

Notice Number 2024-74

Rule Number Env-Sw 800

1. Agency Name & Address:

**Department of Environmental Services
29 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095**

2. RSA Authority: RSA 149-M:7, II, XIV, and XVI

3. Federal Authority: 40 CFR 258

4. Type of Action:

Adoption _____

Repeal _____

Readoption _____

Readoption w/amendment X

5. Short Title: **Landfill Requirements**

6. (a) Summary of what the rule says and of any proposed amendments including whether the rule implements a state statute for the first time:

The Department of Environmental Services (Department) proposes to readopt with amendment Chapter Env-Sw 800, which specifies minimum standards for where a landfill is located, and how it is designed, constructed, operated, and closed, including how post-closure is managed. The existing rules also specify provisions for reclaiming a landfill, and for permit-exempt landfills.

The existing rules in Chapter Env-Sw 800 are scheduled to expire 7-1-24, but are subject to extension pursuant to RSA 541-A:14-a.

The Department believes the proposed rules will benefit the regulated community by clarifying the requirements on the siting, design, operation, closure, and reclamation of solid waste landfills. The Department believes the updates to the proposed rules ensure they are consistent with current industry standards and engineering practice. The Department has focused some attention on correcting grammatical errors, reorganizing some rules for efficiency and clarity, and eliminating redundancy in the proposed rules. The Department believes the proposed rules will benefit the environment, public health, and welfare by enhancing the siting requirements for new landfills to ensure releases will be detected, analyzed, and remediation initiated before a release can reach a sensitive environment. Additional siting requirements are also proposed to further shield vulnerable populations from landfill nuisances. New design requirements for landfills are being proposed to further protect the environment from possible releases from a facility and to ensure that a landfill is designed to be resilient to weather impacts from climate change. Some operating, recordkeeping, and closure requirements are also being updated to ensure solid waste landfills are being managed properly.

More specifically regarding landfill siting requirements in Env-Sw 804, the proposed siting requirements for new landfills, including expansions of existing landfills, do not require changes to the methods used to evaluate and show compliance with the siting requirements; although the proposed changes to siting requirements may reduce land available for development of new or expanded landfills.

More specifically regarding landfill design and construction requirements in Env-Sw 805, the proposed design requirements include: requiring leachate collection system pipes, tanks, sumps, and other conveyance and storage systems to be double-walled; requiring leachate collection systems to handle precipitation from routine operations plus a 25-year storm event plus 20%, which will increase system size to better address ongoing climate changes and extreme weather events; requiring multi-liner systems to have at least one composite liner, which will inhibit leakage through geomembrane liners; requiring back-up high water alarms and automatic dialers for leachate collection systems, which will assist in preventing leachate releases; and requiring

stormwater management systems be designed to handle a 50-year storm event, which will increase stormwater management system and component sizes to better address the increase in extreme weather events.

Proposed design requirements also include: requiring stormwater design reports be prepared in accordance with the alteration of terrain rules in Env-Wq 1500, which would allow applicants to use the same work for two different regulatory programs; requiring stability and settlement evaluations, decomposition gas management systems, and walls, berms, and other waste retaining structures to meet certain minimum design standards; requiring leachate collection and removal systems to be leak tight, which will reduce the potential for spills and other accidental leachate releases to the environment; requiring odor control plans be included in project technical specifications; and updating American Society for Testing and Materials standards.

Other proposed changes to design requirements include two provisions that will relieve permittees of the need to request waivers from the rules; to wit, a grandfathering provision for vertical expansion of existing permitted municipal solid waste landfills in Env-Sw 805.17; and allowing PVC pipes to be solvent welded when used inside a secondary containment system in Env-Sw 805.06. The proposed rules allow for technical specifications to address quality assurance and quality control requirements, thus reducing redundancy and duplication in documentation submitted to the Department and included in construction contracts.

Proposed changes to operating requirements for landfills in Env-Sw 806 include: requiring alternate daily covers be evaluated through a demonstration project; requiring daily and intermediate cover to meet certain minimum standards and be applied within certain timeframes; requiring landfill sections be permanently closed within certain timeframes; requiring leachate analytical characterization to include per- and polyfluoroalkyl substances and certain wastewater parameters; requiring an annual odor control evaluation and report for landfills receiving putrescible wastes; requiring quarterly operations reports to include a summary of complaints and leachate breakouts; requiring annual facility reports to include leachate analytical trends; requiring leachate analytical data be evaluated before submittal to the Department; and requiring investigation when flow rates in leak detection and location systems exceed 50 gallons per acre per day.

Other proposed changes to operating requirements include: requiring deed notification when a landfill begins operations instead of delaying deed notification to the closure phase; requiring a minimum of 6 inches of daily cover consistent with existing approved facility operating plans; requiring leachate generation be limited by implementing certain already required practices; posting to a landfill’s existing publicly available website contact information for reporting issues or complaints; and allowing records to be stored electronically.

Proposed changes to closure and reclamation requirements for landfills in Env-Sw 807 and Env-Sw 808, respectively, and for permit-exempt landfills in Env-Sw 810, are generally proposed to clarify existing requirements.

6. (b) Brief description of the groups affected:

The rules apply to owners of landfills that require a solid waste permit or are permit exempt.

6. (c) Specific section or sections of state statute or federal statute or regulation which the rule is intended to implement:

Rule Sections	State Statute(s) Implemented	Federal Regulations Implemented
Env-Sw 800 (see also specific sections listed below)	RSA 149-M:6, III; RSA 149-M:7, II, III, V, XIV, XVI; RSA 149-M:9	40 CFR 258

Rule Sections	State Statute(s) Implemented	Federal Regulations Implemented
Env-Sw 806.05	RSA 149-M:6, III; RSA 149-M:7, II, III, XIV; RSA 149-M:9	40 CFR 258.4
Env-Sw 806.12	RSA 149-M:27, II, III, IV, V; RSA 149-M:28, IV; RSA 149-M:58, I	

7. Contact person for copies and questions including requests to accommodate persons with disabilities:

Name: **Emily Jones** Title: **Compliance Assurance Section Supervisor**
Mailing Address: **Department of Environmental Services** Phone #: **1-603-271-6467**
P.O. Box 95 Fax#: **1-603-271-2456**
Concord, NH 03302-0095 E-mail: Emily.M.Jones@des.nh.gov

TTY/TDD Access: Relay NH 1-800-735-2964
or dial 711 (in NH)

8. Deadline for submission of materials in writing or, if practicable for the agency, in the electronic format specified: **4:00 pm on Wednesday, June 5, 2024**

Fax E-mail Other format (specify):USPS

Please submit comments to
swmbrules@des.nh.gov

9. Public hearing scheduled for:

Date and Time: **Monday, May 20, 2024, at 1:00 pm**

Physical Location: **Auditorium, DMV building, 23 Hazen Drive, Concord, NH**

You also may attend the hearing via Microsoft Teams, which can be accessed through the following link:
[Click here to join the meeting](#)

Electronic Access (if applicable):

Meeting number (access code): After registering using this link, interested participants will be provided a confirmation email with information about joining the hearing remotely.

You also may join the meeting by phone:

Call in Number: [+1 603-931-4944,,898783766#](tel:+16039314944898783766)

Passcode: 77Nu68

Meeting ID: 250 809 748 091

If any questions or technical issues, please contact Jeremy Lewis at 1-860-387-9931 or via email at Jeremy.M.Lewis@des.nh.gov.

10. Fiscal Impact Statement (Prepared by Legislative Budget Assistant):

FIS # 24:072 , dated 4/15/2024

1. Comparison of the costs of the proposed rule(s) to the existing rule(s):

When compared to the existing rules, the proposed rules may increase and decrease expenditures for independently owned businesses and political subdivisions by indeterminable amounts. Not applicable to Env-Sw 805.18, Env-Sw 807.06, Env-Sw 808.06, and Env-Sw 808.07 which are new sections.

2. Cite the Federal mandate. Identify the impact on state funds:

No federal mandate, no impact on state funds. The state has received a determination of adequacy for its municipal solid waste landfill permit program under the Resource Conservation Recovery Act from the U.S. Environmental Protection Agency, effectively delegating implementation of 40 CFR 258, Criteria for Municipal Solid Waste Landfills, to the state. These rules help implement that federal delegation.

3. Cost and benefits of the proposed rule(s):

The Department has identified the following possible fiscal impacts attributable to the proposed rules.

Landfill siting requirements.

- There are no new costs for existing landfills because the new siting requirements do not apply to landfill footprints permitted prior to the adoption date of the proposed rules. The changed siting requirements may reduce land available for development of new or expanded landfills, the cost implications of such change are unclear.

Land design requirements.

- The proposed landfill design requirements that will increase costs include:
 - Requiring leachate collection system pipes, tanks, sumps, and other conveyance and storage systems to be double-walled; requiring leachate collection systems to handle precipitation from routine operations plus a 25-year storm event plus 20%, which will increase system size and thus cost to better address ongoing climate changes and extreme weather events;
 - Requiring multi-liner systems to have at least one composite liner, which will increase liner material and construction costs while inhibiting leakage through geomembrane liners;
 - Requiring back-up high water alarms and automatic dialers for leachate collection systems, which will increase costs by adding these devices in new designs but assist in preventing leachate releases; and
 - Requiring stormwater management systems be designed to handle a 50-year storm event, which will increase stormwater management system and component sizes and thus costs while better addressing the increase in extreme weather events.
- Proposed design requirements or clarifications that are unlikely to result in additional costs include:
 - Requiring stormwater design reports be prepared in accordance with alteration of terrain rules, which allows applicants to use the same work for two different regulatory programs;
 - Requiring stability and settlement evaluations to meet certain minimum standards, which will provide clarity and reduce the need to request additional information from applicants;
 - Requiring decomposition gas management systems to meet certain minimum design standards, which will again provide clarity and reduce the need to request additional information from applicants;

- Requiring leachate collection and removal systems to be leak tight, which will reduce the potential for spills and other accidental leachate releases to the environment;
- Requiring odor control plans be included in project technical specifications, which plans are already typically required by permit condition at landfills where putrescible wastes are managed;
- Requiring walls, berms, and other waste retaining structures to meet certain minimum design standards, which will provide clarity and reduce the need to request additional information from applicants; and
- Updating American Society for Testing and Materials (ASTM) standards, which will provide clarity and regulatory consistency.
- Proposed design requirements or clarifications that may result in reduced costs include:
 - Two provisions that will relieve permittees of the need to request waivers from the rules; a grandfathering provision for vertical expansion of existing permitted municipal solid waste landfills, and allowing PVC pipes to be solvent welded when used inside a secondary containment system.
 - The proposed rules may decrease costs by allowing technical specifications to address quality assurance quality control requirements, thus reducing redundancy and duplication in documentation submitted to the department and included in construction contracts.
- The proposed design requirements do not apply to existing permitted landfills or existing permitted landfill phases or parts thereof that are approved as of the effective date of these rules. There are no costs relative to existing or approved final designs.

Land operating requirements.

- Cost increases relative to landfill operating requirements are anticipated; however, the costs will vary depending on the landfill and whether a permit condition already addresses a proposed rule requirement. These include:
 - Requiring alternate daily covers be evaluated through a demonstration project, which may increase costs to undertake the demonstration but provide field-based evidence of suitability and a more efficient mechanism for approval of alternate daily covers;
 - Requiring daily and intermediate cover to meet certain minimum standards and be applied within certain timeframes, which may shift costs to the near term but will more timely address offensive odor and other nuisance issues, minimize attraction of wildlife, control drainage, control unsightly conditions such as windblown litter, reduce the potential for fire, provide stability, and assist in the proper development of final grades;
 - Requiring landfill sections be capped (permanently closed) within certain timeframes, which may require more frequent capping events, thus shifting costs to the near term, but will more timely address odor, nuisance, wildlife, drainage, fire, stability, and other conditions previously mentioned;
 - Requiring leachate analytical characterization to include per- and polyfluoroalkyl substances (PFAS) and certain wastewater parameters, which will increase sampling and testing costs and ensure leachate disposal options remain timely available;
 - Requiring an annual odor control evaluation and report for landfills receiving putrescible wastes, which may increase reporting costs for 2 of the 6 MSW landfills but be neutral for 4 of the 6 MSW landfills for which the report is already required;

- Requiring quarterly operations reports to include a summary of complaints and leachate breakouts, which will nominally increase reporting costs to add this information to quarterly reports;
- Requiring annual facility reports to include leachate analytical trends, which will initially increase reporting costs and then likely have a nominal effect on reporting costs;
- Requiring leachate analytical data be evaluated before submittal to the department, which will increase reporting costs; and
- Requiring investigation when flow rates in leak detection and location systems exceed 50 gallons per acre per day, which will increase costs only if such investigation is required.
- Proposed operating requirements or clarifications that are likely to be cost neutral include:
 - Requiring deed notification when a landfill begins operations instead of delaying deed notification to the closure phase;
 - Requiring a minimum of 6 inches of daily cover consistent with existing approved facility operating plans;
 - Requiring leachate generation be limited by implementing certain already required practices;
 - Posting to a landfill's existing publicly available website contact information for reporting issues or complaints; and
 - Allowing records to be stored electronically.

Landfill closure requirements.

- No changes in costs are anticipated from rules relative to landfill closure requirements or from the added clarification to the requirements for requesting post-closure use of a landfill.

Landfill reclamation requirements.

- No change in costs from the rules relative to landfill reclamation requirements.

Permit-exempt landfill requirements.

- No change in costs from the proposed rules relative to permit-exempt landfills are anticipated.

A. To State general or State special funds:

None.

B. To State citizens and political subdivisions:

There would be no direct costs to the citizens of the state. Political subdivisions that own or operate a landfill will be subject to the costs identified in #3 above. Some costs incurred by private facility owners/operators may be passed through to political subdivisions that use a landfill for waste disposal.

C. To independently owned businesses:

New Hampshire has six, operating, double-lined landfills that accept municipal solid waste. In addition, there is one, operating, single-lined landfill; and two, operating, unlined landfills; none of which accept municipal solid waste. New Hampshire has over 250 inactive, closed landfills, most of which are unlined and municipally owned. To the extent that independently owned businesses elect to own or operate a landfill, they will be subject to the costs identified in #3 above.

11. Statement Relative to Part I, Article 28-a of the N.H. Constitution:

Any costs associated with the proposed rules are primarily attributable to the statute. The proposed rules do not mandate or assign to any political subdivision a program or responsibility that is new, expanded, or modified from what existed before state action which would necessitate additional expenditures by a political subdivision. The proposed rules do not impose a change to an underlying function, duty, or activity performed or to be performed by a local government, and so do not violate Part I, Article 28-a of the New Hampshire Constitution.