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WELCOME TO

# Biosolids at a Cross Road
# Navigating Florida's 2026 Legislative Landscape


Presented by:

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100% Employee Owned

OVERVIEW

# What You Need To Know

01 Biosolids Basics

02 Biosolids by the Numbers

03 Florida 2026 Biosolids Legislative Framework

04 Where Do We Go from Here?



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# What Are Biosolids?

## The Basics

**Biosolids** are treated residual solids generated during wastewater treatment, which must be beneficially reused or disposed of in accordance with state and federal regulations.

## KEY TERMS

### Sewage Sludge:

When domestic sewage is conveyed to a wastewater treatment plant (WWTP), it undergoes biological treatment, producing biomass. The liquids are then separated from the solids, producing a semi-solid, nutrient-rich product known as sewage sludge.

### Biosolids:

Sewage sludge that has been treated to comply with EPA's 40 CFR Part 503 standards for land application, which are outlined in the **"Standards for the Use or Disposal of Sewage Sludge,"** is intended for use as a soil conditioner or fertilizer.




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# How Biosolids Are Created

## Process Overview

### Collection:

Wastewater enters from homes, businesses, and industry.

### 1 SECONDARY TREATMENT

Biological treatment processes create biomass

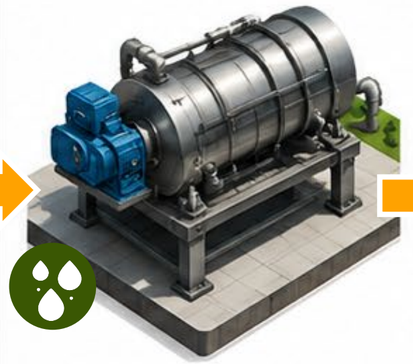
### 2 SETTLING

Solids settle to the bottom of the clarifier. Clear water overflows.

### 3 STABILIZATION

Digestion stabilizes solids by breaking down organics, and volume is reduced by decanting separated water.

### 4 DEWATERING



Water is separated from solids. Produces biosolids cake.

### 5 ADVANCED PROCESSING

(OPTIONAL)


Drying, composting, and/or pelletization .

**END RESULT:**
**TREATED BIOSOLIDS**

Suitable for reuse or disposal.

Land Application

Fertilizer Products

Land Reclamation

Disposal



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# Biosolids Classification System

## Types of Biosolids

| CATEGORY | AA CLASS AA BIOSOLIDS | A CLASS A BIOSOLIDS | B CLASS B BIOSOLIDS |
|---|---|---|---|
| TREATMENT LEVEL | **Highest treatment** standard in Florida | **Advanced treatment** | **Stabilized treatment** |
| PATHOGEN REDUCTION | **Extremely high**/non-detectable | **Very high** reduction | **Detectable** pathogens |
| METAL LIMITS | **Most stringent** limits | **Federal** pollutant limits | **Federal** pollutant limits |
| ODOR POTENTIAL | **Lowest** | **Low** | **Moderate** |
| PUBLIC ACCESS RESTRICTIONS | **Minimal** | **Few** restrictions | **Significant** restrictions |
| LAND APPLICATION RESTRICTIONS | **Limited** restrictions | **Limited** restrictions | **Waiting periods** and site controls required |
| DISTRIBUTION | **Marketed like** commercial fertilizer | **Beneficial reuse** (may be distributed) | **Site-specific land** application only |
| COMMON TREATMENT METHODS | **Heat drying, composting,** pelletization, thermal treatment | **Composting**, alkaline stabilization, heat drying | **Anaerobic digestion,** lime stabilization, dewatering |
| TYPICAL APPEARANCE | Dry pellets or compost-like product | Compost-like or dried material | Dewatered cake or slurry |
| REGULATORY OVERSIGHT | **Highest** in Florida | **Federal Part 503** + state rules | **Federal Part 503** + state rules |
| KEY CONCERNS | **PFAS,**nutrient loading, groundwater protection | **Nutrients** and emerging contaminants | **Pathogens, runoff, odors,** nutrient management |

Source: EPA 40 CFR Part 503 & Florida Chapter 62-640, F.A.C.



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# The Scale of Florida

## 550+

People per day move to Florida

## 24.3M+

Florida residents (3rd largest state)

## 67 | 411

Counties and cities in Florida


## 145M+

Visitors come to Florida annually



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# The Numbers Driving Biosolids Policy

Key data highlighting the scale, impact, and importance of biosolids management in the U.S. and Florida.

## 4.5M+

Dry metric tons of biosolids generated annually in the USA

## 60%

Biosolids are beneficially land-applied nationwide

* *Trending downward*

## ~384K

Dry metric tons of biosolids are produced annually in Florida.

## 33

Counties that transport Class B biosolids to other counties for land application.

## 100 – 150$

Average biosolids management cost per dry ton for many Florida utilities today.

## 30%

One in three Floridians relies on onsite septic systems (2.6M tanks)

Sources: 1000-Friends-Final-Biosolids-Report-_updated.pdf (2024); Draft Sewage Sludge Risk Assessment for PFOA and PFOS (2025); Microplastics in biosolids: An emerging challenge for the urban water cycle | Wastewater Digest (2024); Domestic Wastewater Program | Florida Department of Environmental Protection;



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# Managing Biosolids: Today's Disposal Options

Biosolids can be disposed of in several ways, each supporting public health, environmental protection, and resource recovery.

## Land Application

Biosolids can be used on agricultural land, forests, rangelands, commercial fertilizer, reclaimed areas, and non-agricultural sites like parks and lawns. Their use must comply with federal, state, Tribal, and local regulations.

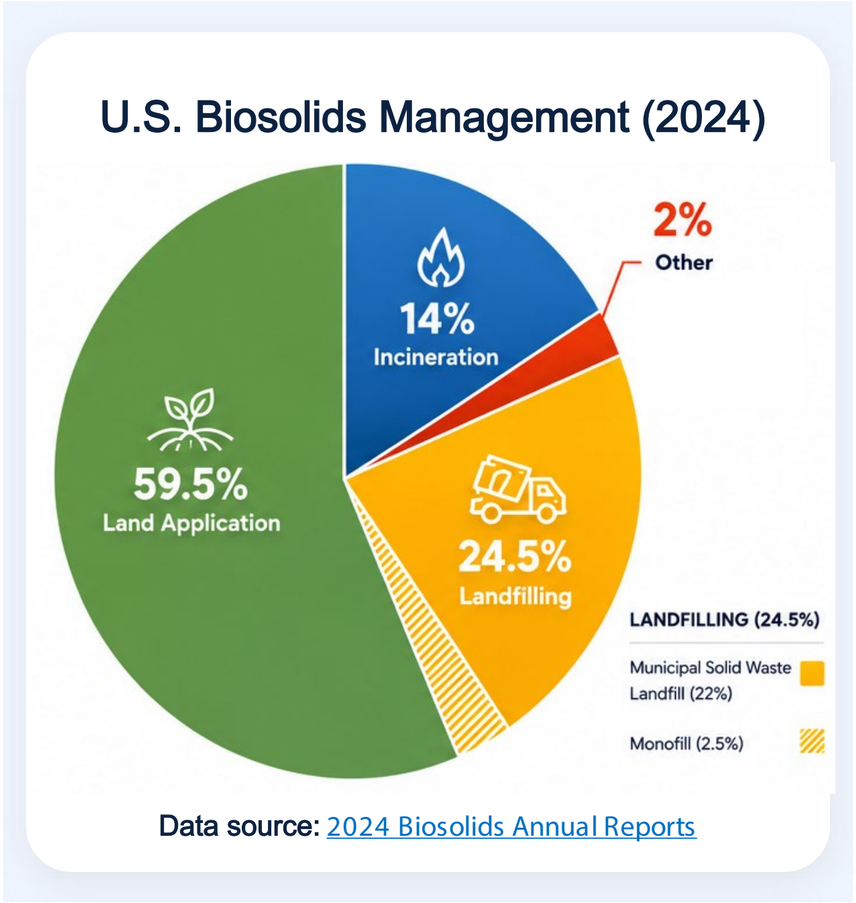
## Landfilling

Used when land application is unavailable or markets decline.

Provides a reliable outlet but consumes landfill airspace and is becoming increasingly expensive in many regions.

## Incineration

Thermally reduces biosolids volume while significantly decreasing pathogens and organic material. Requires specialized infrastructure and higher operating costs; minimizes final disposal volume.




Source: U.S. EPA, *Basic Information about Sewage Sludge and Biosolids*, epa.gov/biosolids/basic-information-about-biosolids



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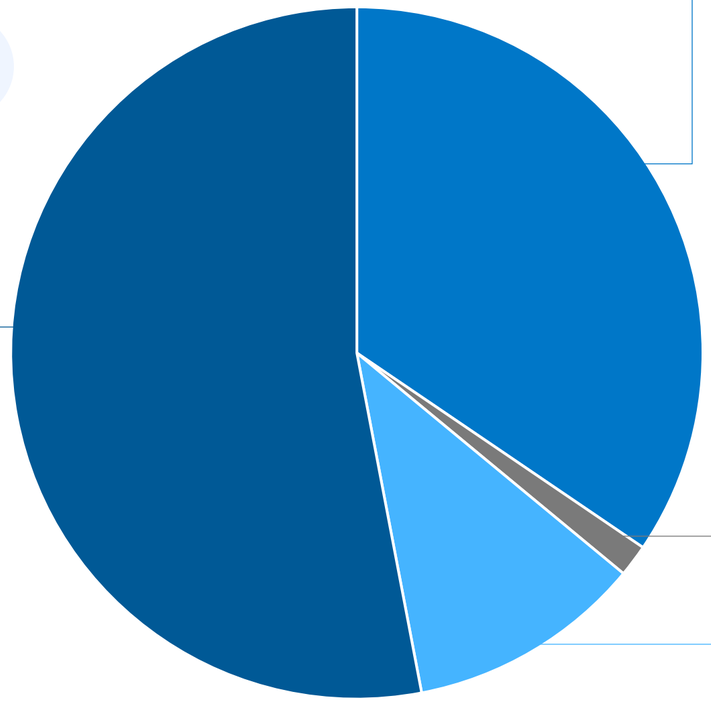
# Reported End Use of Land Applied Sewage Sludge



**53%**

**AGRICULTURAL**

Applied to agricultural land to support soil health and crop productivity.

**34.5%**

**DISTRIBUTION & MARKETING**

Marketed and distributed for beneficial reuse products.

**1.5%**

**RECLAMATION**

Used in land reclamation and restoration projects.

**11%**

**OTHER**

Includes golf courses, forestry, horticulture, and other land uses.

*Source: U.S. EPA, Basic Information about Sewage Sludge and Biosolids, epa.gov/biosolids (2024 data)*



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2024 FLORIDA BIOSOLIDS SNAPSHOT

# Biosolids Management in Florida

In 2024, Florida managed approximately **384,580** dry tons of ALL CLASSES of biosolids across land application, marketing and distribution, and landfills.

**84,000** DRY TONS
**Class B Biosolids Land Applied** in Florida

**235,265** DRY TONS
**Class AA Biosolids Marketed & Distributed** in Florida

**~65,000** DRY TONS
**Biosolids Sent to Landfills** in Florida

## TRENDS SINCE 2021

▲ **INCREASE IN**
Class AA biosolids marketed and distributed

▲ **INCREASE IN**
Biosolids sent to landfills

▼ **DECREASE IN**
Class B biosolids land applied


Source: Florida Senate Bill Analysis, CS/CS/CS/SB 290 (Chapter 2026-3), February 2026, citing Florida DEP 2024 Biosolids Data



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# Florida's Biosolids Landscape: County Data (2024)


## 33 Florida Counties Transfer Class B Biosolids to Other Counties for Land Application

- 8 counties are responsible for 76% of all documented Class B biosolids transfers


## 64% of All Biosolids Produced In Florida Are Now Class AA

- 41 facilities produce Class AA biosolids statewide
- 235, 268 dry tons of Class AA biosolids were distributed and marketed in 2024


## 130 Permitted Class B Land Application Sites Remain In Florida

- These sites encompass more than 46,000 acres
- The number of active receiving sites continues to decline across Florida

Source: Florida Department of Environmental Protection (FDEP), 2024 Biosolids Summary Report; Chapter 62-640, F.A.C.; U.S. EPA 40 CFR Part 503.



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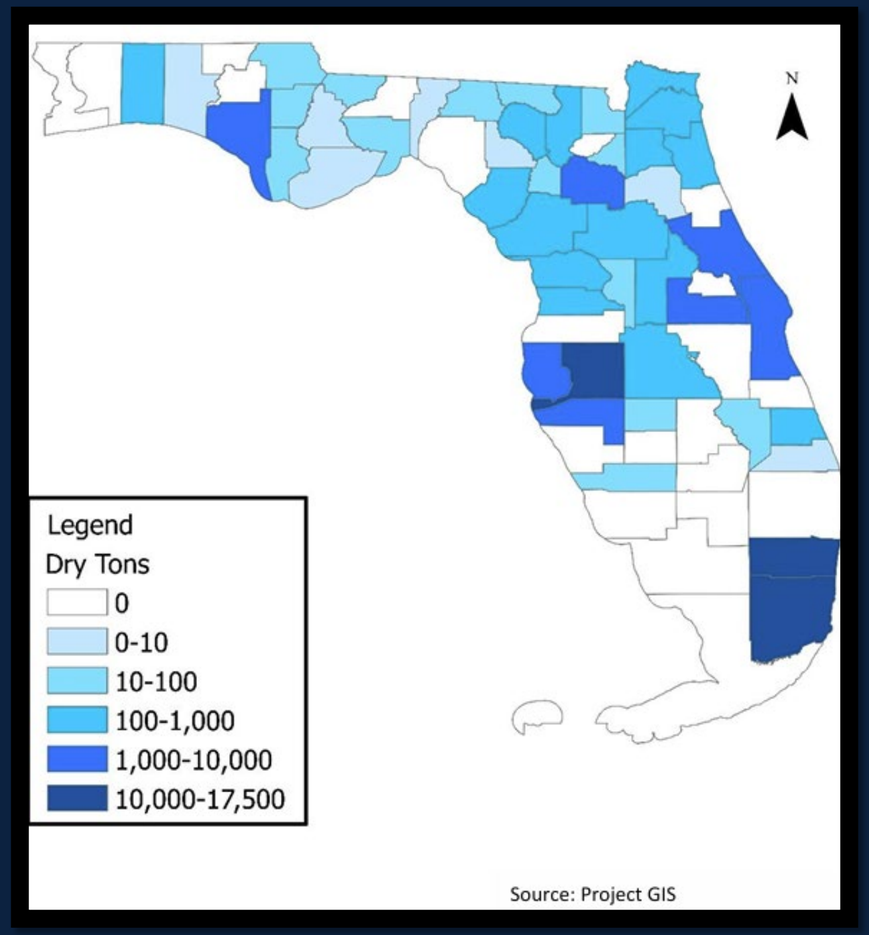
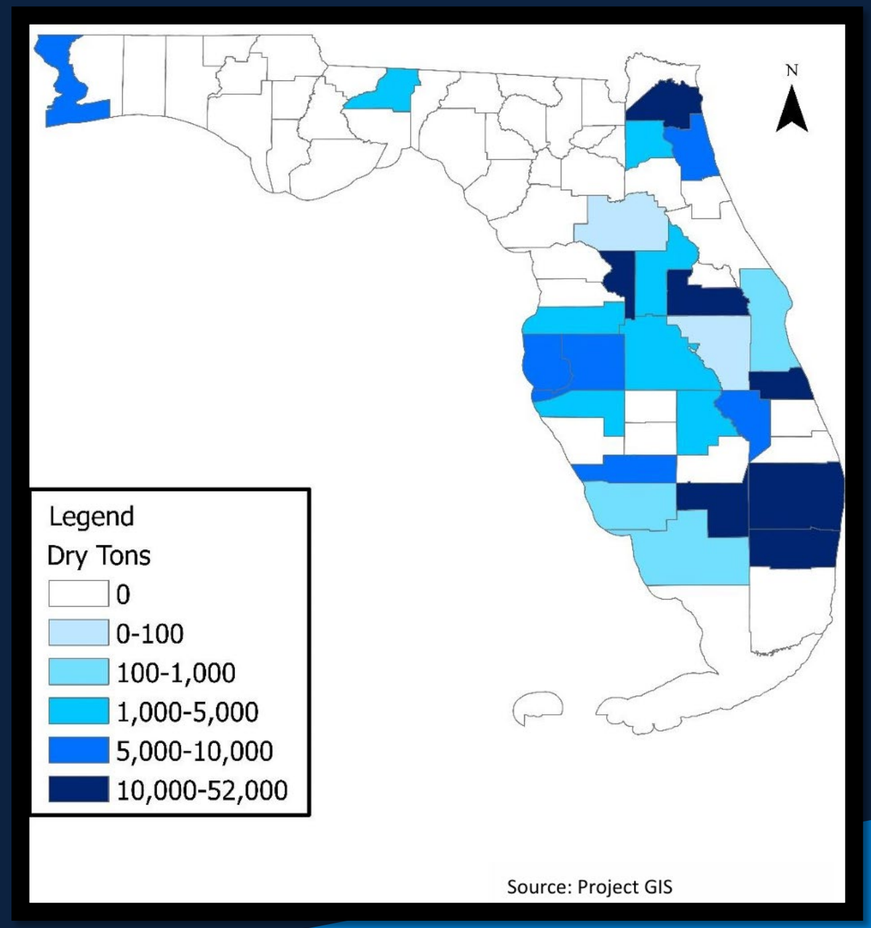
# Florida Biosolids Production: By County (2019– 2021)

## CLASS B BIOSOLIDS




## CLASS AA BIOSOLIDS



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# Florida's Biosolids Transformation

## How Florida's Regulatory and Operational Priorities Continue To Evolve

### POLICY EVOLUTION

**PAST**
Pre-2020

- Class B land application
- Limited statewide oversight
- Limited PFAS oversight

### REGULATORY SHIFT

**PRESENT**
2020-2028

- Transition to Class AA production
- Increased regulatory accountability
- PFAS monitoring and reporting

### LEGISLATIVE CHANGE

**FUTURE**
2028+

- Class AA statewide standard
- Thermal technology drives innovation
- Risk-based, data driven management



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# Biosolids Legislative Framework



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# The Evolution of Biosolids Regulation

**1972**

**Clean Water Act**

**Federal Authority**

**1993**

**40 CFR Part 503**

*Protection of the Environment*

**National Standards**

**1997**

**HB 193 (FL)**

**State Implementation**

**2020**

**SB 712**

*Florida Clean Waterways Act*

**Legislative Reform**

**2026**

3 Laws Enacted 1 Major Veto

- ✓ SB 290
- ✓ HB 1019
- ✓ HB 1285
- X VETOED: HB 1245



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# The Clean Water Act (33 U.S.C. § 1251 et seq.) 1972


## The Foundation

**How is sewage sludge regulated?**

- Federal Water Pollution Control Act, 1948
- CWA is the legal foundation for every biosolids rule that followed
- Established the national framework for protecting the nation's waters and regulating pollutant discharges.
- **Did NOT** include specific requirements for sewage sludge management


## 1977 Revision

**(Section 33 U.S.C. § 1345 (CWA Section 405 (d))**

- Formalized federal control over sludge disposal into waters.
- Triggered the first EPA sludge regulations (Part 257).
- Laid the groundwork for the more detailed Part 503 rules that became the primary sludge management standard in the U.S.


## Water Quality Act (1987)

- Amended the CWA to require the EPA to **establish a comprehensive biosolids program**
- Goal: Reduce potential environmental risks associated with sewage sludge management and maximize the beneficial reuse of sewage sludge.

*Source: CWA § 405(d), 33 U.S.C. § 1345(d) (as amended 1977, 1987); 40 CFR Part 503, 58 FR 9248 (Feb. 19, 1993); 40 CFR 503.4 (implementing rule; landfill-to-disposal compliance).*



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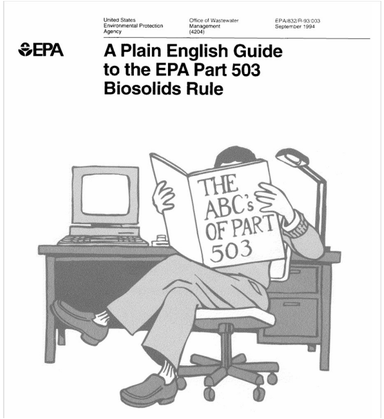
# 40 CFR Part 503, Standards for the Use or Disposal of Sewage Sludge (1993)



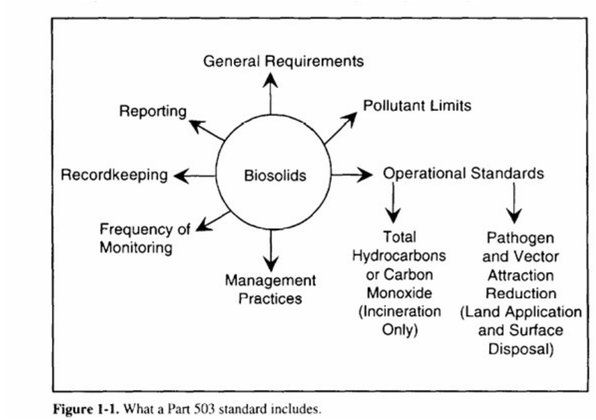
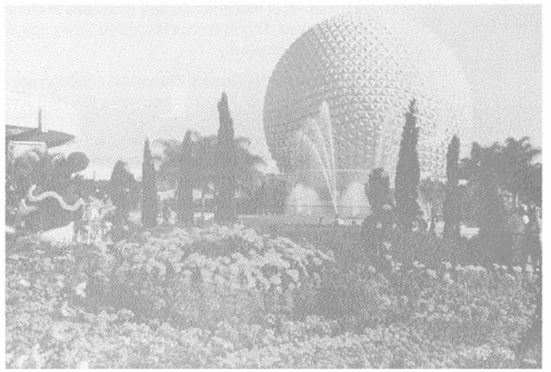




**Figure 1-1.** What a Part 503 standard includes.



*Biosolids compost enhances gardens at Walt Disney World Epcot Center in Orlando, Florida.*

## Standards

- CWA section 405(d) required EPA to establish requirements and management practices for the use and disposal of sewage sludge

## Scope

- Part 503 regulates sewage sludge that is applied to:
  - Land application (Subpart B) — application to agricultural or non-agricultural land.
  - Surface disposal (Subpart C) — placement on land without irrigation.
  - Incineration (Subpart E) — burning sewage sludge in an incinerator

## Purpose

- Maximize beneficial reuse of sewage sludge (e.g., as fertilizer).
- Minimize environmental and health risks
- Ensure compliance with state and federal environmental laws

*Source: CWA § 405(d), 33 U.S.C. § 1345(d) (as amended 1977, 1987); 40 CFR Part 503, 58 FR 9248 (Feb. 19, 1993); 40 CFR 503.4 (implementing rule; landfill-to-disposal compliance).*



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# Surface Water Protection Programs

## HB 197 (Fla. 2007)

Surface Water Improvement and Management Act: Lake Okeechobee Protection Act (LOPA, 2000) and the Northern Everglades and Estuaries Protection Program (NEEPP) (2007)

### Agricultural Use Plans Required

- Anyone land-applying biosolids in the Lake Okeechobee watershed must create a plan showing how phosphorus applications will be limited.
- **The goal is to reduce nutrient pollution entering Lake Okeechobee.**

### Alternative Treatment Encouraged

- Utilities in 11 designated counties (Monroe, Miami-Dade, Broward, Palm Beach, Martin, St. Lucie, Indian River, Okeechobee, Highlands, Hendry, Glades) may add an environmental protection disposal fee to sewer bills —s. 373.4595(3)(b)17., F.S.
- **Proceeds must fund alternative biosolids treatment/disposal technology, not transportation or land-application costs.**

### Financial Oversight

- An audit will be conducted of these fee-receiving facilities and their fee-setting methodology at **least once every three years**—s. 373.4595(3)(b)18., F.S.
- Audit reports go to the Senate President and House Speaker within 120 days; books stay open to Florida Public Service Commission and the Auditor General.

Citation: Ch. 2007-191, Laws of Fla. (CS/CS for CS/HB 197), codified at s. 373.4595(3)(b)16.-18., F.S. (Northern Everglades and Estuaries Protection Program).

# The Foundation for Florida's Biosolids Reform: SB 712 (2020)

SB 712 created DEP's rulemaking authority; Rule 62-640, F.A.C. (2021) set the resulting statewide treatment, monitoring, and land-application standards .

## Clean Waterways Act -- SB 712 (2020) → Rule 62-640, F.A.C. (2021)

### SB 712 Created the Statutory Framework (2020)

01

- ✓ Created s. 403.0855, F.S. — Gave FDEP's statutory authority for biosolids rulemaking.
  - Any new FDEP rule was required to be ratified by the Legislature before taking effect.**
  - Preserved existing local biosolids ordinances — about a third of Florida counties had their own in 2020.

### Rule 62-640 Set the Statewide Standards (2021)

02

- ✓ **Established the rule for Florida's statewide requirements for biosolids treatment, monitoring, and land application**
  - Prohibits land application within 6 inches of the seasonal high-water table absent an approved NMP and water-quality monitoring plan.
  - Revises nitrogen/phosphorus land-application rate provisions and adds groundwater and surface-water monitoring requirements.
  - Requires FDACS Best Management Plan enrollment
  - New or renewed permits issued after 7/1/2020 must meet the new requirements within one year of the rule's effective date.

- ➢ **SB 290 (2026, Ch. 2026-3) removed that ratification requirement from s. 403.0855, F.S.
- ➢ Once biosolids cross a landfill gate, though, Chapter 62-701, F.A.C. (Solid Waste) takes over.



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# Florida Environmental 2026 Legislation Update

| STATUS | BILL | SUMMARY | EFFECTIVE DATE |
|---|---|---|---|
| SIGNED | **Department of Agriculture and Consumer Services**<br>CS/CS/CS/SB 290 | Requires all DEP-permitted biosolids land application sites (permitted after 7/1/2020) to transition to Class AA-only biosolids; removes DEP's legislative-ratification requirement for future biosolids rules. Signed as Chapter 2026-3. | **Law: July 1, 2026**<br>Class AA required by 7/1/2028 (7/1/2031 for non-hauling local govts) |
| SIGNED | **Perfluoroalkyl and Polyfluoroalkyl Substances**<br>CS/CS/HB 1019<br>("Joe Cassello Act") | Phases out AFFF firefighting foam and requires public entities ≥25,000 gpd disposing of biosolids and treated effluent to conduct quarterly PFAS sampling and submit results to DEP (informational only until EPA sets enforceable standards). | **July 1, 2026** |
| VETOED | **Biosolids Management**<br>CS/CS/HB 1245 | Would have capped bulk Class AA biosolids fertilizer/compost land application at the agronomic rate, added recordkeeping, and directed UF/IFAS to publish biennial agronomic rates.<br>Vetoed by the Governor on 6/30/2026 — no volume cap currently exists. | **N/A — Vetoed**<br>(would have been Nov. 1, 2026) |
| SIGNED | **Biosolids Management**<br>CS/CS/HB 1285 | Blocks new or renewed permits for land-applying septage as Class B biosolids when a non-defunct, government-owned or -operated facility that accepts septage for higher treatment sits within 30 miles of the proposed site. Signed as Chapter 2026-171. | **July 1, 2027** |



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# SB 290 (2026)

## Department of Agriculture and Consumer Services



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# Department of Agriculture and Consumer Services

## CS/CS/CS/SB 290

**Signed 3/23/2026**

### The bill:

#### Biosolids Management

- Amends s. 403.0855(2), F.S. — removes the requirement that DEP's biosolids-management rules be ratified by the Legislature before taking effect, so DEP can update Rule 62-640, F.A.C. through normal rulemaking going forward.
- **Requires that permittees of biosolids land application sites permitted after July 1, 2020 shall ensure that only Class AA biosolids are applied to soil, effective July 1, 2028.**
  - Local governments that do not transport biosolids for land application outside of their respective boundaries must comply with the Class AA biosolids land application requirement by July 1, 2031.
- This does not prohibit local governments from transporting Class B biosolids outside their boundaries to a Class AA biosolids treatment facility or waste-to-energy facility.

**Effective Date:** July 1, 2026

**Key Takeaway:** DEP gains faster rulemaking authority, and by 2028 (2031 for non-hauling local governments), Class B land application is off the table statewide unless the material moves to a Class AA facility or a WTE plant — non-upgraded biosolids need a new home.

# HB 1285 (2026)
## Biosolids Management



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# Biosolids Management

## CS/CS/HB 1285

**Signed 6/25/2026**

### The bill:

- Prohibits DEP from issuing or renewing a permit for a land application site that authorizes the disposal or land application of septage as Class B biosolids if there is a permitted wastewater treatment facility that accepts septage for higher levels of treatment that:
  - is less than 30 miles from a proposed Class B biosolids land application site.
  - is owned or operated by the federal government, a federal agency, a state government body or agency, or a political subdivision of the state.
  - is not defunct, used for other purposes, or out of capacity.

**Effective Date:** July 1, 2027

**Key Takeaway:** New/renewed septage-as-Class-B permits are effectively off the table wherever a qualifying public facility already exists within 30 miles — pushing haulers toward that facility, or toward landfill disposal where none exists.


*Citation: Ch. 2026171, Laws of Fla. (CS/CS/HB 1285, "Biosolids Management"), effective 7/1/2027.*



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# HB 1019 (2026)

## Perfluoroalkyl and Polyfluoroalkyl Substances



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# Perfluoroalkyl and Polyfluoroalkyl Substances

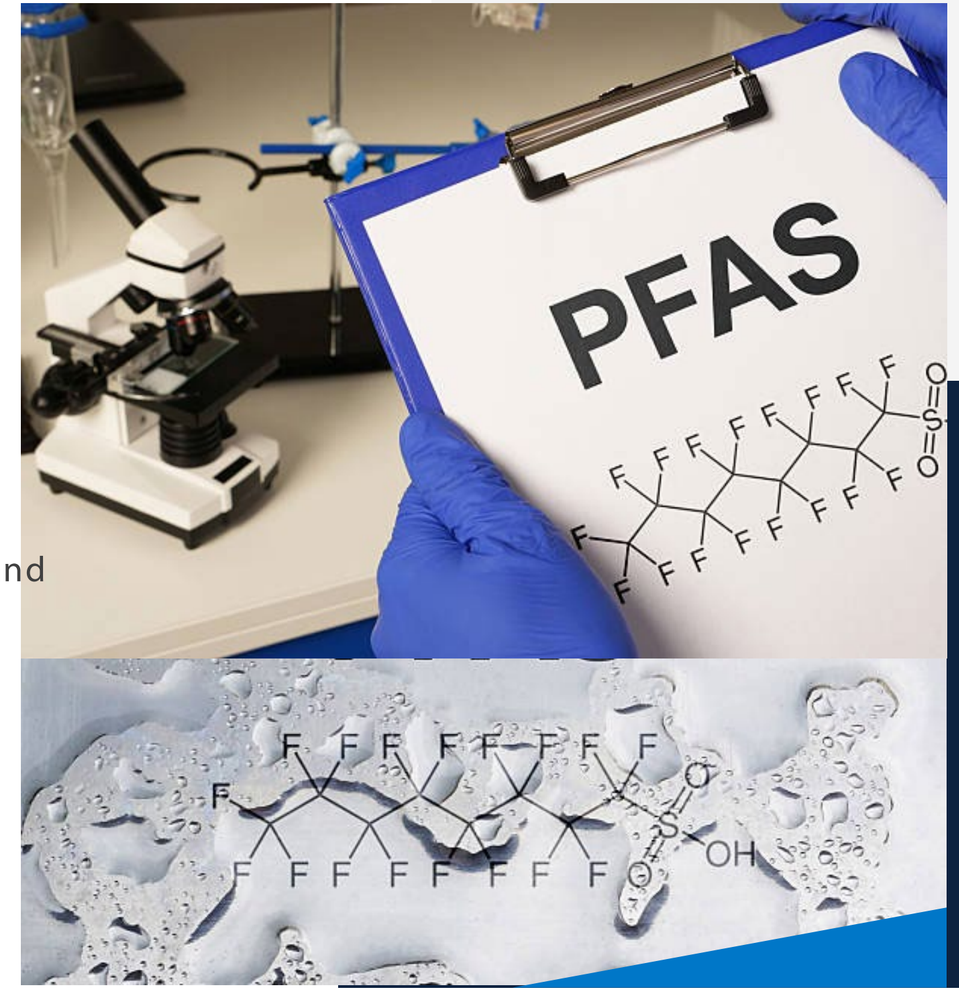
## CS/CS/HB 1019– Conerly (Joe Casello Act)

**Signed 6/26/2026**

### IN ADDITION TO OTHER REVISIONS, THE BILL:

- Begins aqueous film -forming foam (AFFF) phaseout (2026–2029)
- All public entities disposing of domestic wastewater biosolids **and** treated effluent that have a designed average daily flow of 25,000 or more gallons per day to quarterly **conduct at least one biosolids and treated effluent sampling for PFAS.**
- Requires the results to be submitted to DEP, and the sampling must be conducted in accordance with DEP rules.
- Clarifies that until water quality standards for PFAS are established by the US EPA and adopted by DEP, such sampling and reporting is for **informational purposes only** and may not serve as the basis for any DEP enforcement action or other cause of action.

**Effective Date:** July 1, 2026



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# HB 1245
## Biosolids Management



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# HB 1245 Biosolids Management
## Key Requirements

1. Prohibits land application of bulk Class AA biosolids in excess of agronomic rates and imposes new requirements for the beneficial reuse of biosolids.
2. Limits the land application of bulk Class AA biosolids fertilizer and compost products to agronomic rates and requires that beneficial reuse be the primary objective rather than disposal.
3. Requires site owners or operators to record and maintain five years' worth of application data, such as quantities, dates, and transport details, with exemptions for dry, stable biosolids.
4. Mandates the Department of Environmental Protection to adopt new rules by November 1, 2026, for Class AA biosolids distribution and marketing.
5. Restricts the marketing or distribution of Class AA biosolids fertilizer or compost for agricultural use unless specified state and certification requirements are met.

**Effective Date:** November 1, 2026



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# Governor Vetoed HB 1245:
# Biosolids Management

**“The bill would create unnecessary regulations beyond existing state oversight.”**

### Unnecessary Regulation

Determined the bill imposed additional requirements for Class AA biosolids that exceeded existing regulatory programs.

01

### Vendor-Specific Accreditation

Opposed provisions requiring participation in fee-based accreditation programs administered by an industry trade association rather than through state agencies.

02

### Expanded Recordkeeping

Found new landowner recordkeeping requirements to be overly burdensome and likely to encourage unnecessary litigation.

03

### Existing Oversight is Sufficient

Stated that water quality objectives can be achieved through current oversight by the DEP and FDACS.

04

# Timeline: Key Policy Milestones

**2026**

PFAS monitoring begins

**(HB1019)**

**2027**

New restrictions on Class B land application sites

**(HB1285)**

**2028**

Permit holders for biosolids land application sites issued after July 1, 2020, must apply only Class AA biosolids to the soil

**(SB290)**

**2029**

AFFF use prohibited statewide

**(HB1019)**

**2031**

Local governments that do not transport biosolids beyond their boundaries must follow Class AA biosolids land application regulations.

**(SB290)**



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BREAKING
NEWS

# EPA Shifts from Risk Modeling to Risk Management

## Draft Guidance for Reducing Risk from PFOA and PFOS in Biosolids

*Released July 1, 2026 | Federal Register notice published July 6, 2026 | Docket: EPA-HQ-OW-2026-2509*


### What Changed

- EPA withdrew reliance on its January 2025 draft risk assessment.
- Determined the assessment did not reflect typical real-world conditions

### Why

- Previous assessment focused on unlikely high exposure scenarios.
- No national biosolids survey was completed to validate assumptions.
- EPA concluded the findings created confusion.

### New Approach

- The EPA recognizes land application as a cost-effective strategy
- Recommends avoiding it near waterways or areas where children play
- This guidance is voluntary, not mandatory.

### What's Next

- Draft guidance open for a 60-day public comment period.
- "The states plan to use the occurrence data to inform future actions."

**EPA Assistant Administrator for Water, Jess Kramer:**
*"Commonsense recommendations that can protect public health while also supporting wastewater systems and beneficial uses of biosolids when appropriate."*

# Where Do We Go From Here?



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# From Policy to Practice:
## Industry Impacts


### Higher Treatment & Disposal Costs

Utilities may face increased costs and operational constraints

- $55/ton in 2022
- $102–$150/ton today

### Growing PFAS Regulatory Pressure

Continues to create challenges for biosolids management

- HB 1019: PFAS quarterly sampling, publicly reported to DEP starting July 2026

### Fewer Land Application Options

Declining availability of Class B land application sites statewide

- Transition Deadline: July 1, 2028

### Increased Public & Regulatory Scrutiny

- Public reporting
- Greater farmer reluctance
- Increased media attention



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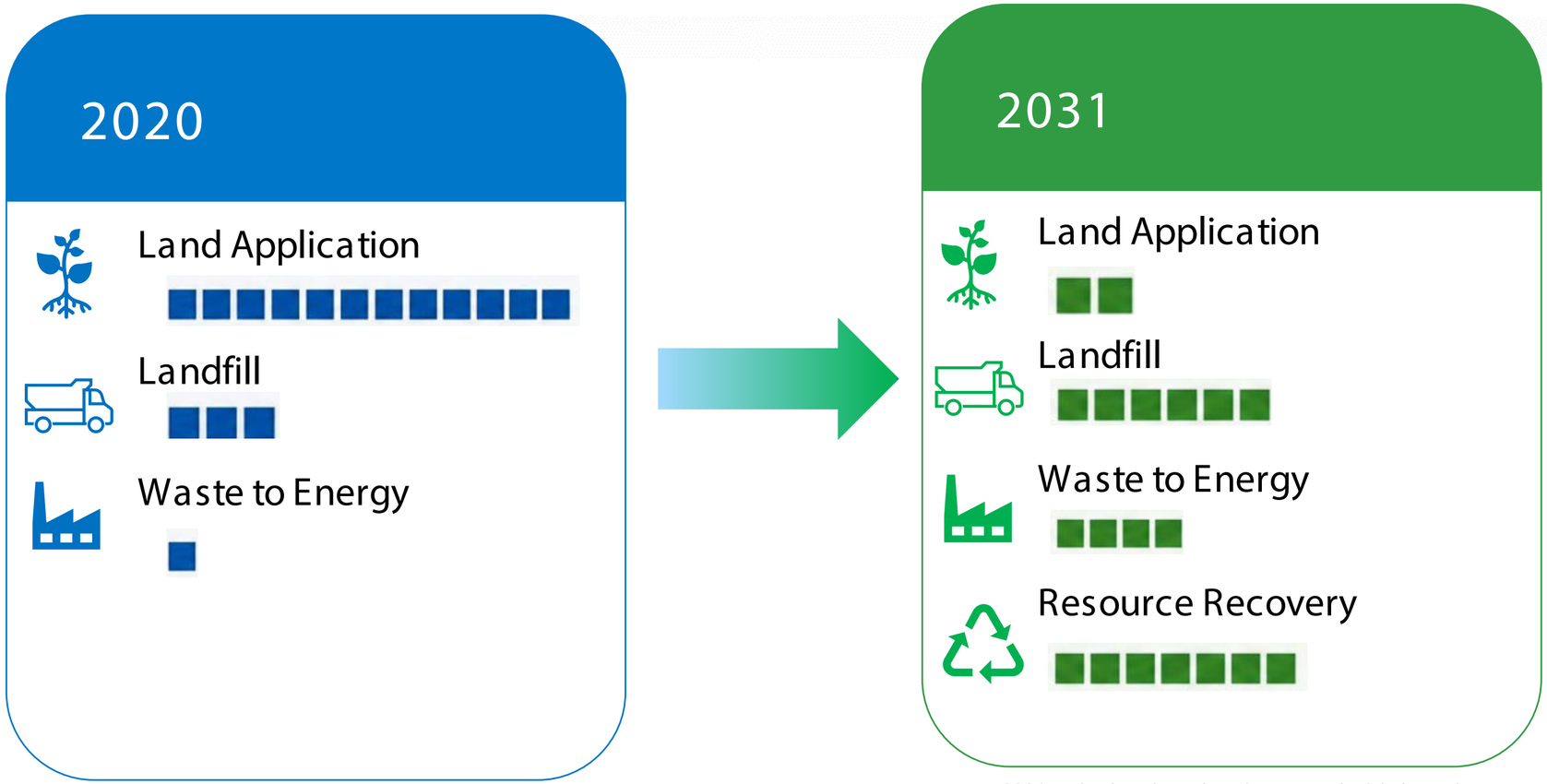
# Florida Is Not Eliminating Biosolids.
# Florida Is Relocating Biosolids.

## THE RESOURCE STAYS. THE DESTINATION CHANGES.




*2031 projections based on the current legislative trajectory and emerging infrastructure*



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# Emerging Treatment Technologies

## Alternative Treatment Technologies

### ALKALINE STABILIZATION & PELLETIZATION

- Produces Class A or Class AA biosolids depending on treatment process and metal concentrations
- Established technology with beneficial reuse potential

- High chemical and energy costs
- PFAS destruction effectiveness remains uncertain
- Requires market development and storage capacity

### THERMAL & CHEMICAL HYDROLYSIS

- Improves digestibility and biosolids dewaterability
- Can increase biogas production and support Class A biosolids pathways

- High capital cost
- Complex operations and maintenance requirements
- Requires skilled operators

### PYROLYSIS & GASIFICATION

- Produces biochar and potential energy recovery products
- High-temperature pyrolysis (700°C+) achieves 97–99% PFAS reduction in biochar — one of the most promising PFAS destruction pathways under active research.

- Emerging technology with limited Florida precedent
- High capital and operational costs
- Residuals and air emissions management considerations

### CO-COMPOSTING

- Well-established beneficial reuse approach
- Produces Class A compost products and reduces biosolids volume
- Supports beneficial reuse markets where demand exists

- Requires bulking agents and land area
- Odor management and community acceptance considerations
- Market saturation risks in some regions

Source: High-Temperature Pyrolysis for Elimination of PFAS from Biosolids." Processes, Vol. 10, No. 11 (2187), October 2022. mdpi.com and ScienceDirect — Journal of Analytical and Applied Pyrolysis, "Biosolids pyrolysis at 600°C achieved >99% PFAS destruction," January 2025.



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# Evaluating Class AATreatment Pathways

## Comparing Today's Leading Treatment Strategies

| TECHNOLOGY | RELATIVE COST | TECHNOLOGY MATURITY | PFAS DESTRUCTION |
|---|---|---|---|
|  ALKALINE STABILIZATION | $$ | ★★★★★ | **LOW** Does not destroy PFAS |
|  HYDROLYSIS | $$$ | ★★★★☆ | **MODERATE** Partial destruction depending on process conditions |
|  PYROLYSIS | $$$$ | ★★☆☆☆ | **HIGH** Can achieve 97–99% PFAS reduction at temperatures above ~700°C |
|  COMPOSTING | $$ | ★★★★★ | **LOW** Does not destroy PFAS |



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# Disposal Method Cost Comparison

## Land Application (Class B)

**$50–$125/dry ton**

✓ Lowest cost · ✓ Nutrient recycling

✗ Phase-out underway
✗ PFAS liability
✗ Permit availability shrinking

## Composting (Class AA)

**$80–$150/dry ton**

✓ Class AA output · ✓ Revenue offset from compost sales · ✓ Active in FL

✗ Odor/site permitting
✗ PFAS not destroyed

## Landfill Disposal

**$102–$150+/dry ton**

✓ Widely available · ✓ No processing required

✗ PFAS leachate risk ·
✗ Airspace consumed fast
✗ Fees up 10% in 2024

## Thermal Drying (Varcor)

**$150–$200/dry ton**

✓ Class AA · PFAS destruction · ✓ 97% less energy vs. conv. dryers · ✓ Fertilizer revenue

✗ High capital cost
✗ Only Indiantown facility in FL (2026)

## Incineration / Cement Kiln

**$180–$235+/dry ton**

✓ 93%+ volume reduction · ✓ PFAS destruction

✗ Highest cost
✗ High CAPEX ($30M+)
✗ Limited FL capacity
✗ Air permitting

Sources: Miami-Dade WASD (2018/2024) · Gulf Coast Community Foundation Playbook (2025) · EREF Tipping Fee Report (2024) · 1000 Friends of Florida (May 2025)



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# The Challenges of Solid Waste and Wastewater Partnerships

## Airspace & Capacity

- ✓ Consumes airspace
- ✓ Competes with solid waste disposal needs
- ✓ Facilities not designed for material

01

## Moisture & Operations

- ✓ Odor and vectors
- ✓ Blending and handling
- ✓ Slope stability and temperature control

02

## Leachate

- ✓ Inherently creates more leachate
- ✓ More pressure on liner systems

03

## Costs and PFAS Liability

- ✓ Tipping fees
- ✓ Accepting the PFAS risk
- ✓ RNG market volatility

04



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# The Business Opportunity for Solid Waste and Wastewater

## Processing Infrastructure

- ✓ Reduced energy for digestion
- ✓ Reduced digestion infrastructure
- ✓ Relies on existing processes

01

## Transportation

- ✓ Single destination logistics
- ✓ No secondary distribution costs
- ✓ Reduced handling

02

## Waste to Energy

- ✓ Additional feedstock opportunities
- ✓ Resource recovery expansion
- ✓ Renewable energy production

03

## PFAS Capture

- ✓ Concentrates PFAS
- ✓ Institutional controls at landfills
- ✓ Centralized treatment likely more cost effective and sustainable

04



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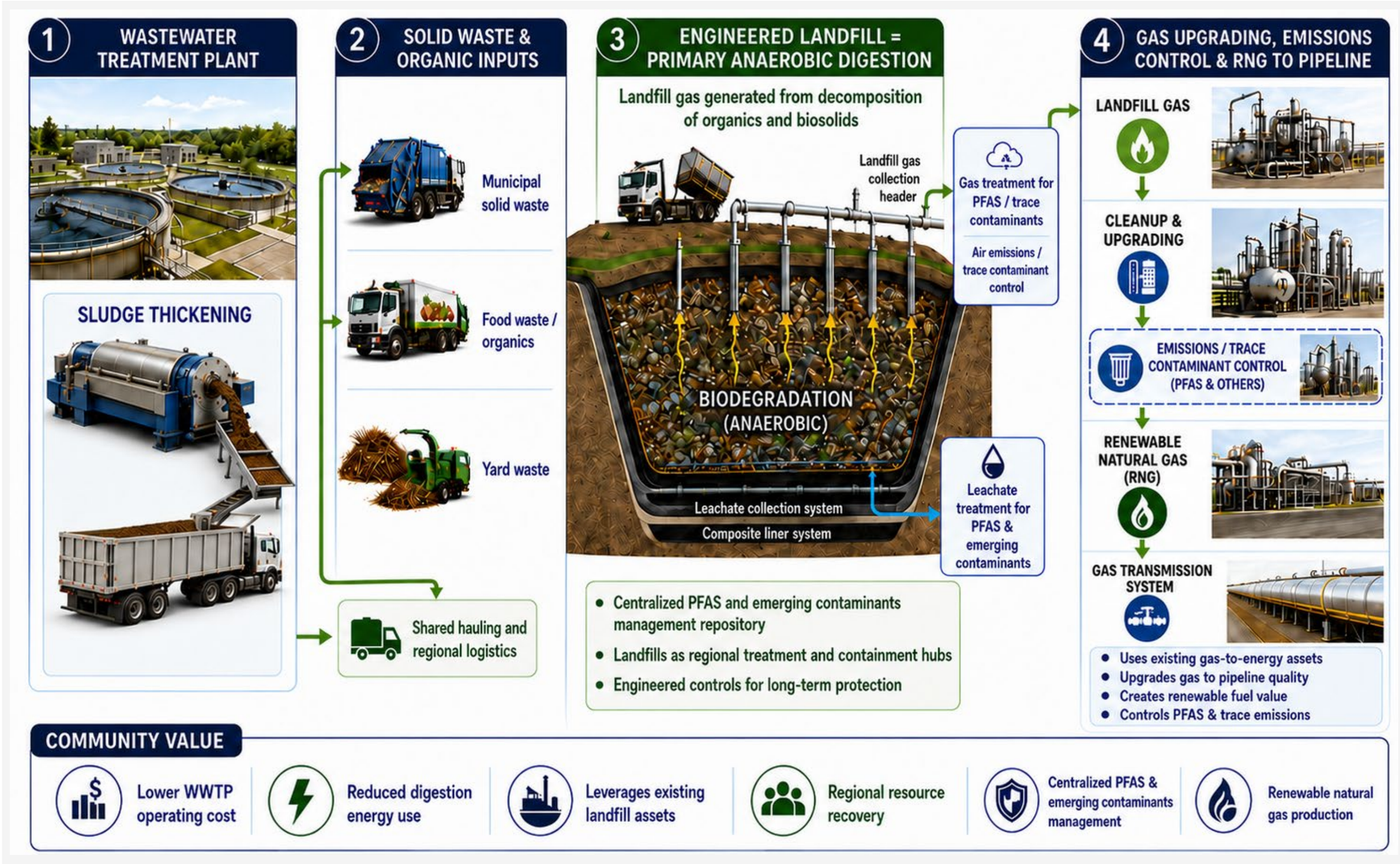
# Leveraging Existing Assetsfor Integrated Biosolids Solutions



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# Preparing for What's Next

## Industry Impacts of Florida's Biosolids Policy Shift

### PFAS Is a Shared Problem

- HB 1019 quarterly PFAS sampling starts July 2026.
- Results will be public.
- WTTP facilities need to understand PFAS concentrations and proactively address as regulatory limits are established.

01

### Land Application Will Decrease

- Class B land application is being phased out by 2028–2031.
- Up to 40,000–60,000 additional dry tons annually need disposal options.
- Land applications sites are decreasing.

02

### Economics Favor Regionalization

- Utilities face $100–$200/dry ton Class AA conversion costs.
- Regional processing hubs, shared hauling contracts, and emerging WTE co-processing partnerships lower per-unit costs for everyone.
- There are real business opportunities here.

03

### Act Before Deadlines Hit

- July 2026 (PFAS monitoring),
- November 2026 (agronomic rate limits)
- July 2027 (Class B permit restrictions)
- July 2028 (Class AA requirement
- July 2031 (local government Class AA compliance)

04

# The Path Forward

## 01 Plan

### Regulatory Readiness

- Initiate PFAS sampling and reporting programs
- Update master plans
- Understand rate impacts

## 02 Engage

### Stakeholder & Community Support

- Regulatory participation
- Early education of decision makers
- Be ready for public outreach and engagement

## 03 Adapt

### Future-Proof Your Program

- PFAS characterization
- Legislative monitoring
- Tracking DEP Chapter 62-640 rulemaking initiated under HB 1245

## 04 Position

### Secure Long-Term Capacity

- Assess regionalization and P3s
- Look for co-treatment opportunities
- Develop a PFAS strategy




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RESOURCES

# Key Resources & References

| | |
|---|---|
| **Florida DEP—Biosolids Program**<br>*floridadep.gov/water/domestic-wastewater/biosolids* | Florida biosolids permitting guidance, Chapter 62-640 rule requirements, forms, and compliance resources |
| **U.S. EPA Part 503 Rule**<br>*epa.gov/biosolids* | Federal biosolids use and disposal standards under 40 CFR Part 503; PFAS research, risk assessment, and regulatory updates |
| **Water Environment Federation (WEF)**<br>*wef.org/resources/publications/biosolids* | Technical guidance, utility management practices, residuals resources, and industry research |
| **Florida Water Environment Association**<br>*fwea.org* | Florida-specific resources, training, and peer networking for wastewater professionals |
| **Northeast Biosolids & Residuals Assoc. (NEBRA)**<br>*nebiosolids.org* | PFAS in biosolids research summaries, policy tracking, technical resources, and residuals management guidance |
| **EPA PFAS Analytical Methods**<br>*epa.gov/pfas/pfas-drinking-water-lab-methods* | EPA PFAS analytical guidance including Draft Method 1633 and drinking water methods 533 and 537.1 requirements |



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RESOURCES

# Key Resources & References

| | |
|---|---|
| **Florida DEP Solid Waste Program**<br>*floridadep.gov/waste* | Landfill permitting, WTE program, and solid waste management in Florida — directly relevant to your audience. |
| **Florida Senate Bill Tracking — 2026 Session**<br>*flsenate.gov/Session/Bills/2026* | Where to track SB 290, HB 1245, HB 1285, and HB 1019 enrolled text and fiscal analyses. |
| **1000 Friends of Florida Biosolids Report (May 2025)**<br>*1000fof.org/wp-content/uploads/2025/06/1000-FriendsFinal-Biosolids Report_updated.pdf* | Florida-specific, publicly accessible, cited multiple times in the deck. |
| **Florida Water Environment Association**<br>*fwea.org* | Florida-specific resources, training, and peer networking for wastewater professionals |
| **Florida Rural Water Association**<br>*frwa.net* | Training, certification, and technical assistance for rural water and wastewater systems |
| **UF/IFAS Biosolids—SL421/SS634 (rev. Feb. 2026)**<br>*ask.ifas.ufl.edu/publication/SS634* | Florida-specific land application rules and agronomic rate guidance. Relevant to HB 1245 compliance. |

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# Let’s Continue the Conversation


100% Employee Owned

# From Class B to Higher Treatment: HB 1285 Decoded

**EFFECTIVE DATE**
**July 1, 2027**

**APPLIES TO:**
New permits
Permit renewals

## Most Affected

Urban utilities

Facilities hauling septage

Existing Class B land application sites

Utilities planning permit renewals after 2027

## What This Means

Utilities relying on Class B land application should begin evaluating alternative management strategies **before permit renewal.**

### Potential options include:

Class AA production

Regional partnerships

Thermal processing

Capacity expansion

### ⚠ Implication for Your Utility

Utilities that rely on Class B land application should evaluate future disposal capacity now.
If a qualifying government-owned higher-treatment facility is located within 30 miles and has available capacity, new or renewed Class B permits may no longer be available after July 1, 2027.



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# The Evolution of Florida BiosolidsRegulation

## 1972
### Clean Water Act

Establishes the federal framework and EPA authority for regulating wastewater treatment and biosolids disposal nationwide.

**Federal Authority**

## 1993
### 40 CFR Part 503
*Standards for the Use or Disposal of Sewage Sludge*

Sets national standards for biosolids treatment, pathogen reduction, land application, and beneficial reuse (Class A/B/EQ).

**National Standards**

## 1997
### HB 193 (FL)

Requires site-specific phosphorus management plans for biosolids applied within the Lake Okeechobee watershed.

**State Implementation**

## 2020
### SB 712
*Florida Clean Waterways Act*

Begins Florida's modern biosolids overhaul: stricter land-application permitting and DEP rulemaking authority under s. 403.0855, F.S.

**Legislative Reform**

## 2026
### 3 Laws Enacted, 1 Major Veto

✓ **Ch. 2026-3 (SB 290):** Class AA-only land application required by 7/1/2028; DEP no longer needs legislative ratification to update biosolids rules.

✓ **HB 1019, "Joe Cassello Act":** Quarterly PFAS sampling of biosolids/effluent required for facilities ≥25,000 gpd, effective 7/1/2026

✓ **Ch. 2026-171 (HB 1285):** Blocks new/renewed land-application permits

✗ **VETOED** HB 1245 would have capped Class AA land-application rates.

### Key Takeaway for Solid Waste Programs

2026 tightened the front end — mandatory Class AA treatment, PFAS sampling, and narrower siting — but the one bill that would have capped how much Class AA can be applied to a single field was vetoed. Until a rate cap becomes law, landfills remain the default pressure valve when land-application demand can't keep pace with the roughly 340,000 dry tons of biosolids that Florida generates each year.

# Foundation for Florida's Biosolids Reform

## 2020 Florida Clean Waterways Act (SB 712)

### Directed the FDEP to Modernize Biosolids Regulations

01

- Prohibited Class A or Class B biosolids land application within 6 inches of the seasonal high-water table, unless a nutrient management plan (NMP) and water quality monitoring plan provide reasonable assurance against water quality violations.
- Required permittees of biosolids land application sites to enroll in FDACS's Best Management Practices program.
- Created s. 403.0855, F.S. — the statutory home for all of DEP's biosolids rulemaking authority since.

### SB 712 Created the Framework for Today's Reforms

02

- Allowed local governments to keep biosolids ordinances already on the books
  - About a third of Florida counties had their own rules in 2020.
- Directed DEP to adopt a biosolids rule but specified it couldn't take effect until ratified by the Legislature.**
- That ratification arrived via HB 1309 (2021, Ch. 2021-153), which enacted the resulting Rule 62-640 overhaul.

**SB 290 (2026, Ch. 2026-63) later removed this ratification requirement from s. 403.0855, F.S., letting DEP implement future biosolids rules without separate legislative approval.

*Citation: Ch. 2020-150, Laws of Fla. (CS/CS/SB 712, the "Clean Waterways Act"), creating s. 403.0855, F.S.; ratified by Ch. 2021-153 (HB 1309); ratification requirement removed by Ch. 2026-63 (SB 290).*

# Florida's Biosolids Rule: SB 712 (2021)

**Rule 62-640, F.A.C. (2021) establishes how biosolids must be treated, monitored, permitted, and land-applied in Florida, and where that authority transfers to the state's solid waste rules.**

## Protect Public Health & Water Quality

- Establishes statewide requirements for biosolids treatment, use, and disposal.
- Requires DEP to adopt new rules for biosolids management; must be ratified by the Legislature

## Treatment, Monitoring & Planning

- Revises the provisions for determining biosolids land application rates: Nitrogen and Phosphorus
- 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

## Scope, Intent, Purpose and Applicability

- 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
- Enrollment in the DACS BMP program will be required


Rule 62-640 translates the federal Part 503 standards into Florida's day-to-day treatment and land-application requirements, but the moment biosolids cross a landfill gate, Chapter 62-701, F.A.C. (Solid Waste) takes over.

*Citation: Rule 62-640, F.A.C. (current version effective 6/21/2021, Ch. 2021-183, L.O.F., implementing s. 403.0855, F.S.); Rules 62-640.100(5)-(6), .300, .500, .600, .650, F.A.C.; Rule 62-701, F.A.C. (solid waste landfill disposal).*



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# Beyond Florida

## State Regulations Regarding PFAS in Biosolids

### Outright Bans

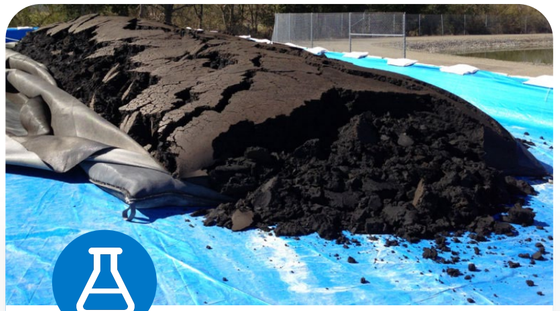
- Maine bans land application of biosolids entirely.
- Connecticut prohibits use of any biosolids containing PFAS.

01

### Numeric Thresholds

- Maryland, Virginia & Michigan tier by concentration.
- Maryland bans applications above 50 ppb PFOA/PFOS starting Oct. 2028
- Virginia tiers rates at 25–50 ppb starting Jan. 2027.

02



### Mandatory Testing

- Washington, Rhode Island & New York now require it.
- Washington mandates quarterly PFAS sampling in 2027–2028;
- Rhode Island's new testing law takes effect in 2026.

03

### Growing Momentum

- 17+ states introduced biosolids/PFAS bills in 2025–26.
- Oklahoma, Mississippi, Georgia, and Massachusetts are among the states now debating restrictions.

04



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# Connecting the Dots: HB 1285 & SB 290

| SB 290 (Back End) | HB 1285 (Front End) |
|---|---|
| Focuses on **biosolids management** | Focuses on **septage disposed as Class B biosolids** |
| Phases out reliance on **Class B land application** | Redirects septage to **higher-treatment wastewater facilities** |
| Requires biosolids sites permitted after July 1, 2020 to apply only **Class AA biosolids by July 1, 2028** | Prevents DEP from issuing or renewing certain Class B land application permits beginning **July 1, 2027**, if a qualifying higher-treatment facility exists nearby |
| Extends the deadline to **July 1, 2031** only for local governments that keep biosolids land application within their own boundaries (no outside transport) — everyone else must comply by 2028 | Encourages treatment at existing public wastewater plants instead of land application whenever practical |

HB 1285 changes the front end of the process by redirecting septage to higher-treatment facilities whenever feasible.
SB 290 changes the back end of the process by steadily transitioning Florida away from Class B land application and toward Class AA biosolids.

*Citation: Ch. 2026-3, Laws of Fla. (SB 290), amending s. 403.0855(4)(a), F.S.; Ch. 2026-71, Laws of Fla. (HB 1285).*



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