



1230 South Boulevard
Baraboo, WI 53913

P (608) 356-2771
TF (800) 362-4505
F (608) 356-2770

www.msa-ps.com

June 4, 2021

Email: JohnT.Hunt@wisconsin.gov

WDNR Northern Region
Attn: John Hunt
223 East Steinfest Road
Antigo, Wisconsin 54409-2777

Re: Followup to Technical Review Request for the Proposed Military Creek Trailhead Plan and Land-Use at the "Open" BRRTS Site
Former C M Christiansen Co Property (now owned by Town of Phelps), Phelps, WI
DNR BRRTS# 02-64-000068

Dear John:

On behalf of the Town of Phelps, the following information is provided concerning the above referenced BRRTS site. The provided information follows the Technical Review Request submittal to WDNR on February 18, 2021, and our phone conference call on April 21, 2021.

Additional Information Request

During the April 21 phone call, it was requested that additional information be provided concerning the cost of engineering controls at the site. This included the two options for possible improvements to the existing soil capping that was placed over the five remedial excavation areas in Fall 1999, and the installation of fencing around the five areas. It was noted in our call that a full Remedial Action Options Analysis (RAOA) was not required but cost information for possible site improvements related to the two engineering controls was requested.

The following has been performed related to the information request.

- The 5 contamination areas were field located on May 11, 2021 and marked with wood lathe. Existing monitoring wells, surface features at the property, and prior maps provided in reports to the WDNR were used to locate the 5 areas at the property.
- A GPS survey was performed by MSA on May 11, 2021. This located the 5 areas in relation to a current base map of the property. These 5 areas, the surveyed monitoring wells, and the proposed trailhead parking area are shown on the attached Figure 1.
- The GPS survey resulted in the 5 areas being approximately 36,800 sq ft in surface area, or an approximate 0.845-acre area of the property.

The five areas were numbered on Figure 1 according to the numbers used in exhibits of the prior reports. Specific measurements for each area are shown in the following.

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Five Contamination Areas (refer to Figure 1)

	<u>Fencing Lin. Ft</u>	<u>Area Sq.Ft</u>
Area 1	224	3056
Area 2	348	7529
Area 3	404	7330
Area 4	381	9750
Area 5	420	9113

COST ESTIMATES

The following cost estimates are provided for comparison of the two engineering controls. The cost estimates are limited by several factors including the following assumptions and should be considered estimates for evaluation purposes.

- No contractor quotes were obtained for actual market rates and installation costs.
- The material unit rates used were obtained from recent projects which had contractor bidding. Cost variations will occur due to the location of material origin and the mobilization to the site.
- The soil capping cost estimate assumes no contingency costs, and assumes the total square footage of the 5 areas (i.e., 36,800 sq. ft) will receive soil capping.
- Fencing costs assumed a 4 ft chain link fence. Unit costs were obtained from on-line sources and recent projects that had fencing installation. Fence cost variations will occur for several reasons, including the quantity and type of installed fence posts that may be needed in wet and soft soil areas, which are present in the areas near the Military Creek lowlands.
- Actual costs will vary due to the site location and other conditions at the property which may limit access and conventional equipment use. For example, the Areas 2 and 3 near Military Creek were previously documented as limited machine access areas, and this will affect the actual cost of placing cap material.

Soil Capping Improvements

The prior reports indicated the soil capping in the remediation areas was approximately 1 ft thick with vegetation. The report documentation also indicated Area 1 was excavated to 14 to 16 ft, and backfilled with clean, on-site sand and gravel and capped. Areas 4 and 5 were also excavated to 3 to 5 ft below grade and capped, with Area 5 having one sidewall sample exceeding the industrial standard and no direct contact zone samples exceeding the risk based standard.

Item	Unit Cost	Volume/Area	Amount Needed	Total Estimate
General Fill (1 ft cap)	\$15	Cu. yd.	1365	\$20,475
General Fill (2 ft cap)	\$15	Cu. yd.	2725	\$40,875
Topsoil	\$20	Cu. yd	680	\$13,600
Seed / Fertilizer / Mulch	\$3	Sq. yd	4086	\$12,258

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Trucking/Grading	\$12	Cu. yd	2045 to 4405	\$24,540 to 52,860
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A general cost estimate for soil capping improvements ranges from \$70,873 (1 ft cap with topsoil) to \$119,593 (2 ft cap with topsoil).

Fencing Improvements

A review of fencing estimated costs was performed using the following assumptions.

- The fencing is a 4 ft high chain link fence.
- No contractor quotes were obtained for actual installation costs.
- Additional costs can be expected due to fence post requirements requiring concrete or other material for the post installations in soft soils.

Item	Unit Cost / Reference	Length / Area / Qty	Category	Estimate
4 ft chain link fencing	\$25 (website)	1800 Lineal ft	Fence / Labor	\$45,000
4 ft chain link fencing	\$9,750 Avg Cost (website)	Per Quarter Acre Area : 4 Areas	Areas 2 through 5. Area 1 at \$25 @ \$25/lin ft.	\$44,600
Fence posts	\$30 (website)	225	Per Post	\$6,750
4 ft chain link fencing	\$50 (Project Bidding)	Per Lineal ft (1800 ft)	Total Installation Cost	\$90,000

A cost estimate for 4 ft chain link fencing ranges from \$51,350 to \$90,000.

The estimated cost for the fencing assumes the fence will be placed as individual fences around the entire perimeter of each area, which may not be feasible at the east side of Areas 2 and 3 near Military Creek.

Summary of Cost Estimate Review

The cost estimate review shows the costs for the two options may be similar depending on the actual contractor costs and the final design that is used for either fencing or additional soil capping. The cost estimate for the fencing suggests that it is likely less expensive, but again contingent on the actual design.

As previously noted, remediation Area 1 received substantial excavation and was backfilled with clean on-site soil suggesting it may not require additional capping. The previous review showed the Area 1 did not have direct contact zone samples with concentrations above the risk based RCL of 24 mg/Kg or the current industrial standard of 3.97 mg/Kg PCP. As the project proceeds, we recommend that the Area 1 be reviewed for possibly receiving sufficient remedial excavation and capping in 1999, in which case it may no longer be a risk area at the property.

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Also, we noted during the GPS survey in May 2021 that remediation Area 5 is very well vegetated and does not exhibit signs of degradation of the soil cover placed in 1999. The Area 5 appears to be relatively flat and without signs of problems with the prior soil cap.

Closing Remarks

Based on the WDNR review of the information in the Technical Review Request submittal, the Town of Phelps requests a WDNR response and approval for the proposed trailhead project at the Property.

Please address the response letter to:

Ron Buel
Park Commission President
Town of Phelps
P.O. Box 157
Phelps, WI 54554

Please contact me with questions or if you need additional information (608-355-8901 or dlyster@msa-ps.com).

Sincerely,

MSA Professional Services, Inc.



Richard Lyster, P.G.
Project Manager / Sr. Hydrogeologist

Cc: Ron Buel, Town of Phelps Park Commission President
Raine Gardner, MSA

Enc. Figure 1 Site Plan (showing Areas 1 to 5 from May 11, 2021 GPS Survey)


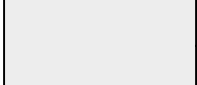

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Attachment A

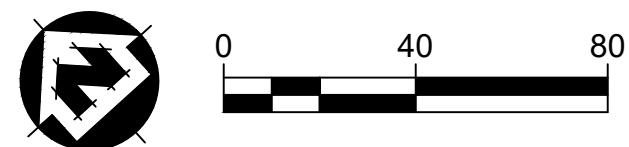
Figure 1 Site Plan (showing Areas 1 to 5 from May 11, 2021 GPS Survey)

LEGEND

-  ASPHALT
-  GRAVEL
-  TURF GRASS



11x17 1"=80'-0"
22x34 1"=40'-0"



PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY:
	Init	-	-	-	-
	Init	-	-	-	-
	Init	-	-	-	-

PLOT DATE: 5/14/2021 3:52 PM, \\msa-ps.com\fs\Project\0707558\07558013\CADD\construction documents\07558013 Site Plan.dwg



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MILITARY CREEK TRAILHEAD PROJECT
TOWN OF PHELPS
VILAS COUNTY, WI

SITE PLAN

PROJECT NO.
07558013
SHEET
C1.0