

B-4 – Vernon County ISR November 17, 2021



Initial Site Report

Proposed Vertical and Horizontal Expansion

Vernon County Landfill

Viroqua, Wisconsin

WDNR License No. 3268

VERSW 157634 | November 17, 2021



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November 17, 2021

RE: Vernon County Landfill
Initial Site Report
Viroqua, Wisconsin
WDNR License No. 3268
SEH No. VERSW 157634 4.00

Ms. Carolyn Cooper, Hydrogeologist
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711-5367

Dear Ms. Cooper:

Short Elliott Hendrickson Inc. (SEH®), on behalf of the Vernon Solid Waste Department, is submitting this Initial Site Report (ISR) to obtain the Wisconsin Department of Natural Resource's opinion regarding the suitability of the proposed expansion, prior to exhausting additional resources relating to the feasibility study and report. This ISR includes a report narrative supplemented by figures and appendices.

This report was prepared in accordance with s. NR 509 Wisconsin Administrative Code. We believe the ISR is complete and request your timely review. Should you have any questions or would like to discuss the proposed expansion further, please contact me at 608.498.4844.

Sincerely,

Brian L. Kent, CHMM
Project Manager

dmk

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Short Elliott Hendrickson Inc., 329 Jay Street, Suite 301, La Crosse, WI 54601-4034

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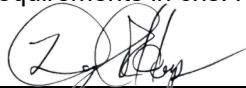
Initial Site Report

Vernon County Landfill
Viroqua, Wisconsin

Prepared for:
Vernon County Solid Waste Department
S3705 County Road LF
Viroqua, WI 54665

Prepared by:
Short Elliott Hendrickson Inc.
329 Jay Street, Suite 301
La Crosse, WI 54601-4034
608.782.3161

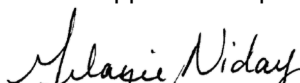
I, Darryl R. Heaps, hereby certify that I am a licensed professional engineer in the State of Wisconsin in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 500 to 538, Wis. Adm. Code.



Darryl R. Heaps, PE, CHMM E-25799 November 17, 2021
Professional Engineer PE Number Date



I, Melanie G. Niday, hereby certify that I am a licensed professional geologist in the State of Wisconsin in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code; that the preparation of this document has not involved any unprofessional conduct as detailed in ch. GHSS 5, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 500 to 538, Wis. Adm. Code.



Melanie G. Niday, PG 672-013 November 17, 2021
Scientist PG Number Date



Distribution

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1	Valerie Joosten, PE Waste Management Engineer Wisconsin Department of Natural Resources 2984 Shawano Ave Green Bay, WI 54313-6727
1	Stacie Sanborn, Director of Solid Waste Vernon County Solid Waste Department S3705 County Road LF Viroqua, WI 54665
1	WDNR - Bureau of Waste Management 101 S. Webster Street PO Box 7921 Madison, WI 53707
1	Darryl Heaps, PE SEH 3535 Vadnais Center Drive St. Paul, MN 55110

Executive Summary

The Vernon County Landfill is proposing to expand the active municipal solid waste (MSW) landfill (License #3268) to accommodate waste disposal needs for the existing waste service area beyond the current permitted capacity. Based on conservative projections, the proposed expansion would add approximately 430,000 cubic yards to the current permitted capacity and have site life of approximately 15 years. The expansion would include an approximate 10-acre contiguous horizontal and vertical expansion east of the existing active landfill. The horizontal component consists of an approximate 4.0-acre horizontal expansion due east and contiguous with Phase III. The vertical expansion will extend the existing landfill vertically over an approximate 5.0-acre area of the existing footprint. The proposed expansion will overlay its waste onto Phase III.

The proposed expansion meets the locational criteria of s. NR 504.04(3) Wis. Admin. Code with the exception of a water supply well located within 1,200 feet of the proposed expansion boundary and the currently approved waste limits. The water supply well currently serving the landfill office and recycling facility is located within the 1,200-foot setback requirement, however a NR 812, Wis. Adm. Code variance for the setback requirement for this well was granted prior to constructing the initial landfill cell in 1992. Assuming the County proceeds with expansion and preparation of a feasibility study report, a request for exemption to the requirements of s. NR504.04(3)(f) will be included to allow the construction of a landfill within 1,200-ft of the well.

The current landfill, and proposed expansion, are located in portions of the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$, and the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 15, T13N, R4W, Town of Viroqua, Vernon County, Wisconsin. The land use surrounding, and adjacent to the landfill property consists of a mix of agricultural and wooded parcels. The closest residence is located to the south on County Road LF and is approximately 1,500-feet from the landfill. The proposed expansion, plus the existing active MSW landfill will occupy approximately 15 acres of the approximate 250 acres owned by Vernon County.

The geologic setting where the existing landfill, and proposed expansion, are located is in an unglaciated portion of Wisconsin known as the "Driftless" region. Topography within this area is typified by systems of bedrock ridges cut by stream and river valleys. A system of bluffs forms the higher elevations generally through the central portion of the site. The proposed horizontal expansion area is along the top of this bluff system. The subsurface geology consists of silty loess as well as clay soils generated from weathering of dolomite bedrock (ridges) along with alluvium and lake deposits in the river and stream valleys. Unconsolidated deposits are of varying thickness depending on location. Ordovician aged dolomites of the Prairie du Chien group underlies the unconsolidated deposits and Cambrian age sandstone underlies the dolomite. Regional groundwater flows south towards the Kickapoo River located approximately three miles east of the site.

It is Vernon County's opinion that the proposed expansion is in compliance with the locational criteria and will be designed in accordance with the performance standards outlined in s. NR 504.04(3) & (4) Wis. Adm. Code. Accordingly, Vernon County requests the WDNR provide an opinion of this ISR regarding the suitability of the proposed expansion, prior to exhausting additional resources relating to the feasibility study and report.

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Initial Site Report

Vernon County Landfill

Prepared for Vernon County Solid Waste Department

1 Introduction

1.1 Purpose

The Vernon County Landfill (WDNR License No. 3268) proposes to expand the existing landfill for disposal of municipal solid waste (MSW), construction & demolition (C&D) waste, commercial and industrial waste. Short Elliott Hendrickson Inc. (SEH®), on behalf of the Vernon County Solid Waste Department (County), is issuing this Initial Site Report (ISR) to provide the information required in s. NR 509.05 through s. NR 509.07 Wisconsin Administrative Code (Wis. Adm. Code). The purpose of the ISR is to obtain preliminary opinion from the WDNR on the potential the property has for expansion and the advisability of spending additional time and funds to prepare a feasibility report.

1.2 Background

The Vernon County Solid Waste Department owns and operates an integrated waste management system on approximately 250-acres located in the Town of Viroqua, Wisconsin. The integrated waste management system includes:

- An approximate 10-acre municipal solid waste landfill, with an approximate design capacity of 590,000 cubic yards (WDNR License No. 3268)
- A closed small sized (50,000 cubic yard) C&D Landfill (WDNR License No. 3712)
- A recyclable material processing and baling facility

1.3 General Submittal Requirements (NR 500.05)

1.3.1 Review Fee

It is our understanding that the WDNR will issue an invoice to the Vernon County Solid Waste Department for \$3,300 to cover the WDNR plan review fees for the ISR. The County will issue payment of the invoice within 30 days of receipt of the invoice, unless special circumstances are warranted and approved by the WDNR.

1.3.2 Paper and Electronic Copies

The County will provide the WDNR copies, electronic and hard copy, of this ISR and future reports and applicable addendums according to the schedule below.

Electronic (Plans and Reports)	Hard Copy (Plan Sheets)	Hard Copy (Report)
Carolyn Cooper	Carolyn Cooper	Carolyn Cooper
Joe Lourigan	Joe Lourigan	(2) Marty Herrick, PE
Marty Herrick, PE	Marty Herrick, PE	WDNR Madison Office
Valerie Joosten, PE	Valerie Joosten, PE	
WDNR Madison Office (USB flash drive)	WDNR Madison Office	

Electronic copies may be transmitted via electronic mail, a secure web-based file/data sharing portal, or flash drive provided with hard copy submittals.

1.3.3 Certifications

This ISR, and future feasibility study, will be prepared and directly supervised, by a State of Wisconsin licensed Professional Engineer and Professional Geologist. The following individuals are a Professional Engineer or Professional Geologist, have prepared and directly supervised preparation of this report, and have provided their signature and seal on the Certification Page of this report.

Name	Title/Certification	Role
Darryl R. Heaps, PE (WI, MN, MS)	Prof. Engineer (WI PE# E-25799)	Engineering Design/ Plans/Report
Melanie G. Niday, PG (WI, MN)	Prof. Geologist (WI PG #672-013)	Geology/Hydrogeology Interpretation

1.3.4 Other General Requirements

A cover letter detailing the desired WDNR action and response is located at the front end of this ISR. A Table of Contents is provided on pages i. and ii. listing the major sections and subsections of this ISR including figures, tables and appendices. Appendices are provided to include all raw data and references identified in the ISR. All visuals required as part of this ISR are attached and have been prepared to comply with the requirements of s. NR 500.05(6)(a-i) Wis. Adm. Code.

1.4 Initial Site Inspection

SEH, on behalf of the County, issued a report to the WDNR titled "Initial Site Inspection Request" dated November 4, 2020. The WDNR conducted a site inspection for the proposed expansion on November 18, 2020. A revised ISI request dated September 3, 2021, was submitted to the WDNR which included additional area to the north and east of the existing landfill for potential landfill expansion. The WDNR conducted a site inspection of the additional areas on September 30, 2021. Due to concerns with the COVID-19 pandemic, participants in the initial site inspection were limited to WDNR staff, and included:

- Martin Herrick, WDNR Engineer
- Carolyn Cooper, WDNR Hydrogeologist

A copy of the original ISI request and revised ISI request are included in Appendix A "ISI Request and WDNR Response." Appendix A also includes a copy of the WDNR's December 15, 2020

“Initial Site Inspection Response - Proposed Expansion to Vernon County Landfill, License #3268,” and the WDNR’s November 1, 2021 “Supplemental Initial Site Inspection Opinion Letter – Proposed Expansion to Vernon County Landfill, License #3268.”

Items referenced in the WDNR’s December 15, 2020, and November 1, 2021, ISI response’s that are relevant to this ISR are summarized below:

- Based on the review of the documents included with the November 4, 2020, ISI Request, the September 3, 2021, revised ISI Request and observations from the site inspection, the department’s preliminary opinion regarding the suitability of site location is that the site location has potential.
- The ISI request states that no public or private wells are located within 1,200 feet of the proposed expansion boundary, except for the well serving the landfill office and recycling facility (WUWN FU046). The ISI request states that a ch. NR 812, Wis. Adm. Code variance for the setback requirement for this well was granted prior to constructing the initial landfill cell. If Vernon County pursues expansion of the landfill within the 1,200-foot setback zone, please request and justify an exemption to this locational criterion or provide an alternative water supply for this property. If the proposed limits of waste would extend closer to the well than currently approved or be located in a different gradient position with respect to groundwater flow from the water supply well, then a new NR 812 well variance application may be required. Further discussion regarding public and private wells in the area would be addressed in the feasibility report.
- The Chad B. Williams well, located at E8263 North Asbury Road, is sampled semiannually as part of the landfill’s environmental monitoring program. Please confirm the WUWN for this well and note whether the well is located within 1,200 feet of the proposed expansion boundary. An NR 812 well variance application may be required. Further discussion regarding public and private wells in the area would be addressed in the feasibility report.
- The ISI request states that there is not a navigable lake, pond, or flowage within 1,000 feet of the proposed expansion; however, the landfill’s existing sedimentation basin, a manmade storm water detention pond east of the landfill, is located within 1,000 feet of the proposed expansion. As a sediment control feature, this pond would be excluded from the setback requirement. The pond may need to be moved and/or enlarged to accommodate a proposed expansion of the landfill. Details of the storm water management system would be provided in the feasibility report.
- Based on information provided in the ISI request, review of the SWDV and the site inspection, no regulated wetlands were identified within the proposed project area at this time. However, the SWDV identified a location within the proposed expansion area as a potential wetland indicator based on soil type and/or wet area. Please see the attached map. Vernon County should have this area checked by an assured wetland delineator and provide the findings in the ISR.
- According to the ISI request, there are no airport runways within 10,000 feet of the proposed landfill expansion. The closest runway at the Viroqua Airport is located approximately 15,840 feet (2.7 miles) southwest of the proposed landfill expansion, and the landfill is not located in the approach or departure path for the airport. Because the proposed expansion is within 5 miles of this runway, notification to the Federal Aviation Administration (FAA) is required. The ISI request included a copy of the October 23, 2020, notification made by SEH to the FAA on behalf of Vernon County, and the FAA’s

March 19, 2021, response indicating that the FAA did not object to the proposed expansion. SEH contacted the FAA again on August 31, 2021, to confirm that the agency does not object to the revised expansion proposal. As of the date of this letter, a response from the FAA has not been received. Section NR 509.06(3), Wis. Adm. Code requires inclusion of the response letters from the FAA in the ISR.

- Please note that s. NR 504.04(4)(d), Wis. Adm. Code, requires submittal of a 7.5 Minute USGS map or equivalent with a scale of 1 inch=500 feet. The ISI request included a 1 inch=2000 feet scale topographic map; however, a 1 inch=500 feet scale map will be required in the ISR submittal. Several maps at this scale may be needed to show all of the items listed in this code section, which include the depiction of contour intervals to sufficiently show relief, surface waters, floodplains, existing land use conditions including the location of public parks, and all water supply wells and residences located within one mile of the property boundaries of the proposed landfill.
- It appears that the site meets or could be constructed and operated to meet the performance standards in s. NR 504.04(4), Wis. Adm. Code.
- The performance criteria outlined in s. NR 504.04(4)(c) through (f), Wis. Adm. Code include evaluation of surface water, groundwater, gas migration and air contaminant impacts. These performance criteria would be evaluated during the department's review of a feasibility report for the proposed expansion.
- Please remember that s. NR 504.06(2)(c), Wis. Adm. Code, requires the separation from the top of the bedrock surface and the bottom of the clay liner to be at least 10 feet.
- Please remember that s. NR 504.09 (2)(f), Wis. Adm. Code, requires a minimum separation distance of 100 feet be maintained between the limits of filling and the adjacent property line. A minimum distance of 50 feet must be maintained between any permanent berms or excavations associated with the landfill, excluding stormwater diversion structures, and the adjacent property line.

The items referenced above are addressed in this ISR. Following is a summary of additional understandings based on past experience and discussions with the WDNR:

- Requirements for the geotechnical investigation for the expansion are based on horizontal boundaries. The horizontal extent of the vertical expansion (on existing permitted air space) has already been investigated and documented.
- Geotechnical data collected since the previous expansion can be utilized assuming it meets the requirements of applicable regulations.
- Wisconsin solid waste regulations do not distinguish between weathered bedrock and competent bedrock and the WDNR evaluates each situation on a case-by-case basis. The WDNR has allowed less than a 10-foot separation to weathered bedrock at a few landfills in the past because the weathered bedrock had characteristics very similar to soil such as lacking good cohesion, tending to be friable, low RQDs, no auger refusal, etc. The feasibility report should discuss the differences between the weathered bedrock and competent bedrock.
- Variances and exemptions presented and approved for the alternate geotechnical program during the previous expansion (2003) are specific to that request and approval. The County will need to prepare an alternate geotechnical program request for the proposed expansion inclusive of any proposed variances or exemption requests to code requirements.

- Review of the NR 140 requirements for expansions is limited to the monitoring points installed and monitored for that monitoring license and does not need to include other monitoring points on the same property installed for a different facility and monitoring license.
- At a minimum, the WDNR requires four hard copies, and one electronic copy of all reports for the ISR and Feasibility report, and associated addendums, if necessary. An additional electronic copy of any plans or drawings associated with the report is also required. The County will provide additional electronic copies per the WDNR request as outlined in Section 1.3.2.

1.5 Potential Conflicts with Location and Performance Standards of NR 504.04

The ISI report located in Appendix A details the compliance status of the proposed expansion to the location standards of s. NR 504.04(3) and performance standards of s. NR 504.04(4)(a.-b.). The performance standards of s. NR 504.04(4)(c.-f.) are not addressed in the ISI or ISR, but will be covered in the feasibility report. Refer to Section 1.4 and Appendix A regarding the WDNR's response to the ISI Request and additional considerations relating to compliance of the location and performance standards of s. NR 504.04.

The only conflicts with the locational criteria or performance standards identified during the ISI was the presence of the facility's water supply well located within 1,200 feet of the proposed expansion boundary or the currently approved waste limits, and the potential presence of wetland indicators within the proposed expansion area based on review of the WDNR's Surface Water Data Viewer (SWDV) interactive map.

As noted in the ISI and per the WDNR's ISI response's, the private well servicing the County's office and recycling center is located less than 1,200 feet from the existing landfill footprint. On November 5, 1991 the WDNR issued the County a variance to install a potable well within 1,200-ft of the proposed landfill. The WDNR approved the plan of operation for the landfill on July 20, 1992 and the well was constructed on November 7, 1992. As part of the WDNR's feasibility determination for the last expansion (June 28, 2004) the WDNR issued an exemption to the requirements of s. NR504.04(3)(f) to allow the construction of a landfill within 1,200-ft of the potable well. Assuming the County proceeds with expansion and preparation of a feasibility study report, a request for exemption to the requirements of s. NR504.04(3)(f) will be included to allow the construction of a landfill within 1,200-ft of the well.

Additionally, in the November 1, 2021, ISI response, the WDNR requested the WUWN of the Chad B. Williams well located at E8263 North Asbury Road and to note whether the well is located within 1,200 feet of the proposed expansion boundary. Per the WDNR's Groundwater and Environmental Monitoring System (GEMS) database, the WUWN is FF457 for the Chad B. Williams well. The Williams well is located south of the existing landfill and is routinely monitored as part of the landfill's monitoring program. Figure 2 of Appendix E shows the approximate location of the Williams well, and other water supply wells in the area, relative to the existing landfill and proposed expansion. The proposed expansion is located due east of the current landfill and further from the Williams residence compared to the existing landfill. Based on the approximate location of the Williams well, the well is located greater than 1,200 feet from the proposed expansion and existing landfill. Additionally, the 1990 and 2003 feasibility studies for

the existing landfill indicate the Williams well is located greater than 1,200 feet from the existing landfill.

As suggested in the WDNR's ISI response's, the area of potential wetland indicators was inspected by an assured wetland delineator on May 4, 2021. The field visit was conducted under temperature that were normal and precipitation conditions that were drier than normal as compared to the historical average for the region according to USDA Field Office Climate Data WETS tables from the Viroqua, WI Station in Vernon County. The drier than normal conditions did not hinder the investigation for wetlands. The May 4, 2021, inspection concluded that no areas meeting the technical criteria for wetland are present within the area investigated. A copy of the memorandum documenting the wetland inspection is provided in Appendix B.

1.6 ISR Checklist

Appendix C, "ISR Checklist" includes a completed Initial Site Report Completeness Checklist. The checklist was utilized by SEH to confirm correct and sufficient data is provided to the WDNR in accordance with ch. NR 509 Wis. Adm. Code, and as a quick reference guide to the WDNR reviewer for location of applicable information contained in this report.

2 Submittal Requirements (NR 509.05(3))

2.1 General Information

The County is proposing to permit a horizontal and vertical expansion for the municipal waste landfill (WDNR License No. 3268). The proposed expansion is described as following:

- Contiguous horizontal and vertical expansion of approximately 10-acres east of the existing active landfill (License No. 3268)
- Vertical expansion with a waste overlay onto the eastern portion of the existing active landfill.

The current landfill, and proposed expansion, are located in portions of the SE¼ of the SW¼, and the SW¼ of the SE¼ of Section 15, T13N, R4W, Town of Viroqua, Vernon County, Wisconsin. The physical address for the existing and proposed landfills and the solid waste department is S3705 County Road LF, Viroqua, Wisconsin. The proposed landfill horizontal component consists of an approximate 4.0-acre horizontal expansion due east and contiguous with Phase III. The contiguous design promotes a minimized landfill footprint. The vertical expansion will extend the existing landfill vertically over an approximate 5.0-acre area of the existing footprint. The proposed expansion will overlay its waste onto Phase III. The approximate waste footprint for the proposed expansion is shown on the attached Figure 1, "Preliminary Waste Footprint."

2.1.1 Primary Contacts

Owner and Applicant:

Vernon County

Contact: Stacie Sanborn, Solid Waste Director
S3705 County Road LF
Viroqua, WI 54665
608.634.2900
stacie.sanborn@vernoncounty.org

Landfill Operator:

Vernon County Solid Waste Department
Contact: Stacie Sanborn, Solid Waste Director
S3705 County Road LF
Viroqua, WI 54665
608.634.2900
stacie.sanborn@vernoncounty.org

Engineering Consultant:

Short Elliott Hendrickson Inc.
Contact: Brian Kent
329 Jay Street Suite 301
La Crosse, WI 54601
608.498.4844
bkent@sehinc.com

2.2 Proposed Landfill Life and Design Capacity

The proposed vertical and horizontal landfill expansion will have a design capacity of approximately 430,000 cubic yards. It is anticipated that the proposed expansion will extend the existing facility air space capacity by 15 years

2.3 System Description and Municipalities Serviced

The Vernon County Landfill serves all municipalities, commercial businesses and industry located within Vernon County, which includes 21 townships, 9 villages, and three cities. Based on US Census Bureau estimates (July 2019), the approximate population of Vernon County is 30,800. This system is utilized by municipal and private waste haulers licensed to operate within the County.

The system accepts residential, commercial, industrial, and institutional wastes. Vernon County also serves as the Recycling Responsible Unit for the municipalities located within the County. The services offered by the system are consistent with the State of Wisconsin's waste management policies. The system keeps transportation distances and costs low, as well as ensuring strong private sector competition by maintaining accessible, fairly priced services.

2.3.1 Recycling Program

Beginning in 1991, the Vernon County Solid Waste and Recycling program has served as the Responsible Unit for the municipalities located within Vernon County. The recycling program provides roll-off containers and curbside delivery and pick up to each participating municipality. The source separated recycled materials are delivered to the recycling building, located at the landfill property, where they are further processed, sorted and bailed for subsequent sale. The Vernon County recycling program was recognized with the WDNR Wisconsin Recycling Excellence Overall System Award during 2020.

2.3.2 MSW Landfill

The MSW landfill was originally designed and permitted in early 1992 with three horizontal phases, a design capacity of 315,000 cubic yards, and comprising of an approximately 9.5-acre footprint. A vertical expansion was approved in 2005, which included three additional vertical sequences and added 275,000 cubic yards of air space.

The liner system for Phases I through III consists of a 5-foot-thick clay liner overlain with a 60-mil HDPE geomembrane liner. Phases I and III are underlain with a partial basin clay lined lysimeter. To date, all the permitted landfill cells have been constructed. Approximately 7-acres of the landfill has interim cover, and no final cover has been completed.

Waste currently placed in the MSW landfill includes MSW from County residences and commercial establishments, C&D waste, and industrial/special wastes. As of March 9, 2021 approximately 93,090 cubic yards of permitted airspace remains in the MSW landfill. Based on the average fill rate from the last three years, the existing permitted MSW landfill will be full in approximately January 2025.

2.3.3 C&D Debris

C&D debris that is not diverted prior to delivery to the landfill is placed in the MSW landfill.

2.3.4 Citizens Drop-off Area

Use of the landfill's public drop-off site is available to homeowners, renters, and businesses located within Vernon County. In 2019, the citizen's drop-off area was expanded to include bins for source separated recyclables and provides a valued convenience to the system users and is much safer than allowing the general public access to the active landfill face and recyclable material processing areas with equipment operators and haulers. Drop off items include:

- Source separated recyclables (plastic, glass, tin, paper, metal)
- Tires
- Large items: Furniture and furnishings including upholstered items
- General household waste, toys, bikes, grills, lawnmowers (without gas and oil), mattresses, stoves, hot water heaters, washers, dryers, small appliances, and other items
- Demolition/Construction Debris: Wood, drywall, doors, windows, sinks, toilets, tubs, roofing, bricks, carpets, tile, and flooring
- Garbage: Normal household waste like bagged waste, paper, and food waste
- Other: Yard waste/grass clippings, shingles, brush, and animal carcasses
- Refrigerators, dehumidifiers, air conditioners

2.4 Anticipated Waste Types and Characteristics

It is anticipated that the future waste types and characteristics will remain very similar to the waste currently being received, and landfilled, at the facility. Slight changes may occur as the result of improvement to national, regional and local recycling initiatives, such as food wastes or other high organic waste streams being diverted. During 2020, approximately 20,937 tons of waste was placed in the MSW landfill. Of this tonnage, approximately 95% was MSW and 5% was C&D material.

While not a significant source of tonnage, special waste is accepted at the landfill. Prior to accepting special wastes at the facility, each waste type and generator are thoroughly reviewed in accordance with the approved Special Waste Management Plan to ensure they are appropriate for disposal and will not negatively impact landfill operations. Special waste sources that are not appropriate are rejected as part of the application process and are not received at the facility.

A copy of the 2020 Vernon County Landfill Tonnage Report is Provided in Appendix D.

2.5 Anticipated Cover Frequency

Cover frequency will be daily, as is currently applied. The majority of daily cover utilized by the facility consists of sand imported to the site. When available, alternative daily cover (ADC), which are beneficially used waste products received at the facility, are utilized for daily cover. Currently the facility is approved to utilize the following waste streams for ADC:

Foundry Sand	Wood Chips	Petroleum Impacted Soil
Street Sweepings	Foundry Slag	Coal Bottom Ash

At least 6-inches of daily cover and/or ADC is placed on the active working face at the end of each day. To the extent feasible, the daily cover and ADC is removed at the beginning of each day and reused.

2.6 Mode of Operation

The Vernon County Landfill will continue to operate as an area fill with the following considerations:

- Segregate C&D material from MSW to the extent operationally feasible
- Utilize a 10-foot “fluff” lift when placing waste on a newly constructed cell. The fluff lift consists of MSW that does not contain large items that could potentially pierce the liner
- Separate disposal areas for asbestos containing materials, which are tracked and mapped

2.7 Anticipated Subbase, Base and Final Grades

The preliminary subbase, base and final cover grades discussed below for the proposed horizontal and vertical expansion of the Vernon County Landfill have been generated following the design requirements of s. NR 504 Wis. Adm. Code. The horizontal expansion area will consist of a composite liner system with the base graded in a herringbone configuration to convey leachate to the center collection trench and low sump area located on the south side of the expansion. Details of the subbase, base liner and final grades will be presented with the feasibility report.

2.7.1 Subbase Grades

The subbase grades presented are conceptual and are based on available information from historical reports, investigations, and bedrock excavation activities in the vicinity of the proposed expansion area. Modification of subbase elevations may be necessary following completion of the geotechnical investigation conducted for the feasibility study.

Subbase grades for the horizontal expansion will be positioned at least 10-feet above the seasonal high groundwater elevation. It is anticipated that bedrock excavation may be necessary to achieve a 10-foot separation between the bottom of the liner and top of bedrock. The attached Figure 2, "Preliminary Subbase Grades" provides the preliminary subbase elevation for proposed horizontal expansion.

2.7.2 Base Grades

The proposed base grades for the horizontal expansion mirror the subbase elevations, and are presented on Figure 3, "Preliminary Base Grades," with an additional 5 feet of clay for the compacted liner system.

The base elevations for the vertical expansion are immediately above the top of final permitted waste grades of waste within the expansion footprint.

2.7.3 Final Grades

The preliminary final grades for the proposed expansion, and existing landfill area are shown on Figure 4, "Preliminary Final Closure Grades." The final grades include a total final cover thickness of 6.5-feet over the waste with a 12-inch sand grading layer. In accordance with s. NR 504.07 the final cover will consist of, starting from the grading layer, 2-feet of compacted clay, a 40-mil geomembrane, a 1-foot drainage layer, 2-feet of rooting zone soil layer, and 6-inches of topsoil.

3 Land Use Information

3.1 Present Land Use

The approximate 4.0-acres for the proposed horizontal expansion are currently vegetated grassland, wooded, and undeveloped, except for the current sedimentation basin along the east side of the existing landfill. The land immediately to the east and north of the landfill and proposed expansion area is owned by Vernon County. It consists of a wooded ridge sloping rapidly to separate valleys, which converge approximately 5,000-feet to the northeast in the area of Seas Branch Pond. Beyond the wooded valley to the east are agriculture fields with a farm located approximately 1-mile east and a farm approximately 4,000-feet southeast.

Adjacent property to the north is wooded and decreases in elevation to the Seas Branch Stream, located approximately 1,500-feet from the landfill, which meanders along County Highway Y. Intermittent residential properties are located along County Highway Y, with the closest being approximately 1,900-feet from the landfill. Land use for property to the west of the landfill is a mixture of agriculture fields and wooded parcels. The closest residence to the west is located on County Road Y and is approximately 2,700-feet from the landfill. Land use for the property to the south of the landfill is also a mixture of agriculture fields and wooded parcels. The closest residence to the south is located on County Road LF and is approximately 1,500-feet from the landfill.

The following is a summary of the figures in Appendix E that present land use information. Please note the figures and table in Appendix E were also provided with the ISI request, and contain additional information including topography, surface waters, flood plains, and existing land use within 1-mile of the landfill property boundary.

- Figure 1 - Site Location: Provides a USGS 7.5-minute quadrangle map depicting location, topography/relief, and surface waters other than man-made storm water basins on the landfill property.
- Figure 2 - Residential and Private Wells Within 1-Mile of Horizontal Expansion: Includes an aerial photograph depicting residences, private wells and landowners within 1-mile of the landfill property. The attached Table 1 of Appendix E, "Adjacent Property Owners" provides a listing of each of the landowners and/or residences located within 1,200 feet of the landfill footprint or contiguous to the landfill property.
- Figure 3 - Floodplains and Water Features Within 1-Mile of Horizontal Expansion: Identifies flood hazard areas and surface water bodies within 1-mile of the landfill property.
- Figure 4 - Topography Within 1-Mile of Horizontal Expansion: Provides topography within 1-mile of the landfill property. The topography data was provided by the Vernon County Land Information Department and is more current than the USGS map provided on Figure 1. Figure 4 provides tighter contour intervals, compared to the USGS map (2 ft. spacing versus 20 ft.), to better portray topographic relief within 1 mile of the expansion area. Figure's 2 through 5 were provided to the WDNR on 34" x 52" plan sheets for the ISI submittal at a scale of 1 inch = 500 feet. Figure's 1 through 5 of Appendix E are being provided to depict the information required by NR 504.04(4)(d).
- Figure 5 - Existing Land Use Within 1-Mile of Horizontal Expansion: Identifies the current land use and category for areas within 1-mile of the landfill property.

3.2 Existing Land Uses Which May Have an Impact on Suitability

There are no existing land uses within one mile of the landfill that will have a negative impact on the suitability of the proposed expansion. The closest residence to the existing landfill is located approximately 1,500-feet to the south and is shielded from the operations view due to topography and wooded parcels. Agricultural activities in the area have not historically impacted site operations, or vice versa. Very little residential development has occurred near the landfill since the landfill was initially permitted.

3.3 Impacts of Expansion on Groundwater Quality

Groundwater quality impacts associated with the historic solid waste disposal operations have not been identified at the site. Due to the design requirements for the existing and proposed landfill expansion, including an engineered liner/cover and leachate collection, the proposed expansion should not adversely impact groundwater quality.

3.4 Areas Where Land Uses Would Be Affected by Proposed Landfill Expansions

There are not areas where land uses would be affected by the proposed landfill expansion. The proposed expansion is located entirely on existing property owned by Vernon County. The land use on properties adjacent to the landfill property are not anticipated to change.

3.5 Adjacent Landowners

Landowners whose property is contiguous to the landfill property boundaries and all residences located within 1,200 feet of the anticipated limits of filling are provided in Appendix E, Figure 2. Names and contact information for the landowners are summarized on Table 1 located in Appendix E. The proposed landfill expansion footprint is located on property currently owned by Vernon County and the footprint is greater than 100-feet from any existing property boundary. In addition, there are no existing residences or private wells located within 1,200 feet of the proposed landfill expansion footprint. The private well servicing the County's office and recycling center is located less than 1,200 feet from the existing landfill footprint. On November 5, 1991, the WDNR issued the County a variance to install a potable well within 1,200-ft of the proposed landfill as discussed in Section 1.5.

Properties contiguous to the County landfill property consist primarily of large vacant parcels of property owned by local residents. Following is a summary of the properties contiguous to the landfill property and a cross reference number showing their location on Figure 2 and Table 1 in Appendix E:

- Randy and Karen Crume own two parcels to the north and east of the County property. One parcel (#1) is approximately 20-acres and is wooded and undeveloped. The second contiguous parcel (#2) is approximately 38-acres is being utilized for pasture, agricultural fields and agriculture buildings. The Seas Branch Stream also meanders through the parcel.
- Alvin Woodmansee owns an approximate 3-acre parcel (#3) to the east of parcel #1 and north of the County property. The parcel is wooded and undeveloped.
- Pauline Buckland owns an approximate 30-acre parcel (#4) of wooded undeveloped land east and north of the County property.
- K&M Herlitzke Farms LLC owns five parcels (#5, #6, #7, #12, and #13) to the east, southeast and south of the County property. The parcels comprise approximately 140-acres and are utilized for agriculture fields.
- Madeline Clements owns an approximate 20-acre parcel (#8) east of the County property. The property is wooded, and a small house or cabin is located in the south-central portion of the property.
- Wisconsin RSA #8 owns an approximate 9-acre parcel (#9) east of the County property. The parcel contains a telecommunication tower and a small building within a fenced and secured area. The building likely contains equipment associated with the telecommunications tower.
- The Zion Church owns an approximate 1-acre parcel (#10) to the southeast of the County property. The one-acre parcel is vacant except for a small rural cemetery.
- The John & Linda Kieler Revocable Trust owns three parcels (#14, #16, #18) south of the County property across County Road LF. The parcels comprise approximately 90-acres wooded and are utilized for agriculture fields.
- Robert & Tammy Menne own an approximate 4-acre parcel (#15) south of the landfill property across County Road LF. The property is utilized as a residence and for agriculture related activities.
- Chad Williams owns an approximate 4-acre parcel (#17) south of the landfill property. The property is utilized as a residence. The William's private well is routinely sampled as part of the existing WDNR plan of operation approval.

- Wayne Kruienga owns an approximate 28-acre parcel (#19) west of the landfill property. The property is vacant is utilized as an agriculture field.
- Alice Mae Nelson owns two contiguous parcels (#20 & #21) west and northwest of the landfill property. The parcels comprise approximately 80-acres and are a mixture of wooded areas, agriculture fields and pasture. County Road Y and the Seas Branch Stream meander through the northernmost parcel (#21).
- Grace Acres LLC own two contiguous properties (#22 & #23) north and northwest of the landfill property. The parcels comprise approximately 28-acres and contain a mixture of wooded areas, agriculture fields and pasture. The Seas Branch Stream meanders through the parcel #22 and a residence and outbuildings are located on the north side of the Seas Branch Stream.

3.6 Land Use Zoning

The Vernon County Landfill property is located within the Town of Viroqua jurisdictional boundary. According to the Town of Viroqua Clerk, the township has adopted a zoning ordinance which is available on their website. Pursuant to Wisconsin Statute s. 289.22 (Local Approval), the Vernon County Solid Waste Department will be issuing a certified letter to the Town of Viroqua requesting they specify all applicable local approvals that are required.

Based on review of the draft ordinance and zoning map, the Vernon County Landfill property is located in a “Special Purpose District”. Permitted uses in the special purpose district include the following uses, so long as such sites are secured in a sufficient manner to insure public and environmental safety, including meeting all applicable State or Federal standards and laws: Landfills and former Landfills; Junk Yards; and, chemical, biological, and/or hazardous material production or handling.

Based on review of the Town of Viroqua’s zoning ordinance, current zoning will not require special applications or variances to facilitate the landfill expansion. Since the entire proposed expansion footprint is located on Vernon County property, and does not require a purchase of agricultural property, an Agricultural Impact Statement will not be required.

As indicated in the WDNR’s opinion to the initial site inspection, the proposed expansion is not located in a floodplain, conservancy or shore land. In such, zoning ordinances relating to these instances are not applicable.

3.7 Recreational, Historical, Archaeological and Critical Habitats

3.7.1 Recreational Areas

There are no recreational areas on and in the vicinity of the landfill property.

3.7.2 Historical and Archeological Sites

As required by Wis. Stat. §44.40, the WDNR performed a review of the area to determine if any known historic, scientific, or archeological areas exists at or near the proposed facility. On October 2, 2020, Laura Spears, WDNR Wastewater Specialist, issued a letter summarizing the findings of an endangered resources (ER) and cultural/historic review for the proposed expansion as part of the ISI request. The ER and cultural/historic review were updated in an August 31, 2021, letter issued from Laura Spears, which included the additional area provided in the revised

ISI request. Copies of the above letters are included in Appendix A and indicates there are not cultural or historic concerns for this parcel.

3.7.3 Critical Habitats and Endangered Resources

The Wisconsin Department of Natural Resources (WDNR) has conducted a review of the area for occurrences of Endangered, Threatened, or Special Concern Species, natural communities, or State Natural Areas in accordance with Wis. Stat. §26.604(4). Per WDNR review and subsequent letter, there are no record of the above occurrences that would be impacted by the proposed project. A copy of the recent endangered resource report from the WDNR is provide in Appendix A.

The WDNR's review of the Surface Water Data Viewer (SWDV) indicated a location within the proposed project area that may have wetland indicators. As suggested in the WDNR's ISI response's, the area of potential wetland indicators was inspected by an assured wetland delineator on May 4, 2021. The field visit was conducted under temperature that were normal and precipitation conditions that were drier than normal as compared to the historical average for the region according to USDA Field Office Climate Data WETS tables from the Viroqua, WI Station in Vernon County. The drier than normal conditions did not hinder the investigation for wetlands. The May 4, 2021 inspection concluded that no areas meeting the technical criteria for wetland are present within the area investigated. A copy of the memorandum documenting the wetland inspection is provided in Appendix B.

3.8 Federal Aviation Administration

The proposed landfill expansion is located approximately 2.7 miles (>15,840 feet) northeast of the closest runway at the Viroqua Airport and is not located in the approach or departure path for the airport. Since the expansion is located less than 5 miles from the airport, the County has issued a letter dated October 23, 2020 to the Federal Aviation Administration (FAA) notifying them of their intent to expand. A copy of the notification letter is attached in Appendix F, "FAA Correspondence."

Review of applicable regulations regarding landfill siting and expansions near airports indicate that the requirements of 49 USC Section 44718(d) apply only to new municipal solid waste landfills (MSWLF's), which are defined as a municipal waste landfill that was established or constructed after April 5, 2000. Furthermore, FAA Advisory Circular AC No. 150/5200-34A states that 49 USC Section 44718(d) does not apply to the expansion or modification of an existing MSWLF. The current active Vernon County Landfill was first constructed in 1993, therefore exempt from the limitations of 49 USC Section 44718(d).

As part of the last expansion process, Vernon County issued a letter to the FAA on May 29, 2002 notifying interested parties of their intention to expand. In a letter dated June 16, 2002 the FAA responded with a letter concurring with the proposal relative to compatibility standards contained in FAA Advisory Circular AC No. 150/5200-33, with the following conditions:

1. The landfill facility must be properly supervised to assure that the bird populations are not increasing and that appropriate control procedures are being followed.
2. Any increases in bird activity that might be hazardous to safe aircraft operations will result in prompt mitigation actions and/or closure of the landfill

3. The above conditions must be clearly defined via State/Local licensing procedures associated with establishment of the landfill.
4. The landfill owner/operator should develop and implement a Wildlife Hazard Management Plan for operation of the landfill.

A Wildlife Hazard Management Plan (Plan) was included in their Plan of Operation, which has been approved by the WDNR and part of the facility operating record. The Plan utilizes the following strategies:

- Minimization of standing water areas
- Minimization of uncovered waste areas
- Prompt revegetation of disturbed areas outside of the waste footprint
- Utilization of bird harassment techniques, perch deterrents, and avoidance structures, as needed

The FAA does not approve or disapprove of solid waste landfill locations but is primarily concerned about location relative to safety. With issuance of the attached notification letter, it is anticipated that the FAA may reply with additional conditional actions to address safety concerns.

In an electronic mail dated March 19, 2021 Bobb Beauchamp, Environmental Protection Specialist with the FAA, confirmed that the landfill expansion is exempt from the requirements of 49 USC Section 44718(d) and encouraged the continued use and implementation of the Plan. The FAA also indicated that the Viroqua Airport does not have regularly scheduled service in addition to general aviation operations, so the provisions of FAA AC 150/5200-34A, Construction or Establishment of Landfills Near Public Airports also does not apply.

Mr. Beauchamp was contacted again on August 31, 2021, to confirm the FAA's response remains unchanged with the addition of the area to the north and east being considered for landfill expansion. No additional response has been received as of the date of this report. However, no additional response may be received as Mr. Beauchamp specifically indicated the referenced provisions do not apply to landfills that were constructed or operated prior to April 5, 2000.

A copy of the October 23, 2020, notification and March 19, 2021 FAA response is included in Appendix F.

3.9 Transportation and Access

No changes are proposed to the existing landfill access. The main roads leading to Viroqua and the landfill include US14/State Highway (STH) 27 to the north, STH56 from the West, STH56/82 from the east, US14 from the south, and STH27/82 from the southwest. Once in Viroqua, or Westby to the north, access to the landfill is gained by turning east on County Road (CR) Y from US14/STH27. Travelling east on CR Y, then turn south on CR LF to the landfill property entrance located on the north side of CR LF. There are no weight restrictions on US14 and STH56, STH82 or STH 27. The county roads have weight restrictions during a brief period in the spring which 6 tons for single axle vehicles and 10 tons for double axle vehicles. Weight restrictions are not enforced on local town roads.

4 Physiographical and Geological Setting

4.1 Topography

The proposed landfill expansion is located in an unglaciated portion of Wisconsin known as the “Driftless” region. Topography within this area is typified by systems of bedrock ridges cut by stream and river valleys. The ridge and valley system is present in the immediate vicinity of the site, with elevations ranging from approximately 1040 feet MSL to 1260 feet MSL within the site boundaries (USGS Avalanche Quadrangle, 2018). Generally, the lower elevations are present to the north along the Seas Branch drainage, and to the southeast along an unnamed discontinuous drainage. A system of bluffs forms the higher elevations generally through the central portion of the site. The proposed horizontal expansion area is along the top of this bluff system. Surface water from the site generally flows either to the north toward Seas Branch (recently improved trout stream) or to the southeast (toward the unnamed discontinuous drainage way) and then northeast along this drainage way.

4.2 Hydrology

The site is located within the West Fork Kickapoo River Watershed, which is part of the Lower Wisconsin River Drainage Basin with regional surface water eventually draining to the Mississippi River approximately five miles south of Prairie du Chien, Wisconsin (Wojahn, 2019). Surface water in the area drains to the Seas Branch (north of the site) and an unnamed drainage (southeast portion of the site) which both feed into the West Fork of the Kickapoo River. The West Fork of the Kickapoo River flows to the south, meeting the Kickapoo River, and eventually the Wisconsin River.

Significant surface water bodies near the site include Seas Branch, and an associated impoundment (approximately one quarter to one half mile north and northeast of the site respectively), an unnamed discontinuous drainage way flowing through the southeast portion of the site, and the West Fork of the Kickapoo River (approximately three miles east of the site). Other than the impoundment of Seas Branch, no significant lakes are present in the immediate vicinity of the site. Additional unnamed drainage ways are also present in small valleys and swales throughout the region.

The Wisconsin Wetland Inventory Map does not identify wetlands within the proposed landfill expansion area. A wetland area is identified on the shorelines of Seas Branch just west of the impoundment area, approximately ½ mile northeast of the site. Six wetland class points too small to delineate are located along the shoreline of Seas Branch to the northwest, north and northeast of the site. Three wetland class points identified as dammed pond are identified on the landfill property to the southeast of the proposed landfill expansion area. No other wetlands were identified in the immediate proximity of the proposed landfill expansion area.

4.3 Geology

4.3.1 Near Surface Soils

Based on review of the Soil Survey for Vernon County (USDA, 2021), the near surface soils comprising the proposed horizontal expansion area include the following soil types.

- Mt. Carroll Silt Loam (114B2), 2 to 6 percent slopes, moderately eroded, well drained. These soils are typically loess.

- Seaton Silt Loam (115D2), driftless ridge, 12 to 20 percent slopes, moderately eroded, well drained. These soils are typically loess.
- Valton Silt Loam (133C2), 6 to 12 percent slopes, moderately eroded, well drained. These soils are typically loess over clayey pedisegment derived from dolomite.
- Pepin Silt Loam (125D2), 12 to 20 percent slopes, moderately eroded, well drained. These soils are typically loess over clayey pedisegment derived from dolomite over skeletal loamy residuum weathered from dolomite.

4.3.2 Unconsolidated Deposits

Unconsolidated deposits generally consist of loess as well as clay soils generated from weathering of dolomite bedrock (ridges) along with alluvium and lacustrine deposits in the river and stream valleys. These soils are typically fine grained and range from silts and clays (above dolomite bedrock ridges) to sands (valley floors). The thickness of unconsolidated deposits generally range from 0 to 50 feet throughout the area (Hindall, 1974).

4.3.3 Bedrock Geology

The uppermost bedrock unit at the site consists of Ordovician aged dolomites of the Prairie du Chien Group, most likely the Oneota Formation, which generally occur as the uppermost bedrock unit on the ridges in this area of southwestern Wisconsin (Gaffield, et al, 1998). Thickness of the Prairie du Chien group deposits ranges from 0 to approximately 250 feet (Hindall, 1974).

Underlying the Prairie du Chien group is the Cambrian aged sandstone bedrock. The Cambrian sandstone is typically the uppermost bedrock unit in the weathered stream valleys in the proximity of the site. In southwestern Wisconsin, the Cambrian sandstone unit is generally up to 1200 feet thick, and includes the Jordan Sandstone (uppermost unit), St. Lawrence Formation, Tunnel City Formation, Wonewoc Formation, Eau Claire Sandstone, and Mount Simon Sandstone (bottom unit). The Cambrian sandstone sequence is underlain by thousands of feet of basement, Precambrian crystalline igneous and metamorphic rock.

4.4 Hydrogeology

There are three major aquifers used for potable water production in the Lower Wisconsin River basin. The aquifers are, in order of importance, the sandstone aquifer, the sand and gravel aquifer, and the Galena-Platteville aquifer. The sandstone aquifer is present in saturated portions of Cambrian sandstone bedrock, with well yields of up to 1850 gpm. The sand and gravel aquifer (where present) utilizes groundwater in saturated unconsolidated sand and gravel deposits, mostly in river and stream valleys. Well yields of up to 2000 gpm are reported in the sand and gravel aquifer (Hindall, 1974). The Platteville-Galena aquifer (where present) produces water from saturated portions of the Platteville Galena dolomite; however, the Platteville Galena dolomite does not occur at the landfill site.

Regionally, groundwater generally flows to the southeast, toward the Kickapoo River in the western portion of Vernon County (Hindall, 1974). Locally, groundwater contours typically somewhat mirror surface topography, with groundwater flowing from areas of higher surface elevation towards the valleys, ultimately feeding into streams as groundwater discharge areas in lower elevations.

The sand and gravel aquifer are not present in the proposed landfill expansion area. The sandstone aquifer would be the only aquifer available for use within the proposed landfill

expansion area. Groundwater elevation in the proximity of the landfill expansion area is estimated to be approximately 1100 ft MSL (Hindall, 1974).

4.5 Water Quality

4.5.1 Groundwater

Groundwater in the Lower Wisconsin River basin is generally of very good quality and is usable for most purposes. The main chemical constituents in the groundwater within the basin are calcium, magnesium, and bicarbonate ions, which are derived primarily from solution of dolomite and limestone bedrock (Gaffield, et al, 1998). Regional differences in groundwater quality occur due to regional variability in the soil and rock through which the groundwater moves (Hindall, 1974).

Hardness as calcium carbonate is above 180 mg/L in 80 percent of sampled wells, and above 225 mg/L in 65 percent of sampled wells. This indicates hard water, and softening is often required for many domestic uses. The median dissolved solids content is approximately between 260 and 350 mg/L in groundwater in the drainage basin (Hindall, 1974).

4.5.2 Surface Water

The chemical quality of surface water in the Lower Wisconsin River basin is generally good and relatively unpolluted, although the water is generally hard (181 mg/L or greater) outside of the Wisconsin River itself. Specific conductance generally ranges from approximately 300 to 500 micromhos, except for in the Wisconsin River, where specific conductance ranges from 150 to 300 micromhos (Hindall, 1974). Since, groundwater in the region tends to feed surface water, the dominant chemical ions in surface water from the Lower Wisconsin River basin are also calcium, magnesium, and bicarbonate ions (Gaffield, et al, 1998).

5 Conclusion and Desired Action

It is Vernon County's opinion that the proposed expansion is in compliance with the locational criteria and will be designed in accordance with the performance standards outlined in s. NR 504.04(3) & (4) Wis. Adm. Code. Accordingly, Vernon County requests the WDNR provide an opinion of this ISR regarding the suitability of the proposed expansion, prior to exhausting additional resources relating to the feasibility study and report.

dmk

6 References

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- USGS 2018, "Avalanche Quadrangle 7.5 Minute Series Topographic Map."
- "Wisconsin Wetland Inventory Map," Wisconsin Department of Natural Resources, Surface Water Data Viewer (undated).
- Wojahn, B., 2019, "Vernon County Land and Water Resource Management Plan", Vernon County Land and Water Conservation Committee.

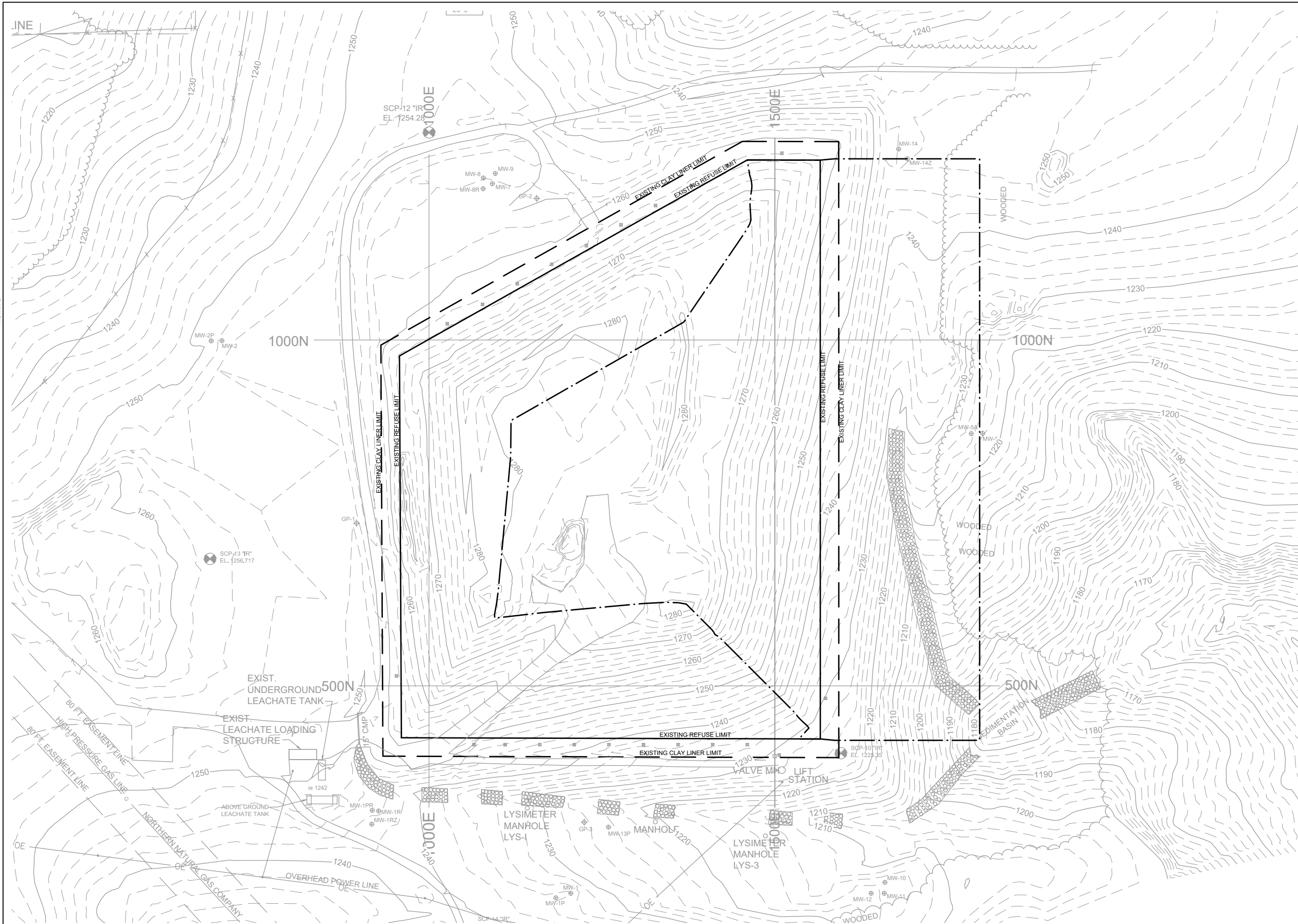
Figures

Figure 1 – Preliminary Waste Footprint

Figure 2 – Preliminary Subbase Grades

Figure 3 – Preliminary Base Grades

Figure 4 – Preliminary Final Closure Grades

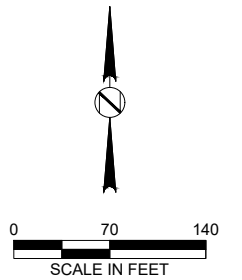


GENERAL NOTES:

1. CONTOUR INTERVAL IS 2-FOOT.

LEGEND:

- 1240 ——— EXISTING GRADE MAJOR CONTOUR
 - - - - - EXISTING GRADE MINOR CONTOUR
 — . — . — PROPOSED WASTE LIMITS



	08/27/2021	DRH	ISSUED FOR REVIEW				
NO	DATE	BY	REMARKS	NO	DATE	BY	REMARKS
REVISIONS				REVISIONS			

DESIGNED	CHECKED
TTR	DRH
DRAWN	CHECKED
TTR	BLK
DATE	APPROVED
08/27/2021	DRH

PLANS PREPARED BY:

 329 JAY STREET
SUITE 301
LA CROSSE, WI 54601-4034
PHONE: 1.608.782.3161
www.sehinc.com

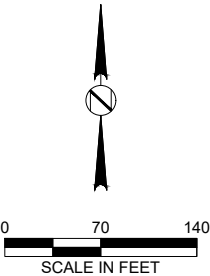
PLANS PREPARED FOR:
VERNON COUNTY SOLID WASTE DEPT
53705 CTH LF
VIROQUA, WISCONSIN

PROJECT/CONTRACT NO	VERNON COUNTY
SEH PROJECT NO	VERSW 157634
FILE NAME	VC157634FIG1

VERNON COUNTY LANDFILL
INITIAL SITE REPORT
VIROQUA, WISCONSIN

PRELIMINARY WASTE FOOTPRINT

FIG 1



DESIGNED TTR	CHECKED DRH
DRAWN TTR	CHECKED BLK
DATE 08/27/2021	APPROVED DRH

PLANS PREPARED FOR:
VERNON COUNTY SOLID WASTE DEPT
53705 CTH LF
VIROQUA, WISCONSIN

PROJECT/CONTRACT NO
VERNON COUNTY

SEH PROJECT NO
VERSW 157634

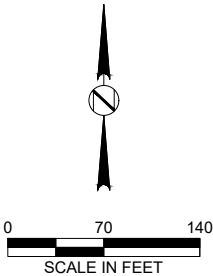
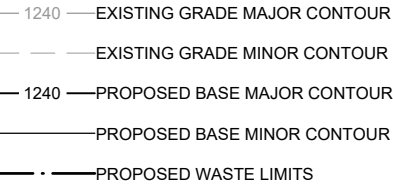
FILE NAME
VC157634FIG2

VERNON COUNTY LANDFILL
INITIAL SITE REPORT
VIROQUA, WISCONSIN

PRELIMINARY SUBBASE GRADES

FIG 2

2 OF 4



	08/27/2021	DRH	ISSUED FOR REVIEW						
Nº	DATE	BY	REMARKS						
REVISIONS									REVISIONS

DESIGNED TTR	CHECKED DRH
DRAWN TTR	CHECKED BLK
DATE 08/27/2021	APPROVED DRH

PLANS PREPARED BY:

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PLANS PREPARED FOR:
VERNON COUNTY SOLID WASTE DEPT
53705 CTH LF
VIROQUA, WISCONSIN

PROJECT/CONTRACT NO
VERNON COUNTY
SEH PROJECT NO
VERSW 157634
FILE NAME
VC157634FIG3

VERNON COUNTY LANDFILL
INITIAL SITE REPORT
VIROQUA, WISCONSIN

PRELIMINARY BASE GRADES

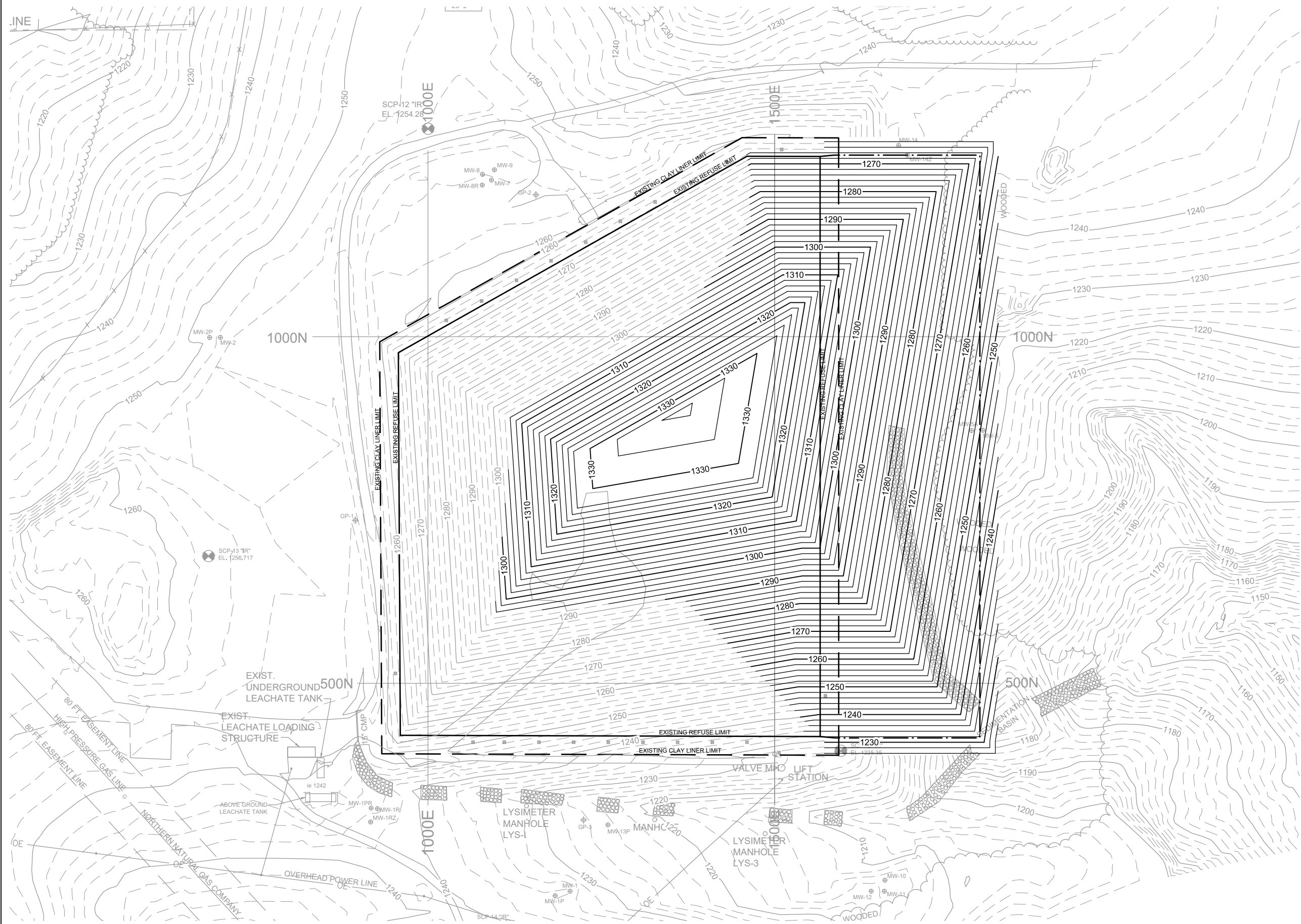
FIG 3

3 OF 4

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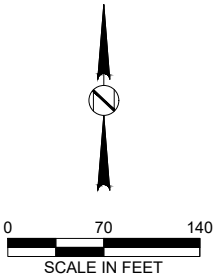


GENERAL NOTES:

1. CONTOUR INTERVAL IS 2-FOOT.
2. PROPOSED CONTOURS REPRESENT FINAL CLOSURE ELEVATIONS.

LEGEND:

- 1240 — EXISTING GRADE MAJOR CONTOUR
- 1240 — EXISTING GRADE MINOR CONTOUR
- 1240 — PROPOSED CLOSURE MAJOR CONTOUR
- PROPOSED CLOSURE MINOR CONTOUR
- PROPOSED WASTE LIMITS



	08/27/2021	DRH	ISSUED FOR REVIEW						
NO	DATE	BY	REMARKS	NO	DATE	BY	REMARKS	NO	DATE
REVISIONS				REVISIONS					

DESIGNED	CHECKED
TTR	DRH
DRAWN	CHECKED
TTR	BLK
DATE	APPROVED
08/27/2021	DRH

PLANS PREPARED BY:

 329 JAY STREET
SUITE 301
LA CROSSE, WI 54601-4034
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PLANS PREPARED FOR:

VERNON COUNTY SOLID WASTE DEPT
53705 CTH LF
VIROQUA, WISCONSIN

PROJECT/CONTRACT NO	VERNON COUNTY
SEH PROJECT NO	VERSW 157634
FILE NAME	VC157634FIG4

VERNON COUNTY LANDFILL
INITIAL SITE REPORT
VIROQUA, WISCONSIN

PRELIMINARY FINAL CLOSURE GRADES

Appendix A

ISI Request and WDNR Response



November 1, 2021

File Ref: FID 663038310
Vernon County
SW/CORR

Ms. Stacie Sanborn
Vernon County Solid Waste and Recycling Center
S3705 County Hwy LF
Viroqua, WI 54665

Subject: Supplemental Initial Site Inspection Opinion Letter - Proposed Expansion to Vernon County
Landfill, License #3268

Dear Ms. Sanborn:

This letter documents a second initial site inspection (ISI) performed by the Department of Natural Resources (department) on September 30, 2021, for additional areas of the proposed expansion of the Vernon County Landfill. Waste Management Engineer Martin Herrick and Hydrogeologist Carolyn Cooper conducted the inspection. The purpose of the inspection was to identify any potential conflicts the additional areas of the proposed expansion might have with the location and performance standards in s. NR 504.04, Wis. Adm. Code. This letter supplements the department's December 15, 2020 ISI opinion letter for the proposed expansion. All comments and recommendations contained in the previous response letter remain valid.

As part of the inspection, the department evaluated the information in SEH's September 3, 2021 revised ISI request submitted on behalf of Vernon County. The revised ISI request proposes an area to the north and east of the existing landfill for a potential landfill expansion, in addition to the areas to the north and west of the landfill that were considered in the original ISI. The revised request notes that soil borings advanced in May 2021 encountered shallow bedrock to the west of the active landfill cell. This finding, along with topographic and property boundary limitations to the west and northwest of the landfill, prompted Vernon County to consider the area north and east of the existing landfill for possible landfill development. The revised ISI states that the proposed expansion is in the South ½ of Section 15, T13N, R4W. Please review this description for accuracy and provide future site location descriptions to the ¼-¼ Section level.

According to the ISI request, the proposed expansion would consist of a contiguous 10-acre horizontal expansion to the west, north or east (or a combination thereof) of the currently permitted active MSW landfill (License #3268) and a vertical expansion over a portion of the active landfill. As observed during the inspection, the horizontal expansion area consists of open, grassy areas adjacent to the existing active landfill with wooded areas farther to the north, northeast and east. The landfill's sedimentation basin is located within the proposed expansion area east of the landfill. Features within the proposed expansion area north and west of the landfill include the leachate loadout area, access roads to the active landfill and the closed construction and demolition (C&D) landfill, a wooden shed, and a soil stockpile area. Any impacts or changes to the existing features would be described in the Initial Site Report (ISR) and feasibility report.

Based on the review of the documents included with the September 3, 2021 ISI request and observations from the site inspection, the department's preliminary opinion regarding the suitability of site location is that the site location has potential. The only conflict with the locational criteria contained in s. NR 504.04(3), Wis. Adm. Code, that was identified is a water supply well located within 1,200 feet of the proposed expansion boundary or the currently approved waste limits.

Regarding the performance standards contained in s. NR 504.04(4), Wis. Adm. Code, the department's review of the Surface Water Data Viewer (SWDV) shows a location within the proposed project area west of the existing landfill with wetland indicators that should be checked by an assured wetland delineator. If there are conflicts that cannot be satisfactorily addressed in accordance with applicable requirements, then they would be constraints to site development.

Summary of Locational Criteria: As described in s. NR 504.04(3)(a) to (i), Wis. Adm. Code, there are several locational criteria that apply to the proposed landfill expansion. The proposed limits of filling may not be located within:

- (a) *1,000 feet of any navigable lake, pond or flowage.* The ISI request states that there is not a navigable lake, pond, or flowage within 1,000 feet of the proposed expansion; however, the landfill's existing sedimentation basin, a manmade stormwater detention pond east of the landfill, is located within 1,000 feet of the proposed expansion. As a sediment control feature, this pond would be excluded from the setback requirement. The pond may need to be moved and/or enlarged to accommodate a proposed expansion of the landfill. Details of the stormwater management system would be provided in the feasibility report.
- (b) *300 feet of any navigable river or stream.* According to the ISI request, the proposed expansion is not within 300 feet of a navigable river or stream. The department's SWDV map also indicates the proposed expansion is not within 300 feet of a navigable river or stream.
- (c) *A floodplain.* According to the ISI request, the proposed expansion is not within a floodplain. The department's SWDV map also indicates this area is not in a floodplain.
- (d) *1,000 feet of the nearest edge of the right-of-way of any state trunk highway, interstate or federal aid primary highway or the boundary of any public park or state natural area, unless the landfill is screened.* According to the ISI request, there are no state trunk highways, interstate or federal aid primary highways within 1,000 feet of the proposed site. US Highway 14/61 and State Highway 27 are the closest features and would be over 12,500 feet from the proposed site. The ISI request states that there are no public parks or state natural areas within 1,000 feet of the limits of the current landfill or expansion footprint.
- (e) *An area where the design or operation of the landfill would pose a significant bird hazard to aircraft.* According to the ISI request, there are no airport runways within 10,000 feet of the proposed landfill expansion. The closest runway at the Viroqua Airport is located approximately 15,840 feet (2.7 miles) southwest of the proposed landfill expansion, and the landfill is not located in the approach or departure path for the airport. Because the proposed expansion is within 5 miles of this runway, notification to the Federal Aviation Administration (FAA) is required. The revised ISI request included a copy of the October 23, 2020 notification made by SEH to the FAA on behalf of Vernon County and the FAA's March 19, 2021 response indicating that the FAA did not object to the proposed expansion. SEH contacted the FAA again on August 31, 2021 to confirm that the agency does not object to the revised expansion proposal. As of the date of this letter, a response from the FAA has not been received. Section NR 509.06(3), Wis. Adm. Code, requires inclusion of the response letters from the FAA in the ISR.
- (f) *1,200 feet of any public or private water supply well.* The ISI request states that no public or private wells are located within 1,200 feet of the proposed expansion boundary, except for the well serving the landfill office and recycling facility (Wisconsin Unique Well Number [WUWN] FU046). The ISI request states that a variance for the setback requirement for this well was granted prior to constructing the initial landfill cell. If Vernon County pursues expansion of the landfill within the 1,200-foot setback zone, please request and justify an exemption to this locational criterion or provide an alternative water supply

for this property. If the proposed limits of waste would extend closer to the well than currently approved or be located in a different gradient position with respect to groundwater flow from the water supply well, then a new NR 812 well variance application may be required.

The Chad B. Williams well, located at E8263 North Asbury Road, is sampled semiannually as part of the landfill's environmental monitoring program. Please confirm the WUWN for this well and note whether the well is located within 1,200 feet of the proposed expansion boundary. An NR 812 well variance application may be required. Further discussion regarding public and private wells in the area would be addressed in the feasibility report.

- (g) *200 feet of a fault that has had displacement in Holocene time.* The ISI request states that the proposed expansion is not within 200 feet of a fault that has had displacement since Holocene time. Further discussion regarding the geologic stability of the area would be addressed in the feasibility report.
- (h) *Seismic impact zone.* The ISI request concludes that the site is in an area of very low seismic hazard based on United States Geological Survey (USGS) information.
- (i) *Unstable areas.* The ISI request states there is no evidence of unstable conditions at the site based on known current or historical data. Further discussion regarding the geologic stability of the area would be addressed in the feasibility report.

It appears that the site meets or could be constructed and operated to meet the performance standards in s. NR 504.04(4), Wis. Adm. Code.

- (a) *Wetland Areas* - Based on information provided in the ISI request, review of the SWDV and the site inspection, no regulated wetlands were identified within the proposed project area at this time. However, as noted in the department's previous ISI opinion letter, the SWDV identified a location within the proposed expansion area west of the landfill as a potential wetland indicator based on soil type and/or wet area. Vernon County should have this area checked by an assured wetland delineator during the growing season and provide the findings in the ISR.
- (b) *Critical Habitat Areas* - Based on a review of the Natural Heritage Inventory, no element occurrences were identified as existing in the area. Therefore, it appears unlikely that there would be any significant adverse impact on critical habitat areas or endangered or threatened species due to the proposed expansion. As the proposed project progresses through the siting process, additional reviews by department staff may be done at different stages to update the NHI review.

Archaeological issues and historical structures for the proposed expansion area were cleared by Richard Kubicek, Departmental Archaeologist/Departmental Historic Preservation Officer, on November 10, 2020. An August 31, 2021 letter from Laura Spears, Wastewater Specialist – Stormwater, provided in revised ISI request, documents that another review for archaeological sites was performed for the S ½ of Section 15, Township 13 North, Range 4 West in the Town of Viroqua, which did not show archaeological sites. Additional reviews may be done at the ISR and feasibility report stages as the landfill footprint and locations of other supporting structures become known.

The performance criteria outlined in s. NR 504.04 (4) (c) through (f), Wis. Adm. Code, include evaluation of surface water, groundwater, gas migration and air contaminant impacts. These performance criteria would be evaluated during the department's review of a feasibility report for the proposed expansion.

Please remember that s. NR 504.06(2)(c), Wis. Adm. Code, requires the separation from the top of the bedrock surface and the bottom of the clay liner to be at least 10 feet.

Section NR 504.04(4)(d), Wis. Adm. Code, requires submittal of a 7.5 Minute USGS map or equivalent with a scale of 1 inch=500 feet. The ISI request included topographic map with a scale of a 1 inch=750 feet; however, a 1 inch=500 feet scale map will be required in the ISR submittal. Several maps at this scale may be needed to show all of the items listed in this code section, which include the depiction of contour intervals to sufficiently show relief, surface waters, floodplains, existing land use conditions, public parks, and all water supply wells and residences located within one mile of the property boundaries of the proposed landfill.

Section NR 504.09(2)(f), Wis. Adm. Code, requires a minimum separation distance of 100 feet be maintained between the limits of filling and the adjacent property line. A minimum distance of 50 feet must be maintained between any permanent berms or excavations associated with the landfill, excluding stormwater diversion structures, and the adjacent property line.

The locational and performance criteria will be evaluated again as the department reviews the ISR and feasibility report. Please keep in mind that as the department continues its review of the proposed expansion and as new information is presented, additional questions or concerns may arise, or requests for further information may be made before a feasibility determination is made.

Please do not hesitate to contact me at 608-931-9387 or carolyn.cooper@wisconsin.gov if you have any questions about this letter.

Sincerely,



Carolyn Cooper, P.G.
Hydrogeologist
South Central Region

cc: Brian Kent, SEH
Darryl Heaps, SEH
Martin Herrick, DNR-WA
John Morris, DNR-WA
Natasha Gwidt, DNR-WA
Joe Lourigan, DNR-WA
Valerie Joosten, DNR-WA



Initial Site Inspection Request

Vernon County Landfill

Viroqua, Wisconsin

WDNR License No. 3268

VERSW 157634 | November 4, 2020, Revised September 3, 2021



Building a Better World
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Engineers | Architects | Planners | Scientists



Building a Better World
for All of Us®

September 3, 2021

RE: Vernon County Landfill
Initial Site Inspection Request
Viroqua, Wisconsin
WDNR License No. 3268
SEH No. VERSW 157634

Ms. Carolyn Cooper, Hydrogeologist
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711-5367

Dear Ms. Cooper:

Short Elliott Hendrickson Inc. (SEH®), on behalf of the Vernon County Solid Waste Department, is submitting this revised Initial Site Inspection (ISI) report to request the Wisconsin Department of Natural Resources (WDNR) provide a preliminary opinion regarding the suitability of additional area to the north and east of the existing landfill for municipal solid waste landfill expansion development. This ISI Request includes a report narrative supplemented by figures and appendices that provide preliminary expansion information as it relates to compliance with the applicable locational criteria and performance standards of s. NR 504.04 Wisconsin Administrative Code.

This report was prepared in accordance with s. NR 509.04 Wisconsin Administrative Code. We believe the ISI is complete and request your timely review. Should you have any questions or would like to discuss the proposed expansion further, please contact me at 608.498.4844.

Sincerely,

Brian L. Kent, CHMM
Project Manager

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Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 329 Jay Street, Suite 301, La Crosse, WI 54601-4034
SEH is 100% employee-owned | sehinc.com | 608.782.3161 | 800.903.6970 | 888.908.8166 fax

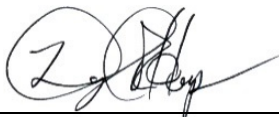
Initial Site Inspection Request

Vernon County Landfill
Viroqua, Wisconsin

Prepared for:
Vernon County Solid Waste
Viroqua, Wisconsin

Prepared by:
Short Elliott Hendrickson Inc.
329 Jay Street, Suite 301
La Crosse, WI 54601-4034
608.782.3161

I, Darryl R. Heaps, hereby certify that I am a licensed professional engineer in the State of Wisconsin in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 500 to 538, Wis. Adm. Code.



Darryl R. Heaps, PE, CHMM
Senior Engineer

E-25799
PE Number

9/3/2021
Date



Brian L. Kent CHMM
Project Manager

9/3/2021
Date



Distribution

No. of Copies	Sent to
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1	Stacie Sanborn Director of Solid Waste Vernon County Solid Waste Department S3705 County Road LF Viroqua, WI 54665
1	WDNR - Bureau of Waste Management 101 S. Webster Street PO Box 7921 Madison, WI 53707
1	Carolyn Cooper, PG Hydrogeologist Wisconsin Department of Natural Resources 3911 Fish Hatchery Road Fitchburg, WI 53711
1	Darryl Heaps, PE SEH 3535 Vadnais Center Drive St. Paul, MN 55110

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Appendix B ER/NHI Report

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Initial Site Inspection Request

Vernon County Landfill

Prepared for Vernon County Solid Waste

1 Introduction

1.1 Purpose

The Vernon County Landfill (WDNR License No. 3268) proposes to expand the existing landfill for disposal of municipal solid waste, commercial and industrial waste. Short Elliott Hendrickson Inc. (SEH®), on behalf of Vernon County (County), is issuing this revised Initial Site Inspection (ISI) report to request additional area to the north and east of the existing landfill be evaluated by the WDNR for the purpose of evaluating compliance with the applicable locational criteria and performance standards specified under s. NR 504.04 Wisconsin Administrative Code. Preliminary soil borings performed in May 2021 encountered shallow bedrock to the west of the active landfill cell. This consideration, along with topographic and property boundary limitations to the west and northwest prompted the area north and east of the existing landfill to be evaluated for landfill development and, therefore, this revised ISI.

An ISI request was submitted to the WDNR on November 4, 2020. The WDNR completed a site inspection on November 18, 2020, and issued a response on December 15, 2020. The WDNR's preliminary opinion regarding the suitability of site location of the original ISI request was the site has potential for landfill development. This ISI is being re-submitted in its entirety and includes additional area to the north and east as well as the original area presented in the November 4, 2020, ISI request.

1.2 Landfill Initial Site Inspection Checklist

Appendix A, "ISI Request Checklist" includes a completed Landfill Initial Site Inspection Request Completeness Checklist (WA1184). The checklist was utilized by SEH to confirm correct and sufficient data is provided to the WDNR in accordance with s. NR 509.04 Wisconsin Administrative Code, and as a quick reference guide to the WDNR reviewer for location of applicable information contained in this report.

2 General Information

The Vernon County Solid Waste Department owns and operates an integrated waste management system on approximately 250-acres located in the Town of Viroqua, Wisconsin. The integrated waste management system includes:

- An approximate 10-acre municipal solid waste landfill, with an approximate design capacity of 590,000 cubic yards (WDNR License No. 3268)
- A closed small sized (50,000 cubic yard) C&D Landfill (WDNR License No. 3712)
- A recyclable material processing and baling facility

2.1 Proposed Operation

The County is proposing to permit a horizontal and vertical expansion for the municipal waste landfill (WDNR License No. 3268). The approximate waste footprint for the proposed expansion is shown on the attached Figure 1 through Figure 5. Please note that the approximate footprint presented is not anticipated to cover the entire area shown, but bounds the areas currently being considered for the expansion. It is anticipated that the proposed expansion footprint will be less than 10-acres. The landfill will continue to accept waste from regional haulers and municipalities located in Vernon County. The proposed expansion is described as following:

- Contiguous horizontal expansion of approximately 10-acres to the west, north, or east (or combination thereof).
- Vertical expansion with a vertical overlay onto the existing landfill.

2.2 Location

The current landfill and proposed expansion are located in the South half of Section 15, T13N, R4W, Town of Viroqua, Vernon County, Wisconsin. The physical address for the Solid Waste Department is S3705 County Road LF, Viroqua, Wisconsin 54665.

2.3 Owner/Applicant

The Owner and Applicant are as follows:

Vernon County Solid Waste Department
C/O Stacie Sanborn, Solid Waste Director
S3705 County Road LF
Viroqua, WI 54665

2.4 Authorized Contacts

Authorized contacts are as follows:

OWNER

Stacie Sanborn, Solid Waste Director
Vernon County Solid Waste Department
S3705 County Road LF
Viroqua, WI 54665
608.634.2900

CONSULTANT

Brian L. Kent, CHMM
SEH
329 Jay Street, Suite 301
La Crosse, WI 54601
608.498.4844

2.5 Present Land Use

Presently the property is utilized for active solid waste disposal relating to the active landfill cell. The property also includes a closed small sized C&D landfill located northeast of the active MSW

landfill. Several buildings are located near the entrance to the property which serve as the scale house, landfill office space, and accommodate the recycling processing operations.

The approximate 22-acres under consideration for the proposed horizontal expansion consist of vacant open grassland, forest, and the existing landfill's sedimentation basin. Portions of the area currently contain soil stockpiles for use in day to day landfill operations.

3 Endangered and Archeological Resources {NR509.04(4)(b)}

3.1 Endangered Resources

The Wisconsin Department of Natural Resources (WDNR) has conducted a review of the area for occurrences of Endangered, Threatened, or Special Concern Species, natural communities, or State Natural Areas in accordance with Wis. Stat. §26.604(4). Per WDNR review and subsequent letter, there are no record of the above occurrences that would be impacted by the proposed project.

A copy of the recent endangered resource report from the WDNR is provide in Appendix B, "ER/NHI Report" for your review.

3.2 Archeologic Resources

As required by Wis. Stat. §44.40, the WDNR performed a review of the area to determine if any known historic, scientific, or archeological areas exist within the vicinity of the proposed facility. As indicated in the attached letter from the WDNR, the review indicates no archeological or historical findings within the proposed landfill property and proposed development site.

A copy of the letter from the WDNR is provided in Appendix B for your review.

4 Base Maps {NR509.04(4)(d)}

Attached Figure 1 through Figure 5 are base maps generated from data provided by the Vernon County Land Information Department and the USGS Avalanche quadrangle maps. Following is a summary of the attached figures relating to the required information.

- Figure 1 - Site Location: Provides location, topography/relief, and surface waters other than man-made storm water basins on the landfill property.
- Figure 2 - Residential and Private Wells Within 1-Mile of Horizontal Expansion: Includes an aerial photograph depicting residences, private wells and landowners within 1-mile of the existing and proposed landfill expansion limits. The attached Table 1, "Adjacent Property Owners" provides a listing of each of the landowners and/or residences located within 1,200 feet of the landfill footprint or contiguous to the landfill property.
- Figure 3 - Floodplains and Water Features Within 1-Mile of Horizontal Expansion: Identifies flood hazard areas and surface water bodies within 1-mile of the existing and proposed landfill expansion limits.
- Figure 4 - Topography Within 1-Mile of Horizontal Expansion: Provides topography for vicinity within 1-mile of the existing and proposed landfill expansion limits. The topography data was provided by the Vernon County Land Information Department and

is more current than the USGS map provided on Figure 1. Note the Figure 4 paper copy submitted with this ISI request is presented at a 1 inch = 500 feet scale per NR 504.04(4)(d).

- Figure 5 - Existing Land Use Within 1-Mile of Horizontal Expansion: Identifies the current land use and category for areas within 1-mile of the existing and proposed landfill expansion limits.

5 Potential Conflicts

Following is a summary of the locational and performance standards specified in s. NR 504.04 Wisconsin Administrative Code, and the compliance status of the proposed expansion relative to the requirements. The attached Table 2, "Locational Criteria and Performance Standard Summary" provides a summary of status of compliance with the locational and performance standards.

5.1 Locational Criteria

As discussed in the following sections, the preliminary review of the locational standard requirements for the proposed horizontal and vertical expansion do not indicate any potential conflicts.

5.1.1 Navigable Lake, Pond or Flowage {s. NR504.04(3)(a)}

The proposed expansion will not be located within 1,000 feet of a navigable lake, pond or flowage. One sedimentation basin is located within the proposed expansion area; however, the rule excludes landfill drainage or sedimentation control structures from the setback requirement. The closest water body to the existing landfill and proposed expansion is the Seas Branch Pond located greater than 4,000 feet to the northeast. According to the WDNR's Surface Water Data Viewer database, the Seas Branch pond is an approximate 11-acre flood control impoundment with poor water quality.

5.1.2 Navigable River or Stream {s. NR504.04(3)(b)}

The proposed expansion will not be located within 300 feet of a navigable river or stream. The closest navigable river or stream is the Seas Branch Stream located greater than 1,000 feet north of the proposed expansion. Additionally, an unnamed intermittent stream is located approximately 700 feet to the east of the proposed expansion. The intermittent stream appears to originate on the landfill property and heads northeast towards the Seas Branch Pond.

5.1.3 Floodplain {s. NR504.04(3)(c)}

As shown on Figure 3, the current landfill and proposed expansion footprint are not located in a flood hazard area or floodplain. The closest floodplain to the landfill footprint is located greater than 1,200 feet to the north in the Seas Branch Valley, which is significantly lower in elevation than the proposed expansion footprint.

5.1.4 State/Federal Highways, Public Park and Natural Areas {s. NR504.04(3)(d)}

The existing landfill and proposed horizontal expansion are located greater than 1,000 feet from any State/Federal Highway, public park or natural area. The existing landfill and proposed horizontal expansion are located greater than 12,500 feet east of the right-of-way for US Highway 14/61 and State Highway 27. As indicated on Figure 5, there are no public parks or State natural areas within 1,000 feet of the limits of current landfill or expansion footprint.

5.1.5 Airport Safety {s. NR504.04(3)(e)}

The proposed landfill expansion is located approximately 2.7 miles (>15,840 feet) northeast of the closest runway at the Viroqua Airport and is not located in the approach or departure path for the airport. Since the expansion is located less than 5 miles from the airport, the County has issued a letter dated October 23, 2020 to the Federal Aviation Administration (FAA) notifying them of their intent to expand. A copy of the notification letter is attached in Appendix C, "FAA Correspondence."

Review of applicable regulations regarding landfill siting and expansions near airports indicate that the requirements of 49 USC Section 44718(d) apply only to new municipal solid waste landfills (MSWLF's), which are defined as a municipal waste landfill that was established or constructed after April 5, 2000. Furthermore, FAA Advisory Circular AC No. 150/5200-34A states that 49 USC Section 44718(d) does not apply to the expansion or modification of an existing MSWLF. The current active Vernon County Landfill was first constructed in 1993, therefore exempt from the limitations of 49 USC Section 44718(d).

As part of the last expansion process, Vernon County issued a letter to the FAA on May 29, 2002 notifying interested parties of their intention to expand. In a letter dated June 16, 2002 the FAA responded with a letter concurring with the proposal relative to compatibility standards contained in FAA Advisory Circular AC No. 150/5200-33, with the following conditions:

1. The landfill facility must be properly supervised to assure that the bird populations are not increasing and that appropriate control procedures are being followed.
2. Any increases in bird activity that might be hazardous to safe aircraft operations will result in prompt mitigation actions and/or closure of the landfill
3. The above conditions must be clearly defined via State/Local licensing procedures associated with establishment of the landfill.
4. The landfill owner/operator should develop and implement a Wildlife Hazard Management Plan for operation of the landfill.

A Wildlife Hazard Management Plan (Plan) was included in their Plan of Operation, which has been approved by the WDNR and part of the facility operating record. The Plan utilizes the following strategies:

- Minimization of standing water areas
- Minimization of uncovered waste areas
- Prompt revegetation of disturbed areas outside of the waste footprint
- Utilization of bird harassment techniques, perch deterrents, and avoidance structures, as needed

The FAA does not approve or disapprove of solid waste landfill locations but is primarily concerned about location relative to safety. A response from Mr. Bobb Beauchamp of the FAA was received on March 19, 2021, indicating the FAA concurs with the conclusions presented in the October 23, 2020 letter and has no objection to the proposed expansion. The written response from the FAA is provided in Appendix C. The FAA was contacted again via email on August 31, 2021, to confirm their response remains unchanged with the addition of area to the north and east being considered for landfill expansion. Confirmation has not yet been received as of the date of this report. Written confirmation from the FAA will be provided in the ISR.

5.1.6 Public & Private Wells {s. NR504.04(3)(f)}

As shown on Figure 2, there are no public or private wells located within 1,200 feet of the existing or proposed expansion landfill footprint except for the well serving the landfill office and recycling facility. A variance for the setback requirement for the recycling facility private well was issued to the County prior to constructing the initial landfill cell.

5.1.7 Halocene Era Faults {s. NR504.04(3)(g)}

According to the U.S Geological Survey (USGS) Earthquake Hazards Program Interactive Fault Map, there are no faults within the vicinity of the active or proposed expansion footprint. Appendix D, "USGS Maps" includes a map from the interactive mapping system showing known faults in the Midwest Region of the United States.

5.1.8 Seismic Impact Zones {s. NR504.04(3)(h)}

According to the USGS Earthquake Hazards Program U.S Seismic Hazards Map, the active or proposed expansion footprint, and most of Wisconsin in general, is located in an area of very low seismic hazard. Appendix D includes a copy of the USGS Seismic-Hazard Maps for the Conterminous United States, 2014.

5.1.9 Unstable Areas {s. NR504.04(3)(i)}

There is no known current or historic data for the site that would suggest that the current landfill or proposed expansion footprint is located in an unstable area. Further discussion relating to stability will be addressed in the Feasibility Report.

5.2 Performance Standards

As discussed in the following sections, the preliminary review of the performance standard requirements for the proposed horizontal and vertical expansion do not indicate any potential conflicts.

5.2.1 Impacts to Wetlands {s. NR504.04(4)(a)}

The proposed expansion will not have a significant adverse impact on wetlands. There are no wetlands present in the expansion area and storm water run-off from the area during construction and operation will be managed in accordance with applicable storm water regulations.

5.2.2 Endangered and Threatened Species {s. NR504.04(4)(b)}

The proposed expansion will not include a "take" of an endangered or threatened species. Please refer to Section 3 and Appendix B for more detail.

5.2.3 Detrimental Effects to Surface Water {s. NR504.04(4)(c)}

The proposed expansion will not have a detrimental effect on surface water quality assuming the landfill is designed, constructed and operated in accordance with State regulations and approvals. Surface water will be managed in accordance with applicable regulations and surface water management systems will be designed and maintained in accordance with industry best management practices. Details of the storm water management system design including any modifications to existing storm water structures will be provided in the Feasibility Report.

5.2.4 Detrimental Effects to Groundwater {s. NR504.04(4)(d)}

The proposed expansion will not cause or exacerbate an attainment or exceedance of a groundwater quality standard assuming the landfill is designed, constructed and operated in accordance with State regulations and approvals. The expansion will include a “state of the art” landfill liner and leachate collection system to prevent the release of contamination to the subsurface and groundwater. Details of the landfill design will be provided in the Feasibility Report.

5.2.5 Migration of Explosive Gas {s. NR504.04(4)(e)}

The proposed expansion will not cause the migration of explosive gases in excess of 25 percent of the lower explosive limit (LEL) assuming the landfill is designed, constructed and operated in accordance with State regulations and approvals. The expansion will include a “state of the art” landfill liner and expansion of the landfill gas collection system to minimize the migration and fugitive emission of methane to the atmosphere and subsurface. Details of the landfill design will be provided in the Feasibility Report.

5.2.6 Hazardous Air Emissions {s. NR504.04(4)(f)}

The proposed expansion will not cause the emission of any hazardous air pollutant (HAP) exceeding the limitations contained in s. NR445.07 Wisconsin Administrative Code assuming the landfill is designed, constructed and operated in accordance with State regulations and approvals. Details of the landfill gas collection and monitoring system design will be provided in the Feasibility Report.

DRH/hbh

Tables

Table 1 – Adjacent Property Owners

Table 2 – Locational Criteria and Performance Standards Summary

Table 1
Adjacent Land Owners

MAP ID	PARCEL ID	OWNER	OWNER 2	POSTAL ADDRESS	SITE ADDRESS
1	036-00411-0000	RANDY D & KAREN M CRUME		E8284 SEAS BRANCH RD, VIROQUA, WI, 54665	
2	036-00393-0000	RANDY D & KAREN M CRUME		E8284 SEAS BRANCH RD, VIROQUA, WI, 54665	E8284 SEAS BRANCH RD
3	036-00410-0000	ALVIN L WOODMANSEE	C/O SUSAN WOODMANSEE	201 N WALBRIDGE AVE 111, MADISON, WI, 53714	
4	036-00408-0000	PAULINE A BUCKLAND		PO BOX 174, VIROQUA, WI, 54665	
5	036-00379-0000	K & M HERLITZKE FARMS LLC		W2818 EVANS DWYER RD, COON VALLEY, WI, 54623	
6	036-00381-0000	K & M HERLITZKE FARMS LLC		W2818 EVANS DWYER RD, COON VALLEY, WI, 54623	
7	036-00674-0000	K & M HERLITZKE FARMS LLC		W2818 EVANS DWYER RD, COON VALLEY, WI, 54623	
8	036-00638-0000	MADELINE CLEMENTS	STEVEN & DEBRA CLARK	210 N WASHINGTON, VIROQUA, WI, 54665	E8454 N ASBURY RD
9	036-00637-0000	WISCONSIN RSA #8	LIMITED PARTNERSHIP	8410 W BRYN MAWR AVE, CHICAGO, IL, 60631	
10	036-00635-0000	ZION CHURCH			
11	036-00645-0000	JEROME J & SHARON M BUTERA		E8449 N ASBURY RD, VIROQUA, WI, 54665	E8449 N ASBURY RD
12	036-00644-0000	K & M HERLITZKE FARMS LLC		W2818 EVANS DWYER RD, COON VALLEY, WI, 54623	
13	036-00642-0000	K & M HERLITZKE FARMS LLC		W2818 EVANS DWYER RD, COON VALLEY, WI, 54623	
14	036-00643-0000	JOHN & LINDA KIELER REVOCABLE TRUST		748 COUNTY RD Z, HAZEL GREEN, WI, 53811	
15	036-00641-0000	ROBERT J & TAMMY L MENNE		E8327 N ASBURY RD, VIROQUA, WI, 54665	E8327 N ASBURY RD
16	036-00652-0000	JOHN & LINDA KIELER REVOCABLE TRUST		748 COUNTY RD Z, HAZEL GREEN, WI, 53811	
17	036-00647-0000	CHAD B WILLIAMS		E7541 COUNTY RD SS, VIROQUA, WI, 54665	E8263 N ASBURY RD
18	036-00650-0000	JOHN & LINDA KIELER REVOCABLE TRUST		748 COUNTY RD Z, HAZEL GREEN, WI, 53811	
19	036-00649-0001	WAYNE K KRUIZENGA	JULIE KRUIZENGA	E8107 COUNTY RD LF, VIROQUA, WI, 54665	
20	036-00406-0000	ALICE MAE NELSON		E8137 COUNTY RD Y, VIROQUA, WI, 54665	
21	036-00405-0000	ALICE MAE NELSON		E8137 COUNTY RD Y, VIROQUA, WI, 54665	E8137 COUNTY ROAD Y
22	036-00404-0000	GRACE ACRES LLC		E8219 COUNTY RD Y, VIROQUA, WI, 54665	
23	036-00402-0000	GRACE ACRES LLC		E8219 COUNTY RD Y, VIROQUA, WI, 54665	E8219 COUNTY ROAD Y

Table 2
Locational Criteria and Performance Standard Summary

Locational/Performance Criteria	Wisconsin Administrative Code	Compliance (Y or N)	Remarks
Locational Criteria			
1,000 ft from any navigable lake, pond or flowage	NR 504.04(3)(a)	Y	Refer to Section 5.1.1
300 ft from any navigable river or stream	NR 504.04(3)(b)	Y	Refer to Section 5.1.2
Floodplain	NR 504.04(3)(c)	Y	Refer to Section 5.1.3
1,000 ft of the nearest R/O/W of any state trunk, interstate or federal aid highway or boundry of a public park unless the landfill is screened	NR 504.04(3)(d)	Y	Refer to Section 5.1.4
Airport Safety	NR 504.04(3)(e)	Y	Expansion of an existing landfill is exempt from the minumum setback requirements. (Refer to Section 5.1.5)
Within 1,200 ft of a private water supply well	NR 504.04(3)(f)	Y	Refer to Section 5.1.6
Within 200 ft. of a fault that has had displacement in Holocene time	NR 504.04(3)(g)	Y	Refer to Section 5.1.7
Within Seismic Impact Zones	NR 504.04(3)(h)	Y	Refer to Section 5.1.8
Within Unstable Areas	NR 504.04(3)(i)	Y	Refer to Section 5.1.9
Location Criteria Base Map	NR 504.04	Y	Refer to Figure 1 through Figure 5 and Section 4
Performance Standards			
A significant adverse impact on wetlands as provided for in NR 103	NR 504.04(4)(a)	Y	Refer to Section 5.2.1
A take of an endangered or threatened species	NR 504.04(4)(b)	Y	Refer to Sections 3 and 5.2.2
A detrimental effect on surface water	NR 504.04(4)(c)	ND	Pending design and maintenance of storm water management systems. (Refer to Section 5.2.3)
A detrimental effect on groundwater quality...	NR 504.04(4)(d)	ND	Pending landfill design and analysis of groundwater data in the feasibility report. (Refer to Section 5.2.4)
Migration and concentration of explosive gas...in excess of 25% of the LEL...	NR 504.04(4)(e)	ND	Pending landfill and landfill gas collection system design in the feasibility report. (Refer to Section 5.2.5)
Emissions of any hazardous air contaminants excess of 25% LEL.	NR 504.04(4)(f)	ND	Pending landfill and landfill gas collection system design in the feasibility report. (Refer to Section 5.2.6)

Notes:
Y= Yes
ND= Not Determined- Determination to be proviced in future submittals

Note: Figures 1 through 5 not included. Please refer to Appendix E of the ISR.

Figures

Figure 1 – Site Location

Figure 2 – Residential and Private Wells Within 1-Mile of Horizontal Expansion

Figure 3 – Floodplains and Water Features Within 1-Mile of Horizontal Expansion

Figure 4 – Topography Within 1-Mile of Horizontal Expansion

Figure 5 – Existing Land Use Within 1-Mile of Horizontal Expansion

Appendix A

ISI Request Checklist

LANDFILL INITIAL SITE INSPECTION REQUEST COMPLETENESS CHECKLIST

SECTION NR 503.07, WISCONSIN ADMINISTRATIVE CODE – C&D AND ONE-TIME DISPOSAL LANDFILLS SECTION NR 509.04, WISCONSIN ADMINISTRATIVE CODE – ALL OTHER LANDFILLS

Refer to Applicable Codes for Exact Requirements

General Information

Applicant:

Applicant Name: Vernon County Landfill

Contact/Title: Stacie Sanborn

Address: S3705 County Road LF, Viroqua, WI

Phone #: 608-634-2900

FID #: 6630308310

Site Location: South ½ of Section 15, T13N, R4W

Town of Viroqua, Vernon County, WI

Date of Initial Site Inspection Request: 09/03/2021

Consultant:

Consultant Name: SEH

Contact/Title: Brian Kent

Address: 329 Jay Street Suite 301, La Crosse, WI

Phone #: 608-498.4844

Date Project Entered into FIST System: _____

Date ISI is Due (Max. 22 bus. Days after receipt of request):

Legal Note:

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

GENERAL SUBMITTAL REQUIREMENTS - NR 503.07(2) or 509.04(2)		Y	N	NA	LOCATION	COMMENTS
1.	Report sent to region and central office	x				see distribution list
2.	Current standard technical procedures used and test methods specified – NR 500.05(5)			x		Not applicable
3.	Visuals - NR 500.05(6)					
a.	8.5x11 to 32x44 inches in size	x				
b.	Appropriate scale to show all required details with sufficient clarity	x				
c.	Be numbered; referenced in the narrative; have a title, legend, horizontal and vertical scales; and drafting or origination dates	x				
d.	Uniform scales	x				
e.	North arrow	x				
f.	Mean sea level as basis for all elevations	x				
g.	Survey grid based on field monuments and utilizing a coordinate system acceptable to the department	x				
h.	Original topography and grid system on plan sheets showing construction, operation or closure topography				x	
i.	Cross-sections include survey grid location, reference to major plan sheets and reduced diagram of cross-section location plan view map				x	
3.	Table of contents – NR 500.05(7)	x				
4.	Appendix listing all references, raw data, testing and sampling procedures and calculations – NR 500.05(8)	x				

Facility Name Vernon County Landfill

LANDFILL REQUEST MINIMUM REQUIREMENTS - NR 503.07(4) or 509.04(4)		Y	N	NA	LOCATION	COMMENTS
1.	Cover Letter					
a.	Applicant identified	x				Section 2.3
b.	Authorized contact identified	x				Section 2.4
c.	Current property owner identified	x				Section 2.3
d.	Type of landfill being proposed	x				Section 2.1
e.	Project location by ¼, ¼ section	x				Section 2.2
f.	Present land use	x				Section 2.5
2.	Known potential impacts to endangered and threatened species - NR 29	x				Section 3.1
3.	Known potential impacts to historic, scientific or archeological areas, including prior studies or surveys, identified - s. 44.40, Wis. Stats.	x				Section 3.2
4.	Enlarged 7.5 minute USGS map or equivalent (minimum 1"=500')					
a.	Ground surface relief within one mile of project	x				Figure 1 and Figure 4
b.	Surface water bodies within one mile of project	x				Figure 3
c.	Floodplains within one mile of project	x				Figure 3
d.	Existing land use within one mile of project	x				Figure 5
e.	All water supply wells and residences within one mile of project	x				Figure 2
5.	Preliminary identification of all potential conflicts with locational criteria and performance standards in: • for C&D and one-time disposal landfills, NR 503.04 • for all other landfills, NR 504.04 excluding NR 504.04(4)(d) to (f)	x				Sections 5.1 and 5.2

Appendix B

ER/NHI Report



August 31, 2021

Brian Kent
SEH
bkent@sehinc.com
608-498-4844

SUBJECT: RE: ER/NHI Review – Vernon County, Wisconsin
Vernon County Landfill v3

Dear Brian Kent:

Per your request, I have reviewed a parcel for potential ecological resources of concern and archaeological sites in Vernon County located in the S ½ of Section 15, Township 13 North, Range 4 West in the Town of Viroqua.

There are no concerns for ecological resources of concern within this reviewed parcel area. There were no elemental occurrences within the 2-mile buffer.

There are no concerns for archaeological or historical sites within this reviewed parcel.

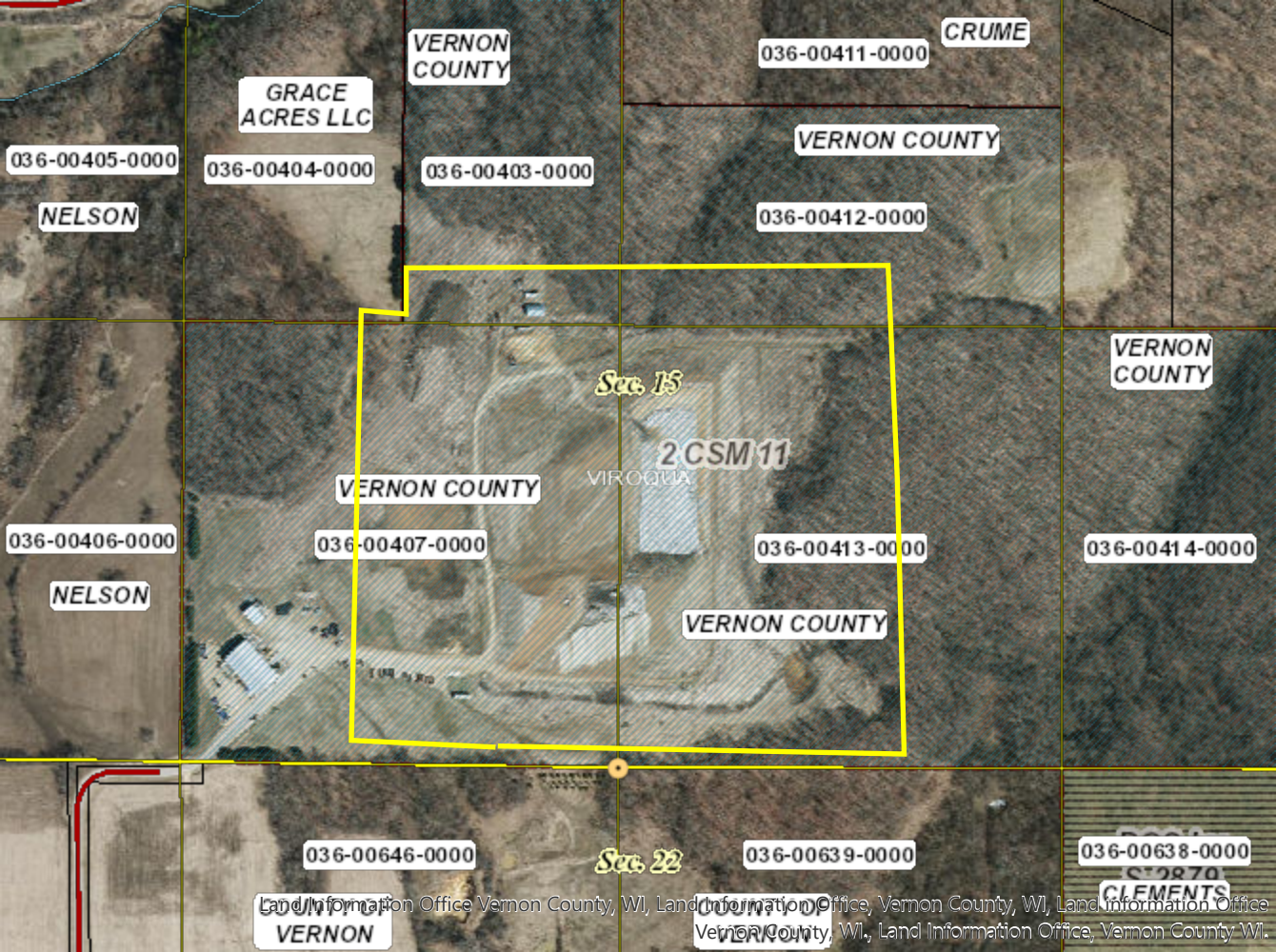
Please include this letter and attachments with future permit submittals to the WDNR.

Sincerely,

Laura Spears

Laura Spears
Wastewater Specialist – Stormwater
South Central Region – Dodgeville Office

Attached: parcel location map, 2020 aerial image, NHI review



VERNON
COUNTY

036-00411-0000 CRUME

GRACE
ACRES LLC

VERNON COUNTY

036-00405-0000

036-00404-0000

036-00403-0000

NELSON

036-00412-0000

VERNON
COUNTY

Sec. 15

2 CSM 11

VIROQUA

VERNON COUNTY

036-00406-0000

036-00407-0000

036-00413-0000

036-00414-0000

NELSON

VERNON COUNTY

036-00646-0000

Sec. 22

036-00639-0000

036-00638-0000

C. 2870
CLEMENTS

Land Information Office Vernon County, WI, Land Information Office, Vernon County, WI, Land Information Office
VERNON County of VERNON, WI, Land Information Office, Vernon County WI.

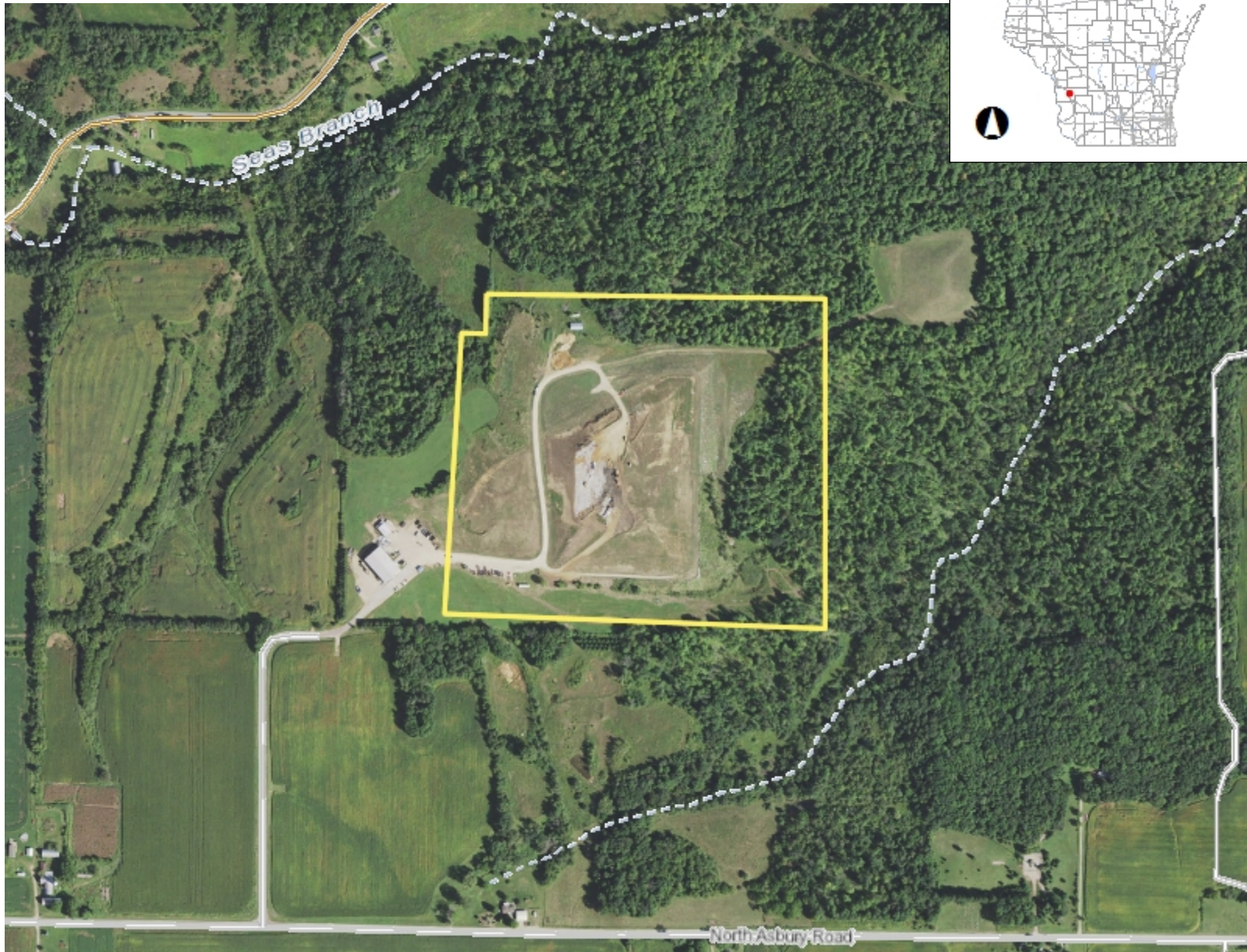


Vernon County Landfill v3



Legend

- Municipality
- State Boundaries
- County Boundaries
- Major Roads
 - Interstate Highway
 - State Highway
 - US Highway
- County and Local Roads
 - County HWY
 - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water



0.3 0 0.13 0.3 Miles

NAD_1983_HARN_Wisconsin_TM

1: 7,920

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

Notes

2020 Aerial

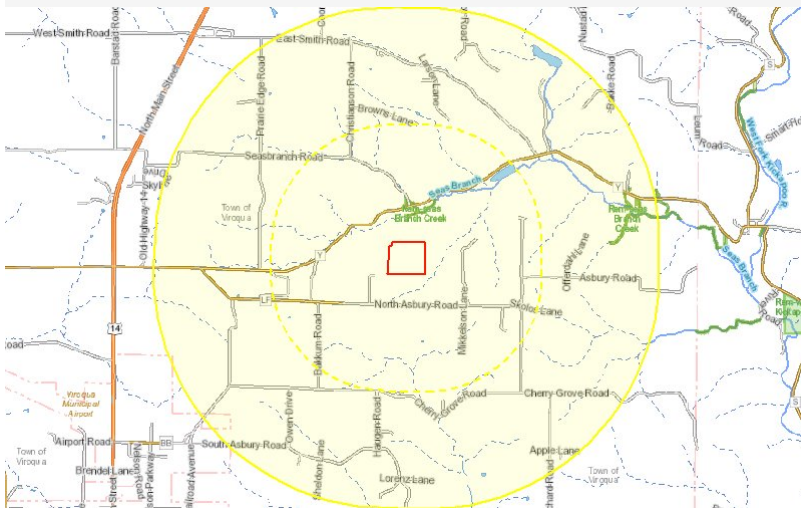
Vernon County Landfill v3

Reviewer Information

Reviewer Name	Laura Spears
Review Date	8/31/2021
Bureau / Org Name	Watershed Management
Work Station	Iowa

General Information

Project Title	Vernon County Landfill v3
Project No	
Federal Nexus	
Project Timing	
Property Type	

 Map

Project Location

County	Vernon
PLSS Description	T13N R04W S15
Township Name	Viroqua
Ownership Type	
Landowner Name	

Project Information

Description	expanded area of the Vernon County Landfill
Habitat Description	expansion/improvements to existing landfill
Impacts to Wetlands and Waterbodies	
Additional DNR and Other Permits	

Element Occurrences

No element occurrences exist in this area

Actions that need to be taken to comply with state and/or federal endangered species laws: **None**

Actions recommended to help conserve Wisconsin's Endangered Resources: **None**

Additional Recommendations: **None**

No actions are required or recommended for the following endangered resources: **None**

Disclaimer

This ER Review may contain Natural Heritage Inventory data (<http://dnr.wi.gov/topic/NHI>), including specific locations of endangered resources, which are considered sensitive and are not subject to Wisconsin's Open Records Law. As a result, information contained in this ER Review may be shared only with individuals or agencies that require this information in order to carry out specific roles in the permitting, planning and implementation of the proposed project. Specific locations of endangered resources may not be released or reproduced in any publicly disseminated documents.

Details related to project location, design, and timing of disturbance are important for determining both the endangered resources that may be impacted by the project and any necessary follow-up actions. If the project plans change, new details become available, or more than a year passed, please renew this review.

Appendix C

FAA Correspondence

From: [Beauchamp, Bobb \(FAA\)](#)
To: [Brian Kent](#)
Subject: RE: Vernon County Landfill
Date: Friday, March 19, 2021 2:20:11 PM

Mr. Kent,

This email is responding to your October 23, 2020 notification of a proposed horizontal expansion at the Vernon County Landfill. Your notification was to meet provisions and requirements of:

- s. NR504.04(3)(e) Wisconsin Administrative Code
- 40 CFR 258.10 –Airport Safety
- 49 USC Section 44718(d), as amended by Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century, Pub. L No. 106-181 (April 5, 2000)
- FAA Advisory Circular AC No. 150/5200-34A (January 26, 2006) : Construction or Establishment of Landfills Near Public Airports
- FAA Advisory Circular AC No. 150/5200-33B (August 28, 2007) : Hazardous Wildlife Attractants On Or Near Airports

This e-mail of course only responds on behalf of the FAA and the Federal provisions shown above.

We concur with your conclusion that the provisions of 49 USC 44718(d) do not apply to this proposed expansion of the Vernon County Landfill. These provisions specifically do not apply to landfills that were constructed or in operation prior to April 5, 2000. The Vernon County Landfill was first constructed in 1993. In addition, the Viroqua Airport does not have regularly scheduled service in addition to general aviation operations, so the provisions of FAA AC 150/5200-34A, Construction or Establishment of Landfills Near Public Airports do also not apply.

Regarding the provisions of FAA Advisory Circular No 150/5200-33B, Hazardous Wildlife Attractants On Or Near Airports: The Landfill is outside the 10,000' area of primary concern identified in the AC. While FAA encourages the Landfill to continue its efforts under their Wildlife Hazard Management Plan, we recognize that FAA does not have regulatory or approval authority over the Landfill in this regard.

Based on the above, FAA has no objection to the proposed expansion at the Vernon County Landfill. Please feel free to contact me if you have any questions or additional concerns.

From: Brian Kent <bkent@sehinc.com>
Sent: Thursday, March 18, 2021 4:02 PM
To: Beauchamp, Bobb (FAA) <Bobb.Beauchamp@faa.gov>
Subject: RE: Vernon County Landfill

Thank you

Brian L. Kent, CHMM
Principal, Project Manager
Short Elliott Hendrickson Inc.
715.456.4621 mobile | 608.498.4844 direct
Building a Better World for All of Us®
Follow SEH on Twitter | Facebook | LinkedIn | Instagram

From: Beauchamp, Bobb (FAA) <Bobb.Beauchamp@faa.gov>
Sent: Thursday, March 18, 2021 1:46 PM
To: Brian Kent <bkent@sehinc.com>
Subject: RE: Vernon County Landfill

Brian, I apologize for not getting back to you. I'll do my best to get you a more formal response by end of day tomorrow.

From: Brian Kent <bkent@sehinc.com>
Sent: Thursday, March 18, 2021 1:38 PM
To: Beauchamp, Bobb (FAA) <Bobb.Beauchamp@faa.gov>
Subject: FW: Vernon County Landfill

Hi Bobb-

I apologize for my persistence but I am following up to check on the status of your response. Your response is needed as part of our permitting process and we are needing to get this to the WDNR in the very near future. Please reply at your earliest convenience. Thank you.

Brian L. Kent, CHMM
Principal, Project Manager
Short Elliott Hendrickson Inc.
715.456.4621 mobile | 608.498.4844 direct
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From: Brian Kent
Sent: Tuesday, March 2, 2021 9:55 AM
To: Beauchamp, Bobb (FAA) <Bobb.Beauchamp@faa.gov>
Subject: RE: Vernon County Landfill

Hi Bobb-

I hope all is well. Just following up with the below email correspondence. I have not received a formal response and wondering if it perhaps was misplaced? Thanks much.

Brian L. Kent, CHMM
Principal, Project Manager
Short Elliott Hendrickson Inc.
715.456.4621 mobile | 608.498.4844 direct
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From: Beauchamp, Bobb (FAA) <Bobb.Beauchamp@faa.gov>
Sent: Tuesday, December 29, 2020 3:08 PM
To: Brian Kent <bkent@sehinc.com>
Subject: RE: Vernon County Landfill

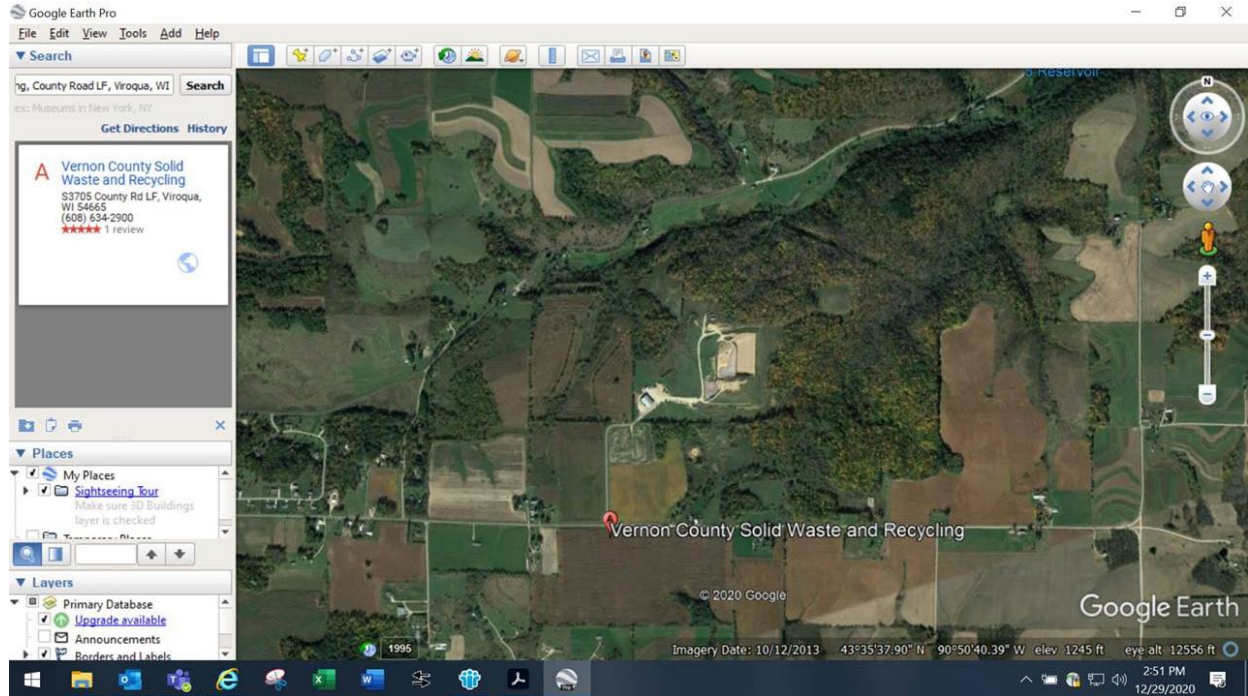
Great, that's the same facility I'm looking at.

Informally the expansion is exempt from 49 USC Section 44718(d) for 2 reasons: the expansion is of an existing landfill, and the Viroqua airport does not have regularly scheduled service in addition to general aviation. It's also outside the 10,000' area of primary concern put forth in FAA's Advisory Circular 150/5200-33B.

I'll work on a formal response email later this week.

From: Brian Kent <bkent@sehinc.com>
Sent: Tuesday, December 29, 2020 2:53 PM
To: Beauchamp, Bobb (FAA) <Bobb.Beauchamp@faa.gov>
Subject: RE: Vernon County Landfill

Yes- below is a screen shot of what shows up for me.



Brian L. Kent, CHMM
Principal, Project Manager
Short Elliott Hendrickson Inc.
715.456.4621 mobile | 608.498.4844 direct
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From: Beauchamp, Bobb (FAA) <Bobb.Beauchamp@faa.gov>
Sent: Tuesday, December 29, 2020 2:14 PM
To: Brian Kent <bkent@sehinc.com>
Subject: RE: Vernon County Landfill

Hi Brian,

I'm also working remotely, and it's been impacting my normal ability to evaluate landfill requests such as this. Can you confirm that the facility identifies as Vernon County Solid Waste and Recycling on Google Earth?

From: Brian Kent <bkent@sehinc.com>
Sent: Tuesday, December 29, 2020 1:52 PM
To: Beauchamp, Bobb (FAA) <Bobb.Beauchamp@faa.gov>
Subject: Vernon County Landfill

Bobb-
Attached is the letter SEH issued on October 23, 2020 providing notification of Vernon County's plan to expand their existing municipal waste landfill. I had not heard anything yet so I figured I better check on the status. Please feel free to contact me to discuss should you have any questions or issues. Please note I am working remotely due to COVID. If you prefer to call, please call my cell number at 715.456.4621. Also, if you already responded by mail it is possible that I have not received it yet since it takes a while to get my mail with our office being closed. Thanks in advance for your response.

Brian L. Kent, CHMM
Principal, Project Manager
Short Elliott Hendrickson Inc.
715.456.4621 mobile | 608.498.4844 direct
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for All of Us®

October 23, 2020

RE: Vernon County Landfill
Proposed Landfill Expansion (WDNR
License No. 3268)
SEH No. VERSW 157634 14.00

FAA Airport Division
AGL - 600
2300 East Devon Avenue
Des Plaines, IL 60018

Dear Sir or Madam:

Short Elliott Hendrickson Inc. (SEH) is submitting this letter on behalf of Vernon County to notify the Federal Aviation Administration (FAA), and other concerned parties, of the County's proposed expansion of the Vernon County Landfill (WDNR License No. 3268). This notification is being provided to meet the provisions and requirements outlined in the following State and Federal Rules and guidance:

- s. NR504.04(3)(e) Wisconsin Administrative Code
- 40 CFR 258.10 –Airport Safety
- 49 USC Section 44718(d), as amended by Section 503 of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century, Pub. L No. 106-181 (April 5, 2000)
- FAA Advisory Circular AC No. 150/5200-34A (January 26, 2006) : Construction or Establishment of Landfills Near Public Airports
- FAA Advisory Circular AC No. 150/5200-33B (August 28, 2007) : Hazardous Wildlife Attractants On Or Near Airports

The proposed Vernon County Landfill Expansion (Landfill Expansion) is located in the Southern Half of Section 12, T13N, R4W, Town of Viroqua, Vernon County, Wisconsin. The proposed horizontal landfill expansion encompasses approximately 10-acres due west and north and contiguous to the current permitted landfill. As shown the Attached Figure 1, "Site Location" the landfill expansion is located approximately 2.8 miles northeast of the closest runway at the Viroqua Municipal Airport and the existing landfill and expansion are not located in the approach or departure path for the airport.

The limitations of 49 USC Section 44718(d) apply to new municipal solid waste landfills (MSWLF's), which are defined as a municipal waste landfill that was established or constructed after April 5, 2000. Additionally, FAA Advisory Circular AC No. 150/5200-34A states that 49 USC Section 44718(d) does not apply to the expansion or modification of an existing MSWLF. The current active Vernon County Landfill was first constructed in 1993, therefore exempt from the limitations of 49 USC Section 44718(d).

As part of the last expansion process, Vernon County issued a letter to the FAA on May 29, 2002 notifying interested parties of their intention to expand. In a letter dated June 16, 2002 the FAA responded with a letter concurring with the proposal relative to compatibility standards contained in FAA Advisory Circular AC No. 150/5200-33, with the following conditions:

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 329 Jay Street, Suite 301, La Crosse, WI 54601-4034
SEH is 100% employee-owned | sehinc.com | 608.782.3161 | 888.908.8166 fax

1. The landfill facility must be properly supervised to assure that the bird populations are not increasing and that appropriate control procedures are being followed.
2. Any increases in bird activity that might be hazardous to safe aircraft operations will result in prompt mitigation actions and/or closure of the landfill
3. The above conditions must be clearly defined via State/Local licensing procedures associated with establishment of the landfill.
4. The landfill owner/operator should develop and implement a Wildlife Hazard Management Plan for operation of the landfill.

A Wildlife Hazard Management Plan (Plan) was included in their Plan of Operation, which has been approved by the WDNR and part of the facility operating record. The Plan utilizes the following strategies:

- Minimization of standing water areas
- Minimization of uncovered waste areas
- Prompt revegetation of disturbed areas outside of the waste footprint
- Utilization of bird harassment techniques, perch deterrents, and avoidance structures, as needed

We understand that the FAA does not approve or disapprove of solid waste landfill locations but is primarily concerned about location relative to safety. We request that you review this letter and attachments and reply with your assessment of the proposed landfill expansion. Please contact me at 608.498.4844 with any questions or concerns.

Sincerely,

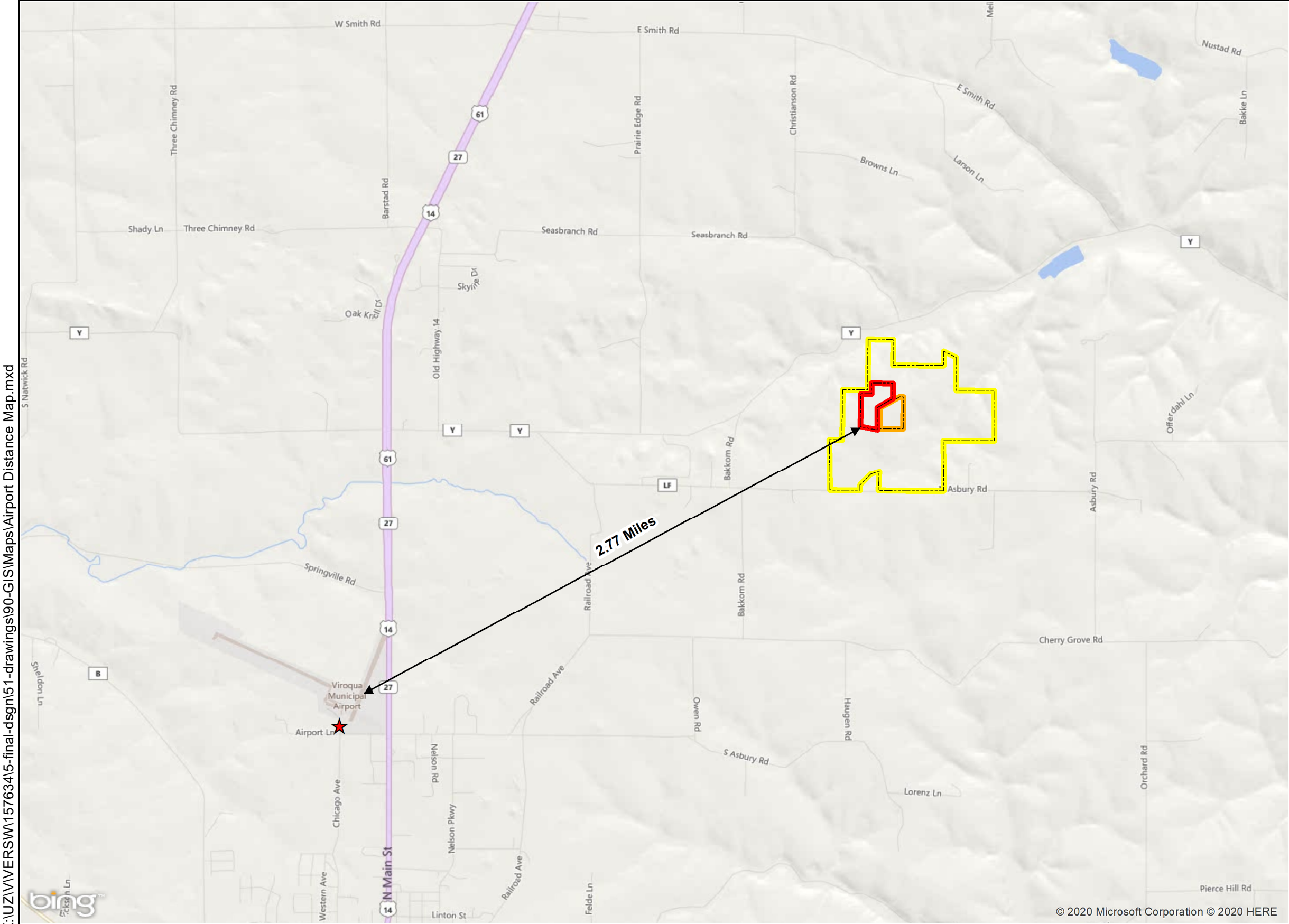
SHORT ELLIOTT HENDRICKSON INC.



Brian L. Kent, CHMM
Project Manager

BLK
Attachment

c: Stacie Sanborn, Vernon County Solid Waste (electronic)
Stacey Miller, Wisconsin DOT, Bureau of Aeronautics
Michael Skildum, Viroqua Municipal Airport Manager
Darryl R. Heaps, SEH (electronic)



Legend

- Landfill Property Boundary
- Active Landfill Limits
- Approximate Limits of Proposed Horizontal Landfill Expansion

0 0.25 0.5 1 Miles

Source:
Vernon County, and WIDNR.
Projection:
Vernon County Coordinates, Feet
Map by:
rjh

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Distance to Viroqua Municipal Airport	Figure 1

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