

GRAND STRAND WATER and SEWER AUTHORITY WASTEWATER TREATMENT FACILITY COMPOST

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A product of the Grand Strand Water and Sewer Authority (GSWSA), Myrtle Beach Wastewater Treatment Facility. Made from treated sewage sludge and wood chips. Sewage sludge when composted is a valuable resource that can be used to improve plant growth and soil quality. Nutrients in composted sewage sludge can replace or supplement commercial chemical fertilizers. In addition, the organic matter in compost improves soil structure and facilitates the ability of plants to acquire nutrients, retain water, and penetrate soil. These properties stimulate the growth of vegetation, which helps reduce soil erosion and improve crop yields. When handling compost or any other commercial potting soil/fertilizer, use sanitary methods and keep out of children's reach. Compliance with these instructions for use complies with section (e) of the Clean Water Act. **Application of this product is prohibited except in accordance with the instructions on this information sheet.**

The most recent sludge analysis complied with all regulatory requirements of the parameters listed in Table 3, Page 9392 of the Friday, February 19, 1993 Federal Register.

RECOMMENDED APPLICATION RATES (NON-AGRICULTURAL USE)

Turfgrass: (rate per 1000 ft.)

Establishment: 3 - 6 yards of compost tilled into top 4 - 6 inches of soil. Three cubic yards equal a 1-inch cover.

Top dressing after seeding: Spread uniform cover 1/3 to 1/4 inch. Apply in spring and fall for cool season grasses.

Ornamental Planting:

Flower Beds (annual): Incorporate 2 – 3 inches of compost into top 4 – 6 inches of soil.

Permanent and Established: Work 1/2 to 1 inch of compost around plantings in spring and fall.

Individual Plantings: Mix one part compost with one or two parts of soil for use as a back fill in a hole.

Surface Mulch: Spread up to 1-inch compost over planting bed area.

RECOMMENDED APPLICATION RATES FOR AGRICULTURAL USE OR BULK SALES

- Bulk Sales - Compost product that is not sold in a bag or other container.
- Other Container - A bucket, box, carton, or a vehicle that has a load capacity of one metric ton (2205 Lbs.) or less (i.e.: A pick-up truck or trailer pulled by an automobile).

Any bulk compost product applied to agricultural land, a public contact site (i.e.: Public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses), or a land reclamation site shall be applied at a **Whole Sludge Application Rate (WSAR)** that is equal to or less than the agronomic rate for the crop grown (based on the nitrogen needs of the crop).

Note: Most sewage sludge is low in Potassium and Potassium may need to be applied at an agronomic rate.

The following Bulk land application rates shall not be exceeded:

- 1) **AWSAR** - 82.4 metric tons/hectare/year (36.74 tons/acre/year or @ 260.6 cubic yards of compost/acre/year)
- 2) **Annual Application Rate** (based on the Nitrogen needs of the crop grown). See example below:

EXAMPLE

Nitrogen needs of crop grown (non-irrigated soybeans), or 240 Lbs./Acre/Year divided by 4.29 Lbs. of Nitrogen/Cubic Yard of Compost = 55.94 Cubic Yards/Acre/Year.

Note: Actual Nitrogen Content may vary greatly and further analysis may need to be conducted to insure the Nitrogen needs of the crop are met and not exceeded. Contact your local Agriculture Extension Service agent for information on the Nitrogen needs of the crop.

ANNUAL WHOLE SLUDGE APPLICATION RATE (AWSAR)

The **AWSAR** is determined solely by calculating the metals pollutant levels applied yearly to the site. The metal with the lowest site life will determine how many years compost can be applied until the pollutant (metals) ceiling concentration is met. **See the formula below:**

$$\text{AWSAR (Metric Tons/Hectare/Year)} = \frac{\text{APLR (from table 4 of 503.13)}}{\text{Pollutant Concentration (Mg/Kg) X 0.001}}$$

SITE LIFE (Using the **AWSAR** & Agronomic rate for Soybeans from examples on previous page)

EXAMPLE #1 - AWSAR site life is **20 years** [assuming the full AWSAR (36.74 dry tons/acre/year) is applied each year]

EXAMPLE #2 - Site Life based on Agronomic Rate for Crop (example - Soybeans) is **93.12**. Assuming that 7.89 Dry Tons/acre/year or 55.96 cubic yards/acre/year is applied to the land for 93.12 years, then the site life based on the agronomic rate will be reached.

Therefore, since it is **prohibited** to apply compost at a rate greater than the agronomic rate, the Site Life for the above examples would be **93.12 years**. If you have any concerns or questions on site life for the crop to be grown, please contact the GSWSA – Myrtle Beach Wastewater Treatment Facility Superintendent for answers.

POLLUTANT METALS ANALYSIS (EPA 503.13 TABLE 3)

The following pollutant metal concentrations are from the most recent quarterly compost analysis.

<u>PARAMETER</u>	<u>RESULT</u>	<u>UNIT</u>	<u>DATE</u>	<u>PARAMETER</u>	<u>RESULT</u>	<u>UNIT</u>	<u>DATE</u>
Arsenic	7.8	mg/kg *	04/05/11	Cadmium	0.89	mg/kg *	04/05/11
Copper	310	mg/kg *	04/05/11	Lead	14	mg/kg *	04/05/11
Mercury	0.53	mg/kg *	04/05/11	Nickel	17	mg/kg *	04/05/11
Selenium	5.6	mg/kg *	04/05/11	Zinc	1700	mg/kg *	04/05/11
Molybdenum	7.2	mg/kg *	04/05/11	* Dry Weight Basis			

NUTRIENT ANALYSIS

The following nutrient analyses are from the most recently available results. These numbers may be six (6) months or greater in time since the last nutrient sampling event, for more accurate up to date information, an additional analysis should be conducted by the applicator of this product at their own expense. Due to the fact that the nutrient content in sewage sludge can vary greatly from week to week, GSWSA **cannot guarantee the nutrient levels in compost received by the customer.**

<u>PARAMETER</u>	<u>RESULT</u>	<u>UNIT</u>	<u>DATE</u>	<u>PARAMETER</u>	<u>RESULT</u>	<u>UNIT</u>	<u>DATE</u>
Potassium, Total	3900	mg/kg	04/05/11	Specific Conductance	1160	umhos	05/03/10
Sodium, Total	750	mg/kg	04/05/11	Fecal (A-1)	<1	col/gm	04/09/11
Nitrogen, Nitrate-Nitrite	190	mg/kg	04/05/11	Alkalinity	1900	mg/kg	05/03/10
				Percent Solids	44.1	%	04/05/11
Nitrogen, Ammonia	13000	mg/kg	04/05/11	Magnesium, Total	2500	mg/kg	04/05/11
Phosphorous, Total	24000	mg/kg	04/05/11	pH (Solids)	7.04	s.u.	04/05/11

GSWSA compost meets the Federal 40 CFR part 503 standards for “Class A” biosolids. If further information is needed in regards to the metals pollutant level in the compost, please contact the GSWSA - Myrtle Beach Wastewater Treatment Facility Superintendent at 234-8425.

SITE LIFE - Site Life is determined by the maximum allowable amount of an inorganic pollutant that can be applied to an area of land. When the Cumulative Pollutant Loading Rate (CPLR) for a pollutant is reached for a particular site, no more of that pollutant can be applied to the site in bulk sewage sludge.