

ENVIRONMENTAL ANALYSIS AND DECISION ON THE NEED FOR AN ENVIRONMENTAL IMPACT STATEMENT (EIS)

Form 1600-8 Rev. 6-90

Department of Natural Resources (DNR)

District or Bureau Solid & Hazardous Waste Management
Type List Designation 8e5a

NOTE TO REVIEWERS: This document is a DNR environmental analysis that evaluates probable environmental effects and decides on the need for an EIS. The attached analysis includes a description of the proposal and the affected environment. The DNR has reviewed the attachments and, upon certification, accepts responsibility for their scope and content to fulfill requirements in s. NR 150.22, Wis. Adm. Code. Your comments should address completeness, accuracy or the EIS decision. For your comments to be considered, they must be received by the contact person before 4:30 p.m., _____ (date).

Contact Person Jim Bauer
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Applicant: Dane County

Address: 217 South Hamilton, Suite 400

Title of Proposal: Feasibility Report - Rodefild Landfill Expansion

Location: County Dane City/Town/Village City of Madison

Township 07 North, Range 10 East, Section(s) N 1/2 Section 25

PROJECT SUMMARY - DNR Review Information Based on:

List documents, plans, studies or memos referred to and provide a brief overview

- Feasibility Report, Dane County Rodefild Landfill Expansion, October 16, 1992.
- Addendum 1 Feasibility Study Report, January 29, 1993.
- For a brief overview, see the attached feasibility summary.

DNR EVALUATION OF PROJECT SIGNIFICANCE (complete each item)

Environmental Effects and Their Significance

Discuss the short-term and long-term environmental effects of the proposed project, including secondary effects, particularly to geographically scarce resources such as historic or cultural resources, scenic and recreational resources, prime agricultural lands, threatened or endangered species or ecologically sensitive areas, and the significance of these effects. (The reversibility of an action affects the extent or degree of impact.)

Physical Environment

Construction of the proposed landfill would permanently alter the existing topography and drainage within the site. About 40 to 50 acres of land would be disturbed. The waste fill area would cover approximately 28 additional acres. Facilities to be constructed outside of the waste fill area include: a perimeter access road, perimeter drainage swales, containment berms, sedimentation basins and service buildings. Approximately 70,000 thousand cubic yards of existing soil would be excavated to get to the proposed base for the landfill's liner. The landfill would be developed in 3 phases, thus limiting the amount of land disturbed at any one time.

The present land surface ranges in elevation from about 860 feet above mean sea level (MSL) in the horizontal expansion area to about 970 feet MSL at the top of the existing landfill. Construction of the landfill would change the site topography to a

mounded area with a maximum elevation of about 1,017 feet MSL. This is 41 feet higher than the approved final elevation of the existing Rodefild landfill. After closure the landfill would have slopes of 25%. After closure the site would be vegetated with a grass seed mixture approved by the Department.

Clay for the landfill liner and final cover would be obtained from a parcel of land located in the N 1/2 of S2, T8N, R9E, Town of Westport, Dane County. About 80 acres would be excavated. Drainage and sedimentation controls would be installed during excavation. The excavated area would be graded, top-soiled, and seeded.

Scenic and Recreational resources

The proposed landfill is located adjacent to the Yahara Hills Golf Course. The landfill would be within 1,000 feet of State Trunk Highway (STH) 12 & 18. Screening berms and vegetation would be provided.

Surface Water

The proposed site is located in the Yahara River watershed. Some increased soil erosion and run-off would be expected from the time excavation begins until vegetation becomes established after closure. Surface water runoff from the landfill would be directed to perimeter drainage swales which would drain to sedimentation basins. The basins would discharge into existing drainage ditches which eventually drain into the Yahara River.

Erosion control devices such as sodding, riprap, ditch checks, revegetation and sedimentation basins would be installed to aid in reducing the amount of sediment and nutrients entrained in the runoff water. Surface water would be kept away from the active fill area by perimeter berms and drainage swales. Any surface water which comes in contact with solid waste would be collected and treated as leachate.

Leachate

The proposed landfill would cause an increase in the amount of leachate discharged to the Madison Metropolitan Sewerage District (MMSD). The collected leachate would be pumped by force main to the MMSD. The estimated amount of leachate that would be produced during mid-operation of the landfill is estimated to be approximately 2,300 gallons per day. Leachate production is expected to decline substantially after closure of the facility. After closure, a composite cover system consisting of 2 feet of clay overlain by a 40 mil geomembrane, a granular drainage layer, a rooting zone layer and topsoil would reduce infiltration of precipitation so that leachate generation would gradually diminish with time. DNR Southern District Wastewater Staff have determined that the additional leachate from the proposed facility should not have an impact on the operation of the MMSD Treatment Plant.

Air Quality

Significant impacts on air quality are not anticipated. The proposed landfill design incorporates a composite liner and cover system and an active gas extraction system. Therefore, off-site, subsurface gas migration is unlikely. Gas generated by the landfill would be burned in a flare. No exceedences of these standards are anticipated as a result of the proposed landfill. Gas production would continue for several decades following closure of the landfill.

Dust, Noise, Odors

A short-term increase in dust, noise and exhaust fumes would occur in the immediate vicinity of the site during construction and operation. In addition, odors produced by decomposing waste would be noticeable to some degree during the operational life of the facility. The odors would vary depending on temperature, wind speed and wind direction. The level or intensity of these effects would be similar to those of the currently operating Rodefild landfill. The Department would require dust control measures and particulate monitoring as a condition of license approval.

Groundwater

Groundwater quality results from monitoring wells around the existing landfill do not indicate that the facility is impacting groundwater. Significant impacts to groundwater due to the expansion of the landfill are not anticipated. Regulation of landfill design and construction under Chapters NR 500 through 520, Wisconsin Administrative Code should prevent significant impacts to the groundwater. The groundwater standards under Chapter NR 140, Wisconsin Administrative Code are enforceable and if exceeded would require the Department of Natural Resources to seek restoration to acceptable standards.

The proposed design includes a composite liner consisting of 4 feet of compacted clay overlain by a 60 mil HDPE geomembrane. The proposed composite liner would provide an equivalent or better level of performance than the liner specifications of ch. NR 504, Wis. Adm. Code, which requires 5 feet of compacted clay without a geomembrane.

Biological Environment

The proposed landfill site is not known to be critical habitat for any endangered or threatened species listed in chapter NR 27, Wis. Adm. Code.

Small wildlife may be disturbed during development and operation of the landfill. However, the creation of open green space after closure would probably enhance habitat for some species after site closure.

A 0.83 acre wetland lies within the proposed landfill footprint and would be permanently lost if the landfill is developed as proposed. This wetland is located such that it would be impractical to expand the existing landfill without impacting the wetland. Three other small wetlands totalling less than 1 acre occur in the area adjacent to the landfill. Flora and fauna could be affected by the development. However, buffer areas would be maintained between the landfill and the wetlands.

In order to comply with Chapter NR 103, Wis. Adm. Code, Dane County has submitted a Practicable Alternatives Analysis (PAA) which indicates there is no practicable alternative that are available of being implemented after taking into consideration cost, available technology, and logistics before the existing Dane County Rodefild landfill reaches capacity. The study indicates that the loss of the 0.83 acres of wetlands would not result in significant adverse impacts to wetland functional values, water quality, or have other significant environmental consequences.

Socle/Economic

Approximately 40 acres of land would be permanently lost to other types of uses. According to the Wisconsin State Historical Society and a survey of the site, there are no known historical or archaeological sites within the area.

2. Significance of Cumulative Effects.

Discuss the significance of reasonably anticipated cumulative effects on the environment (and energy usage, if applicable). Consider cumulative effects from repeated projects of the same type. Would the cumulative effects be more severe or substantially change the quality of the environment? Include other activities planned or proposed in the area that would compound effects on the environment.

The proposed expansion would be located over and adjacent to the currently operating landfill. The cumulative effects with regard to noise, windblown paper, odors, dust and traffic are not expected to change significantly.

Construction of the proposed landfill would contribute to the cumulative losses of wetland habitats now occurring as a result of other development within the area. Final use of the site as open green space, however, would be beneficial in terms of increasing the area of this habitat type in the region.

3. Significance of Risk

a.
Explain the significance of any unknowns which create substantial uncertainty in predicting effects on the quality of the environment. What additional studies or analysis would eliminate or reduce these unknowns?

The environmental effects of solid waste disposal facilities have been well documented by the Department of Natural Resources and in the scientific literature. The requirements and specifications for landfill siting, design, construction, operation, monitoring, closure and long-term care, as defined by Chapters NR 500 through 520, Wisconsin Administrative Code have been developed to prevent the adverse environmental effects that have been documented to date. All new municipal solid waste facilities must be developed in accordance with Chapters NR 500 through 520, Wis. Adm. Code and new federal criteria (40 CFR, Part 258), and are expected to meet the performance standards established by these rules. Department staff would inspect key areas of construction to insure compliance with the above codes. Therefore, if these performance standards are met, the proposed landfill shall not be a significant risk to the quality of the environment.

b.
Explain the environmental significance of reasonably anticipated operating problems such as malfunctions, spills, fires or other hazards (particularly those relating to health or safety). Consider reasonable detection and emergency response, and discuss the potential for these hazards.

The potential failures that may occur involve construction errors and equipment failures. For example, these could include inadequate liner compaction, faulty leachate piping or improper base grade preparation. It would be unlikely that significant failures would occur due to required materials standards, construction documentation and site inspections conducted by Department of Natural Resources staff during landfill construction, operation and closure.

The required monitoring network should provide early detection of released contaminants in the event of a failure of the containment systems.

Small amounts of household hazardous waste are likely to be mixed with the waste placed in the landfill. This factor is considered when the Department of Natural Resources evaluates all municipal waste disposal sites and is the reason the new federal regulations were promulgated. Disposal of large quantities of hazardous waste is not likely to occur because of company liability and DNR surveillance as well as separate licensing and regulatory controls imparted upon facilities which produce or handle wastes of this nature.

4. Significance of Precedent

Would a decision on this proposal influence future decisions or foreclose options that may additionally affect the quality of the environment? Describe any conflicts the proposal has with plans or policy of local, state or federal agencies. Explain the significance of each.

Future options for use of the site after closure would be limited to uses that are compatible with an abandoned landfill. In general, use of the facility for agricultural purposes, the construction of buildings or excavation of the final cover or waste materials would be prohibited. Construction of additional private water supply wells within 1,200 feet of the landfill may be prohibited.

5. Significance of Controversy Over Environmental Effects

Discuss the effects on the quality of the environment, including socio-economic effects, that are (or are likely to be) highly controversial, and summarize the controversy.

Potentially controversial socio-economic effects may be addressed through the local negotiation/arbitration process provided in Chapter 144.445, Wisconsin Statutes. The City of Madison and the Town of Blooming Grove are participating in the negotiation/arbitration process. Virtually any issue is negotiable except the need for the proposed facility and any conditions which would make the owner's responsibilities under a DNR approved feasibility report less stringent.

The proposed landfill does not meet the minimum setback distance of 1,200 feet from 6 private water supply wells. The County has proposed abandoning three of these wells and providing the well owners with an alternate source of water. Dane County has requested an exemption to the 1,200 foot minimum setback for one of the wells which is up-gradient from the proposed landfill. An irrigation well and a potable well on the Yahara Golf Course property would have to be abandoned prior to licensure of the landfill unless the County can demonstrate to the satisfaction of the Department, through additional groundwater monitoring and modelling, that there is no potential for the landfill to impact these wells.

Potentially controversial impacts could include: impacts on adjacent land values, visual impact and screening, nuisance impacts such as noise, dust, traffic, and windblown paper, loss of woodland and wetland habitat and potential post closure uses of the site. Some of these issues may be settled during the negotiation/arbitration process.

ALTERNATIVES

Briefly describe the impacts of no action and of alternatives that would decrease or eliminate adverse environmental effects. (Refer to any appropriate alternatives from the applicant or anyone else.)

The currently operating Dane County Rodefild Landfill is expected to reach capacity in 1994. If the proposed expansion site is not developed, approximately 170,000 tons of waste per year would have to be taken to other landfills in the area. This would shorten the life of existing facilities and increase the need for additional waste disposal facilities at other sites in the area.

Enlarging the landfill to the east and south is precluded by existing transportation corridors and to the west by a gas pipeline corridor. Enlargement to the north is possible, but would result in greater impacts to woodlands and wetlands.

Reducing the size of the proposed landfill footprint could be done. This would reduce the period the landfill is in operation and would lessen the potential for impacts. However, the life of the site would be reduced and another landfill would have to be developed sooner.

Waste reduction, reuse, and recycling are alternatives to land disposal. The amount of waste received by the existing Rodefild landfill has already decreased from 260,000 tons in 1990 to 170,000 tons in 1991 due to the implementation of recycling programs and bans of certain types of waste from the landfill. While the County anticipates an increase in the percentage of waste being recycled, it does not anticipate that this will be enough to substantially lessen the need for additional landfill space. In addition, the high anticipated growth rate in Dane County is expected to increase the amount of waste generated in the County.

SUMMARY OF ISSUE IDENTIFICATION ACTIVITIES

Copies of the complete feasibility report and all addenda have been sent to the Clerks of the City of Madison and Town of Blooming Grove for public viewing. Copies are also available at the Department of Natural Resource Offices in Fitchberg and Madison.

A 30-day public comment period will begin upon issuance of this draft environmental analysis. This comment period will afford the public the opportunity to request an informational or contested case hearing in the matter of this proposal. Upon the completion of any hearing or within 90 days of the issuance of this draft analysis, the Department will then issue a feasibility determination and a final environmental analysis. Should a favorable feasibility determination be made, Dane County may submit a plan of operation report containing the proposed engineering details and specifications and operational procedures for the project. Upon the Department's approval of this report, construction of the facility may commence. Site construction documentation and Department inspections will occur throughout various phases of construction. A license to operate the

facility as a solid waste disposal site would be issued following the Department's approval of the site construction documentation report.

List agencies, citizen groups and individuals contacted regarding the project (include DNR personnel and title) and summarize public contacts, completed or proposed.

<u>Date</u>	<u>Contact</u>	<u>Comment Summary</u>
Several Dates	Lynn Hummel -SD Solid Waste Investigator.	Needs Assessment Evaluation
3/29/92	Marie Stewart - SD Solid Waste Investigator	Initial Site Inspection
10/22/92 2/2/93	Kathleen Haas - Bureau of Solid and Hazardous Waste Management	Waste Reduction and Recycling
11/12/92	Del Mag - SD Water Supply	Private Wells
11/23/92	Lynda Wiese - SD Air Management Specialist	Air Impacts
11/13/92	Steve Fix - SD Water Regulation and Zoning	Wetland Impacts
2/16/93	George Osipoff-SD Wastewater Engineer	Leachate Treatability
Several Dates	Dave Siebert, Wetlands Ecologist, Bureau of Solid and Hazardous Waste Management	Wetland Issues
Several Dates	Dave Carper - Environmental Engineer - Bureau of Solid and Hazardous Waste Management	Engineering design
Several Dates	Paul Huebner, Site Evaluation Unit Leader - Bureau of Solid and Hazardous Waste Management	Environmental Analysis
Several Dates	Roger Gerhardt - Bureau of Water Supply	Water Supply Well Exemptions
Several Dates	Robert Ramharter - Bureau of Environmental Analysis and Review	Environmental Analysis

On-site inspection or past experience with site by evaluator.

DECISION (This decision is not final until certified by the appropriate authority)

In accordance with s. 1.11, Stats., and Ch. NR 150, Adm. Code, the Department is authorized and required to determine whether it has complied with s. 1.11, Stats., and Ch. NR 150, Wis. Adm. Code.

Complete either A or B below:

A.

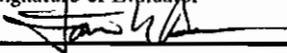
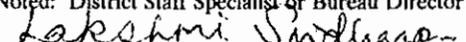
EIS Process Not Required

The attached analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. In my opinion, therefore, an environmental impact statement is not required prior to final action by the Department on this project.

B.

Major Action Requiring the Full EIS Process

The proposal is of such magnitude and complexity with such considerable and important impacts on the quality of the human environment that it constitutes a major action significantly affecting the quality of the human environment.

Signature of Evaluator 	Date Signed 5/6/93
Noted: District Staff Specialist or Bureau Director 	Date Signed 5/6/93

Number of responses to news release or other notice: _____

CERTIFIED TO BE IN COMPLIANCE WITH WEPA	
District Director or Director of BEAR (or designee)	Date Signed

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

Note: Not all Department decisions respecting environmental impact, such as those involving solid waste or hazardous waste facilities under sections 144.43 to 144.47 and 144.60 to 144.74, Stats., are subject to the contested case hearing provisions of section 227.42, Stats.

This notice is provided pursuant to section 227.48(2), Stats.