



**SWL&P MGP SITE
Superior, Wisconsin**

GLLA FFS/RAOR Monthly
Meeting
February 7, 2022



Agenda

No.	Description	Facilitator	Involvement	Duration
1.	Safety	Steve G.	Information	2 minutes
2.	Introductions	Erin/All	Information	5 minutes
3.	Project Overview	Erin/Steve G.	Information	10 minutes
4.	FFS/RAOR Outline	Jill	Information	10 minutes
5.	Preliminary PDI Results	Erin	Information/ Input	20 minutes
7.	Next Steps/Action Items	Erin/All	Input	10 minutes

Safety



Winter Walking - Slips & Fall Prevention

- ◆ Be Prepared and Cautious
- ◆ Choose footwear with good traction
- ◆ Use small steps/strides and walk slowly
- ◆ Walk on designated walkways when possible
- ◆ Keep hands out of pockets, use handrails, and don't carry heavy objects
- ◆ Make sure there are no approaching vehicles before stepping off curb
- ◆ When entering a building, be sure to use floor mats and boot cleaners to remove moisture from the soles of your shoes
- ◆ Choose your path carefully to avoid wet or slippery floors

Introductions

Introductions

◆ **SWL&P/ALLETE Team**

- Greg Prom, Jamie Mehle, Joscy Skandel, Sarah Whiting, and Eric Halverson
- Foth: Steve Garbaciak, Erin Hughes, and Jill Dekart

◆ **USEPA GLNPO Team**

- Meaghan Kern and Christopher Klinkhamer

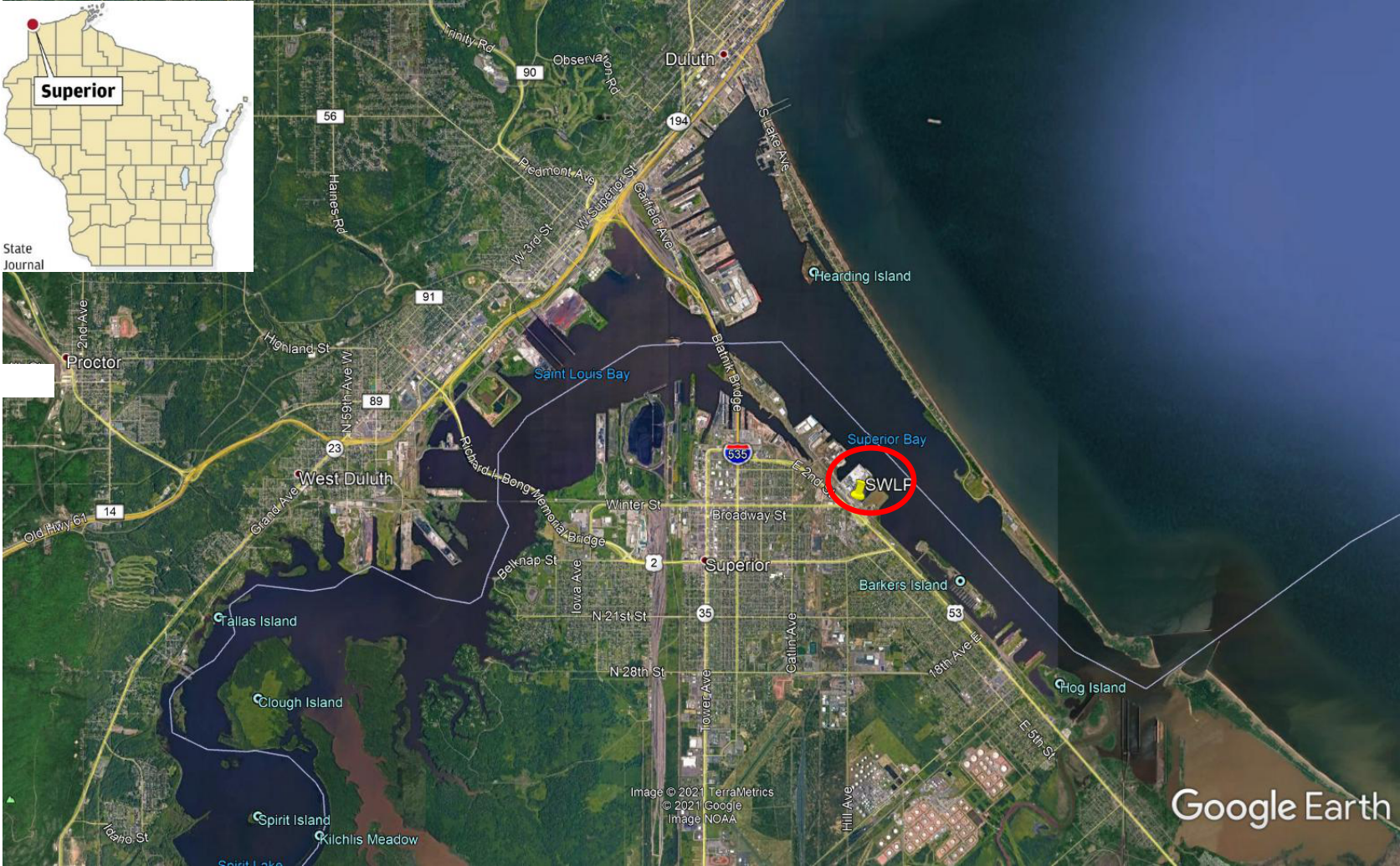
◆ **WDNR Team**

- John Sager, Chris Saari, and Joe Graham

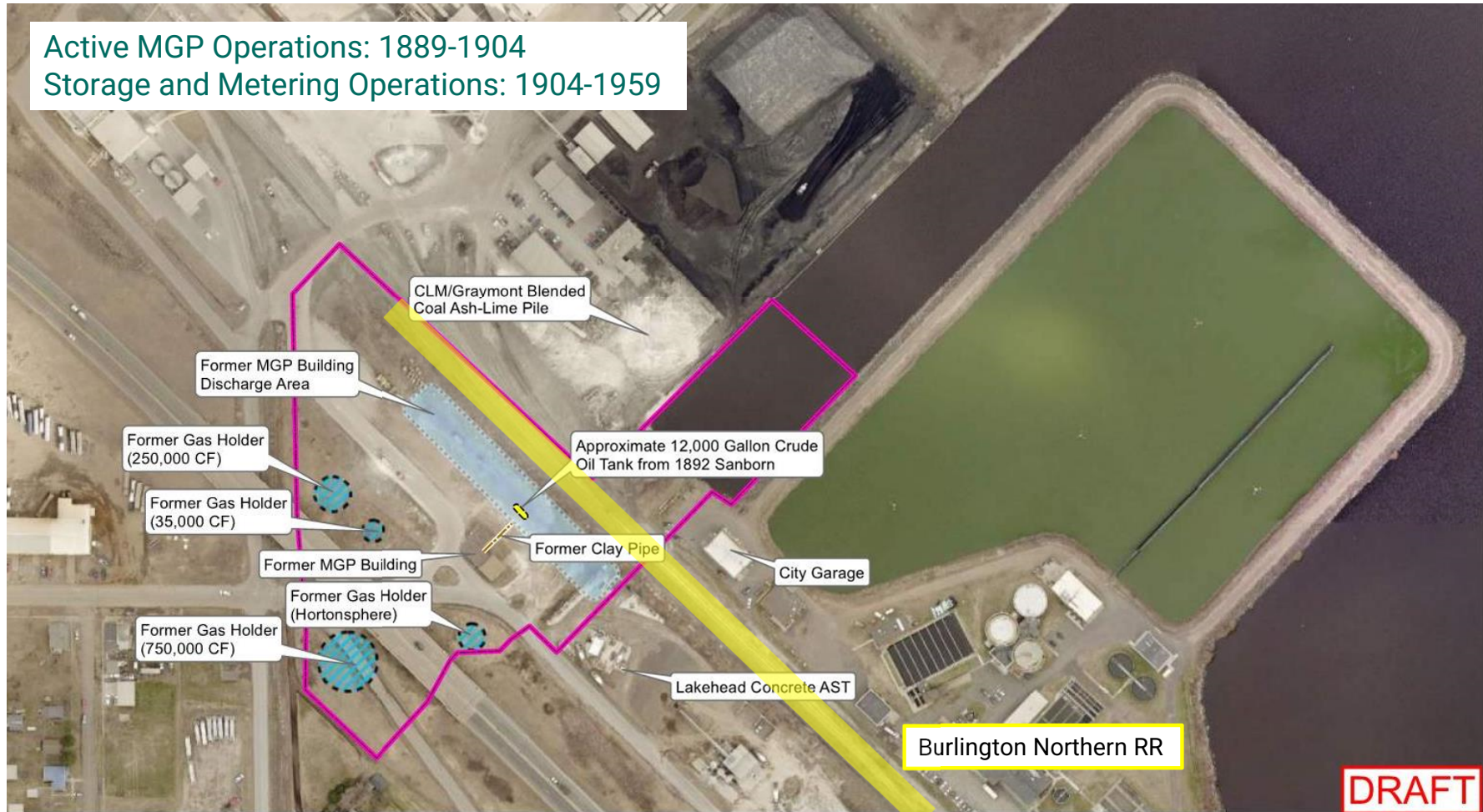
Project Overview



Former MGP Location



Active MGP Operations: 1889-1904
Storage and Metering Operations: 1904-1959



DRAFT

LEGEND

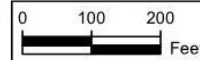
- Former 12,000 Gallon Crude Oil Tank
- Approximate Site Boundary
- Former Clay Pipe
- Former MGP Building Discharge Area
- Former Gas Holders



SUPERIOR WATER, LIGHT & POWER

FIGURE 2-2
HISTORICAL PLANT LAYOUT
REMEDIAL ACTION OPTIONS REPORT
SUPERIOR, WISCONSIN

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.



Date: NOVEMBER 2020	Revision Date:
Drawn By: DAT	Checked By: HLH
Project: 18S024	

Regulatory Status

- ◆ WDNR Bureau of Remediation and Redevelopment Tracking System (BRRTS) #02-16-275446
- ◆ Environmental Investigations Ongoing since 2001
 - Site Investigation Report (Foth, 2019)
- ◆ Remedial Action Options Report (RAOR) Drafted by Foth in 2019
- ◆ SWL&P decided not to submit RAOR and conduct Pre-Design Investigation (PDI) to reduce uncertainties and refine RA cost estimate for both the upland and in-water portions of the Site.
- ◆ PDI conducted by Foth in 2020
 - Upland RAOR Finalized in February 2021, Upland Remedial Design (RD) close to completion
 - In-Water work was entered into GLLA in November 2021 and SWL&P is now preparing FFS/RAOR

Legacy Act Project

- ◆ Initially, SWL&P is seeking Legacy Act funding to first undertake a FFS/RAOR evaluation of potential remedial options and, upon selection of the preferred remedial approach, to undertake the design of the remedy to be implemented in the adjacent slip to the SWL&P property within the St. Louis River AOC.
- ◆ This proposed funding will be utilized to complete the FFS/RAOR and RD for sediment remedial action that will address contaminated sediment in the Project area, though SWL&P envisions a partnership with GLNPO that extends into remedial action (RA).

Scope of Work

◆ **Task 1- FFS/RAOR**

- Summary of Nature and Extent of Contamination, including 2020 PDI results
- Remedial Technology Identification and Screening
- Evaluation of Remedial Options
- Recommendation of a Remedial Option

◆ **Task 2- Remedial Action Design Report**

- 30% Remedial Action Design Briefing Check-In
- 60% Remedial Action Design
- Final Remedial Action Design

Scope of Work

◆ **Task 3- Bid Procurement Package**

- Draft Bid- Ready Plans and Technical Specifications
- Co-Host Pre-Bid Site Walk (upon request from GLNPO)
- Support to GLNPO on its Responses to Bidder Inquiries (upon request from GLNPO)

◆ **Task 4- Permit Applications**

- Pre-app meetings during 60% Remedial Action Design development
- Final applications prepared with Final Remedial Action Design

In-Water Schedule

Nov. 2021	Kick off meeting
Apr. 2022	Target date for approval of FFS/RAOR
May 2022	30% Remedial Action Design Check-In
Aug. 2022	60% Remedial Action Design submittal
Oct. 2022	Final Remedial Action Design/Permit Application Submittal
Dec. 2022 - May 2023	Contractor procurement
Jun. 2023	Start in-water construction
Oct. 2023	Complete in-water construction

FFS/RAOR Outline

FFS/RAOR Outline

Section 1 Introduction

1.1 Purpose

1.2 Site Description

1.3 Site History and Project Background

1.4 Regulatory Status

Section 2 Conceptual Site Model

2.1 Physical Site Characteristics

2.2 Nature and Extent of Contamination

FFS/RAOR Outline

Section 3 Remedial Action Objectives

3.1 Remedial Approach

3.2 Remediation Target Development

- tPAH cleanup goal of 12.205 mg/kg = MEC

Section 4 Identification and Selection of Remedial Technologies

4.1 List of Possible Technologies

4.2 Screening of Remedial Technologies

4.3 Description of Sediment Remedial Action Options

FFS/RAOR Outline

Section 5 Remedial Options Evaluation

5.1 Definition of Evaluation Criteria

5.2 Evaluation of Sediment Remedial Options

5.2.1 Remedial Option A - No Further Remedial Action

5.2.2 Remedial Option B - Dredging and Off-Site Disposal

5.2.3 Remedial Option C - Target Dredging/Capping and Off-Site Disposal

5.3 Comparative Analysis of Sediment Options

Section 6 Selected Remedial Action

6.1 Summary of Selected Action

6.2 Proposed Schedule

6.3 Cost Estimate

6.4 Sustainability

Preliminary PDI Results



Preliminary PDI Results

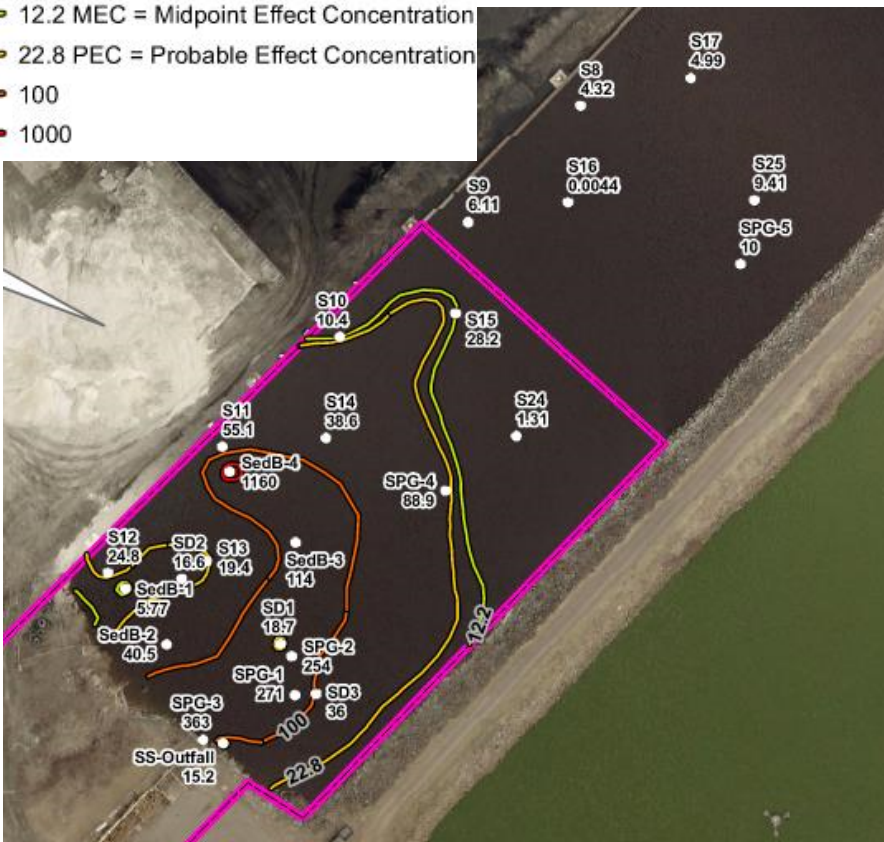
- ◆ Sediment chemistry data has been validated
- ◆ Photo logs and gINT logs prepared
- ◆ Geotechnical samples submitted to laboratory
- ◆ 3D delineation model underway
- ◆ Slope stability calculations underway
- ◆ FFS/RAOR under development

Pre-PDI tPAH Results

LEGEND

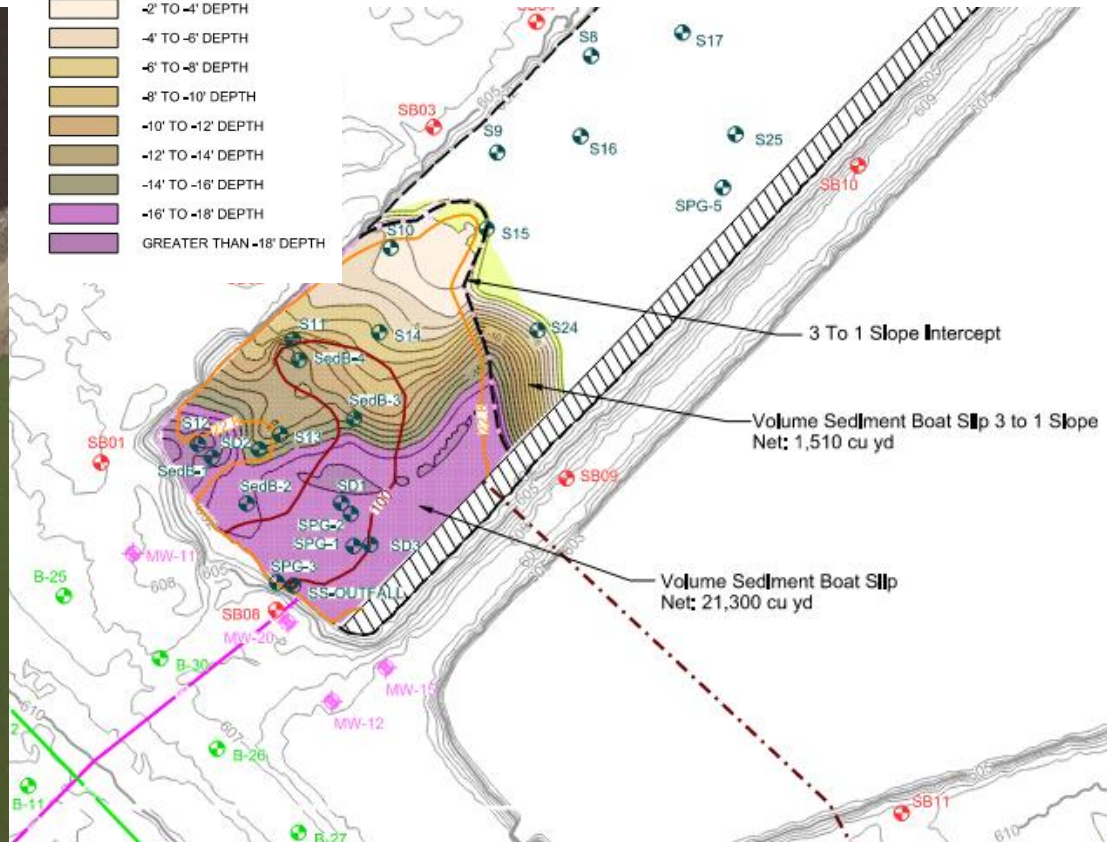
tPAH Isoconcentration Contour (mg/kg)

- 12.2 MEC = Midpoint Effect Concentration
- 22.8 PEC = Probable Effect Concentration
- 100
- 1000



DREDGE CUT DEPTHS BML

- 0' TO -2' DEPTH
- 2' TO -4' DEPTH
- 4' TO -6' DEPTH
- 6' TO -8' DEPTH
- 8' TO -10' DEPTH
- 10' TO -12' DEPTH
- 12' TO -14' DEPTH
- 14' TO -16' DEPTH
- 16' TO -18' DEPTH
- GREATER THAN -18' DEPTH



PDI tPAH Results

Sample Interval (ft bml)	Total PAH (mg/kg)
C-9	
0	4.68
1	11.5
2	0.050
3	3.6
5	6
6	7
7	7.4

Sample Interval (ft bml)	Total PAH (mg/kg)
C-4	
0	126
1	29.6
2	30.0
5	43.8
6	49.2
7	3.85
10	10.8
10.8	11.4
11.4	12.4
12.4	13.4

Sample Interval (ft bml)	Total PAH (mg/kg)
C-1	
0	10.2
1	250
2	73.6
3	44.2
5	44.2
6	34.9
7	67.7
10	53.0
11	70.4
12	11.7
13	13.8
15	16
16.5	17.5
17.5	18.5
20	21
21	22

Sample Interval (ft bml)	Total PAH (mg/kg)
C-2	
0	10.7
1	0.066
2	20.7
3	30.5
5	148
6	5.03
7	0.159
8	0.134
10	0.037
11	12
12	13.2
13.2	13.5
15	16
16	17

Sample Interval (ft bml)	Total PAH (mg/kg)
C-3	
0	32.4
1	63.4
2	168
3	0.144
5	0.077
6	0.039
7	0.053
8	0.187
10	0.034
11	11.8
11.8	12.8
12.8	13.8
13.8	14.8

Sample Interval (ft bml)	Total PAH (mg/kg)
C-11	
0	2.74
1	2
2	3

Sample Interval (ft bml)	Total PAH (mg/kg)
C-12	
0	0.65
0.65	1.65
1.65	2.4

Sample Interval (ft bml)	Total PAH (mg/kg)
GT-1	
6	7

Sample Interval (ft bml)	Total PAH (mg/kg)
GT-4	
12	13.5

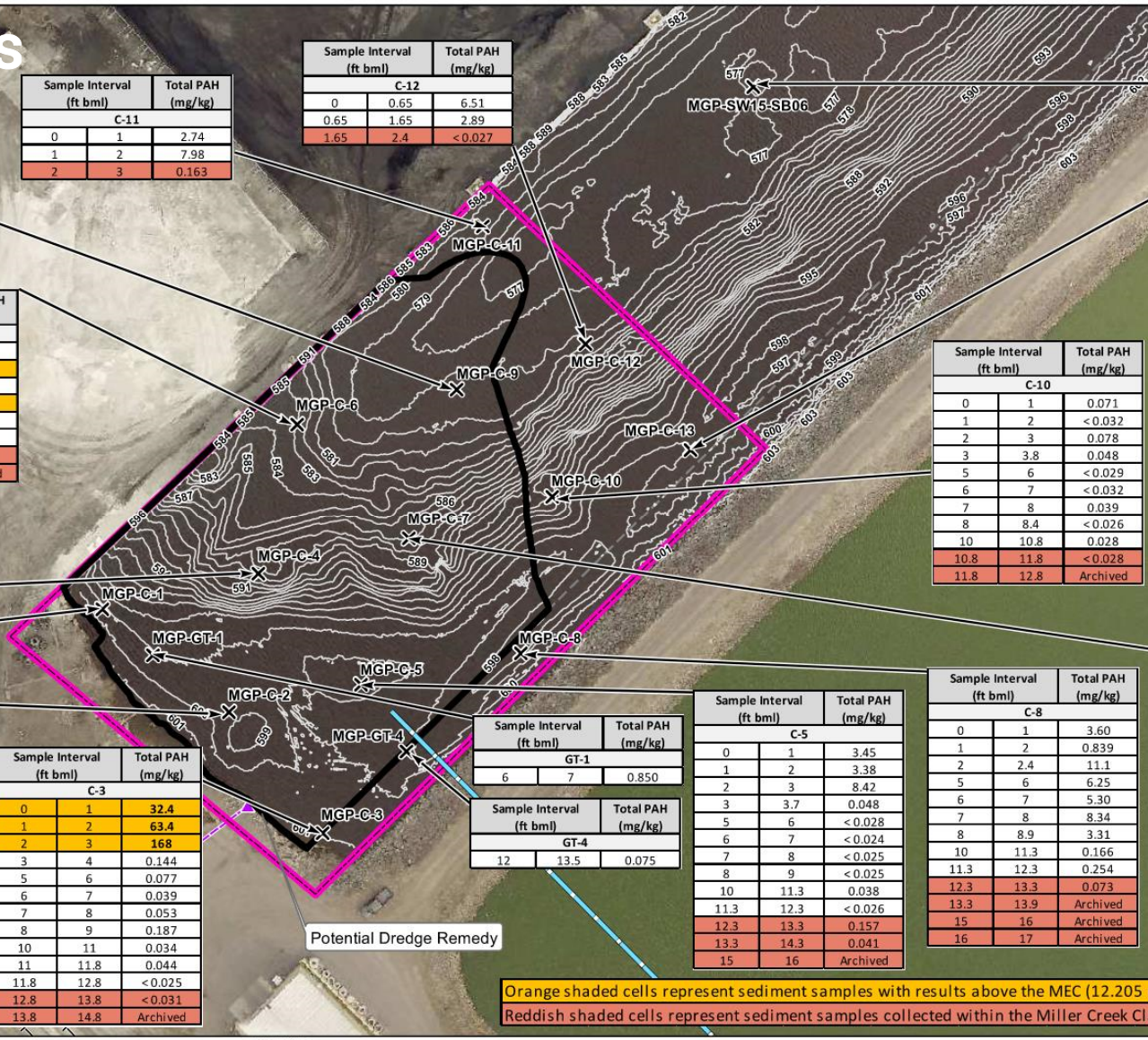
Sample Interval (ft bml)	Total PAH (mg/kg)
C-5	
0	3.45
1	3.38
2	8.42
3	0.048
5	6
6	7
7	8
8	9
10	11.3
11.3	12.3
12.3	13.3
13.3	14.3
15	16

Sample Interval (ft bml)	Total PAH (mg/kg)
C-8	
0	3.60
1	0.839
2	2.4
5	6
6	7
7	8
8	8.9
10	11.3
11.3	12.3
12.3	13.3
13.3	13.9
15	16
16	17

Sample Interval (ft bml)	Total PAH (mg/kg)
C-SW15	
0	1
1	1.6
1.6	2.6
2.6	3.5
5	6

Sample Interval (ft bml)	Total PAH (mg/kg)
C-13	
0	1
1	2
2	2.8
5	6
6	7
7	8
8	9
10	11
11	12
12	13
13	14

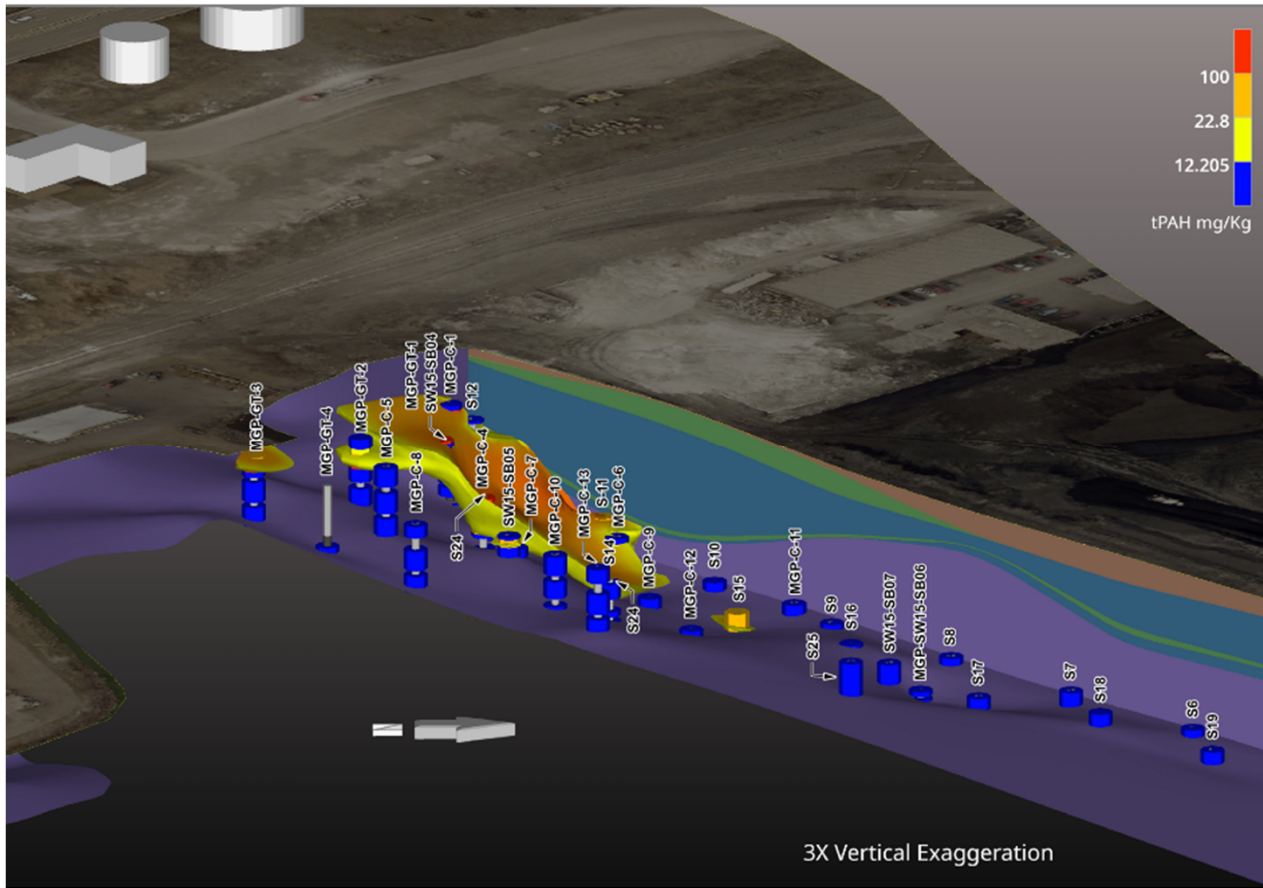
Sample Interval (ft bml)	Total PAH (mg/kg)
C-7	
0	0.2
0.2	0.85
0.85	1.85
1.85	2.85
5	6
6	7



Orange shaded cells represent sediment samples with results above the MEC (12.205 mg/kg).
 Reddish shaded cells represent sediment samples collected within the Miller Creek Clay Unit.

DRAFT

Updated tPAH Results



Dredge Area and Thickness



LEGEND

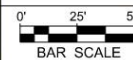
- - - MODEL DAYLIGHT LIMITS (NO MAXIMUM SLOPES)
- - - DESIGN DREDGE DAYLIGHT LIMITS (MAXIMUM 3:1 SLOPES)
- 2' - 4' DREDGE CUT
- 4' - 6' DREDGE CUT
- 6' - 8' DREDGE CUT
- 8' - 10' DREDGE CUT
- 10' - 12' DREDGE CUT
- 12' - 14' DREDGE CUT
- 14' - 19' DREDGE CUT

COLOR CONTOURS REPRESENT THICKNESS BETWEEN THE 6-8-2020 BATHYMETRIC SURVEY AND THE DESIGN DREDGE NEATLINE ELEVATIONS

DRAFT



SUPERIOR WATER, LIGHT & POWER		
FIGURE 1		
DREDGE ISOPACH MAP		
Date: February 2022	Revision Date:	
Drawn By: JRB2	Checked By:	Project: 18S024



Next Steps

Next Steps

- ◆ March meeting
 - Update on remedial options development
 - Delivery date for Draft FFS/RAOR
- ◆ Feedback needed
 - FFS/RAOR outline meets NR 722 requirements
- ◆ Set up web portal