

**The Florida Senate**  
**BILL ANALYSIS AND FISCAL IMPACT STATEMENT**

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

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Prepared By: The Professional Staff of the Committee on Environment and Natural Resources

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BILL: SB 946

INTRODUCER: Senator Rodriguez

SUBJECT: Waste Facilities

DATE: March 24, 2025

REVISED: \_\_\_\_\_

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	<u>Barriero</u>	<u>Rogers</u>	<u>EN</u>	<u>Pre-meeting</u>
2.	_____	_____	<u>CA</u>	_____
3.	_____	_____	<u>RC</u>	_____

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**I. Summary:**

SB 946 prohibits a local governmental entity from applying for or approving a permit for a solid waste facility, a municipal solid waste-to-energy facility, a pyrolysis facility, a solid waste disposal facility, or a solid waste management facility, or an incinerator of any type, where such facility is proposed to be located within two miles of:

- The Everglades Protection Area;
- The Everglades Construction Project; or
- Any water storage or conveyance structure constructed pursuant to the Final Integrated Feasibility Report and Programmatic Environmental Impact Statement or funded pursuant to the America’s Water Infrastructure Act of 2018, the Water Resources Development Act of 2000, the Water Infrastructure Improvements for the Nation Act, or the Surface Water Improvement and Management Act.

The bill preempts permitting authority to the state and supersedes any local government regulations on the matter.

**II. Present Situation:**

**Everglades Restoration**

At one time, the Everglades system covered over 7 million acres of South Florida.<sup>1</sup> Water flowed uninterrupted from the Kissimmee River to Lake Okeechobee through the “River of Grass” that was the Everglades and then on to the Biscayne Bay estuaries, the Ten Thousand Islands, and

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<sup>1</sup> South Florida Water Management District (SFWMD), *Everglades*, <https://www.sfwmd.gov/our-work/everglades> (last visited Mar. 14, 2025).

Florida Bay.<sup>2</sup> By the early 1900s, land in the Everglades was being drained to make room for agriculture and development, with little concern for the increasingly damaged ecosystem.<sup>3</sup>

Early conservationists, scientists, and other advocates, however, were concerned about environmental degradation and with their support, the Everglades National Park was created in 1947.<sup>4</sup> The following year, Congress authorized the Central and South Florida (C&SF) Project.<sup>5</sup> It addressed flood control, regional water supply, prevention of saltwater intrusion, water supply to Everglades National Park, wildlife preservation, recreation, and navigation.<sup>6</sup> The C&SF Project initially focused on the construction of levees and canals, water control structures, pump stations, and other projects.<sup>7</sup>

In spite of its stated purpose, the construction and operation of the C&SF Project had unintended adverse effects on the Everglades system.<sup>8</sup> Some of these included extreme fluctuations in the water levels of Lake Okeechobee, extreme fluctuations in the salinity levels of the Caloosahatchee and St. Lucie estuaries caused by major changes in freshwater discharges, detrimental changes in hydrologic conditions in freshwater wetland habitats, and fluctuations in the salinity levels of Florida and Biscayne bays caused by unsuitable freshwater flows. Wading bird populations are indicative of ecosystem health; by 1999, those populations had decreased by 85-90 percent and were steadily declining.<sup>9</sup> Further, the C&SF Project created water supply shortages in Central and South Florida during dry periods, because the canals drained water off the land too quickly without allowing for storage.<sup>10</sup>

In 1994, in response to litigation over water quality issues in the Everglades, the State of Florida adopted the Everglades Forever Act.<sup>11</sup> The Act established monitoring and protection for the “Everglades Protection Area,” defined as “Water Conservation Areas (WCAs) 1, 2A, 2B, 3A, and 3B, the Arthur R. Marshall Loxahatchee National Wildlife Refuge, and the Everglades

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<sup>2</sup> *Id.*; National Park Service, *Everglades*, <https://www.nps.gov/ever/learn/historyculture/index.htm> (last visited Mar. 3, 2025).

<sup>3</sup> *Id.*

<sup>4</sup> *Id.*

<sup>5</sup> The Flood Control Act of 1948, Pub. L. No. 858, s. 203, 62 Stat. 1176.

<sup>6</sup> SFWMD and U.S. Army Corps of Engineers (USACE), *C&SF Project Comprehensive Review Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement*, i (Apr. 1999), available at [https://www.sfwmd.gov/sites/default/files/documents/CENTRAL\\_AND\\_SOUTHERN\\_FLORIDA\\_PROJECT\\_COMPREHENSIVE\\_REVIEW\\_STUDY.pdf](https://www.sfwmd.gov/sites/default/files/documents/CENTRAL_AND_SOUTHERN_FLORIDA_PROJECT_COMPREHENSIVE_REVIEW_STUDY.pdf).

<sup>7</sup> *Id.*; SFWMD, *2024 Consolidated Annual Report on Flood Resiliency*, 2 (Oct. 2024), available at [https://www.sfwmd.gov/sites/default/files/documents/Flood\\_Resiliency\\_SFWMD\\_2024\\_Consolidated\\_Annual\\_Report.pdf](https://www.sfwmd.gov/sites/default/files/documents/Flood_Resiliency_SFWMD_2024_Consolidated_Annual_Report.pdf).

<sup>8</sup> *Id.* at iii.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.* at iii.

<sup>11</sup> SFWMD, *Conceptual Design Document* (1994), available at <https://www.sfwmd.gov/sites/default/files/documents/epp%20conceptual%20design.pdf>; DEP, *Everglades Forever Act*, <https://floridadep.gov/owper/eco-restoration/content/everglades-forever-act-efa> (last visited Mar. 3, 2025); Keith W. Rizzardi, *Alligators and Litigators: A Recent History of Everglades Regulation and Litigation*, *The Florida Bar*, vol. 75, no. 3, 18 (March 2001), available at <https://www.floridabar.org/the-florida-bar-journal/alligators-and-litigators-a-recent-history-of-everglades-regulation-and-litigation/>.



National Park.”<sup>12</sup> WCA 1 is the Arthur R. Marshall Loxahatchee National Wildlife Refuge and is managed by the U.S. Fish and Wildlife Service.<sup>13</sup> WCAs 2 and 3 are managed by the Florida Fish and Wildlife Conservation Commission.<sup>14</sup> Everglades National Park is managed by the National Park Service.<sup>15</sup>

The State also implemented the Everglades Construction Project, which focused on the construction of stormwater treatment areas and the implementation of best management practices to improve water quality flowing south.<sup>16</sup>

The long-term water quality objective for the Everglades is to implement the optimal combination of source controls, stormwater treatment areas, advanced treatment technologies, and regulatory programs to ensure that all waters discharged to the Everglades Protection Area achieve water quality standards consistent with the Everglades Forever Act.<sup>17</sup>

In 1992 and 1996, Congress authorized the Comprehensive Review Study (Restudy).<sup>18</sup> The Restudy reexamined the C&SF Project to

<sup>12</sup> Section 373.4592(2)(i), F.S.; *see also* FLA. CON. art. II, s. 7(b). Those in the Everglades Agricultural Area who cause water pollution within the Everglades Protection Area are primarily responsible for the abatement costs. *Id.*

<sup>13</sup> SFWMD, *Water Conservation Area 1 (Arthur R. Marshall Loxahatchee National Wildlife Refuge)*, <https://www.sfwmd.gov/recreation-site/water-conservation-area-1-arthur-r-marshall-loxahatchee-national-wildlife-refuge> (last visited Mar. 2, 2025).

<sup>14</sup> Florida Fish and Wildlife Conservation Commission, *Everglades Water Conservation Areas*, <https://myfwc.com/fishing/freshwater/sites-forecasts/s/everglades-water-conservation-areas/> (last visited Mar. 2, 2025).

<sup>15</sup> National Park Service, *Everglades National Park*, <https://www.nps.gov/ever/index.htm> (last visited Mar. 2, 2025); SFWMD, *2016 South Florida Environmental Report*, 3 (2016), available at [https://issuu.com/southfloridawatermanagement/docs/2016\\_sfer\\_highlights\\_final?e=4207603/33817547](https://issuu.com/southfloridawatermanagement/docs/2016_sfer_highlights_final?e=4207603/33817547). This document contains the map shown on this page.

<sup>16</sup> *See* section 373.4592(2)(g), F.S., defining the Everglades Construction Project as a project described in the February 15, 1994, conceptual design document together with construction and operation schedules on file with the South Florida Water Management District, except as modified by this section and further described in the Long-Term Plan. SFWMD, *Conceptual Design Document* (1994); DEP, *Everglades Forever Act*.

<sup>17</sup> DEP, *Everglades Forever Act*, <https://floridadep.gov/eco-pro/eco-pro/content/everglades-forever-act-efa> (last visited Mar. 3, 2025).

<sup>18</sup> SFWMD and USACE, *C&SF Project Comprehensive Review Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement* at 1-3, available at [https://www.sfwmd.gov/sites/default/files/documents/CENTRAL\\_AND\\_SOUTHERN\\_FLORIDA\\_PROJECT\\_COMPREHENSIVE\\_REVIEW\\_STUDY.pdf](https://www.sfwmd.gov/sites/default/files/documents/CENTRAL_AND_SOUTHERN_FLORIDA_PROJECT_COMPREHENSIVE_REVIEW_STUDY.pdf).

evaluate modifications that would help restore the Everglades ecosystem. Following the reexamination of the C&SF Project, the Restudy recommended a comprehensive plan that included structural and operational changes to the project in 1999.

In response to the Restudy, Congress authorized the Comprehensive Everglades Restoration Plan (CERP) in the Water Resources Development Act of 2000.<sup>19</sup> CERP is a framework for modifications and operational changes to the C&SF Project that are necessary to restore, preserve, and protect the South Florida ecosystem, while providing for other water-related needs of the region, including water supply and flood protection.<sup>20</sup>

### **Surface Water Improvement and Management (SWIM) Act**

In 1987, the Florida Legislature created the SWIM Act to protect, restore, and maintain the state's surface waterbodies.<sup>21</sup> The SWIM Act requires the state's five water management districts to identify a list of priority waterbodies and develop plans to restore damaged ecosystems, prevent pollution from stormwater runoff and other sources, and educate the public.<sup>22</sup>

### **America's Water Infrastructure Act 2018 Grants**

The Safe Drinking Water Act, as amended through the 2018 America's Water Infrastructure Act, authorizes the Environmental Protection Agency (EPA) to establish the Drinking Water System Infrastructure Resilience and Sustainability Program and award grants to assist underserved, small, and disadvantaged communities for the purpose of increasing drinking water facility resilience to natural hazards.<sup>23</sup>

### **Water Infrastructure Improvements for the Nation (WIIN) Act**

The WIIN Act addresses and supports the drinking water infrastructure in the U.S. It includes the following three drinking water grants that promote public health and protection of the environment:<sup>24</sup>

- **Small, Underserved, Disadvantaged Communities Grant:** This grant program is designed to help public water systems in small, underserved, and disadvantaged communities meet and comply with Safe Drinking Water Act drinking water regulations by providing funding for drinking water projects and activities. This grant funding will benefit these communities by

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<sup>19</sup> Water Resources Development Act of 2000, Pub. L. No. 106-541, s. 601, 114 Stat. 2680 (2000); USACE, *Central & Southern Florida (C&SF) Project*, <https://www.saj.usace.army.mil/About/Congressional-Fact-Sheets-2024/C-SF-Project-C/> (last visited Mar. 3, 2025).

<sup>20</sup> National Park Service, *Everglades: Comprehensive Everglades Restoration Plan (CERP)*, <https://www.nps.gov/ever/learn/nature/cerp.htm> (last visited Mar. 3, 2025).

<sup>21</sup> See Ch. 87-97, s. 1, Laws of Fla.; sections 373.451 to 373.4595, F.S.

<sup>22</sup> Southwest Florida Water Management District, *Surface Water Improvement and Management Program*, <https://www.swfwmd.state.fl.us/about/newsroom/surface-water-improvement-and-management-swim-program> (last visited Mar. 14, 2025).

<sup>23</sup> U.S. Environmental Protection Agency (EPA), *Drinking Water System Infrastructure Resilience and Sustainability*, <https://www.epa.gov/dwcapacity/drinking-water-system-infrastructure-resilience-and-sustainability> (last visited Mar. 14, 2025).

<sup>24</sup> EPA, *The Water Infrastructure Improvements for the Nation Act (WIIN Act) Grant Programs*, <https://www.epa.gov/dwcapacity/water-infrastructure-improvements-nation-act-wiin-act-grant-programs> (last visited Mar. 14, 2025).

upgrading infrastructure to comply with the Safe Drinking Water Act, reducing exposure to Per- and Polyfluoroalkyl Substances, removing sources of lead, and addressing additional local drinking water challenges.<sup>25</sup>

- Voluntary School and Child Care Lead Testing and Reduction Grant: This grant program awards funding to local education agencies for voluntary testing and reduction of lead in drinking water at schools and childcare facilities.<sup>26</sup>
- Reducing Lead in Drinking Water Grant: This grant program is designed to facilitate reducing lead in drinking water in disadvantaged communities through infrastructure and/or treatment improvements or facility remediation in schools and childcare facilities. The goal of these projects is to address conditions that contribute to increased concentrations of lead in drinking water.<sup>27</sup>

### Solid Waste and Waste-to-Energy Facilities

Energy recovery from waste is the conversion of non-recyclable waste materials into usable heat, electricity, or fuel through processes, including combustion, gasification, pyrolyzation, anaerobic digestion, and landfill gas recovery.<sup>28</sup> This process is often called waste-to-energy (WTE).<sup>29</sup>

Municipal solid waste (MSW) can be used to produce energy at WTE plants and landfills.<sup>30</sup> MSW can contain:

- Biomass, or biogenic (plant or animal products) materials such as paper, cardboard, food waste, grass clippings, leaves, wood, and leather products;
- Nonbiomass combustible materials such as plastics and other synthetic materials made from petroleum; and
- Noncombustible materials such as glass and metals.<sup>31</sup>

The process of MSW incineration is generally divided into three main parts: incineration, energy recovery, and air-pollution control.<sup>32</sup> Most modern incinerators are equipped with energy-recovery schemes, which produce WTE ash.<sup>33</sup> Three major classes of technologies are used to

<sup>25</sup> EPA, *WIIN Grant: Small, Underserved, and Disadvantaged Communities Grant Program*, <https://www.epa.gov/dwcapacity/wiin-grant-small-underserved-and-disadvantaged-communities-grant-program-0> (last visited Mar. 14, 2025).

<sup>26</sup> EPA, *The Water Infrastructure Improvements for the Nation Act (WIIN Act) Grant Programs*, <https://www.epa.gov/dwcapacity/water-infrastructure-improvements-nation-act-wiin-act-grant-programs>. See also EPA, *WIIN Grant: Voluntary School and Child Care Lead Testing and Reduction Grant Program*, <https://www.epa.gov/dwcapacity/wiin-grant-voluntary-school-and-child-care-lead-testing-and-reduction-grant-program> (last visited Mar. 14, 2025).

<sup>27</sup> *Id.* See also, EPA, *WIIN Grant: Reducing Lead in Drinking Water*, <https://www.epa.gov/dwcapacity/wiin-grant-reducing-lead-drinking-water> (last visited Mar. 14, 2025).

<sup>28</sup> EPA, *Energy Recovery from the Combustion of Municipal Solid Waste (MSW)*, <https://www.epa.gov/smm/energy-recovery-combustion-municipal-solid-waste-msw> (last visited Mar. 3, 2025).

<sup>29</sup> *Id.*

<sup>30</sup> U.S. Energy Information Administration (EIA), *Biomass explained, Waste-to-energy (Municipal Solid Waste), Basics*, <https://www.eia.gov/energyexplained/biomass/waste-to-energy.php> (last visited Mar. 3, 2025).

<sup>31</sup> *Id.*

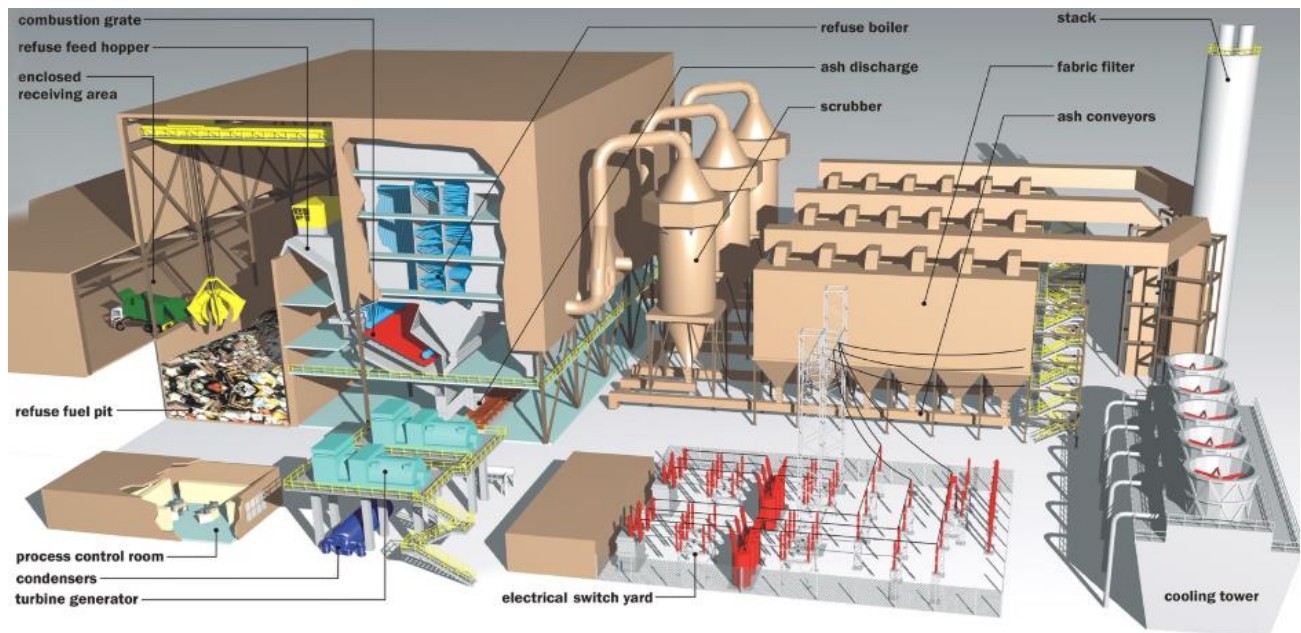
<sup>32</sup> Byoung Cho et al., *Municipal Solid Waste Incineration Ashes as Construction Materials—A review*, *Materials*, vol. 13, 2 (2020), available at <https://pmc.ncbi.nlm.nih.gov/articles/PMC7411600/>.

<sup>33</sup> *Id.*

combust MSW: mass burn, refuse-derived fuel, and fluidized-bed combustion.<sup>34</sup> The most common WTE system in the U.S. is the mass-burn system.<sup>35</sup>

At an MSW combustion facility, MSW is unloaded from collection trucks and placed in a trash storage bunker.<sup>36</sup> An overhead crane sorts the waste and then lifts it into a combustion chamber to be burned. The heat released from burning converts water to steam, which is then sent to a turbine generator to produce electricity. The remaining ash is collected and taken to a landfill where a high-efficiency baghouse filtering system captures particulates. As the gas stream travels through these filters, more than 99 percent of particulate matter is removed. Captured fly ash particles fall into hoppers (funnel-shaped receptacles) and are transported by an enclosed conveyor system to the ash discharger. They are then wetted to prevent dust and mixed with the bottom ash from the grate. The facility transports the ash residue to an enclosed building where it is loaded into covered, leak-proof trucks and taken to a landfill designed to protect against groundwater contamination.<sup>37</sup>

About 90 percent of the energy produced by WTE plants is delivered to the electric grid.<sup>38</sup> The remaining 10 percent consists of steam that some WTE facilities send to nearby industrial plants and institutions.<sup>39</sup>



*Example of a WTE plant<sup>40</sup>*

<sup>34</sup> *Id.*

<sup>35</sup> EIA, *Biomass explained: Waste-to-energy (Municipal Solid Waste), In-depth*, <https://www.eia.gov/energyexplained/biomass/waste-to-energy-in-depth.php> (last visited Mar. 3, 2025).

<sup>36</sup> EPA, *Energy Recovery from the Combustion of Municipal Solid Waste (MSW)*, <https://www.epa.gov/smm/energy-recovery-combustion-municipal-solid-waste-msw#Technology> (last visited Mar. 10, 2025).

<sup>37</sup> *Id.*

<sup>38</sup> U.S. Energy Information Administration, *Waste-to-energy plants are a small but stable source of electricity in the United States*, <https://www.eia.gov/todayinenergy/detail.php?id=55900> (last visited Mar. 9, 2025).

<sup>39</sup> *Id.*

<sup>40</sup> Pinellas County, *Waste-to-Energy Facility*, <https://pinellas.gov/waste-to-energy-facility/> (last visited Mar. 3, 2025) (showing graphic of a mass-burn waste-to-energy plant).

Waste incineration first became popular in the U.S. in the first half of the 20th century as a way to manage waste but declined after the passage of the Clean Air Act in 1963 forced facilities to either adopt costly air pollution controls or shut down.<sup>41</sup> In the 1970s and 1980s, waste-to-energy facilities rose again in popularity as a way to produce a low-cost energy alternative to coal, which was considered by some at the time to be a renewable energy source. Now, the number of incinerators has again declined nationally due to public concern about their environmental and health impacts, as well as a loss in profitability.<sup>42</sup>

In Florida, there are currently 10 WTE facilities.<sup>43</sup> Florida has the largest capacity to burn MSW of any state in the country.<sup>44</sup>

### ***Solid Waste Facility Permitting in Florida***

In Florida, the governing body of a county has the responsibility to provide for the operation of solid waste disposal facilities to meet the needs of all incorporated and unincorporated areas of the county.<sup>45</sup> A county may enter into a written agreement with other parties to undertake some or all of its responsibilities.<sup>46</sup>

A solid waste management facility may not be operated, maintained, constructed, expanded, modified, or closed without a permit issued by the Department of Environmental Protection (DEP).<sup>47</sup> In addition to a solid waste management facility permit, WTE facilities may also require an air construction and operation permits.<sup>48</sup>

DEP may only issue a construction permit to a solid waste management facility that provides the conditions necessary to control the safe movement of wastes or waste constituents into surface or ground waters or the atmosphere and that will be operated, maintained, and closed by qualified and properly trained personnel.<sup>49</sup> Such facility must if necessary:

- Use natural or artificial barriers that can control lateral or vertical movement of wastes or waste constituents into surface or ground waters.

<sup>41</sup> University of Florida, Thompson Earth Systems Institute, *Tell Me About: Waste Incineration in Florida* (2022), <https://www.floridamuseum.ufl.edu/earth-systems/blog/tell-me-about-waste-incineration-in-florida/> (last visited Mar. 3, 2025).

<sup>42</sup> *Id.* The major concern associated with MSW incineration is the air pollution caused by dioxin, furan, and heavy metals originating from MSW. Cho, *Municipal Solid Waste Incineration Ashes as Construction Materials—A review* at 2. See also C. Ferreira et al., *Heavy metals in MSW incineration fly ashes*, *Journal de Physique IV*, vol. 107 (2003), available at <https://jp4.journaldephysique.org/articles/jp4/abs/2003/05/jp4pr5p463/jp4pr5p463.html>; Junjie Zhang et al., *Degradation technologies and mechanisms of dioxins in municipal solid waste incineration fly ash: A review*, *Journal of Cleaner Production*, vol. 250 (2020), available at <https://www.sciencedirect.com/science/article/abs/pii/S095965261934377X>.

<sup>43</sup> DEP, *Waste-to-Energy*, <https://floridadep.gov/waste/permitting-compliance-assistance/content/waste-energy> (last visited Mar. 3, 2025). The state had 11 WTE facilities until 2023 when a fire destroyed one in Miami-Dade County. See Mayor Daniella Levine Cava, *Memorandum on Site Selection for a Sustainable Solid Waste Campus and Update on Miami-Dade County's Solid Waste Disposal Strategy*, 1 (2024), available at [d https://documents.miamidade.gov/mayor/memos/09.13.24-Site-Selection-for-a-Sustainable-Solid-Waste-Campus.pdf](https://documents.miamidade.gov/mayor/memos/09.13.24-Site-Selection-for-a-Sustainable-Solid-Waste-Campus.pdf).

<sup>44</sup> DEP, *Waste-to-Energy*.

<sup>45</sup> Section 403.706(1), F.S.

<sup>46</sup> Section 403.706(8), F.S.

<sup>47</sup> See section 403.707(1), F.S.

<sup>48</sup> Sections 403.707(6) and 403.087(1), F.S.; Fla. Admin. Code R. 62-210.300. See also DEP, *Air Construction Permits*, <https://floridadep.gov/sites/default/files/Air-Construction-Permits.pdf> (last visited Mar. 10, 2024).

<sup>49</sup> Section 403.707(6), F.S.

- Have a foundation or base that can provide support for structures and waste deposits and capable of preventing foundation or base failure due to settlement, compression, or uplift.
- Provide for the most economically feasible, cost-effective, and environmentally safe control of leachate, gas, stormwater, and disease vectors and prevent the endangerment of public health and the environment.<sup>50</sup>

Certain siting restrictions may also apply. For example, DEP may not issue a construction permit for a new solid waste landfill within 3,000 feet of class I surface waters.<sup>51</sup> In addition, solid waste cannot be stored or disposed of in the following areas:

- In an area where geological formations or other subsurface features will not provide support for the solid waste;
- Within 500 feet of an existing or approved potable water well unless storage or disposal takes place at a facility for which a complete permit application was filed or which was originally permitted before the potable water well was in existence;
- In a dewatered pit unless the pit is lined and permanent leachate containment and special design techniques are used to ensure the integrity of the liner;
- In any natural or artificial body of water;
- Within 200 feet of any natural or artificial body of water unless storage or disposal takes place at a facility for which a complete permit application was filed or which was originally permitted before the water body was in existence; and,
- On the right of way of any public highway, road, or alley.<sup>52</sup>

DEP may by rule exempt specified types of facilities from permit requirements if it determines that construction or operation of the facility is not expected to create any significant threat to the environment or public health.<sup>53</sup>

DEP must allow WTE facilities to maximize acceptance and processing of nonhazardous solid and liquid waste.<sup>54</sup> Ash from WTE facilities must be disposed of in a lined MSW landfill or a lined ash monofill, since an EPA study showed that ash from WTE facilities should not be classified as hazardous waste.<sup>55</sup>

### ***Federal Regulations on MSW Landfills***

MSW landfills must comply with federal regulations to monitor groundwater contamination, ensure proper closure and post-closure care, and demonstrate financial responsibility.<sup>56</sup> Groundwater monitoring is required for most landfills, except for small facilities or those

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<sup>50</sup> *Id.*

<sup>51</sup> Section 403.707(5), F.S. The Clean Water Act requires that the surface waters of each state be classified according to designated uses. Florida has six classes with associated designated uses, which are arranged in order of degree of protection required. Class I is for Potable Water Supplies. DEP, *Surface Water Class Boundaries*, <https://geodata.dep.state.fl.us/datasets/FDEP::surface-water-class-boundaries-areas/about> (last visited Mar. 12, 2025).

<sup>52</sup> Fla. Admin. Code R. 62-701.300(2).

<sup>53</sup> Section 403.707(1), F.S.

<sup>54</sup> Section 403.707(1), F.S.

<sup>55</sup> DEP, *Waste-to-Energy*, <https://floridadep.gov/waste/permitting-compliance-assistance/content/waste-energy> (last visited Mar. 10, 2025).

<sup>56</sup> See EPA, *Requirements for Municipal Solid Waste Landfills (MSWLFs)*, <https://www.epa.gov/landfills/requirements-municipal-solid-waste-landfills-mswlf> (last visited Mar. 14, 2025).



proving no risk of hazardous migration. Monitoring systems must collect samples from surrounding aquifers to detect contamination, with corrective actions triggered if pollutants exceed regulatory limits. If corrective action is required, a remedy is selected based on the assessment of corrective measures and must protect human health and the environment, meet groundwater protection standards, control the release source(s) to prevent further releases, and manage any generated solid waste in compliance with applicable Resource Conservation and Recovery Act regulations until the facility has met groundwater protection standards for three consecutive years and demonstrated completion of all required actions.<sup>57</sup>

In addition to groundwater monitoring and corrective action requirements, MSW landfills must also adhere to strict closure, post-closure, and financial assurance regulations to ensure long-term environmental protection and landfill integrity.<sup>58</sup> Closure requirements include installing a final cover system to prevent infiltration and maintaining environmental safety. Post-closure care, which lasts at least 30 years, involves ongoing monitoring of groundwater, methane gas emissions, and waste containment. Financial assurance regulations require MSW landfill owners/operators to demonstrate their ability to cover closure, post-closure, and corrective action costs through various mechanisms, such as trust funds, surety bonds, letters of credit, or corporate guarantees.<sup>59</sup>

### ***Federal Regulations on Waste Incineration***

Pursuant to the Clean Air Act, EPA has developed regulations limiting emissions of nine air pollutants—particulate matter, carbon monoxide, dioxins/furans, sulfur dioxide, nitrogen oxides, hydrogen chloride, lead, mercury, and cadmium—from four categories of solid waste incineration units: (1) municipal solid waste; (2) hospital, medical and infectious solid waste; (3) commercial and industrial solid waste; and (4) other solid waste.<sup>60</sup>

Emission limits may vary depending on the size and type of the facility (e.g., large versus small municipal waste combustors) and whether the materials incinerated are hazardous.<sup>61</sup> In 2024, EPA proposed stricter standards for large municipal waste combustion units.<sup>62</sup> EPA is also considering requiring waste incinerators to report toxic releases to the toxic release inventory, which tracks the management of certain toxic chemicals.<sup>63</sup>

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<sup>57</sup> See *id.*

<sup>58</sup> See *id.*

<sup>59</sup> See *id.*

<sup>60</sup> EPA, *Large Municipal Waste Combustors (LMWC): New Source Performance Standards (NSPS) and Emissions Guidelines*, <https://www.epa.gov/stationary-sources-air-pollution/large-municipal-waste-combustors-lmwc-new-source-performance> (last visited Mar. 11, 2025). See 71 Fed. Reg. 27325-26 (adopting final rule regarding standards of performance for new stationary sources and emission guidelines for existing sources: large municipal waste combustors); 40 CFR part 60.

<sup>61</sup> See generally EPA, *Clean Air Act Guidelines and Standards for Waste Management*, <https://www.epa.gov/stationary-sources-air-pollution/clean-air-act-guidelines-and-standards-waste-management> (last visited Mar. 11, 2025).

<sup>62</sup> 89 Fed. Reg. 4243, 4246 (Jan. 23, 2024) (proposing amendments to 40 CFR part 60). Large municipal waste combustors combust more than 250 tons per day of MSW. 40 CFR 60.32b and 60.50b; EPA, *Large Municipal Waste Combustors (LMWC): New Source Performance Standards (NSPS) and Emissions Guidelines*, <https://www.epa.gov/stationary-sources-air-pollution/large-municipal-waste-combustors-lmwc-new-source-performance> (last visited Mar. 11, 2025).

<sup>63</sup> EPA, *Memorandum re: Petition for Rulemaking Pursuant to the Administrative Procedure Act and the Emergency Planning and Community Right-to-Know Act, Requiring that Waste Incinerators Report to the Toxics Release Inventory*, 1-2 (2024), available at [https://peer.org/wp-content/uploads/2024/12/PET-001757\\_Incinerators\\_PetitionResponse\\_Ltr.pdf](https://peer.org/wp-content/uploads/2024/12/PET-001757_Incinerators_PetitionResponse_Ltr.pdf); EPA, *What is the Toxics Release Inventory?*, <https://www.epa.gov/toxics-release-inventory-tri-program/what-toxics-release>

## Pyrolysis and Gasification

Pyrolysis and gasification units convert solid or semi-solid feedstocks—including solid waste (e.g., MSW, commercial and industrial waste, hospital/medical/infectious waste, sewage sludge, other solid waste), biomass, plastics, tires, and organic contaminants in soils and oily sludges—to useful products such as energy, fuels, and chemical commodities.<sup>64</sup>

Pyrolysis is a process where materials are thermally decomposed or rearranged under process conditions where extremely little to no oxygen is present.<sup>65</sup> Pyrolysis, which is also known as devolatilization, is an endothermic process<sup>66</sup> that produces 75 to 90 percent volatile materials in the form of gaseous and liquid hydrocarbons.<sup>67</sup> Through the application of heat, pyrolysis disintegrates the long hydrocarbon bonds of the incoming feed materials and may generate tars, oils, particulate matter, reduced sulfur and nitrogen compounds, and hazardous air pollutants including polycyclic aromatic hydrocarbons.<sup>68</sup>

Gasification is a process of converting feed materials into syngas (carbon monoxide and hydrogen) and carbon dioxide.<sup>69</sup> The materials are gasified when they react with controlled amounts of oxygen or steam at high temperatures. Oxygen is added in small amounts to maintain a reducing (i.e., oxidation or combustion-preventing) atmosphere, where the quantity of oxygen available is less than the amount needed for complete combustion of the feed material. The process of gasification has endothermic and exothermic<sup>70</sup> phases but overall is an exothermic process and requires an external heat source, such as syngas combustion, char combustion, or steam.<sup>71</sup>

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[inventory](#) (last visited Mar. 11, 2025). U.S. facilities in different industry sectors must report annually how much of each chemical they release into the environment and/or managed through recycling, energy recovery and treatment, as well as any practices implemented to prevent or reduce the generation of chemical waste. *Id.*

<sup>64</sup> EPA, *Rulemaking on Pyrolysis and Gasification Units*, <https://www.epa.gov/stationary-sources-air-pollution/advance-notice-proposed-rulemaking-pyrolysis-and-gasification> (last visited Mar. 13, 2025).

<sup>65</sup> 86 Fed. Reg. 50296, 50299 (Sept. 8, 2021) (advance notice of proposed rulemaking regarding potential future regulation addressing pyrolysis and gasification units).

<sup>66</sup> Endothermic is a process where heat is absorbed by a chemical reaction, thus resulting in decreased temperature.

<sup>67</sup> *Id.* (citing U.S. Dep't of Energy, *Benchmarking Biomass Gasification Technologies for Fuels, Chemicals, and Hydrogen Production* (2002), available at [https://netl.doe.gov/sites/default/files/netl-file/BMassGasFinal\\_0.pdf](https://netl.doe.gov/sites/default/files/netl-file/BMassGasFinal_0.pdf)).

<sup>68</sup> *Id.* at 50299-300.

<sup>69</sup> *Id.* at 50300. Syngas, the primary product of gasification, is a fuel and can be burned in boilers, gas engines, or turbines. It can also be used as a chemical feedstock to produce other, more complex chemicals or hydrocarbon fuels. *Id.*

<sup>70</sup> Exothermic is a process where heat is produced by a chemical reaction, thus resulting in elevated temperature.

<sup>71</sup> *Id.*

### III. Effect of Proposed Changes:

**Section 1** amends s. 373.4592, F.S., regarding Everglades improvement and management. The bill provides that a local governmental entity may not apply for or approve a permit for a solid waste facility,<sup>72</sup> a municipal solid waste-to-energy facility,<sup>73</sup> a pyrolysis facility,<sup>74</sup> a solid waste disposal facility,<sup>75</sup> or a solid waste management facility,<sup>76</sup> or for an incinerator of any type, where such facility is proposed to be located within 2 miles of:

- The Everglades Protection Area;
- The Everglades Construction Project; or
- Any water storage or conveyance structure constructed pursuant to the Final Integrated Feasibility Report and Programmatic Environmental Impact Statement or funded pursuant to the America’s Water Infrastructure Act of 2018, the Water Resources Development Act of 2000, the Water Infrastructure Improvements for the Nation Act, or the Surface Water Improvement and Management Act.

The bill provides that such permitting is preempted to the state. This section supersedes any local government regulations on related matters.

**Sections 2 through 4** make conforming changes.

**Section 5** provides an effective date of July 1, 2025.

### IV. Constitutional Issues:

#### A. Municipality/County Mandates Restrictions:

None.

#### B. Public Records/Open Meetings Issues:

None.

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<sup>72</sup> “Solid waste facility” means a facility owned or operated by, or on behalf of, a local government for the purpose of disposing of solid waste by any process that produces heat and incorporates, as a part of the facility, the means of converting heat to electrical energy in amounts greater than actually required for the operation of the facility. Section 377.709(2)(f), F.S.

<sup>73</sup> “Municipal solid waste-to-energy facility” means a publicly owned facility that uses an enclosed device using controlled combustion to thermally break down solid waste to an ash residue that contains little or no combustible material and that produces electricity, steam, or other energy as a result. The term does not include facilities that primarily burn fuels other than solid waste even if such facilities also burn some solid waste as a fuel supplement. The term also does not include facilities that primarily burn vegetative, agricultural, or silvicultural wastes, bagasse, clean dry wood, methane or other landfill gas, wood fuel derived from construction or demolition debris, or waste tires, alone or in combination with fossil fuels. Section 377.814(2)(b), F.S.

<sup>74</sup> “Pyrolysis facility” means a facility that receives, separates, stores, and converts post-use polymers, using gasification or pyrolysis. Section 403.703(27), F.S.

<sup>75</sup> “Solid waste disposal facility” means any solid waste management facility that is the final resting place for solid waste, including landfills and incineration facilities that produce ash from the process of incinerating municipal solid waste. Section 403.703(36), F.S.

<sup>76</sup> “Solid waste management facility” means any solid waste disposal area, volume reduction plant, transfer station, materials recovery facility, or other facility, the purpose of which is resource recovery or the disposal, recycling, processing, or storage of solid waste. Section s. 403.703(38), F.S.

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None.

**V. Fiscal Impact Statement:**

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

None.

C. Government Sector Impact:

The bill may increase costs for local governments by limiting available locations for the types of solid waste facilities included in the bill, making it more challenging to site new facilities. If local governments are unable to identify suitable locations that comply with the bill's restrictions, they may be required to transport waste to facilities in other counties or municipalities, potentially leading to higher disposal and transportation expenses.

**VI. Technical Deficiencies:**

None.

**VII. Related Issues:**

None.

**VIII. Statutes Affected:**

This bill substantially amends the following sections of the Florida Statutes: 373.4592, 316.5501, 339.2818, and 373.036.

**IX. Additional Information:**

A. Committee Substitute – Statement of Changes:

(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.

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This Senate Bill Analysis does not reflect the intent or official position of the bill's introducer or the Florida Senate.

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