



Vermont Department of Environmental Conservation  
Watershed Management Division  
1 National Life Drive, Main-2  
Montpelier VT 05620-3522

*Agency of Natural Resources*

(phone) 802-490-6188

April 25, 2016

Guy Charlton, Selectboard Chair  
Town of Benson  
PO Box 163  
Benson, VT 05743

RE: Solid Waste Certification

Dear Mr. Charlton,

Enclosed please find the original signed copy of Solid Waste Management Facility Certification #F1602, authorizing the land management of biosolids generated by the wastewater treatment process at the Town of Benson's Wastewater Treatment Facility.

**Final Action/Rights to Appeal to the Environmental Court**

Pursuant to 10 V.S.A. Chapter 220, any appeal of a decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The appellant must submit the Notice of Appeal and include the applicable filing fee, payable to the State of Vermont.

The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal.

The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings.

For further information, see the Vermont Rules for Environmental Court Proceedings, available on line at [www.vermontjudiciary.org](http://www.vermontjudiciary.org). The address for the Environmental Court is 32 Cherry Street, 2nd Floor, Suite 303, Burlington VT 05401 (Tel. # 802-951-1740 FAX #: 802-657-4292).

Please read this certification carefully. If you have any questions or comments, please feel free to contact me at 802-490-6188 or [allison.lowry@vermont.gov](mailto:allison.lowry@vermont.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Allison Lowry".

Allison Lowry  
Environmental Analyst  
Residuals Management Section

**Cc: Ed Tracey, Chief Operator  
Daphne Bartholomew, Town Clerk/Treasurer  
Mary Ellen Parkman, PE  
Rutland Regional Planning Commission  
Solid Waste Alliance Communities**

**Solid Waste Management Facility  
Full Certification  
10 V.S.A. 6605**

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**PERMITTEE:** Town of Benson  
**OPERATOR:** Town of Benson  
**AUTHORIZED REPRESENTATIVE:** Guy Charlton, Selectboard Chair  
**CERTIFICATION NUMBER:** F1602  
**RESIDUALS MANAGEMENT FACILITY I.D. NUMBER:** SW-107  
**PROJECT I.D. NUMBER:** RU98-0314  
**FIELD DESIGNATION:** FBJ0101  
Jeffrey L. Noble farm  
Benson, VT

**CERTIFICATION PERIOD:** Date of signature through March 31, 2026

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**PURPOSE OF CERTIFICATION:** The purpose of this Certification is to ensure that the solid waste management facility (Facility) owned and operated by the Town of Benson (Permittee), for the management of sludge (biosolids) via land application, operates in accordance with the conditions set forth herein to protect the public health and safety and the environment.

**FACILITY DESCRIPTION & LOCATION:** The Facility consists of one agricultural site located in Benson, Vermont, and any vehicles or other equipment necessary for proper operation of the Facility. This Facility is identified in this certification and described in the management plan entitled "*Application for Certification of a Land Application Site for the Management of Wastewater Treatment Biosolids*" which was received by the Agency of Natural Resources (Agency), Department of Environmental Conservation (Department) Wastewater Management Division on January 16, 2015.

**FACILITY OPERATION:** The Facility will utilize land application for the management of treated biosolids. The Facility includes one parcel of property, comprising of 10± usable acres. Stabilized biosolids are permitted for use by land application during times of the year when the ground is not frozen or snow covered, and when saturated soil is at a depth of greater than thirty-six (36) inches below the bottom of the zone of incorporation. During periods when land application is not permitted, biosolids must either be stored or managed at other suitable and certified facilities until conditions allow for land application.

Biosolids are required to be stabilized for pathogen and vector attraction reduction prior to land application, according to the Vermont Solid Waste Management Rules, effective March 15, 2012, (Rules), 40 CFR Part 503, and the Certification. Stabilization will be achieved by the addition of hydrated lime.

**APPLICATION REVIEW:** The application for full certification of the Permittee's management

plan and facilities was reviewed in accordance with the Vermont Solid Waste Management Act, 10 V.S.A. §§6601 et seq. and the Vermont Solid Waste Management Rules, effective March 15, 2012 (Rules). The application is on file with the Department, in Montpelier, Vermont.

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**FINDINGS**

1. On January 16, 2015, the Permittee submitted an application to the Department for renewal of the certification of a solid waste management facility for the management of lime stabilized biosolids utilizing land application. The application was dated January 12, 2015.
2. In accordance with 10 V.S.A. §6605(f), the Permittee provided notice of the application.
3. The application was reviewed by the Department and determined to be administratively incomplete on January 26, 2015. Upon submittal of additional information by the Permittee, the application was determined to be administratively complete on October 30, 2015.
4. The application was reviewed on its technical merits and was determined to be technically complete on March 8, 2016.
6. A draft certification and fact sheet were developed for the application in March, 2016. Public comment regarding the draft certification and fact sheet was actively solicited in accordance with §6-304(h) and §6-305(a)(7 & 8) of the Rules. The notice ran in the *Rutland Herald* and the *Lakes Region Free Press*. The public comment period ran from April 1, 2016 through April 25, 2016.

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**CONDITIONS AND REQUIREMENTS FOR OPERATION**

- A. The Permittee shall perform all actions necessary for the proper management of biosolids in accordance with the Plan and the conditions of this Certification.
- B. The Permittee shall comply with the provisions, requirements and standards set forth in 10 V.S.A. §§6601 et seq. and the Rules, except as expressly provided herein.
- C. The land application site described above is the only facility authorized for biosolids management under this Certification. Use of other sites for biosolids management via land application, without prior written approval from the Secretary, shall constitute grounds for revocation of this Certification.
- D. Biosolids generated by the Permittee's wastewater treatment facility are the only wastes authorized for management via land application. Management of other regulated solid wastes by the Permittee, without prior written approval from the Secretary, shall constitute grounds for revocation of this Certification.
- E. The Permittee is authorized to utilize the contingency option for biosolids management of disposing of biosolids at the City of Rutland WWTF. The Permittee may use other

suitable and certified in-state solid waste management facilities for biosolids management, if appropriate, with prior written authorization for the Secretary or other suitable out-of-state management facilities with prior written notification to the Secretary.

### **COMPLIANCE SCHEDULE**

- F. On or before September 30, 2025, the Permittee shall either submit an application for renewal of this certification, or submit a plan documenting the strategy for closure of the land application site.

### **MATERIALS, MONITORING, AND OPERATING REQUIREMENTS**

- G. The Permittee shall comply with all the siting conditions specified for diffuse disposal facilities in Subchapter 5 and with all the facility operation standards, requirements, and conditions specified in Subchapter 7 of the Rules.
- H. The following actions are specifically prohibited:
- (1) the application of solid wastes on frozen or snow covered ground; and
  - (2) the application of solid wastes at times when saturated soil is within thirty-six (36) inches of the bottom of the zone of incorporation.
- I. The Permittee shall restrict public access to the site certified herein for the duration of any biosolids land application event and for a minimum period of twelve (12) months beyond the last disposal episode. The Permittee shall ensure that the site is properly posted for this purpose during these periods.
- J. The Permittee shall ensure that the following site and crop use restrictions are observed:
- (1) domestic food source animals shall be prohibited from grazing on the waste amended land application site for the duration of disposal and for a period of six (6) months beyond the last disposal episode;
  - (2) the site shall not be used for the production of crops for direct human consumption during any biosolids application event and for the duration of the disposal and a for period of thirty-eight (38) months beyond the last disposal episode;
  - (3) fiber and feed crops (including silage) grown on the waste amended land application site shall not be harvested for a period of five (5) weeks beyond the last disposal episode; and
  - (4) turf grown on the waste amended land application site shall not be harvested for a period of twelve (12) months after the last disposal episode.
- K. The Permittee shall ensure that the biosolids that are applied to the land are treated to reduce pathogen content prior to management, in accordance with "Environmental Regulations and Technology - Control of Pathogens and Vector Attraction in Sewage Sludge" (EPA-625/R-92/013, Revised July 2003, U.S.E.P.A., Cincinnati, OH 4568).

Compliance with this requirement shall be achieved by adding sufficient hydrated lime,  $\text{Ca}(\text{OH})_2$  or its equivalent, to raise the pH of the biosolids to greater than or equal to 12.0 standard units (S.U.) and maintain the biosolids at a pH greater than or equal to 12.0 S.U. for a minimum period of two (2) hours without the addition of additional lime.

- L. The Permittee shall ensure that all biosolids that are applied to the land are treated to reduce their attractiveness to vectors and to reduce the potential for the generation of objectionable odors off site of the Facility in accordance with "Environmental Regulations and Technology - Control of Pathogens and Vector Attraction in Sewage Sludge" (EPA-625/R-92/013, Revised July 2003, U.S.E.P.A., Cincinnati, OH 4568). Vector attraction reduction shall be met by one of the following methods:
- 1) immediately following the treatment with hydrated lime for pathogen reduction in accordance with Condition K of this certification, the biosolids shall be maintained at a pH greater than or equal to 11.5 S.U., without the addition of more hydrated lime, for a minimum period of twenty-two (22) hours; or
  - 2) directly injecting the biosolids beneath the surface of the land application site as the method of application to the land; or,
  - 3) incorporating the biosolids into the land application site's soil within six (6) hours of application to the land, provided that the biosolids are applied to the land within eight (8) hours after being discharged from the pathogen treatment process established in Condition K of this certification.
- M. The Permittee shall not apply biosolids to the site in excess of the nutrient requirements of the crop(s) grown on the site. Prior to each application event, the Permittee shall calculate the appropriate application rate based upon the results of the most recent chemical analyses required by Condition O of this certification, prior applications of biosolids, and any other sources of nutrients applied to the site.
- N. The Permittee shall manage soil pH on the land application site to ensure soil pH is maintained within the prescribed range of 6.5 S.U. to 8.0 S.U. (aqueous). The site shall not be used for land application of biosolids when the site's soil pH is not within this range. The Permittee shall monitor soil pH prior to and at the time of each land application event conducted during the term of this certification and this information shall be submitted to the Department with the appropriate quarterly report.
- O. The Permittee shall conduct sampling and analysis of the biosolids and soil in accordance with the parameters and frequencies set forth in Table 1 of this certification. Testing for metals in the biosolids and soil shall be for the total form, shall be reported in units of milligrams per kilogram (mg/kg), dry weight basis, and the Permittee shall have received the analytical results prior to any land application event conducted during the term of this Certification. Samples shall not be taken more than sixty (60) days prior to an application event.
- P. The Permittee shall sample the biosolids and submit the sample for a TCLP analysis prior to any lagoon cleanout and land application event.
- Q. The Permittee shall hold a meeting with the landowners and/or property managers by

March 1<sup>st</sup> of each year of the certification period in which biosolids are applied to the site, for the purpose of discussing and refining fertilization plans for the upcoming growing season.

- R. The Permittee shall notify the Department a minimum of two (2) weeks prior to each land application event conducted during the term of this certification, and include the proposed volume of biosolids to be applied and the anticipated date of the biosolids application.
- S. The Permittee shall verify that there is at least thirty-six (36) inches of separation between the bottom of the zone of incorporation and saturated soil by checking the depth to saturated soil. This verification shall be determined immediately prior to each land application event conducted during the term of this certification. The results of the depth to saturated soil measurements shall be submitted to the Department with the appropriate quarterly report.
- T. The Permittee shall delineate those areas of the site where application of biosolids is restricted or prohibited, as well as the outer application limits of the site. The Permittee shall delineate all restricted or prohibited areas and the outer boundaries of the application area by placing stakes with colored flagging or other suitable visible markers. The Permittee will maintain an isolation distance of at least 25 feet to all drainage ditches at the site. Restricted areas shall be delineated at times when biosolids are being applied to the site.

#### **RECORD KEEPING AND REPORTING**

- U. The Permittee shall submit quarterly reports to the Department by the 15<sup>th</sup> day of the month following the end of each quarter (April 15, July 15, October 15, and January 15) on forms provided by the Secretary.
- V. All sampling and monitoring results, dates and volumes of lime additions, and calculations for determining application rate shall be included with the appropriate quarterly submittal to the Department.
- W. If the results of any of the required biosolids monitoring shows an exceedence of a regulatory standard, the Permittee shall notify the Secretary in writing of this fact and the reasons for the non-compliance within five (5) days of when the exceedence is detected, together with a proposed strategy for remediation of conditions resulting in the exceedence. If such an exceedence occurs, the Secretary reserves the right to require the Permittee to:
  - (1) conduct studies necessary to determine the source(s) and/or cause(s) of contamination;
  - (2) take actions necessary to control or repair the cause of any impacts; and
  - (3) take actions necessary to remediate any impacts.
- X. If results from any required testing and monitoring indicate a violation of any standard, the Permittee shall notify the Secretary in writing of this fact and the reasons for the non-

compliance within five (5) days of when the violation is detected.

- Y. The Permittee shall give prior notice to the Secretary of any changes planned in the Permittee's biosolids management practices.
- Z. Complaints regarding odors or other emissions or discharges from the Facility received by the Permittee shall be reported to the Department within twenty-four (24) hours, or on the next business day, with a report of the measures taken to resolve the situation. The Secretary reserves the right to require the Permittee to utilize reasonable measures including, but not limited to, those measures set forth in this Certification and the management plan, to remediate problems associated with odors or other nuisance conditions resulting from the operation of any of the facilities certified herein.
- AA. The Permittee shall maintain all records regarding activities, management practices, complaints, and observations in a secure, dry place for a minimum period of five (5) years following expiration of this Certification.
- BB. Any discharge or emission from the Facility not expressly authorized under the terms and conditions of this Certification shall be reported by the Permittee within twenty-four (24) hours of its occurrence, or on the next business day, to the Department, the local health officer, and the select person(s) of the affected municipality(ies).
- CC. The Permittee shall submit an application to the Department for an amendment to this Certification if the Permittee wishes to pursue the use of alternative land application sites for biosolids management during the term of this Certification.
- DD. The Permittee shall make any other reports that may be reasonably required by the Secretary during the term of this Certification.

#### **CLOSURE AND POST-CLOSURE REQUIREMENTS**

- EE. Upon a determination by the Secretary that no further land application will be conducted at the Facility, or upon Permittee's notice that site use is no longer occurring, the Permittee shall comply with the following post-closure requirements:
  - (1) Provide for control of public access to the facility for a period of twelve (12) months following the last application of biosolids;
  - (2) Prohibit grazing of domestic food source animals for a period of six (6) months following the last application of biosolids;
  - (3) Prohibit production of crops for direct human consumption for a period of thirty-eight (38) months following the last application of biosolids;
  - (4) Prohibit the harvest of fiber and feed crops (including silage) for a period of five (5) weeks beyond the last disposal episode;
  - (5) Prohibit the harvest of turf for 12 months after the last disposal episode;
  - (6) Test the soils biannually for a minimum of two years if the site has received



seventy-five percent (75%) of the maximum allowable cumulative level based on soil type for any of the metals monitored, or if the Secretary determines a need. The required parameters are listed in this Certification in Table 1. The results shall be submitted to the Department.

**GENERAL CONDITIONS**

- FF.** The Permittee shall comply with all existing federal and state laws, rules and regulations that apply to biosolids use and management, and with all applicable technical standards set forth in Section 405(d) of the federal Clean Water Act, and 40 C.F.R. Part 503. If an applicable management practice or numerical limitation for pollutants in biosolids more stringent than existing federal or state regulations is promulgated pursuant to Section 405(d) of the federal Clean Water Act, this Certification shall be modified or revoked and reissued to conform to the promulgated regulations. The Permittee shall comply with the limitations no later than the compliance date specified in the applicable regulations as required by Section 405(d) of the federal Clean Water Act and 40 C.F.R. Part 503.
- GG.** This Certification does not convey property rights of any sort or any exclusive privilege, nor does it authorize any injury to private property or any invasion of personal rights.
- HH.** This Certification is not alienable, transferable, or assignable without prior written approval from the Secretary. Requests for such approval shall include an application for reissuance under the new name and a written agreement which specifies the date of transfer and includes the signatures of the authorized representatives.
- II.** If the Permittee anticipates that any compliance date or operating condition will not be met, the Permittee shall notify the Secretary in writing of this fact and reasons for the anticipated non-compliance at least five (5) days prior to the compliance date or conditions in question.
- JJ.** This Certification may be modified or amended for cause during its term with the written approval of the Secretary. If the Secretary determines modification is appropriate, only the conditions subject to modifications are reopened. Until a modification or amendment is granted, all conditions set forth in the Certification remain in full force and effect, pursuant to Section 6-307(a) of the Rules.
- KK.** This Certification may be revoked, in whole or in part, at any time during its effective term in accordance with the Rules.
- LL.** The Permittee agrees to allow Agency personnel access to the Facility during normal business hours to perform such inspections or other activities pursuant to 10 V.S.A. §8005 as may be required to ensure compliance with this Certification, with all applicable statutes, and with the Rules.
- MM.** The Secretary retains the right to require the Permittee to perform any other action deemed necessary in accordance with 10 V.S.A. §6610a.

**Table 1**  
**MINIMUM REQUIRED SAMPLING AND TESTING FREQUENCIES**

<u>PARAMETER</u>	<u>BIOSOLIDS</u>	<u>SOIL</u>
Arsenic	1	EOC
Barium	None	EOC
Cadmium	1	EOC
Chromium	1	EOC
Copper	1	EOC
Lead	1	EOC
Mercury	1	EOC
Molybdenum	1	EOC
Nickel	1	EOC
Selenium	1	EOC
Silver	None	EOC
Zinc	1	EOC
Total Kjeldahl Nitrogen	1	1
Ammonia Nitrogen	1	1
Nitrate Nitrogen	1	1
Total Phosphorus	1	None
Total Potassium	1	None
Polychlorinated Biphenyls (PCBs)	1	EOC
Percent Solids	1	None
pH	1	1
Liming Requirement	None	1
Available Potassium	None	1
Available Magnesium	None	1
Available Phosphorus	None	1
Extractable Phosphorous	1	None
Reactive Aluminum	None	1
Sludge depth	Annually	None
TCLP	Per Condition P	None

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**NOTES:**

An analysis for Total Organic Halides (TOX) may be conducted in lieu of analyzing for PCBs in biosolids. However, if TOX is detected in concentrations greater than or equal to 10.0 mg/kg (dry wt.) in the biosolids, then an analysis specific for PCBs shall be conducted.

A mathematical demonstration of passing the TCLP criteria, based upon the most recent total metals analysis, is permitted only for the metals regulated under §7-208 of the Vermont Hazardous Waste Management Regulations. All other parameters regulated under that standard must be the subject of the full extraction and analysis procedure. Any metal which equals or exceeds the regulatory standard via the mathematical demonstration must be subjected to the full extraction and analysis procedure.

- 1:** Prior to the second and any subsequent land application events conducted during the period of this certification, such that results are available prior the to the land application event(s).
- EOC:** Sampling prior to the end of the certification. Sampling shall be conducted such that the results may be submitted with the application or site closure plan required by Condition F.
- Sludge depth:** The depth of sludge accumulated in the lagoon shall be measured in the fall of each year of this certification.
- None:** No sampling or testing is required for that parameter in the specific media.

Analysis of parameters in the biosolids and soils (except TCLP and sludge depth) shall be for the total form and shall be reported in units of milligrams per kilogram (dry weight) or percent by weight. TCLP analyses shall be reported in units of milligrams per liter or micrograms per liter. Sludge depth shall be reported in units of inches.

The Department's issuance of this Solid Waste Management Facility Certification relies upon the data, judgement, and other information supplied by the Facility operator, hired professional consultants, and other experts who have participated in the preparation of the application.

The Department makes no assurances that the system certified herein will meet performance objectives of the Facility operator and Permittee, and no warranties or guarantees are given or implied.


The Department staff has reviewed the above project and application and finds it to conform with current technical standards. It is recommended that the foregoing findings be made and the Solid Waste Management Facility Certification be issued.

I do affirmatively make the findings as recommended by the staff and approve this Certification.

Dated this 25<sup>th</sup> day of April, 2016, at Montpelier, Vermont.

**AGENCY OF NATURAL RESOURCES**

Alyssa B. Schuren, Commissioner  
Department of Environmental Conservation

BY:   
Ernest F. Kelley, Manager  
Wastewater Management Program  
Department of Environmental Conservation

