

# Public Meeting 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 Public Meeting?

- Provide the public an opportunity to better understand NaturaLawn of America's permit application for a distribution and marketing permit of EQ biosolids in DE.
- Provide the public with an opportunity to ask DNREC questions related to NaturaLawn's permit application.

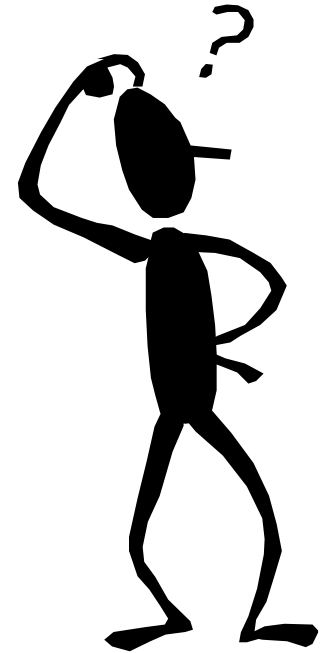


# Public Meeting

- Informal Public Meeting first immediately followed by a Public Hearing.
- Anything you say during the public meeting must be repeated during the hearing to be part of the official record.
- The public meeting will include this presentation, a presentation by the applicant (NaturaLawn), and an opportunity for dialogue between those in attendance.
- The public hearing will be in the typical DNREC format including a hearing officer and a court reporter to document everything said. (the H.O. will provide additional information on the hearing format later)

# 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?

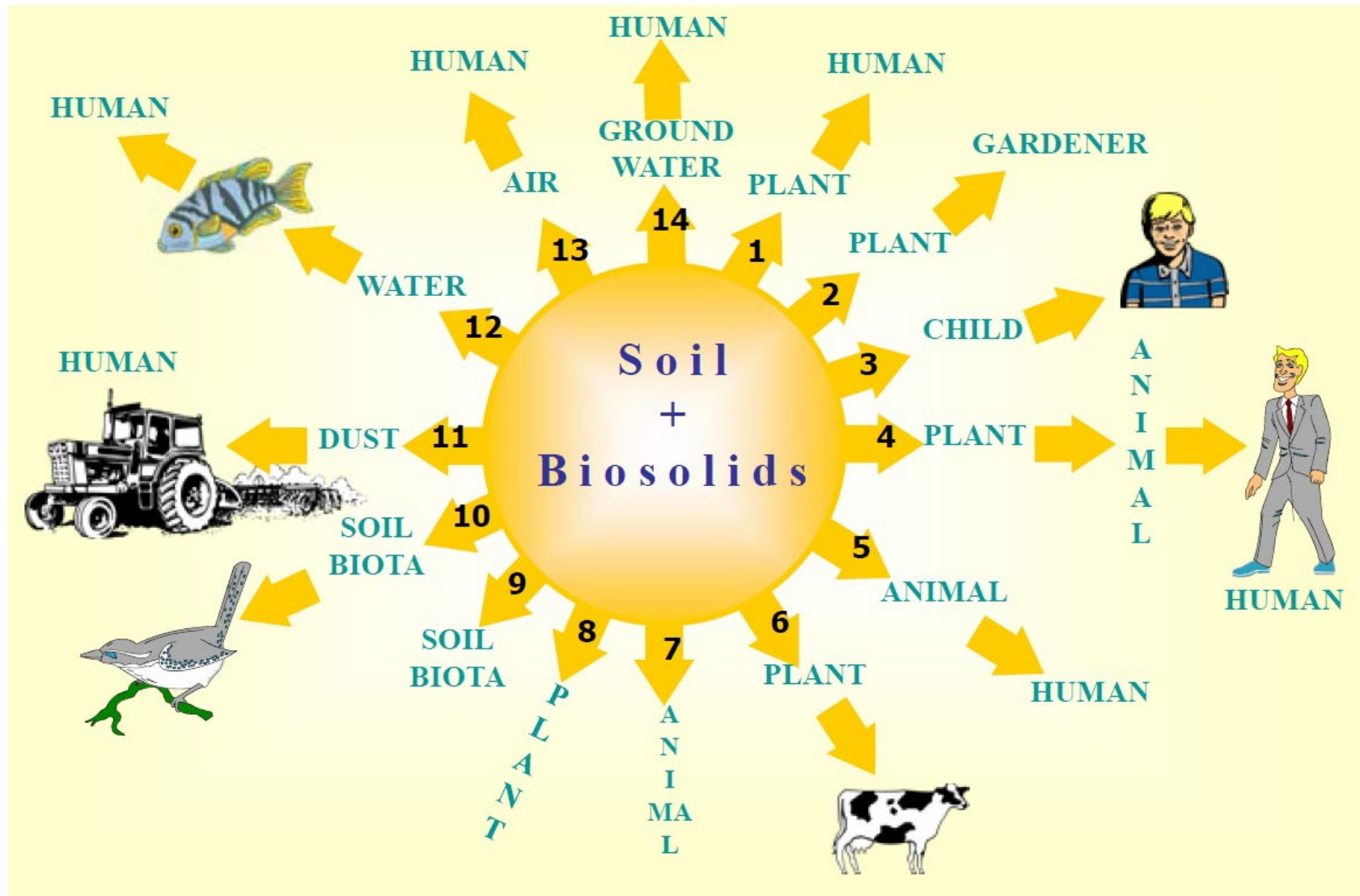
- No fertilizer product produced inside of Delaware meets NaturaLawn's requirements.
- Only a relatively small quantity of biosolids are proposed to be imported by NaturaLawn (no local biosolids producer has expressed interest in producing such a small quantity of pelletized EQ biosolids).

# 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



# 14 - Pathway Risk Assessment



# Emerging Contaminants

- Every 2 years, EPA is required to refine its risk assessments and look at contaminants that are present in biosolids.
- The EPA is required to establish numeric limits and management practices that protect public health and the environment from reasonably anticipated adverse effects of chemical and microbial pollutants during the use or disposal of biosolids.
- The risk assessments determine whether new or revised numeric standards are warranted under EPA's biosolids regulations.
- According to EPA, addressing the uncertainty around potential risk for pollutants identified in biosolids is the top priority for the EPA's Biosolids Program.
  - ✓ DE updates its standards to remain at least as stringent as federal requirements.

<https://www.epa.gov/biosolids/biennial-reviews-sewage-sludge-standards>



# 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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