

Infiltration and Injection Requests

Submittal, Review and Approval Process

PUB-RR-935

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This fact sheet describes the process of review and approval by the DNR of requests to perform infiltration/injection (I/I) as a method of remediation of groundwater contamination.

Request Review and Approval Process

Step 1: Submit a Cover Sheet and Fee to the RR EPA

Submit the fee and a cover sheet to the Regional Remediation and Redevelopment (RR) Environmental Program Associate (EPA). Visit dnr.wi.gov/topic/Brownfields/Fees.html for the appropriate fee. See Box 1 for information on the cover sheet components.

Step 2: Submit the I/I Request to the RR Project Manager

Submit the infiltration/injection request to the Regional RR Project Manager for review and approval. In Northeast Region, submit the I/I request to the I/I Coordinator.

The RR PM will coordinate the review with:

1. the Drinking and Groundwater Program for the NR 140 and NR 812 approvals; and
2. the Water Quality/Wastewater Program for the WPDES general permit approval.

The only instance where an NR 140 approval is not required is if the only substance being injected is oxygen or hydrogen peroxide. See Box 2 for information on the I/I request components.

Additional information is needed for the injection of permanganate, persulfate, or other reactive remedial materials. See Box 2b for a list of the additional information.

Step 3: Submit a WPDES General Permit Application to the Wastewater Staff Person

As part of the I/I request, submit information required for a WPDES general permit to the Wastewater staff person. In Northeast Region, submit the WPDES permit application to the I/I Coordinator. General permit information and application forms may be found at dnr.wi.gov/topic/wastewater/GeneralPermits.html.

For remedial actions involving infiltration or injection, a WPDES general permit for Discharge of Contaminated Groundwater from Remedial Action Operations is typically required. This permit is required because the injection or infiltration of any compound,

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COVER SHEET Components

- BRRTS Activity #
- Site name, address, city, zip code
- Responsible party contact information
 - owner or company name
 - address, city, state, zip code
 - phone number
 - email address
- Environmental Consultant contact information
 - contact name and company name
 - address, city, state, zip code
 - phone number
 - email address
- Type of request (technical assistance or remedial design report review)
- Amount of fee that is attached
- Name of RR Project Manager

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I/I REQUEST Components

See s. NR 140.28(5)

- Site information**- name, address, city, zip code
- Identifying Numbers**- BRRTS #, FID, other
- Identify if compounds are being **injected or infiltrated** or both
- Compound(s)** or material(s) being injected
- Type(s) of contaminants** being treated
- Implementation plan** for injection/infiltration
- Any necessary **constraints** on the injection system (e.g. location/depth of nearby private wells that may be affected)
- Time frame** for which approval is needed (i.e. beginning and end dates for injection/infiltration and implementation of remedy which is reliant on infiltration or injection) *5 year maximum*
- Locations** of proposed injection wells, infiltration zones, etc.
- An **injection-specific monitoring plan**, designed to monitor the effectiveness of the remedy and determine the extent of migration of the injected material and/or its breakdown products
- Pre-injection **vapor screening**, vapor potential and safety plan



Additional Information Needed for Injection of REACTIVE Materials

- Chemical analysis** of the proposed injectant/remedial material
- Mass balance** of the injectant vs. natural oxidant demand and contaminant demand (limit addition of excess injectant)
- Concentrations** of the injectant in the groundwater necessary to oxidize the environment
- Expected persistence** of injectant in the groundwater (i.e. how long will it be effective)
- Description of the monitoring system** in place that can determine the extent of the area affected by the injectant
- Collection of analytical results** for groundwater
 - total Cr before treatment, periodically during treatment and after treatment until Cr has declined to background levels
 - other trace metals that could exceed PALs (including metals contained in the injectant and native trace metals)
- Use of sentinel wells** as part of the monitoring program to show that the injectant is confined to the area to be treated
- A **plan for monitoring** the injectant and trace metals until those compounds have returned to background levels

remedial material, or tracer is considered a discharge to groundwater.

If water is expected to collect in a pit or trench that requires dewatering, check with the regional Basin Supervisor to ascertain whether a general permit for Pit/Trench Dewatering is needed. See contact information to the right.

Step 4: DNR Approval

Upon completion of DNR review, approval will be provided in a letter, which will cover the s. NR 140.28(5), Wis. Adm. Code temporary exemption for injection and the approval to inject materials under s. NR 812.05, Wis. Adm. Code. A time limit will be included in the approval letter, to cover the time needed for the infiltration/injection operation. If extensions are needed, they can be requested and obtained, based on compliance with the original approval.

The approval letter may also address the WPDES general permit. Alternatively, a separate approval for a WPDES general permit may be issued.

For questions on WPDES general permits, please check with your regional Basin Supervisor who will help you determine the Wastewater staff contact for your site.

Northeast: Kelley O'Connor, 920.662.5463
kelley.oconnor@wisconsin.gov

Northern: Kathy Bartilson, 715.635.4053
kathy.bartilson@wisconsin.gov

South Central: Tim Ryan, 608.275.3277
tim.ryan@wisconsin.gov

Southeast: Michael Luba, 414.263.8514
michael.luba@wisconsin.gov

West Central: Paul Laliberte, 715.839.3724
paul.laliberte@wisconsin.gov

Northeast Region I/I Coordinator : Kevin McKnight
kevin.mcknight@wisconsin.gov

Questions?

For questions about infiltration/injection requests, please contact your regional Remediation and Redevelopment Project Manager. Contact information can be found at dnr.wi.gov/topic/Brownfields/Contact.html.

Additional Resources

Underground Injection: dnr.wi.gov/topic/Wells/UIW.html
Injection Well Inventory Form: dnr.wi.gov/topic/Wells/documents/UIW/3300253.pdf
Remediation and Redevelopment Program Services and Fees: dnr.wi.gov/topic/Brownfields/Fees.html

* Front photo courtesy of ORIN Remediation Technologies.

This document contains information about certain state statutes and administrative rules, but does not necessarily include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20204. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.