



# DANE COUNTY DEPARTMENT OF WASTE & RENEWABLES

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Letter of Intent for the  
Eastern Vertical Expansion

City of Madison – Planning Division

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## LETTER OF INTENT

Dane County is pleased to submit this Letter of Intent for the Eastern Vertical Expansion project at the Dane County Landfill Site No. 2 (Rodefeld Landfill). This document contains the following sections:

- Section 1. Project Description
- Section 2. Project Team
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### **Section 1. Project Description**

Dane County hereby states its intention to vertically expand the Dane County Landfill Site No. 2 (DNR Operating License No. 3018) within the existing landfill footprint (Eastern Vertical Expansion). The landfill is located at:

7102 U.S. Highway 12 & 18  
Madison, WI 53718

The Eastern Vertical Expansion will be entirely within the existing landfill footprint from the approved 2014 Eastern Expansion and will consist of approximately 21 acres. A map showing the proposed footprint of the vertical expansion is included in the Development Plans (Plan Sheet C200).

The landfill property is currently zoned as a Planned Development District - Specific Implementation Plan (PD-SIP) and the County is proposing a major alteration to the PD-SIP to allow the vertical expansion in order to extend the landfill site life. A pre-application notification was sent to Alderperson Michael Tierney on 9/4/20.

Please note, as part of the local approval process a certified survey map (CSM) regarding the Dane County Landfill property was submitted on October 6, 2020 to consolidate parcels acquired as part of the 2014 Eastern Expansion of the landfill.

## **Section 2. Project Team**

Owner: Dane County, Dept. of Waste & Renewables  
1919 Alliant Energy Center Way  
Madison, WI 53713  
John Welch – Director  
(608) 516-4154

Consultant: SCS Engineers  
2830 Dairy Drive  
Madison, WI 53718  
Betsy Powers – Project Manager  
(608) 333-5408

## **Section 3. Existing Conditions**

Dane County owns parcels totaling 217 acres, which includes a 104.6 acre landfill. The property includes several landfill gas-to-electric generation buildings, a combined office and maintenance building, a construction & demolition recycling facility, a household hazardous waste facility (Clean Sweep), a diesel and gasoline fuel island, a wood recycling area, private hauler container storage area, shingle and tire recycling bunkers, six sedimentation basins, and various soil stockpiles necessary for landfill operation. The property also includes a biogas process facility consisting of several buildings and industrial equipment used to convert landfill biogas to pipeline quality renewable natural gas.

The western property boundary includes a sedimentation basin, wooded areas, and wetlands. The northern property boundary includes wetlands, open space and a heavily wooded area. Along the eastern property boundary, there are berms used for landfill liner construction, sedimentation basins, narrow strips of wooded area, and a pump house for circulating waste heat from the biogas facility to the County highway garage and medical examiner's office. The southern boundary includes a parcel of land that's leased to Dane County by the City of Madison which is heavily wooded, a screening berm with trees planted as part of the 2014 eastern expansion approval, a sedimentation basin, wetlands, and a narrow strip of wooded area.

Based on current landfill tonnage, the Dane County Landfill Site No. 2 has approximately 7 to 8 years of site life remaining as part of the 2014 eastern expansion. With the proposed eastern vertical expansion, the landfill site life would be extended by approximately 3 to 3.5 years. The expected site life of the landfill and the exact years for each phase may change, as these numbers are highly dependent on multiple variables, such as incoming waste volumes, waste diversion efforts, population and economic trends, and waste compaction rates in the landfill.

## **Section 4. Proposed Uses**

The property, in its entirety, will be used as or in support of the landfill or waste disposal and recycling efforts. The following is an estimate of the proposed uses of the property (all areas are approximate):

Description	Proposed Area
Landfill	105 acres (includes 21 acres for the proposed eastern vertical expansion)
Open Area and/or Wooded Area	93.5 acres
West Building and Parking Areas	6 acres
Paved Driveways	4 acres
Sedimentation Basins	3.5 acres

Biogas Facility	2 acres
Wood Waste Yard and Container Storage Area	3 acres
Total Site Area	217 acres

Once the landfill stops receiving waste, the areas without paving or buildings will revert to open space. Existing support structures (drives, parking, buildings, etc.) and activities will continue to be utilized upon closure of the landfill.

**Section 5. Hours of Operation**

**Subsection 5.1. Landfill**

Landfill operations will continue to utilize the same hours as current operations.

In previous applications, the landfill listed separate operating and waste acceptance hours. For this application, Dane County is proposing identical operating and waste acceptance hours for the entire site (including Cleans Sweep and Construction and Demolition Facility). The proposed hours of operations would be from 6:00 AM to 5:00 PM, Monday through Friday, and from 7:00 AM to 12:00 PM on Saturdays.

The landfill may be operated from 7:00 AM to 5:00 PM on Saturdays following either:

1. A week within which New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving, Christmas Day or other legal holidays occur; or,
2. A week within which adverse weather conditions (such as high winds, rain, ice or heavy snow) have prevented the County from operating the landfill for an aggregate period of more than five (5) hours in any one day.

Subject to applicable City Ordinances, the County reserves the right to conduct construction activity in a manner to achieve an expedited schedule based on weather conditions. The above operating hours are not applicable to construction activities or when it is necessary for the landfill to extend the hours due to a natural disaster or a solid waste emergency.

**Subsection 5.2. Clean Sweep**

Clean Sweep proposes to operate and accept waste Monday through Friday from 6:00 AM to 5:00 PM and on Saturday from 7:00 AM to 12:00 PM. Clean Sweep is closed for the following holidays; New Year's Eve and New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and day after, and Christmas Eve and Christmas Day.

**Subsection 5.3. Construction and Demolition Facility (C&D)**

C&D Facility proposes to operate and accept waste Monday through Friday from 6:00 AM to 5:00 PM and on Saturday from 7:00 AM to 12:00 PM. C&D Facility is closed for the following holidays; New Year's Eve and New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and day after, and Christmas Eve and Christmas Day.

**Subsection 5.4. Biogas Facility**

The biogas facility is in continuous operation (24/7, 365 days per year) to comply with State and Federal regulations. Although the biogas facility is operating continuously, there is minimal activity outside of the hours listed for normal landfill operation.

The off-loading station is available for trailers to unload at all times of the day, however we anticipate that most scheduled unloads will occur during daytime hours.

**Section 6. Number of Employees**

No additional employees will be required for the eastern vertical expansion. Operations would continue under the current business model.

## **Section 7. Buildings on Property**

No additional buildings will be required for the eastern vertical expansion.

The existing zoning allows for 15 buildings on the landfill property but only 13 buildings are present as outlined below and shown on the Development Plans (Plan Sheet C101):

- Building No. 1 - Combined shop and scale office,
- Building No. 2 - Blower building for power generation,
- Building No. 3 - Generator building for power generation,
- Building No. 4 – Household hazardous waste facility,
- Building No. 5 – Construction and demolition facility,
- Building No. 6 – Cold storage building,
- Building No. 9 – Maintenance building,
- Building No. 10 – Blower building,
- Building No. 11A – ANR metering skid,
- Building No. 11B – ANR monitoring skid,
- Building No. 11C – Dane County monitoring skid,
- Building No. 12 – Compressor building, and
- Building No. 13 – Boiler building.

During the 2020 construction season, the eastern blower and generator buildings were removed from the site in order to construct the remaining phases of the eastern expansion. Therefore, Buildings No. 7 and 8 no longer exist.

## **Section 8. Number of Dwelling Units**

There are no dwelling units (existing or proposed) at the facility.

## **Section 9. Auto and Bike Parking Stalls**

No additional parking stalls will be required for the eastern vertical expansion.

The landfill property has a small bike rack (spots for approximately 15 bikes) for recycled bicycles located by the west blower building (Building No. 2). There is also designated parking for 15 automobiles by the Clean Sweep and the C&D Facility (including two handicap parking stalls), 13 parking spots by the west generator building (Building No. 3), seven parking stalls at the combined scale and shop building (Building No. 1), two parking stalls at the biogas facility for operation and maintenance personnel by the blower building (Building No. 10), and two parking stalls for tube trailers at the off-loading facility near the boiler building (Building No. 13).

## **Section 10. Visual Screening**

Dane County has been made aware of the anticipated interchange construction for the intersection of County Road AB and U.S. Highway 12 & 18 by the Wisconsin Department of Transportation (WisDOT). For the purpose of this application, Dane County has proposed a screening plan based on existing conditions with the assumption that WisDOT, if and when their project proceeds, will be required to create an alternative screening plan based on the interchange impacts to satisfy Dane County's obligation to the City of Madison and Wisconsin Department of Natural Resources (WDNR).

Given the location of the landfill, visual screening is an important aspect of the eastern vertical expansion design. The site uses trees, many of which are full canopy, as the primary screening methods for the existing footprint and approved height of the landfill. To assess the vertical expansion screening impacts, Dane County and SCS Engineers prepared renderings to illustrate the impacts from three

different viewpoints if no additional plantings were to occur (Attachment A). Based on these renderings, the vertical expansion poses a screening challenge that requires Dane County to address in both a short and long term screening plan.

The short term screening plan focuses on screening during active waste filling and the long term plan focuses on the closed landfill screening. Short term, Dane County intends to plant more trees along access roads and areas where tree density needs to be increased, replace trees that are in poor condition, and maintain existing vegetation using best management practices (BMP's). Areas where additional trees are to be planted are shown on the Development Plans (Plan Sheet No. L100). A landscape narrative to accompany the design may be found in Attachment B.

Adam Alves, a Board Certified Master Arborist from Dane County's Land & Water Resources Department, performed an evaluation of the current condition of the plantings approved in the 2014 eastern expansion and 2018 biogas facility construction. A full report can be found in Attachment C that details location, species, diameter, canopy, and condition of the trees. Trees that were found to be in "poor" or "very poor" condition will be replaced.

Saiki Design, the registered landscape architect, assessed the maintenance practices for the existing vegetation. One of the suggestions was to move the mowing border away from the patches of forest to allow volunteer vegetation to fill in and provide a dense screen. Dane County sees this as a beneficial way to aid in screening and will be implementing this on areas that do not hinder access to the site or access for maintenance activities.

During active waste filling, Dane County will also incorporate soil screening berms into the perimeter of the waste mass. The soil screening berms will be constructed on the outside edge of the waste mass around the perimeter of the eastern vertical when the waste filling starts to extend above the top of the perimeter berms. The soil berms will provide a visual barrier from the areas surrounding the vertical expansion to the waste placement operations and will continue to be constructed upward until they are no longer able to. Line-of-sight drawings showing the use of soil screening berms and approximate height of existing and proposed trees are shown on the Development Plans (Plan Sheet No. C500).

The long term plan to screen the landfill after active waste filling is complete would be to continue using the outlined BMP's with the potential to incorporate trees on the final cap on the stormwater diversion berms to aid in the visual screening. Planting on the final cap would require additional approvals from WDNR along with potential design changes to the diversion berm to account for windthrow and roots.

### **Section 11. Signage**

No new signage is being proposed for the eastern vertical expansion. Dane County intends to submit an alteration to an approved and recorded specific implementation plan for the landfill front entrance sign within the next six months.

### **Section 12. Traffic Patterns**

Dane County Landfill Site No. 2 receives between 400 and 500 customers or employees per day, through the front entrance located off of U.S. Highway 12 & 18 during normal hours of operation. No additional haulers are anticipated for the eastern vertical expansion as the boundaries for waste acceptance will not be extended.

Additionally, the biogas facility receives large trucks of pressurized renewable natural gas (RNG) during and after normal hours of operations but are separated from landfill traffic immediately after entrance through the front gate. Employees or Contractors may access the site during or after normal hours of operation through the construction entrance along County Road AB or the front gate, as necessary.

Dane County's entrance is currently located on USH 12 & 18, approximately one-third of a mile east of Millpond Road. Dane County has been made aware of the anticipated interchange construction for the intersection of County Road AB and U.S. Highway 12 & 18. Based

on preliminary drawings from WisDOT, Dane County may need to use a new entrance where customers access the site from the proposed County Road AB and U.S. Highway 12 & 18 interchange, located east of the site. If this were to occur, WisDOT would need to obtain all necessary approvals to modify site access to the landfill. Regardless, traffic patterns within the boundaries of the landfill property, would remain the same.

### **Section 13. Stormwater**

The conceptual layout for the stormwater design is shown on the Development Plans (Plan Sheet No. C300). This layout includes the anticipated location of downslope flumes, stormwater diversion berms, and drainage paths for stormwater.

Since the site is permitted for disposal of municipal solid waste, it's subject to stormwater and erosion control permitting through WDNR. Additionally, as part of the eastern expansion agreement between the City of Madison and Dane County, Dane County Land & Water Resources Department has jurisdiction over local erosion control and stormwater permitting activities related to the landfill property.

Please note, the majority of stormwater will be diverted to the existing northeast basin with some stormwater diverted to the existing southeast basin.

### **Section 14. Supplemental Requirements**

#### **Subsection 14.1 Project Schedule**

Dane County and its consultant are currently in the middle of permitting and design of the eastern vertical expansion with final permitting approval by WDNR anticipated in January 2022 (Attachment D).

#### **Subsection 14.2. Financial capability**

This project is funded by government bonding as part of Dane County's approved capital budget for 2020.

#### **Subsection 14.3. Specific Zoning Text**

Specific zoning text for the portion of the Planned Development (PD) district to be developed under the SIP, may be found on the document labeled "USH 12 & 18\_7102\_PRE\_PD Text\_2020-12-02". The specific zoning text includes a description of the proposed land uses, height and floor area ratios, lot area, yard requirements, landscaping, parking and loading, lighting, signage, and alterations and revisions.

#### **Subsection 14.4. Agreements**

In the previously permitted eastern expansion, Dane County, City of Madison, and Town of Cottage Grove entered into an agreement titled "Negotiated Agreement Relating to the Second Rodefeld Landfill Expansion".

As of November 4, 2020, Dane County has been granted authorization from the Waste Facility Siting Board to start the local negotiation process between the City of Madison and Town of Cottage Grove (Attachment E) for the eastern vertical expansion.

In addition, the City of Madison leased a portion of their land to Dane County (Document #5078421) and entered into a separate agreement titled "Rodefeld Landfill Expansion and Solid Waste Agreement".

### **Section 15. Attachments**

- Attachment A – Renderings
- Attachment B – Landscape Narrative
- Attachment C – Tree Report for Existing Conditions
- Attachment D – Project Schedule
- Attachment E – Waste Facility Siting Board Letter