

# Public Hearing for NaturaLawn of America's Distribution and Marketing Permit Application

November 13, 2019



Department of Natural Resources and Environmental Control

**Division of Water**

Surface Water Discharges Section

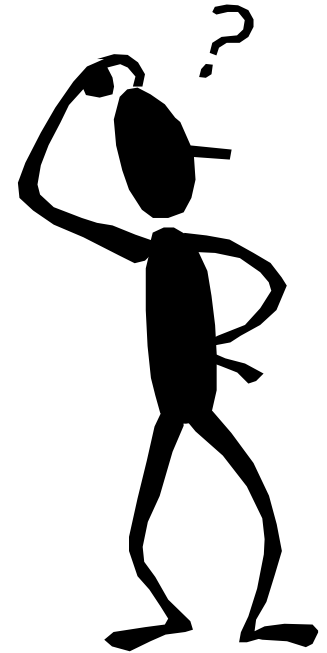
# What is the Purpose of this Hearing?

- Provide the public an opportunity to comment on the NaturaLawn of America's permit application for a distribution and marketing permit of EQ biosolids in DE.



# What are Biosolids?

- Biosolids are **not** raw sewage. They are one of the final products from the treatment of municipal wastewater at a wastewater treatment plant.



# What are Biosolids Continued?

- After treatment breaks down/digests the organic compounds and the remaining solids are heat dried, only then are the remaining fine particles ultimately considered Class A biosolids.



- Biosolids are a nutrient-rich slow release organic fertilizer product that can be utilized like animal manure (but with minimal odor).

# Overview of the NaturaLawn Biosolids Source

- Chicago's Metro Water Reclamation District = Source
- Services approximately 2.3 million people
- Wastewater enters plant and trash/plastic/grit/fats/oils are removed
- Wastewater undergoes aerated digestion (solids are broken down and odor reduced).
- Treated wastewater then goes into clarifiers that settle out solids.



# Facility Overview Continued

- Solids are piped to centrifuges and air dried to remove liquid/concentrate solids.
- Dewatered “biosolids” are transported off site to *Metropolitan Biosolids Management, LLC.* and processed further (heated to at least 176° F, dried to 90% solids, and pelletized) to create what is known as a Class A “EQ” product through a “Process to Further Reduce Pathogens”.
- After sampling is completed to demonstrate regulatory requirements are met, the EQ biosolids can be distributed nationally (in accordance with Federal and State requirements).

# Facility Overview Continued

- Biosolids are transported from MBM to blender formulators in Wisconsin, Ohio, and Pennsylvania by truck.
- Blending of biosolids occurs in large mixers to specific formulations for turf grass needs and biosolids are packaged into 50 pound fertilizer bags.
- Material to be distributed in DE would be trucked to NaturaLawn. (Wilmington or Georgetown)



# Facility Overview Continued

- NaturaLawn's employees would then transport the fertilizer product to residential or commercial customer lawns.
- Product would be applied at an agronomic rate by DE Certified Nutrient Handlers to improve health and growth of turf grass.





# Why Does NaturaLawn Source Biosolids from Outside of Delaware?

- No fertilizer product produced inside of Delaware meets NaturaLawn's requirements.
- Only a relatively small quantity of biosolids are proposed to be imported by NaturaLawn (no local biosolids producer has expressed interest in producing such a small quantity of pelletized EQ biosolids).

# Why Use Biosolids for Turf Grass?

- Biosolids contain nutrients for plant growth (nitrogen, phosphorus, zinc, copper, etc.)
- Slow release nitrogen (less leaching potential)
- Over time, increases the organic content of soil which:
  - Increases water holding capacity of soil
  - Helps increase quality of turf



# What is a Distribution and Marketing Permit?

- DM permit is required by DE regulations to ensure biosolids, that will be distributed throughout DE, are safe and meet State and Federal regulations.
- Only issued for EQ products that are essentially pathogen free
- Permits are issued for 5 years.
- PR and VR requirements and metals limits are based off of EPA's biosolids risk assessment.

# Class A Monitoring Requirements for NaturaLawn

<u>Parameter</u>	<u>Unit Measurement</u>	<u>Minimum Sampling Frequency</u>	<u>Sample Type</u>
Fecal Coliform or Salmonella	MPN (dry weight basis)	Monthly	Composite
Dry Solids Content	%	Daily	Composite
Temp	Degrees Centigrade	Every 15 minutes	Grab

# EQ Biosolids Pollutant Limits

All NaturaLawn biosolids must be under the below limits.

Arsenic	41 mg/kg	Cadmium	39 mg/kg	Chromium	1200 mg/kg	Copper	1500 mg/kg
Lead	300 mg/kg	Mercury	17 mg/kg	Molybdenum	18 mg/kg	Nickel	420 mg/kg
PCB's	3 mg/kg	Selenium	36 mg/kg	Zinc	2800 mg/kg	-	-
Fecal Coliform 1000 colonies/gm (MPN)				Salmonella Density (sp) 3/4gm (MPN)			

Based on EPA's risk assessment, biosolids applied with metals under the pollutant concentration limits pose no adverse effect thus tracking total metal loading rates is not necessary.

# EQ Sampling Requirements

Parameter	Measurement	Minimum Frequency	Sample Type
Moisture content	percent	Daily	Composite
Total Nitrogen as N (dry weight basis)	percent	Monthly	Composite
Organic Nitrogen as N (dry weight basis)	percent	Monthly	Composite
Ammonium as N (dry weight basis)	percent	Monthly	Composite
Nitrate Nitrogen as N (dry weight basis)	percent	Monthly	Composite
Phosphorus (dry weight basis)	percent	Monthly	Composite
Potassium (dry weight basis)	percent	Monthly	Composite
Volatile solids	percent	Monthly	Composite
Fecal Coliform (Colonies/gm)	MPN	Monthly	Composite
pH	S.U.	Monthly	Composite
Arsenic (dry weight basis)	mg/kg	Monthly	Composite
Cadmium (dry weight basis)	mg/kg	Monthly	Composite
Chromium (dry weight basis)	mg/kg	Monthly	Composite
Copper (dry weight basis)	mg/kg	Monthly	Composite
Iron (dry weight basis)	mg/kg	Monthly	Composite
Lead (dry weight basis)	mg/kg	Monthly	Composite
Mercury (dry weight basis)	mg/kg	Monthly	Composite
Molybdenum (dry weight basis)	mg/kg	Monthly	Composite
Nickel (dry weight basis)	mg/kg	Monthly	Composite
Selenium (dry weight basis)	mg/kg	Monthly	Composite
Zinc (dry weight basis)	mg/kg	Monthly	Composite
PCB's (dry weight basis)	mg/kg	Annually	Composite
Priority pollutant scan (see NOTE)	---	Every 3 years	Composite

# Contact Information

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