

**APPLICATION INSTRUCTIONS:  
Certification of Residual Management Programs/Facilities**

The management plan (Plan) submitted in support of an application for full certification must document full compliance with the Vermont Solid Waste Management Rules, effective March 15, 2012 (Rules). The Plan must present a detailed description of the facility and/or the management strategy in a manner such that any member of the public or governmental agency can examine the Plan, understand all aspects of the project, and determine how it complies with the Rules. The Plan must detail all aspects of sewage sludge (biosolids), septage, or other residual waste's management from the time it becomes subject to jurisdiction under the Rules until its final disposal or disposition.

Therefore, in preparing an application and Plan for full certification, the following must be done:

- 1) For the first time full certification of a facility, it is not permissible to simply submit updated information as a supplement to a Plan submitted for a prior interim certification (if the facility has been previously certified under an interim certification). Although most, or much, of the information in the earlier Plan may be germane to the new application, there is a significant amount of information required of an application for full certification that is not required for an interim certification. Therefore, at a minimum, the applicable information from the earlier Plan must be photocopied and incorporated into one new complete document for the first full certification application.

For recertification of a facility that has previously been certified under one or more full certification(s), the Rules do allow (at the Secretary's discretion) you to reference information submitted in a previous Plan, so long as that information has not changed since it was originally submitted. In these cases, the new Plan must specifically state what information from the previous submittal is included by reference and where it is located in the previous plan. Any information that has changed since the date that the previous Plan was submitted must be revised and updated in the new Plan.

(N.B. - a facility's transition from an interim certification to its first full certification is not considered to be *recertification*, it is treated as certification of a *new* facility)

- 2) Submittals **must** include a fully completed application form and a check (payable to "Treasurer - State of Vermont") for the appropriate application fee (see the instructions for Line 5 for the applicable fees). Be sure that the application form bears **all** required signatures. Applications submitted without a fully completed application form, any required signatures, or the required fee will be considered to be an improper application and will be returned to the applicant.
- 3) A fully completed checklist **must** be submitted as a part of the application package. Applications submitted without a checklist will be considered to be administratively incomplete and will not be reviewed any further until a completed checklist is submitted.
- 4) The Plan must contain information such that the "YES" or "N/A" box on the checklist can be checked for every item, as appropriate. Please note that not all sections on the

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checklist may apply to a given project. For example, if no storage is proposed in the application and Plan, then those sections relating to storage facilities and their closure do not apply and need not be addressed in the application. In such cases, the "N/A" column should be checked on the checklist for the non-applicable sections.

- 5) On the checklist, reference the page where each item is addressed in the Plan. The completed checklist may be submitted with the application as an attachment to the Plan, or may be incorporated into the Plan as the index.
- 6) The Plan should be put together so that its sections generally follow the subchapters of the Rules in its arrangement.

Please be aware that the checklist only serves as a general guide for preparing a full certification application and Plan. The following pages contain a broader description of what is expected of an application and Plan. Each line on the checklist is numbered and corresponds to the line instructions which follow. However, these two documents are not a substitute for a thorough examination of the Rules in order to produce a Plan which addresses and demonstrates the details of their intent and requirements.

Applicants are strongly urged to contact the Residuals Management & Emerging Contaminants Program staff (a staff listing is available at <http://dec.vermont.gov/waste-management/contacts>), to discuss a project prior to submitting an application. By doing so, rule interpretations and program concerns can be addressed earlier in the design and permitting process.

If you are required to submit personal history and business disclosure statements in support of the application, pursuant to 10 V.S.A. §6-605(f); those forms should be submitted with the application in order to expedite their timely review.

An outline of the application review and public notification process is presented on page 39 of these instructions.

## **JURISDICTION**

- In general, a residual material becomes a solid waste, and its management is subject to the Rules, at the point in a process when it is removed from active biological treatment. This is, admittedly, a rather "grey" definition and the jurisdictional line may vary from project to project. You should contact the Residuals Management & Emerging Contaminants Program staff for a definitive determination.
- In a traditional domestic treatment facility, sludge/biosolids are subject to regulation under the Rules at the time that the waste is removed from a digester or lagoon. If the waste is comprised of undigested solids, jurisdiction is effective at the time of their removal from the treatment process.

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- Septage becomes a solid waste subject to regulation under the Rules at the time that it is pumped from a septic tank or portable toilet. Simply pumping septic tanks or portable toilets and taking the contents to a municipal wastewater treatment facility (WWTF) for disposal does not require a solid waste management facility certification (although a waste transportation permit for the vehicles may be required and septage fees must be submitted to the State).
- Other materials become solid wastes subject to regulation at the time that they are removed from the equipment in which they were generated. For example, wood ash becomes a regulated solid waste when it is removed from the combustion unit.
- All facilities producing exceptional quality (EQ) biosolids by employing a “Process to Further Reduce Pathogens” (PFRP) (e.g. high temperature anaerobic digestion, composting, heat drying, etc.) must be certified regardless of their location.
- Installations where mobile dewatering equipment will be operated and where there is fixed piping to return the removed liquid to the wastewater treatment process is considered to be a transfer station and is subject to jurisdiction under the Rules.
- Residual wastes that are stored on-site in a storage tank, holding tank, in bunkers, on drying beds, etc. typically are subject to certification requirements unless those facilities are located within the fenced area of a domestic wastewater treatment facility. See §6-303(b) of the Rules for the certification requirement exemptions.
- All biosolids destined for land application or distribution are subject to regulation under the Rules and their management requires proper certification.

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**LINE-BY-LINE CHECKLIST GUIDANCE**

**1) REQUIREMENTS OF THE STATUTES**

**I. 10 V.S.A. §6-605(c) - Planning requirements**

Line 1

- For certification of a new facility, it must be included in an adopted solid waste management implementation plan (SWIP) for the area in which the facility is sited and the SWIP must be consistent with the state solid waste plan and in conformance with any municipal or regional plan(s) for the area in which it is sited.

The SWIP must specifically identify the facility and its location.

However, this statute specifically exempts biosolids and septage land application projects from this requirement. This exemption is provided because land application sites tend to be relatively short-term use facilities and it would be cumbersome for a district or municipal entity to have to go through the process of amending its SWIP every time a new land application site was proposed for certification or an existing site was removed from a management program. It must also be noted that those facilities which are provided an exemption from having to be certified (under the provisions of either §6-301(b)(9) or §6-303(b) of the Rules) do not need to be included in the SWIP.

For the purposes of this statutory demonstration, facilities which produce and distribute EQ or Class A biosolids in a “Process to Further Reduce Pathogens” are not considered to be land application projects, regardless of whether the final product they produce is ultimately managed via application to the land.

Evidence of inclusion in an adopted SWIP and of the SWIP’s conformance with regional and municipal plans must be documented by submitting copies of the applicable section(s) of the approved SWIP, regional, and municipal plans. A sign-off letter of inclusion from the district, municipality, or municipal coalition is not acceptable evidence. If there is no adopted municipal and/or regional planning document for the area in which the facility is sited, the application should state so clearly. The absence of an adopted municipal and/or regional planning document will not preclude certification of the proposed facility. However, if no SWIP has been adopted and approved for the area in which the facility is sited, the proposed facility cannot be issued a certification.

- For recertification of an existing facility, two requirements apply:
  - 1) The project must be included in an adopted SWIP for the area in which the facility is sited; and the SWIP must be consistent with the state solid waste plan, unless the Secretary determines that recertification promotes the public interest.

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The SWIP must specifically identify the facility and its location.

However, this statute specifically exempts biosolids and septage land application projects from this requirement. This exemption is provided because land application sites tend to be relatively short-term use facilities and it would be cumbersome for a district or municipal entity to have to go through the process of amending its SWIP every time a new land application site was proposed for certification or an existing site was removed from a management program. It must also be noted that those facilities which are provided an exemption from having to be certified (under the provisions of either §6-301(b)(9) or §6-303(b) of the Rules do not need to be included in the SWIP.

For the purposes of this statutory demonstration, facilities which treat biosolids in a “Process to Further Reduce Pathogens” (i.e. composting, high temperature digestion, heat drying, etc.) are not considered to be land application projects, regardless of whether the final product they produce is ultimately managed via application to the land.

Evidence of inclusion in an adopted SWIP must be documented by submitting copies of the applicable section(s) of the approved SWIP. A sign-off letter of inclusion from the district, municipality, or municipal coalition is not acceptable evidence. If no SWIP has been adopted and approved for the area in which the facility is sited, the proposed facility can not be issued a certification.

- 2) The project must be in conformance with any municipal and/or regional plans for the area in which the facility is sited. Such plans are not SWIP’s, but rather, municipal or regional planning documents. Also note that the exemption afforded elsewhere to land application projects does not apply here.

In order to document conformance with regional and municipal plans, the applicant must submit a copy of the applicable section(s) of the approved plan(s). A sign-off letter from the municipal or regional planning organization is not acceptable. If there is no adopted municipal and/or regional planning document for the area in which the facility is sited, the application should state so clearly. The absence of an adopted municipal and/or regional planning document will not preclude certification of the proposed facility.

- Please be aware that only certified municipal facilities are eligible to receive state solid waste funding.

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**II. 10 V.S.A. Chapter 170 - Notification**

Line 2

- The application and Plan must confirm that the notification required under 10 V.S.A. Chapter 170 has been conducted at, or prior to, the date the application was submitted. This confirmation must include a copy of the notification letter(s) and a certificate of service indicating who was notified and on what date notification was provided. A sample notification letter template is included on pages 34-35 of these instructions for your reference.

**III. 10 V.S.A. §6-605(f) – Personal History and business disclosure statements**

Line 3

- 10 V.S.A. §6-605(f) requires certain applicants to submit personal history and business disclosure statements providing information on their company, its officers, and its key employees.
- This statute requires any non-governmental entity that is applying for a solid waste management facility certification under 10 V.S.A. §6-605 or §6605(b), or that is applying for a Commercial Waste Hauler Permit under 10 V.S.A. §6-607(a), to submit personal history and business disclosure statements. A non-governmental entity that contracts with an applicant governmental entity to operate any portion of the facility is also subject to the personal history and business disclosure requirements unless the solid waste management activity is comprised only of on-site storage or treatment of waste generated solely on the site or at another site under the sole control of the applicant and which does not accept any other solid waste.
- Owners of land application sites who are non-governmental entities and who are not the applicant or co-applicant do not have to submit disclosure statements.
- Examples of applicants or their contractors that must submit disclosure statements include (but are not limited to):
  - private companies providing contract operation of a municipal wastewater treatment facility or its biosolids management activities where the application seeks certification of disposal type management activities;
  - private companies applying for certification of biosolids management projects; and
  - septage haulers applying for certification of septage land application projects.

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**2) REQUIREMENTS OF THE SOLID WASTE MANAGEMENT RULES**

**I. SUBCHAPTER 3 - APPLICABILITY & ADMINISTRATION**

**A. Application Submittal**

Line 4

- The submittal must include a copy of the Plan and the appropriate application form that:
  - has been signed by the applicant or its authorized representative, the facility's owner or their designated representative, the landowners of each proposed site, the P.E. certifying the application (unless waived by the Secretary), and the person who prepared the application. Please note that landowners must sign both the application form and any landowner agreements for land application sites. Also, a waiver of the requirement for a P.E.'s certification must be requested and granted (both in writing) prior to submittal of an application and Plan that will not be prepared and certified by a Professional Engineer.
  - includes the name of the municipality, septage hauling business or other business concern.
  - includes the names, mailing addresses and phone numbers of the owner and/or authorized representative and the contact person for the facility.
  - includes the names, mailing addresses, telephone numbers, and has been signed by the owner(s) of land application sites.
  - has been signed and certified, by a Professional Engineer registered to practice in Vermont, that the application is in compliance with all applicable standards (unless this requirement has been waived). Note that §6-304(d) of the Rules requires this signature unless a specific waiver is granted by the Agency of Natural Resources.
- Submittals that are received with an improperly or incompletely completed application form will be returned.

**B. Fees**

Line 5

- The application must be accompanied by the appropriate fee, in the form of a check made payable to Treasurer - State of Vermont, when submitted to the Agency. Current application fees are:

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\$1,000.	land application or PFRP facility projects and non-minor amendments
\$125.	all other applications

- Applications that are submitted without the applicable fee will be returned.

### C. Right to Possession and Landowner Agreements

#### Line 6

- The applicant must demonstrate that it has fee simple title or an unencumbered right to possession for the physical site(s) of the facility. Note that this requirement does not apply to land application sites, for which a landowner agreement (see Line 7) is required.

In cases where the applicant is the owner of the physical site of the facility (e.g. - a municipal WWTF or a storage lagoon on property owned by the applicant), then a simple written statement that the applicant is the owner of the site is sufficient.

In cases where the applicant is not the owner of the physical site of the facility (e.g. - a remote storage bunker located at a land application site that is not owned by the applicant), a demonstration of unencumbered right to possession must be submitted. This demonstration may take several forms including, but not necessarily limited to:

- an irrevocable lease or other agreement that is valid for the duration of the proposed certification
- having the owner of the site become a co-applicant to the project (and hence a co-permittee should a certification be issued)
- any other form of agreement that provides the applicant with complete, unencumbered access and right to use the site.

The Department will consider a slightly lesser standard for remote storage and sites associated with land application projects, in that it will consider a proposed agreement that is not fully unencumbered for the duration of the proposed certification (i.e. it contains an escape clause), provided that a contingency management option is in effect that the applicant could immediately utilize if the necessity arose. For the purposes of this demonstration, storage for facilities which treat biosolids in a "Process to Further Reduce Pathogens" (i.e. compost facilities, ATAD facilities, heat drying facilities, etc.) are not considered to be land application projects, regardless of whether or not the final product they produce is ultimately managed via application to the land, and a fully unencumbered right to possession for the entire duration of the certification must be provided (i.e. an escape clause is not acceptable).

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Line 7

- The Plan must include a written landowner agreement for each land application site that is not owned by the applicant. The agreement must:
  - Address the responsibilities of the applicant and the landowner.
  - Include the location of the management site(s), acreage, and contain specific wording regarding with which party the responsibilities of site management lie.
  - Be effective for the entire duration of the certification being sought, although it is acceptable for an agreement to contain an escape clause provision.
  - NOTE: A landowner agreement does not have to be effective for the entire duration of the certification being sought if waste management is adequately covered under a contingency management option that is valid for the period not covered in the landowner agreement.
  - Must include the following language:

"The landowner shall allow employees of the State of Vermont to enter the subject property for the purpose of processing the application for certification."
- Please note that an application will be denied for the site(s) involved in cases where the landowner will not accept the language granting State employees access to the facility for the purpose of processing the application.
- A sample landowner agreement is included on **pages 32 and 33** of these instructions for your reference.

D. Facility Location

Line 8

- The application must provide the location of the facility. The Rules stipulate that the location must be determined using either the Vermont plane coordination system on the appropriate Vermont orthophoto tax map, or through use of a GPS system. If using the Vermont plane coordination system, the northing and easting locations should be provided to the nearest meter. If using a GPS system, the latitude and longitude should be provided to the nearest second.

The location must be provided for the approximate center point of each unit located outside of a WWTF fence, and/or for the approximate center point of the WWTF for any unit(s) located within the fence.

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E. Public Notification

Line 9

- A plan for public notification is no longer required since the adoption of Act 150 in, which replaced the notification requirements required by §6-304(h) and §6-305(a)(2). Except for the applicant's requirement to notify adjoining property owners, notification is now managed via the Environmental Notice Bulletin (ENB). Public notice procedures is outlined on pages X – X of these instructions.

**II. SUBCHAPTER 5 - SITING**

A. Prohibited Areas

Lines 10 - 19

- A demonstration that the facility is not sited in any of the listed prohibited areas is required. The demonstration must be made by submitting site location maps to the appropriate department of the Agency of Natural Resources or the federal government for their review. A review letter from each department must be included in the Plan, except as provided below.
- Please note that as of the date of these instructions latest revision, there are no Class I Groundwater Areas designated in the state and only one Class II Groundwater Area located in northeast Brandon. Unless that facility is located in Brandon, a location review by the Drinking Water and Groundwater Protection Division is not required and a statement in the Plan noting that the facility is not located in the area will suffice.
- For reviews regarding the prohibition of siting within a National Wildlife Refuge, note that there are only two NWRs in located in Vermont. The Missisquoi National Wildlife Refuge is located in Swanton. The Silvio O. Conte National Wildlife Refuge is comprised of numerous non-contiguous parcels of land in the Connecticut River watershed. Unless the facility is located in Swanton or in the Connecticut River watershed, a statement in the Plan noting that the facility is not located in either of these areas will suffice. If the facility is located in Swanton or within the Connecticut River watershed, then a siting determination must be conducted and the findings must be submitted with the Plan.
- For reviews regarding the prohibition of siting within a Wildlife Management Area as designated by the Agency, these areas only exist on state owned lands. If the facility is not located on state owned lands, a location review by the Department of Fish & Wildlife is not required and the plan should clearly state that this is the case.

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- Floodway status should be documented by submitting FEMA flood plain mapping (if it exists) for the site(s), or a statement that the site(s) are not proximate to any surface waters or to any surface water that has been mapped for its flood plain. The site(s) boundaries must be clearly delineated on the FEMA maps.
- A current list of contacts for prohibited area reviews is included on page 37 of these instructions.

**B. Siting Standards**

**Lines 20 - 22**

- The plan must contain a discussion of how the isolation distances to seasonal high groundwater, surface water, bedrock, and drinking water supplies are sufficient to assure that any release or emission from the facility will not create adverse impacts.
- The plan must describe how the isolation distances to property lines, homes, public buildings, or places of public assembly are sufficient to assure that there will not be objectionable odors, an unreasonable visual impact, or an unreasonable increase in noise levels created off-site.
- The siting criteria established in §6-503 do not apply to facilities located within the fenced area of a municipal WWTF which were in existence as of February 1, 1989.

**Lines 23 - 27**

- The plan must demonstrate that the minimum isolation distances established in §6-503(b)(4) are met. A table presenting the regulatory isolation distances in comparison with actual facility conditions is requested.

**Line 28**

- The plan must demonstrate that the facility site does not have serious development limitations, such as highly erodible soils, excessive slopes, or the capacity to support any constructed structures.

**Line 29**

- The plan must demonstrate that the facility (or its access road) is accessible from a state or federal highway or from a Class III or better town highway. This is best achieved by submittal of town highway maps showing the facility access points.
- Transportation from the treatment facility to each management site, including the vehicle type and transportation route, must be discussed in the Plan.

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**III. SUBCHAPTER 6 - DESIGN STANDARDS**

**A. Facility Types**

- The following list gives examples of how the various types of facilities are considered with respect to the Rules:

Storage

storage tanks  
bunkers  
stockpiles  
storage lagoons  
drying beds  
holding tanks

Treatment

lime stabilization vessels  
composting facilities  
heat drying facilities  
ATAD facilities

Transfer Stations

installed pads at WWTF's for mobile dewatering where there is piping back to headworks

Diffuse Disposal Facilities

land application sites

Please note that facilities are not necessarily restricted to those listed above.

**B. Basis of Design**

Line 30

- The application must include a general narrative description of the objective of the project and how the management plan and facility are designed to accomplish those goals.

Line 31

- The application must contain a schematic plan of the wastewater treatment system.

Line 32

- The basis of design description must provide up-to-date information on the actual volume (including dry weight and percent solids) of residual wastes being generated per year, as well as projected generation rates for the duration of the proposed certification period. These calculations must take into account such things as polymers and/or other coagulants or hydrated lime that may be added to biosolids, thereby increasing the total volume of waste being generated.

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C. Submittals

Line 33

- This requirement is demonstrated via a Professional Engineer's signature and stamp on the application form, unless the requirement has been waived by the Secretary.

D. Site Characteristics

- Generally, it is not necessary to include a site characterization for facilities that are located within the fence of a wastewater treatment facility and that existed on or before February 1, 1989. However, site specific information must be presented where an application is proposing the construction of new facilities, regardless of their location, and for all land application sites.

Line 34

- A Natural Resources Conservation Service (NRCS) soil survey map of each land application site and the site of any treatment or storage facilities not located on the premises of a municipal wastewater treatment facility must be included in the Plan, if available. A soil series description must be included for the soils of each land application site. Test pit logs should also confirm the NRCS mapping data.
- Soil test pit and boring logs for each management site, including profile descriptions, depths to groundwater, depths to bedrock or other impervious strata, and any other relevant soil, geologic, or hydrogeologic information, must be included in the Plan.
- The Plan must include a discussion of the soils data and its relevance and suitability to the project.
- Soil chemistry data for each land application site, including total metals, pH, liming requirement, available and reserve phosphorus, available potassium and available magnesium must be included in the Plan.
- The application must include information on the design of the facility, including type of treatment facility, design flow, population and/or area served, volume of biosolids (as dry weight and percent solids) or septage (in gallons) handled per year, and the available biosolids or septage storage capacity.

Line 35

- The Plan must include a basic description of the bedrock geology of the facility's sites. Most important to this issue is depth to bedrock and a general discussion of how its nature affects its hydrology (e.g. karst, highly fractured, solid, etc.).

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Line 36

- The Plan must contain a basic description of groundwater geology and geochemistry at sites. This should include a basic description of aquifers beneath sites and must document existing groundwater quality. Groundwater quality descriptions must be derived from analytical results on samples taken from site's monitoring wells. If land application sites are being recertified, historical groundwater data should also be discussed in context to present conditions and trends.
  
- Note that the installation of monitoring wells, and sampling and analysis of the groundwater will be required before any new land application sites will be certified.

Line 37

- The Plan must contain a brief narrative description of a site's topography.

Line 38

- The Plan must provide, at a minimum, a general delineation of groundwater flow. If groundwater monitoring wells are installed at a given site, groundwater flow must be determined by interpretation of groundwater elevations.

Line 39

- The Plan must contain a narrative description of any surface waters or wetlands proximate to the facility.
  
- Floodplain and floodway status must be documented by the submittal of FEMA floodplain/floodway mapping, if available. If FEMA floodplain maps are not available, a discussion of the site's potential for flooding by nearby surface waters must be presented. The site(s) boundaries must be clearly delineated on the submitted FEMA maps.

Line 40

- The Plan must provide a general description of airshed characteristics at facilities. Generally, a wind rose, depicting local conditions, topography or other conditions that may produce thermal inversions and a narrative description of potentially impacted neighbors will suffice. The Plan should also make note of any localized odor problems that do not originate from the facility and may exist near a facility.

E. Treatment Facilities

- For any new treatment facilities that are proposed in an application, conceptual drawings and specifications must be submitted for the administrative completeness review of the application. However, final design and construction drawings and specifications that have been stamped by a P.E. must be

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submitted for technical review and approval before any certification can be issued. An application cannot be determined to be technically complete until these drawings and specifications have been submitted, reviewed, and approved. Please note that Vermont statute (10 V.S.A. §6-605) specifically prohibits the onset of construction prior to a certification being issued.

- As built drawings must be submitted following construction of a facility. This will be a condition of an issued certification, not as a part of the technical review.

Line 41

- The Plan must contain a narrative description of what level of biosolids treatment a facility is intended to provide and how it has been designed to attain that level of treatment.

Line 42

- The Plan must provide a detailed description of operator control of the treatment facility. The description must provide information on system bypasses, control of operational conditions and how they may be adjusted to attain the desired level of treatment, etc.

Line 43

- The Plan must contain a narrative discussion of how the treatment facility has been designed and will be managed to control vectors, emissions, and discharges (including dust and odors). This may be a critical element for an application to certify facilities that have had persistent odor problems in the past. In such cases, particular attention must be paid to this discussion.

Line 44

- The Plan must describe how the treatment facility is designed to specifically protect surface waters, groundwater, and the air from emissions or releases.

Line 45

- For applications which address residual waste treatment, the Plan must propose a schedule of the parameters and frequency of monitoring of the waste, site soils, groundwater, and/or surface waters, as appropriate. In addition, the monitoring plan should provide a basic description of what sampling and analysis protocols will be employed. Generally, a reference to pertinent sections of SW-846 or the "Standard Test Methods for Water and Wastewater" will suffice. Refer to Appendix D of the Guidelines for more detail. If no monitoring of any particular compartment is proposed, the Plan must fully justify why no monitoring is appropriate.

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Line 46

- If use of another facility is the intended contingency action, in order to demonstrate the availability of the alternative, contingency plans for waste treatment must be in the form of a signed contract or letter of agreement from the alternative facility to accept the waste. Please be aware that contingency options must comply with the regional planning requirements as discussed per Line 1 of these instructions.
- Regardless of the contingency option selected, the Contingency Plan must demonstrate the capability to properly manage residual biosolids in the event that the treatment facility cannot be utilized.
- NOTE: In different sections, the Rules require Contingency Plans for all storage, treatment, and disposal facilities. If a project contains multiple facilities, it is not necessary to develop multiple Contingency Plans. One single encompassing Contingency Plan will be acceptable.

Line 47

- Operator Training Plans must document how training of facility operators will be conducted. The Plan should be designed with the training of a new employee, who has no previous experience in biosolids management, in mind. The Plan may be in outline form. The Plan should document those topics in which employees will be instructed, the frequency of instruction, and should identify who will be conducting the training. An example of what is expected for Operator Training Plans is included in these instructions on pages 38 - 41.
- NOTE: In different sections, the Rules require Operator Training Plans for all storage, treatment, and disposal facilities. If a project contains multiple facilities, it is not necessary to develop multiple Operator Training Plans. One single encompassing Operator Training Plan will be acceptable.

Line 48

- Distribution and Marketing Plans for facilities that are intending to produce a marketable product or a product which is intended for distribution to the general public must present the details of the primary intended means of distribution and marketing. The Plan must document who will be distributing or marketing the product and where the product is intended to be distributed or marketed. The Plan must document the applicant's capability to properly manage all product produced. The Plan must propose a contingency distribution and marketing, or other disposal option, for occasions when the primary strategy is not available. The Plan must document the capability to store or otherwise manage the product if the primary strategy for operation is seasonal. The Plan must present a copy of the informational flyer or package label that will be distributed with the product. The Plan must address how substandard product will be managed. The Plan does not have to identify specific purchasers or users of the product.

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Line 49

- If the waste originates as, or contains any amount of, human fecal material, and land application or distribution and marketing following further processing is the intended management strategy, the application must include a description of the process used to achieve pathogen reduction. The description must document the process' efficiency, and must indicate whether or not the process is a "Process to Significantly Reduce Pathogens" or a "Process to Further Reduce Pathogens". Refer to Appendix B of the Rules for more information.

Line 50

- The Plan must include a description of the process used to achieve vector attraction reduction and must provide documentation on the efficiency of the process.

Line 51

- The Plan must demonstrate that there is adequate storage (or disposal alternative) to provide for proper management of the wastes being treated.

Line 52

- The Plan must document the wastes capability of meeting the prequalification standards established in §6-702(a)(10)(B) of the Rules.

Line 53

- A brief discussion of the treated waste's homogeneity and non-deleterious nature must be contained in the Plan.

F. Storage Facilities

- For any new storage facilities that are being proposed in the application, conceptual drawings and specifications must be submitted for the administrative completeness review of the application. However, final design and construction drawings and specifications that have been stamped by a P.E. must be submitted for technical review and approval before any certification can be issued. An application cannot be determined to be technically complete until these drawings and specifications have been submitted and reviewed. Please note that Vermont statute (10 V.S.A. §6-605) specifically prohibits the onset of construction prior to a certification being issued.
- As built drawings must be submitted following construction of a facility. This will be a condition of an issued certification, not as a part of the technical review.

Line 54

- The Plan must contain a brief narrative description of the storage facility's design.

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- The discussion must indicate how the material will be stored, storage capacity available, type of storage impoundment, and amount of storage required.

Line 55

- The Plan must calculate and document the capacity of each storage unit individually.

Line 56

- The Plan must contain a narrative discussion of how the storage facility has been designed to control vectors, emissions, and discharges (including dust and odors). For those facilities that have demonstrated, or may have, the potential for odor problems, particular attention should be paid to this narrative.

Line 57

- The Plan must describe how the design of the storage facility prevents, to the greatest extent feasible, degradation of the stored waste's quality.

Line 58

- The Plan must provide a detailed description of operator control over operation of the storage facility.

Line 59

- For applications which address residual waste storage, the Plan must propose a schedule of the parameters and frequency of monitoring of the waste, site soils, groundwater, and/or surface waters, as appropriate. In addition, the monitoring plan should provide a basic description of what sampling and analysis protocols will be employed. Generally, a reference to pertinent sections of SW-846 or the "Standard Test Methods for Water and Wastewater" will suffice. Refer to Appendix D of the Guidelines for more detail. If no monitoring of any particular compartment is proposed, the Plan must fully justify why no monitoring is appropriate.

Line 60

- If use of another facility is the intended contingency action, in order to demonstrate the availability of the alternative, Contingency Plans for waste storage must be in the form of a signed contract or letter of agreement from an alternative facility to accept the waste. Please be aware that contingency options must comply with the regional planning requirements discussed per Line 1 of these instructions.
- Regardless of the contingency option selected, the Contingency Plan must demonstrate the capability to properly manage residual biosolids in the event that the storage facility cannot be utilized.

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- NOTE: In different sections, the Rules require Contingency Plans for all storage, treatment, and disposal facilities. If a project contains multiple facilities, it is not necessary to develop multiple Contingency Plans. One single encompassing Contingency Plan will be acceptable.

Line 61

- Operator Training Plans must document how training of facility operators will be conducted. The Plan should be designed with the training of a new employee, who has no previous experience in biosolids management, in mind. The Plan may be in outline form. The Plan should document those topics in which employees will be instructed, the frequency of instruction, and should identify who will be conducting the training. An example of what is expected for Operator Training Plans is included in these instructions on pages 36 - 39 of these instructions.
- NOTE: In different sections, the Rules require Operator Training Plans for all storage, treatment, and disposal facilities. If a project contains multiple facilities, it is not necessary to develop multiple Operator Training Plans. One single encompassing Operator Training Plan will be acceptable.

Line 62

- For land application and PFRP projects, the total storage capacity must be sufficient for a minimum period of 5 months, with 6 months recommended. The storage capacity requirement ensures that no spreading of waste will be done on frozen or snow-covered ground, when there is saturated soil within 3 feet of the bottom of the zone of incorporation, or when other conditions preclude distribution of processed materials.
- The Plan must provide documentation that sufficient storage capacity exists or is proposed for construction.
- An alternative disposal strategy may be substituted for storage capacity, provided the Plan documents the applicant's capability to properly manage all waste materials involved in the project.
- The Plan must present an estimate of the amount of waste to be stored and a proposed schedule for its transportation to and from the storage facility.

Line 63

- The Plan must include descriptions of equipment used in the operation of the storage facility.

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G. Waste Piles

Line 64

- The total storage capacity must be sufficient for a minimum period of 5 months, with 6 months recommended. The storage capacity requirement ensures that no spreading of waste will be done on frozen or snow-covered ground, or when there is saturated soil within 3 feet of the bottom of the zone of incorporation.
- The Plan must provide documentation that sufficient storage capacity exists or is proposed for construction.
- The five month storage capacity requirement may be augmented by use of an appropriate contingency management option.

Line 65

- The Plan must document the strategy and methods that will be employed to control the generation and emission of leachate from waste piles.

H. Lagoons

Line 66

- For all storage lagoons, the Plan must demonstrate that the liner of the lagoon (either natural clays or synthetic membranes) are compatible with, and will not be deteriorated by, the lagoons contents.
- For natural clay liners, the plan must contain documentation that the clay's in situ permeability is less than  $10^{-7}$  cm/sec.
- The five month storage capacity requirement may be augmented by use of an appropriate contingency management option.
- Must document the presence and location of groundwater monitoring wells.

I. Disposal Facilities

- For any newly constructed disposal facilities, conceptual drawings and specifications must be submitted for the administrative completeness review of the application. However, final design and construction drawings and specifications that have been stamped by a P.E. must be submitted for technical review and approval before any certification can be issued. An application cannot be determined to be technically complete until these drawings and specifications have been submitted and reviewed. Please note that Vermont

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statute (10 V.S.A. §6-605) specifically prohibits the onset of construction prior to a certification being issued.

- As built drawings must be submitted following construction of a facility. This will be a condition of an issued certification, not as a part of the technical review.

Line 67

- The Plan must include a narrative description of how the disposal facility has been designed and will be operated such that the possibility of an emission or discharge from the facility will be minimized.

Line 68

- The Plan must contain a narrative discussion of how the disposal facility has been designed to control vectors, emissions, and discharges (including dust and odors).

Line 69

- For applications which address residual waste disposal, the Plan must propose a schedule of the parameters and frequency of monitoring of the waste, site soils, groundwater, and/or surface waters, as appropriate. In addition, the monitoring plan should provide a basic description of what sampling and analysis protocols will be employed. Generally, a reference to pertinent sections of SW-846 or the "Standard Test Methods for Water and Wastewater" will suffice. Refer to Appendix F of the Guidelines for more detail. If no monitoring of any particular compartment is proposed, the Plan must fully justify why no monitoring is appropriate.

Line 70

- If use of another facility is the intended contingency action, in order to demonstrate the availability of the alternative, Contingency Plans for waste disposal must be in the form of a signed contract or letter of agreement from an alternative facility to accept the waste. Please be aware that contingency options must comply with the regional planning requirements as discussed per Line 1 of these instructions.
- Regardless of the contingency option selected, the Contingency Plan must demonstrate the capability to properly manage residual biosolids in the event that the disposal facility cannot be utilized.
- NOTE: In different sections, the Rules require Contingency Plans for all storage, treatment, and disposal facilities. If a project contains multiple facilities, it is not necessary to develop multiple Contingency Plans. One single encompassing Contingency Plan will be acceptable.

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Line 71

- Operator Training Plans must document how training of facility operators will be conducted. The Plan should be designed with the training of a new employee, who has no previous experience in biosolids management, in mind. The Plan may be in outline form. The Plan should document those topics in which employees will be instructed, the frequency of instruction, and should identify who will be conducting the training. An example of what is expected for Operator Training Plans is included in these instructions on pages 38 - 41 of these instructions.
  
- NOTE: In different sections, the Rules require Operator Training Plans for all storage, treatment, and disposal facilities. If a project contains multiple facilities, it is not necessary to develop multiple Operator Training Plans. One single encompassing Operator Training Plan will be acceptable.

J. Diffuse Disposal Facilities

Line 72

- The Plan must document the capability to store or otherwise manage five months (six months is recommended) aggregate volume of wastes produced.

Line 73

- A NRCS soil survey map of each land application site must be included in the Plan, if available. A soil series description must be included for the soils of each land application site. Test pit logs should also confirm the NRCS mapping data.
- Soil test pit and boring logs for each management site, including profile descriptions, depths to groundwater, depths to bedrock or other impervious strata, and any other relevant soil, geologic, or hydrogeologic information, must be included in the Plan.
- Soil chemistry data for each land application site, including total metals, pH, liming requirement, available and reserve phosphorus, available potassium and available magnesium must be included in the Plan.

Line 74

- The type of crop currently grown on each land application site, and the crop that will be planted after application, must be included in the Plan. Also, the nutrient requirements and anticipated yield of each crop must be discussed.

Line 75

- The usable acreage of each diffuse disposal site must be calculated. In general, this will be the total area of a field, less those areas necessary to create the required isolation distances and buffer zones.

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Line 76

- Floodplain and floodway status must be documented by the submittal of FEMA floodplain/floodway mapping, if available. If FEMA floodplain maps are not available, a discussion of the site's potential for flooding by nearby surface waters must be presented. The site(s) boundaries must be clearly delineated on the FEMA maps.

Line 77

- The Plan must discuss any seasonal restrictions that may preclude or delay use of sites. Such restrictions may include, but are not limited to, such considerations as seasonal high groundwater, low permeability soils that may delay drying after spring melt-off or heavy precipitation, cropping practices, etc.

Line 78

- The Plan must document all known prior waste management activities at each site. Information presented must include details on the volumes of wastes applied to the sites, waste chemistry, and loading of regulated contaminants, if known. It is acceptable to report such information in tabular form by calendar year.

Line 79

- The remaining life of each waste management site, based on prior waste applications, waste metals concentrations, and anticipated application rates, must be calculated. Refer to Appendix G of the Guidelines for more information.

Line 80

- A general map showing the location of each site, and access to each site, must be included in the application. Either a USGS map or a municipal highway map, with the facility boundaries delineated, will fulfill this requirement.
- A detailed map of each management site (at a scale of 1" = 660', or more detailed), showing the location of the facility(s), percentages and directions of slope, soil test pit and boring locations, wetlands, surface water bodies, floodplain/floodway boundaries, water supply wells, groundwater monitoring wells, springs, drainage ways, property and right-of-way boundaries, dwellings, and roads, plus any other relevant information, must be included in the Plan. The site map must include the scale and a directional arrow. A bar scale is preferred (rather than stating as 1"=660') so that distances can be estimated when maps are reduced in size during copying.

Line 81

- The application must include a chemical analysis of the biosolids or other waste residual proposed for management. Laboratory analysis results should be

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submitted for all parameters specified by the Rules, plus the metals arsenic, molybdenum, and selenium which are regulated under 40 CFR Part 503. A list of the regulated parameters is presented on page 40 of these instructions. Refer to Appendix D of the Guidelines for more information. The Plan should discuss historical biosolids quality data, any problems or exceedences of standards experienced, and implications to the proposed management strategy.

Line 82

- The waste application rates must be determined, and supporting data, calculations, and any past management practices must be discussed in the Plan. Refer to Appendix E of the Guidelines for more detail.
- Actual application rates for the first year of the certification must be provided. Theoretical application rates (subject to change depending on each year's actual activities) must be submitted for the remaining years of the proposed certification period. Application rates **must** be calculated using the Microsoft Excel© based model that was developed by the Department.

Line 83

- The Plan should document the most likely points of public access, and how public access to the sites will be controlled.
- The control of public access to the site (posting, fencing, etc.) must be discussed in the Plan. The language used to inform the public about the nature of the site, and about why public access is limited, must be included. An example of acceptable language is "Restricted Area - Processed Sewage Biosolids Application for Agricultural Purposes, Town of \_\_\_\_\_." "NO TRESPASSING" signs have also been deemed to be acceptable.
- The most likely points of public access should also be indicated on the detailed site plan.

#### **IV. SUBCHAPTER 7 - OPERATION STANDARDS**

##### **A. General Operation Standards**

Line 84

- The Plan must include a description of the facility operator's qualifications for operating the facility. While this description should be supported by submitting photocopies of the operator's certification, the description should also document specific training in biosolids management that the operators have received and other relevant training.

Line 85

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- For any new constructed disposal facilities, conceptual drawings and specifications must be submitted for the administrative completeness review of the application. However, final design and construction drawings and specifications that have been stamped by a P.E., must be submitted for technical review and approval before any certification can be issued. An application cannot be determined to be technically complete until these drawings and specifications have been submitted and reviewed. Please note that Vermont statute (10 V.S.A. §6-605) specifically prohibits the onset of construction prior to a certification being issued.
- As built drawings must be submitted following construction of a facility. This will be a condition of an issued certification, not as a part of the technical review.

Line 86

- The Plan must identify the primary and secondary contact persons for the facility and provide their name, mailing address, and a 24-hour telephone number.

Line 87

- The Plan must identify who will be conducting all sampling and analysis of the various media under the certification. It is not necessary to identify a specific consultant or laboratory if one has not been selected. In such cases, the Plan should state that sampling and analyses will be conducted by qualified independent contractors. If facility personnel will be conducting these activities, the Plan must document those persons qualifications and experience in sampling and analyses.

Line 88

- Management sites for residual wastes will require groundwater monitoring. The Residuals Management Section requires the installation of up-gradient (background) and down-gradient wells or soil lysimeters for each land application site, to adequately assess any effects on groundwater. An appropriate groundwater monitoring plan must be included in the Plan. Refer to Appendix B and Appendix D of the Guidelines for more information. If no monitoring of any particular compartment is proposed, the Plan must fully justify why no monitoring is appropriate.
- For applications which address residual waste management, the Plan must propose a schedule of the parameters and frequency of monitoring of the waste, site soils, groundwater, surface water, and plant tissues. In addition, the monitoring plan should provide a basic description of what sampling and analysis protocols will be employed. Generally, a reference to pertinent sections of SW-846 or the "Standard Test Methods for Water and Wastewater" will suffice. Refer to Appendix D of the Guidelines for more detail.

Line 89

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- The Plan must discuss how the facility operator assures and the steps taken, to the greatest extent feasible, to prevent the inclusion of hazardous wastes in the waste stream being managed.

Line 90

- The Plan must document how access to the facility by non-authorized persons will be controlled.

**B. Diffuse Disposal Facility Standards**

Line 91

- The Plan must calculate and document that the loading of cadmium to diffuse disposal sites will not exceed 0.45 lbs/acre-year or 4.5 lbs/acre cumulatively.

Line 92

- The Plan must document how the pH of soils on diffuse disposal sites will be raised and maintained within the range of 6.5 S.U. - 8.0 S.U. (aqueous).

Line 93

- The method of waste management (surface application, incorporation, subsurface injection, composting, drying, contract services, etc.) must be included in the Plan.
- A schedule indicating how often, and when, the management sites will receive waste must be included in the Plan.
- The method used for regulating application rates on the land application sites, including the equipment and spreading procedure, must be discussed in the Plan.

Line 94

- The Plan must include descriptions of equipment used in the operation of the diffuse disposal facility.

Line 95

- The control of public access, livestock grazing, crop harvest, and feeding of livestock must be discussed in the Plan. The Rules impose specific restrictions on access and crop use.

Line 96

- The application must include a chemical analysis of the biosolids or other waste residual proposed for management. Laboratory analysis results should be submitted for all parameters specified by the Rules, plus the metals arsenic,

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molybdenum, and selenium which are regulated under 40 CFR Part 503. A list of the regulated parameters is presented on page 40 of these instructions. Refer to Appendix D of the Guidelines for more information. These results should be discussed in detail per reference to Lines 81 and 82.

Line 97

- Documentation that the appropriate pathogen reduction standards are being met must be included in the Plan. This may be as simple as a discussion of how lime stabilization will be conducted, for a presumptive treatment method. In projects where pathogen reduction is achieved via digestion or other time/temperature dependent processes, the Plan must contain adequate data to support a demonstration of a PSRP or PFRP or demonstrate that the process has been accepted by the USEPA as an approved PSRP or PFRP process. Demonstrations of pathogen reduction via pathogen density analyses must submit sufficient results to demonstrate that all disposal events (seasonally based) meet the criteria. All supporting calculations must be submitted.

Line 98

- Documentation that the appropriate vector attraction reduction standards are being met must be included in the Plan. This may be as simple as a discussion of how lime stabilization will be conducted, for a presumptive treatment method. For projects where vector attraction reduction is achieved via digestion or other time/temperature dependent processes, the Plan must contain adequate data to support a demonstration of meeting the criteria. All supporting calculations must be submitted.

Line 99

- The Plan must discuss the site use, cropping, and crop use restrictions imposed by this rule and document how compliance will be assured.
- It is highly recommended that these restrictions are written into the landowner agreement, in order to formalize these rule requirements with the landowner.

C. Reporting

Line 100

- The Plan must document how facility operations will be reported.

Line 101

- The Plan must include a method for reporting information indicating non-compliance with the certification or the Rules.

<b>APPLICATION INSTRUCTIONS: Certification of Residual Waste Management Programs</b>
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Line 102

- The Plan must include a method for reporting any discharge or emission from the facility posing a threat to public health and safety or to the environment or resulting in the creation of a public nuisance.

Line 103

- The Plan must include a method for reporting all complaints received concerning facility operations.

Line 104

- All commercial haulers of regulated solid wastes must document that all vehicles, having a rated capacity of one ton or greater, that will be used to transport those wastes over Vermont highways, are properly permitted by the Department. This demonstration shall be made by submitting photocopies of valid Commercial Waste Hauler Permits for each vehicle so used.

D. Record Keeping

Line 105

- The Plan must establish how facility records will be maintained as required by the Rules.

**V. SUBCHAPTER 9 - FINANCIAL CAPABILITY & RESPONSIBILITY**

A. Private Facilities

- Land application sites are not subject to the financial responsibility requirements. Only treatment, storage, transfer, and non-land application disposal facilities are covered under this Rule.

Line 106

- Financial responsibility must be demonstrated and/or secured for treatment, transfer, and storage facilities, and for all disposal facilities except land application sites.

Line 107

- An appropriate financial responsibility instrument, on an approved form, must be submitted before a certification can be issued. The instrument must be for funds sufficient to assure proper closure and post-closure monitoring of the effected facility(s).
- The estimated closure costs (see Line 114) should be used in determining the amount of the instrument.

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- A discussion of financial capability and responsibility, which includes samples of acceptable instruments, is available upon request as a separate document. Please contact the Residuals Management Section to obtain a copy.

**B. Public Facilities**

- Land application sites are not subject to the financial responsibility requirements. Only treatment, storage, transfer, and non-land application disposal facilities are covered under this Rule.

Line 108

- Municipalities may satisfy the financial capability requirements via a demonstration of their ability to raise sufficient funds to meet the project's needs via taxes, user fees, bonding, etc. Private facilities must actually secure an acceptable instrument sufficient to meet the project's needs.

**VI. SUBCHAPTER 10 - CLOSURE & POST-CLOSURE**

**A. Closure Plans**

Line 109

- Closure plans must be developed and included in the Plan for treatment and storage facilities, and for all disposal facilities except land application sites that will not reach seventy-five percent (75%) of the maximum cumulative loading of any regulated contaminant during the duration of the proposed certification.

Line 110

- The Closure Plan must outline the basic steps that will be necessary to dispose of 100% of the rated volume of the facility, demolish the facility, and return the site to its original contours.
- NOTE: It is acceptable for storage facilities located at remote sites to be turned over to the landowner for his/her use. In such cases, it is only necessary to remove and dispose of 100% of the rated volume of the storage facility.

Line 111

- The Closure Plan should provide a basic listing of materials that will be needed to close the facility.

Line 112

- The Closure Plan must estimate the year of closure of the facility.

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Line 113

- The Closure Plan must propose a basic schedule of closure activities.

Line 114

- The Closure Plan must provide an estimate of closure costs. Closure cost estimates should assume that the facility will be full to capacity and that the contents will need to be removed and disposed, that the facility will be demolished, that the site will be returned to its original contours, and must account for any necessary post-closure monitoring.

Line 115

- The Closure Plan should state that the Closure Plan and the cost estimates will be revised every two years, if necessary.

## **SAMPLE: LANDOWNER AGREEMENT**

This is a sample of an agreement between a Permittee and the owner of a proposed site for sewage biosolids management via land application. A similar agreement would also be executed between a septic service or other waste manager for other types of residual waste and the owner of a proposed management site. Good relations between the waste manager and the landowner are very important for smooth operation of a waste management facility. The agreement is a good place to call out, or put in writing, the responsibilities of site management. The assignment of responsibilities is open to negotiation, and there are no legal requirements regarding the assignment of responsibilities. Such responsibilities include: monitoring the site for the required parameters, allowing for access to take monitoring samples, maintaining the soil pH within the required range, managing the site in regard to crop harvesting/use and nutrient requirements, controlling public access to the site, and meeting all other conditions in the certification issued by the Agency of Natural Resources. This sample agreement should be edited to fit the actual activities being proposed. Please note that it is not necessary to execute a landowner agreement if the Permittee is also the owner of the proposed management site.

**This is a sample agreement, not a form for submittal.**

Agreement is made this [insert date], by and between the [insert name of permittee], a [municipality/business] in [insert location], Vermont, hereinafter referred to as the "Permittee," and [insert landowner's name], of [insert landowner's town of residence], Vermont, hereinafter referred to as the "Landowner," for the development and implementation of a sewage biosolids management plan which includes land application on the property of the Landowner, located on [insert location] in the Town of [insert town name], Vermont, and containing approximately [insert number] acres.

For the consideration and on the terms and conditions hereinafter set forth, the Landowner authorizes the Permittee or its authorized representatives, to apply treated sewage biosolids to the approved Landowner's site(s) for a period of five (5) years, commencing on [insert date], and ending on [insert date].

1. Landowner Responsibilities:

A. The Landowner shall permit the Permittee, or representatives of the Agency of Natural Resources (the "Agency"), to enter each site for the purposes of performing soil tests and other investigations, to determine the suitability of the site to receive treated sewage biosolids, and to perform such monitoring of soil, groundwater, surface water, and vegetation, as may be required to comply with the Permittee's certification and any other federal, state, or local regulations.

B. The Landowner shall comply with all Agency regulations and guidelines applicable to use of each site. These include, but are not limited to: restricting public access for at least twelve (12) months following the last application of waste to the site; following harvesting requirements for proper site management; not growing crops for direct human consumption for at least thirty-six (36) months following last application; not pasturing domestic food source animals for at least six (6) months following last application; not harvesting a feed crop from an amended site for at least five (5) weeks following last application; and not feeding silage from the site to domestic food source animals for at least four (4) months following last application. The Landowner shall also notify the Permittee of on-site activities such as manure or fertilizer applications, to ensure that the site crop nutrient requirements are not exceeded.

C. The Landowner shall allow employees of the State of Vermont to enter the subject property for the purpose of processing the application for certification.

2. Permittee Responsibilities:

A. The Permittee shall obtain all necessary permits, certifications, and other approvals required by federal, state, and local authorities for the land application of treated sewage biosolids.

B. The Permittee shall bear the responsibility for all costs associated with obtaining the necessary approvals to apply treated sewage biosolids to each site, and shall be responsible for the costs of: site testing, sampling and analysis of the biosolids, compliance with certification conditions, liming of sites, the

rental or purchase of necessary equipment, and the appropriate application of treated sewage biosolids to the sites.

C. The Permittee agrees to sample and analyze the treated sewage biosolids at a frequency determined by the Agency, and to provide a copy of the analysis to the Landowner. The parameters of the analysis will be determined by the Agency and stated in the Permittee's certification. They will include, but not necessarily be limited to:

Nutrients:	Total Kjeldahl Nitrogen (TKN)		Ammonia Nitrogen (NH3-N)	
	Nitrate Nitrogen (NO3-N)		Total Phosphorus (TP)	
	Total Potassium (TK)		Water Extractable Phosphorus	
Metals:	Aluminum	Arsenic	Barium	Cadmium
	Chromium	Copper	Lead	Molybdenum
	Nickel	Selenium	Silver	Zinc
Other Parameters:	pH	Percent Solids		
	Total PCB's	TCLP Test Method		

D. The Permittee agrees that the application of treated sewage biosolids will be coordinated with the Landowner, and that the application will be in conformance with the Permittee's certification, issued by the Agency, and any subsequent applicable regulations or guidelines for land application. Conditions may include, but are not limited to, incorporation of the biosolids into the soil, within forty-eight (48) hours of application, where a site lies within a 100 year flood plain.

E. The Permittee shall maintain the soil pH of each site between 6.5 and 8.0, while the site is receiving treated sewage biosolids. Records of the site pH, liming requirement, and amounts of lime applied shall be kept by the Permittee.

F. The Permittee shall maintain records of the quantities of treated sewage biosolids applied to each site. The Permittee shall give a copy of these records to the Landowner.

G. Either party to this agreement shall have the right to terminate said agreement upon thirty (30) days prior written notification to the other party.

In Witness whereof, and dated at town, Vermont, this Date.

WITNESS: \_\_\_\_\_ Print Name as Signed \_\_\_\_\_

LANDOWNER: \_\_\_\_\_ Print Name as Signed \_\_\_\_\_

PERMITTEE: \_\_\_\_\_ Print Name as Signed \_\_\_\_\_

**NOTIFICATION LETTER  
to Adjoining Property Owners  
Required under 10 V.S.A. Chapter 170**



**OFFICIAL NOTICE**

Hello Neighbor,

This letter is an official notice that \_\_\_\_\_ intends to apply for one or more permits from the Agency of Natural Resources, Department of Environmental Conservation (DEC). Because your property borders the location of the activity as described below, Vermont law requires the applicant to provide you with notice of the application(s).

Once each application has been submitted and deemed complete by DEC to begin the review, it will be posted to the DEC Environmental Notice Bulletin (ENB) at [ENB.VERMONT.GOV](http://ENB.VERMONT.GOV), where you may register to receive notifications to stay informed as each application moves through the review process. Although the application(s) may not yet be received or processed by the DEC upon receipt of this letter from the applicant below, you may register now to receive notifications using a specified mile/distance radius from your address location (see next page for detailed instructions on how to register).

In the meantime, you may also contact the property owner/applicant with questions about the activity using the contact information provided below. For background, the permit process includes a public comment period and an opportunity to request a public meeting, all which can be done through the ENB link above once permit applications are posted. Note that to appeal a final permit decision you must submit comments during the public comment period.

For additional information please visit the following website: [DEC.VERMONT.GOV/PERMITS/ENB/GENERAL](http://DEC.VERMONT.GOV/PERMITS/ENB/GENERAL). For general questions or assistance with registering on the ENB please call DEC's main line at (802) 828-1535 and plan to provide the permit types that are being applied for as listed below.

**PROPERTY OWNER(S)/APPLICANT(S) NAME**

**PROPERTY OWNER(S)/APPLICANT(S) CONTACT INFORMATION (MUST PROVIDE TELEPHONE NUMBER AND/OR EMAIL)**

**PROPOSED ACTIVITY STREET ADDRESS/ROUTE**

**PROPOSED TOWN(S)**

**PERMIT TYPE(S) (INDICATE FOR EACH PERMIT TYPE NEW OR RENEWAL)**

To register on the ENB and set up your subscription: please go through the following steps. There are illustrated instructions on Page 12 of [the ENB User Guide](#):

1. Go to [ENB.VERMONT.GOV](http://ENB.VERMONT.GOV)
2. Click **Register** on the upper right-hand side of the home page
3. Enter the required information (name, email address and create password) and click **Register**
4. You will receive an email confirmation for your email address. Once confirmed you will be able to log-in and set up your subscription.
5. Log into ENB and then click **My Subscription** at the top left-hand side of the home page
6. Click **Modify Alerts** on the My Subscription page
7. Click **Edit for Alert #1**
8. Choose the permits being applied for from the **Activity Types of Interest** list by checking the check boxes.
9. Next, choose the location using **Distance from a Point** and click the map icon to set your location.
10. Enter your own address, including Town in the **Search Address** field and set the distance large enough to capture the project activity (1 mile, 5 miles, etc.)
11. Click **OK** once the radius has been set
12. Click **SAVE** on the next page, then Click **OK** to return the main subscription page.
13. Once you receive an alert for an activity, you can choose to **Follow** the activity from your subscription page.
14. For additional instructions see the User Guide on [ENB.VERMONT.GOV](http://ENB.VERMONT.GOV).
15. For help with registration please contact the ENB Administrator: [ANR.ENBAdministrator@vermont.gov](mailto:ANR.ENBAdministrator@vermont.gov).

**CONTACTS FOR SIGN-OFF REVIEWS**  
**§6-502(a) SITING CRITERIA - PROHIBITED AREAS**

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CLASS I & CLASS II GROUNDWATER AREAS

DEC – Drinking Water and Groundwater Protection Division  
1 National Life Drive, Main 2  
Montpelier VT 05620-3521

WETLANDS (all classes)

DEC – Watershed Management Division  
1 National Life Drive, Main 2  
Montpelier VT 05620-3522

NATIONAL WILDLIFE REFUGES

U.S. Fish & Wildlife Service  
11 Lincoln St.  
Essex Jct. VT 05452-3151

WILDLIFE MANAGEMENT AREAS

Fish & Wildlife Coordinator  
Vermont Fish & Wildlife Department  
at the appropriate regional office (Essex Jct., North Springfield, Pittsford, Barre, or St. Johnsbury)

THREATENED OR ENDANGERED SPECIES HABITATS

Vermont Fish & Wildlife Department  
Non-Game & Natural Heritage Program  
1 National Life Drive, Davis 2  
Montpelier VT 05620-3702

CLASS A WATERS OR OUTSTANDING NATURAL RESOURCE WATERS

DEC – Watershed Management Division  
1 National Life Drive, Main 2  
Montpelier VT 05620-3522

FEMA MAPS (floodplain/floodway mapping)

DEC – Watershed Management Division  
1 National Life Drive, Main 2  
Montpelier VT 05620-3522

PUBLIC WATER SUPPLY SOURCE PROTECTION AREAS

DEC – Drinking Water and Groundwater Protection Division  
1 National Life Drive, Main 2  
Montpelier VT 05620-3521

## OPERATOR TRAINING PLAN GUIDELINES:

The following information is intended to serve as general guidance for developing an operator's training plan that accommodates the requirements of the Vermont Solid Waste Management Rules for biosolids management certifications. Sections 6-604, 605, and 606 of the Rules specifically require an applicant for a solid waste management certification to provide an operator training plan for all applicable treatment, storage, transfer and disposal facilities. This guidance is not intended to serve as a template that can be copied and submitted as part of an application. All training plans must speak specifically to the management strategies proposed by the applicant and should be appropriately detailed to explain the biosolids management process from the time the materials are subject to the jurisdiction of the Rules until the material is no longer in the custody of the generator.

An important aspect of an operator training plan is a demonstrated commitment to continuing education in both technical and regulatory aspects of biosolids management. The operator training plan should be used as an opportunity to ensure that all wastewater treatment facility personnel will be appropriately educated during the term of certification. A thorough and complete operator training plan is intended to serve the interests of the wastewater treatment facility operators and may prove useful in addressing technical problems associated with a facility's biosolids management operations. If an application is made for a biosolids composting, drying, or other technically complex facility, a highly detailed operations and training plan is required.

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### I. Purpose

This section can provide a general overview of the structure of the training plan, who it is designed to serve, and what aspects of biosolids management are addressed.

### II. Continuing Education & Training

An operator training plan should discuss training in the following:

- A. All wastewater treatment facility personnel will be required to maintain a current understanding of all applicable local, state, and federal regulations for biosolids management. All wastewater treatment facility personnel will be provided with and required to be familiar with the Vermont Solid Waste Management Rules (Rules) as they relate to biosolids management, state guidelines for biosolids management, conditions of certifications or permits for biosolids management, and any other applicable agreements, local ordinances, or other requirements. It may be useful to list applicable regulations, statutes, ordinances, and certifications/permits that apply to the proposed activities and indicate where these documents may be located.
- B. The operator training plan should offer a commitment to providing education to facility operators in both the regulatory and technical aspects of biosolids management. A statement in an operator training plan requiring that facility operators maintain a knowledge of applicable technical and regulatory aspects of biosolids management helps ensure that the training will be sought and provided. An operator may wish to include copies of certifications and a current list of course work and credit hours obtained to accommodate the requirements of the Rules with respect to both operator training plans and evidence of operator qualifications.

### III. Biosolids Treatment Facilities

- A. Discuss the details of the biosolids treatment facility in such a way that a person unfamiliar with its operations (for example, a new employee with little or no background in biosolids management) would understand, in general, how to properly and safely operate all aspects of the facility (may wish to include a schematic diagram of the facility).
- B. Applications for certification of technically complex treatment facilities, such as composting and heat drying facilities, are required to present a detailed operations plan for those facilities. If an application is for an existing composting or heat drying facility, the training and operations plan should discuss problems that have been experienced in the past and solutions achieved. The plan should detail the procedures necessary for achieving a Process to Further Reduce Pathogens (this information will also be required in other sections of the application).

- C. If a treatment facility is used as a Process to Significantly Reduce Pathogens (PSRPs) then all aspects of Appendix B of the Rules should be addressed in terms of how those requirements will be achieved and monitored. Although this information is required to be presented in other sections of an application, the training plan should at least refer to those sections of the application that discuss the PSRP requirements and procedures. Specific details for achieving and managing PSRP are required to be included in the application and operator training plan.
- D. Other issues to consider and discuss:
  - i. Preparation of equipment;
  - ii. Operational problems typically encountered and solutions identified;
  - iii. Handling procedures for getting biosolids into and out of the treatment facility and the degree of control an operator maintains over the inputs and outputs;
  - iv. Safety precautions and equipment; and
  - v. Use and control of chemical inputs.
- E. It may be helpful to keep in mind that the Department's Residuals Management Program does not maintain regulatory jurisdiction over those parts of the wastewater treatment facility that are not used exclusively for biosolids management (e.g., aerobic digesters, anaerobic digesters). However, if PSRP is proposed via aerobic or anaerobic digestion processes then the Rules clearly require that an applicant for a solid waste management certification demonstrate an ability to achieve certain operational parameters (refer to Appendix B of the Rules).
- F. Note that many of the training plan requirements discussed above may already exist in the facility's O&M Manual. Pertinent sections from that manual may be utilized in preparing this operator training plan.

#### IV. Biosolids Storage Facilities

- A. Discuss the details of the biosolids storage facility in such a way that a person unfamiliar with the operations would understand, in general, how to properly and safely operate all aspects of the facility (may wish to include a schematic diagram of the facility).
- B. Storage Facility Management: (Discuss training in the following)
  - i. Control and regulation of biosolids inputs to the storage facility (should include a schedule for the use of the facility);
  - ii. Procedures for controlling odors and vectors;
  - iii. Procedures for adding chemicals to biosolids in storage;
  - iv. Procedures for removing biosolids from storage;
  - v. Safety precautions and equipment associated with the operation of the storage facility;
  - vi. If PSRP is conducted in the storage facility then discuss those procedures (PSRP is detailed below); and
  - vii. If the storage facility is a lined lagoon, then discuss how, when, and by whom groundwater monitoring wells will be sampled, (if these activities will not be conducted by a contract consultant). Discuss any equipment that may be critical to the operation of the storage facility.
- C. For biosolids storage lagoons, a training and operations plan should discuss the procedures required for managing biosolids inputs and decant outputs that allow an operator to maintain the appropriate volumes and quality of biosolids during periods of storage.

#### V. Biosolids Disposal Facilities

- A. Discuss the details of the biosolids disposal facility in such a way that a person unfamiliar with the operations would understand, in general, how to properly and safely operate all aspects of the facility.
- B. Site preparation: (Discuss training in the following)
  - i. Soil pH management:

- Soil sampling and pH monitoring;
- Regulation of soil pH (lime additions, how much, when, where);
- ii. Site delineation and posting for public access restriction;
- iii. Determining depth to groundwater:
  - how, when, areas to pay particular attention to;
- iv. Meeting with landowner/farmer prior to land application:
  - when, who, issues to discuss;
- v. Preparation of equipment:
  - what, when, how, any problems; and
- vi. Sampling procedures and requirements for groundwater, surface water, soil, plant tissue.

C. Calibration of application equipment.

D. Policing of fields for non-degradables following application, if applicable.

E. Process to Significantly Reduce Pathogens: (Discuss training in the following if not discussed in previous sections of the operator training plan)

- i. If aerobic digestion is used for PSRP compliance then discuss training for data collection and maintenance for retention time and temperatures and any applicable calculations for demonstrating 38% volatile solids reduction;
- ii. If anaerobic digestion is used for PSRP compliance then discuss training for data collection procedures (similar to discussion for aerobic digestion and PSRP compliance); and
- iii. If lime stabilization, then discuss how training will address how much lime has been used in the past for stabilization (at pH 12 for 2 hrs) of a specific volume of biosolids; problems encountered and solutions achieved; use of pH meter; where biosolids will be stabilized; how lime and biosolids will be mixed; other applicable information.

F. Vector Attraction Reduction: (Discuss training in the following)

- i. Method of compliance with federal requirements (e.g., inject into soil, lime stabilization);
- ii. If injection, discuss availability of injection equipment and application to site conditions and land use practices, calibration of equipment; and
- iii. If lime stabilization, discuss how much lime, pH monitoring procedures and how lime will be added and mixed with biosolids.

G. Pre-application notification procedures: (Discuss training in the following)

- i. Who should be notified prior to application events; and
- ii. How will notification be conducted, if applicable.

## VI. Biosolids Sampling Procedures

- A. Discuss applicable methods and procedures for sampling biosolids from storage, treatment or other facilities prior to final management.
- B. Discuss training in biosolids sampling and analytical techniques, if applicable. In some cases, sampling and/or analysis will be conducted by consultants or other trained professionals. If the Permittee is not responsible for sampling or analysis of biosolids then discuss how the Permittee will coordinate with other parties to conduct these activities.

Although some of this information must be detailed in other sections of an application, it is important to also present this information as an operator training and operations plan to provide facility operations personnel with an easily accessible and understandable outline for operating and trouble-shooting the regulated facilities. Portions of this plan may need to be more detailed than the information provided to accommodate other sections of the Rules

## ANALYTICAL PARAMETERS

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Proposed schedules for the chemical analyses of wastes intended for management via land application must be submitted for the following parameters:

Total concentrations in residual materials should be reported as milligrams per kilogram (mg/kg), dry weight.

Metals:

Arsenic  
Cadmium  
Chromium  
Copper  
Lead  
Mercury  
Molybdenum  
Nickel  
Selenium  
Zinc

Polychlorinated Biphenyls (PCBs):

Aroclor 1016  
Aroclor 1221  
Aroclor 1232  
Aroclor 1242  
Aroclor 1248  
Aroclor 1254  
Aroclor 1260

## PUBLIC NOTICE VIA ENVIRONMENTAL NOTICE BULLETIN

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Based upon legislation passed as Act 150, the DEC has created the Environmental Notice Bulletin (ENB), an external website for public notices. DEC issues many different types of permits, and the ENB is meant to streamline public noticing across programs as well as increase transparency and public engagement during the review process.

The ENB will post environmental proposals, draft decisions and final decisions made by DEC. The ENB refers to all applications as “activities”. Applicants and members of the public will be able to view any activity on public notice as well as make comments and follow activities step-by-step throughout the review process. The ENB will be the exclusive form of public noticing for most programs within the Department.

Act 150 created five different activity types or categories. Solid Waste Management Facility Certifications are considered a Type 2 (full certification) or Type 4 (minor amendment of existing certification) activity:

*Type 2: Solid Waste Management Facility Certifications*

- i. Applicant provides notices to adjoining property owners and program receives certification of this with the application;
- ii. Minimum 30-day public comment period;
- iii. Meetings can be requested within 14 days of draft decision
- iv. Public meeting must be announced for at least 14 days prior to the meeting date.
- v. Post meeting public comment period lasts at least 7 days after the meeting;
- vi. Notice is posted to ENB with the final decision and response to public comments if comments were received

*Type 4: Minor amendment to existing Solid Waste Certifications*

- i. No notice to adjoining property owners required;
- ii. Minimum 14-day public comment period;
- iii. Public cannot request a public meeting;
- iv. Notice is posted to ENB with the final decision and response to public comments if comments were received

## APPLICATION REVIEW / PUBLIC NOTIFICATION PROCESS

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### NOTIFICATION: 10 VSA Chapter 170

By: Applicant

To: Adjoining property owners – person who owns land in fee simple, if that land: a) shares a property boundary with a tract of land where proposed or actual activity regulated is located; or b) is adjacent to a tract of land where such activity is located, and the two properties are separated by a river, stream, or public highway

When: At, or prior to, time of application submittal.

What: Letter of Notice of application (*see page 34 for template*)  
Applicant must submit: copy(s) of notice letter, list of adjoining property owners, certificate of service.

**SUBMIT:** Application to Residuals Management Program, Waste Management Division, VT DEC

**ADMINISTRATIVE REVIEW:**

By: Department

What: Review for administrative completeness

When: Do within 15 days of receipt. If incomplete, so notify and define what is needed to complete.

**NOTIFICATION:** If deemed administratively complete, application posted on the Environmental Notice Bulletin (ENB)

**TECHNICAL REVIEW:**

By: Department

What: Review for technical completeness. Find complete, incomplete, or deny. If incomplete, so notify and define what is needed to complete. If denied, so notify and explain the reason for denial. If complete, prepare draft fact sheets and certifications for posting on ENB.

When: Draft Decision Date; starts clock on public comment period

Type 2 applications: 30-day minimum public comment period; public meeting can be requested within 14 days of the draft decision

Type 4 applications: 14-day minimum public comment period; public cannot request a public meeting

**NOTIFICATION:** Draft Certification and Fact Sheet posted on the Environmental Notice Bulletin (ENB)

**FINAL REVIEW:**

By: Department

What: Draft Responsiveness Summary if comments received.  
Amend Draft Certification as needed

When: Upon completion of the public comment period, following signature or denial

**NOTIFICATION:** Final Certification (signed) or denial, copy of Responsiveness Summary.