

Merrimack Wastewater Facility
Compost Operational Controls
Authorization for Utilization of Composted Biosolids

COC-F 2.1

Revision – 01

Approval Signature

06/13/2001
Date of Approval

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**Town of Merrimack, NH
Wastewater Treatment Facility
Authorization for Utilization of Composted Biosolids**

In February 1993 the Environmental Protection Agency (EPA) promulgated new regulations governing sewage sludge or biosolids. A provision in the rule allows for biosolids (compost) that meet stringent parameters for heavy metals and pathogens (disease causing organisms) to be distributed with no restrictions on its use. Merrimack compost consistently meets these "clean biosolids" requirements. As such, Merrimack compost can be used as you would any commercially available fertilizer.

The Applicant agrees to accept full responsibility for any damages, physical or health or other, directly or indirectly caused by the picking up or utilization of composted/stabilized biosolids and will in no way hold the Town of Merrimack or its agents responsible for any and all consequences of access to or use of said composted/stabilized sewage biosolids. The Applicant agrees that in the event a third party makes a claim against the Town of Merrimack as a consequence of the use the Applicant makes of the sewage biosolids, the Applicant will indemnify, defend and save harmless the Town of Merrimack for any damages arising out of said claim and shall pay all defense costs.

I. General Information

Sludge is the end-product of the Town's wastewater treatment process and is transformed into compost by the following method:

1. Liquid biosolids are dewatered to an average of 20% solids.
2. The 20% raw biosolids is then mixed with a bulking agent such as sawdust at a ratio of 2:1.
3. The rough mix is then loaded into as many of the 15 cement bays as is needed for the days biosolids production. Each bay is 6'W X 6'H X 220'L.
4. A machine (roto-blender) riding on rails above the bays moves and blends the mixture down the bays 12 feet per days. At the end of 21 days, finished compost is discharged and is ready for sale or for giveaway to Town residents.
5. During the composting process, air is introduced into the bays by computer controlled blowers. Temperatures are monitored at several points in each bay to insure that the minimum required temperatures are met, (55°C or 131°F for three consecutive days).
6. Finished compost is then analyzed for heavy metals, nitrogen content, and pathogen reduction. All information is available for the public inspection and is reported to EPA.

(CONTINUED ON OTHER SIDE)

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II. Landscape Utilization

Compost is extremely useful for turf grass establishment. Incorporation of compost in soils before seeding grass improves the soils organic content, improves growth, and supplies a limited amount of nutrients such as nitrogen and phosphorus. A half-and-half blend of compost and sub-soil generally quickens seed germination and needs less water, fertilizer, and lime. Other uses include flowerbeds, as an additive for shrubs and trees, and for top dressing existing lawns.

[If you have any questions, please call the Merrimack Wastewater Treatment Facility at 883-8196]

Applicant's Name (PLEASE PRINT)

Name of Hauler if other than Applicant

Address

Location of Compost Disposal Site

Signature of Applicant

Date

Telephone

# of Tickets	@ Yards	= Total	

Label: _____

CT, MA, NH, NY & VT
AGRESOURCE---THE SOURCE FOR COMPOST

100 MAIN STREET AMESBURY, MA 01913 (1-800-313-3320)

WWW.AGRESOURCEINC.COM

AGRESOIL COMPOST- Made at the Town of Merrimack N.H. WWTF. From a mixture of biosolids and sawdust using in-vessel agitated bed technology producing the most consistent compost in the market place. This compost meets Exceptional Quality Standards for general use in horticultural and agricultural standards and is approved by the following Agencies:

- United States Environmental Protection Agency
- New York State DEC Class I
- MA DEP Type I unrestricted use. Valid: (2-15-2011 to 2-15-2013)
- New Hampshire DES Sludge Quality Certification NHSQC-9901 Class A for Low Metals Valid: (8-17-2010 to 8-17-2015) (2012 Label)

Application/ Uses	Rates and Methods
TURF ESTABLISHMENT SOD INSTALLATION SOIL RENOVATION	Incorporate 1 to 3 inches of AGRESOIL COMPOST into the top 4 to 6 inches of soil (3-9 cu yds/1000sqft). Use higher rates for less fertile soil.
TURF MAINTENANCE TOPDRESSING	Broadcast 1/3 of an inch of AGRESOIL COMPOST (approx. 1 cu yd/1000 sqft) on established turf and rake in. For best results aerate soil prior to topdressing.
FLOWER BEDS/ PLANTING BEDS	Mix or rototill 1 to 3 inches AGRESOIL COMPOST into the soil prior to planting.
TREE AND SHRUB PLANTING	Uniformly mix AGRESOIL COMPOST with existing soil and use at a rate of 25% AGRESOIL COMPOST to 75% soil and use as back fill for trees and shrubs.
ORNAMENTAL MULCH	Spread AGRESOIL COMPOST 1 to 2 inches thick over planting areas or individual plant pits
POTTING MEDIA/ CONTAINER PLANTS	Custom blend AGRESOIL COMPOST (1/10 to 1/4 by volume) with traditional planting media. Water thoroughly before planting.
GOLF COURSE TEE AND GREEN CONSTRUCTION	Blend 10-20% AGRESOIL COMPOST with 80%-90% USGA specific sand, mix thoroughly, seed sod. (Screen AGRESOIL COMPOST to 1/4 inch prior to blending)
GOLF COURSE TOP DRESSING	Spread AGRESOIL COMPOST 1 to 2 inches thick over planting areas or individual plant pits

AVERAGE METALS NUTRIENTS (2010)		AVERAGE NUTRIENT ANALYSIS (2010)	
ARSENIC	4.16 mg/kg	AMMONIA NITROGEN	0.74 %
CADMIUM	0.6 mg/kg	TKN	1.88 %
CHROMIUM	19 mg/kg	PHOSPHORUS	0.78 %
COPPER	248 mg/kg	POTASSIUM	0.29 %
NICKEL	13 mg/kg	TOTAL ORGANIC NITROGEN	1.15 %
MERCURY	0.32 mg/kg		
LEAD	13 mg/kg	TOTAL SOLIDS	60.5 %
MOLYBDENUM	6.74 mg/kg		
SELENIUM	2.57 mg/kg		
ZINC	514 mg/kg		

The Town of Merrimack NH, WWTF, PO Box 235 Merrimack NH 03054 (603-883-8196)



Requirements For the Use of Sludge-Based, Class A Biosolids

June 16, 2005

Any person who intends to use compost or other class A biosolids derived from municipal wastewater sludge must use such material in accordance with the requirements of rules adopted by the New Hampshire Department of Environmental Services under Env-Ws 810. The rules are few and simple to follow for those wishing to utilize class A products to establish a new landscape or to enhance an existing one. For those who choose to use class A materials on a broader scale, such as blending topsoil for sale, or in agricultural settings where the area exceeds 5 acres, there are additional requirements. Below are the rules that must be observed when using class A biosolids derived from sludge:

- The rate of application should not exceed the rate recommended on the label provided with the class A biosolids;
- Class A biosolids should not be applied within 35 feet of a pond, stream, lake, or river;
- Land application of Class A biosolids must comply with the requirements of RSA 483, the Rivers Management and Protection Act. Specifically, applications should be setback 250 feet from a designated river and immediately incorporated within $\frac{1}{4}$ mile of a designated river. For information on the Rivers Management and Protection Act see the DES website (<http://des.nh.gov/factsheets/r&l/rl-2.htm>).
- For a person(s) planning to use class A biosolids on a area of more than five acres or for topsoil blending or manufacturing, the following rules apply:
 - Stockpiles of stored biosolids should be maintained to minimize the amount of water running into and through the stockpile; and
 - A nutrient recommendation from UNH Cooperative Extension (Tom Buob, 787-6944) must be obtained and followed during application of the biosolids.

For additional information, please contact the Residuals Management Section of the Department of Environmental Services at (603) 271-2818 or (603) 271-3503.