUBLIC SERVICE COMMISSION OF WISCONSIN

P.O. Box 7854
Madison, WI 53707-7854
(608) 266-3766

This form is required under Wis. Stat. § 196.07. Failure to file the form by the statutory filing date can result in the imposition of a penalty under Wis. Stat. § 196.66. The penalty which can be imposed by this section of the statutes is a forfeiture of not less than \$25 nor more than \$5,000 for each violation. Each day subsequent to the filing date constitutes a separate and distinct violation. The filed form is available to the public and personally identifiable information may be used for purposes other than those related to public utility regulation.

Filed: 07/06/2020

Water Service Started Date: 10/01/2018

DNR Public Water System ID: 73701078

Safe Drinking Water Information System (SDWIS) Total Population Served: 140

I **Keith Rusch, Village Administrator** of **MAINE WATER UTILITY**, certify that I am the person responsible for accounts; that I have examined the following report and, to the best of my knowledge, information and belief, it is a correct statement of the business and affairs of said utility for the period covered by the report in respect to each and every matter set forth therein.

Date Signed: **6/30/2020**

Meters

- Include in Columns (b-f) meters in stock as well as those in service.
- Report in Column (c) all meters purchased during the year and in Column (d) all meters junked, sold or otherwise permanently retired during the year.
- Use Column (e) to show correction to previously reported meter count because of inventory or property record corrections
- Totals by size in Column (f) should equal same size totals in Column (s).
- Explain all reported adjustments as schedule footnote.
- Do not include station meters in the meter inventory used to complete these tables.

Number of Utility-Owned Meters

Classification of All Meters at End of Year by Customers

Size of Meter (a)	First of Year (b)	Added During Year (c)	Retired During Year (d)	Adjust. Increase or Decrease (e)	End of Year (f)	Tested During Year (g)	Residential (h)	Commercial (i)	Industrial (j)	Public Authority (k)	Multifamily Residential (l)	Irrigation (m)	Wholesale (n)	Inter-Departmental (o)	Utility Use (p)	Additional Meters (q)	In Stock (r)	Total (s)		
3/4	78				78	0	60	11	2	2								3	78	1
1 1/2	8				8	0		8											8	2
3	1				1	0				1									1	3
6	1				1	0								1					1	* 4
10	1				1	0											1	1	1	* 5
12	1				1	0											1	1	1	* 6
Total	90				90	0	60	19	2	3				1			5	90		7

1. Indicate your residential meter replacement schedule:

- ☒ Meters tested once every 10 years and replaced as needed
 All meters replaced within 20 years of installation
 Other schedule as approved by PSC

2. Indicate the method(s) used to read customer meters

- ☒ Manually - inside the premises or remote register (# of meter: 90)
 Automatic meter reading (AMR), drive or walk by technology, wand or touchpad
 Advanced Metering Infrastructure (AMI) - fixed network
 Other

**WATER, ELECTRIC, OR JOINT UTILITY
ANNUAL REPORT**

OF

ROTHSCHILD MUNICIPAL WATER UTILITY

211 GRAND AVE
ROTHSCHILD, WI 54474

For the Year Ended: DECEMBER 31, 2019

TO

PUBLIC SERVICE COMMISSION OF WISCONSIN

P.O. Box 7854
Madison, WI 53707-7854
(608) 266-3766

This form is required under Wis. Stat. § 196.07. Failure to file the form by the statutory filing date can result in the imposition of a penalty under Wis. Stat. § 196.66. The penalty which can be imposed by this section of the statutes is a forfeiture of not less than \$25 nor more than \$5,000 for each violation. Each day subsequent to the filing date constitutes a separate and distinct violation. The filed form is available to the public and personally identifiable information may be used for purposes other than those related to public utility regulation.

Filed: 06/01/2020

Water Service Started Date: 07/23/1947

DNR Public Water System ID: 73701617

Safe Drinking Water Information System (SDWIS) Total Population Served: 3190

I **Gary Olsen, Village Administrator** of **ROTHSCHILD MUNICIPAL WATER UTILITY**, certify that I am the person responsible for accounts; that I have examined the following report and, to the best of my knowledge, information and belief, it is a correct statement of the business and affairs of said utility for the period covered by the report in respect to each and every matter set forth therein.

Date Signed: **5/31/2020**

Sources of Water Supply - Well Information

- Enter characteristics for each of the utility's functional wells (regardless of whether it is "in service" or not).
- Do not include abandoned wells on this schedule.
- All abandoned wells should be retired from the plant accounts and no longer listed in the utility's annual report.
- Abandoned wells should be permanently filled and sealed per Wisconsin Administrative codes Chapters NR811 and NR812.

Utility Name/ID for Well (a)	DNR Well ID (b)	Depth (feet) (c)	Casing Diameter (inches) (d)	Yield Per Day (gallons) (e)	In Service? (f)	
WELL E KORT	#6	78	20	1,368,000	Yes	1
WELL KORT ST & W GRAND AVE	#3	89	24	1,144,000	Yes	2
WELL PARK ST	#4	75	20	1,548,000	Yes	3
WELL W GRAND AVE	#5	65	14	720,000	Yes	4
				4,780,000		5

Meters

- Include in Columns (b-f) meters in stock as well as those in service.
- Report in Column (c) all meters purchased during the year and in Column (d) all meters junked, sold or otherwise permanently retired during the year.
- Use Column (e) to show correction to previously reported meter count because of inventory or property record corrections
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Number of Utility-Owned Meters

Classification of All Meters at End of Year by Customers

Size of Meter (a)	First of Year (b)	Added During Year (c)	Retired During Year (d)	Adjust. Increase or Decrease (e)	End of Year (f)	Tested During Year (g)	Residential (h)	Commercial (i)	Industrial (j)	Public Authority (k)	Multifamily Residential (l)	Irrigation (m)	Wholesale (n)	Inter-Departmental (o)	Utility Use (p)	Additional Meters (q)	In Stock (r)	Total (s)		
5/8	213		68		145	0	145												145	1
3/4	1,018	72	4		1,086	55	969	102	8	5	2								1,086	2
1	37				37	5		21	6	3	7								37	3
1 1/2	35	4	4		35	1		19	5	6	5								35	4
2	29				29	3		15	7	5	2								29	5
3	9				9	7		3	6										9	6
4	4				4	2		3	1										4	7
6	1				1	1			1										1	8
Total	1,346	76	76		1,346	74	1,114	163	34	19	16								1,346	9

1. Indicate your residential meter replacement schedule:

- ☒ Meters tested once every 10 years and replaced as needed
 All meters replaced within 20 years of installation
 Other schedule as approved by PSC

2. Indicate the method(s) used to read customer meters

- Manually - inside the premises or remote register
☒ Automatic meter reading (AMR), drive or walk by technology, wand or touchpad (# of meter: 1346)
 Advanced Metering Infrastructure (AMI) - fixed network
 Other

**WATER, ELECTRIC, OR JOINT UTILITY
ANNUAL REPORT**

OF

SCHOFIELD MUNICIPAL WATER AND SEWER UTILITY

200 PARK ST
SCHOFIELD, WI 54476-1164

For the Year Ended: DECEMBER 31, 2019

TO

PUBLIC SERVICE COMMISSION OF WISCONSIN

P.O. Box 7854
Madison, WI 53707-7854
(608) 266-3766

This form is required under Wis. Stat. § 196.07. Failure to file the form by the statutory filing date can result in the imposition of a penalty under Wis. Stat. § 196.66. The penalty which can be imposed by this section of the statutes is a forfeiture of not less than \$25 nor more than \$5,000 for each violation. Each day subsequent to the filing date constitutes a separate and distinct violation. The filed form is available to the public and personally identifiable information may be used for purposes other than those related to public utility regulation.

Filed: 03/30/2020

Water Service Started Date: 03/09/1940

DNR Public Water System ID: 73701628

Safe Drinking Water Information System (SDWIS) Total Population Served: 2117

I **Mark Thuot, Public Works Director** of **SCHOFIELD MUNICIPAL WATER AND SEWER UTILITY**, certify that I am the person responsible for accounts; that I have examined the following report and, to the best of my knowledge, information and belief, it is a correct statement of the business and affairs of said utility for the period covered by the report in respect to each and every matter set forth therein.

Date Signed: **3/14/2020**

Sources of Water Supply - Well Information

- Enter characteristics for each of the utility's functional wells (regardless of whether it is "in service" or not).
- Do not include abandoned wells on this schedule.
- All abandoned wells should be retired from the plant accounts and no longer listed in the utility's annual report.
- Abandoned wells should be permanently filled and sealed per Wisconsin Administrative codes Chapters NR811 and NR812.

Utility Name/ID for Well (a)	DNR Well ID (b)	Depth (feet) (c)	Casing Diameter (inches) (d)	Yield Per Day (gallons) (e)	In Service? (f)	
1959 DRILLED SPRING STREET	NO 2	100	28	1,080,000	Yes	1
1971 DRILLED GROSSMAN	NO 3	100	20	936,000	Yes	2
1982 DRILLED PARK	NO 4	80	20	1,152,000	Yes	3
				3,168,000		4

Meters

- Include in Columns (b-f) meters in stock as well as those in service.
- Report in Column (c) all meters purchased during the year and in Column (d) all meters junked, sold or otherwise permanently retired during the year.
- Use Column (e) to show correction to previously reported meter count because of inventory or property record corrections
- Totals by size in Column (f) should equal same size totals in Column (s).
- Explain all reported adjustments as schedule footnote.
- Do not include station meters in the meter inventory used to complete these tables.

Number of Utility-Owned Meters

Classification of All Meters at End of Year by Customers

Size of Meter	First of Year	Added During Year	Retired During Year	Adjust. Increase or Decrease	End of Year	Tested During Year	Residential	Commercial	Industrial	Public Authority	Multifamily Residential	Irrigation	Wholesale	Inter-Departmental	Utility Use	Additional Meters	In Stock	Total	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	
5/8	995	25	23	(1)	996	0	841	100	39	3	6					7		996	1
3/4	32		2	(1)	29	0	21	7	1									29	2
1	51		3		48	0	7	19	14	2	3					3		48	3
1 1/2	32		2	2	32	23	1	15	6	3	5					2		32	4
2	29	2	3		28	15		14	12	1	1							28	5
3	7			1	8	5			7							1		8	6
4	2				2	1			2									2	7
6	1				1	1			1									1	8
Total	1,149	27	33	1	1,144	45	870	155	82	9	15					13		1,144	9

1. Indicate your residential meter replacement schedule:

- ☒ Meters tested once every 10 years and replaced as needed
 All meters replaced within 20 years of installation
 Other schedule as approved by PSC

2. Indicate the method(s) used to read customer meters

- ☒ Manually - inside the premises or remote register (# of meter: 45)
 Automatic meter reading (AMR), drive or walk by technology, wand or touchpad
 Advanced Metering Infrastructure (AMI) - fixed network
 Other

**WATER, ELECTRIC, OR JOINT UTILITY
ANNUAL REPORT**

OF

RIB MOUNTAIN SAN DIST

224505 LILAC AV
WAUSAU, WI 54401-7611

For the Year Ended: DECEMBER 31, 2019

TO

PUBLIC SERVICE COMMISSION OF WISCONSIN

P.O. Box 7854
Madison, WI 53707-7854
(608) 266-3766

This form is required under Wis. Stat. § 196.07. Failure to file the form by the statutory filing date can result in the imposition of a penalty under Wis. Stat. § 196.66. The penalty which can be imposed by this section of the statutes is a forfeiture of not less than \$25 nor more than \$5,000 for each violation. Each day subsequent to the filing date constitutes a separate and distinct violation. The filed form is available to the public and personally identifiable information may be used for purposes other than those related to public utility regulation.

Filed: 03/16/2020

Water Service Started Date: 06/28/1984

DNR Public Water System ID: 73706600

Safe Drinking Water Information System (SDWIS) Total Population Served: 5850

I **Michael Heyroth, Director** of **RIB MOUNTAIN SAN DIST**, certify that I am the person responsible for accounts; that I have examined the following report and, to the best of my knowledge, information and belief, it is a correct statement of the business and affairs of said utility for the period covered by the report in respect to each and every matter set forth therein.

Date Signed: **3/13/2020**

Sources of Water Supply - Well Information

- Enter characteristics for each of the utility's functional wells (regardless of whether it is "in service" or not).
- Do not include abandoned wells on this schedule.
- All abandoned wells should be retired from the plant accounts and no longer listed in the utility's annual report.
- Abandoned wells should be permanently filled and sealed per Wisconsin Administrative codes Chapters NR811 and NR812.

Utility Name/ID for Well (a)	DNR Well ID (b)	Depth (feet) (c)	Casing Diameter (inches) (d)	Yield Per Day (gallons) (e)	In Service? (f)	
WELL #1	VX778	90	14	684,000	Yes	1
WELL #2	DG454	90	16	720,000	Yes	2
WELL #3	DG455	90	16	540,000	Yes	3
WELL #4	MZ701	80	20	360,000	Yes	4
				2,304,000		5

Meters

- Include in Columns (b-f) meters in stock as well as those in service.
- Report in Column (c) all meters purchased during the year and in Column (d) all meters junked, sold or otherwise permanently retired during the year.
- Use Column (e) to show correction to previously reported meter count because of inventory or property record corrections
- Totals by size in Column (f) should equal same size totals in Column (s).
- Explain all reported adjustments as schedule footnote.
- Do not include station meters in the meter inventory used to complete these tables.

Number of Utility-Owned Meters

Classification of All Meters at End of Year by Customers

Size of Meter (a)	First of Year (b)	Added During Year (c)	Retired During Year (d)	Adjust. Increase or Decrease (e)	End of Year (f)	Tested During Year (g)	Residential (h)	Commercial (i)	Industrial (j)	Public Authority (k)	Multifamily Residential (l)	Irrigation (m)	Wholesale (n)	Inter-Departmental (o)	Utility Use (p)	Additional Meters (q)	In Stock (r)	Total (s)		
1/2	2,369	43	27		2,385	0	2,238	134		3								10	2,385	1
1	70				70	0	17	46		4	1							2	70	2
1 1/2	35	2			37	6	1	29		4	2							1	37	3
2	27	1	1		27	4		21		5	1								27	4
3	5				5	1		4		1									5	5
4	1				1	0		1											1	6
Total	2,507	46	28		2,525	11	2,256	235		17	4							13	2,525	7

1. Indicate your residential meter replacement schedule:

Meters tested once every 10 years and replaced as needed

☒ All meters replaced within 20 years of installation

Other schedule as approved by PSC

2. Indicate the method(s) used to read customer meters

☒ Manually - inside the premises or remote register (# of meter: 2512)☒ Automatic meter reading (AMR), drive or walk by technology, wand or touchpad (# of meter: 14)

Advanced Metering Infrastructure (AMI) - fixed network

Other

**WATER, ELECTRIC, OR JOINT UTILITY
ANNUAL REPORT**

OF

WESTON WATER UTILITY

5500 SCHOFIELD AVE
SCHOFIELD, WI 54476-4333

For the Year Ended: DECEMBER 31, 2019

TO

PUBLIC SERVICE COMMISSION OF WISCONSIN

P.O. Box 7854
Madison, WI 53707-7854
(608) 266-3766

This form is required under Wis. Stat. § 196.07. Failure to file the form by the statutory filing date can result in the imposition of a penalty under Wis. Stat. § 196.66. The penalty which can be imposed by this section of the statutes is a forfeiture of not less than \$25 nor more than \$5,000 for each violation. Each day subsequent to the filing date constitutes a separate and distinct violation. The filed form is available to the public and personally identifiable information may be used for purposes other than those related to public utility regulation.

Filed: 05/08/2020

Water Service Started Date: 08/01/1968

DNR Public Water System ID: 73701639

Safe Drinking Water Information System (SDWIS) Total Population Served: 15045

I **Jessica Trautman, Finance Director** of **WESTON WATER UTILITY**, certify that I am the person responsible for accounts; that I have examined the following report and, to the best of my knowledge, information and belief, it is a correct statement of the business and affairs of said utility for the period covered by the report in respect to each and every matter set forth therein.

Date Signed: **5/8/2020**

Sources of Water Supply - Well Information

- Enter characteristics for each of the utility's functional wells (regardless of whether it is "in service" or not).
- Do not include abandoned wells on this schedule.
- All abandoned wells should be retired from the plant accounts and no longer listed in the utility's annual report.
- Abandoned wells should be permanently filled and sealed per Wisconsin Administrative codes Chapters NR811 and NR812.

Utility Name/ID for Well (a)	DNR Well ID (b)	Depth (feet) (c)	Casing Diameter (inches) (d)	Yield Per Day (gallons) (e)	In Service? (f)	
ALTA VERDE	1	78	12	864,000	Yes	1
BLOEDEL	5	85	20	1,296,000	Yes	2
FOREMOST	2	70	16	1,000,000	Yes	3
MESKER	3	92	20	1,440,000	Yes	4
RIPPLING CREEK	6	111	16	812,000	Yes	5
STERNBERG	4	83	20	1,440,000	Yes	6
				6,852,000		7

Meters

- Include in Columns (b-f) meters in stock as well as those in service.
- Report in Column (c) all meters purchased during the year and in Column (d) all meters junked, sold or otherwise permanently retired during the year.
- Use Column (e) to show correction to previously reported meter count because of inventory or property record corrections
- Totals by size in Column (f) should equal same size totals in Column (s).
- Explain all reported adjustments as schedule footnote.
- Do not include station meters in the meter inventory used to complete these tables.

Number of Utility-Owned Meters

Classification of All Meters at End of Year by Customers

Size of Meter	First of Year	Added During Year	Retired During Year	Adjust. Increase or Decrease	End of Year	Tested During Year	Residential	Commercial	Industrial	Public Authority	Multifamily Residential	Irrigation	Wholesale	Inter-Departmental	Utility Use	Additional Meters	In Stock	Total		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)		
5/8	10	4			14	0	12	2										14	*	1
3/4	5,286	122			5,408	13	5,029	335	18	15	10						1	5,408	*	2
1	185	11	11		185	0	12	71	14	4	73						11	185	*	3
1 1/2	152	16	0		168	39	1	36	11	14	91						15	168	*	4
2	56	6	9		53	7		29	2	10	6						6	53	*	5
3	15	4			19	4		6	3	3	4						3	19	*	6
4	6	1	2		5	1		1		3							1	5	*	7
6	1	2	0		3	3			1		1						1	3	*	8
Total	5,711	166	22		5,855	67	5,054	480	49	49	185						38	5,855		9

1. Indicate your residential meter replacement schedule:

Meters tested once every 10 years and replaced as needed

☒ All meters replaced within 20 years of installation

Other schedule as approved by PSC

2. Indicate the method(s) used to read customer meters

☒ Manually - inside the premises or remote register (# of meter: 6)

Automatic meter reading (AMR), drive or walk by technology, wand or touchpad

☒ Advanced Metering Infrastructure (AMI) - fixed network (# of meter: 5811)

Other

PWS Name	MAINE WATER UTILITY
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Detected VOCs (ug/L)	Year			
	1996	1995	1994	1993
Sample Location				
200				
BROMODICHLOROMETHANE	0.82	0.93		3.6
CHLOROFORM	81.8	64	34.9	200
TTHM	82.62	64.93		203.6

PWS Name	ROTHSCHILD WATERWORKS
----------	-----------------------

Detected VOCs (ug/L)	Year												
	2020	2019	2018	2017	2016	2015	2014	2013	2012	1999	1997	1996	1995
Sample Location													
6													
BROMODICHLOROMETHANE		1.2		0.23	0.39								
BROMOFORM		0.36											
CHLOROFORM		1.5	0.53	0.33	1.4								
DIBROMOCHLOROMETHANE		1.1			0.26								
TETRACHLOROETHYLENE			0.45										
200													
BROMODICHLOROMETHANE		2.4	2.1	3	3.8	2.1	3.7	5	3.4	0.635	0.85	1.04	1.88
BROMOFORM		0.59	0.89		0.68	0.4		0.43	0.2	0.403			0.62
CHLOROFORM		1.8	0.95	3.2	3	2	7.1	4.8	4.1	0.175		0.552	1.09
DIBROMOCHLOROMETHANE		2.9	3.2	2.5	3.6	2.2	1.3	3.3	1.9	1.21	1.27	1.72	2.1
DICHLOROMETHANE										1.22	2.33		
TETRACHLOROETHYLENE				0.41		0.2				0.44			
TTHM										2.423	2.12	3.312	5.41

PWS Name SCHOFIELD WATERWORKS

Detected VOCs (ug/L)	Year																													
	2020	2019	2018	2017	2016	2015	2014	2013	2012	2008	2007	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1988	1987	1984
Sample Location																														
2																														
1,1,1-TRICHLOROETHANE												0.228	0.211	0.282	0.408	0.2	0.329		1.08	0.8	1.9		4.2	6.7	5.73	13.9	12.9	2.8		
BROMODICHLOROMETHANE			0.8		0.64	0.19	0.25																							
BROMOFORM			1.1		0.77																									
CHLOROFORM			0.44	0.32	0.76	0.4	0.34																							
DIBROMOCHLOROMETHANE			1.5		1.1	0.17	0.25																							
DICHLOROMETHANE																	2.85													
TETRACHLOROETHYLENE															0.144															
TRICHLOROETHYLENE															0.203										1.6					
3																														
BROMODICHLOROMETHANE	0.5	0.86		0.36	0.62	1.2	1.1		0.71																					
BROMOFORM	0.76	0.46	0.38	0.87	0.9	1.1	1		0.97																					
CHLOROFORM	0.65	0.72			0.27	0.49	0.38	0.21	0.25																					
DIBROMOCHLOROMETHANE	0.84	1.1	0.44	0.8	1.3	2	1.9		1.4																					
ETHYLBENZENE							0.34																							
TOLUENE							0.3																							
XYLENES, TOTAL							2.5																							
4																														
1,1,1-TRICHLOROETHANE										0.29	0.22			0.126	0.205	0.35	0.756	1.01			0.67			1.2	2.4					
1,1-DICHLOROETHANE																		0.669												
BROMODICHLOROMETHANE	0.46		1.9																											
BROMOFORM	0.57		0.74																											
CHLOROFORM			1.4		0.71																									
DIBROMOCHLOROMETHANE	0.89		2.1						0.29																					
DICHLOROMETHANE																	5.43													
99																														
1,1,1-TRICHLOROETHANE														0.21	0.27	0.63	0.682	0.564		2.78	4.4	2.3	7.8	37.5	4.92				1	
1,1-DICHLOROETHYLENE																								3.6						
1,2,4-TRICHLOROBENZENE																					0.21									
BROMOFORM																					0.9									
CHLOROFORM																								1.1						
DICHLOROMETHANE																	4.07			0.57										
TETRACHLOROETHYLENE														0.144	0.16		0.198			1.03	0.9	1.1		0.4	1.38		6.3	6.6		
TRANS-1,2-DICHLOROETHYLENE																													2.4	
TRICHLOROETHYLENE														0.203	0.23		0.212			1.36	0.783	1.3	1.76	2.3	3.66			26		
TTHM																					0.9			1.1						

PWS Name	RIB MOUNTAIN SANITARY DIST
----------	----------------------------

Detected VOCs (ug/L)	Year							
	2020	2017	2014	1999	1995	1993	1992	1986
Sample Location								
1								
BROMODICHLOROMETHANE	1.7		0.64	0.074		0.7		
BROMOFORM						0.3		
CHLOROFORM	3.2		1	0.15		0.6		1.9
DIBROMOCHLOROMETHANE	1.3		0.4			0.6		
TRICHLOROETHYLENE				0.175				
TTHM				0.224		2.2		1.9
2								
1,1,1-TRICHLOROETHANE							0.5	
BROMODICHLOROMETHANE		0.96		0.067	1.48	2.3	1.5	
BROMOFORM						0.4		
CHLOROFORM		1.9	0.34	0.133	2.19	4	2.5	
DIBROMOCHLOROMETHANE		0.66			0.7	1.6	1.5	
TTHM				0.2	4.37	8.3	5.5	
3								
1,1,1-TRICHLOROETHANE						0.1		
CHLOROFORM					4.21			
TTHM					4.21			
4								
DICHLORODIFLUOROMETHANE		0.39						

WI DNR Bureau of Drinking Water
and Groundwater

Public Drinking Water System Data

Reference 19
Page 6 of 6

PWS Name		WESTON MUNICIPAL UTILITIES																											
Detected VOCs (ug/L)		Year	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2000	1999	1996	1995	1994	1993	1990	1989	1986	1985
Sample Location																													
1																													
1,1,1-TRICHLOROETHANE																													
1,2,3-TRICHLOROPROPANE																													
1,2-DICHLOROETHANE																													
BROMODICHLOROMETHANE																													
BROMOFORM																													
CHLOROFORM																													
CHLOROMETHANE (METHYLCHLORIDE)																													
DIBROMOCHLOROMETHANE																													
DICHLOROMETHANE																													
P-DICHLOROBENZENE																													
TTHM																													
2																													
BROMODICHLOROMETHANE																													
BROMOFORM																													
CHLOROFORM																													
DIBROMOCHLOROMETHANE																													
4																													
CHLOROMETHANE (METHYLCHLORIDE)																													
DICHLOROMETHANE																													
P-DICHLOROBENZENE																													
5																													
1,1,1-TRICHLOROETHANE																													
BROMODICHLOROMETHANE																													
BROMOFORM																													
CHLOROFORM																													
CHLOROMETHANE (METHYLCHLORIDE)																													
DIBROMOCHLOROMETHANE																													
TTHM																													
6																													
BROMODICHLOROMETHANE																													
BROMOFORM																													
CHLOROFORM																													
DIBROMOCHLOROMETHANE																													
ETHYLBENZENE																													
98																													
1,1,1-TRICHLOROETHANE																													
BENZENE																													
BROMODICHLOROMETHANE																													
BROMOFORM																													
CHLOROFORM																													
DIBROMOCHLOROMETHANE																													
DICHLOROMETHANE																													
ETHYLBENZENE																													
TETRACHLOROETHYLENE																													
TOLUENE																													
TTHM																													
XYLENES, TOTAL																													
99																													
1,2-DICHLOROETHANE																													
BENZENE																													
DICHLOROMETHANE																													
P-DICHLOROBENZENE																													
TETRACHLOROETHYLENE																													
TRICHLOROETHYLENE																													
200																													
BROMODICHLOROMETHANE																													
BROMOFORM																													
CHLOROFORM																													
CHLOROMETHANE (METHYLCHLORIDE)																													
DIBROMOCHLOROMETHANE																													
TTHM																													

PHONE LOG/MEMORANDUM

DATE: 12/3/2020

FILE REF: Undeveloped Rosemurgy Property

TO: Jeffery E. Smail

FROM: Matthew Vitale

SUBJECT: Schofield Waterworks PWS

CONVERSATION SUMMARY:

M.V.: I am preparing a Preliminary Assessment for a contaminated site in Wausau and need some information on the city's public water system. From the PSC annual report, there are 3 wells. Are all the wells "blended" or do certain wells service certain areas of the city?

J.S.: All the wells are combined before distribution.

M.V.: Are all the wells in operation or are any used only for backup purposes?

J.S.: We have not been using Well 3. The other two are in consistent use.

Matthew Vitale

PHONE LOG/MEMORANDUM

DATE: 12/3/2020

FILE REF: Undeveloped Rosemurgy Property

TO: John A. Borth

FROM: Matthew Vitale

SUBJECT: Weston Waterworks PWS

CONVERSATION SUMMARY:

M.V.: I am preparing a Preliminary Assessment for a contaminated site in Wausau and need some information on the village's public water system. From the PSC annual report, there are 6 wells. Are all the wells "blended" or do certain wells service certain areas of the village.

J.B.: The well, "Foremost" is a self stander. The other wells are connected.

M.V.: Are all the wells in operation or are any used only for backup purposes?

J.B: No, all wells are in operation.

Matthew Vitale

Vitale, Matthew J - DNR

From: John Borth <jborth@westonwi.gov>
Sent: Friday, December 4, 2020 6:54 AM
To: Vitale, Matthew J - DNR
Subject: RE: Weston Waterworks well Information follow-up

The Foremost Well has only two customers, Kerry Farms and Rib Mountain Metro Sanitary District(2001 Aster Rd.)

Sent from [Mail](#) for Windows 10

From: [Vitale, Matthew J - DNR](#)
Sent: Thursday, December 3, 2020 4:11 PM
To: [John Borth](#)
Subject: Weston Waterworks well Information follow-up

John,

Thank you for taking my call today about the Weston municipal wells. I have a follow-up questions about the Foremost well that you said is separate from the rest of the wells.

Could you tell me the service area of the well, and/or an approximate number of residential connections it serves?

I am trying to estimate the total residential population served by the rest of the system because two wells (Alta Verde and Bloedel) are within 4 miles of my environmental remediation site.

-Matt Vitale

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Matthew Vitale

Pronouns: He/Him/His

Hydrogeologist - Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
1300 W Clairemont Ave

Eau Claire, WI 54701

Soil Map—Marathon County, Wisconsin
(Undeveloped Rosemurgy Property)

Soil Map—Marathon County, Wisconsin
(Undeveloped Rosemurgy Property)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Marathon County, Wisconsin

Survey Area Data: Version 18, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 28, 2011—Nov 2, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
UoB	Udorthents, loamy, gently sloping	0.9	100.0%
Totals for Area of Interest		0.9	100.0%

Marathon County, Wisconsin

UoB—Udorthents, loamy, gently sloping

Map Unit Setting

National map unit symbol: ggxx

Elevation: 800 to 2,000 feet

Mean annual precipitation: 28 to 40 inches

Mean annual air temperature: 46 to 54 degrees F

Frost-free period: 170 to 200 days

Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, loamy, and similar soils: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Loamy

Typical profile

H1 - 0 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.57 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: A

Forage suitability group: Mod AWC, adequately drained

(G090BY005WI)

Other vegetative classification: Mod AWC, adequately drained

(G090BY005WI)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Marathon County, Wisconsin

Survey Area Data: Version 18, Jun 8, 2020

National Flood Hazard Layer FIRMette



89°37'59"W 44°57'33"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend Reference 25

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainage area of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee Note Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert or Storm Sewer
		Levee, Dike or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Base line
		Profile Base line
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL we have provided by FEMA. This map was exported on **2/28/2021 at 9:36 PM** and does not reflect change or amendments subsequent to this date and time. The NFHL and effective information may change or be superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear on the base map image, flood zone labels, legend, scale bar, map creation date, community identifier, FIRM panel number, and FIRM effective date. Map image for unmapped and unmapped areas cannot be used for regulatory purposes.

Vitale, Matthew J - DNR

From: Parks, Timothy P - DNR
Sent: Monday, March 1, 2021 12:31 PM
To: Vitale, Matthew J - DNR
Cc: Bergman, Jennifer M - DNR
Subject: RE: Lake Wausau fish assemblages
Attachments: FishCommunitySampling_LakeWausau_WisconsinRiver_BigRibRiver.xlsx;
FishOccurrencees_LakeWausau_BigRib_WIRiver_FishDistMapper.xlsx;
Draft_Wausau_Comprehensive_final.pdf

Hey Matt,

I'm Tim, Jen Bergman's Biologist counterpart on the Wisconsin River for Portage and Marathon Counties. I wish I could find you some really nice formalized reports for Lake Wausau, but our formats for streams and lake reports are goofy...especially for riverine impoundments.

I am sending you a few things here. First is a an output from the old fish distribution mapper on fish occurrences in Lake Wausau, the Wisconsin River tailwater going into Lake Wausau, and the connected portion of the Big Rib River. This is the most comprehensive list of fish assemblage information for that system. I also have what was available for fish community sampling (like for IBI) in this connected system. Additionally, I through in a Fish Management Comprehensive survey report from 2008 for some additional insight.

The reason why I am including these is because fish are very mobile in connected habitats, and as confirmed through telemetry studies, many species of fish complete life history events in the Rib River, but reside in Lake Wausau.

If you need any more information or further insight, don't hesitate to contact me.

-Tim

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Timothy Parks

Office: (715) 498-0420

Timothy.Parks@wisconsin.gov

From: Bergman, Jennifer M - DNR <Jennifer.Bergman@wisconsin.gov>
Sent: Monday, March 1, 2021 8:15 AM
To: Parks, Timothy P - DNR <Timothy.Parks@wisconsin.gov>
Subject: FW: Lake Wausau fish assemblages

Can you help Matt out? I just got the simple reports from FHDB, I just didn't want to step on your toes with Lake Wausau.

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Jennifer Bergman

Sum of Number of Fish	Column Labels				Grand Total
	1990	2009	2014	2016	
Row Labels	LAKE WAUSAU	BIG RIB RIVER	WISCONSIN RIVER	LAKE WAUSAU	
BLACK BULLHEAD		5			5
BLACK CRAPPIE		7	14	36	57
BLACKSIDE DARTER		3			3
BLUEGILL		6	9	78	93
BLUNTNOSE MINNOW		9			9
BROWN TROUT	1				1
BURBOT		45	1		46
CENTRAL STONEROLLER		370			370
COMMON SHINER		188			188
CREEK CHUB		25			25
EMERALD SHINER			2		2
FANTAIL DARTER		14			14
FATHEAD MINNOW		9			9
GOLDEN REDHORSE		2			2
GOLDEN SHINER			2		2
GRASS PICKEREL			1		1
GREEN SUNFISH		1			1
HORNYHEAD CHUB		23			23
JOHNNY DARTER		1			1
LARGEMOUTH BASS			9	15	24
LOGPERCH			4		4
LONGNOSE DACE		23			23
MUSKELLUNGE	3				3
NORTHERN HOG SUCKER		22	3		25
NORTHERN PIKE	7		1	15	23
NORTHERN REDBELLY DACE		1			1
PUMPKINSEED				13	13
RAINBOW DARTER		121			121
REDHORSES			7		7
ROCK BASS		2	3	7	12
ROSYFACE/CARMINE SHINER		25			25
SAND SHINER		22			22
SHORTHEAD REDHORSE		1	14		15
SILVER REDHORSE			15		15
SMALLMOUTH BASS	17	6	26	43	92
STONECAT		1			1
WALLEYE	519	1	1	68	589
WESTERN BLACKNOSE DACE		3			3
WHITE SUCKER		24			24
YELLOW BULLHEAD			1		1
YELLOW PERCH	1		1	82	84
Grand Total	548	960	114	357	1979

SAMPLE_DATE	(Multiple Items)
-------------	------------------

Count of FISH_COUNT	Column Labels			
Row Labels	BIG RIB RIVER	LAKE WAUSAU	WISCONSIN RIVER	Grand Total
BLACK CRAPPIE	1	186	3	190
BLACKSIDE DARTER	1			1
BLUEGILL	1	256	2	259
BOWFIN		2		2
BURBOT	1		1	2
CENTRAL STONEROLLER	1			1
CHANNEL CATFISH		125		125
COMMON CARP		1		1
COMMON SHINER	1			1
CREEK CHUB	1			1
EMERALD SHINER	2		1	3
FANTAIL DARTER	1			1
GOLDEN SHINER	1	2	1	4
GRASS PICKEREL			1	1
HORNYHEAD CHUB	1			1
JOHNNY DARTER	1			1
LAKE STURGEON		4		4
LARGEMOUTH BASS	1	109	9	119
LOGPERCH	1	1	1	3
LONGNOSE DACE	1			1
MUSKELLUNGE	46	102		148
NORTHERN HOG SUCKER	1	2	1	4
NORTHERN PIKE		725	1	726
PUMPKINSEED	1	94		95
RAINBOW DARTER	1			1
REDHORSES			2	2
ROCK BASS	1	18	2	21
SHORthead REDHORSE		5	4	9
SILVER REDHORSE		5	3	8
SMALLMOUTH BASS	4	207	26	237
TADPOLE MADTOM		1		1
WALLEYE	1	951	1	953
WHITE SUCKER		4		4
YELLOW BULLHEAD		30	1	31
YELLOW PERCH		166	1	167
Grand Total	71	2996	61	3128

Fisheries Survey Report for Lake Wausau, Marathon County, WI

January 2008

Prepared By:

Tom Meronek
Fisheries Biologist

And

Garrett Drach
Fisheries Technician

Wisconsin Department of Natural Resources
5301 Rib Mountain Drive
Wausau, Wisconsin

various fish structures including; scales for panfish, anal fin rays for northern pike, and dorsal fin spines for walleye and black bass.

Spring electrofishing was conducted on April 13 and 14, 2005 at night using a boomshocker operating with Alternating Current (AC) at an output of 112 Volts and 2 Amps, effort for both nights totaled 3 hours and 19 minutes. On April 13 we started near the Thomas Street Bridge and worked up to the Wausau Dam and then moved down into the main flowage. We shocked the shoreline all the way to the Schofield Dam, the target species were gamefish recaptures. On April 14 we concentrated our effort near the Wausau Dam to capture spawning walleye with a goal of marking enough fish for a population estimate. We discontinued this effort when we realized that the numbers of fish needed would not be captured. Electrofishing was also completed in the previous October, 2004, these runs were combined gamefish and index station runs. We completed three ½ mile index stations with a total effort of 40 minutes. And, we completed the remaining 1-1/2 miles of each 2-mile station with a total effort of 1 hour: 29 minutes.

Results and Discussion:

Spring Fyke Netting

The most common eight species of panfish and gamefish are presented in Table 1, with bluegills being the most common panfish and northern pike the most common gamefish caught. Catch per effort (CPE) of fish was calculated as the number per net/per night (#/net/night). CPE varied considerably from the 1995 survey and for all species except yellow perch CPE was higher in 2005. CPE for all gamefish in 2005 was higher than in 1995. And, CPE for bluegill was 300 times higher, and for black crappie it was 100 times greater. It should be noted however that the 1995 survey may have been biased towards gamefish and the panfish sample was likely viewed as less important.

Table 1. Total number and CPE of fish captured in fyke nets set during the spring of 1995 and 2005 in Lake Wausau, Marathon County, WI.

Species	Total		CPE (net/night)	
	1995	2005	1995	2005
Bluegill	227	6031	1.4	317
Black crappie	24	275	0.14	14
Yellow Perch	37	0	0.23	0
Northern pike	527	263	2.46	3.25
Walleye	97	149	0.59	1.39
Largemouth Bass	4	35	0.02	0.32
Smallmouth Bass	7	51	0.04	0.47
Muskellunge	3	12	0.02	0.11

Length frequencies from the spring 2005 sample were prepared for all fish, and for walleye they were compared with the 1995 frequency (Figures 1-8). For most species proportional stock density (PSD) and relative stock density of preferred size fish

(RSDp) were calculated to compare changes in the fishery (Table 2). PSD is calculated by dividing the number of fish greater than stock length into the number that are also greater than quality length for a particular species, then converted to a percentage value. Similar calculations are used to determine RSDp (preferred lengths) (Gabelhouse 1984) values but preferred length values were substituted for quality length.

Table 2. PSD and RSD_p values for fish captured in fyke nets in Lake Wausau, Marathon County, WI during the spring of 1995 and 2005. *(-) denotes insufficient data.

Species	<u>PSD</u>		Preferred size (inches)	<u>RSD_p</u>	
	1995	2005		1995	2005
Bluegill	83	66	8	7	7
Black crappie	58	52	10	23	18
Yellow Perch	64	-	10	9	-
Northern pike	33	78	26	8	37
Walleye	45	67	20	5	45
Largemouth Bass	-	100	14	-	72
Smallmouth Bass	-	100	14	-	94
Muskellunge	-	77	40	-	22

Spring Electrofishing:

Spring electrofishing typically is directed at tagging and recapturing gamefish for population estimates. In 1995 this effort resulted in a total of 1297 walleye captured in 15.3 hours (85 fish per hr). In 2005 a total of 136 walleye were captured in 3.3 hours (41 fish per hr.). However, PSD was greater in 2005 (PSD=47) than in 1995 (PSD=15). Electrofishing effort in 2005 was much lower because electrofishing was halted when it became clear that walleye were not being captured efficiently enough to mark the number needed to calculate a population estimate. In general, in 2005 fish were less vulnerable in the capture zone below Wausau Hydro Dam, both to electrofishing and netting, than they were in 1995.

Northern Pike

The size structure of northern pike improved between 1995 and 2005 as referenced in the PSD and RSD_p values (Table 2). PSD doubled to 78 and RSD_p was 37, a value 4 times higher than in 1995. Length frequencies show good numbers of large fish, especially females (Figure 1). Catch rates improved as well, from 2.46 to 3.25 fish net/night, indicating this is still a good fishery. Northern pike showed good growth rates that were at or above the average for the Wisconsin River (Figure 2).

[ECOS](#) / [Species Reports](#) / Species County Report

Listed species believed to or known to occur in Marathon, Wisconsin

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the [PaC](#) application.

[CSV](#)Search:

4 Species Listings

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status
Insects	monarch butterfly (Danaus plexippus)	Wherever found	Candidate	3		
Birds	Whooping crane (Grus americana)	U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY)	Experimental Population, Non-Essential	2		
Mammals	Gray wolf (Canis lupus)	U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA as follows: (1) Northern AZ (that portion north of the centerline of Interstate Highway 40); (2) Northern NM (that portion north of the centerline of Interstate Highway 40); (3) Western OR (that portion of OR west of the centerline of Highway 395 and Highway 78 north of Burns Junction and that portion of OR west of the centerline of Highway 95 south of Burns Junction); (4) Most of Utah (that portion of UT south and west of the centerline of Highway 84 and that portion of UT south of Highway 80 from Echo to the UT/WY Stateline); and (5) Western WA (that portion of WA west of the centerline of Highway 97 and Highway 17 north of Mesa and that portion of WA west of the centerline of Highway 395 south of Mesa). Mexico.	Recovery	6		

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status
Mammals	Northern Long-Eared Bat (<u>Myotis septentrionalis</u>)	Wherever found	Threatened	3		

Showing 1 to 4 of 4 entries

Previous

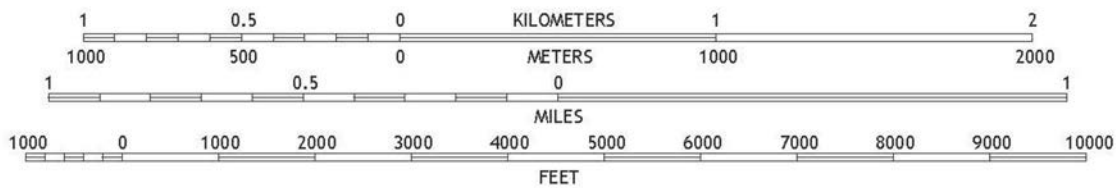
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Next

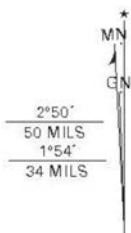
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SCALE 1:24 000



CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988



UTM GRID AND 2019 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

WAUSAU WEST QUADRANGLE
WISCONSIN - MARATHON COUNTY
7.5-MINUTE SERIES



WAUSAU WEST, WI
2018

REI ENGINEERING, INC.

RIVERSIDE RAILROAD CORRIDOR
132 RIVER STREET
WAUSAU, WI



FIGURE 1 : VICINITY MAP

PROJECT NO.
9073

DRAWN BY:
MCM

DATE:
9/13/2021

LEGEND

0 30
SCALE: 1" = 30'

- SOIL SAMPLE - EXCAVATION BOUNDARY - REI ENGINEERING, INC
- SOIL SAMPLE - WASTE DETERMINATION - REI ENGINEERING, INC
- SOIL SAMPLE - PARK - REI ENGINEERING, INC
- SOIL SAMPLE - RR CORRIDOR - REI ENGINEERING, INC
- SOIL SAMPLE (2019) - SAND CREEK CONSULTANTS, INC
- SOIL SAMPLE (2008) - CWE, INC
- SOIL SAMPLE (2006) - CWE, INC

PROPOSED EXCAVATION TO 1 FOOT BLS
PROPOSED EXCAVATION TO 3-4 FEET BLS
ABANDONED RAILROAD TRACKS
PROPERTY BOUNDARIES (APPROXIMATE)

NOTES:

- SAND CREEK CONSULTANTS, INC SOIL SAMPLE LOCATIONS ARE AN APPROXIMATION BASED ON THE CITY OF WAUSAU AND MARATHON COUNTY GIS MAP "SOIL SAMPLES LOCATIONS RIVERSIDE PARK" (DECEMBER 2019)
- CWE, INC. SOIL SAMPLE LOCATIONS ARE AN APPROXIMATION BASED ON CWE'S MAP "SAMPLE LOCATION MAP" (OCTOBER 2009)
- NOT ALL SAMPLE LOCATIONS ARE IDENTIFIED ON THIS MAP. ALL AVAILABLE SAMPLE LOCATIONS ARE DEPICTED ON THE EXPANDED DETAILED SITE MAP UNLESS NOTED.

REI
CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING

RIVERSIDE RAILROAD CORRIDOR
132 RIVER STREET
WAUSAU, WISCONSIN

FIGURE 2 : DETAILED SITE MAP - PARK CULVERT

PROJECT No. 9073	DRAWN BY: MCM	DATE: 2/22/2023
---------------------	------------------	--------------------

-  SOIL SAMPLE - EXCAVATION BOUNDARY
- REI ENGINEERING, INC
-  SOIL SAMPLE - WASTE DETERMINATION
- REI ENGINEERING, INC
-  SOIL SAMPLE - PARK
- REI ENGINEERING, INC
-  SOIL SAMPLE - RR CORRIDOR
- REI ENGINEERING, INC
-  SOIL SAMPLE (2019)
- SAND CREEK CONSULTANTS, INC
-  SOIL SAMPLE (2008)
- CWE, INC
-  SOIL SAMPLE (2006)
- CWE, INC

PROPOSED EXCAVATION TO 1 FOOT BLS
PROPOSED EXCAVATION TO 3-4 FEET BLS
ABANDONED RAILROAD TRACKS
PROPERTY BOUNDARIES (APPROXIMATE)

1. SAND CREEK CONSULTANTS, INC SOIL SAMPLE LOCATIONS ARE AN APPROXIMATION BASED ON THE CITY OF WAUSAU AND MARATHON COUNTY GIS MAP "SOIL SAMPLES LOCATIONS RIVERSIDE PARK" (DECEMBER 2019)
2. CWE, INC. SOIL SAMPLE LOCATIONS ARE AN APPROXIMATION BASED ON CWE'S MAP "SAMPLE LOCATION MAP" (OCTOBER 2009)
3. NOT ALL SAMPLE LOCATIONS ARE IDENTIFIED ON THIS MAP. ALL AVAILABLE SAMPLE LOCATIONS ARE DEPICTED ON THE EXPANDED DETAILED SITE MAP UNLESS NOTED.



RIVERSIDE RAILROAD CORRIDOR
132 RIVER STREET
WAUSAU, WISCONSIN

FIGURE 2 : DETAILED SITE MAP - PARK CULVERT

PROJECT No.
9073

DRAWN BY:
MCM

DATE:
2/22/2023



REI Engineering, INC.

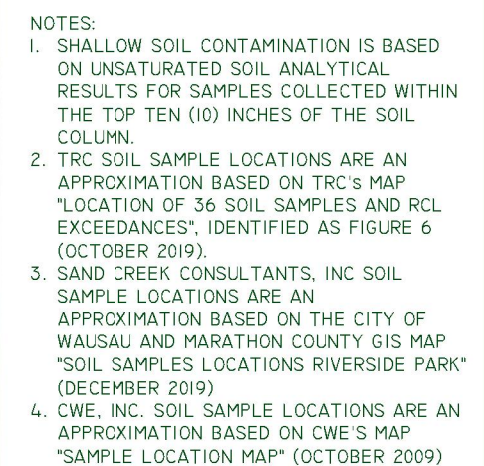


FIGURE 3 : SOIL CONTAMINATION - NR720 INDIVIDJAL EXCEEDANCES		
PROJECT No. 9073	DRAWN BY: MCM	DATE: 2/22/2023

LEGEND

0 30
SCALE: 1" = 30'

PROPOSED EXCAVATION TO 1 FOOT BLS
PROPOSED EXCAVATION TO 3-4 FEET BLS
ABANDONED RAILROAD TRACKS
PROPERTY BOUNDARIES (APPROXIMATE)

REI
CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING

RIVERSIDE RAILROAD CORRIDOR
132 RIVER STREET
WAUSAU, WISCONSIN

FIGURE 4 : PROPOSED EXCAVATION BOUNDARIES

PROJECT No. 9073	DRAWN BY: MCM	DATE: 2/22/2023
---------------------	------------------	--------------------

REI Engineering, INC.

CULVERT
(TO BE REMOVED)

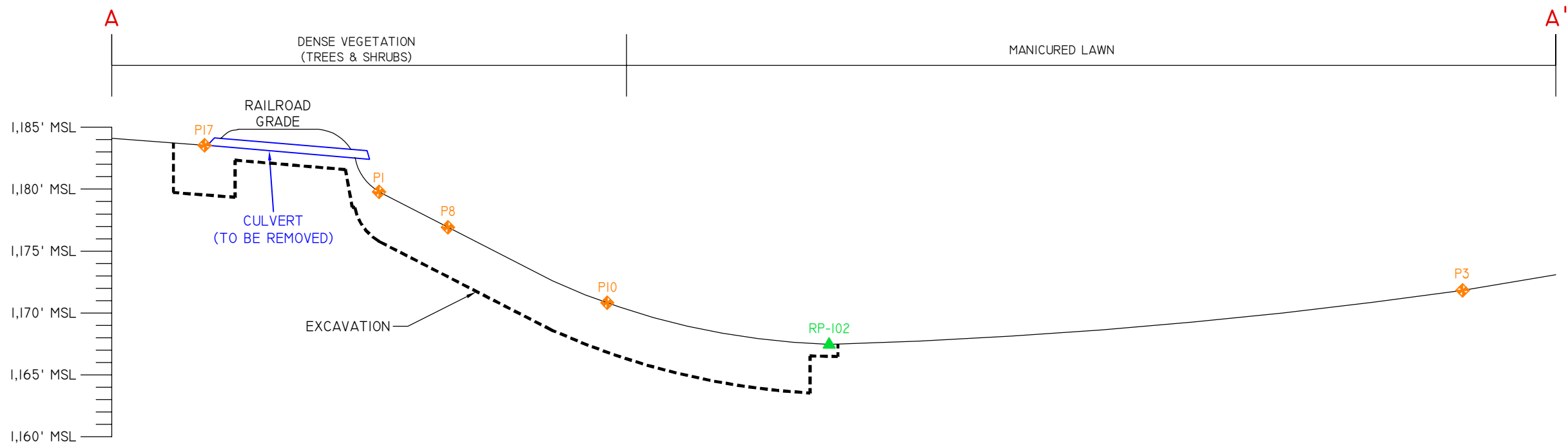
PROPOSED EXCAVATION TO 1 FOOT BLS
PROPOSED EXCAVATION TO 3-4 FEET BLS
ABANDONED RAILROAD TRACKS
PROPERTY BOUNDARIES (APPROXIMATE)



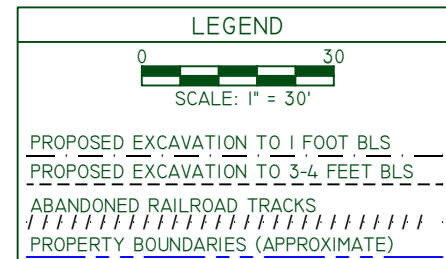
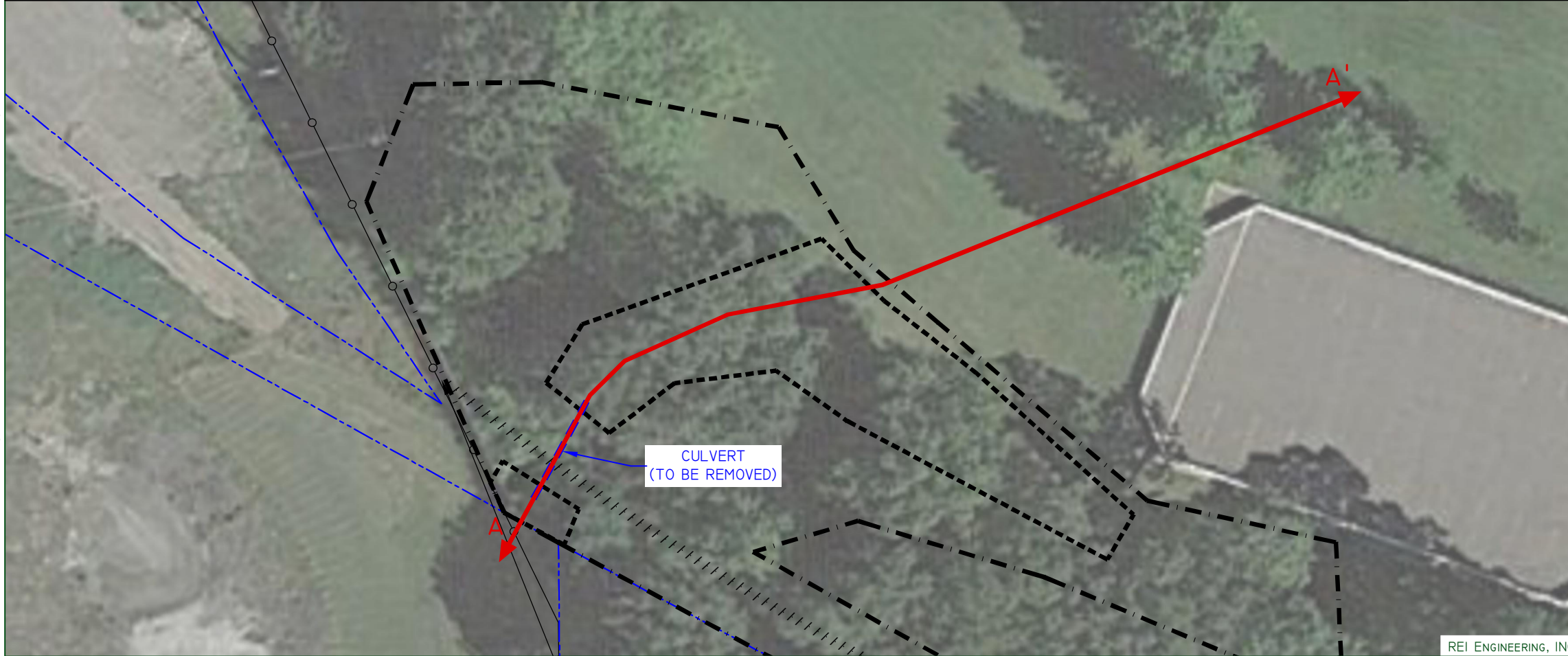
FIGURE 4 : PROPOSED EXCAVATION BOUNDARIES

DATE:
2/22/2023

DRAWING FILE: P:\9000-9099\9073 - CITY OF WAUSAU RIVERSIDE RR CORRIDOR\dwgs\9073-X SECTION.DWG LAYOUT: X-SECTION PLOTTED: FEB 22, 2023 - 4:36PM PLOTTED BY: MATTM



HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=10'



RIVERSIDE RAILROAD CORRIDOR
132 RIVER STREET
WAUSAU, WISCONSIN

FIGURE 5 : ELEVATION PROFILE A-A'

PROJECT No. 9321	DRAWN BY: MCM	DATE: 2/22/2023
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REI ENGINEERING, INC.