*** 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, October 2, 2023 at 4:30pm**
Location:	**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 - September 11, 2023

4 Discussion and Possible Action Reviewing the 2024 Parks, Recreation & Forestry City Budget Allocation

5 Educational Items
A. Park Updates (Athletic Park, Pleasant View, River Edge Trail, Riverlife Concession, Riverside Park Path, Scholfield Park, Sylvan Tubing Hill, Tenth Street Park Path, Oak Island Restroom, Skate Park, Winterization, Park Cleanup and Vandalism)
B. Great Pinery Heritage Waterway Overview
C. Riverside Park Remediation

6 Future Agenda Items -

7 Next Meeting Date - November 6, 2023, at 4:30pm 407 Grant St, Wausau WI 54403 - Council Chambers

8 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 agendized, will be limited to items on the agenda at this time. The messages related to agenda items received prior to the start of the meeting will be provided to the Chair.

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

This Notice was posted at City Hall and transmitted to the Daily Herald newsroom on 9/29/2023 @ 2:30 p.m. Questions regarding this agenda may be directed to Jodi Luebbe, 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

4. Discussion and Possible Action Reviewing the 2024 Parks, Recreation & Forestry City Budget Allocation

Staff has prepared a preliminary operating budget for the City to consider within the guidelines set by the Finance Director. The guidelines were to present a budget with costs to provide the current services. The budget request for 2024 has an increase of 5.5% over the 2023 budget. Increases include 3% in personnel costs, $18,510 (4% each) increase in water, electric, sewer and natural/propane gas, $6,000 increase for gasoline, $1,424 (8%) increase in refuse collection fees, $6,000 increase in registration and tuition due to new CDL training requirements, and $3,399 (5%) increase in insurances. Due to the implementation of workday and the cost to deliver services, $22,383 was included in the budget for city park services completed by the county such as bill paying, financial reporting, employee recruitment and hiring. Incremental increases/decreases in a handful of other expenditures were also completed based on past budget numbers, efficiency in service delivery or reduction of the service.

Revenue was increased by 6% based on past final revenue numbers, increased fees, increased demand and to offset costs of services.

Due to the increased cost of equipment, the County Human Resources and Finance Committee has recommended a 20% increase to rolling stock for 2024 as part of the budget process. This is the first increase to this fund in 10+ years. Per the City Resolution dated October 31, 1974 that created the joint City-County Park Department under the County, 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. For this machinery and equipment, the City and County have each allocated $173,460 to rolling stock each year. The increase of 20% to the department's rolling stock allocation would be $36,220 bringing the new cost for each entity to $209,680.

The budget will be presented to the Finance Committee and City Council during the budget process.

5A. Park Updates

Athletic Park:
Safety net will be replaced this fall.
First base concession area pavement has been removed for plumbing adjustments. New asphalt will be installed once the plumbing work is complete.

Pleasant View roof has been replaced and the chimney repaired.

River Edge Trail north of Bridge St. will have the pavement replaced by DPW.

Riverlife Concession Stand HVAC ductwork repair/redirect to be completed this fall. This is the recommendation to allow the HVAC unit more space and airflow to work properly.

Riverside Park ADA path is complete to the playground (paving by DPW)

Scholfield Park:
Fountain has been replaced and plumbing to bring meter has been brought above ground.
Four individuals have been fined for illegal dumping.

Sylvan Tubing Hill magic carpet was installed at the hook-up locations.

Tenth Street Park an ADA path is complete to the playground (paving by DPW).

Oak Island Restroom will be removed at the end of October. The concrete slab will be installed this fall and the restroom constructed over the winter.

Skate Park construction documents are 90% complete and are being reviewed by staff. The park construction will be bid during the winter for spring 2024 construction. Staff will determine how much of the concrete work can be completed in house. This will be determined with the bid results.

Winterization: Water winterization is underway and many fountains and bathrooms will be closed beginning in mid-October.

Park Cleanup and Vandalism: Encampments at Brockmeyer, Eau Claire River Conservancy, Farmers Market, Hammond, Pleasant View, and Oak Island. Hammond Park and Kickbusch Plaza have had an increase in the amount of vandalism and garbage left in the park requiring multiple cleanups per week by staff.

5B. Great Pinery Heritage Waterway Overview

The Wausau & Marathon County Parks & Recreation Foundation is proud to complete that the **Great Pinery Heritage Waterway (GPHW)** that has been designated as Wisconsin's 21st water trail and the first such water trail in Central Wisconsin. The GPHW paddling trail starts its journey at the historic Hat Rapids Dam in Oneida County and finishes its travels at the Lake DuBay Dam in Portage County. The scenic, urban, and historical water trail is 108 miles in length, the 4th longest water trail in the state. The GPHW connects today's paddler with the history, events and people of the river that runs through our heartland from ancient times to the 20th century. Staff will provide an overview of the trail.

5C. Riverside Park Remediation

Attached to your packet are the testing results for Riverside Park following the completion of the remediation work.

DRAFT

CITY OF WAUSAU – PARKS AND RECREATION COMMITTEE MEETING MINUTES

Date/Time: September 11, 2023 at 6:00 p.m. Location: Council Chambers, City Hall

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

Others Present: Jamie Polley-Parks Director, Andy Sims-Parks Operations Superintendent, Thomas Johansen, Aaron Kowalski-Kowalski Masonry

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 at 6:11pm.

2. Public Comment or Suggestions – none brought forward.

3. Approve Minutes – August 7, 2023 – **Motion** by Larson, second by Lukens to approve the Park and Recreation Committee draft August 7, 2023 minutes. Motion **carried** by voice vote, vote reflected as 5-0.

4. Discussion and Possible Action of Petition Submitted for Repair of Stewart Park – Staff had been asked to provide more specifics from the petitioners and then the estimates. Tom Johansen, 917 McClellan Street, spoke about his concerns regarding the cracks in the amphitheater wall. He felt petitioners wanted the wall to look nice, like the way it was, and not get too deteriorated. He discussed the $4,600 quote from Kowalski Masonry and thought it was a good idea. Johansen felt that the wall should be evaluated every year. He mentioned the possibility of grant funds available through the Community Foundation. Polley said that staff does some work on the wall and relies on Kowalski Masonry for larger work. If larger projects don't get funded, anything under $30,000 can go on a small project list through the Department's budget. Staff reached out to Kowalski Masonry who provided two quotes. Aaron Kowalski said the $4,600 quote would do some masonry repairs to the wall and seal it up to prevent any more water from going into the caps. The wall would go through a freeze/thaw cycle and then should be re-evaluated in the spring. The cracks will be monitored to see which way they are moving. He didn't think there was any foundation issue but they did find that water drains towards the wall on the east side. The wall has tubes through the bottom where water is supposed to drain but there is some vegetation between the concrete and the wall. The vegetation could be cleaned out, but as a secondary safety net the Department could run drain tile which would prevent water from hitting the wall. Johansen thought if drain tile was sufficient, people would appreciate the hasta plants being left there. Kowalski noted the higher quote was for a complete wall rebuild. Polley said at this time the recommendation from Kowalski is to the $4,600 worth of work and then evaluate the wall in spring. Most likely a cap will be recommended. That request will need to come from Committee but shouldn't be made until the wall is evaluated in the spring for the actual recommendation. Polley said there are enough funds in the Department's small projects budget to complete the work for $4,600. **Motion** by Watson, second by Lukens to approve funding $4,600 out of the Park Department's small projects budget. Motion **carried** by voice vote, vote reflected as 5-0.

5. Discussion and Possible Action Supporting Ice Arena Feasibility Study – Polley explained that one component of the Westside Masterplan is the County ice arena. The original sheet of ice in the arena was built in 1974 and at that time the refrigeration equipment and hockey boards were bought used from Eagle River. Nothing new was added when the second sheet was put in other than the refrigeration extension. The original compressors are still running both sheets and the Department limps along every year to make the ice and keep the arena going. The ice arena is a very important venue to the community, the area schools, Marathon County Youth Hockey, and the Cyclones. It brings in teams, spectators and visitors to the area. It's a larger community asset then just a County building and also benefits the City.

The first step of a new arena is to do a feasibility study. The study will look at the needs of the community, talk to all current users, look at potential future uses and economic impact. It will also look at whether the County or a different user group should be doing the ice arena. The cost of the feasibility study is $32,500. The completed study will have a recommendation, a possible rendering of the facility, and a cost estimate. It will then be decided whether or not the County will build it. The County Board has been very clear if this facility moves forward it would have to be a public/private partnership because it doesn't have the means to fund 100% of a facility like this. For the feasibility study Polley has a $5,000 commitment from youth hockey and $5,000 commitment from the Wausau School District.

It's being brought to this Committee because there are City and County gift accounts which is money that comes to the Department that is not levy funded. Some of it is earmarked for specific projects that donors have given for. There is also trust fund money given that is marked for enhancements of parks facilities within the County and City. Polley usually doesn't need authority to spend money in this account. Polley received support for this from the County Park Commission, Environmental Resource Committee, and the Human Resources/Finance Committee to use around $10,500 from the County gift account. It was not going to go to County Board until after the school district and this meeting. She is asking for this Committee's support to use $6,000 or possibly more from the City gift account. Polley wanted to know whether Committee supported using the funds, she doesn't need authority to use them but if they didn't support it she would try to find the funding elsewhere. Lukens said she would support this from an economic development standpoint and it may also help give local youth something to do. Kilian supported Polley's efforts and thought it could be an asset to the City but felt the County wasn't always willing to step up when it could to assist the City with certain needs so he had a hard time with putting City money towards this County effort. **Motion** by Larson, second by Lukens to support the ice arena feasibility study utilizing the City gift account. Motion **carried** by voice vote, 4-1 with Kilian as the dissenting vote.

6. Educational Items

A. Park Updates – Barker Stewart Island – goats are back for their second round and already have made a big impact on the invasive species on the island. They have been enjoying the buckthorn. Vandalism – there continues to be a high frequency of illegal dumping within the parks. A few dumpsters that are utilized seasonally have been removed. Also, the restrooms by the farmers market are temporarily closed due to damage and people trying to stay in the restrooms. Skate Park – contract is complete, and Spohn Ranch will be finalizing the construction plans and bid documents. The goal is to determine the ability for contractors to complete the work yet this year or to see if it will be a Spring 2024 project. Great Pinery Heritage Waterway Trail – the Wausau & Marathon County Parks and Recreation Foundation has developed a water trail on the WI River. Each kayak launch/boat landing will contain a sign with historical information of the area and a map of the trail and current segment of the trail. The first of these signs has been installed at Riverlife Park. Ball Diamonds – Irrigation installation is in progress at Schulenberg and Memorial Parks (private funding) Pleasant View – New shelter roof is substantially complete. Sylvan – Exterior of shelter has been repainted and new carpet was installed on the tube hook-up area. Whitewater Shelter – New roof has been installed. Vistas Clearing – will be starting soon throughout the city.

7. Future Agenda Items – Riverside Park Remediation Summary

8. Next Meeting Date – The next regular scheduled meeting will be at 4:30pm on October 2nd in Council Chambers at City Hall, 407 Grant St., Wausau WI 54403.

8. Adjournment – **Motion** by Watson, second by Lukens to adjourn at 7:10pm. Motion **carried** by voice vote, vote reflected as 5-0.

Parks, Recreation and Forestry Dept
City Park Subfund

2023-2024 Budget Comparison

	2024 Requested	2023 Approved	$ Difference	Increase/Decrease
Personnel Services	$ 2,461,612.00	$ 2,343,399.00	$ 118,213.00	5.04%
Contracted Services	$ 494,607.00	$ 466,218.00	$ 28,389.00	6.09%
Materials and Supplies	$ 491,283.00	$ 457,275.00	$ 34,008.00	7.44%
Insurance and Fixed Costs	$ 80,390.00	$ 76,991.00	$ 3,399.00	4.41%
Total Expenses	$ 3,527,892.00	$ 3,343,883.00	$ 184,009.00	5.50%
Less: Revenues	$ (389,170.00)	$ (368,742.00)	$ (20,428.00)	5.54%
Net Levy	$ 3,138,722.00	$ 2,975,141.00	$ 163,581.00	5.50%

PRF Department
2024 City Small Projects List

Riverside Park; Steps Rebuild **$3,200.00**
Repair masonry and rebuild railing

Oak Island Park; Bridge to Fern Island **$7,500.00**
Install decorative string lighting

Fern Island; Limestone Trail **$10,000.00**
Removal of existing granite trail material and replace with an approved limestone trail material for improved compaction, maintenance, appearance, and accessibility.

City Playgrounds; Engineered Wood Fiber **$5,000.00**
Replace existing sand surface at Westview Park and River Highlands Park Playgrounds with EWF. Acquire additional EWF material to top-dress up to appropriate safety grades at existing playgrounds with same material.

Asphalt Path and Trail Corrections; ADA Compliance **$15,000.00**
Several smaller trail corrections required (grade changes, widths, or not existent connector sections) as identified in City of Wausau ADA audit. Identified areas include Gilbert Park, Oak Island Park, Riverside Park and Reservoir Park.

3M Park; Trail Reconstruction (Apply for grant) **$28,000.00**
Total reconstruction of existing trail system due to rerouting from playground installation and removals along with improper widths and grades as identified in City of Wausau ADA audit.

Sylvan Recreation Area Chalet; Basement Entry/Exit Doors **$11,500.00**
Replace existing metal double doors with commercial grade fiberglass system.

Brockmeyer: Press Box Replacement **~$15,000.00**
Current press box is at end of life.

Brockmeyer: Backstop Replacement **~$10,000**
End of life

Riverlife Concession: Fencing **???**
Replace existing fencing with decorative alternative that increases airflow to rooftop heating/cooling unit for better performance.

Memorial Pool: Slide Maintenance **$17,000.00**
Interior repairs and maintenance on both waterslides.

Barker Stewart Island: Vegetation Management Utilize goats for continued invasive vegetation management.	**$7,000.00**
City Pools: Pool Slide Inspections Mandatory inspections on pool slides.	**$5,000.00**
Riverlife Sign Installation Install sign at south end of Riverlife Park	**$10,000.00**
Athletic Park Column Caps (2023?)	**$26,996.00**
	$171,196 (only $ listed)
If grant for 3M -$28,000 & AP Column Cap 2023 -$26,996	**=$116,200**

Wausau & Marathon County
Parks & Recreation Foundation

PRESS RELEASE

MEDIA CONTACT:
William Bertram, President of Wausau & Marathon County Parks & Recreation Foundation
715-212-8188; william.c.bertram@gmail.com

FOR IMMEDIATE RELEASE

Wisconsin's Newest Water Trail Runs Through the Heart of Our State

According to the Department of Natural Resources (DNR), "*Wisconsin is blessed with more than 15,000 lakes, 43,000 miles of rivers and 800 miles of Great Lakes shoreline, there is no shortage of paddling opportunities in Wisconsin. Water trails provide a network of access points, resting places and attractions for users of watercraft on lakes and rivers. In Wisconsin, some trails are interpretive routes, some take paddlers to campsites, some connect communities, but all allow visitors to experience the natural beauty of our state by this original mode of transportation.*" The DNR listed 12,600 rivers and streams in our great state and of those rivers and streams only 20 rivers are listed on their website as state designated waterways and trails.

The *Wausau & Marathon County Parks & Recreation Foundation* is proud that the **Great Pinery Heritage Waterway (GPHW)** has been designated as Wisconsin's 21st water trail and the first such water trail in Central Wisconsin. Trail information can be found at Water Trails in Wisconsin | | Wisconsin DNR.

The GPHW paddling trail starts its journey at the historic Hat Rapids Dam in Oneida County and finishes its travels at the Lake DuBay Dam in Portage County. The scenic, urban, and historical water trail is 108 miles in length, the 4th longest water trail in the state. The GPHW connects today's paddler with the history, events and people of the river that runs through our heartland from ancient times to the 20th century.

In addition to the creation of the river trail, a comprehensive website highlights the trail's access points and its amenities has been created and will be updated as additional amenities come online, this can be found at, www.greatpinery.com.

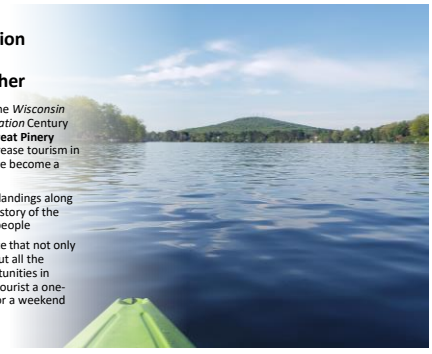
Communities and organizations up and down the river have embraced this unique project by adding key assets such as ADA approved launches that have opened the waterway to the disabled and elderly, making the Wausau area, *"a paddling destination like no other in the Midwest."* Two additional trails are underdevelopment by the Parks Foundation that will create additional water venues to the enjoyment of paddlers throughout the country, making Wausau the preferred base camp for paddling adventures from whitewater rafting on the Wolf River to small streams such as the Lower Big Rib and Eau Claire Rivers that offer a multitude of experiences for the recreational paddler to the adrenaline junkie.

Key funding was provided by the Wausau and Marathon County Parks and Recreation Foundation, B.A. & Esther Greenheck Foundation, the Dwight and Linda Davis Foundation, the Dudley Foundation, the Judd Alexander Foundation, Merrill Community Foundation, and the Community Foundation of North Central Wisconsin along with individual donors such as the Hadley Family Fund.

If you would like to donate to the water trail, please go to our website at Great Pinery Heritage Waterway Post (wmcpf.org), scroll to the bottom of the page and hit donate. The Wausau & Marathon County Parks Foundation is a 501(c)(3) non-profit organization.

Creating a destination for paddlers in the Midwest like no other

- Creating a river trail using the *Wisconsin Valley Improvement Corporation* Century Trail and branding it the **"Great Pinery Heritage Waterway"** to increase tourism in Central Wisconsin so that we become a destination for paddlers
- Create historical signage at landings along the trail length that tell the story of the river, our heritages and its people
- Create a one-of-kind website that not only highlights our water trails but all the outdoor recreational opportunities in Central Wisconsin offering tourist a one-stop experience to "come for a weekend and stay for a lifetime"



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Source: www.bls.gov

Tourism is the fastest growing component of the Wisconsin economy from November '20 to November '21. Up 16% in this timeframe

Tourism is now the 4th largest segment of our state's economy, larger than dairy, lumber, & construction

Tourism is the 2nd fastest growing segment of the Wausau economy from November '20 to November '21. Up 3.1% in this timeframe

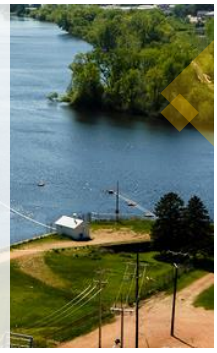
2

What are Water Trails?

Water trails are marked routes on navigable waterways such as rivers and lakes for recreational use. They allow access to waterways for non-motorized boats and sometimes motorized vessels, innertubes, and other craft.

Water trails not only require suitable access points and take-outs for exit but also provide places ashore to camp and picnic, and other facilities for boaters.

Source: www.michiganwatertrails.org



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Why tackle this project!

- **Uniquely ties the Wisconsin River to its history as a historical waterway for Native Americans; Furriers and Missionaries; Logging and Pulp & Paper Industry, Legends & Lore of the rivers. Increase awareness of our historical rivers and the significant roles they played in the development of America's Heartland.**
- Complements Greater Wausau Chamber of Commerce's Master Plan for outdoor recreation
- Complements Wausau's Whitewater Park and builds an awareness of Central Wisconsin as a center for outdoor recreation
- Complements Weston's Lower Eau Claire Water Trail
- Complements the Master Plan for Rib Mountain as a destination for bikers, skiers and paddlers to recreate in Central Wisconsin, driving tourism and hotel stays
- May increase the potential for water-based businesses to locate in Central Wisconsin to support the needs of kayakers, canoeists and paddleboarders
- Marathon & Lincoln counties become a premier destination for kayakers, canoeist and paddleboard enthusiasts
- Positive economic impact to the Central Wisconsin area. Increase use of our county parks, creates a sense of place and promotes good health through outdoor recreation
- Majority of work already done by Wisconsin Valley Improvement Corporation. We are providing branding, signage, and an all-inclusive outdoor recreation website that promotes Central Wisconsin as the "Outdoor Recreation Capital of Wisconsin"
- Expand trail system to create the longest trail system in the Midwest (future). Complements Lower Wisconsin Trail at Portage and the Fox River Heritage Trail, making this one of the longest waterways in USA

4

STRATEGIC ACTION PLAN

INITIATIVE 1.1 THE WAUSAU BRAND

Re-brand the Wausau region as an outdoor recreation mecca

STRATEGIES AND ACTIONS

1.1.1. Launch an Outdoor Recreation Task Force that brings together innovators in the region's outdoor recreation industry to discuss opportunities for new events, destinations, and other business opportunities that leverage the region's large menu of outdoor amenities.

1.1.2. Support Granite Peak Ski Area in its expansion projects. Encourage the growth of the resort and expansion of its facilities. Partner with the ski Area to explore development of surrounding properties with supportive uses (lodging, housing, retail/restaurants) that draw a higher volume of visitors into the region and encourage them to stay longer. Explore opportunities to develop a full-service resort hotel in conjunction with Granite Peak.

1.1.3. Invest in the enhancement and development of extreme sports, outdoor recreation, and related attractions throughout Marathon County. This includes curling, whitewater rafting, hiking and biking trails, and other amenities that attract outdoor sports enthusiasts.

1.1.4. Build awareness of the Wausau region as a destination for the business side of extreme sports and outdoor recreation.

1.1.5. Take ownership of the Wausau region's online and social media presence and play an influential role in traditional media channels. Actively manage and update the City of Wausau and Marathon County websites and other online content, such as Wikipedia, to ensure they include accurate and positive information. These sites are often the first (and sometimes only) source of information people use to learn about a community before a potential visit

5

Executive Summary

- In terms of specific paddlesports, recreational kayaking continues to grow in popularity and seems to be replacing many Americans' desires to canoe. **Stand up paddling, on the other hand, doesn't have nearly as high a participation rate as either canoeing or recreational kayaking, but its popularity has soared in recent years**, gaining 1.5 million participants since 2013.
- **81% of paddlers are on the water 4 hours or less, 11% - 8 hours or less and 8% will overnight.**
- **Paddlers like a variety of water and will typically come to an area for <u>three days, paddling for two and biking and hiking for one</u>, and want local accommodations**
- Paddling participants tend to be Caucasians who have attended or graduated from college. They are best represented by an average annual household income of at least $75,000, a demographic characteristic that has steadily climbed since 2014.
- Males make up a slightly larger percentage of paddlers than females. Male participation, however, is declining at about one percent per year, and female participation is increasing by the same amount.

Source: 2019 Special Report on Paddlesports & Safety – Outdoor Recreation Foundation

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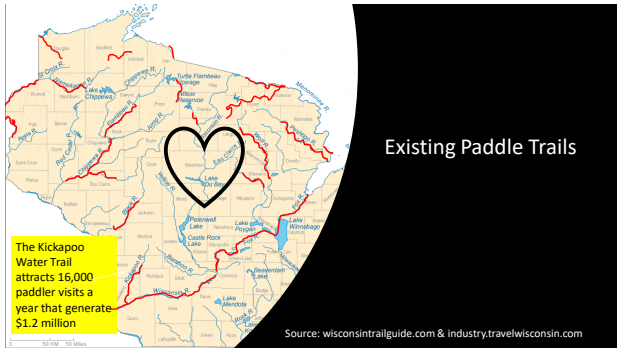

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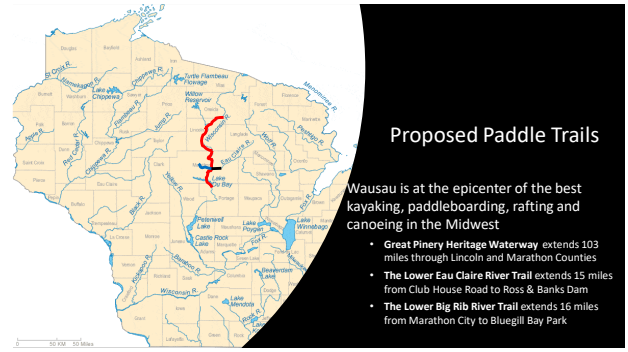

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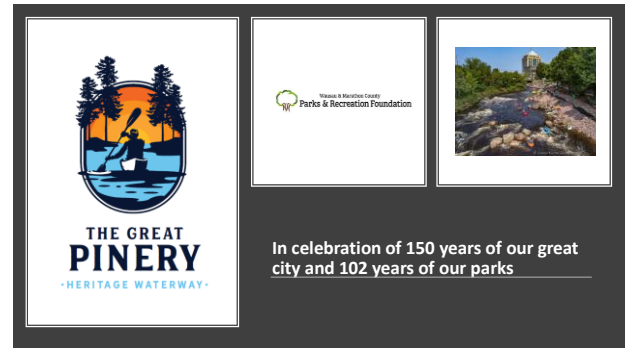

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Project covers four counties:

Trail Head - Hat Rapids – Mile 89
Trail End – Lake DuBay Dam – Mile 190
Landings – 1 in Oneida County, 15 in Lincoln County, 39 in Marathon County, 2 in Portage County

- **Trail Designer:** Wisconsin Valley Improvement Company
- **Storytelling:** Marathon County Historical Society, Merrill Historical Society, and Tomahawk Historical Society with support from the Wisconsin Historical Society & UWM
- **Mapping:** North Central Wisconsin Regional Planning Commission
- **Project Sponsor:** Wausau and Marathon County Parks and Recreation Foundation
- **Project Owners:** Wausau and Marathon County Parks Department, Merrill Parks Department, Lincoln County Parks & Forestry Department, Municipalities up & down the rivers, Public Utilities & Private Entities
- **Website:** Central Wisconsin Visitors Bureau

ONLY TALKING ABOUT MARATHON COUNTY

14

25 Landings & Stories that tell the history of the rivers that runs through us

Landing/Portage	River/Lake	Milage	Story
Wisconsin River Forest	Wisconsin	147	Trappe River or the Road to Jenny (From Wausau)
Brokaw Mill	Wisconsin	153	Brokaw Mill & Wausau Paper History
Gilbert Park	Wisconsin	155	The 1912 Flood
Schofield Park	Wisconsin	155	108-year history of Marathon Electric
RiverLife Park	Wisconsin	158.5	100 plus year history of Wausau Chamber
RiverLife Park	Wisconsin	158.5	Notable Businesses in Wausau (Janke Bookstore)
Wausau Dam Portage	Wisconsin	160	WPS & Wausau Dam History
Oak Island	Wisconsin	160.3	The First Generation of the Wausau Group (Lumbermen)
Memorial Park	Wisconsin	162	History of Lake Wausau
D.C. Everest Park	Lake Wausau	162	D.C. Everest and his Legacy
Bluegill Bay Park	Lake Wausau	163	Alexander Airport
Kort Street Landing	Lake Wausau	165	History of the Greenheck Corporation
Domtar Portage	Lake Wausau	166	100 + year history - Marathon Paper & Mill
River Street Park (future)	Wisconsin	166.2	104-year history of Rothschild (new landing at Military Street)
Canoe Portage Park	Wisconsin	176	100 + history - Mosinee Paper & Mill
Chuck's Boat Landing	Wisconsin	176.4	231-year History of Mosinee
Lake Dubay Lion's Park	Lake Dubay	186	History of Lake Dubay
Park Road Landing	Lake Dubay	190	DuBay and the legacy of the Fur Trade
Lake Dubay Dam Portage	Lake Dubay	190.1	Harnessing the WI River
River Park/Mosinee	Wisconsin	176	Chief Mosinee and the Native Peoples
Trails End	Big Rib River	TBD	Pinery & Logging History
Gulliver's Landing (Rookery)	Big Rib River	TBD	116-year History of Village of Rib Mountain (landing moving)
Yellow Banks	Eau Claire	TBD	History of the Eau Claire River
Drott Street Landing	Eau Claire	TBD	117-year history of City of Schofield

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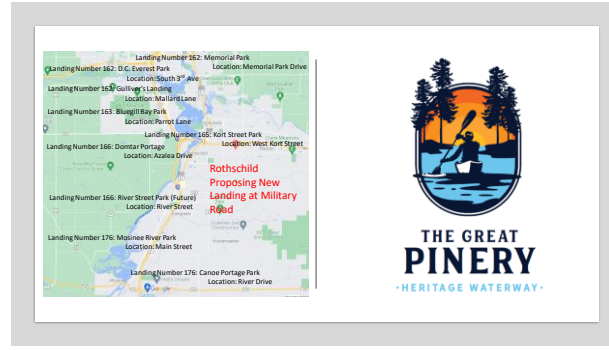
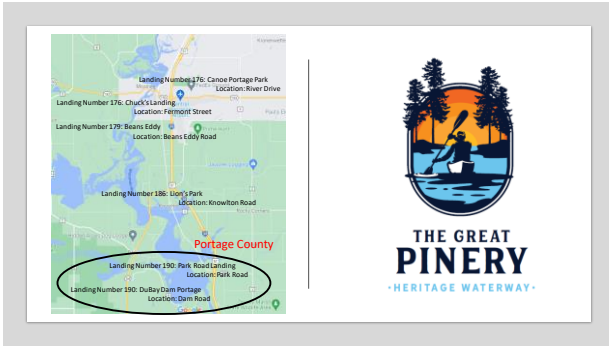
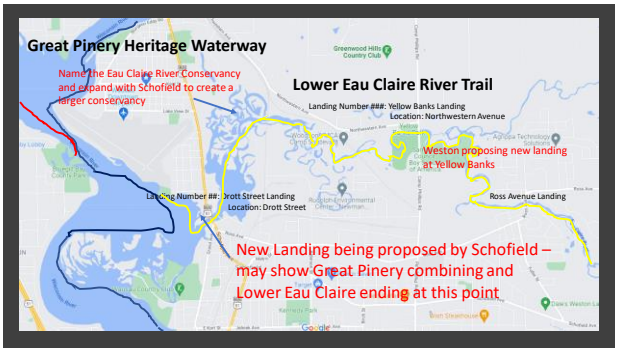


17



18

19



20

Branding key landings with historical storytelling and tying back to the Marathon County Historical Society's website via a QR code for additional storytelling

Opposite Side of Signage

Front Side

40" wide by 30" high
Header: 3"
Story Telling Board: 46" wide by 10" high
Font Size .3"

21

Existing Water Trail Map of Lower Eau Claire River

Created by North Central Wisconsin Regional Planning Commission

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Major Community Partners & Individuals that have endorsed project

- Wisconsin Public Service/WE Energy
- Guppy's Lakeside Grill
- Wisconsin Valley Improvement Company
- Lincoln County Parks & Forestry
- City of Merrill
- City of Merrill Parks Department
- Wausau & Marathon County Parks, Recreation & Forestry
- Marathon County Parks Commission
- Lake Wausau Association
- Village of Maine
- Town of Rib Mountain Parks Commission
- Town of Rib Mountain
- City of Mosinee
- City of Schofield
- Village of Rothschild
- Town of Knowlton
- Village of Weston Parks Department
- Village of Marathon City
- Central Wisconsin Visitors Bureau
- Wausau River District
- Wisconsin Department of Natural Resources
- IRONBULL, Inc.
- North Central Wisconsin Regional Planning Commission
- Merrill Historical Society
- Lake Dubay Association
- Dubay Lions Club
- Greater Wausau Chamber of Commerce
- Wisconsin Department of Tourism
- Wausau Whitewater Kayak Corporation
- Marathon County Historical Society
- Wausau & Marathon County Park and Recreation Foundation
- Peter Biermeier – Retired Director of Programs for Wisconsin DNR, Consultant
- Baker-Tilly Consulting – Cheryl Stang – Vice President Marketing

Big Thumbs Up

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DRAWING FILE: P:\9000-9099\9073 - CITY OF WAUSAU RIVERSIDE RR CORRIDOR\DWGS\9073-DETAILED SITE.DWG LAYOUT: PARK CULVERT CLOSEUP PLOTTED: AUG 29, 2023 - 4:55PM PLOTTED BY: MATTM

CAMP 1
WEATHER STATION

REI TRAILER

CAMP 2

CULVERT
(FORMER)

CULV. OUT.

CULV. IN.

LF1A' LF2A' LF3A' LF4A'

LF1A LF2A LF3A LF4A

I20 RIV

LEGEND

0 30
SCALE: 1" = 30'

- SOIL SAMPLE - EXCAVATION SAMPLE - REI ENGINEERING, INC
- SOIL SAMPLE - WASTE DETERMINATION - REI ENGINEERING, INC
- SOIL SAMPLE - PARK - REI ENGINEERING, INC
- SOIL SAMPLE - RR CORRIDOR - REI ENGINEERING, INC
- SOIL SAMPLE (2019) - SAND CREEK CONSULTANTS, INC
- SOIL SAMPLE (2008) - CWE, INC
- SOIL SAMPLE (2006) - CWE, INC
- UTILITY POLE
- EXCAVATION TO 1 FOOT BLS
- EXCAVATION TO 4 FEET BLS
- TEMPORARY SAFETY FENCING
- OVERHEAD UTILITIES
- SANITARY SEWER LINE
- ABANDONED RAILROAD TRACKS
- PROPERTY BOUNDARIES (APPROXIMATE)

NOTES:
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.

REI ENGINEERING, INC.
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

RIVERSIDE RAILROAD CORRIDOR
132 RIVER STREET
WAUSAU, WISCONSIN

FIGURE 2 : DETAILED SITE MAP - PARK CULVERT

PROJECT No.	DRAWN BY:	DATE:
9073	MCM	8/29/2023

REI Engineering, INC.

Table 1a
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Park
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

					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	40321-76-4	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 [T]	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 Eqivalent 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 horizion, generally 4 to 6 inches below land surface.
* = Area of sample removed during July 2023 remedial excavation.

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:
[T] = Estimated maximum concentration

Italic	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
Underlined	= Exceeds NR720 Industrial Not-To-Exceed DC RCL

Table 1b
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Park
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	40321-76-4	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 Eqivalent Calculations
[1] = TEQ values calculated using the U.S. EPA 2007 values.
* = Excavated during redevelopment
* = Area of sample removed during July 2023 remedial excavation.

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 confimation 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

Italic	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
Underlined	= Exceeds NR720 Industrial Not-To-Exceed DC RCL

Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Railroad Corridor
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

REI CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

					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 J, EMPC	<0.038
1,2,3,7,8-PeCDD	40321-76-4	ng/kg	4.93	22.3	- -	<0.15	<0.0097	<0.11	<0.14	<0.10	0.99 J, EMPC	<0.047
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	- -	0.85 J, B	0.27 J, B	0.29 J, B, EMPC	0.46 J, B	<0.033	2.7 J	0.20 J, EMPC
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	- -	1.4 J	<0.034	0.18 J, EMPC	1.9 J, B	<0.042	9.3	<0.048
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	- -	0.91 J, B	<0.028	<0.030	0.87 J, B	0.082 J, B	5.2 J	<0.044
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	- -	21 B	0.46 J, B	0.95 J, B, EMPC	67 B	3.5 J, B	230 B	0.11 J, B
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	- -	130 B	2.7 J, B	6.7 J, B, EMPC	850 B	41 B	1,800 B	1.3 J, 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 J, B	0.46 J, B, EMPC	12 B, EMPC	0.43 J, B, EMPC	68	0.20 J, EMPC
Total HpCDD	- -	ng/kg	- -	- -	- -	40 B	0.98 J, B	2.1 J, B, EMPC	360 B	21 B	560 B	0.28 J, B, EMPC
Furan Congeners												
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	- -	0.6 J	<0.071	<0.084	<0.11	<0.063	0.78 J, B	0.066 J, 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 J, EMPC
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	- -	0.52 J, EMPC	<0.053	<0.071	<0.10	<0.059	1.6 J	<0.038
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	- -	0.85 J	<0.041	0.2 J	0.32 J, EMPC	<0.055	4.4 J	<0.070
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	- -	0.89 J	<0.036	0.23 J, EMPC	0.33 J	<0.049	3.7 J	<0.062
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	- -	0.82 J, EMPC	<0.030	0.20 J	0.33 J	<0.041	3.0 J	<0.037
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	- -	0.44 J	<0.028	0.29 J	<0.13	<0.042	<0.41	0.049 J
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	- -	6.5 B	0.18 J, B, EMPC	0.43 J, B	8.2 B	0.39 J, B, EMPC	69 B	0.18 J, B, EMPC
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	- -	0.71 J, B, EMPC	<0.022	0.21 J, B, EMPC	0.66 J, B	<0.030	3.1 J	<0.035
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	- -	13 B	0.79 J, B	1.1 J, B	40 B	1.8 J, B, EMPC	140 B	0.52 J, B, EMPC
Total TCDF	- -	ng/kg	- -	- -	- -	5.3 EMPC	<0.071	<0.084	<0.11	<0.068	23 EMPC	0.11 J, B, EMPC
Total PeCDF	- -	ng/kg	- -	- -	- -	17 EMPC	<0.053	<0.21	1.0 J, EMPC	<0.17	69	0.16 J, EMPC
Total HxCDF	- -	ng/kg	- -	- -	- -	16 EMPC	<0.041	0.91 J, EMPC	7.9 EMPC	0.21 J, EMPC	96	<0.051
Total HpCDF	- -	ng/kg	- -	- -	- -	17 B, EMPC	0.32 J, B, EMPC	0.98 J, B, EMPC	31 B	1.3 J, B, EMPC	180 B	0.18 J, 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 Eqivalent Calculations
[1] = TEQ values calculated using the U.S. EPA 2007 values.
* = Area of sample removed during July 2023 remedial excavation.

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
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

Italic	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
Underlined	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

Table 1d
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Railroad 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*	*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	40321-76-4	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, J, EMPC	1.2 P, J, 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	<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 Eqivalent Calculations
[1] = TEQ values calculated using the U.S. EPA 2007 values.
* = Area of sample removed during July 2023 remedial excavation.
* = 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 confimation 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

Italic	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
Underlined	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

Table 1e
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Park
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

					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	40321-76-4	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, J, 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, J, 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	- -	28	54	37	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
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TEQ = Toxicity Eqivalent Calculations
[1] = TEQ values calculated using the U.S. EPA 2007 values.
* = Area of sample removed during July 2023 remedial excavation.

TCDD: Tetrachlorodibenzo-p-dioxin
PeCDD: Pentachlorodibenzo-p-dioxin
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Laboratory Qualifiers and Notes:
J = Estimated Value
EMPC = Estimated Maximum Possible Concentration
P = PCDE Interference
I = Interference Present
V = Results verified by confimation analysis
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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

Italic	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
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Table 1f
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Park
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	40321-76-4	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, J, 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)
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[1] = TEQ values calculated using the U.S. EPA 2007 values.
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Laboratory Qualifiers and Notes:
J = Estimated Value
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I = Interference Present
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E = Exceeds calibration Range
Results reported on a dry weight basis and are valid to no more than 2 significant figures

Italic	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
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Table 1g
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Park
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

REI
CIVIL & ENVIRONMENTAL ENGINEERING, SURVEYING

					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*
					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	40321-76-4	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	- -	110	130	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	- -	108	84	12	16	9.6	21	13	11	2.9	15	16	14	1.2

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

Italic	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
Underlined	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

Table 1h
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Park
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	40321-76-4	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 Eqivalent Calculations
[1] = TEQ values calculated using the U.S. EPA 2007 values.
* = Area of sample removed during July 2023 remedial excavation.

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 confimation 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

Italic	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
Underlined	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

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Table 1i
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Park
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

					Collected By-->	REI Engineering, Inc.											
					Date-->	*9/13/2022*	*9/13/2022*	*9/13/2022*	*9/13/2022*	*9/13/2022*	*9/13/2022*	*9/13/2022*	*9/13/2022*	*9/13/2022*	*9/13/2022*	*9/13/2022*	*9/13/2022*
					Sample-->	*S1*	*S2*	*S3*	*S4*	*S5*	*S6**	*S7*	*S8*	*S9*	*S10*	*S11*	*S12*
					Sample Depth--(Inches)-->	*2-3*	*2-3*	*2-3*	*2-3*	*2-3*	*2-3*	*2-3*	*2-3*	*2-3*	*2-3*	*2-3*	*2-3*
					Percent Moisture (%)-->	*29.3*	*12.2*	*15.0*	*29.6*	*19.4*	*24.3*	*19.5*	*20.6*	*21.3*	*21.3*	*22.7*	*6.8*
					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	0.42 J	0.55 J	0.83 I, J	<0.39	<0.28	<0.29	<0.17	<0.21	<0.23	<0.12	0.29 J, I, EMPC	0.27 J
1,2,3,7,8-PeCDD	40321-76-4	ng/kg	4.93	22.3	- -	1.9 J	2.6 J	1.5 J	1.2 J	1.2 J	2.3 J	0.35 J, I, EMPC	1.0 J	1.1 J	0.45 J, I, EMPC	2.0 J	2.0 J
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	- -	1.7 J	4.3 J	2.6 J	2.4 J	1.7 J	4.8 J	1.00 J	2.3 J	2.0 J	0.97 J	3.6 J	4.4 J
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	- -	2.3 J	13.0	8.2	9.9	6.3	20	2.3 J	7.6	7.3	2.5 J	13	13
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	- -	1.8 J	8.8	4.4 J	4.7 J	3.5 J	9.3	1.5 J	4.5 J	3.9 J	1.7 J	6.7	7.3
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	- -	28	310	180	220	120	530	46	160	150	57	280	320
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	- -	180	2,700	1,500	1,700	840	3,300	370	1,300	1,200	450	2,200	2,700
Total TCDD	- -	ng/kg	- -	- -	- -	14	12	20	5.8	5.0	5.8	1.2 J	25	2.3	<0.12	8.4	11
Total PeCDD	- -	ng/kg	- -	- -	- -	15	20	9.9	12	8.7	15	1.1 J	72	7.6	4.4 J	21	23
Total HxCDD	- -	ng/kg	- -	- -	- -	29	120	70	79	52	160	24.0	63	52	23	110	110
Total HpCDD	- -	ng/kg	- -	- -	- -	53	620	360	440	240	980	100	320	290	120	550	610
Furan Congeners																	
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	- -	7.2 V	1.3 C	1.1 J	1.4 V	1.1 J	2.7 C	<0.35	1.1 J	0.66 J, I, EMPC	0.59 J	2.3 C	2.1 C
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	- -	6.3 J	1.8 J	0.98 J	1.2 J	1.1 J	2.2 J	<0.12	1.0 J	0.70 J	0.37 J	1.9 J	1.9 J
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	- -	11	9.2	6.3	3.8 J	6.8	27	1.4 J	4.4 J	5.8 J	1.5 J, I, EMPC	14	7.0
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	- -	6.9	6.6	3.7 J	4.4 J	3.4 J	7.7	1.1 J	3.3 J	3.4 J	1.5 J	6.2 J	6.6
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	- -	6.9	7.2	4.0 J	4.9 J	4.1 J	14	1.2 J, I, EMPC	3.5 J	3.4 J, I, EMPC	1.4 J, I, EMPC	10	8.0
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	- -	8.1	7.2	3.8 J	4.2 J, P, EMPC	3.3 J	11	1.9 J	6.5	7.3	2.7 J	10 P, EMPC	7.9 P, EMPC
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	- -	1.8 J, I, EMPC	2.0 J, I, EMPC	1.4 J, I, EMPC	1.2 J, I, EMPC	1.3 J, I, EMPC	3.2 J	0.46 J	0.98 J, I, EMPC	1.3 J	0.59 J	2.5 J	2.2 J
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	- -	23	110	62	93	50	140	16	51	44	21	130	130
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	- -	1.6 J	5.4 J	2.8 J	4.2 J	2.6 J	6.9	0.84 J	2.8 J	2.5 J	0.98 J, I, EMPC	5.6 J, I, EMPC	6.7
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	- -	14	150	9.3	150	72	180	21	71	61	29	190	240
Total TCDF	- -	ng/kg	- -	- -	- -	130	43	37	30	49	76	3.6	25	21	9.3	59	52
Total PeCDF	- -	ng/kg	- -	- -	- -	120	100	84	61	75	300	22	72	97	23	210	110
Total HxCDF	- -	ng/kg	- -	- -	- -	71	240	140	99	120	330	22	73	77	30	230	160
Total HpCDF	- -	ng/kg	- -	- -	- -	27	230	130	190	100	150	17	54	47	21	130	140
Individual Exceedances (DC)			1	1	- -	0	0	0	0	0	2	0	0	0	0	0	0
Cumulative Hazard Index (DC)			1.0	1.0	- -	0.192	0.2591	0.1644	0.1442	0.1298	0.4039	0.0398	0.1251	0.1319	0.0491	0.279	0.2359
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	- -	2.1E-06	3.3E-06	2.1E-06	1.9E-06	1.6E-06	5.2E-06	5.0E-07	1.6E-06	1.7E-06	6.2E-07	3.4E-06	3.1E-06
Total 2,3,7,8-TCDD Equivalence[1]	- -	ng/kg	4.82	21.8	- -	10	16	10	9.4	7.7	26	2.5	7.9	8.1	3.0	17	17

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)
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TEQ = Toxicity Eqivalent Calculations
[1] = TEQ values calculated using the U.S. EPA 2007 values.
* = Area of sample removed during July 2023 remedial excavation.

TCDD: Tetrachlorodibenzo-p-dioxin
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Laboratory Qualifiers and Notes:
J = Estimated Value
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I = Interference Present
V = Results verified by confimation analysis
C = Results obtained from confirmation analysis
D = Results obtained from analysis of diluted sample
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Results reported on a dry weight basis and are valid to no more than 2 significant figures

Italic	= Exceeds NR720 Groundwater Pathway Protection
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Table 1j
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Park
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

					Collected By-->	REI Engineering, Inc.											
					Date-->	*10/20/2022*	*11/28/2022*	*11/28/2022*	*11/28/2022*	*11/28/2022*	*11/28/2022*	*7/18/2023*	*7/18/2023*	*7/18/2023*	*7/18/2023*	*7/18/2023*	*7/18/2023*
					Sample-->	*S13**	*S14*	*S15*	*S16*	*S17*	*S18*	*S19*	*S20*	*S21*	*S22*	*S23*	*S24*
					Sample Depth--(Inches)-->	*2-3*	*2-3*	*2-3*	*2-3*	*10-12*	*10-12*	*12*	*12*	*48*	*12*	*48*	*12*
					Percent Moisture (%)-->	*9.2*	*21.7*	*24.1*	*13.3*	*17.1*	*18.2*	*1.8*	*8.2*	*6.8*	*4.2*	*3.8*	*3.4*
					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	0.54 J	0.30 J	3.7 EMPC, I, J	0.16 EMPC, I, J	0.27 J	0.17 EMPC, I, J	<0.28	<0.37	<0.20	<0.25	<0.22	<0.20
1,2,3,7,8-PeCDD	40321-76-4	ng/kg	4.93	22.3	- -	2.9 J	2.7 J	2.2 J	0.17 J	1.5 J	0.73 J	<0.16	0.15 J	<0.14	<0.11	<0.16	<0.15
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	- -	5.3	3.1 J	4.2 J	0.36 J	2.0 EMPC, I, J	1.4 J	<0.15	0.43 J, B	0.23 EMPC, I, J	0.24 J, B	0.35 J, B	0.38 J, B
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	- -	16	11.0	12.0	0.60 J	7.9	5.3	<0.12	0.82 J	0.26 J	0.39 EMPC, I, J	0.59 J	0.77 EMPC, I, J
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	- -	8.9	6.3	7.1	0.33 EMPC, I, J	3.9 J	2.8 J	<0.18	0.42 EMPC, I, J	0.14 EMPC, I, J	0.20 J	0.39 J	0.61 J
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	- -	350	230	260	9.1	150	100	0.51 EMPC, I, J	15	4.6 J	7.1	9.5	18
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	- -	2,800	1,900	2,000	74	1,300	860	5.1 J, B	120	39	52	79	150
Total TCDD	- -	ng/kg	- -	- -	- -	16	13	36	0.41 J	3.8	4.5	<0.28	0.42 J	<0.20	<0.25	<0.22	0.30 J
Total PeCDD	- -	ng/kg	- -	- -	- -	25	21	46	0.85 J	9.7	8.5	<0.16	0.74 J	<0.14	<0.11	0.26 J	<0.15
Total HxCDD	- -	ng/kg	- -	- -	- -	140	95	130	4.7 J	57	41	<0.12	6.4	1.3 J, B	1.8 J, B	2.2 J	6.2
Total HpCDD	- -	ng/kg	- -	- -	- -	600	440	490	19	270	190	0.53 J	29	8.2	13	17	34
Furan Congeners																	
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	- -	8.7 V	2.4 V	4.2 V	0.17 J	1.1 V	1.2 V	<0.21	<0.67	<0.21	<0.22	<0.20	<0.57
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	- -	2.7 J	0.99 EMPC, I, J	2.3 J	<0.15	0.63 J	0.31 J	0.51 EMPC, P, J	27 EMPC, P	6.6 EMPC, P	0.41 EMPC, I, J	35 P	27 EMPC, P
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	- -	27	7.8	5.3 EMPC, P	0.45 J	4.3 J	5.1	<0.15	2.7 J	0.64 EMPC, I, J	0.21 J	1.9 J	3.0 J
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	- -	11	4.0 J	6.2	0.26 EMPC, I, J	3.2 EMPC, I, J	4.0 J	<0.17	1.1 EMPC, I, J	<0.14	<0.082	0.76 EMPC, I, J	1.1 J
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	- -	12	8.5	6.5	0.30 J	5.3	4.4 J	<0.14	0.93 J	<0.14	0.20 J	0.63 J	0.85 J
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	- -	14	8.7	5.6	0.35 J	6.3	5.7 EMPC, P	<0.11	3.0 J	0.78 EMPC, I, J	0.067	2.1 J	3.1 J
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	- -	3.3 J	2.1 J	1.4 J	0.17 B, J	1.5 EMPC, I, J	1.2	<0.19	1.5 EMPC, P, J	<0.057	<0.081	0.80 EMPC, P, J	0.96 J
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	- -	140	87	93	3.5 J	55	38	0.23 EMPC, I, J	8.9	1.8 J	1.9 J	3.8 J	7.1
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	- -	7.8	4.4 J	2.8 J	0.22 EMPC, I, J	2.5 J	2.1 J	<0.22	<0.32	<0.13	0.23	<0.013	<0.19
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	- -	210	130	140	6.0 J	85	62	<0.32	11 J	2.5 J	2.4 J	5.0 J	8.4 J
Total TCDF	- -	ng/kg	- -	- -	- -	120	83	80	1.0	85	43	<0.21	4.7	1.2	<0.22	2.3	4.1
Total PeCDF	- -	ng/kg	- -	- -	- -	300	210	70	4.5 J	160	130	0.25 J	21	4.7 J	1.4 J	17	23
Total HxCDF	- -	ng/kg	- -	- -	- -	300	270	140	5.6	130	140	0.31 J	37	9.3	1.6 J	29	41
Total HpCDF	- -	ng/kg	- -	- -	- -	330	200	190	7.7	130	96	<0.19	20	4.7 J	4.1 J	11	18
Individual Exceedances (DC)			1	1	- -	1	0	0	0	0	0	0	0	0	0	0	0
Cumulative Hazard Index (DC)			1.0	1.0	- -	0.4342	0.2284	0.2753	0.0154	0.1428	0.113	0.0004	0.0535	0.0111	0.0045	0.0441	0.0513
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	- -	5.2E-06	2.8E-06	3.4E-06	1.8E-07	1.8E-06	1.4E-06	4.9E-09	5.8E-07	1.2E-07	6.0E-08	4.8E-07	5.7E-07
Total 2,3,7,8-TCDD Equivalence[1]	- -	ng/kg	4.82	21.8	- -	25	14	16.5	0.87	8.7	6.7	0.024	2.9	0.61	0.29	2.3	2.8

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
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TEQ = Toxicity Eqivalent Calculations
[1] = TEQ values calculated using the U.S. EPA 2007 values.
* = Area of sample removed during July 2023 remedial excavation.

TCDD: Tetrachlorodibenzo-p-dioxin
PeCDD: Pentachlorodibenzo-p-dioxin
HxCDD: Hexachlorodibenzo-p-dioxin
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Laboratory Qualifiers and Notes:
J = Estimated Value
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B = Less than 10x higher than method blank level
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V = Results verified by confimation analysis
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Results reported on a dry weight basis and are valid to no more than 2 significant figures

Italic	= Exceeds NR720 Groundwater Pathway Protection
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Table 1k
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Park
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

					Collected By-->	REI Engineering, Inc.											
					Date-->	*7/18/2023*	*7/18/2023*	*7/18/2023*	*7/19/2023*	*7/19/2023*	*7/19/2023*	*7/19/2023*	*7/19/2023*	*7/19/2023*	*7/19/2023*	*7/19/2023*	*7/19/2023*
					Sample-->	*S25*	*S26*	*S27*	*S28*	*S29*	*S30*	*S31*	*S32*	*S33*	*S34*	*S35*	*S36*
					Sample Depth--(Inches)-->	*12*	*12*	*48*	*48*	*2-3*	*2-3*	*12*	*48*	*2-3*	*2-3*	*12*	*2-3*
					Percent Moisture (%)-->	*6.5*	*7.5*	*4.9*	*1.4*	*4.8*	*5.3*	*4.6*	*2.4*	*6.8*	*10.1*	*3.6*	*13.3*
					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	<0.27	<0.41	0.38 J	<0.22	<0.29	<0.25	<0.061	<0.077	<0.21	<0.69	<0.54	0.75 J
1,2,3,7,8-PeCDD	40321-76-4	ng/kg	4.93	22.3	- -	<0.12	<0.86	2.8 J	<0.14	1.4 J	1.4 J	0.42 EMPC, I, J	0.092 J	0.67 J	2.1 J	<0.22	4.7 J
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	- -	0.51 EMPC, I, J	3.5 EMPC, I, J	5.7	0.41 EMPC, I, J	2.5 J	2.9 J	1.1 J, B	0.31 J, B	1.9 J	3.6 EMPC, I, J	0.31 J	7.3
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	- -	0.54 J	9.3	22	0.66 EMPC, I, J	13	6.4	3.0 J	0.47 J	5.5	14	0.26 EMPC, I, J	23
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	- -	0.38 EMPC, I, J	3.8 J	10	0.48 J	6.6	4.3 J	1.6 J	0.24 J	3.4 J	5.2	<0.13	15
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	- -	10	200	400	14	220	150	52	9.3	100	290	3.8 J	450
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	- -	76	2,100	3,800	110	1,900	1,200	470	74	830	2,500	35	3,500
Total TCDD	- -	ng/kg	- -	- -	- -	<0.27	3.4	7.2	<0.22	6.0	8.7	1.3	0.15 J	3.4	3.3	<0.54	13
Total PeCDD	- -	ng/kg	- -	- -	- -	<0.12	5.9	25	<0.14	20	17	2.3 J	0.092 J	10	13	<0.22	35
Total HxCDD	- -	ng/kg	- -	- -	- -	3.2 J	52	140	3.5 J	88	64	19	3.2 J	44	95	1.6 J	200
Total HpCDD	- -	ng/kg	- -	- -	- -	19	390	740	25	410	290	92	16	190	600	6.9	850
Furan Congeners																	
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	- -	<0.50	<0.67	2.1 C	<0.26	1.8 V	1.4 V	0.50 J	<0.13	0.80 J	1.6 C	<0.70	3.1 V
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	- -	42 EMPC, P	69 EMPC, P	1.9 J	33 EMPC, P	300 EMPC	98 EMPC, P	<0.20	<0.15	170 EMPC, P	3.9 EMPC, P, J	14 EMPC, P	280 EMPC, P
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	- -	1.9 J	11	55	3.1 J	72	11	7.7	0.90 J	12	14	1.0 J	44
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	- -	1.0 EMPC, I, J	4.7 J	13	0.73 EMPC, I, J	11 EMPC, P	6.4 EMPC, P	8.2	0.75 J	5.9 EMPC, P	25.0 EMPC, P, J	<0.16	21 EMPC, P
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	- -	0.76 J	4.2 J	20 EMPC, P	0.80 J	15	4.9 J	5.8 EMPC, P	0.57 J	4.2 J	15	<0.16	16
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	- -	2.4 EMPC, I, J	8.6	43	2.7 J	54	12	8.7	0.71 EMPC, I, J	12	20	0.78 EMPC, I, J	46
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	- -	1.4 EMPC, I, J	4.2 J	5.3	1.2 J	14 EMPC, P	6.3 EMPC, P	1.1	0.25 J	7.6 EMPC, P	3.3 J	<0.11	17 EMPC, P
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	- -	4.3 J	90	180	6.6	110	73	21	2.6 J	47	100	2.3 J	200
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	- -	<0.13	<0.65	10	<0.30	6.6	4.1 J	1.4 J	<0.15	2.8 J	7.6	<0.33	12
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	- -	5.3 J	100	320	8.6 J	110	85	40	8.5 J	50	150	2.7 J	220
Total TCDF	- -	ng/kg	- -	- -	- -	0.65 J	<0.67	140	1.9	160	46	16	0.64 J	32	49	<0.70	120
Total PeCDF	- -	ng/kg	- -	- -	- -	15	74	670	25	620	89	95	7.6	97	320	7.7	270
Total HxCDF	- -	ng/kg	- -	- -	- -	29	130	450	38	750	180	78	7.7	170	410	11	610
Total HpCDF	- -	ng/kg	- -	- -	- -	11	210	190	16	280	170	22	2.6 J	110	250	6.0	440
Individual Exceedances (DC)			1	1	- -	0	0	1	0	3	0	0	0	1	0	0	2
Cumulative Hazard Index (DC)			1.0	1.0	- -	0.0510	0.2135	0.6908	0.0535	0.8958	0.2617	0.1203	0.0147	0.208	0.338	0.0175	0.8902
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	- -	5.5E-07	2.6E-06	7.9E-06	5.8E-07	9.7E-06	3.0E-06	1.4E-06	1.7E-07	3.1E-06	4.1E-06	1.9E-07	1.0E-05
Total 2,3,7,8-TCDD Equivalence[1]	- -	ng/kg	4.82	21.8	- -	2.7	13	39	2.9	48	15	6.6	0.84	15	20	0.93	50

Notes:
NR 720 Standards Obtained From WDNR RR Program's Soil RCL Spreadsheet
This site is assessed as Non-Industrial
RCL = Residual Contaminant Level
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< = Concentration Below Laboratory Detection Limit
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TEQ = Toxicity Eqivalent Calculations
[1] = TEQ values calculated using the U.S. EPA 2007 values.
* = Area of sample removed during July 2023 remedial excavation.

Italic	= Exceeds NR720 Groundwater Pathway Protection
Bold	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL
Underlined	= Exceeds NR720 Non-Industrial Not-To-Exceed DC RCL

TCDD: Tetrachlorodibenzo-p-dioxin
PeCDD: Pentachlorodibenzo-p-dioxin
HxCDD: Hexachlorodibenzo-p-dioxin
HPCDD: Heptachlorodibenzo-p-dioxin
OCDD: Octachlorodibenzo-p-dioxin
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HxCDF: Hexachlorodibenzofuran
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OCDF: Octachlorodibenzofuran

Laboratory Qualifiers and Notes:
J = Estimated Value
EMPC = Estimated Maximum Possible Concentration
B = Less than 10x higher than method blank level
P = PCDE Interference
I = Interference Present
V = Results verified by confimation analysis
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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

Table 1l
Soil Analytical Results - NR720 Soil Standards
City of Wausau - Riverside Park
132 River Street
Wausau, WI 54401
BRRTS# 02-37-584785

					Collected By-->	REI Engineering, Inc.							
					Date-->	*7/19/2023*	*7/19/2023*	*7/19/2023*	*7/19/2023*	*7/20/2023*	*7/20/2023*	*7/21/2023*
					Sample-->	*S37*	*S38*	*S39*	*S40*	*S41*	*S42*	*S43*
					Sample Depth--(Inches)-->	*2-3*	*2-3*	*2-3*	*12*	*12*	*12*	*12*
					Percent Moisture (%)-->	*9.4*	*7.8*	*6.9*	*5.7*	*1.7*	*6.9*	*5.3*
					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	0.41 J	0.36 J	<0.95	<0.082	<0.17	<0.22	<0.34
1,2,3,7,8-PeCDD	40321-76-4	ng/kg	4.93	22.3	- -	1.8 J	1.6 J	1.1 EMPC, I, J	0.14 EMPC, I, J	0.20 EMPC, I, J	0.38 J	<0.22
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	49.3	223	- -	6.3	4.8 J	4.8 J	0.45 J	0.36 EMPC, I, J	1.0 EMPC, I, J	0.30 EMPC, I, J
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	49.3	223	- -	16	10.0	13.0	0.58 J	<0.088	2.0	0.43 EMPC, I, J
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	49.3	223	- -	11	7.7	8.0	0.45 J	0.39 J	1.4	0.37 J
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	484	2.19E+03	- -	370	240	280	13	0.88 EMPC, I, J	45	6.4
OCDD	3268-87-9	ng/kg	1.64E+04	7.44E+04	- -	3,100	1,800	2,200	110	5.3 J, B	340	50
Total TCDD	- -	ng/kg	- -	- -	- -	24	11	6.7	0.91 J	<0.17	<0.22	0.37 J
Total PeCDD	- -	ng/kg	- -	- -	- -	26	16	6.1	0.63 J	0.42 J	3.6 J	0.45 J
Total HxCDD	- -	ng/kg	- -	- -	- -	140	100	100	4.9 J	0.76 J	15	0.85 J
Total HpCDD	- -	ng/kg	- -	- -	- -	660	460	530	24	<0.24	84	13
Furan Congeners												
2,3,7,8-TCDF	51207-31-9	ng/kg	48.2	219	- -	1.8 C	1.5	0.96 EMPC, I, J	0.14 J	<0.22	<0.66	<0.44
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	164	744	- -	31 EMPC, P	27 EMPC, P	51 EMPC, P	0.13 J	0.72 EMPC, I, J	19 EMPC, P	5.8 EMPC, P
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	16.4	74.4	- -	17	8.5	12	0.75 J	0.36 J	3.1 J	1.4 J
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	48.5	220	- -	10	6.7	6.9	0.32 EMPC, I, J	0.35 J	1.4 J	<0.11
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	48.5	220	- -	9	5.0 J	4.8 EMPC, I, J	0.52 J	0.19 EMPC, I, J	1.1 EMPC, I, J	<0.13
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	49.3	223	- -	19	10	8.6	0.84 J	0.26 EMPC, I, J	3.1 J	1.1 J
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	49.3	223	- -	7.7 EMPC, P	3.6 EMPC, P, J	4.9	0.29 J	0.41 EMPC, I, J	1.3 J	<0.16
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	490	2.22E+03	- -	150	95	100	5.3	0.37 EMPC, I, J	19	3.9 J
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	490	2.22E+03	- -	11	4.7 J	8.0	0.37 J	0.47 EMPC, I, J	1.5 J	<0.48
OCDF	39001-02-0	ng/kg	1.64E+04	7.44E+04	- -	210	120	150	8.3 J	1.2 J	24	3.2 J
Total TCDF	- -	ng/kg	- -	- -	- -	60	29	17	4.2	<0.22	6.4	<0.44
Total PeCDF	- -	ng/kg	- -	- -	- -	130	69	78	8.6	0.76 J	19	7.5
Total HxCDF	- -	ng/kg	- -	- -	- -	320	160	170	8.1	0.69 J	39	11
Total HpCDF	- -	ng/kg	- -	- -	- -	410	210	240	5.7	<0.18	43	7.0
Individual Exceedances (DC)			1	1	- -	1	0	0	0	0	0	0
Cumulative Hazard Index (DC)			1.0	1.0	- -	0.3765	0.2348	0.2626	0.0162	0.0105	0.0657	0.0171
Cumulative Cancer Risk (DC)			1.0E-05	1.0E-05	- -	4.6E-06	2.9E-06	3.3E-06	1.9E-07	1.1E-07	7.7E-07	1.9E-07
Total 2,3,7,8-TCDD Equivalence[1]	- -	ng/kg	4.82	21.8	- -	23	14	16	1.0	0.54	3.8	0.93

Notes:
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