

*** 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, June 20, 2022 at 4:00pm**
Location: **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 Public Comment or Suggestions
- 3 Approve Minutes - April 4, 2022
- 4 Discussion and Possible Action Electing the Chair and the Vice Chair
- 5 Discussion and Possible Action on the Roles, Responsibilities and Authority of the Park Commission and Parks & Recreation Committee
- 6 Discussion of the Presentation of the Department Overview
- 7 Educational Items
 - A. Park Update (Athletic Park, City Pools, Dog Park, Forestry, Garbage Update, General Maintenance/Routine Operations/Programs)
 - B. Riverside Park Remediation Update
- 8 Future Agenda Items -
- 9 Next Meeting Date - TBD due to 4th of July
- 10 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) 261-6590 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 6/17/2022 @ 10:00 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

DRAFT

CITY OF WAUSAU – PARK AND RECREATION COMMITTEE MEETING MINUTES

Date/Time: April 4, 2022 at 4:30 p.m. Location: Council Chambers, City Hall
Members Present: Tom Kilian-(via webex), Lou Larson, Tom Neal, Pat Peckham (c), Sarah Watson
Others Present: Jamie Polley-Director, John Kahon – City Forester

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 Chairman Peckham at 4:30pm.
2. Public Comment – none brought forward
3. Approval of Minutes – March 7, 2022 – **Motion** by Larson, second by Watson to approve the Park and Recreation Committee draft March 7, 2022 minutes. Motion **carried** by voice vote, vote reflected as 5-0.
4. Discussion and Possible Action Approving an Agreement with MSA Professional Services to Update the 2017-2021 City Comprehensive Outdoor Recreation Plan – Polley explained the most recent plan on file is 2017-2021 and the updated CORP will be for 2022-2026. MSA had updated the County CORP in 2019 and the goal is to have uniform documents to make them easy to utilize by staff. Eventually the goal is to have one outdoor recreation plan for the Wausau and Marathon County park system. MSA has submitted a proposal that will update all areas of the City CORP and provide usable information and estimates for infrastructure needs and maintenance. It will include capital and staffing needs and cost estimates. Discussion followed. **Motion** by Larson, second by Neal to approve the agreement with MSA Professional Services to Update the City of Wausau Comprehensive Outdoor Recreation Plan for 2022-2026. Motion **carried** by voice vote, vote reflected as 5-0.
5. Discussion and Possible Action Authorizing the Execution of Lease for Radtke Point Park and Grace Park with the City of Schofield – The lease between the City of Wausau and the City of Schofield for Radtke Point Park and Grace Park expired on March 10, 2022. The City Attorney’s office has been working with the City of Schofield to renew the leases. The leases were approved by the Airport Committee on March 16, 2022. **Motion** by Neal, second by Larson to recommend to City Council the authorization of the execution of the lease for Radtke Point Park and Grace Park. Motion **carried** by voice vote, vote reflected as 5-0.
6. Introduction of New City Forester and an Update of the Urban Forestry/Emerald Ash Borer Plan – Polley introduced John Kahon who started as City Forester on November 29, 2021. John gave some background information about himself. He discussed the Emerald Ash Borer infestation sites that have been found in the City and said they have done well with their Emerald Ash Borer management plan for the City trees. The concern now is with private residence trees and starting to make sure there is space at the wood waste yard for residents. Residents are encouraged to call the City if they suspect their boulevard trees are infected. They should call a private arborist company about trees on their own property. Questions were answered. Polley said they will follow the plan for the City trees but it may be altered somewhat as they find pockets of infestation. Neal mentioned the policy about healthy trees being a priority during street construction projects. Kahon has had been meeting with the engineering department trying to reinforce what the previous City forester had been working on.
7. Educational Items
 - A. Park Update – Athletic Park: Seasonal work has begun in preparation for the upcoming baseball season. Brockmeyer Park: We have been in coordination with vendors on some replacement parts for JoJo’s Jungle. These repairs will be completed this spring. Riverside Park: All updates will be completed the week of 3/28. Men’s restroom has been painted and will be tiled after the next weekend rental. General Maintenance: ADA compliance work has been ongoing per the recent audit. Routine Operations/Programs: Snow/ice removal, building and structure maintenance, shelter reservations and special events, equipment maintenance and repair.
 - B. Riverside Park Remediation Update – There is no update at this time.
 - C. Barker Stewart Island Update – It is planned to bring the goats back after July 4th to continue with vegetation management. The Bird Club has installed more trees and has some informational signage on bird habitat that will be installed this spring. The Finance Committee has approved reallocating the funding for the shelter design on the island to complete

the shelter design on the south river front. Staff will determine next steps for a site design on the island. If funding is needed for an architect the request will be submitted with the 2023 CIP requests.

D. Dog Park Committee Update – The past Committee members have been contacted to see if they were interested in continuing to serve on the Committee and all but one can continue. Polley will work with the City Clerk’s Office to put out a call for any other interested citizens and then a meeting will be set.

8. Future Agenda Items – Riverside Park remediation update

9. Next Meeting Date – Monday, May 2, 2022 at 4:30pm the regular meeting at Council Chambers, City Hall.

10. Adjournment – **Motion** by Larson, second by Neal to adjourn at 4:10pm. Motion **carried** by voice vote, vote reflected as 5-0.

AGENDA SUMMARY

4. Election of Committee Chair and Vice Chair

The Committee will make nominations for a Chair and a Vice Chair of the Committee. The Committee will then vote on each position.

5. Discussion and Possible Action on the Roles, Responsibilities and Authority of the Park Commission and Parks & Recreation Committee

Staff will discuss the roles and responsibilities of the Park Commission, how the Park Commission was formed and what authority the Park Commission has regarding the City and County Parks. Staff will also review the city structure and the parks committee. In the packet is a memo from the City Attorney that provides the committee members with background information of the history of the City/County Parks Commission.

6. Presentation of Department Overview

Staff will provide the Parks and Recreation Committee an overview of the department. Committee members will be able to ask questions of staff during and after the presentation.

7. Educational Items

7A. Park Updates

Athletic Park:

First Woodchuck game is 5/31, staff worked additional hours to get the stadium ready for the season. New signage directing parking has been installed

City Pools:

The pools were filled around Memorial Day. The pool and playground staff installed and tested the pool mechanical equipment to ensure the pool systems were operational for the season. Pools opened 6/4.

Dog Park:

Agility course is installed. Restoration around the concrete pads is complete and the area has been seeded. Small dog area is open while the seed establishes in the large dog area. Shelter will be installed as time allows this summer.

Forestry:

Planting is underway with anticipated completion of spring planting by mid-June

Garbage update:

Garbage collection has increased in cost to the point where we have reduced the number of pickups by 40%. Due to illegal dumping, we have also asked our vendor to install different lids at some locations to limit the size of debris that can be deposited.

General Maintenance:

ADA compliance work has been ongoing per the recent audit

Routine Operations/Programs:

Building and structure maintenance.
Shelter reservations and Special Events.
Equipment maintenance and repair

7B. Riverside Park Remediation Update

Attached is the latest report for the Riverside Park Environmental remediation. The document is currently under review by the WDNR and we are awaiting their comments/response on how to move forward. Once this document is approved by the WDNR we will be bidding out the work for any remediation necessary.

(12) *Marathon County Park Commission.*

- (a) *Mission/purpose:* Provide a park and forest recreation system that will meet the needs of our current and future generations, preserve and protect the County's open space, water, historical, cultural, and natural resources; and provide recreation opportunities that are designed to enhance the County's quality of life.
- (b) *Membership:* The Marathon County Administrator shall appoint seven members to the Park Commission. Those members shall be comprised of three Marathon County Board Supervisors, three Wausau City Council members and one citizen member.
- (c) *Duties and responsibilities:*
 - 1. Monitor, preserve and protect the County's open space, water, historical, cultural, natural and economic resources.
 - 2. Determine and recommend recreational and tourism programs within the County.
 - 3. Recommend policy and funding for establishing and implementing park and recreation programs and facilities.
 - 4. Monitor and recommend policy for the development and maintenance of recreation trails including County-sponsored trails and State-funded trails.
 - 5. Make rules and recommend ordinances for the regulation of the use and enjoyment of the County parks, trails and recreation lands.

**BYLAWS of the
MARATHON COUNTY PARK COMMISSION**

as adopted May 16, 1968 and

revised September 16, 1986,

January 13, 1993,

January 10, 2001, and

January __, 2003

Article I - POWERS OF THE COMMISSION

Section 1. The Marathon County Park Commission and the Wausau Park Board were created and given their authority by Marathon County Board Resolution dated April 22, 1920; and the Wausau City Council Ordinance Number 3 and dated April 18, 1905. The Wausau Park Board was merged into the Marathon County Park Commission with associated modifications made in the authority of the Commission by Marathon County Board Resolution 69-74, adopted October 29, 1974, and Wausau City Council Resolution File No. 71-0550, adopted October 31, 1974. Further modifications in the authority of the Commission were made by Marathon County Board Resolution 30-83, adopted May 24, 1983, and Wausau

City Council Resolution File No. 83-0332, adopted March 22, 1983. Most recently, modifications in the authority of the Commission were made by Marathon County Board Resolution No. R-54-92, adopted on August 25, 1992, and Wausau City Council Resolution File No. 92-0814 adopted August 11, 1992. These Resolutions direct the Commission to conform to the laws of the State of Wisconsin as found in Chapter 27.075, 66.30, 59.083, and 59.025.

Article II - JOINT RESPONSIBILITIES

Section 1. The Marathon County Park Commission shall govern, jointly and cooperatively with Marathon County and the City of Wausau, a single Park Department to be known as the ~~Wausau/Marathon County Park Department~~ **Wausau and Marathon County Parks, Recreation, and Forestry Department**, which shall impartially execute all plans and policies of both Wausau and Marathon County.

Article III - MEMBERS AND TERMS

Section 1. There shall be seven members of the Commission, appointed by the Marathon County Administrator and confirmed by the Marathon County Board of

Supervisors consisting of three (3) members whose names shall be recommended by the Mayor of Wausau to the County Administrator and who shall be Wausau Common Council members, three (3) members who shall be Marathon County Board Supervisors residing outside the City limits, and one (1) member who shall be neither a City Council member or a County Board Supervisor, and whose name shall be mutually agreed to by the Mayor and the County Administrator. Members of the Park Commission shall serve a term of seven (7) years or until they are no longer serving as Common Council members or County Board members. In the event an appointment is made to fill a vacancy during the seven year term, the term of the appointee shall be the balance of the term remaining to the replaced member. (See Resolutions, Article I).

Article IV - OFFICERS OF THE COMMISSION

Section 1. The Commission shall elect a President, and a Vice-President, who shall be elected by the Commissioners at their regular July meeting. Said officers shall hold office for one year and until their successors

are elected and qualified. The County Treasurer shall be the Treasurer of the Commission.

Article V - DUTIES OF THE PRESIDENT

Section 1. The President shall preside at all meetings of the Commission, and shall have a vote upon all resolutions as a Commissioner.

Section 2. He shall appoint special committees at such times as he and the Commission deem it necessary to carry on its official business.

Section 3. He shall sign in the name of the Marathon County Park Commission, all contracts and legal documents authorized by the Commission.

Article VI - DUTIES OF THE VICE-PRESIDENT

Section 1. The Vice-President shall preside at meetings in the absence or incapacity of the President, and shall perform such other duties usually appertaining to his office, or as may be assigned to him by the Commission.

Article VII - STANDING COMMITTEES

Section 1. There shall be two standing committees of the Park Commission: Buildings and Grounds and Finance. Each

Committee shall consist of a chairman and one member to be appointed by the President of the Commission.

Article VIII - REMOVAL OF COMMISSIONERS

Section 1. The Marathon County Board of Supervisors may remove any member of the Commission for cause.

Article IX - COMPENSATION OF MEMBERS

Section 1. All members of the Commission may receive a per diem or honorarium and expense allowance as established by the Marathon County Board of Supervisors for attending Commission meetings, either scheduled or special.

Article X - PARK DIRECTOR

Section 1. Under Wisconsin Statutes 27.03(2), the Park Director shall be appointed by the County Administrator with confirmation by the Marathon County Board of Supervisors. The Administrator shall consult with the Mayor of Wausau and representatives from the Park Commission on the appointment. The Park Director shall administer the affairs of the Park Department, and perform all other duties as may be assigned by the Park Commission, County Administrator or the Mayor of Wausau.

Article XI - PERSONNEL

Section 1. The Commission may delegate authority to the Park Director to employ or discharge any employee, or make other special provision therefore, and to contract for the services (full-time or part-time) of consultants or technicians, as allowed by and within the budgets as approved by the County Board of Supervisors and the Wausau Common Council.

Section 2. All employees shall be considered Marathon County employees and shall be under the same County Ordinance, labor agreement or personnel policies available to all Marathon County employees ~~with the exceptions of: (1) the Recreation Superintendent who is a City of Wausau Employee; and (2) seasonal employees who work 100 percent on City programs.~~

Section 3. Administrative and non-represented professional employees shall be compensated, in equal amounts, by both the City of Wausau and Marathon County as specified in County Ordinance Number 69-74 and dated October 29, 1974; and City of Wausau Ordinance Number 71-0550 and dated July 8, 1975, except for: (1) the Recreation Superintendent and City Forester

- 90 percent City and 10 percent County; (2) Chief Ranger - 40 percent City, 60 percent County.

Section 4. All hourly personnel ~~except seasonal employees who work 100 percent on City programs~~ shall be paid by Marathon County, except that monies paid for work performed in the Wausau Park System shall be returned to Marathon County by the City of Wausau, in accordance with accounting systems devised by the Park Director and approved by the City of Wausau and Marathon County. ~~Seasonal employees who work 100 percent on City programs will be paid directly by the City of Wausau.~~

Article XII - PROPERTY

Section 1. The Commission shall, in its cooperative control of the Park Department, manage the property of Marathon County and the City of Wausau in the following manner:

A. Land and Facilities - The Commission shall segregate the expenditure of funds for land and facilities so that the City and County pay only for their respective lands and facilities. The Commission may act as the agent of the City and the

County in all matters concerning the acquisition, lease or disposal of land for park or recreation purposes, and the purchase, construction, maintenance, operation and disposal of park or recreation facilities.

B. Vehicles and Equipment - The Commission shall jointly purchase, maintain and operate all vehicles and equipment used to jointly operate and maintain City and County park and recreation facilities and programs with the costs being **allocated** ~~equally divided~~ between the City and County **based on actual usage**. Ownership of jointly acquired equipment shall be equally shared by the City and County. Ownership of jointly acquired vehicles shall be by the County for insurance and registration purposes, however all costs and benefits associated with vehicle ownership shall be jointly shared by the city and county. Exceptions to joint vehicles and equipment are those vehicles and equipment that are utilized exclusively in either the city or county will be paid for and owned accordingly.

Article XIII - MEETINGS

Section 1. Meetings of the Commission shall be held monthly on the second Wednesday of each month at the Park Department Office, 212 River Drive, Wausau, WI, unless otherwise approved by the Commission.

Section 2. The agenda of each regular meeting will be mailed to the membership not later than 48 hours prior to said meeting and publicly posted not less than 24 hours prior to said meeting in accordance with State Statute.

Article XIV - SPECIAL MEETINGS

Section 1. Special meetings may be called at any time by the President, or by the Park Director, with the consent of a simple majority of the members of the Commission.

Article XV - QUORUM

Section 1. Four voting members shall constitute a quorum for the transaction of business and all officers shall be elected by a majority of those present and voting.

Article XVI - PARLIAMENTARY PRACTICE

Section 1. Order of meetings:
a. Call to order

- b. Announcement of posting
- c. Director's Report
- d. Reports of officers and standing committees
- e. Reports of special committees
- f. Unfinished business
- g. New business
- h. Communications, petitions, and announcements
- i. Adjournment

Section 2. The rules of Parliamentary Practice comprised in "Robert's Rules of Order - Revised" shall govern in all cases in which they are not inconsistent with the standing rules and orders of this Commission and not contrary to the resolution establishing the Commission, or any existing law of the State of Wisconsin.

Article XVII - AMENDMENTS

Section 1. These bylaws may be altered, amended, added to or replaced by a majority of the members of the Commission at any regular meeting of said Commission, or at any properly-called special meeting, providing such changes are not inconsistent with or contravening the resolutions establishing

the Commission, or the laws of the State of Wisconsin. Further, before any changes are made in said bylaws, a copy of the proposed changes shall be filed with the President at least ten (10) days prior to the meeting at which action thereon is to be taken, and the President shall send a copy of said proposed changes by mail to each Commissioner at least five (5) days prior to said meeting, together with written notice of the time and place of such meetings.

Article XVIII - POLICIES OF THE COMMISSION

Section 1. The Commission shall maintain a policy statement manual containing and organizing all policy matters established by the Commission at its meetings.

Article XIX - REPORTS

Section 1. The Commission shall, on or before the thirty-first day of March of every year, submit a written report to the Board of Supervisors of the County of Marathon and to the Common Council of the City of Wausau, Wisconsin. Such reports shall contain a financial statement and a report of the activities

of the Commission during the preceding calendar year.

Article XX - REVENUES

Section 1. All revenues derived from fees for the use of facilities, privileges and conveniences provided within any Wausau or Marathon County park shall be paid over to the Wausau or Marathon County Treasurer and credited to the revenue accounts of the Park Department.

Article XXI - GRANTS

Section 1. The Commission may apply for, receive, and accept grants, subject to the approval of the Marathon County Board of Supervisors or the Wausau Common Council, from any governmental agency, and agree to and comply with such terms and conditions as may be necessary, convenient or desirable.

Article XXII - GIFTS AND BEQUESTS

Section 1. The Commission may accept any gifts or bequests and shall pay over to the Wausau or Marathon County Treasurer any monetary gift or bequest, which shall be budgeted and disbursed, as provided for any other Commission expenditure, unless otherwise

specifically directed by the donor, in which case the directions of the donor shall be strictly adhered to, insofar as possible, provided however, that the objective of any such gift or bequest shall adhere to and complement the overall program of the Park Department.

Article XXIII - BUDGET

Section 1. The Commission shall submit an annual budget as required by the City of Wausau and Marathon County. The Commission may submit separate requests for additional appropriations for the acquisition, development, maintenance, and operation of any park lands, which shall be subject to approval by the Wausau Common Council or the Board of Supervisors of Marathon County.

Article XXIV - EXPENDITURES AND DISBURSEMENTS

Section 1. All expenditures and disbursements of funds for Wausau or Marathon County park purposes shall be made through vouchers presented to the Finance Director of the City of Wausau or to the Marathon County Clerk as provided by law for other disbursements.

Article XXV - SAVING CLAUSE

Section 1. The sentences, sections, articles, schedules and provisions of this Resolution are declared to be severable and any portion which is declared to be unconstitutional or inoperative for any reasons shall

in no way affect the other provisions of the Resolution.

Approved and adopted by the Marathon County Park Commission on this _____ day of _____, 2001, in the City of Wausau, County of Marathon, State of Wisconsin.

President

Commissioner

Vice-President

Commissioner

Commissioner

Commissioner

Commissioner

CITY OF WAUSAU, WISCONSIN

JOINT
A RESOLUTION re. City-County Park
Department.

FILE NO. 71-0550
Introduced Oct. 31, 1974
Referred
Reported Back
Adopted Oct. 31, 1974
Other

RESOLUTION

WHEREAS, the City of Wausau and Marathon County created, heretofore, a joint committee to study a proposal the county assume full responsibility for certain large parks owned, managed by, and located within the City of Wausau; and

WHEREAS, two large city parks are regularly used by many persons who are not city residents; and

WHEREAS, park department personnel and management responsibilities are presently administered both by the city and county; and

WHEREAS, the city is willing to transfer to, and the county is willing to assume responsibility for certain park operations, including a transfer of employees; and

WHEREAS, continued employment of that number of city employees now assigned to city park operations is of great concern to the city, the county, and said employees; and

WHEREAS, the county is willing to employ those city employees terminated as a result of this action,

NOW, THEREFORE, BE IT RESOLVED:

1. The city shall release from employment that number of city employees presently assigned Park Department duties, and the employment of such employees is terminated, effective midnight, December 31, 1974.
2. Marathon County shall accept as county employees, effective at 12:01 A.M., January 1, 1975, those employees presently working for the City of Wausau,

71-0550

which are released from city employment as a result of the within transfer of responsibilities. Such employees shall be assigned to duties in the Marathon County Park Department.

3. The city shall provide the county a roster of employees, including the name, position, date of hire, and present wage and benefit data for each employee affected by this resolution.
4. The city and the county hereby abolish, effective midnight, December 31, 1974, their respective park commissions as presently organized and constituted.
5. The county hereby creates, pursuant to sec. 27.075, a Park Commission composed of seven members, who shall assume the powers and duties of both the city and the county, as provided for in secs. 27.02 thru .06; 27.08 thru .15; and sec. 66.527, Wis. Stats., governing parks and recreation.
6. The composition of such commission, as to the terms of office of its commissioners and their method of appointment, shall be as set forth in the above statutes. The initial commissioners shall be appointed as follows: The Mayor of the City of Wausau shall provide to the Chairman of the Marathon County Board, three nominees for appointment to such commission, and the county board chairman shall appoint the city nominees, whose terms of office shall be apportioned amongst the seven member commission in such a manner that there shall always be three commissioners nominated by the Mayor of the City of Wausau, serving on such commission. The four members appointed by the Chairman of the Marathon County Board shall be residents of Marathon County, but not of the City of Wausau. Thereafter, the residence of the Mayor's nominees shall be as the Mayor may decide, but the chairman's nominees shall be non-Wausau residents.
7. The county and city shall share, on a 50-50 basis, the purchase price of all machinery and equipment purchased and used solely for park department purposes.

8. The county and city shall share, on a 50-50 basis, the salary and fringe benefit costs of the following County Park Department administrative positions for 1975: (See List Below)
9. In future years, if the 50-50 formula no longer is fair and equitable, the parties shall readjust the cost sharing to conform to the facts.

- ~~10. That Sylvan Hill and Athletic Park shall be leased by the county, from the city, for the sum of Ten Dollars (\$10.00) a year, each; that the two governing bodies shall, prior to December 31, 1974, execute a lease for each park. The terms and conditions of the leases shall be approved by the requisite city and county officials, prior to such approval by the governing bodies.~~

*elate #10 per
ordinating
committee report
dated 7-8-75
(attached)*

COORDINATING COMMITTEE

Roger [Signature]

Robert C. Helber

John T. Hays

John [Signature]

Richard B. Anklam

COUNTY PARK DEPARTMENT ADMINISTRATIVE POSITIONS FOR 1975:

- | | |
|-----------------------------|--------------------------|
| 1. Superintendent of Parks | 8. Clerk-Steno I |
| 2. Assistant Superintendent | 9. Park Supervisor |
| 3. Park Forester | 10. Construction Foreman |
| 4. Recreation Coordinator | 11. Maintenance Foreman |
| 5. Administrative Assistant | 12. Horticulture Foreman |
| 6. Business Manager | 13. Park Supply Man |
| 7. Clerk-Steno II | |

7
1
-
0
5
5
0

CITY OF WAUSAU, WISCONSIN

REPORT OF Coordinating Committee

FILE NO. 71-0550

Introduced July 8, 1975

Referred _____

Adopted July 8, 1975

Filed _____

Other _____

Dated July 8, 1975

To the Mayor and Common Council:

Your Coordinating Committee wishes to report at their May 21, 1975, meeting they recommended to delete paragraph #10 from Joint Resolution re: City-County Park Department adopted October 13, 1974, and add Sylvan Hill to paragraph #11 of Resolution re: Administration of City-County Parks, adopted April 14, 1975.

At their meeting on May 29, 1975, they recommended that Athletic Park is to be cleaned after every game and the contract with the Mets is to be a two-year contract with a second year option.

Signed

John L. Kannenberg
John L. Kannenberg, Chairman

7
1
1
0
5
5
0



COUNTY OF MARATHON

COURTHOUSE

WAUSAU, WISCONSIN 54401-5568

COUNTY CLERK
LOUANN E. FENHAUS

(715) 847-5500

September 1, 1992

John Hess, Mayor
City of Wausau
407 Grant Street
Wausau, WI 54401

Dear John:

Attached is a certified copy of Marathon County Resolution #R-54-92, clarifying the City-County Parks Agreement.

This resolution was adopted by the Marathon County Board of Supervisors at their Adjourned Organizational meeting which was held August 25, 1992.

Yours truly,

A handwritten signature in cursive script, appearing to read "Louann", is written over a horizontal line.

Louann E. Fenhaus
Marathon County Clerk

kdk

cc: Bill Duncanson

RESOLUTION #R- 54 -92

RE: AGREEMENT CLARIFYING CITY-COUNTY PARK GOVERNANCE

WHEREAS, the County of Marathon and the City of Wausau have previously adopted resolutions concerning agreements defining the administration and management of City of Wausau parks; and

WHEREAS, the City's mayor and attorney and the County's administrator and corporation counsel have agreed to modifying language desired to clarify the selection process for park commissioners and governance of city parks; and

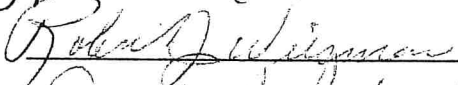
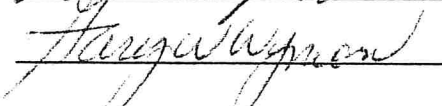
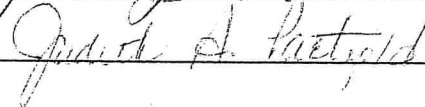
WHEREAS, the Marathon County Park Commission and Director of Parks is supportive of said modifying language.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors of the County of Marathon hereby ordains as follows:

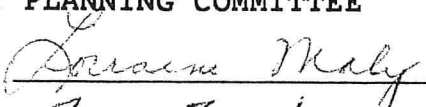
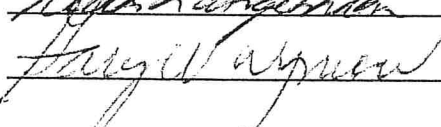
1. Approving the two-page Agreement for City/County Park Governance, which is attached hereto and incorporated by reference as if fully set forth.
2. Authorizing and directing the County Administrator and County Clerk to execute said agreement.
3. Authorizing and directing the County Clerk to issue checks pursuant to this resolution and the Treasurer to honor same.

Dated: August 25, 1992

MARATHON COUNTY PARK COMMISSION

MARATHON COUNTY PLANNING COMMITTEE

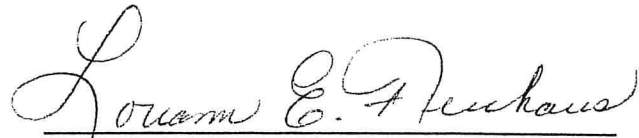
Fiscal Impact: None known.

WD/ded

STATE OF WISCONSIN)
)SS.
COUNTY OF MARATHON)

I, Louann E. Fenhaus, County Clerk in and for Marathon County, Wisconsin, hereby certify that the attached Resolution #R-54-92 was adopted by the Marathon County Board of Supervisors at their Adjourned Organizational meeting which was held August 25, 1992.

S E A L



Louann E. Fenhaus
Marathon County Clerk

Revised
7/30/92

AGREEMENT FOR CITY/COUNTY PARK GOVERNANCE

THIS AGREEMENT made this 25th day of August, 1992, by and between Marathon County, a Wisconsin municipal body corporate, hereinafter referred to as COUNTY and the City of Wausau, a Wisconsin municipal corporation, hereinafter referred to as CITY.

WHEREAS, CITY and COUNTY have previously adopted resolutions concerning the administration and management of CITY parks, CITY resolutions being numbered as File No. 71-0550, adopted October 31, 1974, and File No. 83-0332, adopted March 22, 1983, and COUNTY resolutions being numbered as 69-74, adopted OCTOBER 29, 1974, and 30-83, adopted May 24, 1983.

NOW, THEREFORE, under authority of Wisconsin Statutes 27.075, 66.30, 59.083, and 59.025, CITY and COUNTY agree as follows:

1. There shall be a seven (7) member County Park Commission appointed by the County Administrator under 27.02(2) and by this Agreement, members of the Park Commission appointed by the County Administrator and confirmed by the County Board shall consist of three (3) members whose names shall be recommended by the Mayor of Wausau to the County Administrator and who shall be Common Council members, three (3) members who shall be County Board Supervisors residing outside the City limits, and one (1) member who shall be neither a City Council member or a County Board Supervisor, and whose name shall be mutually agreed to by the Mayor and the County Administrator. Members of the Park Commission shall serve a term of seven (7) years or until they are no longer serving as Common Council members or County Board Supervisors.

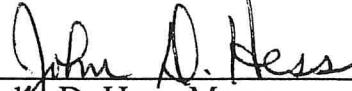
2. The County Administrator shall consult with the Mayor of Wausau in any matter pertaining to the hiring, termination, discipline, performance evaluation, or other personnel matter involving the County Director of Parks, however the decision of the County Administrator shall be final under authority of Statute 59.033(2)(b) and 27.03(2).

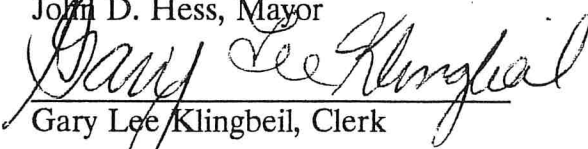
3. This agreement may be amended by mutual consent of both the City and County, with such amendment requiring formal action by both the County Board of Supervisors and the Common Council of the City of Wausau. This Agreement may be terminated by either the Common Council of the City or the County Board of Supervisors, however, notice of such termination shall be required in writing and provided to the other party no less than twelve (12) months in advance of the proposed termination date.

4. Within ninety (90) days of the effective date of this Agreement, the bylaws of the Park Commission in existence prior to this Agreement shall be changed to reflect this Agreement and to conform to current statutes.

5. To the extent that this Agreement conflicts with any previously adopted resolutions or agreements this Agreement shall control.

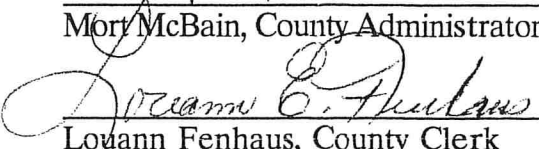
CITY OF WAUSAU BY:


John D. Hess, Mayor


Gary Lee Klingbeil, Clerk

COUNTY OF MARATHON BY:


Mort McBain, County Administrator


Louann Fenhaus, County Clerk

LEGAL OPINION

TO: Mayor Katie Rosenberg
Common Council Members

FROM: Anne Jacobson, City Attorney

DATE: May 13, 2022

RE: Management and Operation of City Parks and Facilities

Facts:

On or before May 18, 2020, a question arose at the beginning of the pandemic regarding enforcement of the posted closures of playgrounds at city parks and the authority for such enforcement.

Legal Question: Under what authority does the county parks director, as a county employee, restrict, lock or close city park facilities to public use?

Background:

Historically, the Wausau Park Board was established in 1905 and the Marathon County Park Commission was established in 1920. The combined Park Department approach was initiated in about 1925 and the first department administrator of the City-County Park Department was created and hired in 1926.

On June 14, 1971, a County-City Study Committee was appointed by the Chairman of the Marathon County Board of Supervisors to study the organization of the Wausau Park Board and the Marathon County Park Commission for the purpose of combining these Commissions into a single unit. The Committee studied the problems of the dual boards having overlapping policy statements and efforts, as well as having separate personnel policies and financial procedures, over 8 months, with 11 meetings.

The report of that Committee recommended reorganization be accomplished by January 1, 1973, and that: 1) the Mayor of Wausau appoint three of the seven member Commission; 2) the City of Wausau transfer all Park Department personnel to the Marathon County Park Department; 3) the salaries of non-represented employees be shared on a fifty-fifty basis; 4) machinery and equipment continue to be purchased on a fifty-fifty basis; 5) for all else, the City contract services from the Marathon County Park Commission as budgeted; 6) certain city parks be transferred by lease to the county park system: Athletic, Oak Island-Fern Island, Radtke Point, Rib River and Sylvan Hill. On March 15, 1973, these recommendations were adopted by the Marathon County Board. The City adopted a similar resolution on Oct. 31, 1974, effectively abolishing at midnight, December 31, 1974, its park commission.

Wis. Stat. §27.075 was created and enacted as part of Chapter 33, Laws of 1973, published June 28, 1974, wherein counties were authorized broad authority to exercise city powers in city parks upon proper action by both the city and county legislative bodies (otherwise, counties only derived powers from the constitution or legislature and could not enforce city police powers in parks). Sub. (4) states, in part, " . . . Said . . . cities . . . are vested with all necessary power to do the things herein required, and to do all things and to exercise or relinquish any of the powers herein provided or contemplated. The procedure herein provided for the request or acceptance of the exercise of the powers conferred on the

county board in cities . . . is hereby prescribed as a special method of determining the local affairs and government of such cities and villages pursuant to section 3 of article XI of the constitution.” (Municipal home rule)

In total, the City has adopted two resolutions and the County has adopted three resolutions, with respect to the operations of the parks system:

City: File No. 71-0550, adopted October 31, 1974	County: 69-74, adopted October 29, 1974
File No. 83-0332, adopted March 22, 1983	30-83, adopted May 24, 1983
	54-92, adopted August 25, 1992

The final County resolution adopted an Agreement for City/County Park Governance and requires amendment by formal action of the respective governing bodies, and notice of termination by either party to be in writing and given no less than 12 months in advance of the proposed termination date.

On the City side, turning first to File No. 71-0550, the resolution adopted October 31, 1974, created a study committee: city and county park system – personnel committees to study employees.

On December 30, 1974, the County executed a “Park Lease” effective January 1, 1975 for 99 years for two parks for \$10 each per year, due January 1.

Effective December 31, 1974 at midnight, the **Wausau Park Board** was combined with the **Marathon County Park Commission** into a single unit

- City parks employees transferred to County
- City and county abolish respective park commissions as presently organized and constituted
- County creates Park Commission under 27.075 who shall assume *the powers and duties of both the city and the county, as provided in Sections 27.02-.06; 27.08-.15; and 66.527 (now s.66.0123)*
- Parties share non-rep employees’ salaries and benefits 50/50 for 13 listed positions in 1975; thereafter, readjust cost sharing to conform to the facts
- Parties share equipment and machinery purchases 50/50
- City contract services from the Park Commission as budgeted
- Parks “transferred” by lease to “county park system”: each shall execute leases for Athletic and Sylvan Hill: Athletic (\$10/year), Oak Island-Fern Island, Radtke Point, Rib River and Sylvan Hill (\$10/year).

On April 14, 1975, a Resolution was passed by the Common Council, deleting references to Athletic Park in para. 10 of the joint resolution; and that para. 11 be deleted and replaced with: “The City shall retain policy and police powers jurisdiction over Athletic Park until such time as the above (deed restriction on use of Park) can be resolved; this period of time not to exceed one year.”

On July 8, 1975, a Resolution was passed by the Common Council to delete para. 10 from the Joint Resolution adopted October 13, 1974, re: City-County Park Department, and add Sylvan Hill to para. 11 of the same Resolution.

On March 22, 1983, the City of Wausau Common Council passed a Resolution, File No. 83-0332, requesting the County Board of Supervisors recommend changes to, and adopt and enforce City ordinances that regulate use by the public of the Wausau Park System; it further recommended certain ordinances be adopted by the county; and limiting that enforcement authority to "City parks" (all lands and water acquired by the City for park or recreational purposes or placed under the jurisdiction of the Marathon County Park Commission and include without limitation, parks, beaches, swimming pools, and privately-owned lands, the use of which has been granted or leased to the City for park, recreational or like public purposes).

Likewise, on May 24, 1983, the County Board of Supervisors passed a Resolution, #30-83, assuming the exercise of authorities and functions as set forth in the City resolution just passed.

On October 2, 1989, a draft agreement was prepared which at that time, purported to be a contract for the purchase of services from the County park department, to be provided to the City. File notes reflect a meeting of the County Park Commission on October 10, 1989, at which the County Administrator gave a presentation on problems and issues, such as accountability, and insurance. The City was discussing the setting of policy by the City, and more input being provided by aldermen.

The "Park Reorganization Committee" of the City met for the first time on January 16, 1990, to select a chairman, discuss the historical relationship to the Park Commission and discuss future options for future policy making.

A draft Resolution dated October 12, 1990, resolves to rescind the current arrangement with the County for park services, provide for a City Park Committee and for a s. 66.30 (now 66.0301) agreement with Marathon County. The draft acknowledges the powers and duties of the City with regard to City park operations lie with the Marathon County Park Commission, pursuant to Wis. Stats. S. 27.075, but to more appropriately and adequately fulfill the requirements and desires of the City residents for park and recreation services, contracting with the County for certain services offered by the Park Department, within the context of and as a part of a comprehensive City park and recreation program, would offer the most benefit to the City residents. It resolved to rescind the provisions within Resolution 71-0550, adopted October 31, 1974, effective January 1, 1992; empower the Board of Public Works with the statutory authority to exercise the duties and responsibilities of park operations; establish a City park committee by ordinance, made up of 7 members, of which 3 would be aldermen, to make recommendations to the council on all park operations; authorize and direct officials to negotiate an appropriate intergovernmental agreement for the provision of certain park services to be performed by the County for the City and for payment therefor.

A section appearing in the November 29, 1990 Comprehensive Park and Recreation Area Plan, entitled "Jurisdictional Transfer of Parks," references that the County proposes ownership and maintenance of D.C. Everest and 10th Street Parks be transferred to the City and that the City transfer ownership of Sylvan Hill Ski Area and Oak Island-Picnic Island community park to the County. Additionally, it proposed transferring Athletic Park and proposed Holtz-Krause sports complex to the County park system.

"Before jurisdictional transfers occur, the City should carefully weigh both the positive and negative aspects related to any jurisdictional transfers. Accepting additional park lands from the County will involve additional expenses for the maintenance and improvements that are currently the responsibility of the County. On the other hand, the City will have complete control over the development and improvement of the parks.

Relinquishing jurisdiction of a park would also diminish the City's financial obligation to maintain that park. However, without a well written transfer agreement Marathon County might reduce maintenance and improvement of the park and diminish its overall quality. Before any City parks are transferred to Marathon County well written, concise agreements should be drafted to insure that the City's interests are protected from the financial and political changes occurring at the County level."

On February 26, 1992, the City's Public Health and Safety Committee considered an ordinance creating City Park Committee and related actions regarding City governance of parks. Then Mayor Robinson explained that he had discussed over the years the need to increase the role of city involvement in determining the future for City parks; a motion to bring the ordinance back to the next meeting passed unanimously.

On March 25, 1992, the draft ordinance was considered. The official minutes of that meeting of the Public Health and Safety Committee reflect that "Mayor Robinson stated that we currently have an eight person committee consisting of four aldermen and four citizens. This committee has not met very often. We felt that it was important that additional direction be given to the future planning of parks and recreational activities in the City. . . . We are proposing . . . to try and expand participation in future planning of parks and recreational activities in the City. We would not tinker with the current City/County Park Commission but to insure some continuity we would have two of the three people who serve on that commission also serve on this committee. We hope that with this we would have additional citizen and aldermanic involvement in the parks planning and recreational planning. Right now we have no real parks plan, this would change the focus and provide the continuity needed."

On April 14, 1992, an ordinance creating Chapter 2.85 – City Parks and Recreation Committee – was introduced, but not passed by Council. It was referred back to the Public Health and Safety Committee where it died. It provided for an 8 member committee, consisting of 4 alders and 4 citizens, with no less than two members who would also be members of the Marathon County Park Commission. The draft ordinance listed the powers, duties and functions of the committee as follows:

- To make policy recommendations with regard to park and recreation services to the common council
- To receive input from citizens concerning park and recreation services and operations and to make corresponding recommendations with regard to those services and operations to the common council.
- To conduct hearings and to make investigations into the desired level and quality of park and recreation services and the costs and benefits of those park and recreation services
- To develop a long-term plan outlining the identified and projected park and recreation needs.

(However, it is listed in WMC 2.16 as a standing committee.)

An Agreement for Park Services was drafted in May of 1992.

On August 25, 1992, the Marathon County Board of Supervisors adopted Resolution #R-54-92, regarding an Agreement Clarifying City-County Park Governance, wherein it approved a two-page Agreement, meant to clarify the selection process for park commissioners and governance of city parks. While I do not find a corresponding City Council Resolution, the Agreement is signed by both the City and County. The Agreement provides for a seven (7) member County Park Commission appointed by the County Administrator and confirmed by the County Board, consisting of 3 Common Council members

recommended by the Mayor, 3 County Board Supervisors residing outside the City limits, and one member who shall be neither a Board or Council member, but mutually agreed to by the County Administrator and Mayor. It further states that the County Administrator shall consult with the Mayor of Wausau in any matter pertaining to the hiring, termination, discipline, performance evaluation, or other personnel matter involving the County Director of Parks, however the decision of the County Administrator shall be final under [statutory authority].

Then Mayor Linda Lawrence inquired about the creation of a city park committee in April 2002 and was advised that a simple majority of the Council could create whatever sort of committee it wished – a standing committee, or a citizen/alder committee (now a “special committee”). She was also advised that it was possible to leave the arrangement with the County with proper notice. At the May 8, 2002 meeting of the Wausau/Marathon County Park Commission, the minutes reflect that Duncanson (Bill) explained that Mayor Lawrence created a City Park and Recreation Committee to increase advocacy of park and recreation needs on City Council. It is a 5-member standing committee. “Duncanson discussed potential opportunities and limitations that come with the new committee.”

On June 12, 2002, the newly minted committee met and then City Planner Joe Pribanich discussed the last citizen survey conducted in 1997 of the City Recreation Plan. Duncanson mentioned that to that date the Park Department had been facility based and that recreation programs were not emphasized. Pribanich added that there was a need to revisit the goals as defined in the various documents because establishing goals is a requirement of the plans. A list of goals and issues was to be compiled by the next meeting.

At their July 10, 2002, meeting, Brad Karger attended and asked the committee to provide him with three, very specific, well-defined targets of improvement for the Park Department, if the City were not completely satisfied with its services, along with its indicators of success for the three targets. Mayor Lawrence indicated the purpose of the standing committee was to foster a better understanding of park issues and better advocacy for park and recreation programs. Joe Pribanich distributed and detailed the City of Wausau park and recreation planning goals he compiled that have been identified in several City planning documents over the last 20-25 years:

- Wausau Plan: A View to the Future (1996)
- River Edge Master Plan (1995)
- City of Wausau Comprehensive Park and Recreation Area Plan (1990)
- City of Wausau Land Use Plan (1983)
- Comprehensive Plan for Wausau Park System (1976)
- Envision Marathon (December 2000 Action Report)

He said the City Planning Commission, this committee and the public would be involved in the recreation planning component of the comprehensive planning process at the county level recently undertaken and for which a consultant was hired.

At their September 19, 2002, meeting, the committee adopted the County Park Department’s mission statement as their own: “To provide diversified park and recreation facilities and programs that will meet the needs of present and future residents and to preserve and enhance important natural, historical and scenic features within the City of Wausau.” The committee expressed its intention to complete a Comprehensive Outdoor Recreation Plan by year-end. It should include a definition of the role of staff and the committee, as well as identify issues.

On April 16, 2003, the City and County entered into an Agreement for the Assignment of Liability for Acts of the Marathon County Parks, Recreation, and Forestry Department Employees, which expired April 16, 2013. That Agreement renews automatically unless terminated by one of the parties. The Agreement is silent as to the term of the renewal

In June of 2003, under then Mayor Linda Lawrence, the County was noticed that city staff was undertaking a study of the advisability of internalizing city park maintenance functions with the Public Works Department.

On August 1, 2011, I wrote an opinion for the Parks and Recreation Committee Chair regarding the steps it would take to dissolve the agreements by which the city and county joined services in operating a joint parks department function.

Ordinances:

Under the Marathon County Ordinances, Section 2.06(12) establishes the Marathon County Park Commission and lists as its duties and responsibilities under (c):

1. Monitor, preserve and protect the County's open space, water, historical, cultural, natural and economic resources.
2. Determine and recommend recreational and tourism programs within the County.
3. Recommend policy and funding for establishing and implementing park and recreation programs and facilities.
4. Monitor and recommend policy for the development and maintenance of recreation trails including County-sponsored trails and State-funded trails.
5. Make rules and recommend ordinances for the regulation of the use and enjoyment of the County parks, trails and recreation lands.

Under Section 19.15(1)(a), the term "Park and Recreation Committee" composed of five members, is the committee of jurisdiction for the City of Wausau parklands, hereafter referred to as the "Committee" in this subchapter.

(c): The Wausau and Marathon County Parks, Recreation, and Forestry Department, whose head shall be the Director, shall be the administrative or executive agency of the Committee. The Director shall be the authorized agent of the Committee as referred to in this subchapter.

(2): The provisions of this subchapter shall apply to all lands, structures and property owned, leased or administered by the City of Wausau and under the management, supervision and control of the Committee.

(6) Rules and regulations may be made governing the use and enjoyment of all lands, structures and property owned, leased or administered by the City of Wausau and under the management, supervision and control of the Committee.

Under the Wausau Municipal Code, only Chapter 9.20 addresses "Park Regulations." Nowhere is the Park and Recreation Committee mentioned, except in a list of standing committees of the Common Council in Chapter 2.16. The title of the chapter contains the following footnote:

"For statutory provisions granting a city park board certain board regulatory powers, see §27.08, Wis. Stats."

However, the City does not have a City Park Board, pursuant to s. 27.08.

Conclusion:

Effective December 31, 1974, the City transferred its powers and duties with respect to city parks to the county. The City must give 12 months' advance notice of termination to rescind the jurisdictional transfer. The City added "Parks and Recreation Committee" to its list of standing committees in Chapter 2.16 of the ordinances, but no report describing the duties of the committee could be found. Likewise, no list of those functions transferred to the County, retained by the City, or shared jointly, could be found. Additionally, no agreement exists as to the procurement of services from the County, in exchange for the money budgeted for county use with respect to city parks.

Recommendation:

With the advent of the standing Parks and Recreation Committee of the City of Wausau, the question becomes one of authority and purpose. If the city has indeed transferred all of its jurisdictional authority to manage City parks to the County, the purpose of the committee should be more clearly delineated, so as not to duplicate or contradict County control and management of city parks.

With the turnover of staff over the years, it is recommended that a review be conducted of all resolutions, agreements, leases and ordinances, and the functions performed by each party, for compliance with Section 27.075, Wis. Stats., which provides that both a city may request, and a county may assume and exercise, " (1) certain powers conferred upon it for the purpose of governing, managing, controlling, improving and caring for public parks, parkways, boulevards and pleasure drives, as evidenced by resolutions *designating the particular park function, duty or act, and the terms, if any, upon which the same shall be exercised by the county board. Such resolution shall state whether the authority or function is to be exercised exclusively by the county or jointly by the county and city, and shall also state that the exercise of such power by the county is in the public interest.*"

Parks, Recreation & Forestry

An Overview



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Overview

1. Department Mission, Structure and Overview
2. Building the Park System
3. Wausau/Marathon County Parks and Recreation Foundation
4. Needs/Challenges
5. Initiatives/Future Projects
6. Customers

Mission Statement

Marathon County's Vision/Mission

Marathon County will be a preferred place to live, work, visit and do business, with the overarching goals of being the healthiest, safest and most prosperous county in the state.

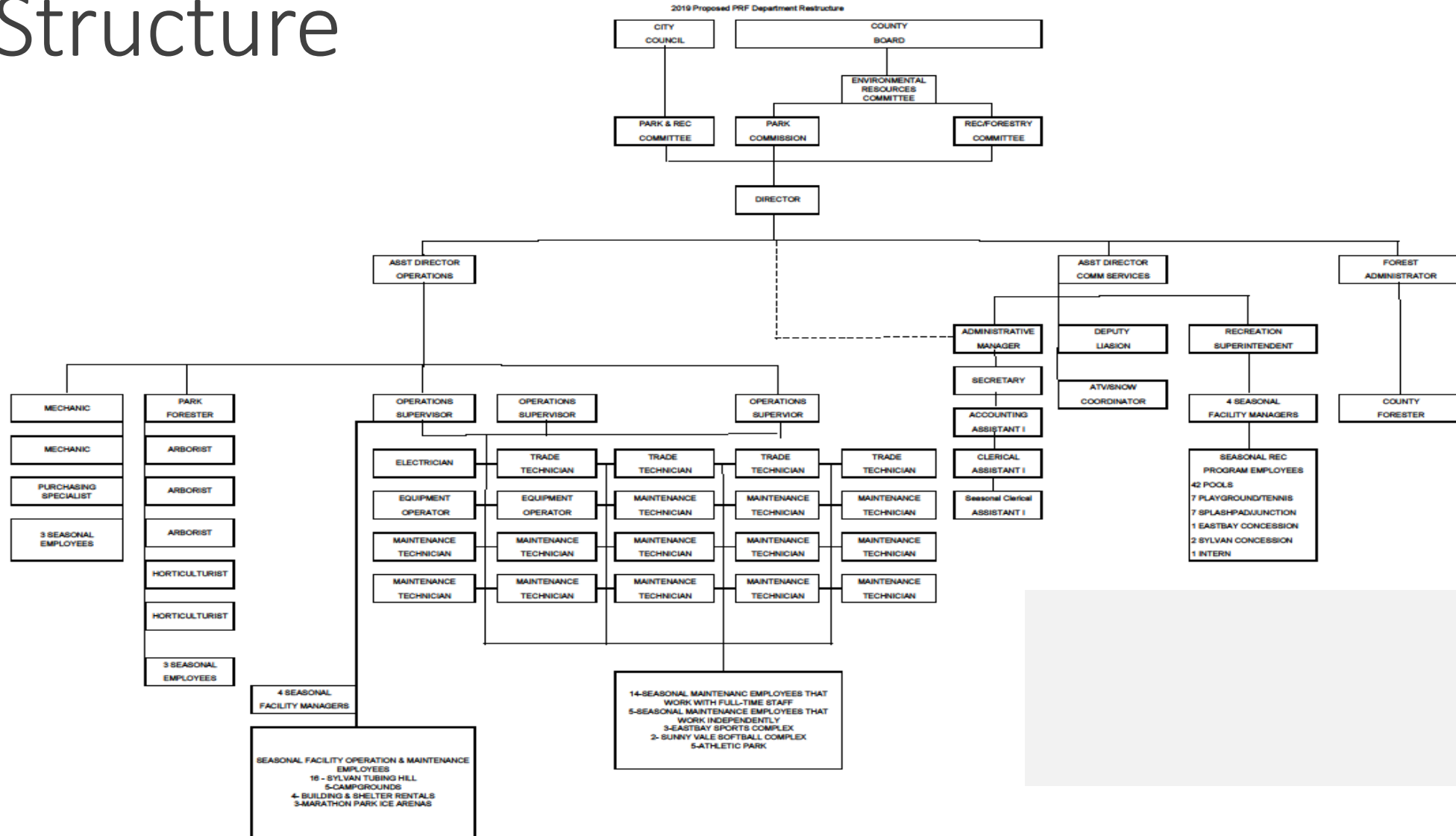
Parks, Recreation and Forestry Mission Statement:

Adaptively manage our park and forest lands for natural resource sustainability while providing healthy recreational opportunities and unique experiences making our County a desirable place to live, work and play



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Parks, Recreation & Forestry Department Structure



Wausau & Marathon County

OPERATES TWO SEPARATE PARK SYSTEMS (SINCE 1924) & COUNTY FOREST SYSTEM – CITY CONTRACTS W/ MARATHON COUNTY

Marathon County:

- 17 County Parks ranging from 0.42-1453 acres
 - Picnicking, hiking, swimming, fishing
 - Camping – 162 sites + 2 group sites
- 10 County Forests ranging from 269-9433 acres
- Specialized facilities
 - Two Ice Arenas
 - Shooting Range
 - Peoples Sports Complex
 - SunnyVale Softball Complex
 - Marathon Park - Marathon Junction, Splash pad, train, fairgrounds, pickleball
- Recreation Programs

City of Wausau

- 34 Parks ranging from 0.2 to 73 acres
- Urban Forestry Program - approx. 25,000 street trees
- Recreation Programs
- Specialized facilities
 - Sylvan Tubing Hill and Mountain Biking
 - Athletic Park
 - 3 outdoor aquatic centers
 - Whitewater Park
 - Skate Park
 - 400 Block
 - Boat Launches



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Activities by Facility

http://www.co.marathon.wi.us/Portals/0/Departments/PKS/Documents/FLYER_ParkFeatures.pdfhttp://www.co.marathon.wi.us/Portals/0/Departments/PKS/Documents/FLYER_ParkFeatures.pdf

Wausau and Marathon County Parks Recreation, and Forestry Department																																	
Phone Number: 715-261-1550 www.co.marathon.wi.us/parks.asp		Acreage	ADA Accessible	Baseball/Softball	Basketball Court	Beach	Boat Landings	Boating	Camping	Fishing	Golf	Grills	Historic Site	Hunting	Lake/Pond/River	Nature Center	Open Area	Picnic Area	Pier	Pickleball Court	Plants/Wildlife	Play Equipment	Restrooms	Shelter/Pavilion	Sports Field/Area	Swimming	Tennis Court	Trail	Volleyball Court	Other - ATV Trail	Other - Cross Country Ski Trail		
Marathon County Parks																																	
Amco Park	379 CTH F, Athens	39	X							X					X	X	X				X	X	X	X									
Ashley Park	1600 Sandy Credd Road, Mosinee	160	X							X						X					X												
Big Eau Pleine Park	3301 Eau Pleine Park Road, Mosinee	1453	X			X	X	X	X	X						X	X	X			X	X	X	X	X	X	X		X			X	
Big Rapids Park	EP1806 Big Rapids Street, Stratford	33	X							X					X	X	X				X	X	X	X	X								
Bluegill Bay Park	3800 Bluegill Avenue, Wausau	98	X				X	X		X					X	X	X	X			X	X	X	X					X	X			
Cherokee Park	H2700 CTH N, Colby	69	X							X					X	X	X				X	X	X	X					X				
Courthouse Square	500 Forest Street, Wausau	0.42	X													X					X												
D.C. Everest Park	1800 S 3rd Avenue, Wausau	12.1	X				X	X		X					X	X	X	X			X	X											
Dells of the Eau Claire Park	P2150 CTH Y, Aniwa	278	X		X				X	X					X	X	X				X	X	X	X	X	X		X					
Duane L. Corbin Shooting Range Park	2173 Rifle Road, Mosinee	100	X																														
Library Park	106 W Washington Street	1	X												X	X	X				X												
Marathon Park	1201 Stewart Avenue, Wausau	78	X	X	X				X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Mission Lake Park	400 County Park Road, Hatley	93	X			X	X	X		X					X	X	X				X	X	X	X	X		X	X					
Mountain-Bay Trail	Trailhead - Municipal Street, Weston		X												X	X	X				X	X	X					X				X	
Reitbrock Geographical Marker	5651 Meridian Road, Athens	0.1	X											X		X																	
Rib Falls Park	1725 CTH S, Edgar	315	X							X					X	X	X				X	X	X	X					X				
Sunny Vale Park	1000 S 72nd Avenue, Wausau	300	X			X		X		X					X	X	X				X		X	X	X		X	X					
Sunny Vale Softball Complex	1000 S 66th Avenue, Wausau	72	X	X												X	X							X	X	X							
Marathon County Forests																																	
Bern Wetland Forest	Town of Bern	269	NA											X	X						X								X				
Burma Road Forest	Town of Mosinee	1480	NA											X	X						X	X				X	X					X	
Elderon Forest Unit	Town of Elderon	280	NA											X	X						X						X						
Harrison-Hewitt Forest	Town of Harrison	9115	NA											X	X						X	X					X						
Kronenwetter Forest	Town of Kronenwetter	5171	NA											X	X						X						X						
Leather Camp Forest Unit	Town of Guenther	5248	NA											X	X						X						X						
Nine Mile County Forest Recreation Area	Town of Rib Mountain	4894	X											X	X						X	X			X	X	X		X				X
Ringle Marsh Forest	Town of Ringle	3028	NA											X	X						X						X						
Wisconsin River Forest	Town of Maine	283	NA				X	X						X	X	X					X							X					

Wausau and Marathon County Parks Recreation, and Forestry Department																																						
Phone Number: 715-261-1550 www.co.marathon.wi.us/parks.asp		Acreage	ADA Accessible	Baseball/Softball	Basketball Court	Beach	Boat Landings	Boating	Camping	Fishing	Golf	Grills	Historic Site	Hunting	Lake/Pond/River	Nature Center	Open Area	Picnic Area	Pier	Pickleball Court	Play Equipment	Restrooms	Shelter/Pavilion	Sports Field/Area	Swimming	Tennis Court	Trail	Volleyball Court	Other - ATV Trail	Other - Cross Country Ski Trail	Other - Disc Golf	Other - Mountain Bike Trail	Other - Sculpture	Other - Shooting Range	Other - Splash Pad	Other - Tubing Hill	Other - Wildlife Refuge	
City of Wausau Parks																																						
Airport Park	155 Lake View Drive	6	X	X												X									X													
Alexander Park	625 Lake View Drive	3	X	X	X											X	X		X	X	X	X	X															
Athletic Park	324 E Wausau Avenue	4	X	X																		X	X	X														
Barker-Stewart Island	600 Stewart Island	15	X							X					X	X					X						X											
Big Bull Falls Park	204 W Scott Street	3	X												X	X	X							X														
Boileau Field	2404 N 5th Street	2	X	X												X									X													
Brockmeyer Community Park	4200 Stettin Drive	27	X	X												X	X				X	X	X	X	X													
City Hall Park	407 Grant Street	1	X													X	X			X																		
Isle of Ferns Park	450 Island	12	X							X					X	X	X		X									X										
Forest Park	3100 9th Street	4	X													X	X		X	X	X	X	X	X	X		X											
Gilbert Park	3000 N 6th Street	6	X				X	X	X	X					X	X	X	X																				
Hammond Park	600 Grand Avenue	1	X													X	X								X													
Kaiser Pool	900 E Bridge Street	1	X																				X	X	X													
Lincoln Tot Lot	822 S 5th Avenue	1	X													X	X					X																
Memorial Park	505 Memorial Park Road	23	X	X	X		X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X					
Oak Island Park	500 River Drive	15	X	X			X	X		X					X	X	X	X	X	X	X	X	X	X	X	X		X										
Paff Woods Nature Preserve	1601 Kickbush Street	21	X																		X							X										
Picnic Island	300 Picnic Island	3	X												X	X	X	X		X																		
Pleasant View Park	1221 Sumner Street	10	X	X												X	X				X		X															
Reservoir Park	1130 Elm Street	4	X													X	X				X		X															
River Edge Trail		7	X												X	X	X			X								X										
River Highlands Park	1901 Marquardt Road	5	X	X	X											X	X			X		X																
Riverside Park	100 Sherman Street	12	X	X	X					X					X	X	X			X		X	X	X				X										
Schofield Park	606 E Randolph Street	5	X				X	X		X					X	X	X	X		X		X			X													
Schulenburg Park	1533 Summit Drive	4	X																				X	X	X													
Stewart Park	508 10th Street	2	X														X	X																				
Sylvan Hill Park	1329 Sylvan Street	73	X													X	X				X	X					X						X				X	X
10th Street Park	935 Jackson Street	1	X		X											X					X																X	X
The 400 Block	401 N 3rd Street	1.5															X																					
3M Park	405 Park Boulevard	16	X	X												X	X	X	X	X	X			X	X													
Westview Terrace	1501 Bissel Street	4	X													X				X								X										
White Water Park	200 River Drive	0.2	X												X	X	X																					
Woodson Park	220 W Washington Street	1	X													X																			X			
Yawkey Park	320 Grant Street	0.7	X													X	X																					



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Wausau & Marathon County

Annual Operating
Budget:
Total - \$4.97 Million
Dollar Budget
Split City/County

FUNDING

Marathon County:

Expenditures = \$3,329,169

Revenue = \$1,201,967

Levy = \$2,127,202

Department also receives a number of Forestry and Snowmobile/ATV grants

Includes enterprise funds (Nine Mile, Peoples Sports Complex, Marathon Junction)

All funded through Marathon County – City is billed for City services

City of Wausau

Expenditures = \$3,259,450

Revenue = \$421,595

Levy = \$2,837,855

Includes 400 Block Fund (Riverlife & 400 Block)

Capital projects for both City/County funded separately



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Serving Wausau and Marathon County

Quality of Life:

- Parks
- Open Space
- Active and Passive Recreation Opportunities
- Code Enforcement

Tourism

- Unique facilities
- Event set up and take down
- Facility coordination

Natural Resource

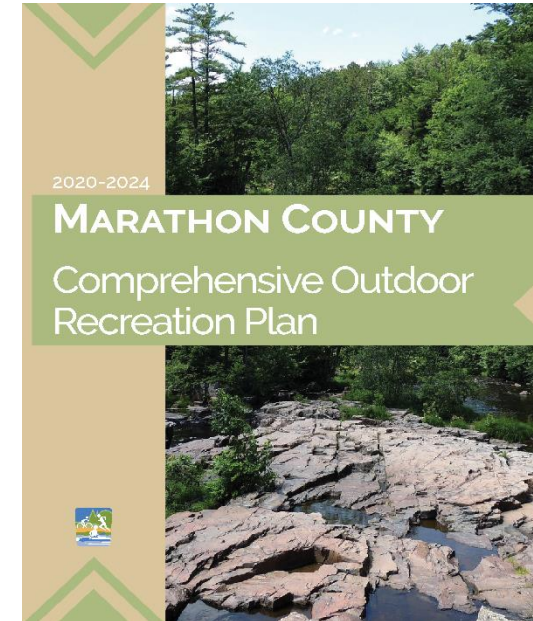
- Sustainable Forestry
- Horticulture
- Water Quality
- Wildlife Habitat



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Building Wausau and Marathon County Parks

- County's Goal: healthiest, safest, and most prosperous.
- Community needs (under served populations).
- Trends and unique opportunities.
- Partnerships and local resources.



Wausau Comprehensive Outdoor Recreation Plan 2017-2021

Marathon County Comprehensive Outdoor Recreation Plan 2020-2024

Marathon County Forest Comprehensive Land Use Plan -15 Year



Building Wausau and Marathon County Parks

- Grants
- Donations of park improvements and/or funds
- Sponsorships - People State Bank (Peoples Sports Complex)
- Contracts – Wausau Woodchucks, Wausau Cyclones
- Partnerships
(volunteer hours for maintenance + funding)
 - Central WI Off-Road Cycling Coalition (CWOCC)
 - Wausau Nordic
 - Wausau Area Pickleball
 - Wausau Area Disc Golf Association
 - Wausau Canoe & Kayak Corporation
 - MC United Soccer
 - Wausau Area Youth Hockey
 - Wausau Area Baseball



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Building Wausau and Marathon County Parks

Collaborations:

We seek collaborations with organizations that have a similar vision as the County, City and Department

Partners also seek us out based on our mission

Examples:

- Marshfield Clinic
- Aspirus
- Wausau Noon Optimist
- Kiwanis
- Local municipalities (Kronenwetter, Weston, Marathon City)
- Other City/County Departments (pop up splash pad)



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Wausau/Marathon County Parks and Recreation Foundation

Our Mission

To promote the common good and general welfare of the people of Marathon County, Wisconsin.

We fulfill our mission by:

- Lessening the burdens of government by protecting the natural resources and combating deterioration of public buildings, monuments, or works in the communities within Marathon County;
- Bringing about civic betterments and social improvements within Marathon County

Funding: Donations, Ironbull, fundraising

Our Purpose

The development of programs to:

- Focus public attention on the Wausau and Marathon County Park Systems' facilities and needs,
- Stimulate and encourage the gifting of funds, land, endowments and bequests to the Marathon County Park Commission, and
- Receive, hold, manage, use and dispose of funds and properties of all kinds, whether given absolutely or in trust, for the benefit of the Wausau or Marathon County Park Systems.



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Needs/Challenges

- Staffing and wages
- State Levy Limits
- Aging facilities
- Increased demand for parks
- Community collaboration on sports facilities



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Initiatives & Future Projects

- Kayak/Bike share programs
- Snowmaking & Fat tire biking at Nine Mile
- Enhanced Sponsorships
- Playground Replacement
- Westside Master Plan
- Trail Coordination Wausau to Merrill
- Work with Friends of Mountain Bay to Extend Trail West
- Master Plan of Rib Falls Park
- River Edge Improvement in Coordination with City Planning
- Department Consolidation and Operations (new site)
- Establish Parks, Recreation & Forestry Sustainability Plan
- Master Plan and Development of Brokaw Park Property
- ARPA Projects – Showers at Campgrounds, update Skate park



Wausau & Marathon County
**Parks, Recreation
& Forestry**

Customers

- Facebook 4,480 followers
- City parks mainly utilized by City/County residents
- Campgrounds & Nine Mile heavily used by WI residents and neighboring states
- Conduct participant surveys after each recreation program
- Sought community input with Outdoor Recreation Plan update



- Safety – Partnership with MC Sheriffs office and Wausau Police Department



Wausau & Marathon County
**Parks, Recreation
& Forestry**

What We Wish We Could Do Better?

- Update facilities
- Provide more staffing
- Provide more Recreation Programs
- Become a bigger partner in community events



Wausau & Marathon County
**Parks, Recreation
& Forestry**

CELEBRATING
100
YEARS
1920-2020

Thank you



Questions?



Wausau & Marathon County
**Parks, Recreation
& Forestry**

WMC Parks, Recreation & Forestry

2021 Year in Review



In 2021 our parks saw a significant increase in usage for a second year in a row compared to years prior to COVID-19. During the COVID-19 pandemic our citizens turned to our 3,401 acres of parkland and 30,714 acres of County Forest to recreate.

-Our department has 43.75 FTE and 150+ seasonals.

-General operating budget of \$6,378,828 in expenditures and \$1,399,315 in revenues

- SUCCESSFUL 100+1 ANNIVERSARY CELEBRATION AUGUST 28, 2021

- SECURED 5 YEAR SPONSORSHIP BY PEOPLES STATE BANK OF SPORTS COMPLEX

- FULLY IMPLEMENTED NEW RECREATION SOFTWARE – CIVICREC

- PLANTED 430 TREES, REMOVED 187 NON-ASH TREES & 420 ASH TREES, TREATED 865 ASH

-ESTABLISHED 15 YEAR EMERALD ASH BORER MANAGEMENT PLAN

-NEW PLAYGROUND EQUIPMENT IN 3M PARK, SCHOLFIELD & MARATHON PARK

- PARTICIPATED IN THE UPDATE TO THE RIB MOUNTAIN STATE PARK MASTER PLAN

- 896 SHELTER RENTAL DAY AND 110+ EVENTS OPEN TO THE PUBLIC

-308.5 ACRES AND 81,920 FT OF TRAILS MOWED = 7,676 HOURS OF MOWING

- 2985 TOTAL PASSES SOLD (DISC GOLF, BIKING, BOAT LAUNCH, SKI, SHOOTING RANGE, ETC

TIMBER SALES

9 sales sold totalling 633 acres with
15,824 cords

\$653,057.00

Gross revenue
\$457,140 Net Revenue to County



CAMPING

Camping had its busiest season in
many years

18%



Increase in revenue over what was
budgeted.

NEW PROGRAM

1st Annual Pickleball Tournament
46 teams = 80 participants

72 Games

Weekly pickleball program had 64
participants

SPONSORSHIPS

New Sponsorship Policy and Park
Naming Guidelines Established

Peoples
STATE BANK

5 year contract with 5 year renewal
for Peoples Sports Complex



Wausau & Marathon County
**Parks, Recreation
& Forestry**





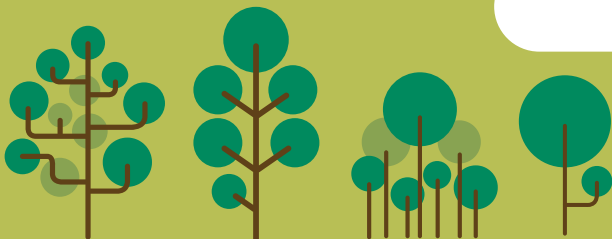
2021 Year in Review - Projects

CITY PARK PROJECTS

- 34 PARKS, 26,000 STREET TREES
- COMPLETED PLAYGROUNDS AT PLEASANT VIEW PARK AND FOREST PARK.
- PLANNED AND ORDERED PLAYGROUND FOR RIVERSIDE PARK
- RECEIVED COMMUNITY DEVELOPMENT BLOCK GRANT FOR RIVERSIDE PARK PLAYGROUND
- VEGETATION MANAGEMENT AT BARKER STEWART ISLAND 
- PHASE IV OF THE ATHLETIC PARK RENOVATIONS COMPLETED
- RECEIVED CATASTROPHIC STORM GRANT \$13,000
- SYLVAN HILL PUMP HOUSE UPGRADE AND SECOND SNOW GUN
- CITY DOG PARK OPENED
- 15 MEMORIAL BENCHES INSTALLED
- MOVIN WITH THE MAYOR EVENTS - PICKLEBALL, YOGA, ROLLER SKATING
- 506 SWIMMING LESSON STUDENTS, ADDED ADULT & EVENING LESSONS (50% INCREASE)
- REPLACED ALL DOWNTOWN FLOWER BASKETS WITH SELF WATERING BASKETS
- PLANNED AND INSTALLED NEW LANDSCAPING AT CITY HALL

COUNTY PARK PROJECTS

- 17 COUNTY PARKS AND 10 COUNTY FOREST UNITS
- ELECTRICAL UPGRADES TO BIG EAU PLEINE CAMPGROUND
- CULVERT INSTALLATION TO BIG EAU PLEINE ROAD FOR RECONSTRUCTION
- INSTALLED AMCO VAULT TOILET AND ACCESS ROAD
- NEW RADIANT HEAT IN ICE RINK 1 OF THE ICE ARENA
- PLANNED AND ORDERED PLAYGROUNDS FOR BIG EAU PLEINE PARK
- COMPLETED UPDATE TO SUNNYVALE SOFTBALL COMPLEX FENCES, CONCESSION, ETC.
- REPLACED THE RUBBER FLOORING OF THE ICE ARENA
- SUCCESSFULLY PARTNERED WITH THE FAIR TO PROVIDE FAIR OPERATIONS
- REPLACED ALL COUNTY PARK/FACILITY WALL MOUNTED DRINKING FOUNTAINS
- PROCESS OF ACQUIRING 39.085 ACRES OF COUNTY PARK LAND
- ACQUIRED 40 ACRES OF FOREST LAND





WMCPRF 2022 Work Plan

Plans to Complete

- Update City Comprehensive Outdoor Recreation Plan
- Westside Master Plan - MSA Hired as Consultant
- Sustainability Plan
- Rib Falls Park Master Plan



- Treat & Remove
Ash Trees
- Plant 400+ trees

Forestry Work Plan Including:

- Est. & advertise 625+ acres of timber for sale
& Admin 33+ sales.
- Acquire Land & Land, wildlife & recreation management

Research

Snowmaking &
Fat Tire Biking
at Nine Mile



Secure Field
Sponsors PSC

Playground Replacements



Blue Gill Bay
Mission Lake
Riverside
Lincoln Tot Lot

Dells of Eau Claire
Big Eau Pleine
Cherokee

County CIP

- Big Eau Pleine Road Repairs
- Cattle barns 1 & 2 Roof Replacement
- Mission Lake Parking Lot Repair
- Restroom Replacement @ BEP & DCE



Establish Long Term
Replacement Schedule

Develop
5 Year CIP

Stewart Park
Step & Wall
Repair



City Small Projects

- Engineered Wood Fiber in Playgrounds
- 400 Block Assisted Listening Device
- ADA Showers & CO2 Injector Systems- Pools
- 3M Trail Construction
- Sylvan Hill Basement Doors
- 400 Block Stage Concrete Repair

City CIP

- Drinking Fountain Replacement
- Memorial Park Tennis Court Replacement
- Athletic Park Scoreboard

Expand
Recreation
Offerings

County Small Projects

- MPB Locker room & Entrance Doors
- Stonework at Dells of Eau Claire
- MPB Table & Chair Replacement
- Dells of Eau Claire Road Repairs

Finish
Dog
Park



June 2, 2022



CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING

WDNR

Attn: Mr. Matthew Thompson
1300 W. Clairmont Avenue
Eau Claire, WI 54701



Subject:

Riverside Rail Corridor – Remedial Action Options Report
132 River Street
Wausau, WI 54401
WDNR BRRTS #02-37-584785

Dear Mr. Thompson,

Enclosed is the remedial action options report for the above referenced Riverside Rail Corridor site in Wausau, Wisconsin.

Thank you for your assistance with this project, please contact me with questions or comments at (715) 675-9784 or Mmichalski@REIengineering.com

Sincerely,
REI Engineering, Inc.

Matthew C. Michalski, P.G.
Hydrogeologist

Enclosures A/S



RESPONSIVE. EFFICIENT. INNOVATIVE.

4080 N. 20th Avenue Wausau, WI 54401
715-675-9784 REIengineering.com



REI

**CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING**

REMEDIAL ACTIONS OPTIONS REPORT

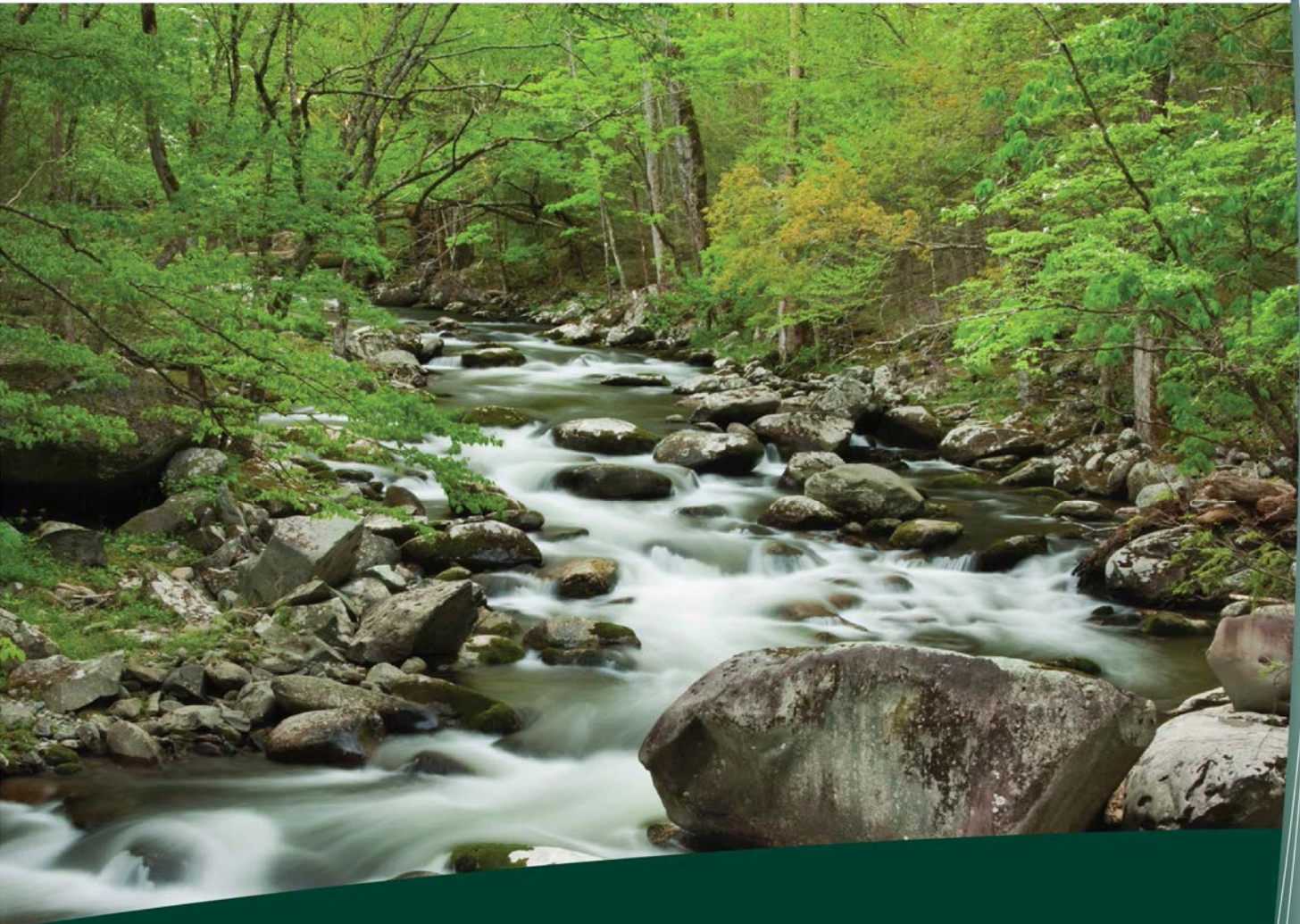
RIVERSIDE RAIL CORRIDOR

132 RIVER STREET

WAUSAU, WI 54401

BRRTS #02-37-584785

REI PROJECT #9073



**COMPREHENSIVE
SERVICES WITH
PRACTICAL
SOLUTIONS**



REMEDIAL ACTIONS OPTIONS REPORT

RIVERSIDE RAIL CORRIDOR

132 RIVER STREET

WAUSAU, WI 54401

BRRTS #02-37-584785

REI PROJECT #9073



PREPARED FOR:

**City of Wausau
Attn: Mr. Eric Lindman, P.E
407 Grant Street
Wausau, WI 54403**

JUNE 2022

REMEDIAL ACTIONS OPTIONS REPORT

WISCONSIN ADMINISTRATIVE CODE CHAPTER NR712 CERTIFICATIONS

The recommendations contained in this report are based on the information obtained from our study of the site and were arrived at in accordance with accepted hydrogeologic and engineering practices at this time and location.

"I, Matthew C. Michalski, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Matthew C. Michalski
Hydrogeologist

6/1/2022
Date

"I, Brian J. Bailey, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

B. J. Bailey
Scientist

6/1/2022
Date

"I, Eric L. Bradfish, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Eric L. Bradfish
Environmental Engineer



TABLE OF CONTENTS

1.0 Executive Summary	1
2.0 Introduction.....	3
2.1 Purpose of Report	3
2.2 General Information	3
2.2.1 Responsible Party	3
2.2.2 Regulatory Contact	3
2.2.3 Environmental Consulting Firm	3
2.2.4 Site Name, Address, & Legal Description	3
2.3 Site Background.....	4
2.4 Terminology Utilized.....	4
2.5 Summary of Site Investigation	5
3.0 Results of Site Investigation	6
3.1 Regional Geology & Hydrogeology	6
3.2 Site Geology	7
3.3 Site Hydrogeology	7
3.4 Soil & Vadose Zone Quality	7
4.0 Remedial Action Options	9
4.1 In-Situ Remedial Options.....	9
4.1.1 Photolysis	9
4.1.2 Phytoremediation and Bioremediation.....	10
4.2 Ex-Situ Remedial Options.....	11
4.2.1 Soil Excavation.....	11
4.2.2 Soil Incineration	11
4.2.3 Thermal Desorption	11
4.3 Institutional & Engineering Controls	11
5.0 Recommended Remedial Action.....	12
5.1 Estimated Timeframe	12
5.2 Estimated Costs	12
5.3 Remedial Action Performance Verification.....	13
5.4 Remedial Action Generated Waste Disposal	13
5.5 Sustainable Remedial Actions Evaluation	13

5.5.1 Energy Use & Potential for Renewable Energy	13
5.5.2 Generation of Air Pollutants	13
5.5.3 Water Use & Impacts to Water Resources.....	14
5.5.4 Future Land Use & Enhancements of Ecosystem.....	14
5.5.5 Reducing, Reusing, and Recycling Materials and Wastes.....	14
5.5.6 Optimizing Sustainable Management Practices During Long-term Care and Stewardship	14
6.0 Excavation Scope	14
6.1 Landfill Approval	14
6.2 Site Preparation	15
6.3 Volume of Soil to be Removed.....	15
6.4 Confirmation Soil Samples	15
6.5 Site Restoration	16
7.0 Conclusions and Recommendations	16
8.0 References	16

LIST OF TABLES

Tables 1a-h	Soil Analytical Results
Tables 2	WAC Chapter NR720 Exceedances

LIST OF FIGURES

Figure 1	Vicinity Map
Figure 2	Detailed Site Map
Figure 3	Detailed Site Map – RR Corridor
Figure 4	Detailed Site Map - Park
Figure 5	Detailed Site Map - Culvert
Figure 6	Elevation Profile A-A'
Figure 7	Soil Contamination – NR720 Individual Exceedances
Figure 8	Soil Contamination – Shallow (1,2,3,4,6,7,8-HpCDD)
Figure 9	Soil Contamination – Deep (1,2,3,4,6,7,8-HpCDD)
Figure 10	Proposed Excavation Boundaries

APPENDIXES

Appendix A	Marathon County Landfill Sampling Requirements
------------	--

REMEDIAL ACTIONS OPTIONS REPORT

RIVERSIDE RAIL CORRIDOR

132 RIVER STREET

WAUSAU, WI 54401

BRRTS #02-37-584785

REI PROJECT #9073

1.0 EXECUTIVE SUMMARY

The subject property is currently and has been utilized as a public park maintained by the City of Wausau. The lands currently contained within the park boundaries were deeded to the city through three (3) deeds dated October 15, 1923, January 18, 1930, and November 13, 1930 with provisions requiring the lands be maintained as a public park for free use of the public.

On September 24, 2019, TRC Solutions submitted results for the Wood Waste Burning Site Investigation related the open WAULECO SNE Corp (BRRTS# 02-37-000006) Environmental Repair Program (ERP) site. Soil samples were collected based on aerial deposition models with samples collected both within and outside of modeled deposition areas. Soil samples collected outside of the area of modeled deposition were located near potential sources of dioxins and furans. Three (3) samples were collected along the former railroad tracks south of Riverside Park which revealed an exceedance for residential direct contact Residual Contaminant Level (RCL).

On November 21, 2019, the City of Wausau received a “Responsible Party” letter for contamination identified within the former rail corridor located at the south end of Riverside Park. The “Responsible Party” letter identified the property owners’ responsibilities in relation to the identified contamination. An ERP site listing was opened for the property on the WDNR’s BRRTS database. On December 31, 2019, REI submitted a Site Investigation Workplan on behalf of the responsible party.

The site investigation consisted of thirty (30) hand sampling locations. Fifty-seven (57) unsaturated soil samples were submitted to a state certified laboratory for analysis.

Laboratory analytical results for seventeen (17) soil samples collected either within the subject property boundaries or surrounding neighborhood, by other consulting firms, as part of other projects submitted to the WDNR were also utilized. Results of the investigation are as follows:

Unconsolidated materials encountered during the site investigation varied depending on location within the subject property. Soils along the former railroad tracks, associated grade, and sloped portion of the property, generally consisted of a brown sandy silt to silty sand with varying amounts of organics, glass fragments, coal clinkers, and metal fragments underlain by a reddish tan fine to coarse grained sand with gravel in a few locations.

Unconsolidated materials encountered in areas of manicured lawn consisted of brown silt with medium grained sand from land surface to depths ranging from nine (9) to twelve (12) inches below land surface. Underlain by a reddish brown to light brown silty clay to sandy clay with varying amounts of gravel.

Unsaturated soil contamination exceeding the Wisconsin Administrative Code (WAC) Chapter NR720 Non-Industrial Direct Contact RCLs was identified in twenty-five (25) of the seventy-four (74) soil samples utilized as part of the site investigation.

Based on the results of the site investigation REI recommended remedial actions be taken to address unsaturated soil contamination exceeding the WAC Chapter NR720 direct contact RCLs.

Five (5) remedial action alternatives were analyzed including:

- Photolysis
- Phytoremediation and Bioremediation
- Soil Excavation
- Soil Incineration
- Thermal Desorption

Additionally, managing residual contamination through the implementation of institutional and/or engineering controls was also analyzed.

Based upon the effectiveness, technical feasibility, cost, and estimated time to site remediation and closure, soil excavation appears to be the preferred remedial action at this site.

2.0 INTRODUCTION

2.1 Purpose of Report

The purpose of the remedial action options report is to evaluate remedial options to address soil contamination identified on the subject property exceeding the Wisconsin Administrative Code (WAC) Chapter NR720 Non-Industrial Direct Contact RCLs.

2.2 General Information

2.2.1 Responsible Party

City of Wausau
Attn: Mr. Eric Lindman, P.E.
407 Grant Street
Wausau, WI 54403

2.2.2 Regulatory Contact

Wisconsin Department of Natural Resources
Remediation and Redevelopment Program
Attn: Mr. Matt Thompson
West Central Regional Office
1300 W. Clairemont Avenue
Eau Claire, WI 54701

2.2.3 Environmental Consulting Firm

REI Engineering, Inc.
Attn: Mr. Matthew C. Michalski
4080 North 20th Avenue
Wausau, Wisconsin 54401
Phone: (715) 675-9784
E-mail: MMichalski@REIengineering.com

2.2.4 Site Name, Address, & Legal Description

Riverside Rail Corridor
132 River Street
Wausau, WI 54401

Facility ID:

737251350

Parcel ID Number:

291-2907-362-0511

Public Land Survey System:

The North Half (N $\frac{1}{2}$) of the Southeast Quarter (SE $\frac{1}{4}$) of Section Thirty-five (35), Township Twenty-nine North (29N), Range Seven East (7E), Marathon County, Wisconsin.

WTM Coordinates:

Easting: 548,852

Northing: 497,486

Latitude & Longitude:

Latitude: 44° 57' 0.8" N

Longitude: 89° 38' 3.3" W

Legal Description:

The subject property was obtained by the City of Wausau through three (3) deeds dated October 15, 1923, January 18, 1930, and November 13, 1930 with provisions requiring the lands be maintained as a public park for free use of the public. Per the City of Wausau, the lands deeded to the city are not platted and no plat or certified survey maps exist for the subject property.

The site location is depicted in Figure 1.

2.3 Site Background

Site background information including current and historic land use, site layout, zoning, previous releases/investigations, current investigation summary, and other data sources utilized are summarized in the previously submitted Site Investigation Reports submitted to the WDNR on September 20, 2021. The current site layout is depicted in Figures 2-4.

2.4 Terminology Utilized

Due to the numerous naming conventions and large number of compounds potentially included as part of the dioxins, furans, and biphenyls families of chemicals the following terminology is commonly utilized and will be included throughout this report. 2,3,7,8-tetrachlorodibenzo-p-dioxin is commonly shortened to 2,3,7,8-TCDD, TCDD, or referenced

simply as dioxin. Dioxin-like compounds (DLCs) is “a description used for compounds that have chemical structures, physico-chemical properties, and toxic responses similar to TCDD (U.S. EPA, 2010).” DLCs include compounds from the dioxins, furan, and biphenyls families of chemicals. Furthermore, dioxin and dioxin-like compounds are commonly referenced simply as dioxins.

2.5 Summary of Site Investigation

The following is a summary of events that have taken place at the site as part of the site investigation:

December 19, 2019	WDNR notified that REI was retained as the environmental consultant for environmental investigation.
December 31, 2019	REI submitted Site Investigation Work Plan to the WDNR.
January 30, 2020	WDNR provides notice to proceed with the scope of services outlined in the December 31, 2019 Site Investigation Work Plan
April 23, 2020	REI personnel collected soil samples from sample locations R1 through R10 and P1 through P5.
July 10, 2020	REI personnel staked the proposed soil sample locations P6 through P16.
August 5, 2020	REI personnel collected soil samples from sample locations P6 through P16, RP-102, and RP-103. Due to a power outage at the laboratory the collected samples exceeded the allowable holding temperature and as such were not analyzed.
September 14, 2020	REI personnel collected soil samples from sample locations P6 through P16, RP-102, and RP-103.
February 24, 2021	WDNR requests additional soil sampling to further define degree and extent.
April 23, 2021	REI personnel staked the proposed soil sample locations P17 through P20.

- May 12, 2021 REI personnel collected soil samples from sample locations P1, P11, P17 through P20, and R11.
- September 20, 2021 REI submitted a Site Investigation Report to the WDNR.
- November 12, 2021 WDNR approved the Site Investigation Report.

Sample locations are depicted in Figures 2-5.

3.0 RESULTS OF SITE INVESTIGATION

3.1 Regional Geology & Hydrogeology

The site is located in the northcentral portion of the Central Wisconsin River Basin. Land surface elevation at the site is approximately $1,180 \pm 10$ feet above MSL according to the U.S.G.S. Wausau East, Wisconsin 7.5-minute quadrangle map. The topography for the region consists of gently rolling till plains slightly modified by stream erosion. The region has many crystalline rock outcroppings that project through the glacial deposits. The nearest surface water is Lake Wausau (WBIC 1437500) located adjacent to the northeast boundary of the subject property. Lake Wausau is a drainage lake and impoundment of the Wisconsin River (WBIC 1179900). Lake Wausau is not listed as an impaired water, but the Wisconsin River is identified as an impaired water due to Mercury and Polychlorinated biphenyls (PCBs).

The geology and water resources of the basin as described by Devaul and Green (1971), indicate that unconsolidated surficial geology generally consists of unpitted outwash consisting of stratified sand and gravel with some clay and silt including alluvium. Major streams generally have branching drainage patterns and there are fewer wetlands or natural lakes compared to outwash deposits to the south and northeast. The bedrock in the area consists of Pre-Cambrian crystalline rock. The depth to bedrock is anticipated to be present at approximately 40 feet bls, based on local Well Construction Reports.

Soil permeabilities for the unpitted outwash material are 2.5 to 5 inches per hour. The average annual precipitation in the area is about 30.9 inches per year. The typical evapotranspiration rate is about 19.7 inches per year. This leaves about 11.2 inches per year for surface runoff and groundwater recharge. Surface water inflow into the basin averages 7.1 inches per year and outflow averages 18 inches per year (Devaul and Green, 1971).

3.2 Site Geology

Unconsolidated materials encountered during the site investigation varied depending on location within the subject property. Soils along the former railroad tracks, associated grade, and sloped portion of the property, generally consisted of a brown sandy silt to silty sand with varying amounts of organics, glass fragments, coal clinkers, and metal fragments underlain by a reddish tan fine to coarse grained sand with gravel in a few locations.

Unconsolidated materials encountered in areas of manicured lawn consisted of brown silt with medium grained sand from land surface to depths ranging from nine (9) to twelve (12) inches below land surface. Underlain by a reddish brown to light brown silty clay to sandy clay with varying amounts of gravel.

Figure 6 depicts the elevation profile southwest to northeast across the area of the identified culvert.

3.3 Site Hydrogeology

Groundwater was not encountered during completion of the site investigation. However, based on data included in the 2020 Annual Groundwater Monitoring Report for the nearby Wauleco/SNE ERP site (BRRTS# 02-37-000006) depth to groundwater in the area of the site investigation ranges from approximately eight (8) to twenty (20) feet below land surface depending on well location and the local groundwater flow is toward the east.

3.4 Soil & Vadose Zone Quality

Soil analytical results are summarized in Tables 1a-1h. In the fall of 2019, the City of Wausau redeveloped the former railroad tracks located between River Street and Thomas Street. As part of the redevelopment the former railroad tracks were removed and approximately the top six (6) inches of soil were removed and transported to the Marathon County Landfill for disposal. Following the soil removal, sheet pilings were installed along Lake Wausau (WBIC 1437500) and the Wisconsin River (WBIC 1179900). Following installation of the sheet pilings, clean fill materials were utilized to adjust the land surface elevation and a paved walking path was installed with landscaping present along the sides. Based on the approximately top six (6) inches of the soil column having been excavated during the site redevelopment, the locations of soil samples *N4-1* (0-6 inches bls), *N4-2* (0-6 inches bls), *N4-3* (0-6 inches bls), *R8* (2-4 inches bls), *R9* (4-5 inches bls), and *R10* (5-6 inches bls) were removed.

Unsaturated soil contamination identified during the site investigation included concentrations exceeding the WAC Chapter NR720 state soil standards for the following:

Concentrations of at least one (1) of the seventeen (17) dioxins exceeding the WAC Chapter NR720 Non-Industrial Direct Contact RCL were identified in twenty-five (25) of the seventy-four (74) soil samples collected from within the park boundaries or nearby neighborhood. Table 2 summarizes individual exceedances by compound.

Compound	WAC Chapter NR720 Non-Industrial Direct Contact RCL Exceedances	Exceedance Count
Dioxins		
2,3,7,8-TCDD	No Exceedances	0
1,2,3,7,8-PeCDD	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls), 117 Riv 1 (4-6 inches bls), 117 Riv 2 (4-6 inches bls), N4-2 (0-6 inches bls)^, N4-3 (0-6 inches bls)^, R1 (3-5 inches bls), P1 (7-9 inches bls), P8 (2-3 and 10-12 inches bls), P10 (2-3 and 10-12 inches bls), P11 (2-3 and 10-12 inches bls), P17 (10-12 inches bls)	16
1,2,3,4,7,8-HxCDD	No Exceedances	0
1,2,3,6,7,8-HxCDD	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls), P1 (7-9 and 22-24 inches bls), P8 (2-3 and 10-12 inches bls), P11 (2-3 and 10-12 inches bls), P17 (10-12 inches bls)	9
1,2,3,7,8,9-HxCDD	Culvert In (4-6 inches bls)	1
1,2,3,7,8,9-HpCDD	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls), 117 Riv 1 (4-6 inches bls), 117 Riv 2 (4-6 inches bls), N4-1 (0-6 inches bls)^, N4-2 (0-6 inches bls)^, N4-3 (0-6 inches bls)^, R1 (3-5 inches bls), P1 (2-3, 7-9, and 22-24 inches bls), P6 (2-3 inches bls), P7 (2-3 inches bls), P8 (2-3 and 10-12 inches bls), P9 (2-3 inches bls), P10 (10-12 inches bls), P11 (2-3 and 10-12 inches bls), P13, (2-3 inches), P17 (2-3 and 10-12 inches bls)	22
OCDD	Culvert In (4-6 inches bls), P11 (2-3 inches bls)	2
Furans		
2,3,7,8-TCDF	No Exceedances	0
1,2,3,7,8-PeCDF	N4-2 (0-6 inches bls)^	1
2,3,4,7,8-PeCDF	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls), 1003 EMT (8-10 inches bls), N4-3 (0-6 inches bls)^, P1 (2-3, 7-9, and 22-24 inches bls), P6 (2-3 inches bls), P8 (2-3 and 10-12 inches bls), P10 (2-3 and 10-12 inches bls), P11 (2-3 and 10-12 inches bls), P17 (10-12 inches bls), P18 (2-3 inches bls)	15
1,2,3,4,7,8-HxCDF	N4-3 (0-6 inches bls)	1
1,2,3,6,7,8-HxCDF	No Exceedances	0
2,3,4,6,7,8-HxCDF	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls), 1003 EMT (8-10 inches bls), P11 (2-3 and 10-12 inches bls)	4
1,2,3,7,8,9-HxCDF	No Exceedances	0
1,2,3,4,6,7,8-HpCDF	Culvert In (4-6 inches bls), P11 (2-3 inches bls)	2
1,2,3,4,7,8,9-HpCDF	No Exceedances	0
OCDF	No Exceedances	0

^ = Sample location excavated during redevelopment

Table 2: WAC Chapter NR720 Non-Industrial Direct Compound RCL exceedances by compound.

The concentration of 1,2,3,4,6,7,8-HpCDD in sample *Culvert In* (4-6 inches bls) also identified an exceedance of the WAC Chapter NR720 Industrial Direct Contact RCL. The concentration of 2,3,4,7,8-PeCDF in samples *Culvert Out* (4-6 inches bls) and *1003 EMT* (8-10 inches bls) also identified exceedances of the WAC Chapter NR720 Industrial Direct Contact RCL.

Three (3) soil samples identified WAC Chapter NR720 Non-Industrial Direct Contact RCL exceedances for the calculated cumulative hazard index including: *Culvert In* (4-6 inches bls), *Culvert Out* (4-6 inches bls), and *N4-3* (0-6 inches bls).

Ten (10) soil samples identified WAC Chapter NR720 Non-Industrial Direct Contact RCL exceedances for the calculated cumulative cancer risk including: *Culvert In* (4-6 inches bls), *Culvert Out* (4-6 inches bls), *N4-3* (0-6 inches bls), *P1* (7-9 inches bls), *P8* (2-3 and 10-12 inches bls), *P10* (2-3 inches bls), *P11* (2-3 and 10-12 inches bls), and *P17* (10-12 inches bls).

Please note, 2,3,7,8-TCDD is the only compound analyzed with a WAC Chapter NR720 Groundwater Pathway Protection RCL. Zero (0) of the seventy-four (74) soil samples collected from within the park boundaries or nearby neighborhood identified an exceedance of the WAC Chapter NR720 Groundwater Pathway Protection RCL.

A soil isoconcentration map depicting the estimated extent of unsaturated soil contamination exceeding the WAC Chapter NR720 state soil standards for all sampled parameters is included in Figure 7. Soil isoconcentration and “heat” maps depicted 1,2,3,4,6,7,8-HpCDD concentrations are included in Figures 8 and 9. Please note, the soil isoconcentrations and “heat” maps depict contamination extending southwest beyond the property boundaries of the subject property. However due to the limited and significantly further spaced data points in this direction, this depiction is related to the software program attempting to correlate the further spaced data points. As a result, the accuracy of these maps is best limited to the subject property in the areas of higher density data points.

4.0 REMEDIAL ACTION OPTIONS

4.1 In-Situ Remedial Options

4.1.1 Photolysis

Dioxins can, under the proper conditions, undergo photolysis by sunlight. The process is generally cost effective and less destructive compared to other remedial options for

dioxins. An organic low-toxicity solvent, such as isooctane, hexane, cyclohexane, etc., is sprayed onto the surface of impacted soils and allowed to photodegrade under sunlight. Research studies have identified convective upward movement of dioxins as the volatile organic solvents evaporate as the major transport mechanism moving dioxins to the surface for ongoing photolysis.

The majority of contamination at the site is limited to shallow soils ideal for photolysis. Soil sampling and laboratory analysis would be required to ensure dioxin concentrations in the treated soils decrease below the WDNR WAC Chapter NR720 Groundwater Protection Pathway and Non-Industrial Direct Contact RCLs following each application event. Additionally, multiple applications maybe required to decrease soil concentrations below the WDNR WAC Chapter NR720 Groundwater Protection Pathway and Non-Industrial Direct Contact RCLs. Prior WDNR approval would likely be required prior to the application of any solvents as part of the site remediation and depending on the chosen solvent may require specialized application permitting and/or licensing.

4.1.2 Phytoremediation and Bioremediation

Phytoremediation and Bioremediation utilizes living plants, bacteria, fungi, rhamnolipids, and other microbiota to extract, destroy, or lower the bioavailability of contaminants in soil, air, and water. While the cost of phytoremediation can be significantly lower than traditional treatment methods, the time scale for completed remediation below the WAC NR720 Non-Industrial Direct Contact RCLs would likely be measured in years. Additionally, the applicability and effectiveness of phytoremediation and bioremediation for the treatment of dioxins contamination at field scale are still being assessment.

The majority of contamination at the site is limited to shallow soils which may allow for a variety of different phytoremediation or bioremediation options. Soil sampling and laboratory analysis would need to be completed during the treatment process to ensure dioxin concentrations decrease below the WDNR WAC Chapter NR720 Groundwater Protection Pathway and Non-Industrial Direct Contact RCLs. Additionally, if phytoremediation is used with plants that extract and accumulate dioxins, the resulting biomass will need to be tested and may require appropriate disposal such as incineration or landfilling.

4.2 Ex-Situ Remedial Options

The effectiveness of the ex-situ remedial options are all the same as the impacted soils will be excavated from the site. Soil sampling and laboratory analysis will be required to verify that soil contamination exceeding the WDNR WAC Chapter NR720 Groundwater Protection Pathway and Non-Industrial Direct Contact RCLs was removed. Prior to the excavation the existing vegetation and railroad tracks located within the area of impacted soils would need to be removed. Following completion, the excavation would be backfilled with clean soils. Due to the steep slope and concentration of surface runoff through the culvert at the top of the hill, significant work will be required to prevent destabilization of the slope while new vegetation is established. Hauling of impacted soils would need to be completed by a licensed solid waste hauler to the final treatment or disposal location.

4.2.1 Soil Excavation

Soil excavation consists of the removal and transport of impacted soils to an off-site facility for disposal within the facility.

4.2.2 Soil Incineration

Soil incineration consists of heating soils to temperatures greater than 1,200°C and is considered the most effective way of destroying dioxins. Generally, impacted soils would be excavated and transported to an incineration facility for treatment. There are multiple methods of incineration available and as with thermal desorption, incineration is a highly energy intensive process.

4.2.3 Thermal Desorption

Thermal desorption consists of heating soils to temperatures lower than incineration to volatilize dioxins to the soil and organic particles of the soil. Generally, impacted soils would be excavated and transported to a facility for treatment. Thermal desorption is an energy intensive process.

4.3 Institutional & Engineering Controls

Institutional and/or engineering controls generally consist of physical barriers to prevent direct human contact with impacted soils including but not limited to fencing, capping or impacted soils, land use changes, etc. Generally, if engineering controls are utilized, annual inspections are required at a minimum to ensure the controls are operating as intended.

Institutional and/or engineering controls will not result in the removal, destruction, or decrease of dioxin concentrations. The site would have continuing obligations associated with residual contamination and any required maintenance inspection requirements.

5.0 RECOMMENDED REMEDIAL ACTION

Due to the limited area of contamination at this site, both horizontal and vertical; site location and topography; and current surface cover/vegetation, REI recommends soil excavation as the remedial option for this site. While other methods would allow for the destruction or removal of dioxins from the impacted soils, the volume of soil remediated for reuse would be limited in comparison to other sites. Additionally, both soil incineration and thermal desorption would require soils to be excavated from the site and transported to an offsite treatment location. Due to the site topography, in-situ remedial options are not likely feasible at this site as the current site vegetation, which is likely acting to stabilize the slope from significant erosion, would need to be removed. The timeframe of both photolysis, phytoremediation, and bioremediation is open ended, but would likely be measured in years and would require engineering controls such as fencing around the area to prevent direct human contact during the remediation period.

5.1 Estimated Timeframe

The timeframe for completion of the remedial action will depend mainly on bidding period and selected contractor availability. Trees and railroad tracks located within the remedial area will need to be removed prior to commencement of the excavation. Once the excavation area is prepared, the excavation should be completed over a period of two (2) to five (5) days depending on turn times for hauling of impacted soils for disposal and clean fill to the site.

5.2 Estimated Costs

REI understands the City of Wausau intends to bid out the remedial action scope of work. As costs can vary between excavators and the proposed excavation area will require site specific erosion control. The total excavation is expected to result in the removal of approximately 810 to 910 cubic yards of impacted soil. Disposal cost for landfiling of this material is \$34.17/ton (at the Marathon County Landfill), bringing the total disposal cost to approximately \$44,300 – \$50,000. Laboratory analytical costs for waste determination samples is expected to cost approximately \$3,000 - \$4,000. Confirmation soil sampling laboratory analysis are expected to cost approximately \$15,700 - \$31,300 depending on the total number of confirmation

samples collected. Cost for consultant oversight, report preparation, and data interpretation will vary depending on actual time onsite, number of samples collected, and waste determination analytical results, but is expected to cost approximately \$12,000 - \$17,000.

5.3 Remedial Action Performance Verification

Confirmations soil samples will also need to be collected to verify the effectiveness of the excavation. Sidewall samples will be collected to verify the lateral extend of contamination as effectively been remediated or remediated to the property boundaries and base samples will be collected in location without existing vertical definition to verify that soil contamination exceeding the Non-Industrial Direct Contact RCLs has been removed from the direct contact zone.

As field screening methods for dioxins are extremely limited, REI recommends that lateral confirmations samples be collected prior to the completion of the soil excavation. Collection of the samples prior to the completion of the excavation will also limit the possibility of contamination remaining following completion of the initial excavation.

5.4 Remedial Action Generated Waste Disposal

Soils excavated as part of the site remediation will be transported to the Marathon County Landfill for disposal.

5.5 Sustainable Remedial Actions Evaluation

5.5.1 Energy Use & Potential for Renewable Energy

Energy use as part of the selected remedial action will consist mainly of petroleum compounds used to operate excavation and transport equipment. This energy use is expected to be similar for excavation actives needed for other ex-situ remedial options previously identified. Renewable energy options for this project are limited to biodiesel, but the use of this fuel will be dependent on the selected contractor for excavation activities.

5.5.2 Generation of Air Pollutants

Completion of the soil excavation will require the use of equipment powered by internal combustion engines which are known sources of air pollutants. However,

there are federal requirements for emission controls depending on the age and size of equipment used.

5.5.3 Water Use & Impacts to Water Resources

Significant water usage is not expected as part of the remediation of this site. Additionally, impacts to water resources are not expected during or after completion of the remedial action. Erosion control best management practices (BMP's) shall be installed prior to any land disturbing activities and shall remain in place until the site is deemed restored by the WDNR. During site remediation, the excavating contractor shall assume full responsibility for inspection and maintenance of the erosion control devices.

5.5.4 Future Land Use & Enhancements of Ecosystem

REI's goal is to minimize disruption of the local ecosystem to areas with identified impacts. Collection of confirmation samples prior to the completion of the soil excavation will allow for further delineation of the area to be excavated.

5.5.5 Reducing, Reusing, and Recycling Materials and Wastes

Impacted soils excavated from the subject property will be transported to the Marathon County Landfill for disposal. No other significant waste streams are expected to be generated during the remedial actions. If the culvert is reinstalled following the excavation, recycled concrete from non-contaminated sites could be utilized to armor the outfall location and stabilize the backfilled slope if needed.

5.5.6 Optimizing Sustainable Management Practices During Long-term Care and Stewardship

After completion of the excavation long-term care and/or stewardship should not be required except for any maintenance or intervention required to reestablish native vegetation on the slope.

6.0 EXCAVATION SCOPE

6.1 Landfill Approval

Prior to hauling impacted soils for disposal, approval will be required from the landfill. For the Marathon County Landfill this includes providing all requested analytical results required

by the landfill. For material impacted with Dioxins, the Marathon County Landfill will need analytical results for all parameters listed under Protocol 1, which is included as Appendix A. Due to the volume of soil to be removed from the site, three (3) to four (4) composite samples will need to be collected from the proposed excavation area for the required parameters. The additional sampling for disposal approval will need to be completed prior to any material being transported to the Marathon County Landfill. Please note, if the material does not pass the Protocol 1 requirements, the landfill will not be able to accept the material as a solid waste. This would require the material to be shipped to a hazardous waste landfill, which could accept the material, or further examine other remedial options.

6.2 Site Preparation

The majority of the proposed excavation area consists of thick vegetation including bushes and trees. Additionally, a portion of the proposed excavation area has abandoned railroad tracks present. Prior to excavation, the area will need significant vegetation removed along with the railroad tracks contained within the excavation area. However, trees and shrubs should be cut off at grade as the stumps and root mass should be excavated for disposal with the surrounding impacted soils due to entrainment of soils within the root mass.

6.3 Volume of Soil to be Removed

Based on laboratory analytical data the proposed excavation consists of an irregularly shaped area depicted in Figure 10. In total an area of approximately 12,950 square feet is proposed to be excavated to a depth of one (1) foot below land surface. Two (2) areas within the initial excavation area will also need to be extended vertically an additional two (2) to three (3) feet to a total depth of three (3) to four (4) feet bls. These areas are depicted on Figure 10 and measures approximately 2,960 square feet. Excavation to four (4) feet bls would remove the entire direct contact zone in these locations.

6.4 Confirmation Soil Samples

REI is estimating between twenty (20) to thirty (30) confirmation soil samples will be collected to verify the effectiveness of the excavation. REI is proposing that approximately ten (10) confirmation soil samples be collected prior to the start of excavation activities to ensure that the lateral extent of soil contamination is completely contained within the proposed soil excavation in all directions except the southwest due to property boundaries. These samples

can be collected during the same sampling event as the waste determination samples required prior to disposing of impacted materials at the Marathon County Landfill.

6.5 Site Restoration

Due to the slope of the land surface in a large portion of the excavation area, erosion control measures will need to be implemented by the excavation contractor to ensure any backfilled material does not migrate down slope due to rainfall events until vegetation is able to be reestablished on the slope. This may include fast growing grasses, bushes, or trees. Additionally, if the culvert located beneath the railroad tracks is to be replaced, riprap or armoring would be advisable to prevent erosion due to the channeling effects of the culvert.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon the effectiveness, technical feasibility, cost, and estimated time to site remediation and closure, soil excavation appears to be the preferred remedial action at this site.

8.0 REFERENCES

- ATSDR. (1999). *Chlorinated Dibenzo-p-Dioxins (CDDs)*. U.S. Department of Health and Human Services, Division of Toxicology and Environmental Medicine. Atlanta: Agency for Toxic Substances and Disease Registry.
- ATSDR. (2006). *ToxFAQs: CARBS/Chemical Agent Briefing Sheet - Dioxins*. U.S. Department of Health and Human Services, Division of Toxicology and Environmental Medicine. Atlanta: Agency for Toxic Substances and Disease Registry.
- Devaul, R.W., and Green, J.H. (1971). *Water Resources of Wisconsin – Central Wisconsin River Basin*: U.S. Geological Survey Hydrologic Investigations (Atlas HA-367). Washington DC: U.S. Geological Survey.
- U.S. Congress, Office of Technology Assessment (1991). *Dioxin Treatment Technologies: Background Paper (OTA-BP-O-93)*. Washington, DC: U.S. Government Printing Office.
- U.S. EPA. (1998). *Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites*. Office of Solid Waste and Emergency Response. Washington, D.C.: United States Environmental Protection Agency.

- U.S. EPA. (2008). *Frequently Asked Questions on the Update to the ATSDR Policy Guideline for Dioxins and Dioxin-Like Compounds in Residential Soil*. Office of Solid Waste and Emergency Response. Washington, D.C.: United States Environmental Protection Agency.
- U.S. EPA. (2010). *Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-like Compounds*. Risk Assessment Forum. Washington, DC: United States Environmental Protection Agency.
- U.S. EPA: Office of Superfund Remediation and Technology Innovation (2010). *Reference Guide to Non-combustion Technologies for Remediation of Persistent Organic Pollutants in Soil, Second Edition (EPA 542-R-09-007)*. Cincinnati, OH: U.S. EPA/National Service Center for Environmental Publications.
- Wisconsin Department of Natural Resources. (n.d.). Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web. Retrieved from <https://dnr.wi.gov/botw/SetUpBasicSearchForm.do>
- Wisconsin Department of Natural Resources. (n.d.). RR Sites Map. Retrieved from <https://dnrmaps.wi.gov/H5/?viewer=rrsites>
- Wisconsin Department of Natural Resources. (n.d.). Surface Water Data Viewer. Retrieved from <https://dnrmaps.wi.gov/H5/?Viewer=SWDV>
- Wisconsin Department of Natural Resources. (n.d.). Well Driller Viewer. Retrieved from <https://dnrmaps.wi.gov/H5/?viewer=Well Driller Viewer>

TABLES



Table 1a
Soil Analytical Results
Riverside Rail Corridor
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

Collected By-->						CWE, Inc.											
Date-->						6/13/2006	6/13/2006	6/13/2006	12/8/2008	12/8/2008	12/8/2008	12/8/2008	12/8/2008	12/8/2008	12/8/2008	12/8/2008	12/8/2008
Sample-->						Culv. In.	Culv. Out	122E	1003 Emt	130 Riv	141 Riv	120 Riv	117 Riv 1	Fern	117 Riv 2	Oak	Weston
Sample Depth--(Inches)-->						4-6 ²	4-6 ²	4-6 ²	8-10	4-6	6-8	4-6	4-6	4-6	4-6	4-6	4-6
Percent Moisture (%)-->						-	-	-	-	-	-	-	-	-	-	-	-
Saturated (S) vs Unsaturated (U)-->						U	U	U	U	U	U	U	U	U	U	U	U
Dioxin Congeners	CAS Number	Units	Non-Industrial Not-to-Exceed DC RCL	Industrial Not-to-Exceed DC RCL	Groundwater Pathway Protection RCL												
2,3,7,8-TCDD	1746-01-6	ng/kg	4.82	21.8	30.0	2.1	<2.0	<0.99	<1	<1.8	<1	<1	<1	<1	<1	<1	<1
1,2,3,7,8-PeCDD	36088-22-9	ng/kg	4.93	22.3	--	15	11	<4.9	<5	<5	<5	<5	5.1	<5	5.6	<5	<5
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	--	48	23	6.3	<5	<5	<5	<5	12	<5	15	<5	<5
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	--	140	83	17	15	6.0	<5	<5	41	5.6	44	<5	<5
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	--	60	36	11	6.8	5.5	<5	<5	25	<5	27	<5	<5
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	--	2,400	1,400	270	260	95	87	120	1,100	170	1,100	30	<5
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	--	17,000	9,300	1,600	3,000	700	630	830	7,600	1,200	8,200	270	24
Total TCDD	--	ng/kg	--	--	--	10	14	6.7	7.9	<1.8	3.3	5.7	15	3.5	22	<1	<1
Total PeCDD	--	ng/kg	--	--	--	84	71	<4.9	<5	<5	<5	<5	40	<5	48	<5	<5
Total HxCDD	--	ng/kg	--	--	--	780	570	110	85	58	25	34	310	34	360	<5	<5
Total HpCDD	--	ng/kg	--	--	--	4,300	2,800	460	500	190	170	230	2,000	300	2,000	58	<5
Furan Congeners																	
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	--	6.7	7.3	1.7 [†]	2.0	<3.9	<1	<1	3.5	1.4	3.7	<1	<1
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	--	13	8.7	<4.9	<5	<5	<5	<5	<5	<5	<5	<5	<5
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	--	45	80	5.7	76	<5	<5	<5	16	<5	16	<5	<5
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	--	32	35	7.3	24	<5	<5	<5	37	<5	12	<5	<5
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	--	34	33	5.4	26	<5	<5	<5	19	5.9	17	<5	<5
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	--	59	75	9.0	100	<5	<5	<5	29	<5	23	<5	<5
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	--	14	11	<4.9	6.4	<5	<5	<5	<5	<5	5.0	<5	<5
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	--	550	480	94	160	43	27	42	350	83	350	19	<5
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	--	40	31	8.5	13	<5	<5	<5	20	<5	20	<5	<5
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	--	950	710	130	170	49	36	53	520	170	550	34	<5
Total TCDF	--	ng/kg	--	--	--	110	190	43	140	4.8	18	24	110	16	110	12	5.6
Total PeCDF	--	ng/kg	--	--	--	550	880	69	880	49	28	33	260	12	250	45	<5
Total HxCDF	--	ng/kg	--	--	--	990	1,200	150	1,600	64	40	52	580	60	560	27	<5
Total HpCDF	--	ng/kg	--	--	--	1,400	710	250	540	87	51	78	870	190	850	38	<5
Individual Exceedances (DC)			1	1	--	8	5	0	2	0	0	0	2	0	2	0	0
Cumulative Hazard Index (DC)			1.0	1.0	--	1.6315	1.4627	0.1804	0.8558	0.0366	0.0105	0.0151	0.6551	0.0519	0.6298	0.0059	0.0001
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	--	2.2E-05	1.8E-05	2.4E-06	9.4E-06	5.6E-07	2.8E-07	3.9E-07	8.9E-06	8.7E-07	8.7E-06	1.2E-07	1.5E-09
Total 2,3,7,8-TCDD Equivalence ¹	--	ng/kg	4.82	21.8	--	106	88	12	46	2.8	1.3	1.9	44	4.2	42	0.58	0.0072

Notes:

NR 720 Standards Obtained From WDNR RR Program's Soil RCL Spreadsheet
This site is assessed as Non-Industrial
RCL = Residual Contaminant Level
DC = Direct Contact
ng/kg = Parts Per Trillion (ppt)
< = Concentration Below Laboratory Detection Limit
- = Not Sampled/Collected
- - = No Standard/Not Applicable
TEQ = Toxicity Equivalent Calculations

¹ = TEQ values calculated using the U.S. EPA 2007 values.

² = Depth is approximate. CWE letter notes sample collection from base of A horizon, generally 4 to 6 inches below land surface.

Laboratory Qualifiers and Notes:

[†] = Estimated maximum concentration

TCDD: Tetrachlorodibenzo-p-dioxin
PeCDD: Pentachlorodibenzo-p-dioxin
HxCDD: Hexachlorodibenzo-p-dioxin
HPCDD: Heptachlorodibenzo-p-dioxin
OCDD: Octachlorodibenzo-p-dioxin
TCDF: Tetrachlorodibenzofuran
PeCDF: Pentachlorodibenzofuran
HxCDF: Hexachlorodibenzofuran
HPCDF: Heptachlorodibenzofuran
OCDF: Octachlorodibenzofuran

<i>Italic</i>	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
<u>Underlined</u>	= Exceeds NR720 Industrial Not-To-Exceed DC RCL

Table 1b
Soil Analytical Results
Riverside Rail Corridor
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

Collected By-->						Sand Creek Consulting (SCC)				TRC				SCC		REI	SCC	REI
Date-->						1/9/2018	1/9/2018	1/9/2018	1/9/2018	8/14/2019	8/14/2019	8/14/2019	8/14/2019	11/5/2019	11/5/2019	9/14/2020	11/5/2019	9/14/2020
Sample-->						B-101	B-102	B-103	B-104	N4-1*	N4-2*	N4-3*	N7-1	RP-101	RP-102	RP-102	RP-103	RP-103
Sample Depth--(Inches)-->						8	8	8	8	0-6	0-6	0-6	0-6	10	8	10-12	10	12-14
Percent Moisture (%)-->						12.0	15.1	16.8	9.9	8.7	12.0	8.9	8.2	26.7	24.6	9.9	22.6	17.7
Saturated (S) vs Unsaturated (U)-->						U	U	U	U	U	U	U	U	U	U	U	U	U
Dioxin Congeners	CAS Number	Units	Non-Industrial Not-to-Exceed DC RCL	Industrial Not-to-Exceed DC RCL	Groundwater Pathway Protection RCL													
2,3,7,8-TCDD	1746-01-6	ng/kg	4.82	21.8	30.0	<0.28	<0.41	<0.23	<0.23	0.80 ^J	0.85 ^J	1.0	0.26 ^J	<2.1 ^D	<0.27	<0.28	<2.5	<0.36
1,2,3,7,8-PeCDD	36088-22-9	ng/kg	4.93	22.3	--	2.3 ^J	0.74 ^{I,J,EMPC}	0.48 ^{I,J,EMPC}	0.56 ^J	2.5 ^J	5.2	5.9	0.91 ^J	<1.5 ^D	1.9 ^J	0.44 ^{I,J,EMPC}	<0.55	<0.59
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	--	3.1 ^J	1.1 ^J	0.55 ^{I,J,EMPC}	0.69 ^J	6.3	7.8 ^{J,DN2}	9.0 ^{J,DN2}	2.2 ^J	<2.9 ^D	4.8 ^J	1.1 ^{I,J,EMPC}	1.4 ^J	<1.2
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	--	15	4.2 ^J	2.2 ^J	3.6 ^J	24	39 ^{DN2}	44 ^{DN2}	6.1	6.0 ^{J,D}	21	5.8	4.7	<1.4
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	--	7.6	2.4 ^J	1.4 ^J	1.9 ^J	12	15 ^{J,DN2}	15 ^{J,DN2}	3.4 ^J	3.4 ^{J,D}	8.9	3.0 ^J	2.0 ^{I,J,EMPC}	<1.1
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	--	290	85	50	81	530	820 ^{DN2}	930 ^{DN2}	150	95 ^D	380	110	77	9.4
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	--	2,000	570	380	650	5,100	7,300 ^{DN2}	9,200 ^{DN2}	1,300	610 ^{I,J,D}	3,000	900	520	63
Total TCDD	--	ng/kg	--	--	--	10	2.5 ^B	1.7 ^{B,J}	1.1 ^{B,J}	11	18	12	21	<2.1 ^D	2.0	1.1	4.7	0.40 ^J
Total PeCDD	--	ng/kg	--	--	--	23	7.1	2.6	3.3 ^J	22	25	33	50	<1.5 ^D	9.6	2.2 ^J	7.2	<0.59
Total HxCDD	--	ng/kg	--	--	--	120	39	19	24	170	260 ^{DN2}	310 ^{DN2}	7.6	45 ^D	120	40	35	<1.1
Total HpCDD	--	ng/kg	--	--	--	560	160	99	150	1,000	1,600 ^{DN2}	1,900 ^{DN2}	330	180 ^D	710	210	140	9.4
Furan Congeners																		
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	--	2.9 ^V	0.87 ^J	<0.46	<0.26	2.1 ^V	4.4 ^C	2.4 ^V	0.55 ^{I,J,EMPC}	<2.4 ^D	1.4 ^C	<0.61	1.9 ^V	<0.44
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	--	2.0 ^J	0.70 ^J	<0.52	0.42 ^J	2.1 ^J	270 ^{P,EMPC}	3.4 ^J	0.69 ^J	<1.5 ^D	1.8 ^J	<0.46	<0.29	<0.73
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	--	9.8	2.0 ^J	1.1 ^J	1.2 ^J	11	14	61	4.1 ^J	<1.7 ^D	14	5.3 ^{I,J,EMPC}	12	<0.44
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	--	5.8	2.0 ^{I,J,EMPC}	1.3 ^J	1.5 ^J	8.2	16 ^{J,DN2}	75 ^{P,DN2,EMPC}	3.6 ^{P,J,EMPC}	4.8 ^{J,D}	6.3	<0.73	2.1 ^J	<1.3
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	--	6.7	1.8 ^J	0.99 ^J	1.2 ^J	8.0	20 ^{J,DN2}	28 ^{P,DN2,EMPC}	2.7 ^J	3.8 ^{J,D}	14 ^{P,EMPC}	11 ^{P,EMPC}	6.2 ^{P,EMPC}	<1.2
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	--	11 ^{P,EMPC}	2.7 ^J	1.2 ^J	1.6 ^J	6.5	16 ^{J,DN2}	30 ^{DN2}	2.4 ^J	3.9 ^{J,D}	6.2	7.7	5.2	<1.3
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	--	1.3 ^J	0.36 ^J	<0.12	<0.20	3.0 ^J	6.7 ^{J,DN2}	6.1 ^{J,DN2}	0.8 ^J	2.0 ^{J,D,EMPC}	2.9 ^J	<1.1	1.5 ^{I,J,EMPC}	<1.2
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	--	120	30	17	26	150	250 ^{DN2}	380 ^{DN2}	46	37 ^D	99	40	45	3.2 ^J
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	--	4.0 ^J	0.96 ^{I,J,EMPC}	0.81 ^J	1.0 ^J	9.4	14 ^{J,DN2}	20 ^{J,DN2}	2.3 ^J	2.3 ^{I,J,D,EMPC}	6.3	2.4 ^{I,J,EMPC}	2.4 ^J	<1.7
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	--	190	36	19	42	320	490 ^{DN2}	620 ^{DN2}	71	49 ^{I,J,D,EMPC}	170	56	68	6.2 ^J
Total TCDF	--	ng/kg	--	--	--	69	23	7.9	6.6	58	99	140 ^E	21	<2.4 ^D	41	14	35	<0.44
Total PeCDF	--	ng/kg	--	--	--	120	36	0.38	18	180	480	760	50	130 ^D	260	120	190	2.6 ^J
Total HxCDF	--	ng/kg	--	--	--	150	37	24	27	200	430 ^{DN2}	1,200 ^{DN2}	87	110 ^D	280	120	210	<1.2
Total HpCDF	--	ng/kg	--	--	--	140	46	34	59	380	610 ^{DN2}	1,100 ^{DN2}	100	91 ^D	250	90	110	3.2 ^J
Individual Exceedances (DC)			1	1	--	0	0	0	0	1	3	4	0	0	0	0	0	0
Cumulative Hazard Index (DC)			1.0	1.0	--	0.2495	0.0676	0.0352	0.0493	0.3379	0.713	1.0547	0.1096	0.0596	0.2933	0.1112	0.1333	0.0012
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	--	3.2E-06	8.7E-07	4.6E-07	6.7E-07	4.5E-06	9.0E-06	1.3E-05	1.4E-06	8.0E-07	3.8E-06	1.4E-06	1.5E-06	3.0E-08
Total 2,3,7,8-TCDD Equivalence ¹	--	ng/kg	4.82	21.8	--	15	4.2	2.4	3.3	22	44	62	7.0	3.9	19	6.7	7.5	0.15

Notes:

NR 720 Standards Obtained From WDNR RR Program's Soil RCL Spreadsheet

This site is assessed as Non-Industrial

RCL = Residual Contaminant Level

DC = Direct Contact

ng/kg = Parts Per Trillion (ppt)

< = Concentration Below Laboratory Detection Limit

-- = Not Sampled/Collected

-- = No Standard/Not Applicable

TEQ = Toxicity Equivalent Calculations

¹ = TEQ values calculated using the U.S. EPA 2007 values.

* = Excavated during redevelopment

TCDD: Tetrachlorodibenzo-p-dioxin

PeCDD: Pentachlorodibenzo-p-dioxin

HxCDD: Hexachlorodibenzo-p-dioxin

HPCDD: Heptachlorodibenzo-p-dioxin

OCDD: Octachlorodibenzo-p-dioxin

TCDF: Tetrachlorodibenzofuran

PeCDF: Pentachlorodibenzofuran

HxCDF: Hexachlorodibenzofuran

HPCDF: Heptachlorodibenzofuran

OCDF: Octachlorodibenzofuran

Laboratory Qualifiers and Notes:

^J = Estimated Value

EMPC = Estimated Maximum Possible Concentration

^P = PCDE Interference

^I = Interference Present

^V = Results verified by confirmation analysis

^C = Results obtained from confirmation analysis

^D = Results obtained from analysis of diluted sample

^{DN2} = Results obtained from diluted sample

^E = Exceeds calibration Range

^B = Less than 10x higher than method blank level

Results reported on a dry weight basis and are valid to no more than 2 significant figures

<i>Italic</i>	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
<u>Underlined</u>	= Exceeds NR720 Industrial Not-To-Exceed DC RCL

Table 1c
Soil Analytical Results
Riverside Rail Corridor
132 River Street
Wausau, WI 54401
BRRS# 02-37-584785

Collected By-->						Arcadis						
Date-->						9/26/2020	9/26/2020	9/26/2020	9/26/2020	9/26/2020	9/30/2020	9/30/2020
Sample-->						SB-01 (0-4)	SB-01 (28-31)	Dup-01	SB-03 (0-4)	SB-03 (24-27.5)	SB-05 (0-4)	SB-05 (29-31.5)
Sample Depth--(Inches)-->						0-4	28-31	28-31	0-4	24-27.5	0-4	29-31.5
Percent Moisture (%)-->												
Saturated (S) vs Unsaturated (U)-->						U	U	U	U	U	U	U
Dioxin Congeners	CAS Number	Units	Non-Industrial Not-to-Exceed DC RCL	Industrial Not-to-Exceed DC RCL	Groundwater Pathway Protection RCL							
2,3,7,8-TCDD	1746-01-6	ng/kg	4.82	21.8	30.0	<0.21	<0.15	<0.15	<0.18	<0.13	0.35 ^{1, EMPC}	<0.038
1,2,3,7,8-PeCDD	36088-22-9	ng/kg	4.93	22.3	--	<0.15	<0.0097	<0.11	<0.14	<0.10	0.99 ^{1, EMPC}	<0.047
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	--	0.85 ^{1, B}	0.27 ^{1, B}	0.29 ^{1, B, EMPC}	0.46 ^{1, B}	<0.033	2.7 ¹	0.20 ^{1, EMPC}
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	--	1.4 ¹	<0.034	0.18 ^{1, EMPC}	1.9 ^{1, B}	<0.042	9.3	<0.048
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	--	0.91 ^{1, B}	<0.028	<0.030	0.87 ^{1, B}	0.082 ^{1, B}	5.2 ¹	<0.044
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	--	21 ^B	0.46 ^{1, B}	0.95 ^{1, B, EMPC}	67 ^B	3.5 ^{1, B}	230 ^B	0.11 ^{1, B}
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	--	130 ^B	2.7 ^{1, B}	6.7 ^{1, B, EMPC}	850 ^B	41 ^B	1,800 ^B	1.3 ^{1, B}
Total TCDD	--	ng/kg	--	--	--	2.2	<0.15	<0.15	<0.18	<0.13	13 ^{EMPC}	<0.038
Total PeCDD	--	ng/kg	--	--	--	<0.26	<0.0097	<0.11	<0.14	<0.10	21 ^{EMPC}	<0.047
Total HxCDD	--	ng/kg	--	--	--	7.2 ^B	0.27 ^{1, B}	0.46 ^{1, B, EMPC}	12 ^{B, EMPC}	0.43 ^{1, B, EMPC}	68	0.20 ^{1, EMPC}
Total HpCDD	--	ng/kg	--	--	--	40 ^B	0.98 ^{1, B}	2.1 ^{1, B, EMPC}	360 ^B	21 ^B	560 ^B	0.28 ^{1, B, EMPC}
Furan Congeners												
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	--	0.6 ¹	<0.071	<0.084	<0.11	<0.063	0.78 ^{1, B}	0.066 ^{1, B}
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	--	<0.18	<0.049	<0.060	<0.094	<0.050	<0.58	0.072 ^{1, EMPC}
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	--	0.52 ^{1, EMPC}	<0.053	<0.071	<0.10	<0.059	1.6 ¹	<0.038
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	--	0.85 ¹	<0.041	0.2 ¹	0.32 ^{1, EMPC}	<0.055	4.4 ¹	<0.070
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	--	0.89 ¹	<0.036	0.23 ^{1, EMPC}	0.33 ¹	<0.049	3.7 ¹	<0.062
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	--	0.82 ^{1, EMPC}	<0.030	0.20 ¹	0.33 ¹	<0.041	3.0 ¹	<0.037
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	--	0.44 ¹	<0.028	0.29 ¹	<0.13	<0.042	<0.41	0.049 ¹
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	--	6.5 ^B	0.18 ^{1, B, EMPC}	0.43 ^{1, B}	8.2 ^B	0.39 ^{1, B, EMPC}	69 ^B	0.18 ^{1, B, EMPC}
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	--	0.71 ^{1, B, EMPC}	<0.022	0.21 ^{1, B, EMPC}	0.66 ^{1, B}	<0.030	3.1 ¹	<0.035
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	--	13 ^B	0.79 ^{1, B}	1.1 ^{1, B}	40 ^B	1.8 ^{1, B, EMPC}	140 ^B	0.52 ^{1, B, EMPC}
Total TCDF	--	ng/kg	--	--	--	5.3 ^{EMPC}	<0.071	<0.084	<0.11	<0.068	23 ^{EMPC}	0.11 ^{1, B, EMPC}
Total PeCDF	--	ng/kg	--	--	--	17 ^{EMPC}	<0.053	<0.21	1.0 ^{1, EMPC}	<0.17	69	0.16 ^{1, EMPC}
Total HxCDF	--	ng/kg	--	--	--	16 ^{EMPC}	<0.041	0.91 ^{1, EMPC}	7.9 ^{EMPC}	0.21 ^{1, EMPC}	96	<0.051
Total HpCDF	--	ng/kg	--	--	--	17 ^{B, EMPC}	0.32 ^{1, B, EMPC}	0.98 ^{1, B, EMPC}	31 ^B	1.3 ^{1, B, EMPC}	180 ^B	0.18 ^{1, B, EMPC}
Individual Exceedances (DC)			1	1	--	-	-	-	-	-	-	-
Cumulative Hazard Index (DC)			1.0	1.0	--	-	-	-	-	-	-	-
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	--	-	-	-	-	-	-	-
Total 2,3,7,8-TCDD Equivalence ¹	--	ng/kg	4.82	21.8	--	1.2	0.034	0.16	1.4	0.060	8.3	0.037

Notes:
NR 720 Standards Obtained From WDNR RR Program's Soil RCL Spreadsheet
This site is assessed as Non-Industrial
RCL = Residual Contaminant Level
DC = Direct Contact
ng/kg = Parts Per Trillion (ppt)
< = Concentration Below Laboratory Detection Limit
- = Not Sampled/Collected
-- = No Standard/Not Applicable
TEQ = Toxicity Equivalent Calculations
¹ = TEQ values calculated using the U.S. EPA 2007 values.

TCDD: Tetrachlorodibenzo-p-dioxin
PeCDD: Pentachlorodibenzo-p-dioxin
HxCDD: Hexachlorodibenzo-p-dioxin
HPCDD: Heptachlorodibenzo-p-dioxin
OCDD: Octachlorodibenzo-p-dioxin
TCDF: Tetrachlorodibenzofuran
PeCDF: Pentachlorodibenzofuran
HxCDF: Hexachlorodibenzofuran
HPCDF: Heptachlorodibenzofuran
OCDF: Octachlorodibenzofuran

Laboratory Qualifiers and Notes:
¹ = Estimated Value
EMPC = Estimated Maximum Possible Concentration
^B = Compound was found in the blank and sample.
² = Lab report containd two (2) separate identical results
³ = Lab report containd two (2) separate results with one result = 0.0050 mg/kg and the seond = 0.0052 mg/kg.
Results reported on a dry weight basis and are valid to no more than 2 significant figures

<i>Italic</i>	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
<u>Underlined</u>	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

Table 1d
Soil Analytical Results
Riverside Rail Corridor
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

Collected By-->						REI Engineering, Inc.												
Date-->						4/23/2020	9/14/2020	4/23/2020	9/14/2020	4/23/2020	4/23/2020	4/23/2020	4/23/2020	4/23/2020	4/23/2020	4/23/2020	4/23/2020	5/12/2021
Sample-->						R1	R1	R2	R2	R3	R4	R5	R6	R7	R8*	R9*	R10*	R11
Sample Depth--(Inches)-->						3-5	10-12	4-6	10-12	3-6	3-5	6-9	6-8	11-13	2-4	4-5	5-6	10-12
Percent Moisture (%)-->						28.6	12.9	22.4	15.4	16.7	18.8	13.3	8.6	8.1	11.3	3.9	8.3	10.4
Saturated (S) vs Unsaturated (U)-->						U	U	U	U	U	U	U	U	U	U	U	U	U
Dioxin Congeners	CAS Number	Units	Non-Industrial Not-to-Exceed DC RCL	Industrial Not-to-Exceed DC RCL	Groundwater Pathway Protection RCL													
2,3,7,8-TCDD	1746-01-6	ng/kg	4.82	21.8	30.0	1.1 ^J	<0.67	0.55 ^J	<0.39	<0.24	<0.18	<0.34	<0.52	<0.20	<0.17	<0.15	<0.22	<0.43
1,2,3,7,8-PeCDD	36088-22-9	ng/kg	4.93	22.3	--	5.2 ^J	1.9 ^J	2.8 ^J	1.0 ^{I,J,EMPC}	0.55 ^{I,J,EMPC}	1.2 ^J	0.84 ^J	0.73 ^J	<0.10	<0.094	<0.097	0.24 ^{I,J,EMPC}	0.87 ^J
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	--	12	5.1 ^J	5.1 ^J	3.3 ^J	0.39 ^{I,J,EMPC}	1.7 ^J	0.89 ^{I,J,EMPC}	0.59 ^{I,J,EMPC}	<0.25	<0.22	<0.19	0.61 ^J	8.5
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	--	39	16	22	11	1.6 ^{I,J,EMPC}	6.0	3.5 ^J	2.6 ^J	<0.25	<0.17	0.29 ^J	1.5 ^J	2.3 ^J
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	--	24	8.5	10	5.2 ^{I,J,EMPC}	1.2 ^{I,J,EMPC}	3.6 ^J	1.9 ^J	1.2 ^J	<0.26	0.16 ^{I,J,EMPC}	<0.17	1.2 ^J	8.0
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	--	960	310	400	200	37	0.64 ^J	78	57	5.8	1.3 ^J	5.3	33	4.0 ^J
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	--	7,400	2,600	3,000	1,400	270	850	660	510	44	49	35	280	150
Total TCDD	--	ng/kg	--	--	--	22	7.5	9.3	4.1	1.2	6.3	<0.34	<0.52	<0.20	<0.17	<0.15	<0.22	1,300
Total PeCDD	--	ng/kg	--	--	--	58	20	29	5.9	2.4 ^J	11	<4.3	3.1 ^J	<0.10	<0.094	0.16 ^J	0.72 ^J	3.8
Total HxCDD	--	ng/kg	--	--	--	350	140	160	60	16	51	28	15.0	2.4 ^J	1.3 ^J	2.7 ^J	14	8.5
Total HpCDD	--	ng/kg	--	--	--	1,900	610	760	410	77	230	160	130	11	12	10	63	56
Furan Congeners																		
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	--	4.0 ^V	1.8 ^C	2.5 ^V	1.5 ^V	0.66 ^J	0.80 ^{I,J,EMPC}	<0.34	<0.48	<0.17	<0.26	<0.18	0.18 ^{I,J,EMPC}	1.1 ^C
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	--	4.7 ^J	1.9 ^J	3.2 ^J	<1.0	0.49 ^J	0.94 ^J	0.57 ^J	<0.022	<0.14	<0.047	<0.16	0.17 ^{I,J,EMPC}	1.0 ^J
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	--	12	5.0 ^J	15	4.8 ^J	1.3 ^J	2.4 ^J	5.7	9.2	0.14 ^{I,J,EMPC}	0.24 ^J	0.56 ^J	0.81 ^J	13
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	--	19	9.8 ^{P,EMPC}	24 ^{P,EMPC}	4.1 ^J	1.2 ^J	2.8 ^J	1.2 ^J	1.7 ^J	<0.28	<0.28	0.20 ^J	0.52 ^J	3.9 ^J
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	--	22	6.7	7.9	3.8 ^J	1.4 ^{I,J,EMPC}	4.8 ^{P,EMPC}	2.0 ^J	1.8 ^J	<0.18	0.85 ^J	0.90 ^{P,I,EMPC}	1.2 ^{P,I,EMPC}	5.2
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	--	23	7.5	15	6.8	1.5 ^J	3.6 ^J	4.8	1.9 ^J	<0.27	0.28 ^J	0.43 ^J	0.93 ^J	8.5
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	--	5.5 ^J	1.7 ^{I,J,EMPC}	3.1 ^J	<0.90	<0.46	0.64 ^J	0.67 ^{I,J,EMPC}	<0.17	<0.23	<0.20	<0.14	0.22 ^{I,J,EMPC}	1.6 ^{J,P,EMPC}
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	--	340	120	140	65	14	40	28	17	2.2 ^J	1.8 ^J	1.9 ^J	8.6	61
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	--	17	6.8	7.6	2.7 ^{I,J,EMPC}	<0.50	2.0 ^J	1.3 ^J	1.2 ^J	<0.22	<0.15 ^{I,J,EMPC}	<0.14	0.46 ^J	4.0 ^J
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	--	450	170	180	110	16	56	39	32	3.0 ^J	2.5 ^{I,J,EMPC}	2.4 ^J	19	92
Total TCDF	--	ng/kg	--	--	--	110	50	72	15	5.8	22	9.6	7.8	0.31 ^J	0.49 ^J	2.4	3.0	27
Total PeCDF	--	ng/kg	--	--	--	230	120	240	97	17	41	81	86	1.9 ^J	2.2 ^J	9.2	13	140
Total HxCDF	--	ng/kg	--	--	--	520	210	290	130	22	60	86	39	3.1 ^J	3.7 ^J	6.9	14	290
Total HpCDF	--	ng/kg	--	--	--	750	230	310	150	30	87	74	44	2.4 ^J	1.8 ^J	1.9 ^J	20	170
Individual Exceedances (DC)			1	1	--	2	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Hazard Index (DC)			1.0	1.0	--	0.6165	0.2248	0.3381	0.1425	0.0392	0.0986	0.0905	0.0951	0.0016	0.0046	0.0075	0.026	0.1848
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	--	8.3E-06	2.9E-06	4.3E-06	1.9E-06	4.8E-07	1.0E-06	1.1E-06	1.1E-06	2.8E-08	5.1E-08	8.9E-08	3.3E-07	1.9E-06
Total 2,3,7,8-TCDD Equivalence ¹	--	ng/kg	4.82	21.8	--	40	14	23	9.1	2.3	5.0	5.3	5.4	0.14	0.25	0.43	1.6	9.5

Notes:

NR 720 Standards Obtained From WDNR RR Program's Soil RCL Spreadsheet

This site is assessed as Non-Industrial

RCL = Residual Contaminant Level

DC = Direct Contact

ng/kg = Parts Per Trillion (ppt)

< = Concentration Below Laboratory Detection Limit

-- = Not Sampled/Collected

-- = No Standard/Not Applicable

TEQ = Toxicity Equivalent Calculations

¹ = TEQ values calculated using the U.S. EPA 2007 values.

* = Excavated during redevelopment

TCDD: Tetrachlorodibenzo-p-dioxin

PeCDD: Pentachlorodibenzo-p-dioxin

HxCDD: Hexachlorodibenzo-p-dioxin

HPcDD: Heptachlorodibenzo-p-dioxin

OCDD: Octachlorodibenzo-p-dioxin

TCDF: Tetrachlorodibenzofuran

PeCDF: Pentachlorodibenzofuran

HxCDF: Hexachlorodibenzofuran

HPcDF: Heptachlorodibenzofuran

OCDF: Octachlorodibenzofuran

Laboratory Qualifiers and Notes:

^J = Estimated Value

EMPC = Estimated Maximum Possible Concentration

^P = PCDE Interference

^I = Interference Present

^V = Results verified by confirmation analysis

^C = Results obtained from confirmation analysis

^D = Results obtained from analysis of diluted sample

^E = Exceeds calibration Range

Results reported on a dry weight basis and are valid to no more than 2 significant figures

<i>Italic</i>	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
<u>Underlined</u>	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

Table 1e
Soil Analytical Results
Riverside Rail Corridor
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

Collected By-->						REI Engineering, Inc.										
Date-->						4/23/2020	4/23/2020	5/12/2021	4/23/2020	4/23/2020	4/23/2020	4/23/2020	4/23/2020	4/23/2020	4/23/2020	4/23/2020
Sample-->						P1	P1	P1	P2	P2	P3	P3	P4	P4	P5	P5
Sample Depth--(Inches)-->						2-3	7-9	22-24	2-3	10-12	2-3	12-14	2-3	9-11	2-3	11-13
Percent Moisture (%)-->						45.0	24.7	12.7	20.7	19.5	19.0	12.0	17.8	12.9	19.9	16.8
Saturated (S) vs Unsaturated (U)-->						U	U	U	U	U	U	U	U	U	U	U
Dioxin Congeners	CAS Number	Units	Non-Industrial Not-to-Exceed DC RCL	Industrial Not-to-Exceed DC RCL	Groundwater Pathway Protection RCL											
2,3,7,8-TCDD	1746-01-6	ng/kg	4.82	21.8	30.0	0.35 ^J	0.71 ^J	<3.9 ^D	<0.30	<0.13	<0.24	<0.74	<0.96	<0.54	<0.76	<0.91
1,2,3,7,8-PeCDD	36088-22-9	ng/kg	4.93	22.3	--	3.0 ^{I,J, EMPC}	6.1	3.0 ^{J,D}	0.43 ^J	<0.15	0.25 ^J	0.42 ^{I,J, EMPC}	<0.56	<0.53	0.74 ^{I,J, EMPC}	<0.79
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	--	6.0 ^J	14	10 ^{J,D}	0.58 ^{I,J, EMPC}	<0.21	0.61 ^J	0.77 ^{I,J, EMPC}	1.8 ^{I,J, EMPC}	0.57 ^{I,J, EMPC}	1.8 ^J	<0.39
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	--	23	57	50 ^D	2.6 ^J	0.4 ^J	1.4 ^J	1.4 ^J	3.9 ^J	1.9 ^J	4.4 ^J	0.64 ^J
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	--	13	30	26 ^D	1.6 ^{I,J, EMPC}	0.35 ^{I,J, EMPC}	0.67 ^{I,J, EMPC}	0.76 ^J	3.0 ^J	0.82 ^{I,J, EMPC}	2.6 ^{I,J, EMPC}	<0.64
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	--	520	1,200	900 ^D	55	4.8 ^J	27	28	110	39	110	17
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	--	4,000	9,600	6,600 ^D	370	67	170	220	890	310	840	130
Total TCDD	--	ng/kg	--	--	--	4.0	9.6	<3.9 ^D	1.7	0.82 ^J	<0.24	<0.74	<0.96	<0.54	2.3	1.1
Total PeCDD	--	ng/kg	--	--	--	18	53	26 ^D	5.3 ^J	<0.15	1.8 ^J	0.82	3.6 ^J	<0.43	6.6	<0.79
Total HxCDD	--	ng/kg	--	--	--	200	430	330 ^D	22	4.8 ^J	9.1	7.2	37	12	43	5.9
Total HpCDD	--	ng/kg	--	--	--	1,100	2,500	1,800 ^D	110	19	52	54	200	73	200	31
Furan Congeners																
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	--	1.6 ^J	2.6 ^V	<4.6 ^D	0.47 ^J	<0.21	0.26 ^{I,J, EMPC}	<0.64	<0.74	<0.77	<0.96	<0.66
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	--	3.1 ^J	6.1	<1.1 ^D	0.40 ^{I,J, EMPC}	<0.26	<0.48	<0.61	<1.2	<0.59	<1.1	<1.1
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	--	26	34	22 ^{J,D}	1.1 ^J	<0.22	0.61 ^J	2.2 ^J	2.3 ^{I,J, EMPC}	0.89 ^J	1.8 ^{I,J, EMPC}	0.55 ^{I,J, EMPC}
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	--	9.3	15	16 ^{J,D}	1.4 ^J	<0.30	0.83 ^J	0.73 ^J	2.3 ^{I,J, EMPC}	1.6 ^{P,I, EMPC}	2.4 ^{I,J, EMPC}	<0.41
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	--	10	21	16 ^{J,D}	2.1 ^{P,I, EMPC}	0.55 ^J	1.3 ^{I,J, EMPC}	0.81 ^{I,J, EMPC}	2.4 ^J	0.86 ^J	1.7 ^J	<0.45
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	--	25	39	14 ^{J,D}	1.7 ^J	0.22 ^{I,J, EMPC}	0.67 ^{I,J, EMPC}	1.6 ^{I,J, EMPC}	3.0 ^J	0.65 ^J	2.7 ^J	<0.45
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	--	4.5 ^J	6.9	<1.5 ^D	<0.56	<0.24	<0.33	<0.33	<0.16	<0.14	<0.40	<0.43
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	--	140	340	250 ^D	16	3.9 ^J	11	8.1	41	16	54 ^{P, EMPC}	9.5 ^{P, EMPC}
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	--	9.7	21	14 ^{J,D}	0.78 ^{I,J, EMPC}	<0.60	<0.87	<0.51	1.4 ^J	<0.27	<0.72	<0.98
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	--	240	540	400 ^D	26	4.1 ^{I,J, EMPC}	12	13	55	20	59	12
Total TCDF	--	ng/kg	--	--	--	81	110	74 ^D	6.2	0.48	2.6	1.8	13	1.6	8.9	<0.66
Total PeCDF	--	ng/kg	--	--	--	440	610	280 ^D	17	2.9	9.7	25	31	12	26	3.6 ^J
Total HxCDF	--	ng/kg	--	--	--	440	830	550 ^D	25	5.7	15	24	40	17	45	3.0 ^J
Total HpCDF	--	ng/kg	--	--	--	380	840	620 ^D	35	7.8	20	18	83	31	46	8.3
Individual Exceedances (DC)			1	1	--	2	4	3	0	0	0	0	0	0	0	0
Cumulative Hazard Index (DC)			1.0	1.0	--	0.4623	0.8467	0.5517	0.0489	0.0042	0.0233	0.0364	0.061	0.0234	0.0709	0.0074
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	--	5.8E-06	1.1E-05	7.5E-06	6.1E-07	5.3E-08	2.9E-07	4.3E-07	8.5E-07	3.2E-07	9.5E-07	1.1E-07
Total 2,3,7,8-TCDD Equivalence ¹	--	ng/kg	4.82	21.8	--	<u>28</u>	<u>54</u>	<u>37</u>	2.7	0.26	1.4	2.1	4.1	1.6	4.7	0.54

Notes:

NR 720 Standards Obtained From WDNR RR Program's Soil RCL Spreadsheet

This site is assessed as Non-Industrial

RCL = Residual Contaminant Level

DC = Direct Contact

ng/kg = Parts Per Trillion (ppt)

< = Concentration Below Laboratory Detection Limit

- = Not Sampled/Collected

-- = No Standard/Not Applicable

TEQ = Toxicity Equivalent Calculations

¹ = TEQ values calculated using the U.S. EPA 2007 values.

TCDD: Tetrachlorodibenzo-p-dioxin

PeCDD: Pentachlorodibenzo-p-dioxin

HxCDD: Hexachlorodibenzo-p-dioxin

HPcDD: Heptachlorodibenzo-p-dioxin

OCDD: Octachlorodibenzo-p-dioxin

TCDF: Tetrachlorodibenzofuran

PeCDF: Pentachlorodibenzofuran

HxCDF: Hexachlorodibenzofuran

HPCDF: Heptachlorodibenzofuran

OCDF: Octachlorodibenzofuran

Laboratory Qualifiers and Notes:

^J = Estimated Value

EMPC = Estimated Maximum Possible Concentration

^P = PCDE Interference

^I = Interference Present

^V = Results verified by confirmation analysis

^C = Results obtained from confirmation analysis

^D = Results obtained from analysis of diluted sample

^E = Exceeds calibration Range

Results reported on a dry weight basis and are valid to no more than 2 significant figures

<i>Italic</i>	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
<u>Underlined</u>	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

Table 1f
Soil Analytical Results
Riverside Rail Corridor
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

Collected By-->						REI Engineering, Inc.									
Date-->						9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020
Sample-->						P6	P6	P7	P7	P8	P8	P9	P9	P10	P10
Sample Depth--(Inches)-->						2-3	10-12	2-3	10-12	2-3	10-12	2-3	10-12	2-3	10-12
Percent Moisture (%)-->						17.2	6.4	15.9	9.5	11.9	17.3	17.4	9.7	15.9	14.1
Saturated (S) vs Unsaturated (U)-->						U	U	U	U	U	U	U	U	U	U
Dioxin Congeners	CAS Number	Units	Non-Industrial Not-to-Exceed DC RCL	Industrial Not-to-Exceed DC RCL	Groundwater Pathway Protection RCL										
2,3,7,8-TCDD	1746-01-6	ng/kg	4.82	21.8	30.0	0.32 ^{I, J} _{EMPC}	<0.27	0.97 ^J	<0.27	0.69 ^J	0.61 ^J	<0.26	0.27 ^J	0.41 ^J	<0.38
1,2,3,7,8-PeCDD	36088-22-9	ng/kg	4.93	22.3	--	3.2 ^J	0.33 ^J	3.8 ^J	0.62 ^J	6.4	6.6	3.3 ^J	0.68 ^J	5.9	2.7 ^J
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	--	7.9	<0.96	9.4	1.5 ^J	17	16	6.7	2.1 ^J	12	5.1 ^J
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	--	24	2.0 ^J	35	5.7	69	51	28	6.5	48	15
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	--	13	1.4 ^J	19	3.2 ^J	29	25	12	3.8 ^J	22	8.5
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	--	530	36	1,200	190	1,200	1,000	550	150	900	290
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	--	4,600	290	11,000 ^E	1,700	10,000 ^E	8,100	4,400	1,100	7,600	2,300
Total TCDD	--	ng/kg	--	--	--	8.1	0.61 ^J	20	5.2	18	9.5	16	3.5	10	3.6
Total PeCDD	--	ng/kg	--	--	--	24	0.33 ^J	45	8.9	49	50	44	6.6	44	22
Total HxCDD	--	ng/kg	--	--	--	180	1.6	330	52	480	390	250	5.7	350	130
Total HpCDD	--	ng/kg	--	--	--	1,000	66	2,400	360	2,300	1,900	1,100	280	1,800	560
Furan Congeners															
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	--	1.9 ^V	<0.44	3.7 ^C	0.86 ^{I, J} _{EMPC}	4.1 ^C	5.7 ^C	3.3 ^V	0.76 ^J	4.3 ^C	2.1 ^C
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	--	0.32 ^{I, J} _{EMPC}	<0.72	3.3 ^J	<1.1	4.7 ^J	5.9	3.4 ^J	0.88 ^J	4.5 ^J	2.7 ^J
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	--	17	1.9 ^J	8.9	2.0 ^J	32	66	8.5	2.3 ^{I, J} _{EMPC}	53	54
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	--	11	<0.86	11	2.3 ^{I, J} _{EMPC}	20	17	13	3.5 ^J	15	12
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	--	13	1.6 ^{P, J} _{EMPC}	8.7	2.5 ^{I, J} _{EMPC}	24	36	12	4.0 ^{P, J} _{EMPC}	24	37
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	--	10	<1.4	9.0	3.1 ^J	20	23	9.5	3.5 ^J	31	31
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	--	4.6 ^J	<0.69	3.7 ^J	0.67 ^J	8.3 ^I _{EMPC}	10	4.0 ^J	0.67 ^{I, J} _{EMPC}	8.4	6.8
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	--	180	16	230	42	310	330	230	59	300	140
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	--	12	<1.1	12	2.8 ^J	20	20	12	2.4 ^J	17	8.3
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	--	400	26	640	100	550	530	390	95	460	170
Total TCDF	--	ng/kg	--	--	--	56	4.5	77	16	82	150	86	18	140	110
Total PeCDF	--	ng/kg	--	--	--	250	32	150	30	500	990	150	47	810	930
Total HxCDF	--	ng/kg	--	--	--	450	36	300	52	830	1,300	350	78	1,000	950
Total HpCDF	--	ng/kg	--	--	--	560	40	570	96	790	840	480	120	730	360
Individual Exceedances (DC)			1	1	--	2	0	1	0	4	4	1	0	3	1
Cumulative Hazard Index (DC)			1.0	1.0	--	0.4105	0.0329	0.4747	0.0847	0.8475	1.0253	0.3827	0.1023	0.882	0.6476
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	--	5.3E-06	4.1E-07	7.2E-06	1.2E-06	1.1E-05	1.3E-05	5.0E-06	1.4E-06	1.1E-05	7.3E-06
Total 2,3,7,8-TCDD Equivalence ¹	--	ng/kg	4.82	21.8	--	26	2.0	35	6.1	54	62	24	6.6	53	36

Notes:
NR 720 Standards Obtained From WDNR RR Program's Soil RCL Spreadsheet
This site is assessed as Non-Industrial
RCL = Residual Contaminant Level
DC = Direct Contact
ng/kg = Parts Per Trillion (ppt)
< = Concentration Below Laboratory Detection Limit
- = Not Sampled/Collected
-- = No Standard/Not Applicable
TEQ = Toxicity Equivalent Calculations
¹ = TEQ values calculated using the U.S. EPA 2007 values.

TCDD: Tetrachlorodibenzo-p-dioxin
PeCDD: Pentachlorodibenzo-p-dioxin
HxCDD: Hexachlorodibenzo-p-dioxin
HPCDD: Heptachlorodibenzo-p-dioxin
OCDD: Octachlorodibenzo-p-dioxin
TCDF: Tetrachlorodibenzofuran
PeCDF: Pentachlorodibenzofuran
HxCDF: Hexachlorodibenzofuran
HPCDF: Heptachlorodibenzofuran
OCDF: Octachlorodibenzofuran

Laboratory Qualifiers and Notes:
^J = Estimated Value
_{EMPC} = Estimated Maximum Possible Concentration
^P = PCDE Interference
^I = Interference Present
^V = Results verified by confirmation analysis
^C = Results obtained from confirmation analysis
^D = Results obtained from analysis of diluted sample
^E = Exceeds calibration Range
Results reported on a dry weight basis and are valid to no more than 2 significant figures

<i>Italic</i>	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
<u>Underlined</u>	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

Table 1g
Soil Analytical Results
Riverside Rail Corridor
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

Collected By-->						REI Engineering, Inc.												
Date-->						9/14/2020	9/14/2020	5/12/2021	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020	9/14/2020
Sample-->						P11	P11	P11	P12	P12	P13	P13	P14	P14	P15	P15	P16	P16
Sample Depth--(Inches)-->						2-3	10-12	22-24	2-3	10-12	2-3	10-12	2-3	10-12	2-3	10-12	2-3	10-12
Percent Moisture (%)-->						18.7	17.7	9.3	20.5	14.3	20.7	13.8	16.8	3.7	12.1	6.9	15.3	6.6
Saturated (S) vs Unsaturated (U)-->						U	U	U	U	U	U	U	U	U	U	U	U	U
Dioxin Congeners	CAS Number	Units	Non-Industrial Not-to-Exceed DC RCL	Industrial Not-to-Exceed DC RCL	Groundwater Pathway Protection RCL													
2,3,7,8-TCDD	1746-01-6	ng/kg	4.82	21.8	30.0	1.5	0.79 ^{I, J} _{EMPC}	<0.17	<0.51	<0.39	<0.56	<0.44	<0.70	<0.27	<0.39	<0.36	<0.77	<0.50
1,2,3,7,8-PeCDD	36088-22-9	ng/kg	4.93	22.3	--	11	7.1	1.3 ^J	1.9 ^J	1.1 ^J	1.5 ^J	0.97 ^J	1.5 ^J	<0.30	1.7 ^J	2.5 ^J	2.7 ^J	<0.93
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	--	24	15	1.5 ^J	3.5 ^J	1.9 ^{I, J} _{EMPC}	3.3 ^{I, J} _{EMPC}	2.1 ^{I, J} _{EMPC}	2.9 ^J	0.75 ^J	5.7	4.0 ^{I, J} _{EMPC}	5.0 ^J	<1.7
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	--	100	52	8.7	13	7.4	22	13	13	3.7 ^J	16	18	16	<2.0
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	--	45	25	3.8 ^J	6.7	4.8 ^J	10	6.9	5.9	1.6 ^J	9.7	9.4	10	<1.6
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	--	1,900	880	150	220	120	830	370	220	72	350	370	300	40
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	--	18,000 ^E	7,500	1,100	1,700	920	3,900	2,100	1,800	530	2,500	3,100	2,400	310
Total TCDD	--	ng/kg	--	--	--	21	19	0.57 ^J	8.0	4.2	5.3	4.5	6.9	1.7	1.4	4.8	4.4	<0.50
Total PeCDD	--	ng/kg	--	--	--	86	60	7.6	29	170	12	12	19	4.9	14	14	15	<0.93
Total HxCDD	--	ng/kg	--	--	--	700	380	52	120	64	220	120	100	30	140	140	130	8.1
Total HpCDD	--	ng/kg	--	--	--	3,700	1,700	270	410	240	1,400	660	420	130	690	760	570	74
Furan Congeners																		
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	--	9.1 ^C	8.7 ^C	0.83 ^J	2.2 ^C	1.2 ^C	0.91 ^{I, J} _{EMPC}	1.3 ^V	1.7 ^C	<0.30	2.2 ^C	1.9 ^V	1.1 ^{I, J} _{EMPC}	<0.69
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	--	11	7.4	0.88 ^J	2.0 ^{I, J} _{EMPC}	<1.8	<1.6	<1.4	<1.3	<1.3	2.1 ^J	1.9 ^{I, J} _{EMPC}	<0.74	<1.1
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	--	<u>110</u>	<u>130</u>	15	14	10	10	8.1	4.1 ^J	1.7 ^J	5.4	6.0	2.5 ^{I, J} _{EMPC}	1.0 ^J
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	--	22	17	3.1 ^J	6.6	2.6 ^{I, J} _{EMPC}	4.9 ^J	3.7 ^J	4.9 ^J	2.1 ^J	9.0	9.2	8.3	1.2 ^{I, J} _{EMPC}
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	--	46	32	5.3	20 ^P _{EMPC}	13 ^P _{EMPC}	5.7 ^J	5.8	7.7 ^P _{EMPC}	2.3 ^J	9.3	6.9 ^I _{EMPC}	7.9	<1.2
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	--	56	58	16	7.6	4.1 ^J	7.7	5.9	6.7	0.96 ^{I, J} _{EMPC}	5.5	7.3	5.3 ^J	1.8 ^J
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	--	18	16	2.0 ^J	2.5 ^J	<1.2	<1.5	0.97 ^{I, J} _{EMPC}	<1.4	<0.36	2.2 ^J	2.4 ^J	2.3 ^{I, J} _{EMPC}	<1.3
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	--	540	340	47	95	50	110	89	100	30	120	140	110	15
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	--	38	22	3.3 ^J	5.5 ^J	2.2 ^{I, J} _{EMPC}	5.5 ^{I, J} _{EMPC}	5.5 ^J	5.5 ^J	0.79 ^{I, J} _{EMPC}	6.5	8.4	5.7	<2.8
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	--	840	530	65	130	65	210	140	170	49	230	210	170	23
Total TCDF	--	ng/kg	--	--	--	280	290	33	72	39	34	38	32	7.7	26	27	25	1.9
Total PeCDF	--	ng/kg	--	--	--	1,400	1,500	220	230	160	150	150	87	28	100	92	74	5.0 ^J
Total HxCDF	--	ng/kg	--	--	--	2,100	2,000	130	260	170	230	200	130	42	220	210	180	22
Total HpCDF	--	ng/kg	--	--	--	1,300	890	130	200	100	280	210	220	66	300	310	230	31
Individual Exceedances (DC)			1	1	--	7	5	0	0	0	1	0	0	0	0	0	0	0
Cumulative Hazard Index (DC)			1.0	1.0	--	1.7746	1.4579	0.2136	0.2754	0.1665	0.253	0.181	0.196	0.0428	0.2285	0.2552	0.2148	0.0172
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	--	2.2E-05	1.7E-05	2.5E-06	3.3E-06	2.0E-06	4.2E-06	2.6E-06	2.5E-06	5.8E-07	3.1E-06	3.4E-06	2.3E-06	2.6E-07
Total 2,3,7,8-TCDD Equivalence ¹	--	ng/kg	4.82	21.8	--	<u>108</u>	<u>84</u>	12	16	9.6	21	13	11	2.9	15	16	14	1.2

Notes:

NR 720 Standards Obtained From WDNR RR Program's Soil RCL Spreadsheet

This site is assessed as Non-Industrial

RCL = Residual Contaminant Level

DC = Direct Contact

ng/kg = Parts Per Trillion (ppt)

< = Concentration Below Laboratory Detection Limit

- = Not Sampled/Collected

- - = No Standard/Not Applicable

TEQ = Toxicity Equivalent Calculations

¹ = TEQ values calculated using the U.S. EPA 2007 values.

TCDD: Tetrachlorodibenzo-p-dioxin

PeCDD: Pentachlorodibenzo-p-dioxin

HxCDD: Hexachlorodibenzo-p-dioxin

HPcDD: Heptachlorodibenzo-p-dioxin

OCDD: Octachlorodibenzo-p-dioxin

TCDF: Tetrachlorodibenzofuran

PeCDF: Pentachlorodibenzofuran

HxCDF: Hexachlorodibenzofuran

HPCDF: Heptachlorodibenzofuran

OCDF: Octachlorodibenzofuran

Laboratory Qualifiers and Notes:

^J = Estimated Value

_{EMPC} = Estimated Maximum Possible Concentration

^P = PCDE Interference

^I = Interference Present

^V = Results verified by confirmation analysis

^C = Results obtained from confirmation analysis

^D = Results obtained from analysis of diluted sample

^E = Exceeds calibration Range

Results reported on a dry weight basis and are valid to no more than 2 significant figures

<i>Italic</i>	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
<u>Underlined</u>	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

Table 1h
Soil Analytical Results
Riverside Rail Corridor
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

Collected By-->						REI Engineering, Inc.							
Date-->						5/12/2021	5/12/2021	5/12/2021	5/12/2021	5/12/2021	5/12/2021	5/12/2021	5/11/2021
Sample-->						P17	P17	P18	P18	P19	P19	P20	P20
Sample Depth--(Inches)-->						2-3	10-12	2-3	14-16	2-3	14-16	2-3	12-14
Percent Moisture (%)-->						26.4	16.2	18.6	4.2	25.1	15.9	14.3	3.9
Saturated (S) vs Unsaturated (U)-->						U	U	U	U	U	U	U	U
Dioxin Congeners	CAS Number	Units	Non-Industrial Not-to-Exceed DC RCL	Industrial Not-to-Exceed DC RCL	Groundwater Pathway Protection RCL								
2,3,7,8-TCDD	1746-01-6	ng/kg	4.82	21.8	30.0	0.59 ^{J,I} _{EMPC}	1.2	<2.7 ^D	<0.37	<0.79	<0.32	<3.1 ^D	<0.32
1,2,3,7,8-PeCDD	36088-22-9	ng/kg	4.93	22.3	- -	4.7 ^J	7.6	<1.4 ^D	<0.21	1.1 ^J	0.63 ^J	2.5 ^{J,D}	<0.20
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	- -	12	18	5.1 ^{J,D}	<0.46	2.4 ^J	0.87 ^J	3.3 ^{J,D}	<0.37
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	- -	46	86	20 ^{J,D}	<0.44	9.4	3.4 ^J	11 ^{J,D}	1.0 ^{J,I} _{EMPC}
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	- -	22	38	9.6 ^{J,D}	<0.41	3.9 ^{J,I} _{EMPC}	1.8 ^{J,I} _{EMPC}	5.1 ^{J,D}	0.4 ^{J,I} _{EMPC}
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	- -	900	1,400	360 ^D	3.9 ^J	180	72	240 ^D	17
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	- -	7,000 ^E	11,000 ^E	2,700	29	1,400	540	1,900 ^D	140
Total TCDD	- -	ng/kg	- -	- -	- -	7.9	8.7	<2.7 ^D	<0.37	5.6	4.0	<3.1 ^D	<0.32
Total PeCDD	- -	ng/kg	- -	- -	- -	40	51	2.4 ^{J,D}	<0.21	11	6.8	7.7 ^{J,D}	<0.20
Total HxCDD	- -	ng/kg	- -	- -	- -	300	480	150 ^D	1.4 ^J	72	28	84 ^D	6.2
Total HpCDD	- -	ng/kg	- -	- -	- -	1,700	2,700	710 ^D	3.9 ^J	330	130	450 ^D	33
Furan Congeners													
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	- -	2.1 ^V	4.2 ^C	<2.5 ^D	<0.69	1.6 ^V	<0.56	<4.0 ^D	<0.50
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	- -	3.3 ^J	5.2	<2.5 ^D	<0.35	1.2 ^J	0.91 ^J	<2.9 ^D	<0.21
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	- -	13	30	17 ^{J,D}	<0.38	3.4 ^J	1.9 ^J	6.7 ^{J,D}	0.43 ^J
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	- -	12	22	8.8 ^{J,D}	<0.42	4.2 ^J	2.1 ^J	6.8 ^{J,D}	0.6 ^J
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	- -	13	24	11 ^{J,D}	<0.35	3.9 ^J	1.9 ^J	6.9 ^{J,D}	0.38 ^{J,I} _{EMPC}
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	- -	21	44	19 ^{J,D}	<0.41	3.2 ^J	1.6 ^J	6.7 ^{J,D}	0.53 ^{J,I} _{EMPC}
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	- -	4.9	8.1	<4.6 ^D	<0.33	1.8 ^{J,I} _{EMPC}	0.89 ^{J,I} _{EMPC}	<1.9 ^D	<0.39
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	- -	210	340	130 ^D	1.5 ^J	62	30	100 ^D	6.5
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	- -	13	21	8.7 ^{J,D}	<0.57	3.3 ^{J,I} _{EMPC}	1.4 ^J	5.9 ^{J,I,D} _{EMPC}	<0.51
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	- -	380	590	170 ^D	2.1 ^J	120	58	170 ^D	11
Total TCDF	- -	ng/kg	- -	- -	- -	59	100	43 ^D	<0.69	20	11	<4.0 ^D	0.59 ^{J,B}
Total PeCDF	- -	ng/kg	- -	- -	- -	200	360	250 ^D	4.6 ^J	54	23	84 ^D	5.4
Total HxCDF	- -	ng/kg	- -	- -	- -	270	660	210 ^D	2.0 ^J	100	28	160 ^D	10
Total HpCDF	- -	ng/kg	- -	- -	- -	540	880	290 ^D	3.3 ^J	150	130	240 ^D	15
Individual Exceedances (DC)			1	1	- -	1	4	1	0	0	0	0	0
Cumulative Hazard Index (DC)			1.0	1.0	- -	0.5416	0.9879	0.2926	0.0015	0.1259	0.0537	0.2024	0.0106
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	- -	7.4E-06	1.3E-05	3.7E-06	2.3E-08	1.7E-06	7.0E-07	2.6E-06	1.4E-07
Total 2,3,7,8-TCDD Equivalence ¹	- -	ng/kg	4.82	21.8	- -	36	63	18	0.063	8.1	3.7	13	0.70

Notes:

NR 720 Standards Obtained From WDNR RR Program's Soil RCL Spreadsheet

This site is assessed as Non-Industrial

RCL = Residual Contaminant Level

DC = Direct Contact

ng/kg = Parts Per Trillion (ppt)

< = Concentration Below Laboratory Detection Limit

- = Not Sampled/Collected

- - = No Standard/Not Applicable

TEQ = Toxicity Equivalent Calculations

¹ = TEQ values calculated using the U.S. EPA 2007 values.

TCDD: Tetrachlorodibenzo-p-dioxin

PeCDD: Pentachlorodibenzo-p-dioxin

HxCDD: Hexachlorodibenzo-p-dioxin

HPCDD: Heptachlorodibenzo-p-dioxin

OCDD: Octachlorodibenzo-p-dioxin

TCDF: Tetrachlorodibenzofuran

PeCDF: Pentachlorodibenzofuran

HxCDF: Hexachlorodibenzofuran

HPCDF: Heptachlorodibenzofuran

OCDF: Octachlorodibenzofuran

Laboratory Qualifiers and Notes:

^J = Estimated Value

_{EMPC} = Estimated Maximum Possible Concentration

^P = PCDE Interference

^I = Interference Present

^V = Results verified by confirmation analysis

^C = Results obtained from confirmation analysis

^D = Results obtained from analysis of diluted sample

^E = Exceeds calibration Range

Results reported on a dry weight basis and are valid to no more than 2 significant figures

<i>Italic</i>	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
<u>Underlined</u>	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

Table 2
WAC Chapter NR720 Exceedances
Riverside Rail Corridor
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

Compound	WAC Chapter NR720 Non-Industrial Direct Contact RCL Exceedances	Exceedance Count
Dioxins		
2,3,7,8-TCDD	No Exceedances	0
1,2,3,7,8-PeCDD	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls), 117 Riv 1 (4-6 inches bls), 117 Riv 2 (4-6 inches bls), N4-2 (0-6 inches bls)^, N4-3 (0-6 inches bls)^, R1 (3-5 inches bls), P1 (7-9 inches bls), P8 (2-3 and 10-12 inches bls), P10 (2-3 and 10-12 inches bls), P11 (2-3 and 10-12 inches bls), P17 (10-12 inches bls)	16
1,2,3,4,7,8-HxCDD	No Exceedances	0
1,2,3,6,7,8-HxCDD	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls), P1 (7-9 and 22-24 inches bls), P8 (2-3 and 10-12 inches bls), P11 (2-3 and 10-12 inches bls), P17 (10-12 inches bls)	9
1,2,3,7,8,9-HxCDD	Culvert In (4-6 inches bls)	1
1,2,3,7,8,9-HpCDD	Culvert In (4-6 inches bls)*, Culvert Out (4-6 inches bls), 117 Riv 1 (4-6 inches bls), 117 Riv 2 (4-6 inches bls), N4-1 (0-6 inches bls)^, N4-2 (0-6 inches bls)^, N4-3 (0-6 inches bls)^, R1 (3-5 inches bls), P1 (2-3, 7-9, and 22-24 inches bls), P6 (2-3 inches bls), P7 (2-3 inches bls), P8 (2-3 and 10-12 inches bls), P9 (2-3 inches bls), P10 (10-12 inches bls), P11 (2-3 and 10-12 inches bls), P13, (2-3 inches), P17 (2-3 and 10-12 inches bls)	22
OCDD	Culvert In (4-6 inches bls), P11 (2-3 inches bls)	2
Furans		
2,3,7,8-TCDF	No Exceedances	0
1,2,3,7,8-PeCDF	N4-2 (0-6 inches bls)	1
2,3,4,7,8-PeCDF	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls)*, 1003 EMT (8-10 inches bls)*, N4-3 (0-6 inches bls)^, P1 (2-3, 7-9, and 22-24 inches bls), P6 (2-3 inches bls), P8 (2-3 and 10-12 inches bls), P10 (2-3 and 10-12 inches bls), P11 (2-3 and 10-12 inches bls), P17 (10-12 inches bls), P18 (2-3 inches bls)	15
1,2,3,4,7,8-HxCDF	N4-3 (0-6 inches bls)^	1
1,2,3,6,7,8-HxCDF	No Exceedances	0
2,3,4,6,7,8-HxCDF	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls), 1003 EMT (8-10 inches bls), P11 (2-3 and 10-12 inches bls)	4
1,2,3,7,8,9-HxCDF	No Exceedances	0
1,2,3,4,6,7,8-HpCDF	Culvert In (4-6 inches bls), P11 (2-3 inches bls)	2
1,2,3,4,7,8,9-HpCDF	No Exceedances	0
OCDF	No Exceedances	0
Cumulative Hazard Index	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls), N4-3 (0-6 inches bls)^	3
Cumulative Cancer Risk	Culvert In (4-6 inches bls), Culvert Out (4-6 inches bls), N4-3 (0-6 inches bls)^, P1 (7-9 inches bls), P8 (2-3 and 10-12 inches bls), P10 (2-3 inches bls), P11 (2-3 and 10-12 inches bls), P17 (10-12 inches bls)	10

Notes:

WAC = Wisconsin Administrative Code

* = Concentration also exceeded the WAC Chapter NR720 Industrial Direct Contact RCLs.

^ = Sample location excavated during redevelopment

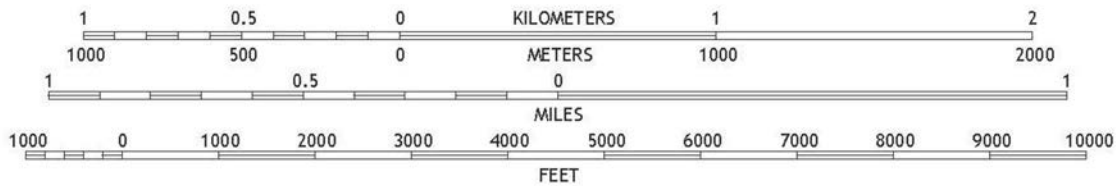
FIGURES



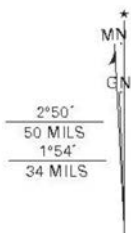
DRAWING FILE: P:\9000-9099\9073 - CITY OF WAUSAU RIVERSIDE RR CORRIDOR\DWGS\9073-VICN.DWG LAYOUT: RR CORRIDOR PLOTTED: SEP 13, 2021 - 2:12PM PLOTTED BY: MATTHEW



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

DRAWING FILE: P:\9000-9099\9073 - CITY OF WAUSAU RIVERSIDE RR CORRIDOR\DWG\9073-DETAILED SITE.DWG LAYOUT: SITE (24X36) PLOTTED: SEP 13, 2021 - 2:12PM PLOTTED BY: MATTM



DRAWING FILE: P:\9000-9099\9073 - CITY OF WAUSAU RIVERSIDE RR CORRIDOR\dwgs\9073-DETAILED SITE.DWG LAYOUT: RR CloseUP PLOTTED: SEP 13, 2021 - 2:13PM PLOTTED BY: MATTM



LEGEND

0

60

SCALE: 1" = 60'

□

SOIL SAMPLE - RR CORRIDOR

- REI ENGINEERING, INC

+

SOIL SAMPLE (2019)

- TRC

○

●

SOIL SAMPLE (2017)

- AECOM

◆

SOIL SAMPLE (2008)

- CWE, INC

PROPERTY BOUNDARIES (APPROXIMATE)

NOTES:

1. TRC SOIL SAMPLE LOCATIONS ARE AN APPROXIMATION BASED ON TRC'S MAP "LOCATION OF 36 SOIL SAMPLES AND RCL EXCEEDANCES", IDENTIFIED AS FIGURE 6 (OCTOBER 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 3 : DETAILED SITE MAP - RAILROAD

PROJECT No. 9073	DRAWN BY: MCM	DATE: 9/13/2021
---------------------	------------------	--------------------

REI Engineering, INC.

DRAWING FILE: P:\9000-9099\9073 - CITY OF WAUSAU RIVERSIDE RR CORRIDOR\dwgs\9073-DETAILED SITE.DWG LAYOUT: PARK CLOSEUP PLOTTED: SEP 13, 2021 - 2:14PM PLOTTED BY: MATTH



LEGEND

0 30
SCALE: 1" = 30'

- 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
- 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.

FIGURE 5 : DETAILED SITE MAP - PARK CULVERT

PROJECT No. 9073

DRAWN BY: MCM

DATE: 9/13/2021

REI
CIVIL & ENVIRONMENTAL
ENGINEERING, SURVEYING

RIVERSIDE RAILROAD CORRIDOR
132 RIVER STREET
WAUSAU, WISCONSIN

REI Engineering, INC.

0 30

SCALE: 1" = 30'

- ◆ 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

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.



FIGURE 5 : DETAILED SITE MAP - PARK CULVERT

PROJECT No.
9073

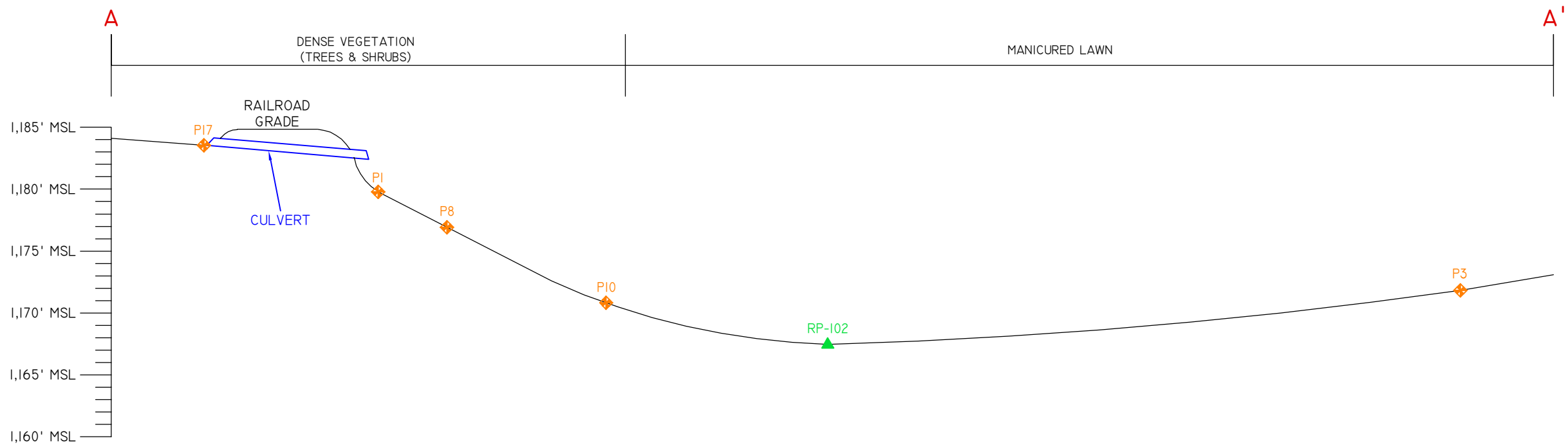
DRAWN BY:
MCM

DATE:
9/13/2021



REI Engineering, INC.

DRAWING FILE: P:\9000-9099\9073 - CITY OF WAUSAU RIVERSIDE RR CORRIDOR\dwgs\9073-X SECTION.DWG LAYOUT: X-SECTION PLOTTED: SEP 13, 2021 - 2:16PM PLOTTED BY: MATTM



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



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

LEGEND

0 30
SCALE: 1" = 30'

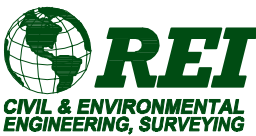
◆ SOIL SAMPLE - PARK (2020)
- REI ENGINEERING, INC

◻ SOIL SAMPLE - RR CORRIDOR (2020)
- REI ENGINEERING, INC

▲ SOIL SAMPLE (2019)
- SAND CREEK CONSULTANTS, INC

△ SOIL SAMPLE (2006)
- CWE, INC

PROPERTY BOUNDARIES (APPROXIMATE)



RIVERSIDE RAILROAD CORRIDOR
132 RIVER STREET
WAUSAU, WISCONSIN

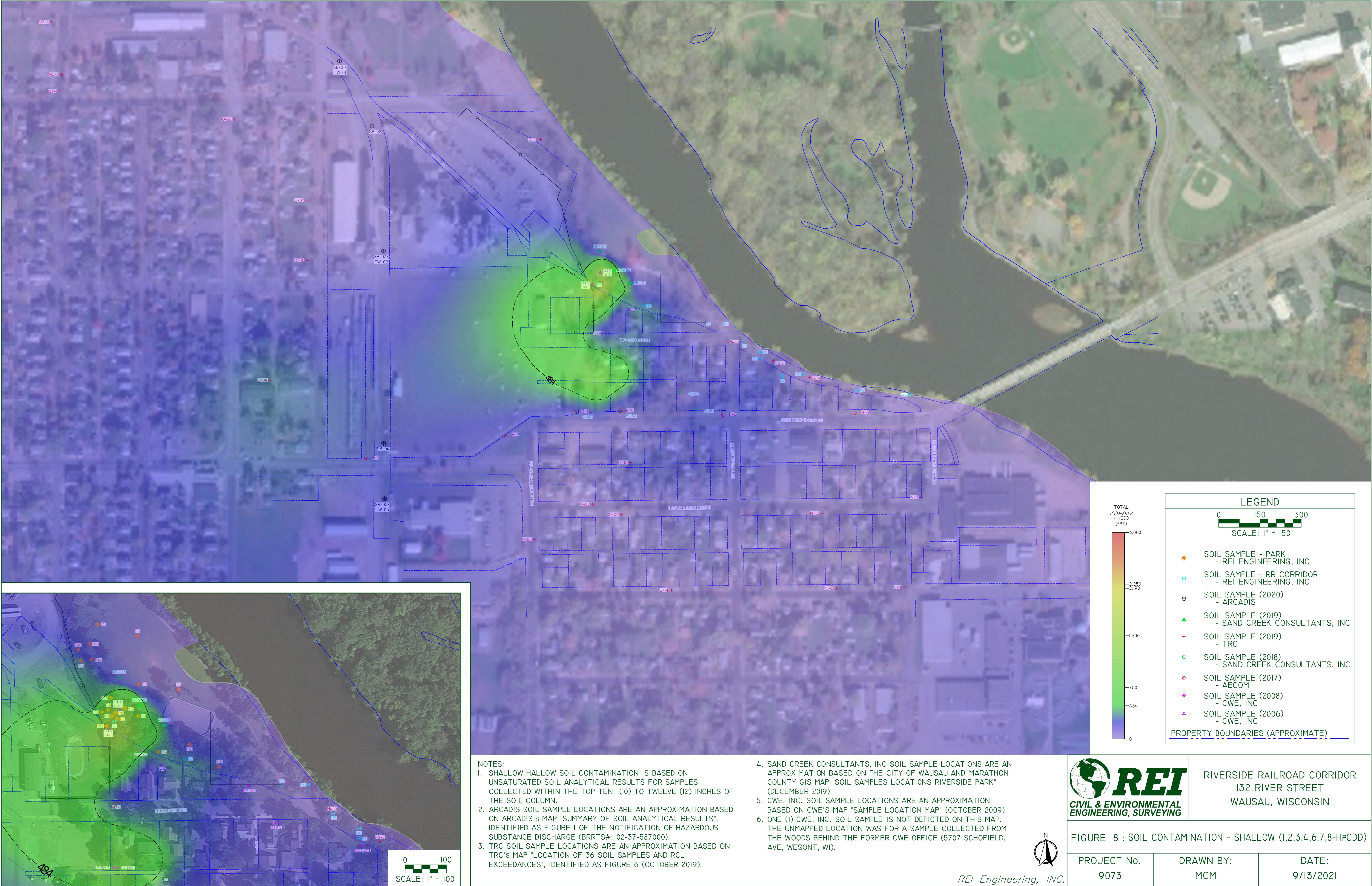
FIGURE 6 : ELEVATION PROFILE A-A'

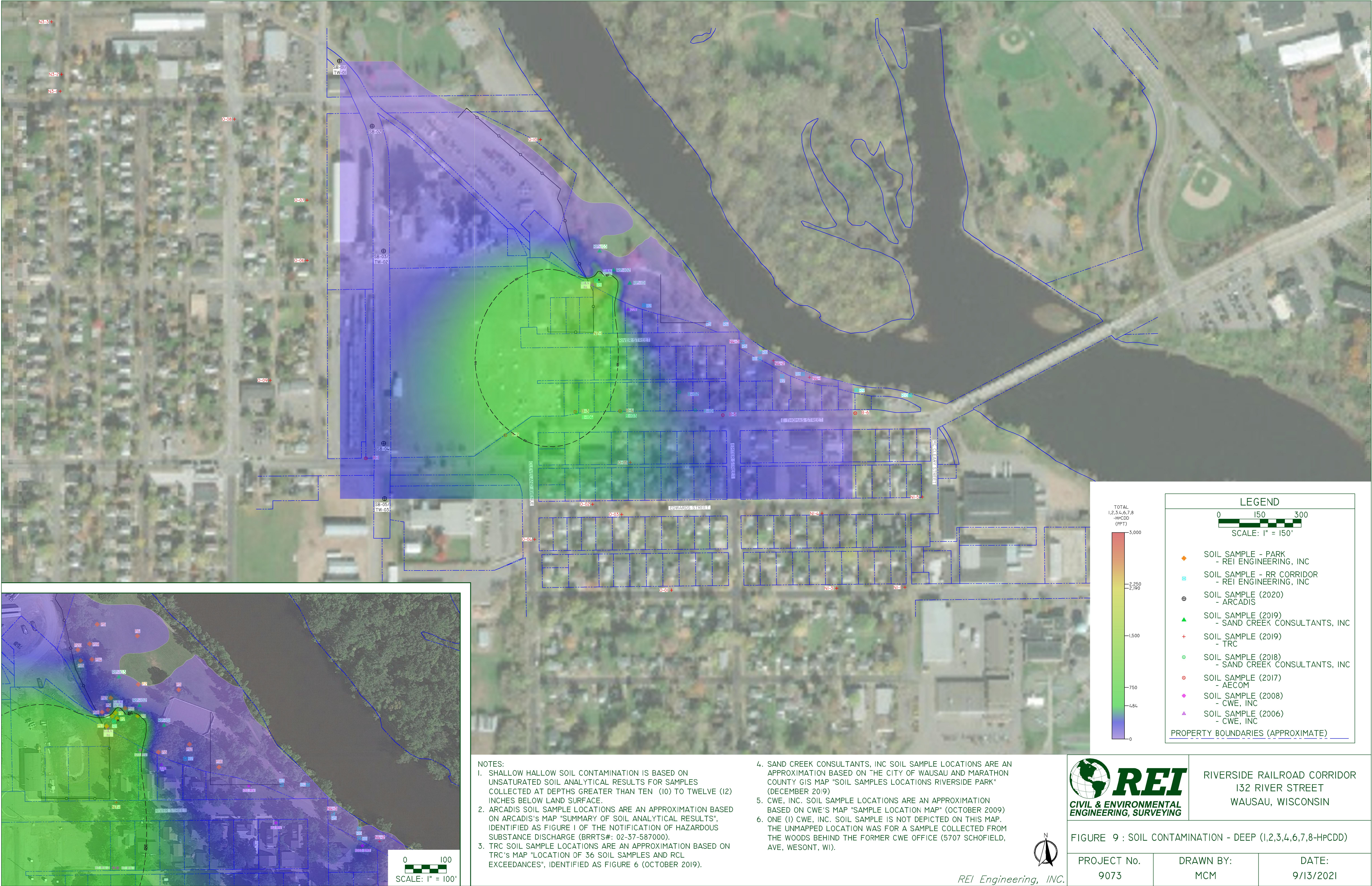
PROJECT No. 9321	DRAWN BY: MCM	DATE: 9/13/2021
---------------------	------------------	--------------------

REI ENGINEERING, INC.

DRAWING FILE: P:\9000-9099\9073 - CITY OF WAUSAU RIVERSIDE RR CORRIDOR\DWGS\9073-Soil CONTAMINATION-NR720.DWG LAYOUT: SITE (24X36) PLOTTED: SEP 13, 2021 - 2:22PM PLOTTED BY: MATTM







DRAWING FILE: P:\9000-9099\9073 - CITY OF WAUSAU RIVERSIDE RR CORRIDOR\DWGS\9073-Soil Contamination-NR720.dwg LAYOUT: SITE (24X36) PLOTTED: MAY 25, 2022 - 1:32PM PLOTTED BY: MATTM



APPENDIX A

MARATHON COUNTY LANDFILL SAMPLING REQUIREMENTS



Protocol 1

<u>Analytical Parameter</u>	<u>Acceptance Criteria</u>
pH	2.5 < pH < 12.0
Total solids	> 40%
Free liquids (paint filter)	0%
Flash point (closed cup)	> 140°F
TCLP Metals ²	
arsenic	< 5.0 mg/l
barium	< 100.0 mg/l
cadmium	< 1.0 mg/l
chromium	< 5.0 mg/l
copper	< 100.0 mg/l
lead	< 5.0 mg/l
mercury	< 0.2 mg/l
nickel	< 35.0 mg/l
selenium	< 1.0 mg/l
silver	< 5.0 mg/l
zinc	< 200.0 mg/l
TCLP Organics ²	
benzene	< 0.5 mg/l
carbon tetrachloride	< 0.5 mg/l
chlorobenzene	< 100.0 mg/l
chloroform	< 6.0 mg/l
o-cresol	< 200.0 mg/l*
m-cresol	< 200.0 mg/l*
p-cresol	< 200.0 mg/l*
1,4-dichlorobenzene	< 7.5 mg/l
1,2-dichloroethane	< 0.5 mg/l
1,1-dichloroethene	< 0.7 mg/l
2,4-dinitrotoluene	< 0.13 mg/l
hexachlorobenzene	< 0.13 mg/l
hexachloro-1,3-butadiene	< 0.5 mg/l
hexachloroethane	< 3.0 mg/l
methyl ethyl ketone	< 200.0 mg/l
nitrobenzene	< 2.0 mg/l
pentachlorophenol	< 100.0 mg/l
pyridine	< 5.0 mg/l
tetrachloroethene	< 0.7 mg/l
trichloroethene	< 0.5 mg/l
2,4,5-trichlorophenol	< 400.0 mg/l
2,4,6-trichlorophenol	< 2.0 mg/l
vinyl chloride	< 0.2 mg/l