

TOWN OF STARKS

**Ordinance Regulating Storage and
Land Application of Sludge and
Septage**

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ARTICLE I: Authority

This Ordinance is adopted pursuant to Maine Constitution Article VII, part 2; and 30-A M.R.S.A. 3001.

ARTICLE II: Findings and Purpose

The Town finds that sludge and septage may contain concentrations of heavy metals, polychlorinated biphenyls and substances which can be harmful to humans, animals, aquatic life, plant life and the natural environment. The Town further finds that its topography, which includes wetlands, numerous brooks and tributaries, and significant groundwater aquifers, makes it uniquely susceptible to environmental damage and, more particularly, that runoff from areas where sludge and septage have been spread would pose a special danger to those water bodies and would threaten the ecological and economic well-being of the Town.

The purpose of this Ordinance is to provide an opportunity for effective notice and meaningful public input during the local review process, to provide opportunity for local review, monitoring and enforcement of sludge and septage storage and application activities, including any long-term effects, to ensure adequate remedy for any damage that may occur, to protect the health and safety of the residents of Starks, to enhance and maintain the quality of the environment, and to conserve natural resources through regulation of storage and land application of industrial wastewater treatment plant sludge and septage.

ARTICLE III: Definitions

- a. Applicant: The term "applicant" refers to the owner and/or operator of the wastewater treatment plant or generator of the sludge or septage.
- b. Aquifer: See "significant groundwater aquifer."
- c. Board: The term "Board" refers to the Starks Planning Board.
- d. Selectmen: The term "Selectmen" refers to the Starks Town Selectmen.
- e. Department of Environmental Protection: The term "Department of Environmental Protection," more commonly referred to as "DEP" refers to the State of Maine Department of Environmental Protection, including the Board of Environmental Protection and the Commissioner, and/or its successor agencies.
- f. EP Toxicity Test: The term "EP Toxicity Test" refers to the Extraction procedure Toxicity Test as described in Section 1.2.4. of the U.S. Environmental protection Agency (EPA) document entitled Test Methods for Evaluating Solid Waste, SW 846 (Nov. 1986).
- g. Operator: The term "operator" refers to any person who has care, change or control of a landscaping site or storage facility subject to this Ordinance. This person may be the owner, an agent, a lessee of the owner, or an independent contractor.
- h. Owner: The term "owner" refers to any person who, alone or in conjunction with, owns the real property upon which is located a landspreading site or storage facility subject to this Ordinance.
- i. Primary sand and gravel recharge areas: The term "primary sand and gravel recharge areas" refers to the surface directly overlying sand and gravel formations that provide direct replenishment of the ground water in sand and gravel and fractured bedrock aquifers. The term does not include areas overlying formations that have been identified as unsaturated and are not contiguous with saturated formations.
- j. Septage: The term "septage" refers to waste, refuse, effluent, sludge, and materials from septic tanks, cesspools, or similar facilities.

k. Significant groundwater aquifer: The term "significant groundwater aquifer" refers to any formation of soil or fractured bedrock that contains significant recoverable quantities of water (greater than ten gallons per minute from a properly constructed six-inch well). Note: reference may be made to the "Hydrogeologic Data for Significant Sand and Gravel Aquifers" map prepared by the Maine Geologic Survey. In the event that on-site testing required pursuant to this Ordinance identifies additional aquifers or identifies boundaries of aquifers that are different from those mapped, the results of the on-site testing shall control.

l. Sludge: The term "sludge" refers to the solid, semi-solid or liquid septage generated by a municipal, commercial or industrial wastewater treatment plant.

m. Temporary Field Stacking: The term "temporary field stacking" refers only to short-term stacking of materials for not longer than a period of seventy-two (72) hours before spreading is to occur.

ARTICLE IV: Application Procedure

A. Procedure

1. An applicant wishing to deliver, store or spread sludge, septage, or any material containing the aforementioned in Starks shall file an application form with the Board. The application shall be submitted at least 135 days before the date of first delivery, storage or spreading, so as to ensure adequate time for review under this Ordinance.

2. The applicant shall submit twenty(20) copies of the application at least thirty (30) days prior to the Board meeting at which the applicant wishes to be heard.

3. The application shall be accompanied by a non-refundable fee of Fifteen Hundred Dollars (\$1,500.0), in the form of a check or money order made payable to the Town of Starks.

4. The Board shall require the applicant to deposit an amount not to exceed Twenty-Five Thousand Dollars (\$25,000.00) in an interest-bearing account in the name of the Town. The purpose of this account shall be to allow the Town to hire a professional consultant to review the application for compliance with this Ordinance as well as conduct such additional studies as may be required to assure that the public health, safety, and natural environment will not be adversely impacted by the proposed sludge spreading or storage. Funds shall be withdrawn from this account by the Treasurer of the Town at the Board's request. Any interest earned and any remaining balance in this account shall be returned to the applicant following approval or denial of the application.

5. At the meeting at which it is first considered by the Board, the Board shall review the application to determine whether it is complete or whether additional submissions are required. If the application is found to be incomplete, the Board shall notify the applicant in writing within thirty (30) days of the meeting as to what additional submissions are necessary to begin the review process.

6. The applicant must provide any additional information within thirty (30) days of the date on which the Board gives notice that additional information is required.

7. The application shall be considered "complete" and "filed" as of the date when all required information is furnished to the Board by the applicant.

8. A public hearing shall be held within thirty-five (35) days after the Board determines that the application is complete. The Board shall cause notice of the time, place and date of such hearing to be sent by mail, not less than ten (10) days before the hearing to the applicant, to abutters of the properties involved, and to owners of any property within 1,000 feet of the properties involved. Owners of abutting properties and of properties within 1,000 feet shall be those listed in the most recent tax records of the Town of Starks. Notice shall also be published at least seven (7) days prior to the public hearing in a newspaper of general circulation in the Town of Starks. Notice shall also be posted in three (3) public places designated by the Board. Failure to receive notice shall not invalidate a public hearing held if the requirements of this subsection have been met.

9. The Board shall approve, approve with conditions, or deny a permit within 35 days of the issuance of a license from the DEP, or within 70 days of the Town's public hearing, whichever date is later.

10. If the applicant/operator is denied a license by the DEP, no action shall be required by the Board. The applicant shall send the DEP approval or denial to the Board within three (3) days of receiving it.

11. Within seven (7) days of its final action, the Board shall notify the applicant of its action and the reason(s) for such action. Approval of the application, together with the conditions of approval, if any, shall constitute a permit.

B. Submissions

An application to spread sludge or septage in the Town of Starks shall include the following:

1. A completed "Application for Sludge Utilization" prepared for the Department of Environmental Protection.
2. A fee as required by Article IV, A.3 of this Ordinance and a deposit into an interest-bearing account as provided in Article IV, A.4.
3. A map of the proposed site that clearly indicates property lines, abutters, owners of property within 1,000 feet, existing water well locations within 1,000 feet, areas not suitable for spreading and the reason(s) therefore, required setbacks and the reason(s) therefore, storage areas, and proximity to any primary sand and gravel recharge area and/or significant groundwater aquifer.
4. A baseline soils analysis for each site. This analysis shall be conducted in the manner recommended by the Soil Conservation Service for soils testing generally and shall include testing as required by Appendix A of this Ordinance.
5. A hydrogeologic analysis conducted by a certified geologist or registered professional engineer qualified by education and experience to conduct a hydrogeologic analysis. This analysis shall be sufficient to determine that the application of sludge or septage to the proposed site will meet the performance standards set forth in Article V.B of this Ordinance and shall include, but not be limited to, the following:
 - a. A site-specific geologic literature search.
 - b. Aerial photo interpretation, including a photolineament analysis, to identify potential high-yield aquifers.
 - c. Documentation of type, depth, yield, static water level, and length of casing of any water wells within 1,000 feet of a proposed spreading site.
 - d. Reconnaissance field mapping by a certified geologist of the surficial and bedrock geology of the proposed site and all areas within 1,000 feet, which field mapping shall relate any observed bedrock outcrop fracture orientation and spacing data to the photolineament analysis.
 - e. Documentation of the hydrogeologic setting of the project site, including but limited to a general description of the depth and expected seasonal variations in the depth to the first ground water table encountered below ground surface, a description of the general direction of ground water flow up to the point where discharge to surface water occurs, a description of the relationship of the site to any significant aquifers (those producing over 10 gallons per minute to a properly constructed six-inch water well) including bedrock aquifers or inferred bedrock aquifers.
 - f. A description of the background ground water quality at the upgradient and downgradient edges of the proposed site. This description shall include background levels for any constituent regulated by this Ordinance as per Appendix A.

- g. A proposed ground water monitoring plan to be used just prior to and for two years following the application of the sludge and/or septage, including the proposed horizontal and vertical placement of monitoring wells and all domestic wells within 1,000 feet monitored, frequency of monitoring, and precision of measurement for each parameter to be measured.
6. A plan for the independent weekly analysis (per the schedule required in Article V.B.2.a.) of the sludge or septage (required by Appendix A of this Ordinance). Sampling and analysis shall be performed by a State-certified laboratory chosen by the Board in accordance with the DEP document entitled *Methodology for Sampling and Analysis of PCDFs in Sludge and Residual*, and shall be performed on all sludge or septage without regard to the source.
7. A plan for the submission of the results of the tests required in subsection b and c of Article V.B.2. of this Ordinance.
8. A plan for the submission of the results of soils tests to be performed just prior to and twice yearly following the application of the sludge and/or septage for the duration of the permit sought, including the proposed sampling schedule, sampling locations, and parameters to be measured.
9. The Board may require additional information as it deems necessary.

ARTICLE V: Performance Standards

A. General Standards

1. Storage and land application of sludge and septage is prohibited in Starks unless approval has first been obtained from the Board, and from the Maine Department of Environmental Protection.
2. No sludge or septage may be stored on site in Starks except in a permanent storage facility as provided in the Department of Environmental Protection Regulations Chapter 567 B-4.c. There shall be no winter field stacking of sludge or septage in Starks. Stacking per site shall be limited to the amount approved for use on each site.
3. If temporary field stacking is to occur, there must be precautions taken to prevent leaching and/or dispersal into the air.
4. Spreading shall be allowed only from May 15 to November 15 in any year. Spreading shall not be allowed in any event if it is raining, or if the ground is saturated, frozen or snow-covered.

B. Testing Requirements

Provided that approval of the application is conditioned on approval by the Department of Environmental Protection, the Board shall approve or conditionally approve an application for land spreading (or storage for the purpose of land spreading) if the applicant agrees to comply with any additional testing required by the Board, including but not limited to the following:

1. Site Testing and Monitoring

- a. Soils Analysis: The applicant shall furnish a baseline soils analysis as required in section IV.B.4. and a soils testing program in accordance with section IV.B.8. of this Ordinance with the initial application to the Board.
- b. Water Analysis: The applicant shall install at least two monitoring wells on each site, the number and location of said wells to be determined by a Board-appointed certified geologist or registered professional engineer qualified by education and experience to make that determination. The water in these wells shall be tested quarterly for the parameters approved by the Board based on the actual constituents of the sludge or septage. At the discretion of the Planning Board or at the request of the owner of an existing well located within 1,000 feet of any site proposed for storage or spreading of any sludge or septage, the Board may require baseline and annual water analysis of any well as required by Appendix A of this Ordinance.

2. Characteristics of Sludge or septage

a. The Board shall provide for the supervision of an independent random weekly sample of sludge or septage taken at the point of generation after the product has gone through all processing steps necessary prior to delivery. All testing shall be in accordance with the sixteenth edition of *Standard Methods for Examination of Water and Wastewater* (1985), published by the American Public Health Association, and the results shall be furnished to the Starks Code Enforcement Officer and/or Board on a schedule approved by the Board.

b. Sludge and septage: Sludge and septage shall be tested for pollutants as required by the Department of Environmental Protection regulations and as required by this Ordinance. In addition to the above requirements, the Board or its agent shall take a representative composite sample of the actual product delivered to Starks and test by the "EP Toxicity Test: and as required by Appendix A of this Ordinance.

c. No sludge or septage may be delivered to, stored or spread in Starks if testing required by this Ordinance indicates that concentrations of heavy metals, organic compounds or pollutants exceed the maximum permissible concentrations and/or loading limits appearing in the Department of Environmental Protection regulations at Chapter 567 B-1.b.

3. Hydrogeologic Criteria

a. No sludge or septage may be delivered to, stored, or spread on land with a slope of greater than fifteen percent (15%).

b. Where the proposed application site has a slope of 15% or less, no sludge or septage may be delivered to, stored, or spread within the following setback areas:

Residences, classified bodies of water including lakes, ponds, and streams; water supply wells.....	300 feet
Intermittent streams.....	50 feet
Public roadways, drainage gullies, property boundaries.....	25 feet

Additional setback requirements established by the Department of Environmental Protection regulations at Chapter 567 B-2.b. and B-4.a. must also be met.

c. Notwithstanding the provisions of subsection b of this section with respect to water supply wells, no sludge or septage containing human pathogens may be delivered to, stored, or spread on a site closer than a 200-day hydraulic ground water travel time from the nearest existing water well used for drinking water purposes.

d. No sludge or septage may be delivered to, stored, or spread over a significant groundwater aquifer, over a primary sand and gravel recharge area, or within the recharge area of a public water supply well.

e. The sludge or septage shall not cause the State of Maine Primary Drinking Water Standards or the National Primary Drinking Water Regulations, which are incorporated herein by reference, to be exceeded in the ground water at a distance greater than one hundred (100) feet from the edge of the sludge or septage spreading boundary, or at the property line, if it is within 100 feet of the sludge or septage spreading boundary, taking into account existing background ground water quality under the site. The burden shall be on the applicant to show that the sludge or septage spreading will not cause these standards to be exceeded.

4. Aquatic Impact Criteria

The sludge or septage spreading shall not cause the National Water Quality Criteria (freshwater chronic criteria), established by the US Environmental Protection Agency (EPA) to protect aquatic organisms, to be exceeded in classified water bodies that will receive runoff from the sludge or septage spreading site, taking into account the existing quality of those classified water bodies. The freshwater chronic criteria appear in full in the "Guidelines for Deriving Numerical Nation Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses," published in the EPA document *Quality Criteria for Water* 1989, EPA 440/5-86-001. The burden shall be on the applicant to establish that the sludge and septage spreading will not cause these criteria to be exceeded.

C. Additional Requirements

1. The Board shall not approve an application for land spreading (or storage for the purpose of land spreading) unless the applicant agrees in writing to furnish the Board and the Starks Code Enforcement Officer with copies of all conditions and limitations imposed by the Department of Environmental Protection as well as prompt notice of any changes in the composition of the material, and further testing required by the DEP and the results of those tests, and any annual variations in site spreading or storage plans.
2. The Board shall not approve an application unless the applicant agrees in writing to notify the Starks Code Enforcement Officer of delivery of any sludge or septage to Starks, to advise the Board and the Code Enforcement Officer of the proposed spreading timetable, and of who is to do the actual spreading. The person spreading sludge or septage shall notify the Board and the Code Enforcement Officer as soon as possible prior to spreading, and in any event not later than three (3) days prior to spreading.
3. The Board shall not approve an application unless the applicant has provided the landowner and the Board with a written statement indicating that the applicant has agreed or will agree to indemnify the owner for any damages which may result from the spreading of sludge or septage.
4. The Board shall not approve an application unless the applicant agrees in writing to be financially responsible should the storage or spreading of its sludge prove hazardous to the health and safety of the residents, wildlife, soil, water, and/or air quality of the Town of Starks.
5. Pursuant to Section B-3.C2 of the DEP Rules for Land Application of Sludge and Residuals, the Board shall require that an applicant provide a fence or barrier suitable to prevent access to the sludge spreading site by unauthorized individuals or animals. Said fence shall be a minimum of eight (8) feet in height and of page wire construction. Signs indicating the spreading of sludge and septage must be located around the property at a height of between 3 to 6 feet above the ground, and spaced at intervals of no greater than 100 feet.

ARTICLE VI: Duration of Permit; Review Process

- A. A permit issued under this Ordinance shall be valid for a period of five years from the date of issuance and shall be subject to annual review by the Board .
- B. At least fourteen (14) days prior to annual review, but not more than thirty (30) days prior thereto, the Board shall notify the applicant of the review.
- C. As part of the annual review, the applicant shall submit the following information to the Board in writing:
 1. The names of the applicant and the landowner and the date of the original permit.
 2. A narrative describing the following:
 - a. the quantity of sludge and/or septage waste supplied the previous year and the number of acres utilized;
 - b. any problems incurred the previous year;
 - c. any proposed changes in the upcoming year (NOTE: new acreage requires a new application);
 - d. any physical or chemical changes in the sludge or septage waste;
 - e. a sludge or septage waste analysis as required in the initial application;

- f. a soil pH for each land acre to which the sludge or septage waste was applied;
- g. the results of the quarterly water analysis required under Article V.B.1.b. of this Ordinance;
- h. such analysis as the Department of Environmental Protection or Board required in the initial approval.

D. The applicant shall submit a non-refundable annual renewal fee of One Thousand Dollars (\$1,000.00) in the form of a check or money order, made payable to the Town of Starks.

E. If the Board determines that the conditions of the permit were met for the previous year, the Board shall allow the permit to continue in effect until the next annual review. The Board may, in its discretion, modify or revoke the permit if actions by the applicant or the operator were in violation of this Ordinance or if they find that continuation of the permit unreasonably threatens human or animal health and safety.

F. Any person applying or storing sludge or residual waste within the municipal boundaries at the time of enactment of this Ordinance pursuant to a license issued by the Department of Environmental Protection may continue to do so for ninety (90) days from the enactment of this Ordinance. By the ninety-first day following enactment of this Ordinance, any such person shall submit an application to the Board as required by this Ordinance prior to continuance of the application or storage activity.

ARTICLE VII: Modification of Conditions and Revocation of Permit

If at any time, as a result of any testing required by the Department of Environmental Protection, this Ordinance, or the Board, elements or compounds are found in quantities which may threaten environmental safety or human or animal health, the Board may require additional testing at the applicant's expense and may modify the conditions applicable to any permit. If the Board as a result of any required testing or risk assessment determines that continued storage or spreading of sludge or septage unreasonably threatens environmental safety or human or animal health, then it may take such appropriate action as it deems necessary, including limitation, modification, suspension or revocation of any permit.

ARTICLE VIII: Enforcement and Penalty

- A. The Starks Code Enforcement Officer shall have the right to enter all land application and storage sites during all daylight hours for the purpose of inspecting the site for compliance with this Ordinance.
- B. If the Code Enforcement Officer finds violations of any permit conditions or of any obligations imposed by this Ordinance or Chapter 567 of the Department of Environmental Protection regulations, the Code Enforcement Officer shall issue a written notice to the landowner, the Board, the applicant, the operator (if different from the landowner) and notify the Department of Environmental Protection.
- C. The Board, upon finding the provisions of this Ordinance or conditions of approval are being or have been violated, may temporarily suspend the permit and they may revoke the permit after notice and hearing. The Selectmen shall take whatever action necessary for the enforcement of this Ordinance, including prosecution of the code violation pursuant to the Maine Rules of Civil Procedure.
- D. The applicant and/or operator who violates this Ordinance or the conditions of approval, *as well as the owner who knowingly permits such violations to occur*, shall be guilty of a civil violation and shall be subject to a civil penalty of not less than *Five Hundred Dollars (\$500.00)* nor more than *Five Thousand Dollars (\$5000.00)* for each offense. Each day such a violation is permitted to exist shall constitute a separate offense.

ARTICLE IX: Appeals

An aggrieved party may appeal any final action taken by the Board to the Superior Court pursuant to the Maine Rules of Civil Procedure.

ARTICLE X: Validity, Severability, and Conflict with Other Ordinances

- A. Should any section or provision of this Ordinance be declared by the courts to be invalid, such decision shall not invalidate any other section of this Ordinance.
- B. Whenever the requirements of this Ordinance are inconsistent with the requirements of any other ordinance, code, or statute, the more restrictive requirements shall apply.

ARTICLE XI: Amendments

Amendments may be initiated by a request of the Planning Board, the Town Selectmen, or by petitions bearing the signatures of registered Starks voters equal to, or in excess of, ten percent (10%) of the votes cast in the last gubernatorial election in the Town. The Board shall conduct a public hearing on any proposed amendment.

APPENDIX A**TESTING PARAMETERS**

1. All Soil, Water, Sludge, and septage Tests shall include pH, Magnesium, Potassium, Phosphorous, Boron, Arsenic, Chloride, Selenium, Fluoride, Sulfate, Aluminum, Sodium, Cadmium, Copper, Nickel, Lead, Vanadium, Zinc, Silver, Barium, Calcium, Iron, Mercury, Manganese, Molybdenum, Nitrate, Nitrite, Ammonium, Total Kjeldahl N., Polychlorinated Dibenzofurans (PCDF's), Polychlorinated Biphenyls (PBC's), Total Organic halogens (TOX), Polychlorinated Dibenzopyrans, (All Dioxin Cogeners), Chromium (metallic, hexavalent, trivalent).
2. Soil Tests shall also include cation exchange capacity, crop recommendations, texture separate analysis, and percent organic matter.
3. Water Tests shall include color and turbidity.
4. Sludge and septage Tests shall include the percent of components present in the test results of paragraph one (1) of this Appendix A.
 - A. The percent of loss on ignition shall also be included.

CERTIFICATION: We the Selectmen of the Town of Starks hereby Certify to the Clerk that the foregoing document is a document entitled "*TOWN OF STARKS ORDINANCE REGULATING STORAGE AND LAND APPLICATION OF SLUDGE AND SEPTAGE*", and further certify it to be the subject of a hearing scheduled for Wednesday, Oct. 2, 1996 at 7 PM at the Town Hall in Starks and subject of a public referendum for its adoption, said referendum to take place on Nov. 5, 1996 at the Town Hall in Starks.

Date of Certification: 9-18-96

Roger L Abbott
First Selectmen Roger Abbott

Carolyn Hewett
Second Selectman Carolyn Hewett

Julie Costigan
Third Selectman Julie Costigan

ATTEST: A true copy of an ordinance entitled "*TOWN OF STARKS ORDINANCE REGULATING STORAGE AND LAND APPLICATION OF SLUDGE AND SEPTAGE*", as certified to me by the municipal officers of Starks.

Signature: Jane S Brackett
Jane Brackett, Town Clerk

Date: Oct 27, 1996

CONSTABLE'S RETURN

By virtue of a directive from the Selectmen, I have notified and warned the inhabitants of the Town of Starks to assemble at the time and place and for the purpose therein named by the posting attested copies of the "*TOWN OF STARKS ORDINANCE REGULATING STORAGE AND LAND APPLICATION OF SLUDGE AND SEPTAGE*" and notice of the public hearings in three conspicuous places within the said Town the

Signature: Carrol Clark 10-28-96 date
Carrol Clark, Town Constable