
**Proposed changes in regulations governing land application of biosolids in Florida**

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Published in *The Florida Cattleman and Livestock Journal*, April 2019

Florida produces approximately 340,000 dry tons of biosolids per year; 2/3 is beneficially used and 1/3 is landfilled. The majority of the biosolids recycled in the state is currently applied to beef cattle pastures. When properly used, biosolids are safe to forages and animals and beneficial to pastures. One of the main benefits of biosolids is the fertilizer effect. Biosolids contain essential plant nutrients (i.e., nitrogen, phosphorus, sulfur, and micronutrients) that can improve forage production and nutritive value. Because some nutrients in biosolids may not be immediately available to the plants, biosolids can act as a "slow release" fertilizer source by releasing nutrients more slowly than commercial fertilizers. This may also improve nutrient uptake efficiency by plants and, consequently, reduce the environmental risks associated with nutrient losses to water bodies. In addition to providing nutrients, biosolids can also increase soil organic matter content and, consequently, promote soil quality by improving soil physical, chemical and biological properties.

Despite many positive impacts to the environment, land application can have negative impacts on water, soil, and air if not practiced correctly. Land application of biosolids in Florida is regulated by the Florida Department of Environmental Protection (FLDEP) in accordance with Chapter 62-640, F.A.C., biosolids rule. These regulations contain numerical limits for heavy metals, prescribe pathogen reduction standards, site restriction, crop harvesting restrictions and monitoring, and record keeping and reporting requirements. Although state regulations were initially developed based on federal regulation (Part 503), they often exceed federal requirements. Land application of biosolids in Florida can also be subjected to local ordinances.

Despite the lack of scientific evidence suggesting that the current practice of biosolids land application is harmful either to human health or the environment, there is growing public opposition to this practice in Florida. The public is mainly concerned about odor issues and possible negative impacts on water quality. Meanwhile, advocates of biosolids emphasize its nutritional value as a fertilizer and organic matter source and the lack of scientific evidence regarding harmful effects of biosolids use.

Although land application of biosolids is an attractive option for beneficial reuse, it represents a complex challenge for government and private organizations. Recently, concerns have been expressed about the potential linkage between land application of biosolids and water quality degradation in the state. In June 2018, the FLDEP announced the creation of a Biosolids Technical Advisory Committee (TAC) to evaluate current management practices and regulations governing land application of biosolids. Members of the TAC included stakeholders representing environmental groups, large and small utilities, waste haulers, university researchers and consultants. Four public meetings were held during September 2018 and January 2019 at FLDEP

Central District Office in Orlando, FL to discuss various topics related to land application of biosolids. The members of the committee were charged with answering the following questions:

- What are the current options for biosolids management in the state?
- Are there better ways to manage biosolids to improve the protection of our water resources?
- What research gaps exist and need to be examined to build upon and improve biosolid management?

At each of the meetings, TAC members and invited speakers provided information relative to biosolids management and regulations, research on biosolids, and innovative technologies. On January 23, 2019, the TAC committee was disbanded. Based on the deliberation of the TAC and public comments, the following recommendations are currently being further evaluated by the FLDEP for implementation:

1. Increase frequency of inspection
2. Develop site-specific water quality monitoring protocols to prevent off-site nutrient transport
3. Establish biosolids application rates based on both site characteristics (soil P sorption capacity, water table level, distance to surface water) and biosolids-P characteristics (water extractable P levels)
4. Conduct and support field-scale biosolids research trials
5. Promote innovative biosolids processing technologies

Although no changes in biosolids regulation have been implemented yet, there was a general consensus that promoting education and outreach are key to the future success of biosolids recycling programs in the state. Public education must be considered as an important part of this process. For additional information on the biosolids TAC meetings, please visit: https://floridadep.gov/water/domestic-wastewater/content/dep-biosolids-technical-advisory-committee.

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**Upcoming Events**

**April 9, 11:00 AM, Ona Soil and Water Science Highlight with Maria Silveira -** Maria will present an update on biosolids research and regulations in the Grazinglands Education Bldg. To attend by webinar, register through our website or to attend in person call 863-735-1314.

**April 26, Quail Field Day -** Come join us to learn more about Bobwhite Quail; spots are limited! The day will include a walking tour of Sharp Ranch. Topics to be covered: History & facts of bobwhite quail, reproductive season in South Florida, habitat improvement, cage vs. natural, and causes of quail mortality. Registration is fee, $50. Register through our website or call 863-735-1314 for more information.

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