BENEFITS OF BIOSOLIDS

Every day, each person in Florida generates nearly 100 gallons of domestic wastewater. As wastewater treatment facilities collect and clean the water, solid byproducts accumulate. This collected material, called biosolids, is high in organic content and contains nutrients, which are naturally occurring and are needed by plants, making biosolids a safe and valuable soil conditioner and fertilizer. Land application of biosolids occurs in all 50 states. In Florida, nearly one-third of biosolids are used on farms and ranches, primarily on hay crops and pasture land.

Wastewater Treatment and Biosolids

- Wastewater treatment facilities clean the water and solids discharged by domestic toilets, drains and appliances.
- The treated wastewater solids, known as biosolids or sewage sludge, are removed from the water. The solids may be disposed of in a landfill or further treated through physical, chemical and biological processes including heat systems, pasteurization or other methods. Many facilities in Florida treat their biosolids in accordance with federal and state regulations, and recycle them as a safe and beneficial agricultural product.
- After being disinfected, the treated – or reclaimed – water can be used safely for agricultural irrigation, groundwater recharge, industrial processes and lawn irrigation.

Fertilizer for Land Application

- Biosolids can replenish organic matter in soil that has been depleted. Biosolids provide nitrogen, phosphorus and potassium – the key nutrients that plants need to thrive – as well as beneficial trace elements such as calcium and magnesium, which are typically not found in chemical fertilizers.
- The organic, slow-release nitrogen and phosphorus in biosolids are absorbed more efficiently than chemical fertilizers by crops.
- Organic nutrients are less water-soluble and, therefore, less likely than chemical fertilizers to leach into groundwater. Biosolids hold the nutrients near the roots, where plants need them.

Land application of biosolids occurs in all 50 states.

FAST FACTS

- Biosolids are wastewater solids that have been treated and processed in accordance with federal and state regulations.
- Florida domestic wastewater facilities generate an estimated 320,000 dry tons of biosolids annually.
- After being treated and processed, biosolids may be disposed or beneficially used.
- Florida ranches, citrus groves, sod farms and other agricultural endeavors safely use biosolids as a soil conditioner and fertilizer.
- Water and nutrients can easily wash out of root zones in Florida's sandy soil. The organic matter in biosolids holds moisture and nutrients.

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Classification

- The highest quality of biosolids in Florida, known as Class AA, meet strict environmental criteria. Class AA registered products may be sold to the public as fertilizer and are found in stores and garden centers.
- Class B biosolids are the lowest level of biosolids that can be applied to land in Florida. There are strict limits on the agricultural use of Class B solids. The land-application sites must obtain DEP permits, have site-specific nutrient management plan and follow site restrictions to protect public water sources.

Oversight

- Federal, state and some local government rules regulate the production, use and disposal of biosolids.
- State and federal regulations establish chemical limits, land-application rules and procedures to destroy harmful microorganisms. These regulations are designed to prevent or minimize potential impacts from nutrients, heavy metals and any disease-causing agents that may remain.

All biosolids facilities and land-application sites are required to obtain permits, keep records and submit annual reports.

Public Health and Safety

- The state of Florida and the U.S. Environmental Protection Agency have set comprehensive rules and regulations to ensure the protection of public health and the environment. The Florida regulations are contained in Chapter 62-640, Florida Administrative Code (F.A.C.), and the EPA regulations are contained in Title 40 Code of Federal Regulations Part 503.
- These rules require bosolids to be stabilized or treated to reduce odors and their appeal to insects and animals.
- These rules also contain requirements for proper siting, design and operation of biosolids facilities to help control odor.
- New treatments and uses of biosolids are being developed, and research and regulations continue to ensure that biosolid recycling remains safe and productive.

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