
ENVIRONMENTAL Fact Sheet



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Large Groundwater Withdrawal Permitting Process

In 1998 two state laws, the Groundwater Protection Act and the Safe Drinking Water Act, were amended to ensure that undesirable impacts to water resources from new large groundwater withdrawals are identified and mitigated. New groundwater withdrawals of 57,600 gallons or more from wells over any 24-hour period are considered to be large groundwater withdrawals and require a permit from the Department of Environmental Services. The 1998 amendments require large groundwater withdrawal applicants to develop a conservation plan that demonstrates the need for the proposed withdrawal. Applicants must send copies of all application materials submitted to DES and to each municipality and community water supplier located in the potential impact area of a proposed withdrawal.

DES and an advisory committee, consisting of representatives from environmental organizations, municipalities, water suppliers, and a variety of potentially impacted businesses, worked together to develop rules to implement the large groundwater withdrawal provisions of the amended statutes. The rules, Env-Wq 403, establish a permitting process and decision-making criteria for siting new large groundwater withdrawals. That process generally consists of the following steps:

1) Preliminary Permit Application

The applicant must submit a preliminary large groundwater withdrawal permit application to DES that includes the following:

- A Large Groundwater Withdrawal Permit Application Notification Form.
- A description of intended use/purpose and proposed withdrawal volume.
- Preliminary delineation of potential impact area including the maximum extent of the withdrawal's zone of influence, the maximum extent of the withdrawal's recharge area, and the withdrawal's down-gradient area.
- Preliminary list of water users, potential and known contamination sources and a water resources inventory.
- Conceptual hydrologic model.
- Identification of data gaps in the conceptual hydrologic model.
- A proposed withdrawal testing design.
- An estimate of the withdrawal's effects.

2) Public Notification

After the preliminary application is considered administratively complete by DES, the applicant must send, by certified mail, a copy of the preliminary permit application and any subsequent application materials to all municipalities and community water suppliers located in the potential impact area of a proposed withdrawal.

3) Preliminary Application Public Hearing

Pursuant to RSA 485-C:21, a municipality or water supplier located in the potential impact area has 15 days after the receipt of the preliminary permit application to request that DES conduct a public hearing. The public hearing must be conducted within 30 days of the request.

4) Preliminary Application 45-Day Public Comment Period

The applicant, each municipality, and each supplier of water within the potential impact area of the well may submit comments to DES within 45 days after the public hearing or, if no hearing is requested, within 45 days after the receipt of the application. DES considers all relevant recommendations and comments received during the 45-day comment period or at the public hearing.

5) Approval of the Preliminary Application

Within 45 days of the close of the 45-day public comment period, DES must approve or deny the preliminary application. DES may also request that the applicant provide supplemental information and establish deadlines for the submission of this information.

6) Withdrawal Testing

After preliminary approval, the applicant must complete withdrawal testing in accordance with the applicant's proposed test design.. DES staff conducts site visits during withdrawal testing. Results of the withdrawal testing may require the applicant to update or revise its application.

7) Final Report

After completing withdrawal testing, the applicant must submit a final report to DES. The report must contain the following:

- A revised withdrawal permit volume: A revised permit volume may be requested provided the revised volume is less than or equal to the withdrawal volume demonstrated during withdrawal testing.
- Revised list of water users and water resources inventory.
- Revised delineation of the potential impact area.
- Revised conceptual hydrologic model based on data collected during withdrawal testing.
- A detailed description of the withdrawal testing program.
- A detailed analysis, including all calculations and collected data that fully summarizes the withdrawal testing results.
- A full assessment of impacts or potential impacts from the proposed withdrawal to existing water users or natural resources.
- A proposed monitoring and reporting program designed to ensure that adverse impacts will not occur as a result of the proposed withdrawal.
- A proposed plan, if necessary, to mitigate any potential adverse impacts should they occur.

8) Final Report Public Hearing

Pursuant to RSA 485-C:21, a municipality or water supplier located in the potential impact area has 15 days after the receipt of the final report to request DES conduct a public hearing. The public hearing must be conducted within 30 days of the request.

9) Final Report 45-Day Public Comment Period

The applicant, each municipality, and each supplier of water within the potential impact area of the well may submit comments to DES within 45 days after the public hearing or, if no hearing is requested, within 45 days after the receipt of the application. DES considers all relevant recommendations and comments received during the 45-day comment period or at the public hearing.

10) Technical Review

DES completes a technical review for a proposed large groundwater withdrawal within 45 days of a public hearing as described above or, if no hearing is requested, within 45 days of receipt of the final report. Using the adverse impact criteria in RSA 485-C, DES evaluates the permit application to verify that adverse impacts will not occur as a result of the proposed withdrawal. Adverse impacts are defined in RSA 485-C:21 as:

- (a) Reducing the withdrawal capacity of a private water supply well of a single residence as a result of the reduction of available water that is directly associated with the withdrawal as determined by the following:
 - (1) Any reduction in capacity for wells with a capacity less than Water Well Board recommended optimum minimum flow capacity of 4 gallons per minute for 4 hours before the withdrawal;
 - (2) Any reduction in capacity below 4 gallons per minute for 4 hours, for wells that had a capacity greater than 4 gallons per minute for 4 hours, before the withdrawal; or
 - (3) A reduction in capacity where the well still has a capacity between 4 gallons and 10 gallons per minute for 4 hours and the user provides information indicating that the reduction in flow has resulted in the inability to meet his or her water needs.
- (b) Reducing the capacity of a public drinking water supply below the minimum withdrawal rates required per consumer determined by the following:
 - (1) Minimum daily amounts of drinking water shall be determined per use based on the design flow criteria established for public water supply systems established in rules adopted by the department; or
 - (2) Where it is verified that such wells were unable to produce the design flow before the withdrawal began, the adverse impact shall be any reduction in the ability to produce water;
- (c) Reducing the capacity of a water supply that is used for a multiple-unit dwelling, but that is not a public water supply, that results in the inability to continue established activities or maintain existing water capacity requirements;
- (d) Reducing the capacity of a private, non-residential, non-drinking water supply that results in the inability of a commercial, industrial, agricultural, or retail facility to continue established services or production volumes;
- (e) Reducing the ability of a registered water user to produce volumes equivalent to the average daily withdrawal for a specific calendar month as determined by discharge measurements and reports made to the department in accordance with the water use reporting requirements under RSA 488 or other previous water use reporting requirements of the department;
- (f) Reducing surface water levels or flows that will, or do, cause a violation of surface water quality rules adopted by the department;
- (g) Causing a net loss of values for submerged lands under tidal and fresh waters and its wetlands as set forth in RSA 482-A;
- (h) Causing the inability of permitted surface water or groundwater discharges to meet permit conditions;
- (i) Reducing river flows below acceptable levels established pursuant to RSA 483;
- (j) Causing the contamination of groundwater obtained from wells or surface waters from contaminated groundwater whose flow has been altered by the withdrawal, or causing the contamination of an aquifer or contributing to the spread of any existing contamination; and
- (k) Causing the long-term predictable rate of replenishment of the aquifer that is the source of the withdrawal to be exceeded.

11) Final Decision

If the permit application information demonstrates the withdrawal will not produce adverse impacts, DES will issue a large groundwater withdrawal permit. If the permit application information indicates that an

adverse impact may occur, but can be mitigated, a withdrawal permit shall be granted under the following conditions:

- Sufficient information is provided verifying that any adverse impact will not be immediate or irreversible.
- Adverse impacts can be prevented by mitigation.
- A monitoring and reporting program is implemented as approved by DES.

If insufficient permit application information exists for DES to complete a technical evaluation, depending upon the proposed large groundwater withdrawal potential impacts, DES will either issue a conditional approval contingent upon the results of monitoring and reporting requirements, or require that additional analysis or hydrogeologic testing be completed for the withdrawal prior to issuing a permit.

Public Participation

DES recognizes that numerous stakeholders often become interested in the large groundwater withdrawal permitting process after the public hearing and comment period have ended. Therefore, DES is always available to meet with stakeholders to discuss the withdrawal permitting process. Furthermore, all documents, reports, and data submitted to DES regarding the withdrawal are available for review, **by appointment**, at our offices at 29 Hazen Drive, Concord, N.H. Additionally, DES will provide each municipality with copies of any mailed correspondence sent to the applicant and will provide the applicant with copies of any mailed correspondence sent to or received from each municipality. DES will coordinate and conduct public information meetings and/or technical working sessions with project stakeholders during the permitting process where there is sufficient interest.

Expiration of Approvals

An approved Preliminary Application expires within four years of issuance if the applicant does not submit the final report.

A large groundwater withdrawal permit expires within five years of issuance if the withdrawal is not activated.

A large groundwater withdrawal permit must be renewed ten years from the date of issuance for active large groundwater withdrawals.

For Additional Information

Contact Christine Bowman at (603) 271-8866 or christine.bowman@des.nh.gov, or Stephen Roy at (603) 271-3918 or stephen.roy@des.nh.gov. The large groundwater withdrawal regulations can be found at www.des.nh.gov, click on "A to Z List" and search for "Large Groundwater Withdrawals."

Please contact the Drinking Water and Groundwater Bureau at (603) 271-2513 or dwgbinfo@des.nh.gov or visit our website at <http://des.nh.gov/organization/divisions/water/dwgb/index.htm>. All of the bureau's fact sheets are on-line at <http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/index.htm>.

Note: This fact sheet is accurate as of September 2010. Statutory or regulatory changes or the availability of additional information after this date may render this information inaccurate or incomplete.