



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Robert R. Scott, Commissioner

EMAIL ONLY

January 25, 2019

Claudia Lamphier, Administrator
Town of Effingham
68 School Street
Effingham, NH 03882

Subject: Effingham – Closed Effingham Town Landfill, 53 Snow Road
DES Site #**198805021**, Project #555

Application for Renewal of Groundwater Management Permit, prepared by
Pine Tree Engineering, Inc. (Pine Tree), and dated November 5, 2018

2018 Landfill Monitoring, prepared by Pine Tree, and dated October 12, 2018

Dear Ms. Lamphier:

Please find enclosed Groundwater Management Permit Number **GWP-198805021-E-006**, approved by the New Hampshire Department of Environmental Services (NHDES). This Permit is issued for a period of 5 years to monitor groundwater quality at the above-referenced site, and is a renewal of your Permit that expired on January 1, 2019.

All required sampling results and monitoring summaries should continue to be addressed to the NHDES Groundwater Management Permits Coordinator. Correspondence should include the appropriate [Cover Sheet for Reports](#) and completed [Cover Sheet for Groundwater Monitoring Reports](#) that clearly show the NHDES identification number for this site (i.e., DES Site #**198805021**, Project #555). The submittal of documents in an electronic format through NHDES' [OneStop database](#) is preferred.

As defined under Condition No. 7 of the renewed Permit, Periodic Summary Reports are required to be submitted biennially in November 2021 and November 2023 following the corresponding September monitoring rounds. Please note that regular Permit monitoring data collected in September still need to be submitted within 45 days of the sampling event in accordance with standard Permit conditions. Submittal of the September 2019, 2020, and 2022 sampling data should include a tabulated summary of analytical results, groundwater elevation data, an up to date site plan, and lab data sheets.

Based on our review of the Permit renewal application and recent NHDES communications relative to this site, we have the following comments. Comments requiring a response from the Town and/or Pine Tree are summarized in ***bold italicized font***.

Included in the *2018 Landfill Monitoring* submittal, dated October 12, 2018, are the results of the initial screening for per- and polyfluoroalkyl substances (PFAS) in groundwater at the site, as previously required by NHDES. The scope of the initial PFAS sampling effort included collection of groundwater samples from on-site monitoring wells MW-2S and MW-3, and the transfer station supply well. These samples were analyzed for the nine individual PFAS currently recommended by NHDES, which include perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS), for which Ambient Groundwater Quality Standards (AGQS) have been established. Specifically, the AGQS of 70 nanograms per liter (ng/L) applies to the concentrations of PFOA and PFOS individually, or as a sum of the two concentrations combined (e.g., "PFOA+PFOS").

www.des.nh.gov

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Telephone: (603) 271-2908 Fax: (603) 271-2181 TDD Access: Relay NH 1-800-735-2964

1. Results of the initial PFAS screening at the site detected multiple PFAS in samples collected from monitoring wells MW-2S and MW-3. Seven out of the nine PFAS analyzed for were detected in the MW-3 sample; including PFOS at a concentration of 181 ng/L, exceeding AGQS; and PFOA at 29.7 ng/L. Detected concentrations at the sampled wells for PFOA+PFOS ranged from 27.1 ng/L (MW-2) to 210.7 ng/L (MW-3); with PFAS detections (total of the nine analyzed) ranging from 33.18 ng/L to 263.38 ng/L. We note results from the transfer station water supply well indicated no PFAS (of the nine analyzed) were detected. Based on the PFAS screening results provided, and consistent with current NHDES policy, NHDES requires that Pine Tree complete a limited Receptor Survey to identify and sample (for PFAS) any water supply wells within 1,000 feet of the landfill. Sampling results for water supply wells shall be submitted to NHDES' Waste Management Division and the property owner. Immediate verbal notification is required upon receipt of analytical sampling results showing exceedances of AGQS. The analytical sampling reports shall be submitted within 5 days of this verbal notification. ***Please proceed with the identification and sampling of all water supply wells within 1,000 feet of the landfill for PFAS, as outlined above. Results shall be submitted to NHDES no later than 90 days of the date of this letter. The Data Submittal should include an evaluation of the PFAS results and recommendations for future monitoring or other actions.***
2. Consistent with current NHDES policy, a second (confirmatory) round of sampling for PFAS is required. Based on the available data, this second round shall include, at a minimum, the previously sampled MW-2S and MW-3; along with the background well MW-4S. NHDES notes several monitoring wells or piezometers are indicated on the site plan which may be in favorable positions for determining the extent of PFAS impact if they still exist. The condition of KC-40, KC-41, and MW-5 should be evaluated and if they are deemed to be appropriately-constructed and viable sampling points, they should also be sampled. In consideration of the monitoring schedule established under the site Permit, NHDES will look for the confirmatory PFAS sampling to be included as part of the next (September 2019) Permit monitoring round. ***Conduct PFAS sampling at monitoring wells MW-2S, MW-3, and MW-4S, and if viable KC-40, KC-41, and MW-5, during the September 2019 Permit monitoring round. Results shall be submitted to NHDES as part of the next Permit Data Transmittal, due in November 2019, and should include an evaluation of the results and recommendations for future monitoring or other actions.***
3. NHDES notes the elevated concentrations of PFOS detected at the site may be the result of wastes disposed of at the landfill or potentially past or current site practices; such as the use of Class-B firefighting foam to extinguish fires. MW-3, at which the highest PFOS concentration was reported, also appears to be located in an area directly downgradient from the "wood waste/burn pile" indicated on site plans previously provided to NHDES. To provide background Site history, inquiries should be made to site workers and persons with historical knowledge of the Site about the potential use of firefighting foam; such as past or current burn piles, or if the Site has ever been used for fire training. ***Please make inquiries relative to the use of firefighting foam at the Site. Results can be submitted to NHDES as part of the next Permit Data Transmittal in November 2019.***

4. Please note along with the routine submittal of documents through NHDES' OneStop, NHDES is requesting all PFAS analytical results be uploaded to NHDES' Environmental Monitoring Database (EMD). Guidance for the EMD upload process can be found at the following link: <https://www.des.nh.gov/organization/commissioner/documents/pfas-emd-guidance.pdf>. Technical questions regarding EMD data uploads should be directed to Melanie Cofrin at (603) 271-8803 (Melanie.Cofrin@des.nh.gov). **Please upload analytical results from PFAS sampling events to NHDES' EMD.**
5. Please note, as a point of clarification, the 30-year postclosure monitoring period referenced by Pine Tree within the Permit renewal application does not apply to determining the length of time a permittee must implement post-closure monitoring. The 30-year postclosure period for landfills, referenced in Env-Sw 807.05(c), is solely for the purpose of determining initial financial assurance requirements. Pursuant to Env-Sw 807.05(e), the length of time a landfill must be under postclosure monitoring, maintenance, and reporting is dependent on achieving the performance standards in Env-Sw 807.04.

Should you have any questions, please contact me at NHDES' Waste Management Division.

Sincerely,



James O'Rourke, P.G.
Waste Management Division
Tel: (603) 271-2909
Fax: (603) 271-2181
Email: James.ORourke@des.nh.gov

cc: Paul Rydel, P.G., HWRB
Linda Birmingham, CPM, SWMB
Robert Prue, P.E., Pine Tree Engineering, Inc.
Attention Health Officer, Town of Effingham



The
NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
hereby issues
GROUNDWATER MANAGEMENT PERMIT NO. GWP-198805021-E-006
to the permittee
TOWN OF EFFINGHAM
to monitor the groundwater quality at the
CLOSED EFFINGHAM TOWN LANDFILL
(Snow Road)
in EFFINGHAM, N.H.
via the groundwater monitoring system comprised of
4 monitoring wells and 1 bedrock water supply well
as depicted on the Site Plans entitled
"Effingham Landfill Groundwater Contour Site Plan" and
"Attachment 2 Groundwater Management Zone"
dated November 5, 2018, prepared by Pine Tree Engineering, Inc.

TO: TOWN OF EFFINGHAM
68 SCHOOL STREET
EFFINGHAM, NH 03882

Date of Issuance: January 25, 2019
Date of Expiration: January 24, 2024

Pursuant to authority in N.H. RSA 485-C:6-a, the New Hampshire Department of Environmental Services (NHDES), hereby grants this Permit to monitor past discharges to the groundwater at the above-described location for five years, subject to the following conditions:

(continued)

STANDARD MANAGEMENT PERMIT CONDITIONS

1. The permittee shall not violate Ambient Groundwater Quality Standards adopted by NHDES (N.H. Admin. Rules Env-Or 600) in groundwater outside the boundaries of the Groundwater Management Zone, as shown on the referenced site plan.
2. The permittee shall not cause groundwater degradation that results in a violation of surface water quality standards (N.H. Admin. Rules Env-Wq 1700) in any surface water body.
3. The permittee shall allow any authorized staff of NHDES, or its agent, to enter the property covered by this Permit for the purpose of collecting information, examining records, collecting samples, or undertaking other action associated with this Permit.
4. The permittee shall apply for renewal of this Permit prior to its expiration date but no more than 90 days prior to expiration.
5. This Permit is transferable only upon written request to, and approval of, NHDES. Compliance with the existing Permit shall be established prior to Permit transfer. Transfer requests shall include the name and address of the person to whom the Permit transfer is requested, the signatures of the current and future permittees, and a summary of all monitoring results to date.
6. NHDES reserves the right, under N.H. Admin. Rules Env-Or 600, to require additional hydrogeologic studies and/or remedial measures if NHDES receives information indicating the need for such work.
7. The permittee shall maintain a water quality monitoring program and submit monitoring results to NHDES no later than 45 days after sampling. Samples shall be taken from the monitoring wells as shown and labeled on the referenced site plan and other sampling points listed in the following table in accordance with the schedule outlined herein:

Monitoring Locations	Sampling Frequency	Parameters
Landfill Monitoring Wells: MW-1, MW-2S, MW-3, and MW-4S; and Transfer Station Water Supply Well	September of each year	Specific conductance @25°C, pH, chloride, arsenic, iron, manganese, and static water level elevation (monitoring wells only)
Same as above	September 2023	Nitrate, TKN, barium, lead, and the NHDES Waste Management Division Full List of Analytes for Volatile Organics*

* Low-level analysis for 1,4-dioxane is not required.

Sampling shall be performed in accordance with the documents listed in Env-Or 610.02 (e). Samples shall be analyzed by a laboratory certified by the U.S. Environmental Protection Agency, or NHDES pursuant to Env-C 300. All overburden groundwater samples collected for metals analysis (arsenic, iron, manganese, barium, and lead) shall be analyzed for dissolved metals; and thus must be field filtered (with a 0.45-micron filter) and acidified after filtration in the field. Surface water samples, and groundwater samples collected from bedrock or water supply wells, shall be analyzed for total metals, and shall not be filtered.

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Summaries of water quality shall be submitted on a biennial (every other year) basis to NHDES' Waste Management Division, in the months of November 2021 and 2023, using a format acceptable to NHDES. The Summary Reports shall include the information listed in Env-Or 607.04 (a), as applicable.

The Summary Reports shall be prepared and stamped by a professional engineer or professional geologist licensed in the State of New Hampshire.

8. Issuance of this Permit is based on the Groundwater Management Permit Renewal Application dated November 5, 2018, and the historical documents found in NHDES file DES #198805021. NHDES may require additional hydrogeologic studies and/or remedial measures if invalid or inaccurate data are submitted.
9. Within 30 days of discovery of a violation of an ambient groundwater quality standard at or beyond the Groundwater Management Zone boundary, the permittee shall notify NHDES in writing. Within 60 days of discovery, the permittee shall submit recommendations to correct the violation. NHDES shall approve the recommendations if NHDES determines that they will correct the violation.
10. All monitoring wells at the site shall be properly maintained and secured from unauthorized access or surface water infiltration.

ADDITIONAL CONDITION FOR LANDFILLS

11. The permittee shall maintain the capping system at the facility so that it continues to meet the standards set forth in Env-Sw 805.10.

SPECIAL CONDITIONS FOR THIS PERMIT

12. Recorded property within the Groundwater Management Zone includes the lots as listed and described in the following table:

Tax Map / Lot No.	Property Address	Owner Name and Address	Deed Reference (Book / Page)
204 / 20 410 / 77 411 / 21	Effingham Town Landfill Snow Road Effingham, NH 03882	Town of Effingham 68 School Street Effingham, NH 03882	954 / 341

13. The permittee shall update the ownership information required by Env-Or 607.03(a)(20) for all properties within the Groundwater Management Zone prior to renewal of the Permit, or upon a recommendation for site closure.



Karlee A. Kenison, P.G., Administrator
Hazardous Waste Remediation Bureau
Waste Management Division

Any person aggrieved by any terms or conditions of this Permit may appeal to the N.H. Waste Management Council ("Council") by filing an appeal that meets the requirements specified in RSA 21-O:14 and the rules adopted by the Council, Env-WMC 200. The appeal must be filed **directly with the Council within 30 days** of the date of this decision and must set forth fully **every ground** upon which it is claimed that the decision complained of is unlawful or unreasonable. Only those grounds set forth in the notice of appeal can be considered by the Council.

Information about the Council, including a link to the Council's rules, is available at <https://nhec.nh.gov/> (or more directly at <https://nhec.nh.gov/waste/index.htm>). Copies of the rules also are available from NHDES' Public Information Center at (603) 271-2975.

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