



# **Chapter 62-640, F.A.C. Public Workshop**

**Division of Water Resource Management  
September 18, 2020**



# Agenda

- **Welcome and Introductions**
- **Biosolids Overview**
- **Background on Rulemaking and Senate Bill 712 (SB 712)**
- **Overview of Draft Amendments to Ch. 62-640, F.A.C.**
- **Public Comment**
- **Closing Remarks**



# Biosolids Overview

- **Treatment of domestic wastewater produces two principal end products: effluent and biosolids (co-product)**
- **Defined in dictionaries as “solid organic matter recovered from a sewage treatment process and used especially as fertilizer”**



# Biosolids Management Options

**A wastewater management facility may choose from several biosolids use or disposal options:**

- **Transfer to another facility**
- **Landfill**
- **Land application**
- **Distribution and marketing as a fertilizer**
- **Incineration**
- **Bioenergy/innovative technology (potential)**



# Classes of Biosolids

**Two primary uses:**

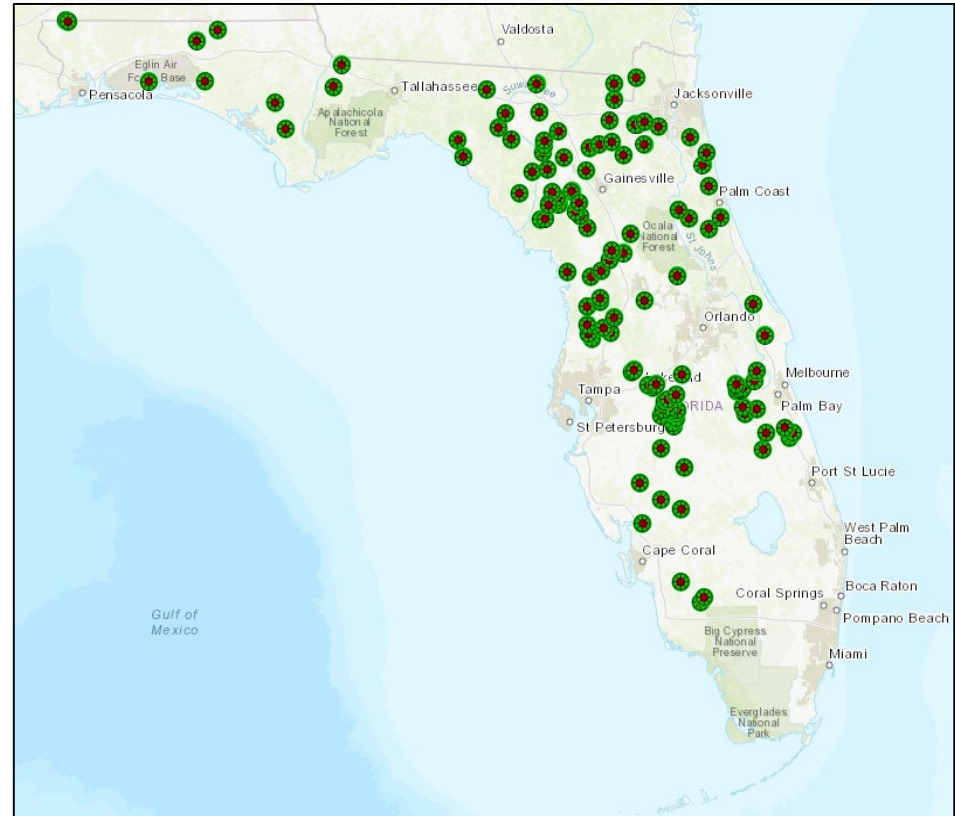
- **Land application**
  - Typically Class B biosolids – minimum quality for beneficial use
- **Distribution and marketing as fertilizer**
  - Class AA biosolids – highest quality for beneficial use





# Class B Biosolids Land Application

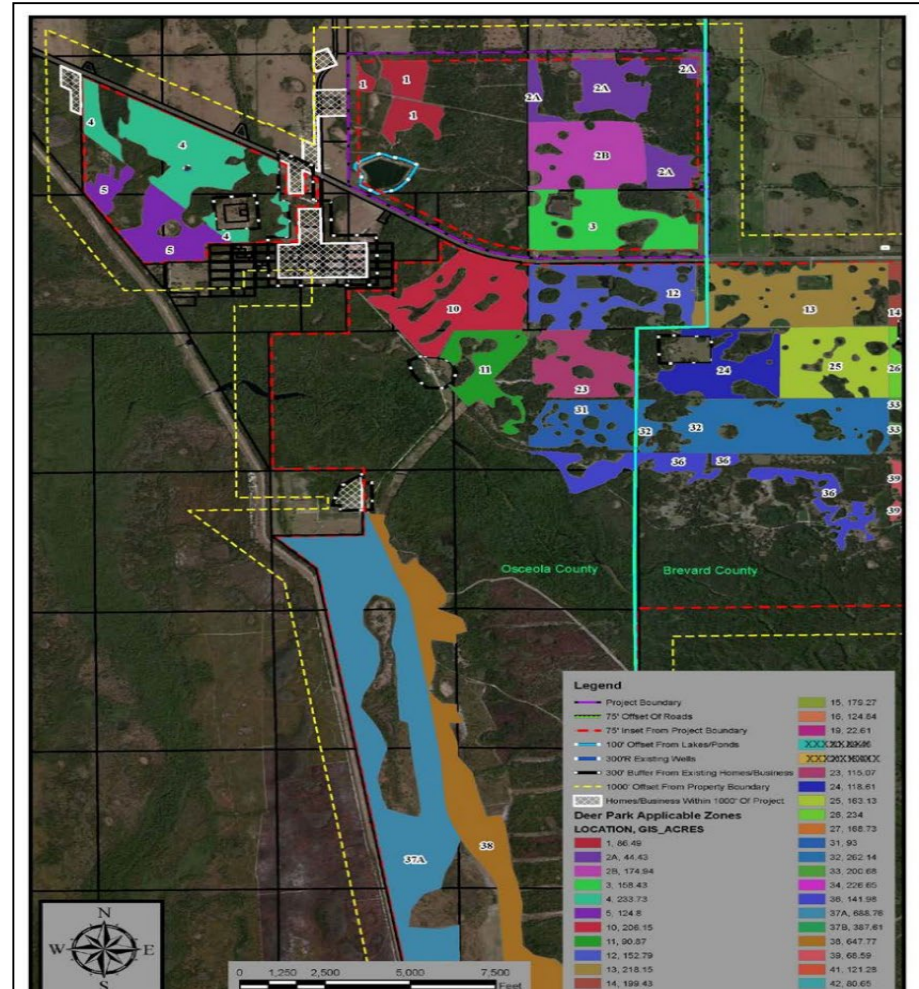
- **Approximately 130 permitted land application sites in Florida**
- **Haulers are the most common site permittees**
- **Utilities commonly contract with haulers/appliers instead of applying the biosolids themselves**
- **Primarily pasture and hay crops**





# Example Application Site

- Site in Osceola and Brevard Counties, shows the application zones, setbacks, etc.
- This site has 30 application zones covering 5,736 acres
- The odd shapes of the application zones, or fields, primarily result from setback buffers (i.e., wetlands, surface waters, residences, etc.)





# State Regulations for Land Application

## Land application permits include:

- Nutrient management plan (with P assessment)
- Setback provisions
- Ground water depth provision at time of application
- Signage requirements
- Storage requirements
- Public access, grazing, harvesting restrictions
- Runoff provisions
- Record keeping/reporting requirements







# Biosolids Regulations

- **Federal – Title 40 CFR Part 503 (Florida is not delegated Part 503)**
- **State – Chapter 62-640, Florida Administrative Code (F.A.C.)**
  - **Primarily based on Part 503, but addresses additional items of concern**
- **Local ordinances**



# Biosolids Rulemaking

**Rulemaking began in 2019 after recommendations were made by the Biosolids Technical Advisory Committee (TAC)**

- **Notice of Rule Development – 3/22/19**
- **Held three public workshops – 6/25-27/19**
- **Notice of Proposed Rule – 10/29/19**
- **Statement of Estimated Regulatory Costs (SERC) – 10/29/19**
- **Proposed rule was withdrawn 3/20/20 to allow for the addition of provisions based on SB 712**
- **Notice of Rule Development – 4/14/20**



# Biosolids – SB 712

## Legislative findings and provisions:

- **It is in the best interest of the state to regulate biosolids management in order to minimize the migration of nutrients that impair water bodies**
- **Permitting according to site specific application conditions, an increase inspection rate, groundwater and surface water monitoring protocols, and nutrient management research will improve biosolids management and assist in protecting this state's water resources and water quality**
- **Requires DEP to adopt new rules for biosolids management; adopted rules must be ratified by the Legislature**



# Biosolids – SB 712 (2)

**New site permits and site permit renewals after July 1, 2020 shall:**

- **Meet a minimum unsaturated soil depth of two feet from the depth of biosolids placement when biosolids are applied**
- **Not allow application on soils with a seasonal high water table (SHWT) within six inches of the soil surface or depth of biosolids placement unless the permittee provides reasonable assurance through the site nutrient management plan and water quality monitoring plan that land application will not cause or contribute to surface water quality violations or ground water violations**
- **Require enrollment in a Florida Department of Agriculture and Consumer Services (DACS) Best Management Practices (BMP) program**



# Biosolids – SB 712 (3)

- **All site permits will have to comply with the DACS BMP enrollment requirement and the SHWT provision by July 1, 2022**
- **New and renewed permits after July 1, 2020 must include a permit re-opener condition to add a compliance date of no later than one year after the effective date of new biosolids rules**
- **All permits must comply with the new rules no later than two years after the effective date of the new biosolids rule**
- **A municipality or county may enforce or extend a local ordinance, regulation, resolution, rule, moratorium, or policy adopted before November 1, 2019, relating the application of Class A or Class B biosolids until the regulation, resolution, etc., is repealed by the municipality or county**



# Summary of Key Rule Revisions

- **Revising the provisions for determining biosolids land application rates**
  - **Determine rates based on N or P, cannot exceed either**
    - **P adjustments will be based on the ability of the soil to store P and the water extractable P in biosolids**
    - **Provisions to adjust N limited to 1.5 factor**
- **Ground water and surface water monitoring requirements for land application sites**
- **Prohibition on applying biosolids to land with a seasonal high water table within six inches of the soil surface or depth of biosolids placement (SB 712)**



# Summary of Key Rule Revisions (2)

- **Biosolids sites comply with the new rules (SB 712):**
  - **Within one year of the effective date of the new rules for new permits or permit renewals issued after July 1, 2020**
  - **Within two years of the effective date of the new rule for all permits**
- **Enrollment in an DACS Best Management Practices (BMP) program will be required (SB 712)**
- **Biosolids permit applications shall be considered projects of heightened public interest**
- **References to Florida Department of Health (DOH) regulation of septage removed**



# 62-640.100, F.A.C.

## *Scope, Intent, Purpose, and Applicability*

- **62-640.100(5)(c) – deleting obsolete references to the quantity of septage treated**
- **62-640.100(5)(f) through (h) – establishes the compliance period for existing facilities and land application sites (SB 712)**
  - **New or renewed facility or biosolids land application site permits issued after July 1, 2020 shall meet the new requirements no later than within one year of the effective date of the new rule**
  - **All permits for facilities and biosolids land application sites shall meet the new requirements within two years of the effective date of the new rule**
  - **Note, the above timeframes replace the three-year phase-in proposed in 2019**





# 62-640.100, F.A.C. (2)

## *Scope, Intent, Purpose, and Applicability*

- **62-640.100(5)(i) – deletes obsolete language (2010 transition to site permitting)**
- **62-640.100(6)(a) – provides informational language to highlight that biosolids sites are subject to any applicable basin management action plans (BMAPs)**
- **Adding section 403.0855, F.S., to the rulemaking authority and law implemented notes for the rule (repeated for other rules – SB 712)**



# 62-640.200, F.A.C.

## *Definitions*

- **62-640.200(9)** – “capacity index” is being added as a measure of the ability of the site soil to store phosphorous
- **62-640.200(18)** – deletes obsolete language (“existing site” now covered under 62-640.100(5)(f) – (h))
- **62-640.200(28)** – revisions related to adopting and incorporating by reference (repeated throughout the rule)
- **62-640.200(33)** – “percent water extractable phosphorus” (PWEPP) is defined as percentage of phosphorus that is water extractable in a biosolids sample



# 62-640.200, F.A.C. (2)

## *Definitions*

- **62-640.200(35) – clarification to pH definition**
- **62-640.200(42) – “seasonal high water” is defined as the elevation to which the ground and surface water may be expected to rise due to a normal wet season (SB 712)**
- **62-640.200(44) – deletes obsolete language**
- **62-640.200(51) – revising the definition of “water table” to be consistent with Chapter 62-520, F.A.C.**



# **62-640.210, F.A.C.**

## ***General Technical Guidance and Forms***

- **Various – updated references/dates**
- **62-640.210(1)(q) – adding a reference as supplemental guidance for the water extractable phosphorus method**
- **62-640.210(1)(r) – adding a reference to provide the analysis method for water extractable phosphorus; this document is incorporated and adopted by reference in Rule 62-640.650(3)(a)1., F.A.C.**
- **62-640.210(1)(s) and (t) – adding references for the Mehlich-3 extraction method for soil fertility testing**
- **62-640.210(2) – revising the current rule forms to reflect the rule revisions, but no new forms are being added**



# 62-640.300, F.A.C.

## *General Requirements*

- **62-640.300(1)** – adding “treatment” to clarify that the sentence applies to treatment facility permits, not biosolids site permits
- **62-640.300(3)(d)** – requires all biosolids site permit applications to be considered projects of heightened public interest
- **62-640.300(3)(f)** – deleting obsolete language related to the 2010 transition to permitted sites
- **62-640.300(3)(g)** – requires permitted biosolids land application sites be enrolled in the DACS BMP Program (SB 712)



# 62-640.400, F.A.C.

## *Prohibitions*

- **62-640.400 (14) – Biosolids shall not be applied on soils that have a seasonal high water table less than six inches from the soil surface or within six inches of the intended depth of biosolids placement, unless a Department-approved nutrient management plan and water quality monitoring plan provide reasonable assurance that the land application of biosolids at the site will not cause or contribute to a violation of the state’s surface water quality standards or ground water quality standards (SB 712)**



# 62-640.500, F.A.C.

## *Nutrient Management Plan (NMP)*

- **62-640.500(5)(c)** – requires a description of how the site nutrient management plan (NMP) complies with any applicable BMAPs
- **62-640.500(5)(e)** – reduces the minimum frequency of soil fertility testing to annually



# 62-640.500, F.A.C. (2)

## *Nutrient Management Plan (NMP)*

- **62-640.500(5)(f) – requires rates of application based on nitrogen and phosphorus. Application shall not exceed either rate (i.e. application rate is limited to the more restrictive of the two nutrient-based rates), unless the applicant can provide reasonable assurance that applying at a higher rate is protective of water quality**
- **62-640.500(5)(f)1. – adding a table with allowed minimum crop nutrient needs to aid in the determination of biosolids application rates**
- **62-640(5)(f)2.- 3 – these are not new requirements but reflect language previously included in the rule**





# 62-640.500, F.A.C. (3)

## *Nutrient Management Plan (NMP)*

- **62-640.500(5)(f)4.** – requires the soil phosphorus storage “capacity index” and soil phosphorus results for each application zone be included in the NMP; the “capacity index” shall be based on Mehlich-3 extractions for phosphorus, iron, and aluminum
- **62-640.500(5)(f)5.** – existing language
- **62-640.500(5)(f)6.** – requires the NMP to include the “percent water extractable phosphorus” (PWEPP) of each biosolids source to the site



# 62-640.500, F.A.C. (4)

## *Nutrient Management Plan (NMP)*

- **62-640.500(5)(f)7.** – outlines the adjustments for phosphorus application rates depending on the soil “capacity index” (CI) and the biosolids PWEF (higher adjustments are allowed for higher CI values and lower PWEFs, while lower or no adjustments are allowed for soils with low or negative CI values and biosolids with higher PWEF values)
- **62-640.500(5)(f)8.** – specifies that nitrogen application rates can be adjusted by a factor of 1.5 to account for the availability of nitrogen in biosolids and nitrogen mineralization.
- **62-640.500(5)(f)9.** – existing language



# 62-640.500, F.A.C. (5)

## *Nutrient Management Plan (NMP)*

- **62-640.500(5)(f)10.** – establishes allowable septage application rates based on the soil capacity index and whether or not a septage management facility accepts food establishment sludge (grease)
- **62-640.500(5)(f)11. and 12.** – existing language
- **62-640.500(8)** – the revision specifies when and how to submit revisions to the NMP, which may be necessary between permit cycles if the soil capacity index changes



# 62-640.600, F.A.C.

## *Pathogen Reduction and Vector Attraction Reduction*

- **62-640.600(1)(c) – eliminating the provision allowing septage to meet Class B pathogen reduction treatment by raising the pH to 12.5 for 30 minutes because lime cannot reach a pH over 12.47 at a temperature of 25 degrees Celsius**



# 62-640.650, F.A.C.

## *Monitoring, Record Keeping, Reporting, and Notification*

- **62-640.650(3)(a)1.a. – minor changes for references**
- **62-640.650(3)(a)1.b. – the analysis method for monitoring for water extractable phosphorus is adopted and incorporated by reference**
- **62-640.650(3)(a)1.c. -- treatment facilities are required to monitor for water extractable phosphorus immediately following the effective date of the rule**
- **62-640.650(3)(a)3. – water extractable phosphorus is added to the list of parameters to be analyzed in biosolids during routing monitoring for treatment facilities**



# 62-640.650, F.A.C. (2)

## *Monitoring, Record Keeping, Reporting, and Notification*

- **62-640.650(3)(b)1.** – a specific University of Florida Institute of Food and Agricultural Sciences (IFAS) soil fertility test, the “Phosphorus Index Test,” is identified for soil fertility testing, but if a permittee uses a different agricultural lab other than IFAS, the required soil fertility parameters are specified; additionally, soil fertility testing samples for the capacity index are allowed to be deeper than 6 inches but cannot go below the seasonal high water table (SHWT)
- **62-640.650(3)(b)1.a.-c.** – breaking out references separately and adding a Mehlich-3 reference (incorporated)
- **62-640.650(3)(b)2.** – deleting a reference to sites permitted for Class AA biosolids because no sites have been, or are, expected to be permitted for only Class AA



# **62-640.650, F.A.C. (3)**

## ***Monitoring, Record Keeping, Reporting, and Notification***

- **62-640.650(3)(c)1.**
  - **Revising the requirement for ground water monitoring to a lower nitrogen threshold and establishing a phosphorus threshold (phosphorus rate or soil capacity index)**
  - **Adding a requirement to submit a ground water monitoring plan if the soil capacity index changes to a negative value**
  - **Adding a provision allowing the Department to install wells and conduct monitoring at the site even if a site is not required by rule to conduct ground water monitoring**



# 62-640.650, F.A.C. (4)

## *Monitoring, Record Keeping, Reporting, and Notification*

- **62-640.650(3)(d)**
  - **Adding surface water monitoring requirements for biosolids land application sites based on the proximity of the application area to surface water**
  - **Adding a provision to allow the Department to conduct surface water monitoring at the site even if surface water monitoring is not required by rule**
- **62-640.650(3)(e). – adding “unless specifically provided otherwise in this chapter” to the requirement to use a certified laboratory because agricultural laboratories are allowed by section 62-640.650(3)(b)1., F.A.C., for soil fertility testing**





# **62-640.650, F.A.C. (5)**

## ***Monitoring, Record Keeping, Reporting, and Notification***

- **62-640.650(4)(j)4. – adding surface water monitoring results to the site record keeping requirements**
- **62-640.650(4)(j)7. – adding demonstration of reasonable assurance to the record keeping requirements when the seasonal high water table is less than 6 inches from the soil surface or depth of biosolids placement (SB 712)**
- **62-640.650(5)(d)2. – deleting the reference to sites permitted for Class AA only because no sites have been permitted for Class AA or are expected to be permitted for Class AA**



# 62-640.700, F.A.C.

## *Requirements for Land Application*

- **Rule Title – deleting the classes of biosolids from the title because it has caused confusion related to Class AA biosolids (Class AA is typically distributed and marketed)**
- **62-640.700(6)(b) – deleting the obsolete one-year deadline date after the effective date of the 2010 revisions**
- **62-640.700(6)(e)2.f. – measures to prevent leaching are added as a concern for long term storage of biosolids at a site**
- **62-640.700(9) – clarification of the soil pH requirement**



# 62-640.700, F.A.C. (2)

## *Requirements for Land Application*

- **62-640.700(10) – Seasonal High Water Table**
- **62-640.700(10)(a) – repeats the prohibition from 62-640.400(14) regarding the prohibition on land application on soils with a SHWT less than six inches.... (SB 712)**
- **62-640.700(10)(b) – the required two feet of unsaturated soil at the time of application is retained (SB 712)**
- **62-640.700(10)(c) – methods to determine the SHWT are expanded and a document providing methodology is being adopted**
- **62-640.700(10)(d) – retains the determination of the water table level before application for SHWT less than two feet of the soil surface**



# 62-640.800, F.A.C.

## *Additional Requirements for Land Application at Reclamation Site*

- **62-640.800(5) – the requirements for ground water and surface water monitoring from Rule 62-640.650 are added to the land reclamation site requirements**



# **62-640.850, F.A.C.**

## ***Distribution and Marketing of Class AA Biosolids***

- **Only updating rule references and dates of reference documents**



# 62-640.880, F.A.C.

## *Additional Requirements Related to Biosolids Treatment Facilities*

- **62-640.880(2)(j)2. – allows small septage management facilities to be operated by a registered septic tank contractor or master septic tank contractor**



# Miscellaneous Revisions

- **Several tables within the chapter are being revised for compliance with federal Section 508 standards for accessibility**
- **Reference documents are being updated as applicable**
- **Language for adopting and incorporating documents/availability of documents is being revised**
- **Language for submittal of information to DEP is being revised**



# ERC Adoption

- **The revisions to Chapter 62-640, F.A.C., must be adopted by the Environmental Regulation Commission (ERC)**
- **An ERC rule adoption hearing has not been set yet; anticipated for the next ERC meeting**





# Legislative Ratification

- **Legislation ratification of a rule is required when the costs of the rule exceed \$1 million over a five-year period**
- **SB 712 requires ratification by the Legislature**
  - **Legislative ratification would likely have been required because of expected regulatory costs**



# Public Comment

***Written comments can also be:***

- ***Emailed to: [maurice.barker@floridadep.gov](mailto:maurice.barker@floridadep.gov)***
- ***Mailed to: Maurice Barker, 2600 Blair Stone Rd, MS#3545, Tallahassee, FL 32399-2400***



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