



Virginia
Regulatory
Town Hall

Notice of Intended Regulatory Action Agency Background Document

Agency Name:	Virginia Department of Health
VAC Chapter Number:	12 VAC 5-585-500
Regulation Title:	Biosolids Use Regulations
Action Title:	Amend Section 500 of Biosolids Use Regulations
Date:	May 15, 2002

This information is required prior to the submission to the Registrar of Regulations of a Notice of Intended Regulatory Action (NOIRA) pursuant to the Administrative Process Act § 9-6.14:7.1 (B). Please refer to Executive Order Twenty-Five (98) and Executive Order Fifty-Eight (99) for more information.

Purpose

Please describe the subject matter and intent of the planned regulation. This description should include a brief explanation of the need for and the goals of the new or amended regulation.

Section 500 of the current Biosolids Use Regulations provides for three types of storage situations as follows:

1. Emergency storage, involving retention of sewage sludge at the treatment process site due to unforeseen circumstances.
2. Temporary storage, involving storage of up to 100 wet tons daily of biosolids at a land application site, for up to 30 days, when factors such as weather, prevent operation on the site. However, no additional biosolids can be stored until the originally stored material is land applied on the site.
3. Routine storage, involving an engineered, permanent structure, designed to retain up to 60 days of biosolids production volume, based on contractual amounts managed by the owner of the storage facility. Routine storage facilities require monitoring of groundwater, and must be emptied in the late spring and fall of each year to minimize odor and liquid management problems.

Operation of routine storage facilities has frequently resulted in liquid management problems and odor concerns. Many local governments have adopted local ordinances that prevent the

construction of new routine storage facilities. The use of smaller temporary storage sites has provided an alternative that minimizes these operational problems.

However, the approval of temporary storage for biosolids, in excess of that transported to a site during a single day operation, and cannot be land applied on that site, would require a variance to the Biosolids Use Regulations (12 VAC 5-585-90). Issuance of such variances is a time consuming process. In addition, issuance of numerous variances to a regulation is not desirable.

The purpose of amending Section 500 of the Biosolids Use Regulations is to provide standards for field storage of biosolids as a special type of temporary storage. By placing such standards in this section of the regulations, the need for temporary storage variances will be eliminated. The use of field storage will greatly reduce the need to use routine storage facilities.

Basis

Please identify the state and/or federal source of legal authority to promulgate the contemplated regulation. The discussion of this authority should include a description of its scope and the extent to which the authority is mandatory or discretionary. The correlation between the proposed regulatory action and the legal authority identified above should be explained. Full citations of legal authority and, if available, web site addresses for locating the text of the cited authority must be provided.

The Biosolids Use Regulations (12 VAC 5-585) were adopted by the Board of Health, in 1995, under Section 32.1-164.5 of the *Code of Virginia*. The Biosolids Use Regulations were subsequently revised, effective on October 15, 1997, in accordance with the Virginia Administrative Process Act (APA). The regulations provide for an Advisory Committee(12 VAC 5-585-270) to make recommendations to the State Health Commissioner concerning the implementation of the regulations. Members of the Biosolids Use Regulations Advisory Committee (BURAC) have helped develop the standards for amending the Biosolids Use Regulations to provide for field storage. The members of the BURAC have requested that the Division of Wastewater Engineering staff (Division) initiate the administrative process to include those standards in the Biosolids Use Regulations.

Substance

Please detail any changes that would be implemented: this discussion should include a summary of the proposed regulatory action where a new regulation is being promulgated; where existing provisions of a regulation are being amended, the statement should explain how the existing regulation will be changed. The statement should set forth the specific reasons the agency has determined that the proposed regulatory action would be essential to protect the health, safety or welfare of citizens. In addition, a statement delineating any potential issues that may need to be addressed as the regulation is developed shall be supplied.

The recommended amendment to the Biosolids Use Regulations, would add the following text:

12 VAC 5-585-500 E. Field Storage

The **biosolids** owner may use field storage as an alternative to routine storage during periods of inclement weather, or when the site soils are frozen, or surface saturated. Field storage may be used during winter conditions when there is limited or no nutrient uptake, or land application operations could physically alter the site surface or otherwise increase surface runoff of particulates. Only **dewatered** biosolids suitable for land application (Class A or B pathogen control) and established as having minimal odor potential (e.g. pH of 11 or more, or digested with a volatile solids level of 60 percent or less or other method approved by the Division) shall be placed into field storage. Field storage operations shall not result in water quality, public health, or public nuisance problems. If field storage is used, the following requirements and BMPs shall be adhered to:

1. All field storage locations must be pre-approved by the Division. Field storage locations shall be as remote as practicable possible and located only in areas identified as having no flooding potential **as identified by the county soil survey**. Sites selected for field storage shall not be located on excessively moist or wetland soils where very low infiltration rates regularly lead to standing water or excessive runoff after storm events. Stockpiles shall not be located on soils with extremely high hydraulic conductivity (such as gravel) resulting in excessive infiltration rates. The design and operation of the field storage site shall be adequately described and approved in accordance with this chapter (12 VAC 5-585-500) and 620). The local government shall be notified in advance of all proposed field storage locations and provided an opportunity to comment on the proposed site. The Commissioner may consider all comments on the proposed location and deny or revoke approval of any site if it will become problematic due to odor, health, or water quality issues, in accordance with the provisions of this chapter (12 VAC 5-585-70).

2. The stored biosolids shall be sufficiently dewatered so as to maintain a stacking height of at least **4** feet on the average. The ability of the biosolids to stay consolidated during stockpiling is to be verified and documented by the operator of the treatment works producing the biosolids at the source. This consolidation property is to be rechecked in at the storage location if the biosolids contain polymers that may be altered during storage such that the biosolids bound water is released. Biosolids may be blended with thickened biosolids from the source treatment facility if they do not have the proper consistency. The stored biosolids shall maintain a sloping surface shape that minimized accumulation of precipitation on the stored biosolids. Field Storage Areas are to be designed to slope to minimize accumulation of precipitation, or other methods of removing accumulated precipitation are to be provided. Management steps must be taken to assure that no ponding of water occurs in contact with biosolids. The quantity of stored biosolids at the storage site shall be limited to the amount equivalent to the quantity that would provide the agronomic rate of application, in accordance with the provisions of this chapter (12 VAC 5-585-510), for approved sites within or adjacent to the property on which the storage site is located. Adequate daily records of stored quantities shall be maintained and reported monthly in accordance with the provisions of this chapter.

3. The design of field storage shall include the following:

a. The distance to seasonal high water table shall be equal to or more than 36 inches, unless a liner with a minimum permeability of 10^{-6} cm./sec and of sufficient strength to support operational equipment and approved by the Division is installed.

b. The distance to bedrock shall be equal to or greater than 40 inches unless a liner with a minimum permeability of 10^{-6} cm./sec and of sufficient strength to support operational equipment and approved by the Division is installed.

- c. In karst topography, the Division may require additional design measures.
- d. If the average site slope is greater than 6%, adequate surface water diversion methods must be provided and operated.
- e. Minimum buffer distances are as follows:

Property lines of sites not permitted for land application of biosolids	500 feet
On-site residences (unless waived in writing)	200 feet
Potable wells	300 feet
Surface waters	200 feet

4. Seasonal restrictions on storage time shall be established in accordance with the design of the field storage facility as follows:

<u>DESIGN TYPE</u>	<u>TIME PERIOD (Days)</u>	
	November through March	April through October
Uncovered and no Liner below biosolids:	14	14
Approved Liner under biosolids only: <i>(installed and maintained to avoid seepage)</i>	45	30
Approved Cover over biosolids only:	120	30
Approved Liner and Cover	120	30

- 5. Operation of the Field Storage shall include:
 - a. Removal within 48 hours of biosolids from the storage site if objectionable odors related to the stored biosolids are verified by **VDH** at any occupied residence on surrounding property.
 - b. Biosolids placed into **covered** storage are to be of a sufficiently cool temperature to allow placement of covering that will not result in safety or health concerns from a build up of heat, ammonia, or other gases or odors. Only biosolids with a minimum potential for heat build-up, such as stabilized compost, is to be placed in covered storage as incompletely stabilized compost can reheat to the point of catching fire.
 - c. Biosolids stockpiles are to be inspected every **7 (or 14) days** and after severe precipitation events to ensure that runoff controls are in good working order. Any observed excessive slumping, erosion or movement of biosolids is to be corrected within 24 hours. Any ponding or excessive odor at the site is to be corrected. An inspection report shall be completed and submitted with monthly reports.
 - d. Following storage without liners, the residual biosolids remaining on the soil should be scraped and removed, the soil at the site shall be tilled to break up compaction, and the site should be cropped to take up nutrients.

The standards for field storage will serve to prevent impacts to either public health, or water quality, while providing a reasonable alternative to the problematic use of routine storage facilities.

Alternatives

Please describe, to the extent known, the specific alternatives to the proposal that have been considered or will be considered to meet the essential purpose of the action.

The Virginia Department of Health may elect to request that the State Board of Health consider the following alternatives:

1. Do not revise the Biosolids Use Regulations, and continue to issue variances,
2. Revise the entire set of Biosolids Use Regulations, or
3. Revise the sections of the Biosolids Use Regulations dealing only with the request for the field storage amendment.

The issuance of numerous variances will place additional demands on the limited staff resources available to implement the regulations. In addition, the availability of alternative storage to reduce the use of routine storage will be limited. Failure to provide specific State requirements as requested will likely result in local adoption of ordinances with varying non-uniform requirements, that could have significant financial impacts on the regulated entities. Court challenges are likely to result from inconsistent and overly restrictive local ordinances, leading to expensive litigation. Although additional requests for revisions to the Biosolids Use Regulations have been received from local governments and private individuals, the process of revising the entire set of the Biosolids Use Regulations will likely become a long drawn out process, as the land application of biosolids is a highly controversial subject. Thus, the Virginia Department of Health is electing to recommend that only the previously listed section of the Biosolids Use Regulations be revised at this time.

Family Impact Statement

Please provide a preliminary analysis of the potential impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

No longer required by executive order.