

Environmental Analysis and Review Workload Management and Tracking System

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General Information

Project Id: 6909 Region/CO: CO Date Received: 06/24/2004 Staff Assigned: Pardee Project Category: WEPA (DNR)

Project Title: Large POWTS General Permit EA

Primary Count: Statewide Status: Closed

Secondary County: [REDACTED] Municipality: [REDACTED]

Latest Activity Date: Latest Inspection Date

Regional Id: [REDACTED]

Transportation Projects

Category: [REDACTED] Type: [REDACTED] DOT Project ID #: [REDACTED] Phase: [REDACTED]

Wetland Impact Acres: 0.00 Mitigation Type/Location/Ratio: [REDACTED] [REDACTED] [REDACTED]

WEPA (DNR)

DNR Program: Wastewater - NR 150.03(8)(i) Action Type: 2

Comment Period/#Received: 01/05/2005 1 EA Status: Certification

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

Form 1600-8

Rev. 6-2001

Department of Natural Resources (DNR)

Region or Bureau
Watershed Management

Type List Designation
II

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 no later than 30 days after the publication notice issued by DNR for the notice of intent to issue Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit No. WI-0062901-1.

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Applicant: WDNR

Title of Proposal: Issuance of a General Permit for the Disposal of Domestic Wastewater to Subsurface Soil Absorption Systems

Location: Statewide

PROJECT SUMMARY

1. Brief overview of the proposal including the DNR action

The Wisconsin Department of Natural Resources (WDNR) currently issues individual Wisconsin Pollutant Discharge Elimination System (WPDES) discharge permits for the disposal of domestic wastewater to subsurface soil absorption systems that meet the size criteria established in in ch. NR 206 and NR 200.03(3) and (4), Wis. Adm. Code. Wastewater systems subject to such permits include large "Privately Owned Wastewater Treatment Systems" (POWTS) that receive a construction plan approval from the Department of Commerce.

A new general permit is being proposed to provide the DNR with an additional option for issuing permit coverage for a subsurface soil absorption system. General permits are authorized under s. 283.35, Stats. A general permit is a method of regulating a specific category or group of point sources that are not a significant contributor of pollution. The intent of issuing this general permit is to assure that all eligible dischargers are appropriately regulated, that large dischargers to subsurface soil absorption systems employ technology to remove nitrogen to protect groundwater and to reduce monitoring requirements and other associated regulatory costs (for both the system owner and state government) without significantly reducing the protections afforded to groundwater and the public health and welfare.

Systems eligible for coverage under the general permit must utilize treatment technology designed and operated to remove at least some of the nitrogen in wastewater discharged to the system. The use of nitrogen removal technology will limit the amount of nitrate contamination of groundwater, thereby providing a safe groundwater supply. To provide an extra level of protection, the permit does not allow systems to be located in source water areas for public water supply wells that are considered to be highly susceptible to nitrate-nitrogen or microbial contamination. In general, proposed systems would need to utilize a treatment technology that provides significant removal of total nitrogen prior to application to the land.

2. List the documents, plans, studies or memos on which this DNR review is based

Proposed WPDES Permit No. WI-0062901-1, and associated briefing memo.

DNR EVALUATION OF PROJECT SIGNIFICANCE

3. Environmental Effects and Their Significance

- a. Discuss which of the primary and secondary environmental effects listed in the supporting documents are long-term or short-term.

The issuance of this general permit, in lieu of an individual permit, will reduce the overall level of assurance of system performance by not requiring monitoring to verifying the performance of the system in terms of effluent quality and subsequent impact on groundwater. However, systems are being designed and installed under existing provisions of Comm 83, Wis. Adm. Code, that provide no nitrogen removal and that are exempt from the WPDES program because configuration of the system results in the design size falling below the threshold level established in NR 200.03. Individual permits would typically include effluent and groundwater monitoring to verify attainment of groundwater standards. However, a general permit that contains less monitoring and for which coverage can be granted with less administrative costs will allow potential permittees to operate systems that meet the discharge volumes for WPDES coverage, provide some level of nitrogen removal and not have to monitor or meet specific limitations. The primary environmental effect may be a reduced assurance of groundwater protection for systems that require WPDES permits.

It is presumed that the development served by a subsurface soil absorption system would occur regardless of which type of permit (general or individual) is issued, so there are no anticipated secondary environmental effects related to development itself.

- b. Discuss which of the primary and secondary environmental effects listed in the supporting documents are effects on geographically scarce resources (e.g. historic or cultural resources, scenic and recreational resources, prime agricultural lands, threatened or endangered resources, or ecologically sensitive areas).

The primary environmental effects would relate to groundwater impacts and would not be expected to adversely impact geographically scarce resources.

- c. Discuss the extent to which the primary and secondary environmental effects listed in the supporting documents are reversible.

Groundwater impacted by domestic wastewater subsurface soil absorption systems would have elevated levels of dissolved solids, nitrate-nitrogen, and potentially increased levels of bacteria or viruses. Certain pollutants, including bacteria and viruses, are further removed or attenuated as the wastewater and groundwater move through the subsurface soil environment. Dissolved solids are not typically removed, but may be attenuated by dispersion and dilution mechanisms. Affected groundwater can be treated by groundwater remediation systems, but this is expensive and not typically practical for the relatively minor groundwater impacts associated with domestic wastewater systems.

4. 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 use of a general permit rather than an individual permit would not affect the total number of systems in existence, but may affect the reliability of their performance. This reduction in reliability is not considered to pose a significant risk. Additionally, the number of systems expected to be covered by this general permit is small. There are currently less than 5 systems regulated by the Department that might qualify for coverage under the general permit. It is difficult to predict the number of new system proposals that might be subject to this general permit, but it is estimated to be no more than approximately 5 per year. The cumulative effects of issuing general permits to qualifying systems would not be expected to change the quality of the environment to any significant extent.

5. Significance of Risk

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

Systems eligible for coverage under this general permit will not be required to monitor the groundwater or the quality of wastewater being discharged to the subsurface dispersal component of the system. Although the design criteria for system components must be met, there are uncertainties with respect to the direction of groundwater flow and the attenuation of contaminants in the soil. Should a system cause significant contamination of the groundwater at a particular location, a remedial action may be needed to attain the groundwater standards.

In addition to a WPDES permit, proposed subsurface soil absorption systems must receive construction plan approval from either the Department of Natural Resources or the Department of Commerce. As part of this plan review process, proposed systems are required to meet minimum separation requirements from private or public water supply wells, property boundaries, groundwater table, bedrock and other design factors. Additionally, the Department may deny coverage under the general permit for systems located in source water areas for public water supply wells.

It is expected that subsurface soil absorption systems will typically utilize "package" or self-contained treatment processes that are designed to be more inherently reliable than treatment processes typically used at larger plants that are custom designed and require extensive operator attention. The Department intends to grant coverage under this permit to any system employing a product or process approved by the Department of Commerce as being capable of removing nitrogen.

The general permit will also require that the system be operated in accordance with a management plan prepared by or for the system owner. The management plan will provide specific operation and maintenance instructions and must be followed to be in compliance with the terms of the permit. Systems that are publicly owned treatment works must be operated by a state certified operator as required in s. NR 108.06(2), Wis. Adm. Code. A large POWTS that receives a DComm plan approval may be required by DComm to submit certain information or to perform certain monitoring, and would be required to be maintained and service by a qualified POWTS maintainer per s. Comm 83.52, Wis. Adm. Code.

System owners will be required to submit an annual "Compliance Maintenance Annual Report" (CMAR) to the Department. The CMAR report will request information on management, staffing and operation of a facility, and is used to identify any potential compliance problems. The general permit would also impose a number of standard conditions, including a requirement that the permittee "at all times properly operate and maintain all facilities and systems".

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.

All wastewater systems have certain risks for experiencing operating problems or malfunctions. Many of these problems will be obvious and addressed regardless of the extent of effluent or groundwater monitoring at the system. However, certain problems may be difficult to detect without monitoring data. The plan review process is intended to promote passive and fail-safe type designs and thus minimize the need for monitoring. In general, the infiltration of treated wastewater into an unsaturated soil zone is a highly reliable and passive treatment process. When it "fails" in a hydraulic sense, the failure is obvious because water will back up into the plumbing system or overflow on the ground surface. Such incidents are violations of conditions of the permit and are subject to enforcement. A treatment deficiency with regard to nitrogen removal would be less obvious and may be difficult to determine without monitoring data.

6. 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.

It is not expected that this proposal would significantly influence future decisions or foreclose options that may additionally affect the environment. The proposal does not conflict with Department of Commerce or other state or federal regulations. There may, however, be local regulations that could apply to land disposal systems that are defined as Privately Owned Wastewater Treatment Systems" (POWTS) and come under the plan review authority of the Department of Commerce. A large POWTS that receives plan approval from DComm would also be required to obtain a sanitary permit issued by the county. Local county ordinance requirements may then be applied through the sanitary permit. In general, it is not expected that the general permit would conflict with possible supplemental local requirements.

7. 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.

It is not currently anticipated that this proposal will be highly controversial. The proposed general permit will be public noticed

throughout the state for 30 days.

ALTERNATIVES

8. 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 alternative to issuing a general permit would be to maintain the current process of issuing individual permits and include monitoring requirements for system effluent and groundwater. Maintaining these individual permits would not allow attainment of cost savings and efficiency afforded by the general permit process. The general permit eliminates the costs associated with installing groundwater monitoring wells, sample collection and analysis, reporting, analysis of results, and general administration. Additionally, without this general permit, systems that do not qualify for WPDES permit coverage may continue to be constructed solely under the approval of the Department of Commerce, even though they are only marginally below the threshold size for a WPDES permit.

SUMMARY OF ISSUE IDENTIFICATION ACTIVITIES

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

The Department has been in contact with a Department of Commerce POWTS Advisory group with regard to the general permit proposal. In June of 2003, the Department sent a letter to the advisory group outlining the proposal and the advisory group has indicated support in concept for the Department's proposal.

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

Not Applicable

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.

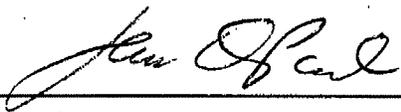
B. Major Action Requiring the Full EIS Process



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 Tom Gilbert	Date Signed January 5, 2005
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Number of responses to news release or other notice: See Attachment: "File Memo – Summary of Public Participation"

Certified to be in compliance with WEPA	
Environmental Analysis and Liaison Program Staff 	Date Signed 01/19/2005

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.

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

EPA Review	
<input checked="" type="checkbox"/> No comments by EPA	
<input type="checkbox"/> Changes Requested by EPA (List and attach)	
Action Taken After Public Notice	
<input type="checkbox"/> No changes have been made	
<input checked="" type="checkbox"/> Changes made after Public Notice. (Account for all changes below)	
<input type="checkbox"/> The Expiration Date has changed	
<input type="checkbox"/> The Schedule of Compliance has changed	
<input checked="" type="checkbox"/> Other. Summarize Changes Briefly	<p>General Permit Changes:</p> <ol style="list-style-type: none"> 1. In Section 1.1.1.3 of the draft permit, it is indicated that the permit applies to systems approved by the Department of Commerce. Additional language has been added to clarify that that approval must include DNR concurrence in accordance with Comm 83.22(2)(b)6. 2. Language in Section 1.2 has been revised to clarify that the source water protection area refers to an area associated with a "public drinking water system using groundwater" (not water systems using surface water). 3. In Section 2.2, the word "significant" has been deleted, and an incorrect code citation has been corrected, such that the last sentence now reads as: "Whenever the permittee intends to make operational changes, the management plan shall be amended and be submitted to the respective agency for approval prior to implementing such changes (see s. Comm 83.54(1)(d) and s. NR 206.07(2)(h), Wis. Adm. Code)."
Permit Drafter - Signature and Date: Tom Gilbert 12-8-04	

Responses to Public Comments:

Comment 1 - The General Permit will only be issued after a plan review process with approval by Department of Commerce has occurred. As part of the plan review process, the DNR intends to ensure that only systems with adequate nitrogen removing capability are approved. DNR program guidance will be provided that will provide a general criterion that acceptable systems should be able to remove 65% of total nitrogen from domestic strength wastewater. The extent of treatment required to comply with NR 140 groundwater standards may vary based on the specific

circumstances of the facility site. This case specific evaluation will occur as part of the plan review.

Comment 2 - The factors DNR will consider in deciding on whether to issue an individual permit are already listed in s. 205.08(5), Wis. Adm. Code. These factors include consideration of whether the facility is a "significant contributor of pollution" and whether the facility is in compliance with terms and conditions of the general permit.

Comment 3 - In evaluating equivalence to domestic wastewater, the DNR will consider the definition of "domestic wastewater" as currently defined in state administrative rule, and standard authoritative references that describe the typical pollutant content of domestic wastewater. Any wastewater determined to not be domestic would potentially be subject to receiving a DNR general permit for industrial or other non-domestic discharge into a subsurface soil absorption system. Under either scenario, the DNR will evaluate the proposed discharge to ensure compliance with NR 140 groundwater standards.

Comments 4 & 5 - The DNR did not intend that a POWTS located in a source water protection area should be prohibited from discharging if the proposed facility complies with all other regulations. The intent is to identify areas that *may* warrant the additional protections provided under an individual permit. The Source Water Assessment Program (SWAP) includes a database of information and provides a very generalized indication of well vulnerability. The SWAP data will essentially be used as an initial screening process and if a facility location is proposed in a source water protection area, then a more specific evaluation of groundwater and well impacts will be conducted as part of the plan review process. This evaluation would generally be conducted consistent with procedures as described in NR 140, Wis. Adm. Code. Department rules do not require public participation notification when granting coverage to a facility under a general permit.

Comment 6 - The language in Section 2.2 of the permit will be revised to delete the word "significant" and to indicate that a revised management should be provided when "operational changes" are made. This is consistent with NR 206.07(2)(h).

Comment 7 - The DNR does not routinely provide effluent limits for toxic pollutants in situations where the wastewater is of domestic quality and there is no expectation that toxic pollutants will occur in any significant amount.

Comment 8 - Permittees will be required to describe actions to address and correct problems as part of the Compliance Maintenance Annual Report required in accordance with ch. NR 208, Wis. Adm. Code.