

SB 61 - AS INTRODUCED

2023 SESSION

23-0927

08/10

SENATE BILL **61**

AN ACT relative to surface water setbacks for landfills.

SPONSORS: Sen. Avar, Dist 12; Sen. Lang, Dist 2; Sen. Ward, Dist 8; Sen. Watters, Dist 4;
Sen. Carson, Dist 14

COMMITTEE: Energy and Natural Resources

ANALYSIS

This bill enables the department of environmental services to adopt rules relative to surface water setbacks for landfills.

Explanation: Matter added to current law appears in ***bold italics***.
Matter removed from current law appears ~~[in brackets and struckthrough]~~
Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Twenty Three

AN ACT relative to surface water setbacks for landfills.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 1 Statement of Purpose. The protection of perennial rivers, lakes, and coastal waters from
2 contamination is in the public interest of the state of New Hampshire. The general court recognizes
3 that the state's current statutes and rules provide for redundant protection of groundwater and
4 surface water from releases or spills of leachate generated by disposal of waste in the state's
5 landfills. As environmental protection technology advances, however, the general court intends that
6 the department of environmental services reexamine its rules periodically to determine whether the
7 protections already provided by the rules can be enhanced for newly sited facilities. The purpose of
8 this act is to direct the department to reexamine its rules governing setbacks of newly sited landfills
9 from surface water bodies to impose site-specific requirements sufficient to prevent groundwater
10 contaminated by a spill or release of leachate from reaching such a water body before remedial
11 action can be implemented, to provide the department with representative factors that it must
12 consider in adopting new setback rules, and to require the department to take into account certain
13 additional environmental protective measures proposed by an applicant for a landfill permit. The
14 act also sets a timeframe for the department's adoption of new setback rules and requires that any
15 newly-sited landfill permitted after the effective date comply with the new rules if they are timely
16 adopted as provided in this legislation.

17 2 Findings. The general court finds that:

18 I. The current rules of the department of environmental services require a "thorough
19 hydrogeological investigation" of any proposed landfill site so that "[t]he potential release of
20 contaminants to surface waters can be prevented, attenuated or otherwise remediated." Env-Sw
21 804.03(c)(3). The rules also contain multiple provisions for the design, construction, and operation of
22 landfills that require redundant protections against groundwater and surface water contamination.
23 These provisions include a minimum 200-foot setback between the proposed landfill cell's footprint
24 and any perennial surface water body. Env-Sw 804.03(d).

25 II. The department of environmental services' rules have proven effective in preventing
26 releases of contaminants from the state's lined landfills to groundwater and surface water, and the
27 department's requirement of a network of release detection wells at landfill sites enables the
28 department to be notified of even low levels of contaminants in groundwater so that contamination is
29 detected and remediated before the contaminants can migrate to surface water or sensitive receptors
30 like drinking water wells.

1 III. The 200-foot minimum setback between landfills and perennial surface water in the
2 department's rules falls within one of three broad categories of methods used by other states to
3 determine setbacks. The 3 categories are distance-based setbacks, site-specific setbacks, and
4 distance-based setbacks that can be reduced by the landfill owner through implementation of design
5 features that provide additional redundancy to the landfill's environmental protection systems.

6 IV. The general court finds that the most protective of these methods is the use of site-
7 specific setbacks. This approach avoids the possible limitations of the current one-size-fits-all
8 distance-based method, ensures that the setback is based on the conditions at the specific site, and
9 concentrates protections on downgradient groundwater and surface water where it belongs.

10 V. The state should encourage permit applicants to propose design features providing
11 further redundancy to the landfill's environmental protection systems and that such features should
12 be taken into account in the department's determination of a site-specific setback.

13 VI. This approach reflects the balance New Hampshire seeks to strike in its environmental
14 regulation between ensuring that all reasonably practicable and economically sound measures are
15 used to protect our environment while providing permit applicants with incentives to improve
16 environmental protection beyond the rigorous baseline standards.

17 3 New Paragraph; Rulemaking; Surface Water Setback. Amend RSA 149-M:7 by inserting after
18 paragraph III the following new paragraph:

19 III-a. Criteria for the setback of a landfill cell from perennial surface water bodies to
20 prevent, attenuate, or otherwise remediate the potential release of contaminants to each such
21 surface water body from the landfill cell. Any rules adopted by the department under this paragraph
22 shall, in addition to any other factors the department deems necessary for the rules to provide
23 adequate protection of perennial surface water, take into account the following with respect to the
24 subsurface conditions between the proposed landfill cell and the surface water body:

25 (a) The soil stratigraphy and permeability;

26 (b) The volume, gradients, and travel time of groundwater supplying the surface water
27 body, including the means by which to measure or model representative travel time;

28 (c) Bedrock lithology and structure, including the nature, degree and continuity of
29 fracturing; and

30 (d) Hydraulic conductivity and such processes as advection, dispersion, and diffusion in
31 groundwater.

32 4 New Paragraph; Site-Specific Setback to Surface Water. Amend RSA 149-M:9 by inserting
33 after paragraph XIV the following new paragraph:

34 XV.(a) In formulating a site-specific setback to perennial surface water under rules adopted
35 pursuant to RSA 149-M:7, III-a, the department shall take into account any measures proposed in
36 the application for a permit that would provide greater or more redundant protection of perennial

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1 surface water than the department would otherwise require under its rules. Such measures shall
2 include, without limitation:

3 (1) Installation of a tertiary soil or geomembrane liner system below the secondary
4 liner system, providing a third layer of protection between waste materials and groundwater.

5 (2) Installation of a second monitoring zone beneath the secondary liner system
6 providing redundant verification of the effectiveness of the liner systems.

7 (3) Conversion of the primary and/or secondary liner systems from the minimum
8 single-liner design to an enhanced composite liner design in accordance with the department's
9 landfill design rules.

10 (4) Improvements to the engineered low permeability subgrade such as increases in
11 thickness and reductions in permeability of the soil zones beneath the liner systems.

12 (5) Increasing the thickness of the liner by at least 20 mil for geomembrane liners
13 and at least one foot for soil liners.

14 (6) Increasing the vertical separation distance of the secondary liner from
15 groundwater to greater than the minimum set by the department's rules.

16 (7) Installation of groundwater monitoring well networks that are capable of being
17 utilized as groundwater extraction points or that provide points for sampling, groundwater
18 characterization, or groundwater extraction in excess of what the department requires under its
19 rules.

20 (8) Implementation of enhanced environmental monitoring programs, including
21 increasing the frequency of sampling and analytical testing, incorporation of real-time monitoring
22 systems, and use of automated collection with telemetry.

23 (b) The department shall include as a condition to any permit the implementation of a
24 measure proposed in the application for the permit upon which the department relied in formulating
25 the site-specific setback required by RSA 149-M:7, III-a.

26 5 Deadline for Rulemaking; Applicability. The department shall complete the rulemaking and
27 adopt the rules required by this act within one year of its effective date. Conditioned only upon the
28 department's timely compliance with such rulemaking and adoption deadline:

29 I. Any newly-sited landfill in the state that receives a standard permit from the department
30 after the effective date of this act must meet the newly adopted setback rules; and

31 II. The department may not issue any such standard permit without imposing a site-specific
32 setback on the landfill's design and construction in accordance with the newly adopted setback rules.

33 6 Effective Date. This act shall take effect upon its passage.