



AGENDA

VILLAGE OF LITTLE CHUTE PLAN COMMISSION MEETING

PLACE: Little Chute Village Hall – Village Board Room

DATE: Monday, December 9, 2019

TIME: 6:00 p.m.

- A. Call to order
- B. Roll Call
- C. Public Appearance for Items Not on the Agenda

1. Approval of Minutes from the Plan Commission Meeting of November 11, 2019
2. Recommendation—Van Handel Homestead Final Plat
3. Recommendation—CR Buildings LLC CSM
4. Recommendation—Maria Estates Preliminary Plat
5. NWLF Conditional Use Permit Information Update
6. Unfinished Business
7. Items for Future Agenda
8. Adjournment

Requests from persons with disabilities who need assistance to participate in this meeting or hearing should be made with as much advance notice as possible to the Clerk's Office at 108 West Main Street, (920) 423-3852 December 5, 2019

MINUTES OF THE PLAN COMMISSION MEETING NOVEMBER 11, 2019

Call to Order

The Plan Commission meeting was called to order at 6:00 p.m. by President Vanden Berg

Roll Call

PRESENT: President Vanden Berg
Todd Verboomen
Bill Van Berkel
Kent Taylor
Larry Van Lankvelt
Richard Schevers

STAFF PRESENT: Administrator Fenlon, Community Development Director Moes, Attorney Claringbole

Public Appearance for Items Not on the Agenda

None

Approve Minutes from the Plan Commission Meeting of October 14, 2019

Moved by Commissioner Verboomen, seconded by Commissioner Van Lankvelt to Approve the Minutes from the Plan Commission Meeting of October 14, 2019

All Ayes— Motion Carried

Public Hearing—1419 Holland Road

Moved by Commissioner Van Lankvelt, seconded by Commissioner Van Berkel to enter into Public Hearing

All Ayes— Motion Carried

Director Moes advised that this is for consideration of the granting of conditional use under authority provided in Section 44 Village Code of Ordinance. Applicant requests a conditional use permit for operation of sanitary landfill. Commissioner Van Lankvelt recommended more information and resolutions of issues are needed before approving this request.

Moved by Commissioner Van Berkel, seconded by Commissioner Van Lankvelt to exit Public Hearing

All Ayes— Motion Carried

Action—1419 Holland Road

Director Moes advised that staff recommendation is to delay approval until all concerns are met and more information is received.

Moved by Commissioner Van Lankvelt, seconded by Commissioner Van Berkel to table this issue until more information is received. Commissioner Verboomen will be abstaining.

All Ayes— Motion Carried

Recommendation—Reis Annexation

Director Moes advised that staff recommendation is to recommend to the Village Board to approve the Reis Annexation.

Moved by Commissioner Van Lankvelt, seconded by Commissioner Verboomen to recommend to the Village Board to Annex the Reis Annexation and zoned commercial.

All Ayes— Motion Carried

Unfinished Business

None

Items for Future Agenda

None

Adjournment

Moved by Commissioner Verboomen, seconded by Commissioner Van Lankvelt to Adjourn the Plan Commission Meeting at 6:21 p.m.

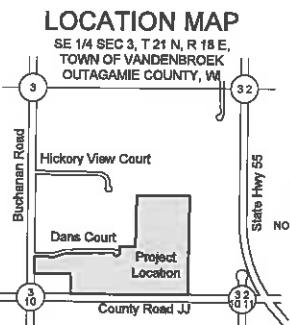
All Ayes– Motion Carried

VILLAGE OF LITTLE CHUTE

By: Michael Vanden Berg, Village President

Attest: Laurie Decker, Village Clerk

Van Handel Homestead



There are no objections to this plat with respect to Secs. 236.15, 236.16, 236.20 and 236.21(1) and (2), Wis. Stats. as provided by s. 236.12, Wis. Stats.

Certified .20

Department of Administration

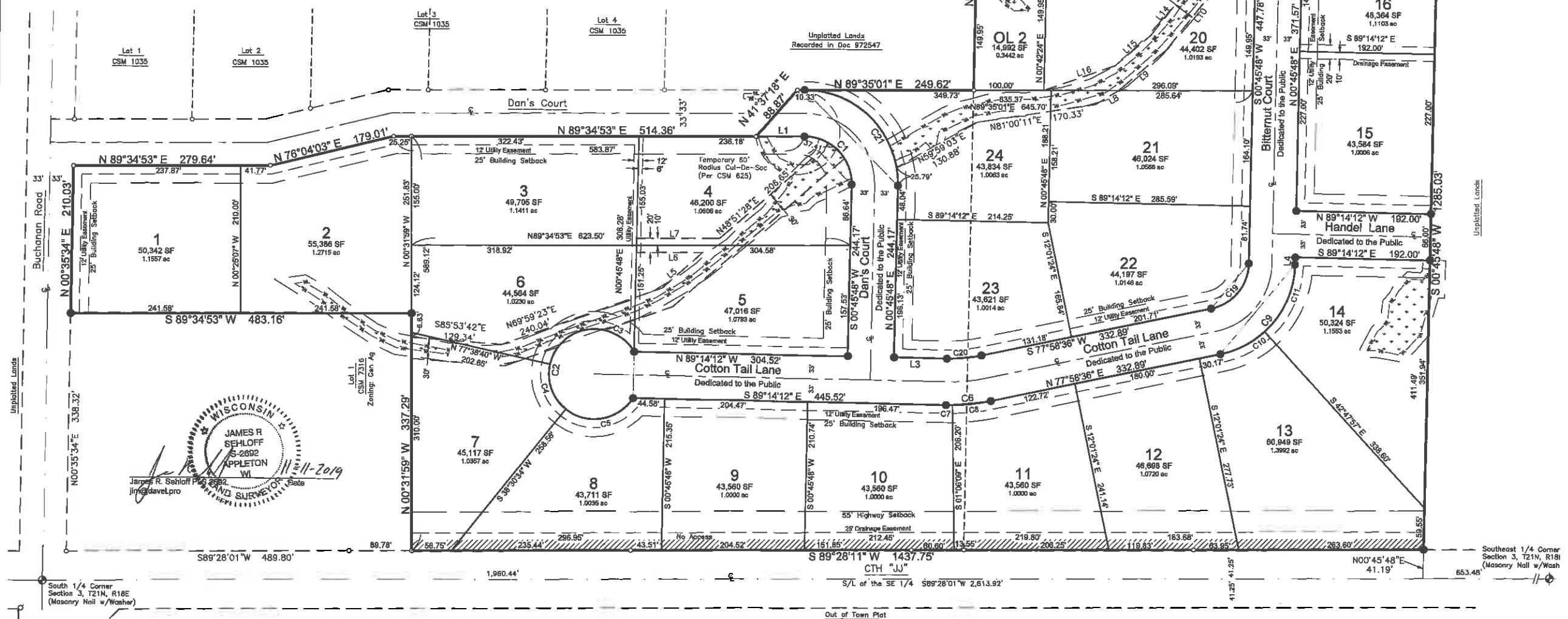
Bearings are referenced to the South line of the Southeast 1/4, Section 03, T21N, R18E, assumed to bear N89°28'01"E, base on the Outagamie County Coordinate System.

LEGEND

- 3/4" Rebar Found
- 1/4" x 18" Steel Rebar @ 4.30lbs/LF SET
- All other corners 3/4" x 18" Steel Rebar @ 1.50lbs/LF SET
- SF Lot areas in square feet
- ▨ No Access area

NOTES

1. All linear measurements have been made to the nearest one hundredth of a foot.
2. All bearings are computed and measured to the nearest second.
3. CTH JJ is a restricted access highway. No ingress/egress will be allowed to CTH JJ without an approve driveway permit from the Outagamie County Highway Department.
4. Outlot 1 is reserved for Storm Water management and Ownership and maintenance will be shared by Lots 3-24, each having a 1/22 share of said Outlot 1. A maintenance agreement of the Storm Water pond will be recorded in a separate document.
5. Outlot 2 will be deeded to land described in Doc 972547. Outlot 2 is deed restricted to said lands.
6. Lot 17 access is though a wetland setback. The driveway thought the setback area must be made of pervious materials.



Van Handel Homestead

Part of Lot 1 and all of Lot 2 of CSM 7316 being part of the Southwest 1/4 of Southeast 1/4 and unplatte
land located in part of the Southeast 1/4 of the Southeast 1/4 of Section 03,
Township 21 North, Range 18 East, Town of Vandenbrook, Outagamie County, Wisconsin

Surveyor's Certificate

I, James R. Schloff, Professional land surveyor, hereby certify: That in full compliance with the provisions of Chapter 236 of the Wisconsin Statutes and the subdivision regulations of the Town of Vandenbrook and Outagamie County, and under the direction of Van Handel Homestead, LLC, and Vanessa A. Mills, owner, of said land, I have surveyed, divided and mapped Van Handel Homestead; that such plat correctly represents all exterior boundaries and the subdivision of the land surveyed; and that this land is located in Part of Lot 1 and all of Lot 2 of CSM 7316 being part of the Southwest 1/4 of Southeast 1/4 and unplatte land located in part of the Southeast 1/4 of the Southeast 1/4 of Section 03, Township 21 North, Range 18 East, Town of Vandenbrook, Outagamie County, Wisconsin, containing 1,430.129 Square Feet (32.8312 Acres) of land described as follows:

Commencing at the South 1/4 corner of Section 03; thence, along the South line of the Southeast 1/4 of said Section 03, N89°28'01"E, 1980.44 feet; thence, N00°45'48"E, 41.19 feet to the Northerly right of way of CTH JJ, said point also being the point of beginning; thence, along said Right of way, S89°28'11"W, 1437.75 feet to the Southeast corner of Lot 1 CSM 7316; thence, along the East line of said Southeast 1/4, N00°31'59"W, 337.29 feet; thence S89°34'53"E, 483.16 feet to East right of way line of Buchanan Road; thence, along said East right of way line, N00°35'34"E, 210.03 feet to the South right of way of Dan's Court; thence, along said South right of way line, N89°34'53"E, 279.84 feet; thence, continuing along said South Right of Way Line, N76°04'03"E, 179.01 feet; thence, continuing along said South Right of Way Line, N89°34'53"E, 249.62 feet to the West line of Southeast 1/4 of the Southeast 1/4 of Section 03; thence, along said West line, N00°42'24"E, 632.88 feet to the North line of said Southeast 1/4 of the Southeast 1/4; thence, along said North line, N89°36'28"E, 654.77 feet; thence S00°45'48"W, 1265.03 feet to the point of beginning, subject to all covenants, and restrictions of record.

Given under my hand this 11 day of JANUARY, 2011.

James R. Schloff, Wisconsin Professional Land Surveyor No. S-2692

Utility Easement Provisions

An easement for electric, natural gas, and communications service is hereby granted by

Van Handel Homestead, LLC, and Vanessa A. Mills, Grantors, to:

Wisconsin Electric Power Company and Wisconsin Gas, LLC, Wisconsin corporations doing business as We Energies, Grantee, SBC, Grantee, and Time Warner Cable, Grantee

their respective successors and assigns, to construct, install, operate, repair, maintain and replace from time to time, facilities used in connection with overhead and underground transmission and distribution of electricity and electric energy, natural gas, telephone and cable TV facilities for such purposes as the same is now or may hereafter be used, all in, over, under, across, and upon the property shown within those areas on the plat designated as "Utility Easement Areas" and the property designated on the plat for streets and alleys, whether public or private, together with the right to install service connections upon, across within and beneath the surface of each lot to serve improvements, thereon, or on adjacent lots; also the right to trim or cut down trees, brush and roots as may be reasonably required incident to the rights herein given, and the right to enter upon the subdivided property for all such purposes. The Grantees agree to restore or cause to have restored, the property, as nearly as is reasonably possible, to the condition existing prior to such entry by the Grantees or their agents. This restoration, however, does not apply to the initial installation of said underground and/or above ground electric facilities, natural gas facilities, or telephone and cable TV facilities or to any trees, brush or roots which may be removed at any time pursuant to the rights herein granted. Structures shall not be placed over Grantees' facilities or in, upon or over the property within the lines marked "Utility Easement Areas" without the prior written consent of Grantees. After installation of any such facilities, the grade of the subdivided property shall not be altered by more than four inches without written consent of grantees.

The grant of easement shall be binding upon and inure to the benefit of the heirs, successors and assigns of all parties hereto.

Van Handel Homestead, LLC, and Vanessa A. Mills,

Managing Member Date Vanessa A. Mills Date

Print Name _____

CURVE TABLE							
Curve	Radius	Chord Direction	Chord Length	Arc Length	Central Angle	Tangent Bearing-In	Tangent Bearing-Out
C1	87.00'	S 44°49'40"E	95.72'	106.63'	91°10'55"	N 89°34'53"E	S 00°45'48"W
C2	84.00'	N 00°45'48"E	88.00'	93.278'	297°59'17"	S 31°46'02"E	S 30°16'33"E
C3	84.00'	N 81°02'23"E	119.24'	153.44'	137°22'07"	N 12°21'20"E	S 30°16'33"E
C4	84.00'	N 16°34'02"W	87.08'	71.32'	63°50'45"	N 51°29'26"W	N 12°21'20"E
C5	84.00'	S 89°09'22"W	95.65'	106.00'	96°42'25"	S 31°46'09"W	N 51°29'26"W
C6	84.00'	N 84°22'12"E	63.03'	63.16'	12°47'13"	S 89°14'12"E	N 77°16'36"E
C7	283.00'	N 89°49'50"E	9.22'	9.22'	1°31'57"	S 89°14'12"E	N 88°53'51"E
C8	283.00'	N 89°26'13"E	53.84'	53.84'	10°55'16"	N 88°53'51"E	N 77°58'36"E
C9	133.00'	N 39°22'12"E	165.88'	179.22'	77°12'47"	N 77°58'36"E	N 00°45'48"E
C10	133.00'	N 62°36'19"E	70.58'	71.44'	30°46'33"	N 77°58'36"E	N 47°12'03"E
C11	133.00'	N 23°58'55"E	104.87'	107.79'	48°26'15"	N 47°12'03"E	N 00°45'48"E
C12	67.00'	N 08°39'08"E	18.39'	18.45'	15°46'40"	N 00°45'49"E	N 16°32'29"E
C13	64.00'	S 38°45'53"E	92.49'	256.77'	267°28'06"	N 07°32'02"E	N 84°59'49"W
C14	64.00'	S 33°12'09"W	112.81'	136.06'	123°36'04"	S 28°35'53"E	N 64°59'49"W
C15	64.00'	S 89°49'42"E	84.34'	82.07'	82°25'38"	N 68°58'28"E	S 28°36'63"E
C16	64.00'	N 46°38'08"E	48.65'	49.81'	44°40'42"	N 24°17'47"E	N 68°58'29"E
C17	64.00'	N 16°54'59"E	18.98'	18.72'	16°46'45"	N 07°32'02"E	N 24°17'47"E
C18	133.00'	N 04°05'55"E	15.71'	15.72'	6°46'14"	N 00°45'48"E	N 07°32'02"E
C19	67.00'	S 39°22'12"W	83.61'	80.29'	77°12'47"	S 00°45'48"W	S 77°58'36"W
C20	217.00'	S 84°22'12"W	49.33'	48.43'	12°47'13"	S 77°58'36"W	N 89°14'12"W
C21	133.00'	S 44°46'24"E	189.79'	211.33'	91°02'25"	N 89°43'23"E	S 00°45'48"W

Printed by: jim
J:\Projects\3D\5B08\5B08\Civil\3D\5B08Final.dwg
Nov 08 2019 - 1:30pm

Owner's Certificate of Dedication

As the property owner, I hereby certify that I caused the land described on this plat to be surveyed, divided, mapped and dedicated as represented on the plat. I also certify that this plat is required by s.236.10 or s.236.12 to be submitted to the following for approval or objection:

Outagamie County Planning and Zoning Committee
Town of Vandenbrook
Village of Little Chute
Department of Administration

In WITNESS WHEREOF the hand and seal of said owner this _____ day of _____, 20____.

In the presence of:

Vanessa A. Mills, the property owner

State of Wisconsin _____)

County) ss

Personally came before me on the _____ day of _____, 20____, the above the property owner(s) to me known to be the persons who executed the foregoing instrument and acknowledge the same.

Notary Public, Wisconsin _____ My Commission Expires _____

Town Board Approval Certificate

Resolved, that the plat of Van Handel Homestead in the Town of Vandenbrook, Outagamie County, Van Handel Homestead, LLC, and Vanessa A. Mills, owner, is hereby approved by the Town Board of the Town of Vandenbrook.

Chairman _____ Date _____

I hereby certify that the foregoing is a copy of a resolution adopted by the Town Board of the Town of Vandenbrook.

Clerk _____ Date _____

Treasurer's Certificate

We, being the duly elected, qualified and acting Treasurer's of the Town of Vandenbrook and Outagamie County, do hereby certify that in accordance with the records in our office, there are no unredeemed tax sales and unpaid taxes, or special assessments on and of the land included in this plat.

Town Treasurer _____ Date _____

County Treasurer _____ Date _____

Village of Little Chute Approval (Extraterritorial)

Resolved, that the plat of Van Handel Homestead in the Town of Vandenbrook, Outagamie County, Van Handel Homestead, LLC, and Vanessa A. Mills owner, is hereby approved by the Village Board of the Village of Little Chute.

Village President _____ Date _____

I hereby certify that the foregoing is a copy of a resolution adopted by the the Common Council of the City of Kaukauna.

Clerk _____ Date _____

Development & Land Services Approval Certificate

Resolved, that the plat of Van Handel Homestead in the Town of Vandenbrook, Outagamie County, Van Handel Homestead, LLC, and Vanesa A. Mills owners, is hereby approved by Outagamie County.

Authorized Representative _____ Date _____

This Final Plat is contained wholly within the property described in the following recorded instruments:

Property owners of record: Van Handel Homestead, LLC Recording Information: Doc No. 2152099 Parcel Number(s): 200-0087-00 200-0088-08

Vanessa A. Mills Doc No. 2100251 Doc No. 2100252 200-0083-07

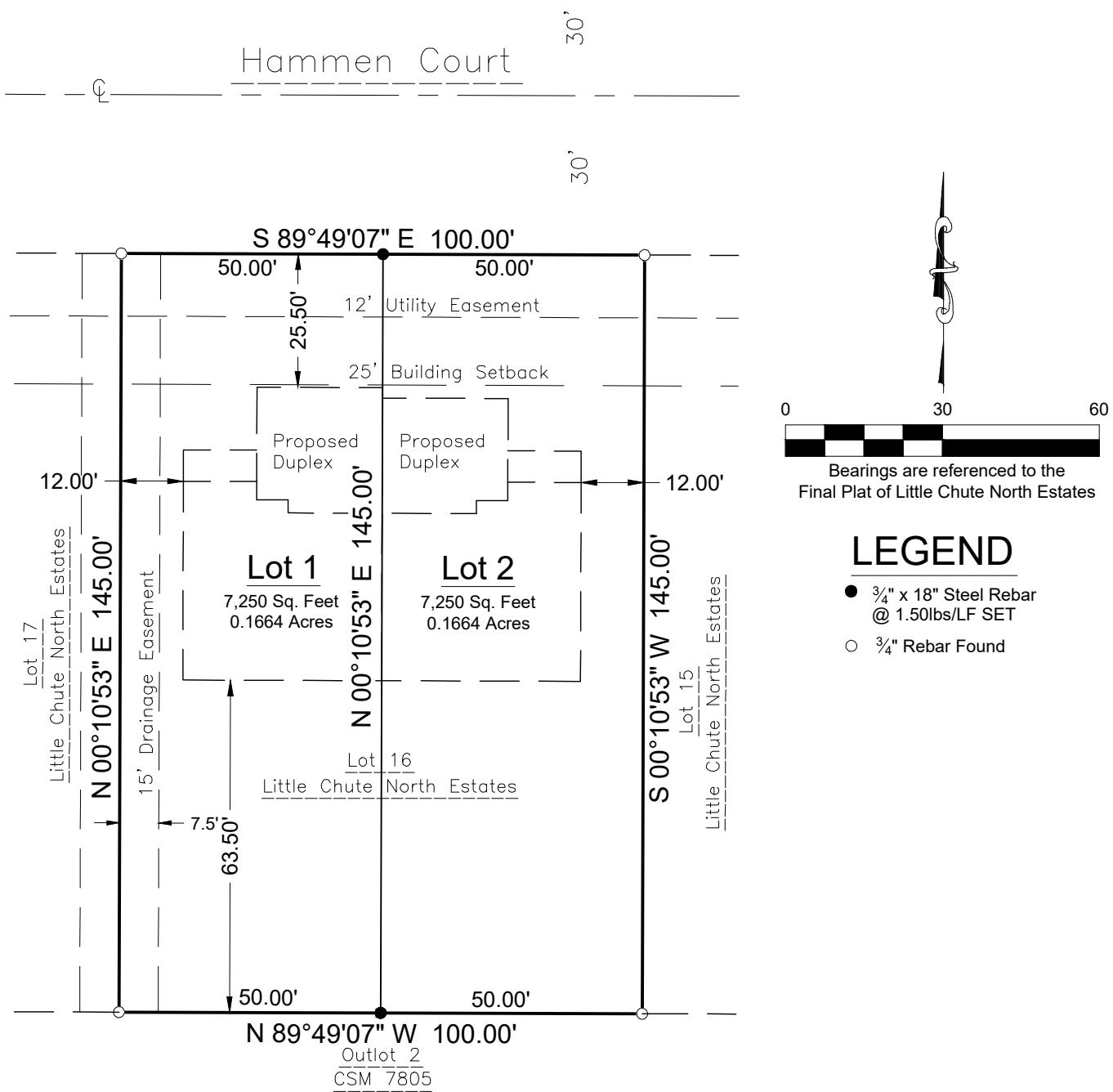
File: 5486Final.dwg
Date: 11/08/2019
Drafted By: jm
Sheet: 2 of 2
Revision Date: Nov 08, 2019

There are no objections to this plat with respect to Secs. 236.15, 236.16, 236.20 and 236.21(1) and (2), Wis. Stats. as provided by s. 236.12, Wis. Stats.
Certified _____ 20 _____
Department of Administration

DAVEL ENGINEERING &
ENVIRONMENTAL, INC.
CIVIL ENGINEERING CONSULTANTS
1611 Radin Street Menasha, WI 54952
Ph: 920-991-1666 Fax: 920-830-9595
www.davel.pro

Certified Survey Map No. _____

All of Lot 16 of Little Chute North Estates, being part Northwest 1/4 of the Southwest 1/4, Section 10, Township 21 North, Range 18 East, Village of Little Chute, Outagamie County, Wisconsin.



Note:

1. Restrictive covenants shall be recorded at the Outagamie County Register of Deeds, providing declarations and/or by-laws similar to those typically recorded on a declaration of condominium. Said covenants shall provide for mediation of any and all disputes between owners of each unit and any third party with regard to construction, use, and maintenance of the real property. Furthermore, said covenants shall specifically state that the village of Little Chute and all approving authorities shall not be held responsible for the same, and that said covenants shall inure to all heirs and assigns.



**DAVEL ENGINEERING &
ENVIRONMENTAL, INC.**
Civil Engineers and Land Surveyors

1164 Province Terrace, Menasha, WI 54952
Ph: 920-991-1866 Fax: 920-441-0804
www.davel.pro

James R. Sehloff
Professional Land Surveyor No. S-2692
jim@davel.pro

Survey for:
CR Buildings LLC
W4704 Deer Run Drive
Black Creek, WI 54106

Date

Drafted by: jim
Sheet : 1 of 3

Certified Survey Map No. _____

All of Lot 16 of Little Chute North Estates, being part Northwest 1/4 of the Southwest 1/4, Section 10, Township 21 North, Range 18 East, Village of Little Chute, Outagamie County, Wisconsin.

Surveyor's Certificate

I, James R. Sehloff, Professional land surveyor, hereby certify: That in full compliance with the provisions of Chapter 236 of the Wisconsin Statutes and the subdivision regulations of the Village of Little Chute, and under the direction of CR Buildings, LLC, the property owners of said land, I have surveyed divided and mapped this Certified Survey Map; that such map correctly represents all exterior boundaries and the subdivision of the land surveyed; and that this land is all of Lot 16 of Little Chute North Estates, being part Northwest 1/4 of the Southwest 1/4, Section 10, Township 21 North, Range 18 East, Village of Little Chute, Outagamie County, Wisconsin., containing 14,500 Square Feet (0.3329 Acres) of land, subject to all easements, and restrictions of record.

Given under my hand this _____ day of _____, _____:

James R. Sehloff, Wisconsin Professional Land Surveyor No. S-2692

Owner's Certificate of Dedication

CR Buildings, LLC, a limited liability company duly organized and existing under and by virtue of the Laws of the State of Wisconsin, as the property owner, does hereby certify that we caused the land above described to be surveyed, divided and mapped all as shown and represented on this map.

We do further certify this plat is required by s.236.10 or s.236.12 to be submitted to the following for approval or objection:

Village of Little Chute

Managing Member

Date

State of Wisconsin)
)SS
 _____ County)

Personally came before me on the _____ day of _____, 20_____, the above the property owner(s) to me known to be the persons who executed the foregoing instrument and acknowledge the same.

My Commission Expires _____
Notary Public, Wisconsin

Certified Survey Map No. _____

All of Lot 16 of Little Chute North Estates, being part Northwest 1/4 of the Southwest 1/4, Section 10, Township 21 North, Range 18 East, Village of Little Chute, Outagamie County, Wisconsin.

Village Board Approval Certificate

Resolved, that this certified survey map in the Village of Little Chute, Outagamie County, CR Buildings LLC, the property owner, is hereby approved by the Village Board of the Village of Little Chute.

Chairman _____ Date _____

I hereby certify that the foregoing is a copy of a resolution adopted by the Village Board of the Village of Little Chute.

Clerk _____ Date _____

Treasurers' Certificate

We, being the duly elected, qualified and acting Treasurers' of the Village of Little Chute and Outagamie County, do hereby certify that in accordance with the records in our office, there are no unredeemed tax sales and unpaid taxes, or special assessments on and of the land included in this certified survey map.

Village Treasurer _____ Date _____

County Treasurer _____ Date _____

This Certified Survey Map is contained wholly within the property described in the following recorded instruments:

the property owners of record: CR Buildings LLC Recording Information: Doc. 2176541 Parcel Number: 260451926

James R. Sehloff Professional Land Surveyor No. S-2692 Date

PRELIMINARY PLAT
"MARIA ESTATES"

BEING ALL OF LOT 2 OF CERTIFIED SURVEY MAP NO. 7818 RECORDED AS DOCUMENT NO. 2174623 AND ALL OF LOT 1 OF CERTIFIED SURVEY MAP NO. 5829 RECORDED AS DOCUMENT NO. 1803006 AND PART OF THE NORTHWEST 1/4 OF THE FRACTIONAL NORTHWEST 1/4, ALL LOCATED IN SECTION 3, TOWNSHIP 21 NORTH, RANGE 18 EAST, TOWN OF VANDENBROEK, OUTAGAMIE COUNTY, WISCONSIN.

DELLA MARCUS CORP., INC.
715 DEPOT STREET
LITTLE CHUTE, WISCONSIN 54140
PROJECT: PRELIMINARY PLAT "MARIA ESTATES", TOWN OF
VANDENBROEK, OUTAGAMIE COUNTY, WISCONSIN

CAROL LAND SURVEYING CO., INC.

APPLETON, WISCONSIN 54912-1297
PHONE: (920) 731-4168 FAX: (920) 731-5673



Memorandum

Foth Infrastructure & Environment, LLC
2121 Innovation Court, Suite 300
P.O. Box 5126 • De Pere, WI 54115-5126
(920) 497-2500 • Fax: (920) 497-8516
www.foth.com

November 18, 2019

TO: Brian Van Straten, Outagamie County Recycling & Solid Waste Department
CC: Marty Sturzl, Foth Infrastructure & Environment, LLC
RE: Northwest Landfill
Village of Little Chute – Conditional Use Permit
Request for Additional Information Response

Purpose

The purpose of this memorandum is to respond to the village of Little Chute's (Village) request for information dated November 15, 2019 related to the Condition Use Permit (CUP) for the proposed Northwest Landfill (NWLF). The following are the Village's requests in italics followed by Outagamie County Recycling & Solid Waste's (OCRSW) response.

1. *Appleton, HOVMSD, and East Central Regional Planning Center Positions*

4.a. of the attachment to the County's CUP application indicates the County is negotiating with the City of Appleton to route all leachate from the new NWLF cell to the City of Appleton wastewater treatment plant. The Plan Commission wants to know the results of these negotiations.

Also, the Plan Commission would like to know what position the East Central Regional Planning Commission will take on the issue of detaching this new NWLF cell from the Heart of the Valley Metropolitan Sewerage District ("HOVMSD").

Relatedly, the Plan Commission would like to know what conditions HOVMSD will impose if the new cell remains in the HOVMSD for receiving and treating the leachate from the new NWLF cell.

Response: OCRSW is currently beginning initial discussions with the East Central Regional Planning Commission (ECRPC) and the city of Appleton to be able to send leachate from the NWLF to the city of Appleton's wastewater treatment plant as the primary method of leachate treatment for the facility. Results of these discussions will be conveyed to the Village when they are completed.

2. **Operational Systems Details**. Section 8 of the attachment to the County's CUP application indicates “[a]n extensive landfill gas collection system and treatment system will be installed” in accordance with DNR regulations. The Plan Commission would like more details about the how this system works, when it will be installed, and whether it is effective in the collection and treatment of landfill gas and whether it adequately limits the noxious odors associated therewith.

Response: The design of the landfill gas system for the Northwest Landfill will be presented in a Plan of Operation (POO) planned for submittal to the Wisconsin Department of Natural Resources (WDNR) in spring/summer of 2020.

The gas system will consist of horizontal and vertical gas collection wells installed throughout the waste mass. In addition, supplemental gas collection will be provided by connections to the leachate collection system installed at the bottom of the landfill. The gas collection points will be connected by a series of gas header and lateral piping to an existing gas-to-energy facility where it is combusted to generate electricity. In addition, the gas header system is connected to existing gas flares as a backup to the gas-to-energy facility.

Horizontal gas extraction wells will be installed as waste is being placed to allow for gas collection in active fill areas. The first series of wells will be installed 6 to 12 months after initial waste placement. The horizontal wells are considered temporary and are replaced by vertical wells as the landfill reaches final filling elevations. Typical spacing of these wells is 200 to 300 feet. The gas system for the NWLF will consist of >100 gas extraction points designed to collect all of the gas produced within the waste mass.

The landfill will be required to operate under state and federal air permits. Quarterly surface emissions testing will be performed as a requirement of these permits. The testing consists of a technician performing survey of the landfill area with equipment which can detect gases that are being released to the atmosphere. All sources of emissions are addressed to eliminate them within a stipulated timeframe.

3. **Litter Control Plan Details**. Section 9 of the attachment to the County's CUP application indicates that “[a] litter control plan will be developed.” The Plan Commission would like to see a copy of this plan.

Response: A litter control plan for the NWLF will be prepared and submitted in the POO. The plan will be similar to the Northeast Landfill (NELF) litter control plan. A copy of the NELF's plan is included as Attachment 1.

4. **Bird Control Plans**. Section 11 of the attachment to the County's CUP application indicates the County "is actively working with the United States Fish and Wildlife Service to address the issue of migratory birds congregating at the landfill" to develop a control program. The Plan Commission would like more details about this control program. The Plan Commission would also like to see a copy of this control program to the extent the program is documented in writing.

Response: A copy of OCRSW's agreement with the United States Fish & Wildlife Service (USFWS) is included as Attachment 2. The USFWS has been actively employing lethal and non-lethal harassment methods at the NELF since 2012. Annual summaries of these activities are included as Attachment 3.

5. **Leachate Metering Plans for New NWLF Cell**. Not addressed in the County's CUP application is the issue of how the leachate discharged from the new NWLF cell will be metered. The Plan Commission would like more information about this issue.

Response: The preliminary design of the leachate management system for the NWLF consist of a central leachate storage tank. Submersible pumps installed within each phase of the landfill will pump leachate to the storage tank. A separate pump will extract leachate from the tank and send it to a connection to the city of Appleton's sanitary system via a forcemain. A magnetic flow meter will be installed in a building near the storage tank. The flow meter will record flow through the forcemain to the sanitary sewer. In addition, a flow proportional sampler will be installed to collect representative samples of the leachate for laboratory testing at frequencies agreed to by OCRSW and the city of Appleton.

Attachments

Attachment 1
NELF Litter Control Plan

Report

**Dust, Litter, and Odor Control Plan
for the Outagamie County
Northeast Area 6 Landfill**

Scope I.D.: 0070001

**Outagamie County Department of Solid Waste
Appleton, Wisconsin**

December 2009

Dust, Litter, and Odor Control Plan

Outagamie County Northeast Area 6 Landfill

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Attachments

Attachment 1	Wind Rose – January through December, Green Bay, Wisconsin
Attachment 2	Dust and Litter Control Monitoring Form
Attachment 3	Odor Monitoring Forms

1. Introduction

This document provides a detailed discussion of the specific actions to be taken during construction and waste disposal activities associated with the Outagamie County Northeast Area 6 Landfill (NELF) to reduce fugitive dust emissions, blown litter, and odors. It also assigns the responsibility for controlling dust emissions, blown litter, and odors to specific personnel, and it outlines the documentation procedures that will be used to show compliance with this plan.

Fugitive dust emissions, measured as total suspended particulate (TSP) matter, are regulated by the United States Environmental Protection Agency (USEPA) under the Clean Air Act (CAA). The Wisconsin Department of Natural Resources (WDNR) under the authority of the USEPA enforces the secondary TSP standard (i.e., 150 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]). Dust control procedures are put in place to maintain compliance with the standard.

Monitoring of TSP occurs daily by making visual observations of fugitive dust at the landfill. Based on these observations, dust generation is controlled by using dust control measures (e.g., wetting with water those surfaces that produce dust).

Provisions of NR 506.07(1) (c) require that blown litter be recovered and disposed in the active area of the landfill by the close of each day's landfill activities. Due to the proximity of the landfill to US Highway 41, particular concern is expressed in condition #7 of the feasibility approval for the landfill which requires a discussion of the measures to be taken to ensure that dust or blowing litter will not cause safety problems for motorists traveling on US Highway 41.

The plan will also outline specific procedures for retrieving any litter which escapes from the landfill into the highway right of way.

2. Dust Control

2.1 Dust Generating Activities

Dust can be generated by a number of on-site activities, including landfill construction, waste disposal activities, vehicular traffic, and soil erosion when high winds occur over bare soil areas. Each of these sources of TSP is discussed in this section. Dust control procedures are discussed in Section 2.2.

2.1.1 Landfill Construction and Waste Disposal

During landfill construction, dirt roads are used to haul soil from borrow pits to the landfill areas under construction. The hauling of soil along the haul roads can produce fugitive dust. In addition, while placing and grading soils, dust can be generated. The primary means to control dust generated during construction will be through the application of water to haul roads, limiting the number of haul roads, and controlling the maximum speed of vehicles on haul roads.

2.1.2 Vehicular Traffic

During daily landfill operations (i.e., waste hauling and filling), the primary source of fugitive dust is from trucks and heavy equipment moving through the landfill, and truck traffic or regrading operations along the gravel access and haul roads.

2.1.3 High Winds

High winds may result in the generation of fugitive dust from exposed soil and access roads. Vegetation effectively eliminates dust generation due to wind erosion of soil. Windy conditions could also cause litter to be blown from the landfill.

Attachment 1 contains monthly wind roses for the closest monitoring station, located at Austin Straubel Airport, Green Bay, Wisconsin. A wind rose can be used to graphically depict the dominant transport direction for winds for a broad area. However, the effects of terrain, local variabilities and other factors may result in the wind rose not being truly representative of the actual wind conditions at a particular site. The wind rose does provide the best information regarding percentage of time direction(s) and wind speeds associated with site wind.

The wind rose in Attachment 1 is for the months of April through November. This is the time period when we anticipate construction activities to most likely occur and dust generation to be of the most concern. In review of Attachment 1 we can make the generalizations regarding wind speed and direction presented in Table 2-1. From Table 2-1 we can surmise the following:

- Average wind speed is about 9.8 mph;
- About 5.8% of the days will be calm (~1 to 2 days per month);
- The dominant wind directions are from the south-southwest to west; and
- South-southwest to west winds exceed 12 mph more frequently than north-northwest winds.

Table 2-1
Summary of Wind Rose Data
Green Bay, WI

Month	Average Wind Speed (mph)	~% Calm Wind	Dominant Wind Directions (%/directions)	% Wind Greater Than 12 mph/directions
April	11.3	2.8%	~33%/E,NNE ~26%/W,SSW	~14%/E,NNE ~12%/W,SSW
May	10.3	5.5%	~30%/E,NNE ~29%/W,SSW	~10%/E,NNE ~9%/W,SSW
June	9.5	5.7%	~22%/E,NNE ~34%/W,SSW	~5%/E,NNE ~10%/W,SSW
July	8.6	8.0%	~15%/W,NNW ~34%/W,SSW	~3%/W,NNW ~9%/W,SSW
August	8.5	8.5%	~15%/W,NNW ~36%/W,SSW	~3%/W,NNW ~8%/W,SSW
September	9.2	6.7%	~16%/W,NNW ~36%/W,SSW	~3%/W,NNW ~9%/W,SSW
October	10.1	5.2%	~21%/W,NNW ~37%/W,SSW	~6%/W,NNW ~10%/W,SSW
November	10.7	4.1%	~22%/W,NNW ~38%/W,SSW	~7%/W,NNW ~15%/W,SSW

Notes:

mph – miles per hour and % calm winds rounded to the nearest tenth

Prepared by: MJP1
Checked by: MRS

The wind directions of greatest concern are from the southeast to southwest which would blow across Highway 41 or from the west which blow toward the residential area to the east of Holland Road. The south-southwest winds are of most concern and are predominant during the time period mentioned above. Diligent dust monitoring and dust and litter control procedures will be implemented during all times at the landfill, especially the time period described above.

If wind speeds in any direction exceed 45 mph, consideration will be given to suspending operations.

2.2 Dust Control Procedures

This section describes the specific dust monitoring and suppression activities that will be taken by the landfill operator and construction contractor(s) to minimize the potential for dust generation at the NELF during landfill construction and landfill operational activities. Procedures for control of wind blown litter will also be discussed.

The dust and litter control procedures discussed below include:

- ◆ dust suppressants and watering which are used primarily during warm weather;
- ◆ limiting vehicle speed;

- ♦ revegetation of areas where construction and/or borrow soil excavation is completed;
- ♦ temporary mulching of disturbed areas prone to wind erosion;
- ♦ road grading to remove fines;
- ♦ constructing roads of coarse, open graded aggregate with very low fines content;
- ♦ Positioning of portable litter control devices as needed; and
- ♦ Diverting landfill operations to an alternative area to preclude wind blown litter.

2.2.1 Dust Suppressant Application Guidelines for Landfill Roads

The application of a dust suppressant and water to access roads and haul roads during warm weather can prevent significant dust generation if road conditions are properly monitored. An example of dust suppressant is a magnesium chloride solution which reduces dust generation by cementing together the dust-sized surficial road material. The dust suppressant can generally be rejuvenated for approximately six months by adding water, after which, reapplication of the dust suppressant may be necessary.

The dust suppressant should be applied on the necessary portions of the access roads and haul roads to prevent dust generation. Dust suppressants are intended for use within the confines of a road bed or a specifically designated soil area. Application and maintenance procedures will comply with manufacturers' recommendations. The following discussion is an example of a procedure to be followed for the application of a specific dust control product (Dustgard™).

The manufacturer, Daffinson, recommends Dustgard™ be applied at a rate of 0.5 gallon per square yard in two 0.25 gallon per square yard applications. The surface should be prewatered to a depth of three to four inches prior to application to aid even penetration. This basic rate should provide dust control for approximately six months before reapplication is required. Dustgard™ should be reapplied before the first treatment is completely used up, to prevent the loss of fine-grained soil particles.

2.2.2 Watering

If dust generation is observed, then the Landfill Operations Manager is responsible for deciding if watering should occur to suppress dust. Watering should be completed as soon as possible, but within no more than one hour from when it is observed to be dusty. The road will be wetted with water using a watering truck. Water for wetting the roads will be obtained from the on-site sedimentation pond and/or hydrants located on site.

The Landfill Operator or the construction contractor is responsible for properly maintaining their watering trucks. If the watering truck is out of service, a back-up water truck will be obtained from one of two possible sources, which include:

- ♦ An off-site truck vendor.
- ♦ A local contractor and construction equipment rental vendor.

The construction contractor(s) are responsible for providing and maintaining their own water truck.

2.2.3 Dust Suppression During Waste Excavation/Disposal

Waste materials are expected to be moist. Therefore, actual dust emissions during the disposal process are expected to be insignificant. However, as an extra measure to maintain the moisture content of the material, water or leachate will be sprayed on the active excavation face when dusty conditions are apparent.

2.2.4 Vehicle Speed Limits

During dry periods, the amount of dust generated by vehicular traffic is proportional to the speed and weight of the vehicles traveling over the road or open soil area. In those areas where dust control measures are ineffective, the Landfill Operations Manager will reduce the allowable speed limit of vehicular traffic within the affected area. The Landfill Operations Manager will adjust the vehicle speed limit as needed. As a "rule of thumb" a vehicle speed limit of no greater than 15 miles per hour is recommended.

2.2.5 Vegetation

Following completion of construction activities, exposed soil will be vegetated to prevent dust generation. Vegetation will be established by hydroseeding or other means. Once vegetation begins to grow, any spots not vegetated will be reseeded to provide complete coverage.

For those soil areas not associated with contracted construction activities, the Outagamie County Landfill Operations Manager will coordinate the establishment of vegetation of any bare soil areas on a semiannual basis. Revegetation can be accomplished by hydroseeding or other means to establish perennial grass species.

2.2.6 Mulch

Outagamie County occasionally has on-hand wood mulch produced by grinding wood wastes. This wood mulch can be used as an effective means of dust control on bare soil areas or open waste face areas. Wood chips or compost can be used as a temporary treatment until weather is suitable for permanent or temporary seeding. The wood chips or compost could be left in-place and blended with soil as part of an intermediate cover.

2.2.7 Road Grading

Road grading is one of the most effective procedures for controlling dust. Road grading will be performed on an as-needed basis to remove fines from the surface of the gravel access roads to minimize the potential for dust generation. Prior to starting regrading activities, the gravel will be watered if necessary to prevent dust generation during grading.

2.2.8 Haul Road Construction

Haul road construction for waste and/or soil hauling will be designed for construction traffic. One of the design goals is to minimize dust production. Road grading and the design features listed below can minimize dust production.

- ♦ If required or practical, construct the haul road with a geotextile below the aggregate. This will minimize the intrusion of fines into the aggregate;

- ♦ The road may be constructed with an open graded aggregate with less than 10% passing the number 200 sieve (P200). Crushed concrete or asphalt can be used for this purpose if it meets the P200 criteria. This will limit dust generation during normal use;
- ♦ Grade the road frequently and when the aggregate becomes fouled with fines; and
- ♦ Apply additional aggregates as required to maintain the construction traffic.

2.2.9 Restricted Operations

Filling operations will be modified depending on wind direction and velocity to limit dust and wind blown litter. During high winds from a southerly or westerly direction, operations will take place in the most protected area in each phase to minimize dust blowing north toward Highway 41 or east toward the residential areas. Filling operations will be conducted under regular controlled conditions when winds are from the northerly or easterly directions.

If wind speeds in any direction exceed 45 mph, consideration will be given to suspending operations.

3. Litter Control

3.1 Introduction

NELF operators will manage litter in a manner that is effective both inside and outside the landfill boundary. The purpose of a litter control plan is to prevent litter from becoming a nuisance or safety hazard and to provide adequate aesthetics. Problems that can develop if litter is allowed to go uncontrolled include:

- ◆ Complaints from neighbors and the public;
- ◆ Reduced aesthetics;
- ◆ Increased presence of vectors;
- ◆ Increased risk of onsite and offsite fire as well as other safety hazards;
- ◆ Increased landfill operating costs; and
- ◆ Reduced willingness of landowners to allow landfill expansion.

3.2 Litter Control Procedures

The most common ways to prevent and minimize litter problems are to:

- ◆ Confine the working face;
- ◆ Fencing;
- ◆ Make effective use of litter catch screens, fences and/or enclosure;
- ◆ Deposit / compact waste on the down-wind slope;
- ◆ Push waste short distances and minimize waste handling;
- ◆ Cover and/or compact waste more frequently during periods of high wind;
- ◆ Restrict waste deposition/handling during periods of high wind;
- ◆ Require incoming vehicles to cover loads;
- ◆ Conduct frequent litter inspections and clean-up.

3.2.1 Confine the Working Face

Keeping the working face of the active fill area as small as possible is one of the best ways to help prevent litter problems.

3.2.2 Fencing

Fencing is a primary method of litter control. Fencing can include portable litter catch screens and fixed fencing.

Litter catch screens are relatively simple to use and are typically oriented perpendicular to wind direction and located downwind from the working face. For smaller active areas, litter catch screen designs that completely enclose the working face are also very effective. The most practical designs will be portable and will be constructed of heavy-duty framing such that they can be transported and positioned using on-site equipment. There are numerous litter catch screen designs and spacings that work well. Most designs include the following elements:

- ◆ Heavy duty framing;
- ◆ Portability with means to move and position the screens using on-site equipment;

- ◆ Chain link fabric or equivalent material that has a large percentage of open area with relatively small openings;
- ◆ Inclined slightly to provide better trapping and retention of litter;
- ◆ Height of 7 to 12 feet; and
- ◆ Double rows with 40 to 80 foot spacing between rows.

Fixed fencing would consist of a wire mesh or similar fence installed along the perimeter of waste filling areas. Multiple rows of fencing can be used. In addition, fencing may be confined with screening berms (see Section 4.6 of P.O.O.) to increase effectiveness.

Note that all litter catch screens and fences should be cleaned regularly to maintain their effectiveness.

3.2.3 Push Short and Minimize Handling

Pushing short means that the refuse unloading or tipping areas are kept as close as possible to the working face of the landfill. In this manner, the distance that equipment operators will have to travel while pushing the garbage into place for cell construction and compacting is minimized. This practice will minimize the wind exposure that the uncovered garbage will receive as it is being placed. Landfill operators and spotters should be sure that incoming vehicles are unloading as close as possible to the working face.

3.2.4 Cover Waste More Frequently During Periods of High Wind

Periods of high wind may dictate that wastes be covered more frequently in order to control litter. Selective placement of small amounts of cover soil or alternative cover can effectively reduce wind dispersal of litter and can save significant amounts of time and cost when compared with litter clean up. Cover soils placed for the sole purpose of litter control do not have a minimum thickness and can therefore be placed in a manner that does not consume unnecessarily large volumes of landfill air space.

3.2.5 Restrict Waste Deposition / Handling During Periods of High Wind

Not only do high wind conditions contribute to severe litter dispersal, but can also result in safety hazards for people using the landfill. Depending on landfill use, it may be necessary to implement special "high-wind" operating protocols or restrictions. Examples of these kinds of protocol include decreasing the size of the working face, limiting the number of vehicles that unload simultaneously, and limiting operations to areas that are best sheltered. Use of special unloading screen enclosures and alternative cover materials can also be incorporated into high-wind operating protocol. Under extreme wind conditions, it may be appropriate to close the landfill entirely.

3.2.6 Require Incoming Vehicles to Use Controls or Covers

Many landfills require that incoming vehicles be covered with a tarp or other cover such that litter and other objects do not fall out or blow out. This requirement should be posted at the landfill gate and any incoming vehicles that do not follow the policy could be surcharged a litter collection fee or could be turned around.

3.2.7 Conduct Frequent Litter Inspections and Clean-Up

As expected, preventative litter control programs will not eliminate all litter problems. For this reason, regulations require that landfill operators conduct and document periodic litter inspections and remove litter from on-site and off-site areas of accumulation. Litter inspections should be conducted and documented on daily or weekly logs. Depending on typical wind conditions and waste types, inspections and litter removal may need to be carried out more frequently. Regular hand pick ups and/or vacuum trucks work well for litter removal. Litter inspection and removal efforts should focus on likely accumulation areas such as fence lines, borrow ditches, drainages, lee slopes, and areas of dense vegetation. Inspection and removal activities must be documented. It is best if the documentation is provided on the daily operating log (see example form in Attachment 2).

4. Odor Control

4.1 Introduction

Odor is frequently associated with landfill operations. Waste delivered to the site may have a characteristic odor. In addition, decomposition of the waste can release odor and generate gases. Leachate recirculation may enhance the generation of gas and odors due to increased waste decomposition.

Detection of odor is a subjective process and varies widely from one individual to the next. The following sections have been developed as a guide to address the potential odor issue at the NELF.

4.2 Identification of Potential Odor Sources

Odors can be created by a variety of materials and activities associated with the landfill. The following is a summary of the potential odor sources.

- A. Acceptance of waste materials, including but not limited to:
 - ♦ Yard waste
 - ♦ Municipal solid waste
 - ♦ Construction & Demolition (C&D) wastes
 - ♦ Petroleum contaminated soils
- B. Emissions from decomposing materials, including but not limited to:
 - ♦ Yard waste composting
 - ♦ Municipal solid waste (MSW)
 - ♦ Demolition waste
- C. Emissions from operational activities, including but not limited to:
 - ♦ Equipment maintenance
 - ♦ Leachate recirculation
 - ♦ Gas system operation
- D. Emissions from construction/closure activities, including but not limited to:
 - ♦ Gas extraction well installation
 - ♦ Splicing of separate liner and cover projects

4.3 Odor Monitoring

4.3.1 General

Odors will be monitored by landfill personnel at the NELF property line and various locations outside the perimeter of the NELF facility by recording observations regarding detectable odors. The summary of each monitoring event will be recorded noting existing weather conditions and any possible odor sources.

4.3.2 Monitoring Frequency and Procedure

Odor monitoring will be conducted weekly and also on receipt of any odor complaint received by the landfill, Outagamie County Health Department, or Wisconsin Department of Natural Resources (WDNR). The weekly observations will routinely be made at varying times of the day ranging from early in the morning before the landfill opens through the end of the day after placement of daily cover. The monitoring will consist of physically traveling around the perimeter of the landfill property. Observations made at the monitoring location will be recorded on an "Odor Monitoring Form" or on an "Odor Complaint Response Monitoring Form." Examples of these forms are in Attachment 3 of this Odor Control Plan.

If odors are detected at any of the monitoring locations, further inspection of the site will be implemented to locate the source of the odor as discussed in Section 4.4.3. Once the source is identified, measures will be taken to address the problem as discussed in Section 4.3.

4.3.3 Odor Source Identification

The following screening criteria will be utilized to determine if a detected off-site odor can be potentially attributed to the landfill:

- ♦ Location of the landfill in regard to the detected odor (landfill upwind or downwind of the odor);
- ♦ Can the odor be attributable to a non-landfill source; and
- ♦ Similar odors are not observed at odor monitoring locations upwind of the landfill.

NELF personnel will conduct further investigations to identify the odor sources, if the odor is considered to be potentially attributable to the landfill. This will consist of following the odor based on the wind direction at the time.

4.4 Odor control

Odor minimization and control is a high priority at the landfill facility. It is the Outagamie County Solid Waste Department's (OCSWD) policy to provide odor controls to minimize the potential for odor migrations beyond its property boundary. The following is a discussion of the efforts made to prevent or minimize odors at the landfill for each potential emission source.

4.4.1 Acceptance of Waste Materials

The primary odor control measure for the acceptance and placement of waste will be the use of daily cover. A minimum of 6-in of soil or an alternative daily cover (ADC) will be applied to the working area at the end of each working day. If weather conditions (high winds, high temperatures and humidity, etc.) exist which could exacerbate odors, the size and location of the active area will be adjusted to minimize potential for the odors to reach the property boundary. In addition, daily cover could be placed more frequently.

Odors from yard waste will be controlled by locating the stockpiles in areas which will minimize potential for the odors to reach the property boundary.

In the event that monitoring reveals that the control measures are ineffective in controlling the migration of odors off-site, the application of odor suppressants or masking agents may be utilized to enhance odor control.

4.4.2 Decomposing Materials

Various waste materials decompose over time and produce odors as a result. Waste which decomposes within the limits of the MSW landfill will be controlled by the placement of daily, intermediate & final cover and the installation and operation of an active gas system.

The design of the active gas system is provided in the Plan of Operation for the NELF. The system is designed to prevent migration of gases, produced by waste decomposition, beyond the waste limits. The final cover and gas system will be monitoring and maintained on a regular basis in accordance with the Plan of Operation.

4.4.3 Operational Activities

Leachate Recirculation

Leachate recirculation has the potential to create significant odor problems due to the associated increase in waste decomposition and the exposure of leachate to the atmosphere. The operation, including the methods to control odor are included in the Leachate Recirculation Plan included the Plan of Operation for the NELF.

Equipment Maintenance

The NELF operations (waste placement, covering, maintenance, etc.) will be performed by the OCDSW. Routine maintenance is conducted on all landfill operations equipment. This maintenance program is designed to keep engines running clean and efficient to minimize exhaust fumes and odors.

Gas System Operation

The gas system will be operated and maintained in accordance with the Plan of Operation. Gas collected by the system will be combusted to generate electricity. In addition, an existing gas flare will be utilized to combust the gas when the cogeneration equipment is not operating.

4.4.4 Construction/Closure Activities

Construction activities at the landfill have the potential to create significant odors. The problems are primarily related to exposing waste during splicing of liner and cover sequences.

The primary control measure for odors created during liner/cover splicing will be to limit the period of time and the area of waste exposed during which this occurs.

In the event that monitoring reveals that the control measures are ineffective in controlling the migration of odors off-site, the application of odor suppressants or masking agents may be utilized to enhance odor control.

4.5 Provisions for Plan Amendment

This odor control plan has been developed as a guide to address potential odor issues at the NELF. This plan will be amended as needed due to operational changes, additional special waste acceptance, or changes in technology.

5. Responsibilities

This section describes responsibilities for implementation of the various components of this plan. Certain responsibilities lie with landfill personnel and contractors. Landfill operations personnel are responsible for implementing this plan during landfill operations and procedures are described herein.

5.1 Landfill Operations Manager

The OCDSW will designate an individual who will be responsible for landfill operations. This individual will have overall responsibility for insuring that the landfill operator and any contractors working on-site implement and follow this plan. Responsibilities include the following:

- ◆ Observations to determine if fugitive dust, blown litter or odors are being generated;
- ◆ Recording incidents of fugitive dust, litter generation, and odor complaints;
- ◆ Documenting any measures taken to control fugitive dust, litter, and odors, and their effectiveness;
- ◆ Watering of gravel access roads;
- ◆ Positioning of portable litter control devices;
- ◆ Deciding when to rehydrate or reapply dust suppressants (if required);
- ◆ Posting and enforcement of vehicle speed limits;
- ◆ Coordinating dust procedures with contractor(s) and the landfill operator;
- ◆ Deciding when to curtail or relocate landfill operations to preclude wind blown litter.

This individual shall document any dust, litter, or odor generation occurrences and the dust, litter, and/or odor mitigation procedures that were implemented. These data shall be recorded on the “Dust and Litter Control Monitoring Documentation” and “Odor Monitoring” forms located in Attachments 2 and 3. The frequency of observation will be determined on site conditions. However, days on which dust, litter, or odors were not observed shall be recorded as well.

Dust, litter, and odor control observations are conducted by an individual designated by the OCDSW. This individual will monitor the site conditions at the beginning of each work day, including a review of the weather forecast that may be helpful in anticipating significant dust generation. “Significant dust, or litter” is defined as visible dust or litter generated by landfill activities, vehicular traffic, or high winds. High winds can generally be described as winds greater than 15 miles per hour. Reasons that dust generation would be insignificant could be a recent rain or snow event, or frozen soil conditions. Results of these observations will be recorded on a daily basis on the “Dust and Litter Control Monitoring” form in Attachment 2.

If significant dust or litter generation is anticipated due to site and/or weather conditions, designated personnel will check the site continually throughout the day. The active haul roads, construction areas, waste excavation and waste placement areas should be observed. If significant fugitive dust or wind blown litter is observed, appropriate action will be taken by the responsible party to control the dust and control the litter.

5.2 Construction Contractor(s)

Construction contractor(s) perform a number of construction tasks at the NELF. Each earthwork contractor will be responsible for observing and controlling dust generated by their specific tasks. A dust control supervisor must be assigned by each earthwork contractor that operates on-site. All contractors who may generate substantial dust will be responsible for monitoring dust generated by their activities. For example, a contractor who has constructed earthen haul roads has the responsibility for monitoring the dust conditions, and taking the action(s) necessary to mitigate dust. Contractor dust control activities will be coordinated with the OCDSW. Activities associated with dust control are described below:

- ◆ Air observations to determine if dust is being generated;
- ◆ Performing necessary measures to control dust in their work area;
- ◆ Documentation of dust control measures;
- ◆ Coordination of work activities with landfill personnel; and
- ◆ Reporting dust observations and the control measures implemented.

6. Corrective Actions

6.1 Failure of the Dust Suppressant

If the dust suppressant does not appear to be effectively eliminating fugitive dusts, prior to the next scheduled application, landfill personnel will coordinate the reapplication of the dust suppressant. Application will occur as soon as possible, but no later than 48 hours after the failure of the dust suppressant. The dust suppressant will be reapplied on those sections of the access road and haul roads that were observed to be dusty. Applications of the dust suppressant will be documented on the Dust and Litter Control Monitoring form.

6.2 Failure of Dust, Litter, or Odor Control Measures

If dust or litter control measures cannot adequately control dust (i.e., visible dust is still present), or wind blown litter, the Site Supervisor will stop work until adequate measures can be taken to control dust or litter. All work stoppages will be coordinated with the OCDSW, and documented on the Dust and Litter Control Monitoring form. If a dust control measure fails, this plan shall be modified accordingly, including details of the effective dust control technique.

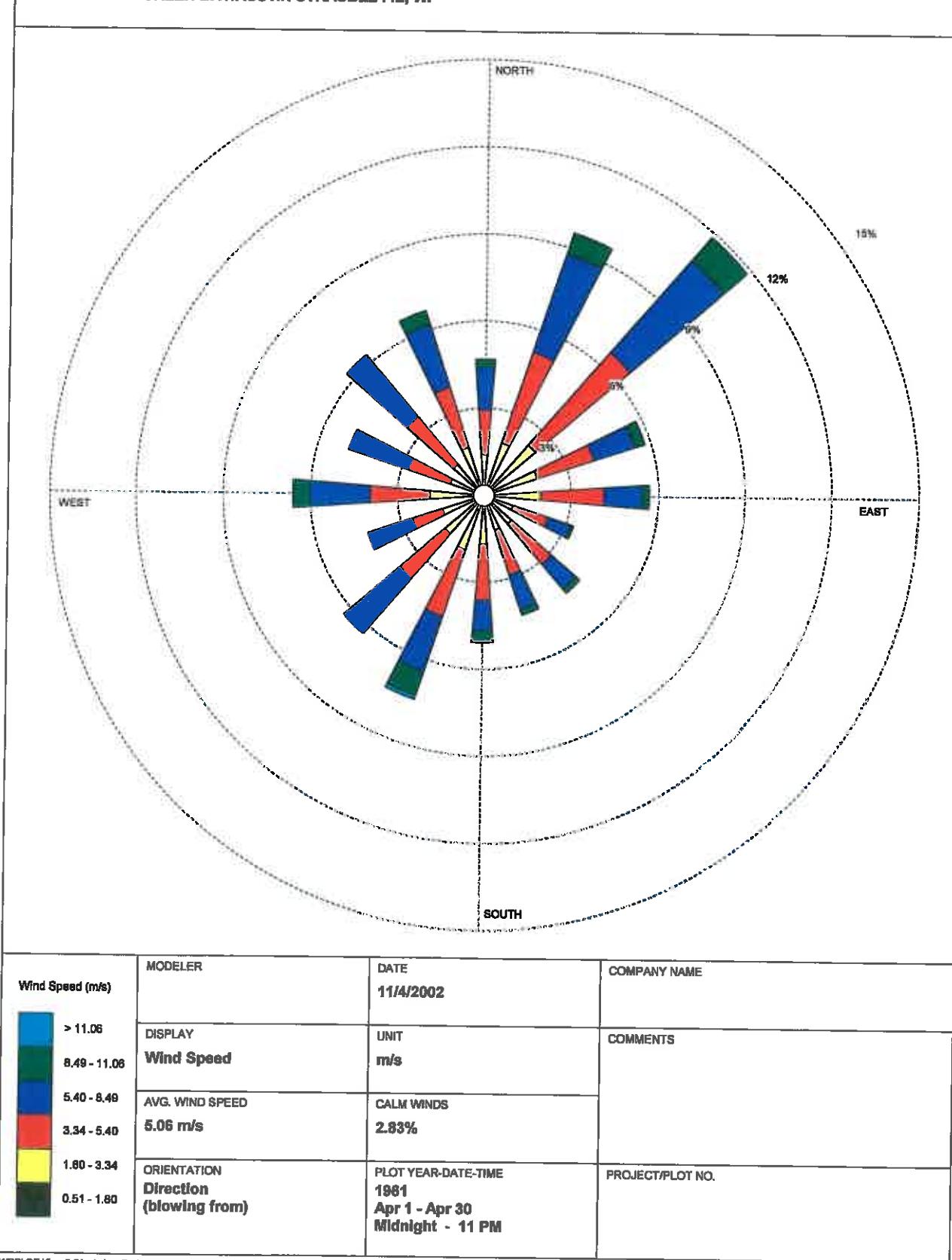
The odor control portion of this plan has been developed as a guide to address potential odor issues at the NELF. This plan will be amended as needed due to operational changes, additional special waste acceptance, or changes in technology.

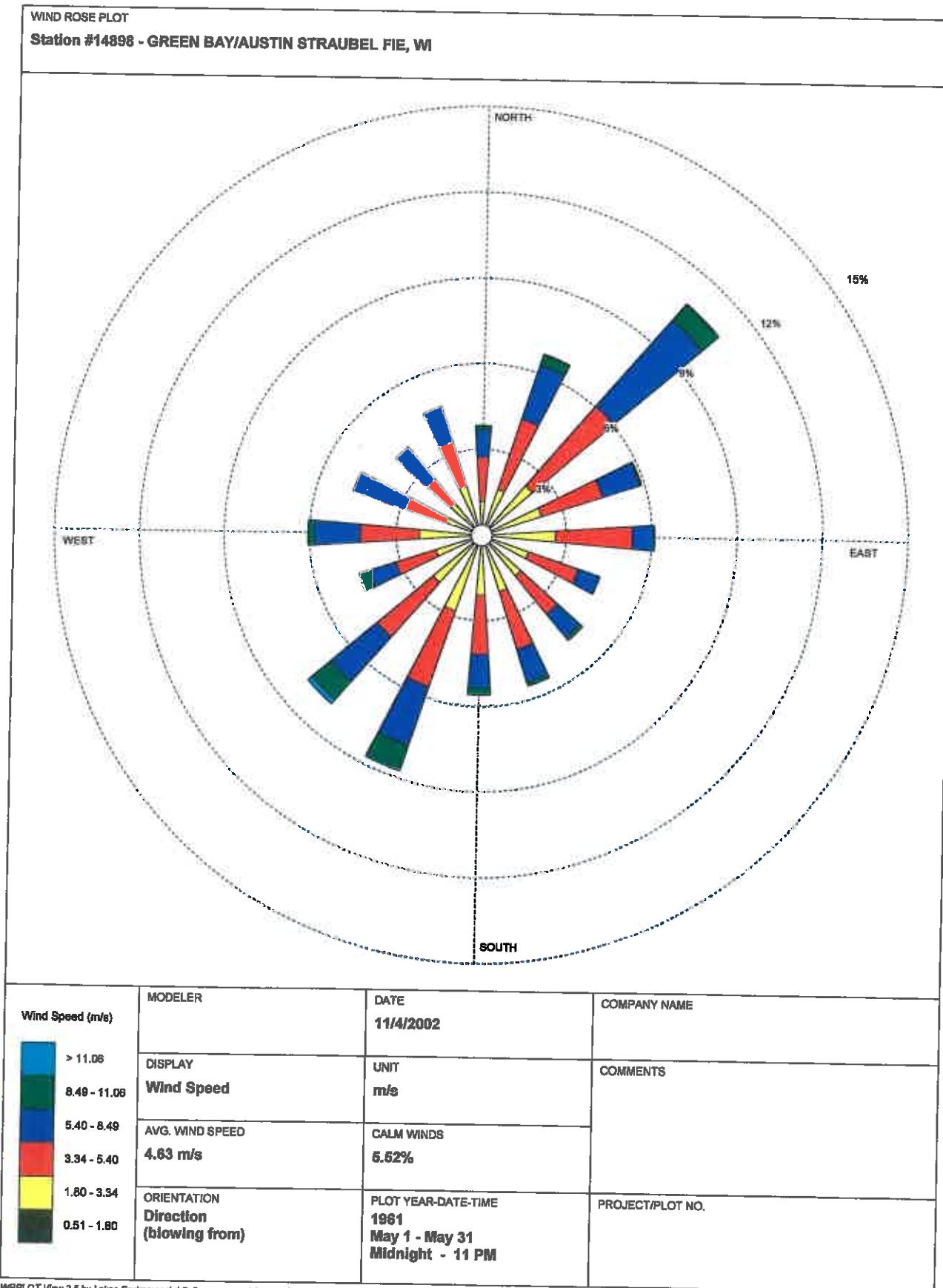
Attachment 1

**Wind Roses – April through
November, Green Bay, Wisconsin**

WIND ROSE PLOT

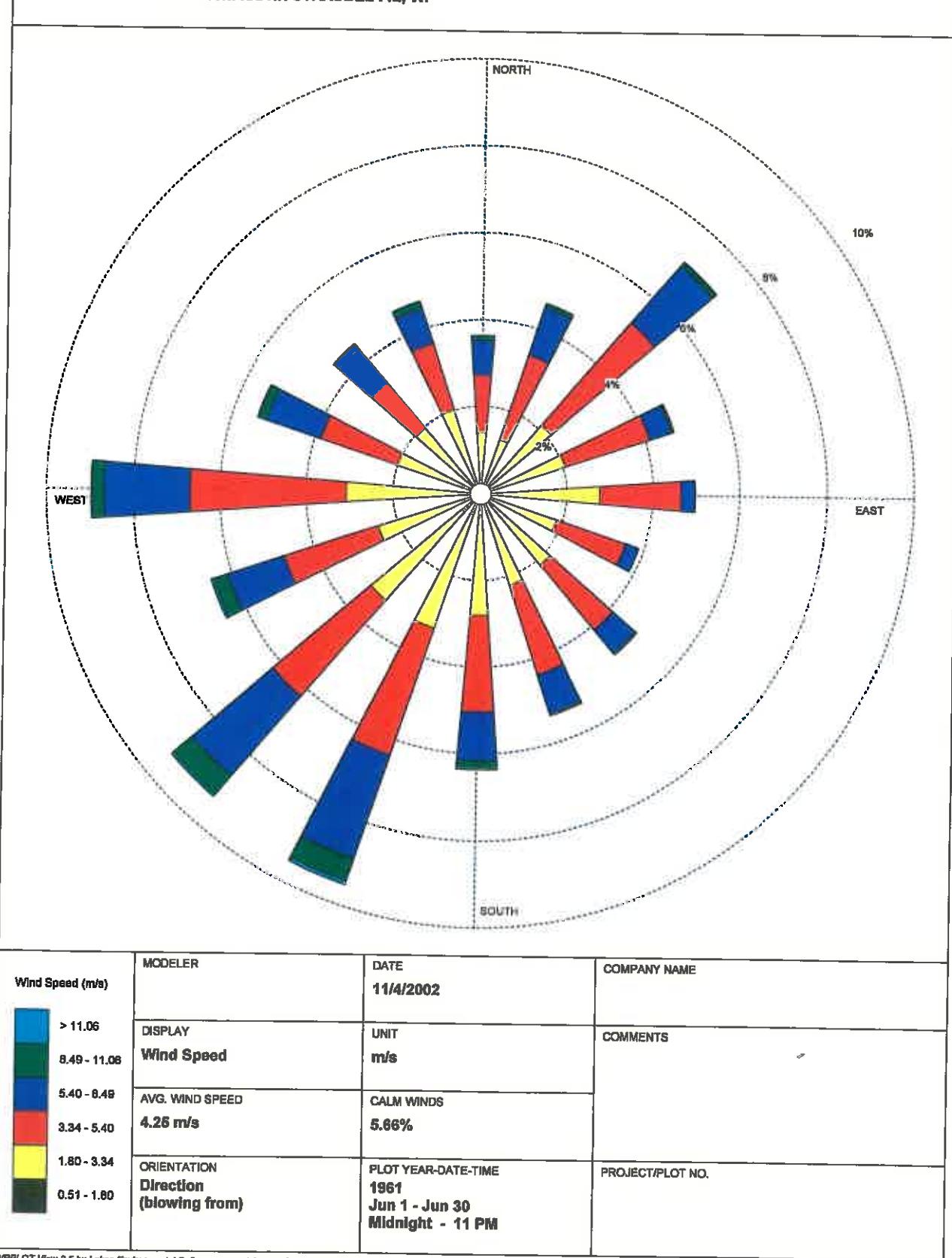
Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI





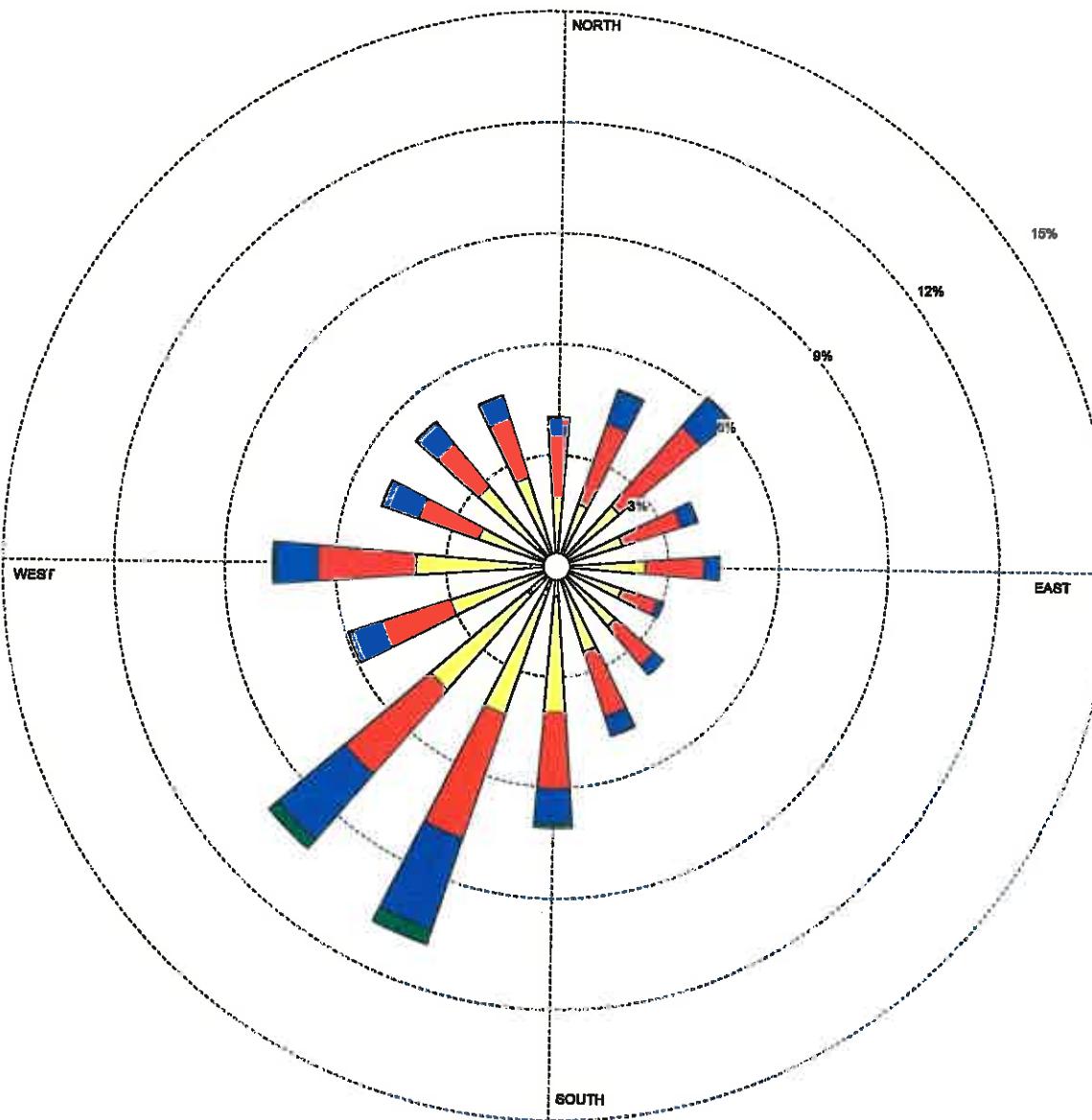
WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



WIND ROSE PLOT

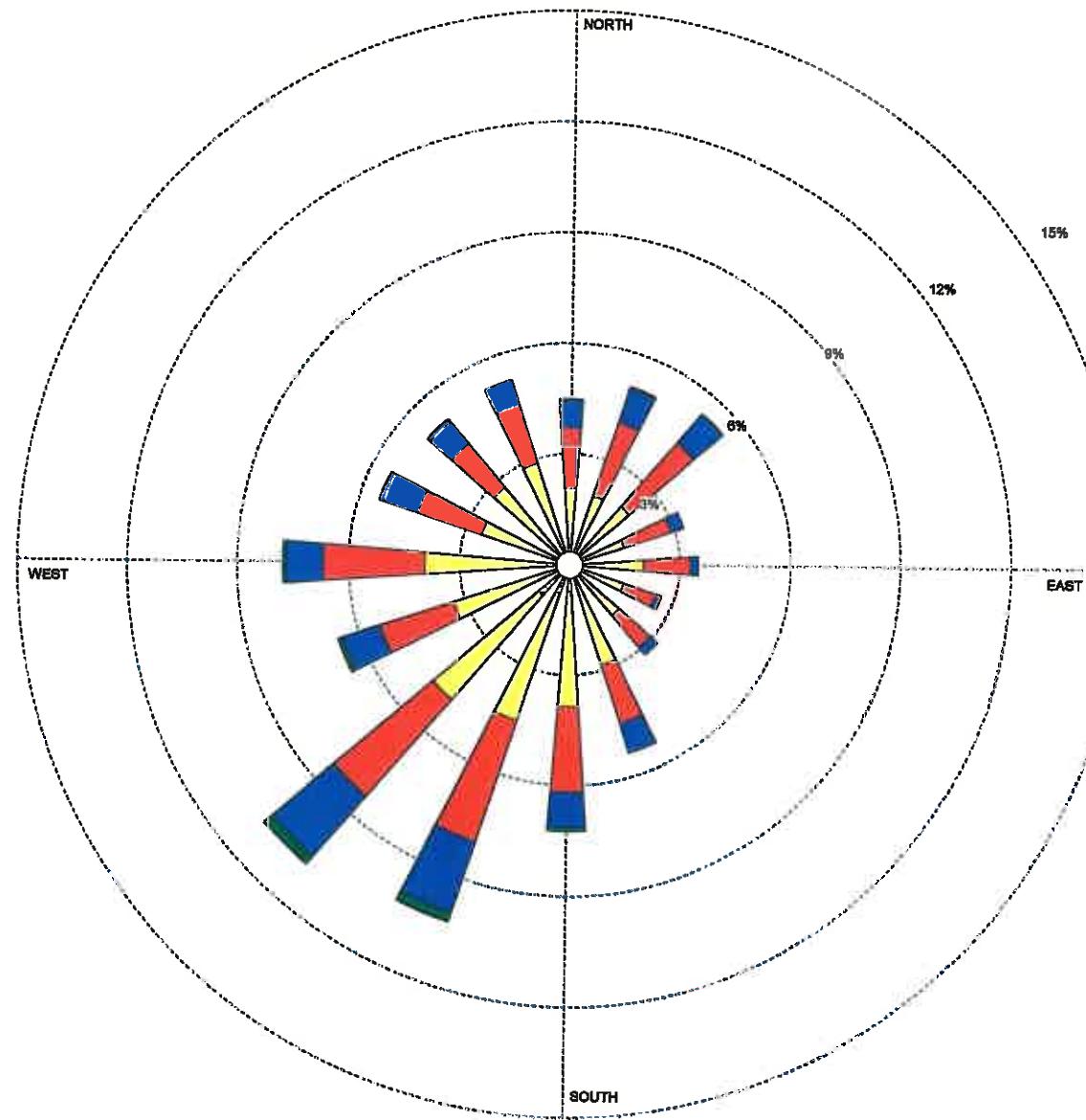
Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



Wind Speed (m/s)	MODELER	DATE 11/4/2002	COMPANY NAME
> 11.08	DISPLAY	UNIT	COMMENTS
8.49 - 11.08	Wind Speed	m/s	
5.40 - 8.49	AVG. WIND SPEED	CALM WINDS	
3.34 - 5.40	3.84 m/s	7.95%	
1.80 - 3.34	ORIENTATION	PLOT YEAR-DATE-TIME	PROJECT/PLOT NO.
0.51 - 1.80	Direction (blowing from)	1961 Jul 1 - Jul 31 Midnight - 11 PM	

WIND ROSE PLOT

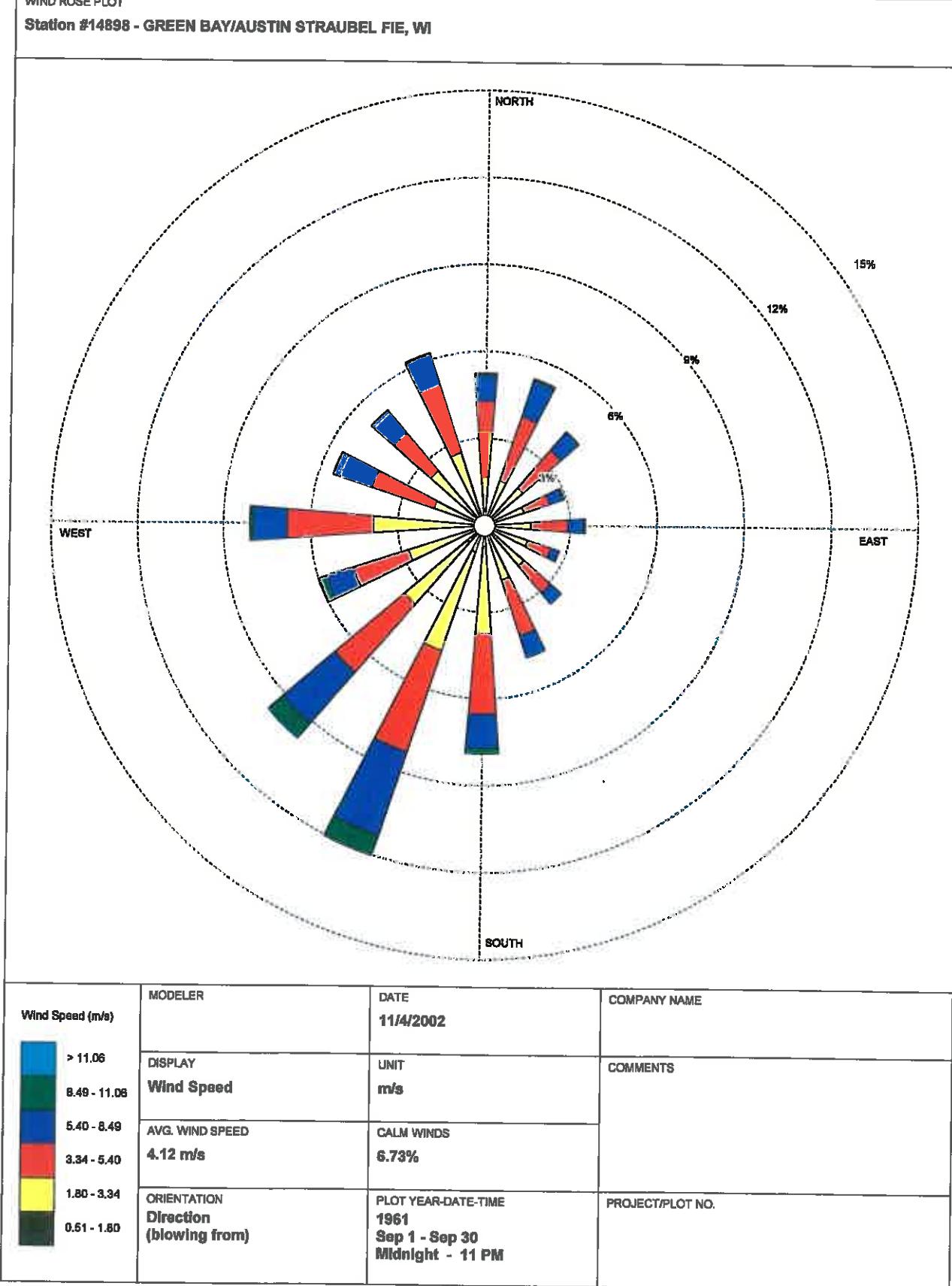
Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



Wind Speed (m/s)	MODELER	DATE	COMPANY NAME
> 11.06		11/4/2002	
8.49 - 11.06	DISPLAY	UNIT	COMMENT'S
5.40 - 8.49	Wind Speed	m/s	
3.34 - 5.40	AVG. WIND SPEED	CALM WINDS	
1.80 - 3.34	3.78 m/s	8.45%	
0.51 - 1.80	ORIENTATION	PLOT YEAR-DATE-TIME	PROJECT/ PLOT NO.
	Direction	1981	
	(blowing from)	Aug 1 - Aug 31	
		Midnight - 11 PM	

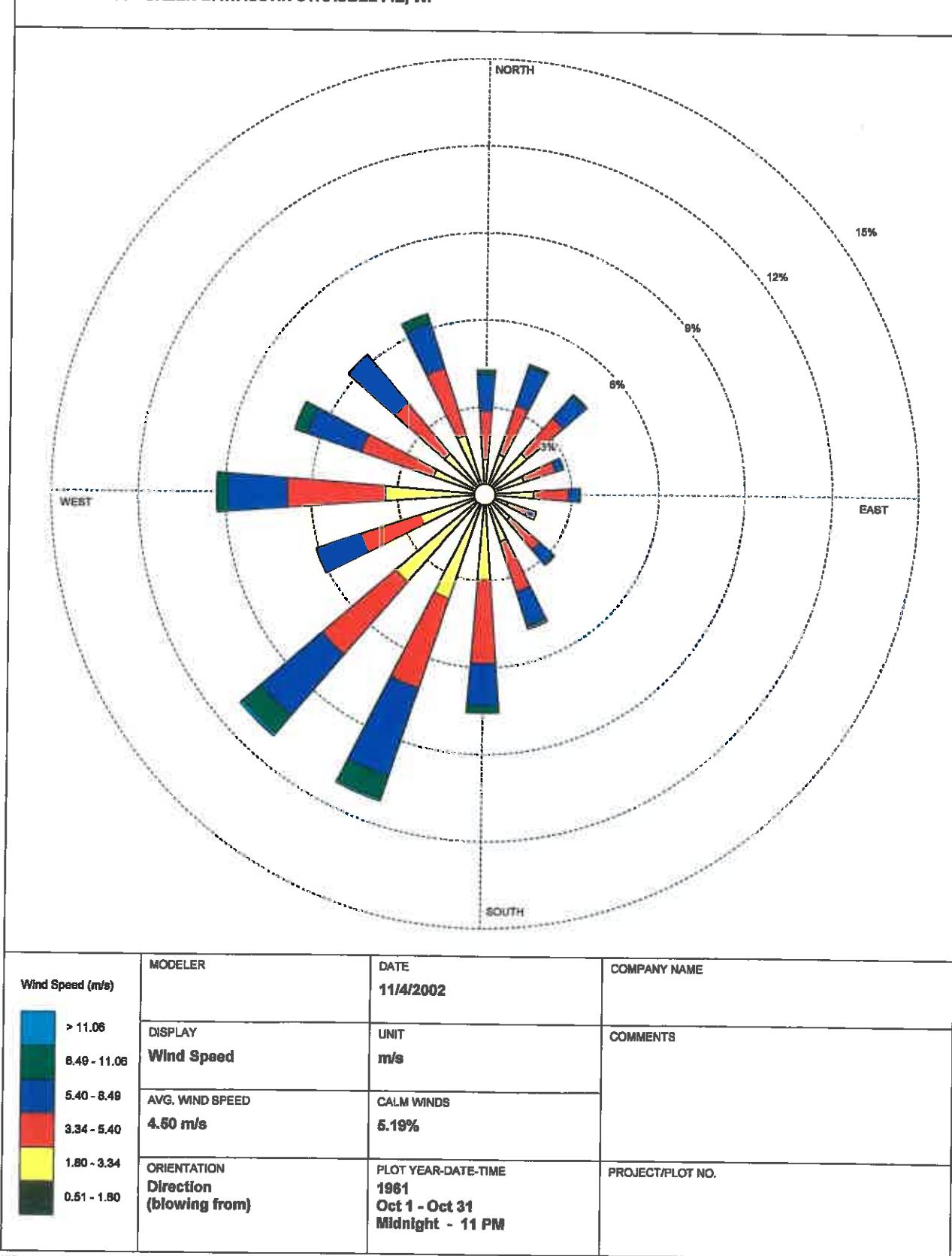
WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



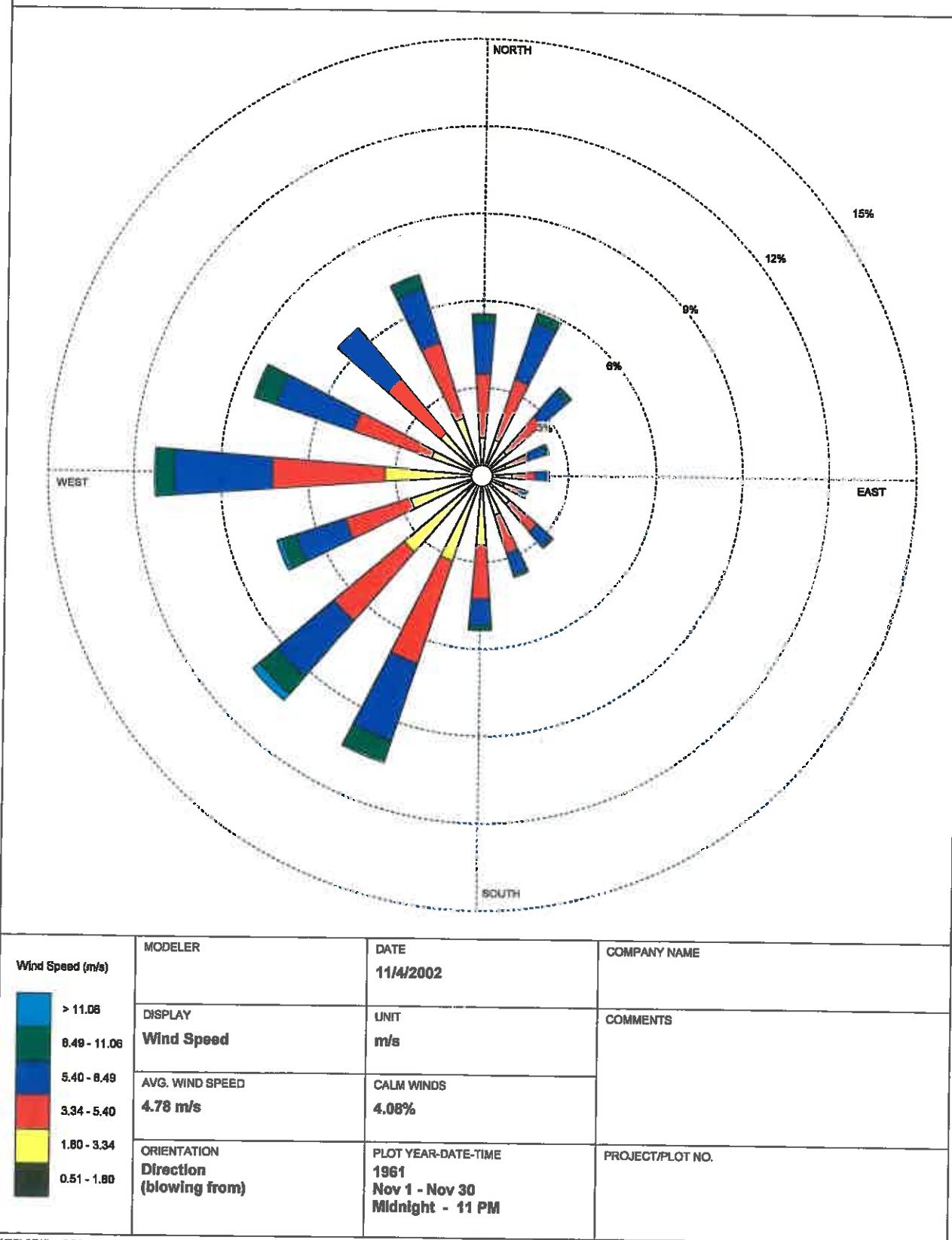
WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



Attachment 2
Dust and Litter Control Monitoring Form

Dust and Litter Control Monitoring Documentation
Outagamie County Landfill
Appleton, Wisconsin

Date: _____ Initials: _____

Dust or Litter Possible Yes _____ No _____	If No, Provide Rationale (e.g., rain, frozen, etc.)
---	---

Time	Activities Occurring	Dust (Y/N)	If yes, describe action taken to control dust or litter	Gal. Water Applied
AM				
PM				

Was Dust Suppressant Applied to Roads? Yes _____ No _____

If Yes, how much was applied: _____ approximate gallons? Road Description _____

Prewatered? Yes _____ No _____

Application Rate: _____ gal/yd² Applications _____

Were portable litter control devices used? Yes _____ No _____

Was an alternative landfill operations area used? Yes _____ No _____

General Comments

Attachment 3
Odor Monitoring Forms

Routine Odor Monitoring Form
Outagamie County Landfill
Appleton, WI

Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One) Comments Attached: Yes/No (Circle One)	

Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One) Comments Attached: Yes/No (Circle One)	

Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One) Comments Attached: Yes/No (Circle One)	

Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One) Comments Attached: Yes/No (Circle One)	

Odor Complaint Response Monitoring Form
Outagamie County Landfill
Appleton, WI

Complaint Location:		
Complaint Time/Date:		
Reported By (Name):		
Report Odor Description:		
Monitoring Date:	Cloud Cover/Precipitation:	
Air Temperature:	Monitor:	
Location: see attached Figure A		
Wind Direction:	Odor: Yes/No (Circle One)	
Odor Description (if applicable)		
Comments:		
WDNR Monitor Present: Yes/No (Circle One)	Comments Attached: Yes/No (Circle One)	

Complaint Location:		
Complaint Time/Date:		
Reported By (Name):		
Report Odor Description:		
Monitoring Date:	Cloud Cover/Precipitation:	
Air Temperature:	Monitor:	
Location: see attached Figure A		
Wind Direction:	Odor: Yes/No (Circle One)	
Odor Description (if applicable)		
Comments:		
WDNR Monitor Present: Yes/No (Circle One)	Comments Attached: Yes/No (Circle One)	

Complaint Location:		
Complaint Time/Date:		
Reported By (Name):		
Report Odor Description:		
Monitoring Date:	Cloud Cover/Precipitation:	
Air Temperature:	Monitor:	
Location: see attached Figure A		
Wind Direction:	Odor: Yes/No (Circle One)	
Odor Description (if applicable)		
Comments:		
WDNR Monitor Present: Yes/No (Circle One)	Comments Attached: Yes/No (Circle One)	

Attachment 2
USFWS – Cooperative Service Agreement

COOPERATIVE SERVICE AGREEMENT
between
OUTAGAMIE COUNTY RECYCLING AND SOLID WASTE DEPARTMENT
(OCRSWD)
and
UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)
WILDLIFE SERVICES (WS)

ARTICLE 1

The purpose of this Cooperative Service Agreement is to facilitate APHIS-WS providing OCRSWD with management of gulls to reduce human health and safety concerns at the landfill and adjacent landowners in Appleton, Wisconsin.

ARTICLE 2

APHIS-WS has statutory authority under the Act of March 2, 1931 (46 Stat. 1468; 7 USCA 8351-7 USCA 8352) as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 USCA 8353), to cooperate with States, local jurisdictions, individuals, public and private agencies, organizations, and institutions while conducting a program of wildlife services involving mammal and bird species that are reservoirs for zoonotic diseases, or animal species that are injurious and/or a nuisance to, among other things, agriculture, horticulture, forestry, animal husbandry, wildlife, and human health and safety.

ARTICLE 3

APHIS-WS and OCRSWD mutually agree:

1. The parties' authorized representatives who shall be responsible for carrying out the provisions of this Agreement shall be:

OCRSWD:

Brian Van Straten
Director, Recycling and Solid Waste
1419 Holland Road
Appleton, WI 54911
920-832-1521

APHIS-WS:

Daniel L. Hirschert
State Director
USDA, APHIS, Wildlife Services
732 Lois Drive

Sun Prairie, WI 53590
(608) 837-2727
(608) 837-6754 (fax)

2. To meet as determined necessary by either party to discuss mutual program interests, accomplishments, needs, technology, and procedures to maintain or amend the Work Plan (Attachment A). Personnel authorized to attend meetings under this Agreement shall be the OCRSWD director or his/her designee, the State Director (WS) and District Supervisor, or their designee, and/or those additional persons authorized and approved by the OCRSWD and the State Director.
3. APHIS-WS shall perform services more fully set forth in the Work Plan, which is attached hereto and made a part hereof. The parties may mutually agree in writing, at any time during the term of this Agreement, to amend, modify, add or delete services from the Work Plan.

ARTICLE 4

OCRSWD agrees:

1. To authorize APHIS-WS to conduct activities for the completion of the requested gull management project. These activities are defined in detail in the attached Work Plan. APHIS-WS will be considered an invitee on the lands controlled by OCRSWD. OCRSWD will be required to exercise reasonable care to warn APHIS-WS as to dangerous conditions or activities in the project areas.
2. To reimburse up to \$40,132 as specified in the attached Financial Plan (Attachment B) upon completion of this Cooperative Service Agreement for services agreed upon and specified in the Work Plan. APHIS-WS shall keep records and receipts of all reimbursable expenditures hereunder for a period of not less than one year from the date of completion of the services provided under this Agreement and OCRSWD shall have the right to inspect and audit such records. OCRSWD ensures and certifies that it is not currently debarred or suspended and is free of delinquent Federal debt.
3. To designate to APHIS-WS the OCRSWD authorized individual whose responsibility shall be the coordination and administration of OCRSWD activities conducted pursuant to this Agreement.
4. APHIS-WS shall be responsible for administration and supervision of the program.
5. All equipment purchased for the program is and will remain the property of APHIS-WS. There will be no equipment with a procurement price of \$5,000 or more per unit purchased directly with funds from the cooperators for use solely on this project.
6. To coordinate with APHIS-WS before responding to all media requests related to the project.

7. If required, to provide APHIS-WS personnel with badges/identification for travel in restricted areas.
8. To notify APHIS-WS verbally or in writing as far in advance as practical of the date and time of any proposed meeting related to the program.
9. Obtain all necessary Federal and State permits for take of migratory birds and list APHIS-WS personnel as designees. APHIS-WS will assist OCRSWD with the permit process.
10. To provide APHIS-WS office space with a lockable door and internet service. OCRSWD understands that firearms and pyrotechnics will be stored (following APHIS-WS Policies) in this office space and access will be limited.

ARTICLE 5

APHIS-WS Agrees:

1. To conduct activities at OCRSWD as described in the attached Work Plan and Financial Plan, and to provide all resources necessary for accomplishment of the program (except those items OCRSWD agrees to provide as specified in Article 4), including personnel, equipment, supplies, and other support materials.
2. Designate to OCRSWD the authorized APHIS-WS individual who shall be responsible for the joint administration of the activities conducted pursuant to this Agreement.
3. To make all local law enforcement and Department of Natural Resources contacts as to planned activities for the project.
4. To consult with OCRSWD prior to issuing any news release, advertisement, or literature of any kind or permitting the issuance of any news release, advertisement, or literature of any kind which refers to OCRSWD or the services performed under this Agreement. APHIS-WS shall not issue any such release, advertisement, or literature without the express prior written approval of the OCRSWD director or his/her designee.
5. OCRSWD shall have the right to use or permit the use of all estimates, reports, records, data, charts, documents, models, designs, renderings, drawings, specifications, computations and other papers of any type whatsoever, whether in the form of writing, figures, or delineations, or any ideas or methods represented by them, which are prepared or compiled in connection with this Agreement, for any purpose and at any time without other compensation than that specifically provided herein.

ARTICLE 6

This Agreement is contingent upon the passage by Congress of an appropriation from which expenditures may be legally met and shall not obligate APHIS upon failure of Congress to so appropriate. This Agreement may also be reduced or terminated if Congress only provides APHIS funds for a finite period under a Continuing Resolution.

ARTICLE 7

APHIS assumes no liability for any actions or activities conducted under this Cooperative Service Agreement except to the extent that recourse or remedies are provided by Congress under the Federal Tort Claims Act (28 U.S.C. 1346(b), 2401(b), and 2671-2680).

ARTICLE 8

Pursuant to Section 22, Title 41, United States Code, no member of or delegate to Congress shall be admitted to any share or part of this Agreement or to any benefit to arise there from.

ARTICLE 9

All activities will be conducted in accordance with all applicable Federal, State and local laws, rules, and regulations. Nothing in this Agreement shall prevent APHIS-WS from entering into separate agreements with any other organization or individual for the purpose of providing wildlife damage management services exclusive of those provided for under this agreement.

ARTICLE 10

OCRSWD certifies that APHIS-WS has advised the OCRSWD that there may be private sector service providers available to provide wildlife management services that the OCRSWD is seeking from APHIS-WS.

ARTICLE 11

The performance of wildlife damage management actions by APHIS-WS under this agreement is contingent upon a determination by APHIS-WS that such actions are in compliance with the National Environmental Policy Act, Endangered Species Act, and any other applicable federal statutes. APHIS-WS will not make a final decision to conduct requested wildlife damage management actions until it has made the determination of such compliance.

ARTICLE 12

This Cooperative Service Agreement may be amended at any time by mutual agreement of the parties in writing. Also, this Agreement may be terminated at any time by mutual agreement of the parties in writing, or by one party provided that party notifies the other in writing at least 120 days prior to effecting such action. The length of notice for unilateral termination may be longer or shorter if necessary. Further, in the event OCRSWD does not provide necessary funds, APHIS-WS is relieved of the obligation to provide services under this agreement.

In accordance with the Debt Collection Improvement Act of 1996, the Department of Treasury requires a **Taxpayer Identification Number** for individuals or businesses conducting business with the agency.

OCRSWD Taxpayer Identification Number (TIN): 39-6005724

OCRSWD:

BY:  11-20-18
Brian Van Straten Date
Director, Recycling and Solid Waste
1419 Holland Road
Appleton, Wisconsin 54911
920-832-1521

**UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
WILDLIFE SERVICES**

APHIS-WS Taxpayer Identification Number (TIN): 41-0696271

BY: **DANIEL HIRCHERT** Digitally signed by DANIEL HIRCHERT
ON 11-1-2018 at U.S. Government, via Department of Agriculture.
ID=DANIEL.HIRCHERT.092743 18700320100 1.1-12021803794298
Date:2018-10-21 11:56:12 -05'00' 11-1-2018
Daniel L. Hirschert, State Director Date
USDA, APHIS, WS
732 Lois Drive
Sun Prairie, WI 53590

BY: 
Willie D. Harris 11-1-2018
Director, Eastern Region Date
USDA, APHIS, WS
920 Main Campus Drive; Suite 200
Raleigh, NC 27606

ATTACHMENT A WORK PLAN

Introduction

The U.S. Department of Agriculture (USDA), Wildlife Services (WS) program has statutory authority under the Act of March 2, 1931 (46 Stat. 1468; 7 USCA 8351-7 USCA 8352) as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 USCA 8353), to cooperate with States, local jurisdictions, individuals, public and private agencies, organizations, and institutions while conducting a program of wildlife services involving mammal and bird species that are reservoirs for zoonotic diseases, or animal species that are injurious and/or a nuisance to, among other things, agriculture, horticulture, forestry, animal husbandry, wildlife, and human health and safety.

The WS program uses an Integrated Wildlife Damage Management (IWDM) approach (sometimes referred to as IPM or "Integrated Pest Management") in which a series of methods may be used or recommended to reduce wildlife damage. IWDM is described in Chapter 1, 1-7 of the Animal Damage Control Program Final Environmental Impact Statement (USDA, 1994). These methods include the alteration of cultural practices as well as habitat and behavioral modification to prevent damage. However, controlling wildlife damage may require that the offending animal(s) are killed or that the populations of the offending species be reduced.

Purpose

Ring-billed, Herring Gulls, and European Starlings pose unacceptable negative impacts to human health and safety on OCRSWD properties (County Landfill) due to gulls and starlings causing the potential for disease transmission and distributing waste off landfill property. Feeding and loafing gulls and starlings can transport landfill waste off property increasing maintenance costs and public sentiment towards the landfill. In addition, the landfill is required to adhere to DNR regulations and waste taken off site may involve the landfill in litigation and/or fines.

White-tailed deer on the Outagamie County Landfill property are becoming overly abundant, damaging planted trees and vegetation, creating the potential of foraging through waste, tampering with environmental collection systems such as landfill liners, gas wells, storm water/leachate systems, windscreens/litter control fencing, and pose a risk to vehicle traffic on site and along adjacent roadways, including I-41.

Results or Benefits Expected

APHIS-WS will provide the OCRSWD with a gull management program at the County Landfill from April – November. If longer time periods or additional visits are requested, the Financial Plan of this agreement may need to be amended. Results should be realized immediately based on experiences at other landfills in WI and previous years at OCRSWD. OCRSWD understands that APHIS-WS will do everything possible to keep gulls off the landfill; however, it is likely that gulls will continue to use the site when management actions are not being employed. Based on experiences in 2012 – 2018, it is recommended that

landfill personnel continue to harass gulls when APHIS-WS is not on site. Failure to continue harassment efforts by landfill personnel may result in benefits only realized when APHIS-WS is on site. Additionally, OCRSWD understands that harassed gulls may use properties adjacent to or in close proximity to the landfill, resulting in complaints from those property owners/managers.

APHIS-WS may provide the OCRSWD with a starling pesticide management program at the County Landfill as needed during the fall, winter, and spring months when starlings congregate in larger numbers. Results should be realized immediately the day after pesticide treatment.

APHIS-WS may also conduct deer depopulation through the use of trained marksman as requested by OCRSWD when deer begin damaging landscaping plants and/or car/deer collisions become hazardous on nearby roads.

Planned USDA, APHIS, Wildlife Services Activities

APHIS-WS will harass gulls with pyrotechnics, propane cannons, vehicles, and other harassment devices for approximately two-three hours per visit and two or three visits per week from April – July to prevent gulls using the landfill. From August – November, APHIS-WS will increase harassment efforts to no more than five hours per visit and no more than five visits per week. Lethal actions may also be used to reinforce harassment methods and also if harassment methods become less successful. Lethal removal will occur under authority of a USFWS Depredation permit issued to OCRSWD. APHIS-WS will dispose of gulls in accordance with federal requirements. APHIS-WS will comply with all necessary recordkeeping requirements, including compliance with the National Environmental Policy Act. APHIS-WS will coordinate gull management with the Director of Solid Waste or their designee. Dates of gull management will occur from April 1 – December 31, 2019, or as agreed.

Starlings may be managed during the winter months with a lethal pesticide application using Compound DRC-1339 (EPA #56228-63) to remove starlings roosting and feeding at the landfill. Bait will be supplied by APHIS-WS for application by the OCRSWD personnel to habituate starlings to the feed (enticement). Once starlings are consuming the bait on a regular basis, APHIS-WS will pre-bait the day prior to the pesticide application, and will apply the pesticide-treated bait according to label instructions. The pesticide-treated bait will only be applied for a one (1) day period and all remaining pesticide-treated bait will be removed on the same day of application. APHIS-WS will return the day immediately following treatment to remove any dead birds on site and in close proximity to the application site. Dates of management may occur from January 1 – December 31, 2019, or as agreed.

APHIS-WS may also conduct deer depopulation through the use of trained marksman as requested by OCRSWD. APHIS-WS will place stands and bait sites at approved locations and attempt to remove deer with suppressed center-fire rifles, under the authority of a nuisance wild animal permit issued by the Wisconsin DNR to the landfill. Shooting will primarily take place in late afternoon or evenings, unless it is determined that another time period would be more effective. Female deer will be targeted over males. APHIS-WS will

comply with all necessary recordkeeping requirements, including compliance with the National Environmental Policy Act. Deer will be donated to a local food pantry. Dates of management may occur from January 1 – December 31, 2019, or as agreed.

As part of this agreement, APHIS-WS will provide pyrotechnics training to landfill staff. In addition, APHIS-WS will supply pyrotechnics as necessary to the landfill. An ATF-compliant storage box was provided in 2013.

Reports

APHIS-WS will prepare a final report which will include a summary of weekly/monthly gull management activities conducted under this Cooperative Service Agreement. Starling and deer removal data will be provided as needed or requested.

Effective Dates

The cooperative agreement shall be effective from January 1 – December 31, 2019. These dates do not reflect the date's management will take place.

**ATTACHMENT B
FINANCIAL PLAN**

Personnel Costs	\$22,282
Supplies	\$ 6,348
Equipment	\$ 0
Vehicle Use	<u>\$ 2,933</u>
Subtotal (Direct Costs)	\$31,563
 Pooled Job Costs	\$ 3,472
Indirect Costs	<u>\$ 5,097</u>
 TOTAL	\$40,132

The distribution of the budget from this Financial Plan may vary as necessary to accomplish the purpose of this agreement, but may not exceed \$40,132.

Financial Point of Contact

OCRSWD:

Brian Van Straten, Director, Recycling and Solid Waste

(920) 832-1521

APHIS, WS:

Donna Evans, Budget Analyst

(608) 837-2727

Attachment 3
Annual Bird Harassment Summaries



January 28, 2013

United States
Department of
Agriculture

Animal and
Plant Health
Inspection
Service

Wildlife Services
1201 Storbeck Drive
Waupun, WI 53963
Phone: 920-324-4514
Fax: 920-324-5367

Philip P. Stecker
Director of Solid Waste
1419 Holland Road
Appleton, WI 54911

Mr. Stecker:

Re: Outagamie County Landfill Gull Harassment Summary – 2012

Included is a summary of our gull harassment activities at the Outagamie County Landfill from September 18 – December 28, 2012. USDA, APHIS, Wildlife Services (WS) made 29 visits and harassed an estimated 159,500 gulls using 791 pyrotechnics (Table 1). WS also removed 109 gulls (50 Ring-billed and 59 Herring Gulls) (Table 1). The number of Herring and Ring-billed Gulls removed should be reported on the Outagamie County Landfill's Federal Depredation Permit 2012 annual report to the U.S. Fish and Wildlife Service. If Outagamie County employees removed additional birds under your Federal Depredation Permit, be sure to also report those birds on your permit annual report.

Table 1. Number of gulls harassed, pyrotechnics used, and gulls shot by USDA, APHIS, Wildlife Services at the Outagamie County Landfill from September – December 2012.

Month	Date	# Gulls ¹	# Pyros used	# Gulls shot
September	9/18/2012	10,000	31	0
	9/20/2012	10,000	35	7
	9/25/2012	10,000	23	2
	9/27/2012	9,500	24	6
October	10/2/2012	10,000	37	11
	10/4/2012	9,000	16	6
	10/10/2012	8,500	41	15
	10/12/2012	10,000	25	6
	10/16/2012	8,000	26	0
	10/18/2012	6,500	15	0
	10/23/2012	4,000	16	0
	10/25/2012	4,500	23	10
	10/30/2012	4,500	20	2
	November	11/1/2012	4,000	29
	11/6/2012	4,000	19	9
	11/8/2012	3,500	26	6
	11/13/2012	4,000	19	4
	11/15/2012	2,500	21	0
	11/20/2012	4,000	44	0
	11/27/2012	4,000	41	3
	11/29/2012	4,000	31	0
	December	12/4/2012	3,000	26
	12/6/2012	4,000	25	5
	12/11/2012	4,000	37	5
	12/14/2012	3,000	17	3
	12/18/2012	4,000	24	0



Safeguarding American Agriculture

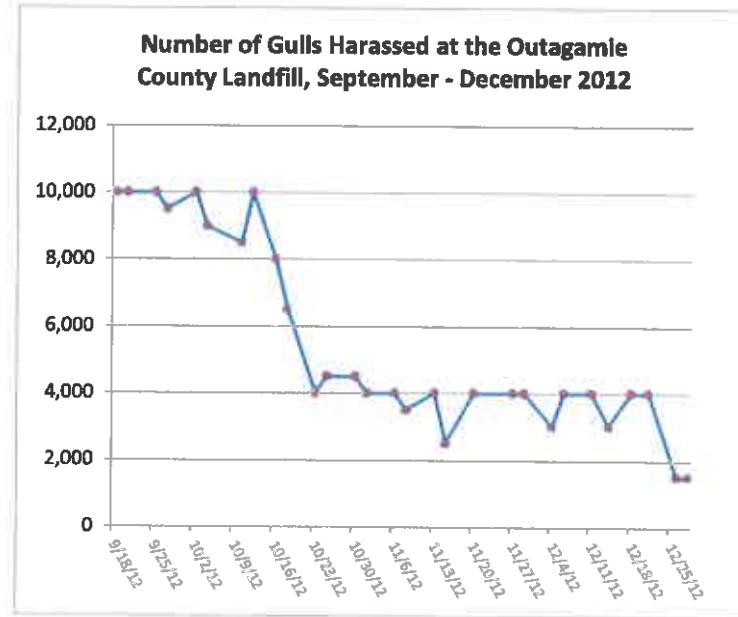
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Federal Relay Service
(Voice/TTY/ASCI/Spanish)
1-800-877-8339

12/21/2012	4,000	29	0
12/26/2012	1,500	46	0
12/28/2012	1,500	25	0
Total	159,500	791	109

¹ – Peak number of birds observed during the day, actual amount harassed varied throughout the day.

Harassment efforts took place twice a week for three hours during each visit as previously arranged with the landfill. Scarey Man® effigies were initially placed on the maintenance building and recycling sorting building. After several weeks of harassment, WS noticed gulls loafing on the county building and moved the Scarey Man® effigy from the maintenance building to the county building. Harassment efforts reinforced with occasional lethal removal of gulls helped keep the number of gulls down for the remainder of that day during our visits. However, the effectiveness in keeping gulls away from the landfill and surrounding properties and a reduction in the number of gulls visiting the landfill daily for the remainder of the fall was not noticed. The reduction in the number of gulls harassed during visits shown in the graph is most likely attributed to winter migration of gulls south. Cannons deployed by the landfill worked infrequently and were seldom moved around. Scarey Man® effigies were effective in preventing gulls from loafing on roof tops. With WS presence only for three hours two days a week, it is difficult to prevent gulls from utilizing a large attractant such as the Outagamie County Landfill. However, the presence of the effigies, use of pyrotechnics, and an occasional lethal removal appears to have at least kept the population of gulls on site to a lower number than what may be expected if no harassment took place. Additionally, gulls were kept off of buildings where effigies were used, reducing damage and fecal buildup at these locations.



To improve effectiveness of harassment efforts, WS recommends installation of several 15-20 foot poles adjacent to the landfill to allow for placement of gull effigies. It may also be necessary to increase the frequency and length of time of harassment visits. On several occasions we noticed gulls loafing on the trash/transfer building. An additional Scarey Man® effigy placed on the trash/transfer building should help reduce the locations where gulls can loaf and rest on the landfill.

Please feel free to contact me with any questions you may have or if you are interested in having WS provide additional assistance to the Outagamie County Landfill.

Sincerely,

Charles D. Lovell

Charles D. Lovell
District Supervisor/Certified Wildlife Biologist®



United States
Department of
Agriculture

Animal and
Plant Health
Inspection
Service

Wildlife Services
1201 Starbeck Drive
Waupun, WI 53963
Phone: 920-324-4514
Fax: 920-324-5367

January 6, 2014

Philip P. Stecker
Director of Solid Waste
1419 Holland Road
Appleton, WI 54911

Re: Outagamie County Landfill Gull Harassment Summary – 2013

Mr. Stecker:

Included is a summary of our gull harassment activities at the Outagamie County Landfill from April 1 – November 27, 2013. USDA, APHIS, Wildlife Services (WS) made 101 visits and harassed an estimated 256,720 gulls using 3,845 pyrotechnics (Table 1). WS also removed 407 gulls (263 Ring-billed and 144 Herring Gulls) (Table 1). The number of Herring and Ring-billed Gulls removed will be reported on the Outagamie County Landfill's Federal Depredation Permit 2013 annual report to the U.S. Fish and Wildlife Service. If Outagamie County employees removed additional birds under your Federal Depredation Permit, please be sure to let me know.

Table 1. Number of gulls harassed, pyrotechnics used, and gulls shot by USDA, APHIS, Wildlife Services at the Outagamie County Landfill in 2012 and 2013.

Month	Ave. # gulls harassed		# pyros used		# gulls shot	
	2012	2013	2012	2013	2012	2013
April		37,100		413		54
May		23,300		321		71
June		6,600		231		37
July		8,320		267		53
August		41,400		896		80
September	39,500	48,750	113	795	15	25
October	65,000	66,000	219	499	50	54
November	30,000	25,250	230	423	31	33
December	25,000		229		13	
Total	159,500	256,720	791	3,845	109	407

Harassment efforts took place three times a week for three hours during each visit as previously arranged with the landfill. A gull effigy was hung from a pole near the active landfill site on August 7th when gull activity at the landfill increased considerably. A Scarey Man® effigy also was placed on the landfill main office building on August 16th to prevent gulls from roosting on this building. WS harassed a daily average of 2,542 gulls throughout the year a significant decrease from 2012 where a daily average of 5,500 gulls was harassed. However, the number of gulls present on the landfill was much lower from April – August. In August, gulls had completed nesting and raising young. Those adults and young were noticed in the increases of gull use at the landfill during this time. Harassment efforts reinforced with occasional lethal removal of gulls helped keep the number of gulls down for the remainder of that day during our visits. However, the



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1-800-877-8339

effectiveness in keeping gulls away from the landfill and surrounding properties and a reduction in the number of gulls visiting the landfill daily for the remainder of the fall was less noticeable. The reduction in the number of gulls harassed during visits shown in the graph in the fall is most likely attributed to winter migration of gulls south. Harassment efforts and the Scarey Man® effigy were effective in preventing gulls from loafing on roof tops. With WS presence only

for three hours three days a week, it is difficult to prevent gulls from utilizing a large attractant such as the Outagamie County Landfill. However, the presence of the effigy, use of pyrotechnics, and an occasional lethal removal appears to have at least kept the population of gulls on site to a lower number than what may be expected if no harassment took place as observed when comparing 2012 and 2013 harassment numbers. Additionally, gulls were kept off of buildings where effigies were used, reducing damage and fecal buildup at these locations.

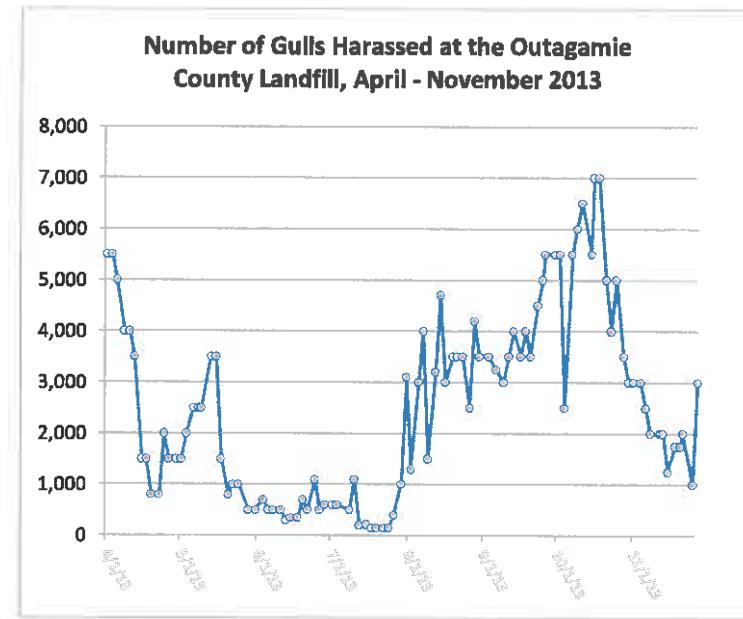
To improve effectiveness of harassment efforts, WS recommends installation of several 15-20 foot poles adjacent to the landfill to allow for placement of gull effigies near the active landfill sites. Although harassment efforts were effective when WS was on site, gulls returned to the landfill when harassment efforts did not occur. To keep the daily average number of gulls at the landfill at a much lower level it may be necessary to increase the frequency and length of time of harassment visits.

Please feel free to contact me with any questions you may have or if you are interested in having WS provide additional assistance to the Outagamie County Landfill.

Sincerely,

Charles D. Lovell

Charles D. Lovell
District Supervisor/Certified Wildlife Biologist®





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January 13, 2015

Brian Van Straten
Director of Solid Waste
1419 Holland Road
Appleton, WI 54911

Re: Outagamie County Landfill Gull Harassment Summary – 2014

Mr. Van Straten:

Included is a summary of our gull harassment activities at the Outagamie County Landfill from April 1 – December 19, 2014. USDA, APHIS, Wildlife Services (WS) made 100 visits and harassed an estimated 296,530 gulls using 5,934 pyrotechnics (Table 1). WS also removed 422 gulls (151 Ring-billed and 271 Herring Gulls) (Table 1). The number of Herring and Ring-billed Gulls removed will be reported on the Outagamie County Landfill's Federal Depredation Permit 2014 annual report to the U.S. Fish and Wildlife Service. If Outagamie County employees removed additional birds under your Federal Depredation Permit, please be sure to let me know.

Table 1. Number of gulls harassed, pyrotechnics used, and gulls shot by USDA, APHIS, Wildlife Services at the Outagamie County Landfill in 2012, 2013, and 2014.

Month	# gulls harassed			# pyros used			# gulls shot		
	2012	2013	2014	2012	2013	2014	2012	2013	2014
April		37,100	51,000		413	430		54	28
May		23,300	16,950		321	280		71	0
June		6,600	1,425		231	103		37	0
July		8,320	22,350		267	273		53	17
August		41,400	62,900		896	1,122		80	40
September	39,500	48,750	80,100	113	795	1,399	15	25	144
October	65,000	66,000	37,475	219	499	1,552	50	54	125
November	30,000	25,250	22,600	230	423	644	31	33	55
December	25,000		1,730	229			131	13	13
Total	159,500	256,720	296,530	791	3,845	5,934	109	407	422

Harassment efforts took place twice a week for three hours from April – July and in December and four times a week for four hours from August - November. A Scarey Man® effigy also was placed on the landfill main office building on August 16th to prevent gulls from roosting on this building. WS harassed a daily average of 2,965 gulls throughout the year, a significant decrease from 2012 where a daily average of 5,500 gulls was harassed. Although the total number of gulls harassed in 2014 was more than previous years, the frequency on site in 2014 was higher than 2012 or 2013. May, June, July, November, and December saw the lowest average number of gulls per day. In August, gulls had completed nesting and raising young. Those adults and young were noticed in the increases of gull use at the landfill during this time. Harassment efforts reinforced with occasional lethal removal of gulls helped keep the number of gulls down for the remainder of that day during our visits. However, the effectiveness in keeping gulls away from the landfill and surrounding properties and a reduction in the number of gulls visiting the landfill daily for the remainder of the fall was less noticeable. The reduction in the number of gulls harassed during visits shown in the graph in the fall is most likely attributed to winter migration.



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Harassment efforts and the Scarey Man® effigy were effective in preventing gulls from loafing on roof tops. With WS presence only for three to four hours two to four days a week, it is difficult to prevent gulls from utilizing a large attractant such as the Outagamie County Landfill. However, the presence of the effigy, use of pyrotechnics, and an occasional lethal removal appears to have at least kept the population of gulls on site to a lower number than what may be expected if no harassment took place as observed when comparing 2012 and 2013 harassment numbers.

Additionally, gulls were kept off of buildings where effigies were used, reducing damage and fecal buildup at these locations.

To improve effectiveness of harassment efforts, WS recommends installation of several 15-20 foot poles adjacent to the landfill to allow for placement of gull effigies near the active landfill sites. Although harassment efforts were effective when WS was on site, gulls returned to the landfill when harassment efforts did not occur. To keep the daily average number of gulls at the landfill at a much lower level it may be necessary to increase the frequency and length of time of harassment visits.

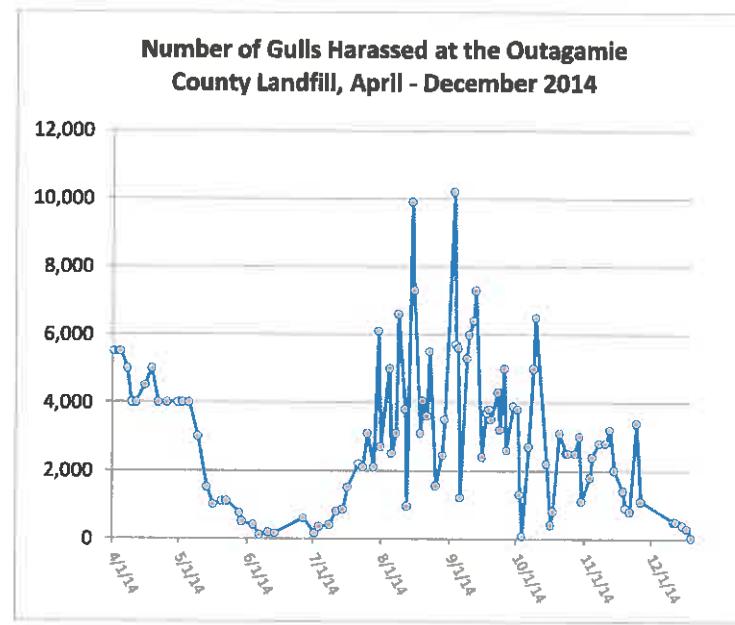
WS is also aware of several complaints (noise and number of gulls on private property in close proximity to the landfill). It would be difficult to reduce the noise and use of pyrotechnics due to the effectiveness of these harassment tools. However, WS did switch to using mostly screamers instead of bangers to reduce noise. Additionally, WS avoided launching pyrotechnics on the northern most area of the landfill. WS did notice a large number of gulls using private property (i.e., soccer fields to SW and agricultural fields and buildings to the N). WS is available to assist those private property owners with harassment of gulls. If the landfill would allow, WS could implement harassment activities on these private locations without an increase in cost for services under the current agreement.

Please feel free to contact me with any questions you may have or if you are interested in having WS provide additional assistance to the Outagamie County Landfill.

Sincerely,

Charles D. Lovell

Charles D. Lovell
District Supervisor/Certified Wildlife Biologist®





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January 11, 2016

Brian Van Straten
Director of Solid Waste
1419 Holland Road
Appleton, WI 54911

Re: Outagamie County Landfill Gull Harassment Summary – 2015

Mr. Van Straten:

Included is a summary of our gull harassment activities at the Outagamie County Landfill from April 1 – December 18, 2015. USDA, APHIS, Wildlife Services (WS) made 127 visits and harassed an estimated 110,570 gulls using 5,531 pyrotechnics (Table 1). WS also removed 577 gulls (382 Ring-billed and 195 Herring Gulls) (Table 1). The number of Herring and Ring-billed Gulls removed will be reported on the Outagamie County Landfill's Federal Depredation Permit 2015 annual report to the U.S. Fish and Wildlife Service. If Outagamie County employees removed additional birds under your Federal Depredation Permit, please be sure to let us know.

Table 1. Number of gulls harassed, pyrotechnics used, and gulls shot by USDA, APHIS, Wildlife Services at the Outagamie County Landfill in 2013, 2014, and 2015.

Month	# gulls harassed			# pyros used			# gulls shot		
	2013	2014	2015	2013	2014	2015	2013	2014	2015
April	37,100	51,000	18,545	413	430	276	54	28	17
May	23,300	16,950	2,340	321	280	174	71	0	19
June	6,600	1,425	10,135	231	103	388	37	0	27
July	8,320	22,350	24,475	267	273	611	53	17	227
August	41,400	62,900	23,590	896	1,122	1,401	80	40	140
September	48,750	80,100	16,130	795	1,399	1,006	25	144	47
October	66,000	37,475	10,265	499	1,552	939	54	125	91
November	25,250	22,600	2,920	423	644	467	33	55	7
December		1,730	2,170		131	269		13	2
Total	256,720	296,530	110,570	3,845	5,934	5,531	407	422	577

Harassment efforts took place three times a week for three hours from April – July and in December and five times a week for five hours from August - November. A Scary Man® effigy also was placed on the landfill main office building on July 6th to prevent gulls from roosting on this building. WS harassed a daily average of 871 gulls throughout the year, a significant decrease from 2014 where a daily average of 2,965 gulls were harassed. The total number of gulls harassed in 2015 was significantly less than previous years. May and October – December saw the lowest average number of gulls per day. In July, gulls had completed nesting and raising young. Those adults and young were noticed in the increases of gull use at the landfill during this time. Harassment efforts reinforced with occasional lethal removal of gulls helped keep the number of gulls down for the remainder of that day during our visits. The effectiveness in keeping gulls away from the landfill and surrounding properties and a reduction in the number of gulls visiting the landfill daily for the remainder of the fall was also noticeable in 2015, which is different from previous years. The increase in gulls harassed in September is likely a result of migration; however, continued harassment efforts quickly reduced the presence of gulls at the landfill. Harassment efforts and the Scary Man® effigy were effective in preventing gulls from loafing on roof tops. It is difficult to prevent gulls from utilizing a large attractant such as the



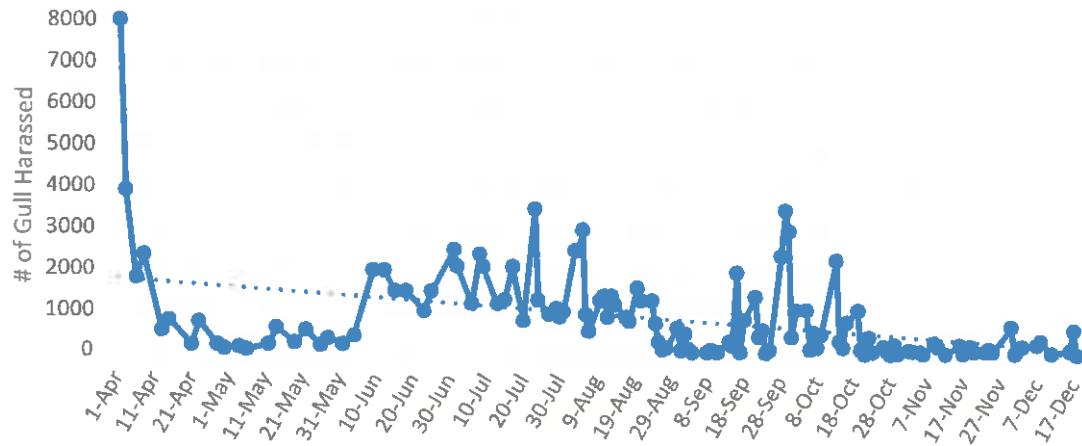
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Outagamie County Landfill. However, with an increase in days and time spent at the landfill, the presence of the effigy, use of pyrotechnics and propane exploders, and an occasional lethal removal appears to have at least kept the population of gulls on site to a lower number than what may be expected if no harassment took place and lower than previous years. Additionally, gulls were kept off of buildings where effigies were used, reducing damage and fecal buildup at these locations.

Number of Gulls Harassed at the Outagamie County Landfill, April - December 2015



Although harassment efforts were effective when WS was on site, gulls returned to the landfill when harassment efforts did not occur. To keep the daily average number of gulls at the landfill at a much lower level it may be necessary to increase the frequency and length of time of harassment visits.

WS is also aware of several complaints (noise and number of gulls on private property in close proximity to the landfill). It would be difficult to reduce the noise and use of pyrotechnics due to the effectiveness of these harassment tools. However, WS did use more screamers instead of bangers to reduce noise. Additionally when launching pyrotechnics, WS directed them primarily to the west or southwest when using them in the eastern most area of the landfill. WS did notice a large number of gulls using private property (i.e., soccer fields to NW and agricultural fields and buildings to the N and E).

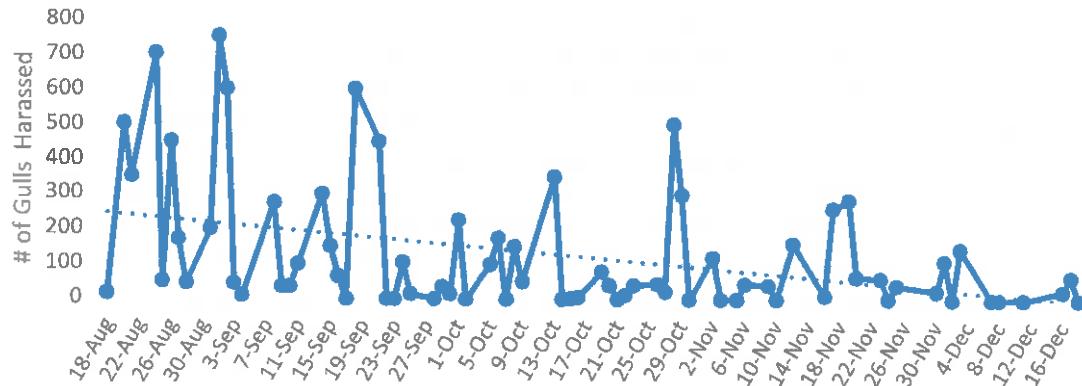
A large number of the gulls that were harassed from the landfill chose to rest/loaf at the USA Youth Sports Complex to the northwest of the landfill across I-41. The droppings and feathers that accumulated on the soccer fields was excessive and there were health concerns from those who used the fields. At the request of the landfill, WS began harassment efforts on August 18th. Harassment of gulls from the soccer fields occurred for approximately one hour throughout the day concurrently with harassment at the landfill. Harassment included use of pyrotechnics (screamers only) and a Scary Man®. The Scary Man® was placed on site at the beginning of the day and removed at the end of each day of harassment. We did not leave the Scary Man® in place overnight for fear of it being stolen. WS made 75 visits and harassed an estimated 9,623 gulls using 265 pyrotechnics (Table 2). Due to safety and proximity to homes, lethal methods were not employed at the USA Youth Sports Complex.

Table 2. Number of gulls harassed, average harassed per month, and pyrotechnics used by USDA, APHIS, Wildlife Services at the USA Youth Sports Complex in 2015.

Month	# gulls harassed	Average # of gulls harassed per month	# pyros used
August	2,480	276	55
September	3,584	171	84
October	2,099	100	69
November	1,115	74	44
December	345	38	13
Total	9,623	128	265

As the graph below shows, there were daily fluctuations in the number of gulls harassed from August – December at the USA Youth Sports Complex. However, the average number of gulls harassed each month declined from 276 in August to 38 in December (Table 2).

Number of Gulls Harassed at USA Youth Sports Complex,
August - December 2015



The increase in days and time spent in 2015 proved more effective than previous years at keeping the number of gulls using the Outagamie County Landfill to a consistently lower number during the time WS was providing management. We did not see a huge increase in the summer and the fall as previous years. WS recommends harassment efforts for 2016 mirror the 2015 efforts, including harassment at the USA Youth Sports Complex. It would also be beneficial if the local businesses where gulls loaf to also incorporate harassment at their sites to improve effectiveness in keeping gulls away from the overall area.

Please feel free to contact me with any questions you may have or if you are interested in having WS provide additional assistance to the Outagamie County Landfill.

Sincerely,

Charles D. Lovell

Charles D. Lovell
District Supervisor/Certified Wildlife Biologist®



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February 3, 2017

Brian Van Straten
Director of Solid Waste
1419 Holland Road
Appleton, WI 54911

Re: Outagamie County Landfill Gull Harassment Summary – 2016

Mr. Van Straten:

Included is a summary of our gull harassment activities at the Outagamie County Landfill from April 4 – December 7, 2016. USDA, APHIS, Wildlife Services (WS) made 120 visits and harassed an estimated 329,950 gulls using 6,383 pyrotechnics (Table 1). WS also removed 282 gulls (225 Ring-billed and 57 Herring Gulls) (Table 1). The number of Herring and Ring-billed Gulls removed will be reported on the Outagamie County Landfill's Federal Depredation Permit 2016 annual report to the U.S. Fish and Wildlife Service. If Outagamie County employees removed additional birds under your Federal Depredation Permit, please be sure to let us know.

Table 1. Number of gulls harassed, pyrotechnics used, and gulls shot by USDA, APHIS, Wildlife Services at the Outagamie County Landfill in 2014, 2015, and 2016.

Month	# gulls harassed			# pyros used			# gulls shot		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
April	51,000	18,545	48,000	430	276	625	28	17	23
May	16,950	2,340	13,450	280	174	449	0	19	20
June	1,425	10,135	11,900	103	388	456	0	27	26
July	22,350	24,475	22,400	273	611	607	17	227	26
August	62,900	23,590	51,400	1,122	1,401	1,049	40	140	18
September	80,100	16,130	75,000	1,399	1,006	1,034	144	47	64
October	37,475	10,265	72,500	1,552	939	1,159	125	91	64
November	22,600	2,920	31,500	644	467	859	55	7	32
December	1,730	2,170	3,800	131	269	145	13	2	9
Total	296,530	110,570	329,950	5,934	5,531	6,383	422	577	282

Harassment efforts took place three times a week for three hours from April – July and in December and five times a week for five hours from August - November. A Scary Man® effigy also was placed on the landfill main office building on May 6th to prevent gulls from roosting on this building. WS harassed a daily average of 2,750 gulls throughout the year, a significant increase from 2015 where a daily average of 871 gulls were harassed, but similar to 2013 and 2014. May – June and December saw the lowest average number of gulls per day. In July, gulls had completed nesting and raising young. Those adults and young were noticed in the increases of gull use at the landfill during this time. Harassment efforts reinforced with occasional lethal removal of gulls helped keep the number of gulls down for the remainder of that day during our visits. However, the effectiveness in keeping gulls away from the landfill and surrounding properties and a reduction in the number of gulls visiting the landfill daily for the remainder of the fall was less noticeable. The reduction in the number of gulls harassed in late October and November is most likely a combination of harassment and winter migration further south. The increase in gulls harassed in September and October is likely a result of migration; however, continued harassment efforts quickly reduced the presence of gulls at the landfill for that day. Harassment efforts and the Scary Man® effigy were effective in preventing gulls from loafing on



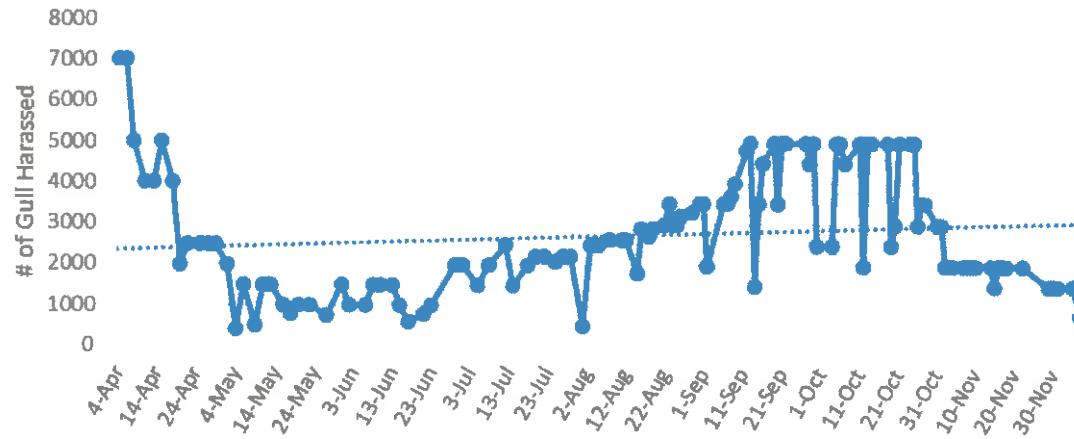
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roof tops. It is difficult to prevent gulls from utilizing a large attractant such as the Outagamie County Landfill. However, with an increase in days and time spent at the landfill, the presence of the effigy, use of pyrotechnics and propane exploders, and an occasional lethal removal, appears to have at least kept the population of gulls on site to a lower number than what may be expected if no harassment took place. Additionally, gulls were kept off of buildings where effigies were used, reducing damage and fecal buildup at these locations.

Number of Gulls Harassed at the Outagamie County Landfill,
April - December 2016



Although harassment efforts were effective when WS was on site, gulls returned to the landfill when harassment efforts did not occur. To keep the daily average number of gulls at the landfill at a much lower level it may be necessary to increase the frequency and length of time of harassment visits.

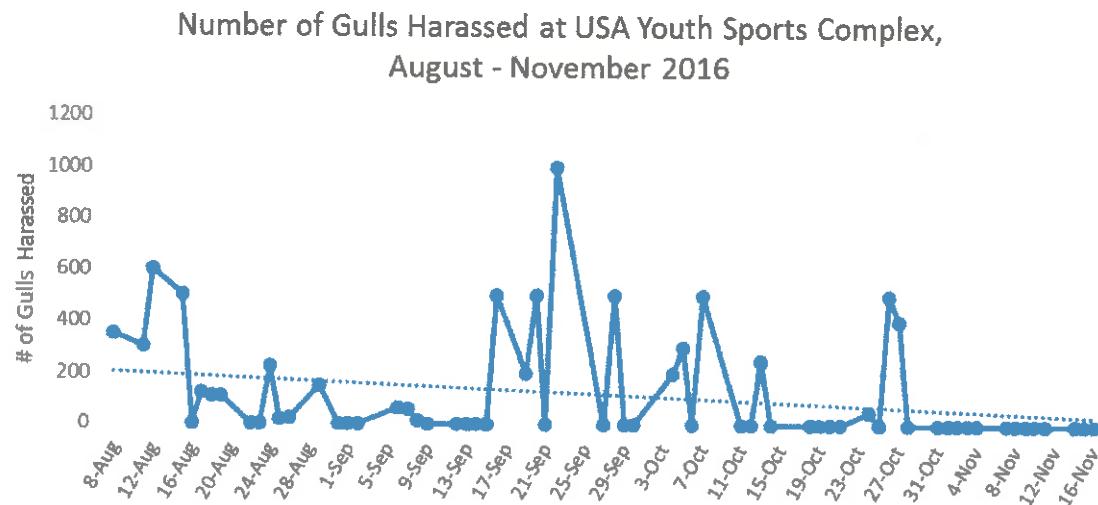
WS is also aware of several complaints (noise and number of gulls on private property in close proximity to the landfill) from previous years, but was not aware of any in 2016. It would be difficult to reduce the noise and use of pyrotechnics due to the effectiveness of these harassment tools. However, WS did use more screamers instead of bangers to reduce noise. Additionally when launching pyrotechnics, WS directed them primarily to the west or southwest when using them in the eastern most area of the landfill. During harassments efforts, WS did notice when the gulls were not at the landfill, they were loafing on private property (i.e., soccer fields to NW and agricultural fields and buildings to the N and E).

Occasionally, gulls that were harassed from the landfill chose to rest/loaf at the USA Youth Sports Complex to the northwest of the landfill across I-41. The droppings and feathers that accumulated on the soccer fields was excessive and there were health concerns from those who used the fields. At the request of the landfill, WS began harassment efforts on August 8th. Harassment of gulls from the soccer fields occurred for approximately one hour throughout the day concurrently with harassment at the landfill. Harassment included use of pyrotechnics (screamers only). WS made 64 visits and harassed an estimated 7,555 gulls using 81 pyrotechnics (Table 2). Due to safety and proximity to homes, lethal methods were not employed at the USA Youth Sports Complex. The number of gulls that used the Sports Complex was less in 2016 compared to 2015 (Table 2).

Table 2. Number of gulls harassed, average harassed per month, and pyrotechnics used by USDA, APHIS, Wildlife Services at the USA Youth Sports Complex in 2015 and 2016.

Month	# gulls harassed		Average # of gulls harassed/month		# pyros used	
	2015	2016	2015	2016	2015	2016
August	2,480	2,515	276	168	55	35
September	3,584	2,840	171	149	84	32
October	2,099	2,200	100	122	69	14
November	1,115	0	74	0	44	0
December	345	0	38	0	13	0
Total	9,623	7,555	128	118	265	81

As the graph below shows, there were daily fluctuations in the number of gulls harassed from August – October at the USA Youth Sports Complex with the most use in mid to late September and early October. Many days there were no gulls using the complex and there appeared to be no particular pattern to their use. However, the average number of gulls harassed each month declined from 168 in August to 0 in November and there were more than 2,000 less gulls using the Sports Complex in 2016 compared to 2015 (Table 2).



The days and time spent in 2016 proved as effective as previous years at keeping the number of gulls using the Outagamie County Landfill to a consistently lower number during the time WS was providing management. We did not see a huge increase in the summer and the fall was similar to previous years. WS recommends harassment efforts for 2017 mirror the 2016 efforts, including harassment at the USA Youth Sports Complex. It would also be beneficial if the local businesses where gulls loaf to also incorporate harassment at their sites to improve effectiveness in keeping gulls away from the overall area.

Please feel free to contact me with any questions you may have or if you are interested in having WS provide additional assistance to the Outagamie County Landfill.

Sincerely,

Charles D. Lovell
District Supervisor/Certified Wildlife Biologist[®]



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February 21, 2018

Brian Van Straten
Director of Solid Waste
1419 Holland Road
Appleton, WI 54911

Re: Outagamie County Landfill Gull Harassment Summary – 2017

Mr. Van Straten:

Included is a summary of our gull harassment activities at the Outagamie County Landfill from April 3 – November 30, 2017. USDA, APHIS, Wildlife Services (WS) made 115 visits and harassed an estimated 279,320 gulls using 4,260 pyrotechnics (Table 1). WS also removed 436 gulls (353 Ring-billed and 83 Herring Gulls) (Table 1). The number of Herring and Ring-billed Gulls removed will be reported on the Outagamie County Landfill's Federal Depredation Permit 2017 annual report to the U.S. Fish and Wildlife Service. If Outagamie County employees removed additional birds under your Federal Depredation Permit, please be sure to let us know.

Table 1. Number of gulls harassed, pyrotechnics used, and gulls shot by USDA, APHIS, Wildlife Services at the Outagamie County Landfill in 2015, 2016, and 2017.

Month	# gulls harassed			# pyros used			# gulls shot		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
April	18,545	48,000	4,975	276	625	253	17	23	49
May	2,340	13,450	5,200	174	449	297	19	20	32
June	10,135	11,900	4,450	388	456	288	27	26	0
July	24,475	22,400	4,850	611	607	132	227	26	37
August	23,590	51,400	70,000	1,401	1,049	613	140	18	152
September	16,130	75,000	82,500	1,006	1,034	828	47	64	67
October	10,265	72,500	92,000	939	1,159	1,352	91	64	47
November	2,920	31,500	15,345	467	859	497	7	32	52
December	2,170	3,800	0	269	145	0	2	9	0
Total	110,570	329,950	279,320	5,531	6,383	4,260	577	282	436

Harassment efforts took place three times a week for three hours from April – July and five times a week for five hours from August - November. WS harassed a daily average of 2,429 gulls throughout the year, a slight decline from 2016 where a daily average of 2,750 gulls were harassed. April – July saw the lowest average number of gulls per day. In August, gulls had completed nesting and raising young. Those adults and young were noticed in the increases of gull use at the landfill in August. Harassment efforts reinforced with occasional lethal removal of gulls helped keep the number of gulls down for the remainder of that day during our visits. However, the effectiveness in keeping gulls away from the landfill and surrounding properties and a reduction in the number of gulls visiting the landfill daily for the remainder of the fall was less noticeable. The reduction in the number of gulls harassed in November is most likely a combination of harassment and winter migration further south. The increase in gulls harassed in September and October is likely a result of migration; however, continued harassment efforts quickly reduced the presence of gulls at the landfill for that day. Harassment efforts were somewhat effective in preventing gulls from loafing on roof tops; however, a Scary Man® effigy will be added in 2018 on the landfill office building and the Department of Transportation building to the south to prevent loafing and resting gulls. It is difficult to prevent gulls from



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and 2016. It would also be beneficial if the local businesses where gulls loaf also incorporate harassment at their sites to improve effectiveness in keeping gulls away from the overall area.

Please feel free to contact me with any questions you may have or if you are interested in having WS provide additional assistance to the Outagamie County Landfill.

Sincerely,

Charles D. Lovell
District Supervisor/Certified Wildlife Biologist®

The days and time spent in 2018 proved as effective as previous years at keeping the number of gulls using the Outagamie County Landfill to a consistently lower number during the time WS was providing management. The number of gulls using the landfill throughout the year was similar to previous years. However, the number of gulls observed from August – October was much lower in 2018 than in 2017. WS recommends harassment efforts for 2019 mirror the 2018 efforts. If necessary or requested, WS is available to assist neighboring properties with gull harassment as in the past. It would also be beneficial if the local businesses where gulls loaf also incorporate harassment at their sites to improve effectiveness in keeping gulls away from the overall area.

Please feel free to contact me with any questions you may have or if you are interested in having WS provide additional assistance to the Outagamie County Landfill.

Sincerely,

Charles D. Lovell
District Supervisor/Certified Wildlife Biologist[®]