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.)

Prepared By: The Professional Staff of the Appropriations Committee on Agriculture, Environment, and General Government

BILL:	CS/SB 1692
INTRODUCER:	Environment and Natural Resources Committee and Senator Brodeur
SUBJECT:	Preventing Contaminants of Emerging Concern from Discharging Into Wastewater Facilities and Waters of the State
DATE:	February 7, 2024 REVISED:

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Barriero	Rogers	EN	**Fav/CS**
2.	Reagan	Betta	AEG	**Favorable**
3.			FP	

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/SB 1692 creates the Per- and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane Pretreatment Initiative within the Department of Environmental Protection (DEP) to prevent contaminants of emerging concern from entering the waters of the state through wastewater facilities. The bill provides:

- By November 1, 2024, the DEP must provide specific guidance to wastewater facilities with an industrial pretreatment program on the types of industrial users to be included in a required inventory of industrial users that are probable sources of 1,4-dioxane or certain types of PFAS;
- By July 1, 2025, each such wastewater facility must submit such an inventory to the DEP, and the DEP must develop its own inventory of major facilities that discharge directly into surface waters that are probable sources of these contaminants;
- The DEP and wastewater facilities must provide written notice to all identified industrial users that they have been identified as a probable source of these contaminants and will be issued permits, orders, or other similar measures to enforce applicable pretreatment standards as early as one year after the written notice is sent; and
- Such permits, orders, or other similar measures must be issued by July 1, 2027.

The bill provides interim discharge limits and surface water quality standards for 1,4-dioxane and certain types of PFAS for industrial users until new specific discharge limits are established.

The interim limits go into effect beginning July 1, 2025. The bill allows a wastewater facility to develop and propose local limits for these contaminants to the DEP.

In order to implement the provisions of this bill, the DEP's Wastewater Management Program would require four new full-time equivalent positions for the additional duties required for implementation. These four positions would be housed within the Wastewater Management Program, Division of Water Resource Management. The total cost to the DEP for the four positions is $507,625 from the Water Quality Assurance Trust Fund.

The bill has an effective date of July 1, 2024.

II. Present Situation:

Wastewater Treatment

The proper treatment and disposal or reuse of wastewater is a crucial part of protecting Florida's water resources. The majority of the state's wastewater is controlled and treated by centralized treatment facilities regulated by the Department of Environmental Protection (DEP). There are over 4,100 active wastewater facilities regulated by the DEP.[1] Approximately 2,100 of these facilities are classified as industrial and 2,000 as domestic wastewater.[2]

Under the federal Clean Water Act, any discharge of a pollutant from a point source[3] to surface waters (i.e., the navigable waters of the United States or beyond) must obtain a National Pollution Discharge Elimination System (NPDES) permit.[4] NPDES permit requirements for most wastewater facilities or activities (domestic or industrial) that discharge to surface waters are incorporated into a state-issued permit, thus giving the permittee one set of permitting requirements rather than one state and one federal permit.[5] The DEP issues operation permits for a period of five years for facilities regulated under the NPDES program and up to 10 years for other domestic wastewater treatment facilities meeting certain statutory requirements.[6]

The DEP oversees the development and implementation of local pretreatment programs in the state.[7] These local pretreatment programs are developed and implemented in accordance with the Clean Water Act, the state NPDES program within s. 403.0885, F.S., and Chapter 62-625 of the Florida Administrative Code. Pretreatment is the removal, reduction or alteration of pollutants in industrial wastewater prior to discharge or introduction into a domestic wastewater treatment facility. Metal finishing and related operations are a common source of industrial

---

[1] Dep't of Environmental Protection (DEP), *General Facts and Statistics about Wastewater in Florida*, https://floridadep.gov/water/domestic-wastewater/content/general-facts-and-statistics-about-wastewater-florida (last visited Jan. 25, 2023).
[2] *Id.*
[3] "Point source" is defined as any discernible, confined, and discrete conveyance, including any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. Fla. Admin. Code R. 62-620.200(37).
[4] 33 U.S.C. s. 1342.
[5] Sections 403.061 and 403.087, F.S.
[6] Section 403.087(3), F.S.
[7] DEP, *Domestic Wastewater Industrial Pretreatment Program*, https://floridadep.gov/water/domestic-wastewater/content/domestic-wastewater-industrial-pretreatment-program (last visited Jan. 25, 2024).

wastewater in Florida that typically requires treatment prior to discharge to a wastewater treatment facility.[8]

In general, a pretreatment program may be required if a publicly owned wastewater treatment facility receives discharge from significant industrial users and the wastewater treatment facility discharges to either surface waters of the state or various reuse systems. There are currently 67 active pretreatment programs.[9]

Biosolids

When domestic wastewater is treated, solid, semisolid, or liquid residue known as biosolids[10] accumulates in the wastewater treatment plant and must be removed periodically to keep the plant operating properly.[11] Biosolids also include products and treated material from biosolids treatment facilities and septage management facilities regulated by the DEP.[12] The collected residue is high in organic content and contains moderate amounts of nutrients.[13]

According to the DEP's estimates in 2019, wastewater treatment facilities produce about 340,000 dry tons of biosolids each year.[14] Biosolids can be disposed of in several ways: transfer to another facility, placement in a landfill, distribution and marketing as fertilizer, incineration, bioenergy, and land application to pasture or agricultural lands.[15] In 2019, about one-third of the total amount of biosolids produced was used for land application[16] and is subject to regulatory requirements established by the DEP to protect public health and the environment.[17]

There is increasing concern over the presence of per- and polyfluoroalkyl substances (PFAS) in biosolids. While many PFASs have been found in biosolids, perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) are among the most abundant.[18] PFAS in biosolids is the result of the continued manufacture and use of these compounds throughout society, including by

[8] *Id.*
[9] *Id.*
[10] Biosolids are the solid, semisolid, or liquid residue generated during the treatment of domestic wastewater in a domestic wastewater treatment facility and include products and treated material from biosolids treatment facilities and septage management facilities. The term does not include the treated effluent or reclaimed water from a domestic wastewater treatment facility, solids removed from pump stations and lift stations, screenings and grit removed from the preliminary treatment components of domestic wastewater treatment facilities, or ash generated during the incineration of biosolids. Section 373.4595, F.S.
[11] DEP, *Domestic Wastewater Biosolids*, https://floridadep.gov/water/domestic-wastewater/content/domestic-wastewater-biosolids (last visited Jan. 25, 2024).
[12] Fla. Admin. Code R. 62-640.200(6).
[13] DEP, *Domestic Wastewater Biosolids*.
[14] DEP, *Biosolids in Florida*, 5 (2019), *available at* https://www.florida-stormwater.org/assets/MemberServices/Conference/AC19/02%20-%20Frick%20Tom.pdf#:~:text=Biosolids%20and%20Management%20in%20Florida%20Estimated%20Total%20Production,two-thirds%20are%20beneficially%20used%20and%20onethird%20is%20landfilled.
[15] *Id*. at 4.
[16] *Id*. at 5.
[17] Fla. Admin. Code R. 62-640.
[18] EPA, *EPA Biosolids PFOA & PFOS Problem Formulation Meeting Summary*, 1 (2020), *available at* https://www.epa.gov/sites/default/files/2021-02/documents/biosolids-pfoa-pfos-meeting-summary-nov-2020.pdf.

households, as well as industrial discharges of PFAS to wastewater.[19] The United States Environmental Protection Agency's (EPA) Office of Water, the Environmental Council of the States, and the National Association of State Departments of Agriculture have jointly developed Principles for Preventing and Managing PFAS in Biosolids.[20] The EPA is also currently conducting a risk assessment for PFOA and PFOS in biosolids, which is expected to be completed by December 2024.[21]

Penalties

Section 376.302, F.S., outlines the penalties for specific violations of Chapter 376, F.S., including:

- Discharge of pollutants or hazardous substances into the state's surface or ground waters or onto its lands in violation of any departmental standard;[22]
- Failure to obtain or comply with a permit required by Chapter 376, F.S., or to noncompliance with DEP rules, orders, permits, registrations, or certifications.

Violators are liable to the state for any damage caused and subject to civil penalties of up to $15,000 per offense, with each day during any portion of which such violation occurs constituting a separate offence.[23] There is an exception for discharges that are promptly reported and, where applicable, removed in accordance with the DEP rules and orders when the site has been determined eligible for participation in a program described in s. 376.3078, F.S., (dry-cleaning facility restoration) or s. 376.3079, F.S. (third-party liability insurance for dry-cleaning facilities or wholesale supply facilities).[24]

However, any person who *willfully* commits these violations is guilty of a first-degree misdemeanor, punishable by a fine between $2,500 and $25,000, or one year in jail, or both, for each offense.[25] Each day during any portion of which such violation occurs constitutes a separate offense.[26]

In addition, it is a violation of Chapter 376, F.S., to:

- Knowingly make any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under Chapter 376, F.S.; or

[19] EPA, *Joint Principles for Preventing and Managing PFAS in Biosolids*, 1 (2023), *available at* https://www.epa.gov/system/files/documents/2023-07/Joint-Principles-Preventing-Managing-PFAS.pdf.
[20] EPA, *Joint Principles for Preventing and Managing PFAS in Biosolids*, https://www.epa.gov/biosolids/joint-principles-preventing-and-managing-pfas-biosolids (last visited Jan. 25, 2024).
[21] EPA, *Risk Assessment of Pollutants in Biosolids*.
[22] "Standard" means any DEP rule relating to air and water quality, noise, solid-waste management, and electric and magnetic fields associated with electrical transmission and distribution lines and substation facilities. The term does not include rules which relate exclusively to the internal management of the department, the procedural processing of applications, the administration of rulemaking or adjudicatory proceedings, the publication of notices, the conduct of hearings, or other procedural matters. Section 403.803(13), F.S.
[23] Sections 376.302(2) and 403.141(1), F.S.
[24] Sections 376.302(2) and 376.311, F.S.
[25] Section 376.302(3), F.S.
[26] *Id.*

- Falsify, tamper with, or knowingly render inaccurate any monitoring device or method required to be maintained under Chapter 376, F.S., or by any permit, registration, rule, or order issued under this chapter.[27]

Any person who commits such violations is guilty of a first-degree misdemeanor, punishable by a fine of not more than $10,000 or by six months in jail, or by both, for each offense.[28]

Contaminants of Emerging Concern

Contaminants of Emerging Concern (CECs) are chemicals that are being discovered in water that previously had not been detected or are being detected at levels that may be different than expected.[29] While there are no regulatory limits, there may be a long-term potential risk to human health or the environment associated with CECs. Additional studies may also bring new or changing health exposure information. The EPA prioritizes CECs for research and data collection. As part of this data collection, all large and selected smaller public water systems across the U.S. are required to monitor for the targeted CECs.[30]

PFAS

PFAS are a large and complex class of synthetic chemicals that are resistant to heat, water, and oil.[31] PFOA and PFOS are two of the most widely used and studied chemicals in the PFAS group.[32] PFOA and PFOS have been replaced in the U.S. with other PFAS in recent years.[33] In chemical and product manufacturing, GenX chemicals are considered a replacement for PFOA, and perfluorobutane sulfonate (PFBS) is considered a replacement for PFOS.[34]

PFAS have been used in a wide variety of consumer products and industrial processes since the 1940s.[35] Most people in the U.S. have been exposed to PFAS, primarily through touching, drinking, eating, or breathing in materials containing these chemicals.[36] PFAS may be present in:
- Drinking water;
- Waste sites, including soil and water at or near landfills, disposal sites, and hazardous waste sites;
- Fire extinguishing foam used in training and emergency response events at airports and firefighting training facilities;

---

[27] Section 376.302(4), F.S.
[28] *Id.*
[29] DEP, *Regulated Drinking Water Contaminants and Contaminants of Emerging Concern*, https://floridadep.gov/comm/press-office/content/regulated-drinking-water-contaminants-and-contaminants-emerging-concern (last visited Jan. 25, 2024).
[30] *Id.*
[31] DEP, *PFAS Dynamic Plan*, 3 (2022), *available at* https://floridadep.gov/sites/default/files/Dynamic_Plan_March_2022.pdf.
[32] EPA, *Drinking Water Health Advisories for PFAS: Fact Sheet for Communities*, 2 (2022) *available at* https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-communities.pdf.
[33] *Id.*
[34] *Id.*
[35] EPA, *PFAS Explained*, 2 (2023), *available at* https://www.epa.gov/system/files/documents/2023-10/final-virtual-pfas-explainer-508.pdf.
[36] *Id.*

- Manufacturing facilities, including chrome plating, electronics, and certain textile and paper manufacturers that produce or use PFAS;
- Consumer products, including stain- or water-repellent, or non-stick products, paints, sealants, and some personal care products;
- Food packaging, including grease-resistant paper, microwave popcorn bags, pizza boxes, and candy wrappers;
- Biosolids, including fertilizer from wastewater treatment plants used on agricultural lands; and
- Food, including fish caught from PFAS-contaminated water and dairy products from livestock exposed to PFAS.[37]

Because PFAS do not break down in the environment—earning them the nickname "Forever Chemicals"—concentrations of PFAS can accumulate in people, wildlife, and the environment over time, infiltrate soils, and contaminate drinking water sources.[38] Even at very low levels, exposure to PFAS can cause serious health problems, including:

- Reproductive effects such as increased high blood pressure in pregnant people;
- Developmental effects or delays in children, including low birth weight, bone variations, or behavioral changes;
- Increased risk of some cancers, including kidney and testicular cancers;
- Reduced ability of the body's immune system to fight infections, including reduced vaccine effectiveness;
- Interference with the body's natural hormones, including thyroid hormones;
- Increased cholesterol levels; and
- Liver damage.[39]

Our understanding of these chemicals and their impact on human health is incomplete, and PFAS regulatory and technical developments are quickly evolving.[40] Currently, technologies capable of reducing PFAS in drinking water include granular activated carbon, anion exchange resins, reverse osmosis, and nanofiltration.[41]

In Florida, widespread use of PFAS has led to contamination of state groundwater resources, including private and public potable supply wells.[42] The DEP has begun investigating potential

---

[37] *Id.*
[38] *See* EPA, *Fact Sheet: EPA's Proposal to Limit PFAS in Drinking Water*, 5 (2023), *available at* https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet_PFAS_NPWDR_Final_4.4.23.pdf; U.S. Centers for Disease Control and Prevention, *Per- and Polyfluorinated Substances (PFAS)*, https://www.cdc.gov/biomonitoring/PFAS_FactSheet.html (last visited Jan. 25, 2024).
[39] EPA, *Fact Sheet: EPA's Proposal to Limit PFAS in Drinking Water*, 5 (2023), *available at* https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet_PFAS_NPWDR_Final_4.4.23.pdf.
[40] DEP, *PFAS Dynamic Plan*, 3 (2022), *available at* https://floridadep.gov/sites/default/files/Dynamic_Plan_March_2022.pdf.
[41] EPA, *Fact Sheet: EPA's Proposal to Limit PFAS in Drinking Water*, 2 (2023), *available at* https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet_PFAS_NPWDR_Final_4.4.23.pdf.
[42] DEP, *PFAS Dynamic Plan*, 3 (2022), *available at* https://floridadep.gov/sites/default/files/Dynamic_Plan_March_2022.pdf.

sources of PFAS and has found PFAS at fire training facilities, state funded cleanup sites, and dry-cleaning sites. PFAS contamination has also been identified at federal facilities in Florida.[43]

Regulations and Guidance

The Safe Drinking Water Act gives the EPA the authority to publish health advisories and set enforceable National Primary Drinking Water Regulations for drinking water contaminants.[44] The EPA may also require monitoring of public water systems.[45]

The EPA has proposed enforceable maximum contaminant levels (MCLs) and published interim drinking water health advisories levels (HALs) for several types of PFAS. MCLs are legally enforceable standards that establish the maximum level of a contaminant allowed in drinking water which can be delivered to users of a public water system.[46] HALs are developed when a chemical is found in drinking water but no MCL has been established.[47] HALs are non-enforceable and non-regulatory and provide technical information to state agencies and other public health officials on health effects, analytical methods, and treatment technologies associated with drinking water contamination.[48] Lifetime HALs represent the concentration of a contaminant in drinking water at below which adverse health effects are not anticipated to occur over a lifetime.[49]

In 2016, the EPA published drinking water HALs for PFOA and PFOS of 70 parts per trillion (ppt).[50] In 2022, the EPA released updated HALs based on data indicating that the levels at which negative health effects could occur are much lower than previously understood.[51] The updated HALs included four types of PFAS and are as follows:

- PFOA: 0.004 ppt or nanograms/Liter (ng/L).
- PFOS: 0.02 ppt or ng/L.
- GenX: 10 ppt or ng/L.
- PFBS: 2,000 ppt or ng/L.[52]

---

[43] *Id.*; DEP, *DEP's Efforts to Address PFAS in the Environment*, https://floridadep.gov/waste/waste-cleanup/content/dep%E2%80%99s-efforts-address-pfas-environment (last visited Jan. 25, 2024).
[44] EPA, *Fact Sheet: EPA's Proposal to Limit PFAS in Drinking Water*, 2 (2023), *available at* https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet_PFAS_NPWDR_Final_4.4.23.pdf.
[45] EPA, *Proposed PFAS National Primary Drinking Water Regulation*, https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas (last visited Jan. 25, 2024).
[46] EPA, *Fact Sheet: EPA's Proposal to Limit PFAS in Drinking Water*, 4 (2023), *available at* https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet_PFAS_NPWDR_Final_4.4.23.pdf.
[47] Florida Dep't of Health (DOH), *Chemical Contaminants–HALs and Chemical Fact Sheets*, https://www.floridahealth.gov/environmental-health/drinking-water/chemicals-hals.html (last visited Jan. 25, 2024).
[48] EPA, *Drinking Water Health Advisories for PFAS: Fact Sheet for Communities*, 2 (2022) *available at* https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-communities.pdf.
[49] *Id.*
[50] *See* 87 Fed. Reb. 36848, 36849 (June 21, 2022). EPA also published interim recommendations for contaminated groundwater using the HAL of 70 ppt; however, that guidance has been rescinded. *See* EPA, *EPA Releases PFAS Groundwater Guidance for Federal Cleanup Programs, Fulfilling PFAS Action Plan Commitment*, https://www.epa.gov/newsreleases/epa-releases-pfas-groundwater-guidance-federal-cleanup-programs-fulfilling-pfas-action (last visited Jan. 25, 2024); EPA, *Interim Recommendations for Addressing Groundwater Contaminated with PFOA and PFOS*, https://www.epa.gov/pfas/interim-recommendations-addressing-groundwater-contaminated-pfoa-and-pfos (last visited Jan. 25, 2024).
[51] 87 Fed. Reb. 36848, 36849 (June 21, 2022).
[52] *Id.*

The 2022 interim drinking water HALs for PFOA and PFOS will continue to remain available as the EPA finalizes a national primary drinking water regulation for those contaminants.[53] In March 2023, the EPA proposed MCLs for six types of PFAS known to occur in drinking water.[54] The EPA is proposing to regulate PFOA and PFOS at a level they can be reliably measured—4.0 ppt or ng/L.[55] The EPA is also proposing an enforceable MCL on a combination of PFBS, GenX chemicals, and other types of PFAS. For these PFAS, water systems would use an approach called a hazard index[56] to determine if the combined levels of these PFAS pose a potential risk. This approach protects communities from the additive effects of multiple PFAS when they occur together.[57]

The EPA's proposed rule would also require public water systems to:
- Monitor for these types of PFAS;
- Notify the public of PFAS levels; and
- Reduce PFAS levels in drinking water if they exceed the proposed standards.[58]

In Florida, the Department of Health (DOH) has established a lifetime drinking water HAL for PFOA and PFOS of 70 ppt or ng/L, applied to PFOA and PFOS individually or combined.[59] This is consistent with the EPA's initial HAL for these contaminants.

Under s. 376.91, F.S., if the EPA has not finalized its standards for PFAS by January 1, 2025, the DEP must adopt rules providing statewide cleanup target levels (CTLs) for PFAS in drinking water, groundwater, and soil with priority given to PFOA and PFOS. The rules for statewide CTLs for PFOA and PFOS may not take effect until ratified by the Legislature.[60] A CTL is the concentration for each contaminant identified by an applicable analytical test method, in the medium of concern, at which a site rehabilitation program is deemed complete.[61] The DEP establishes by rule CTLs for specific contaminants.[62] These CTLs apply to requirements for site rehabilitation across numerous programs.

The DEP's provisional groundwater and soil CTLs for PFOA and PFOS are as follows:[63]

---

[53] EPA, *Drinking Water Health Advisories for PFAS: Fact Sheet for Communities*, 1 (2022) *available at* https://www.epa.gov/system/files/documents/2022-06/drinking-water-ha-pfas-factsheet-communities.pdf.
[54] 88 Fed. Reg. 18638, 18641 (Mar. 29, 2023); EPA, *Proposed PFAS National Primary Drinking Water Regulation*, https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas (last visited Jan. 25, 2024).
[55] *Id.*; 88 Fed. Reg. 18638, 18666.
[56] The Hazard Index is a tool used to evaluate health risks of simultaneous exposure to mixtures of related chemicals. EPA, *Fact Sheet: EPA's Proposal to Limit PFAS in Drinking Water*, 4 (2023), *available at* https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet_PFAS_NPWDR_Final_4.4.23.pdf.
[57] EPA, *Fact Sheet: EPA's Proposal to Limit PFAS in Drinking Water*, 1-2 (2023), *available at* https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet_PFAS_NPWDR_Final_4.4.23.pdf.
[58] EPA, *Proposed PFAS National Primary Drinking Water Regulation*, https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas (last visited Jan. 16, 2024).
[59] DEP, *PFAS Dynamic Plan*, 5 (2022), *available at* https://floridadep.gov/sites/default/files/Dynamic_Plan_March_2022.pdf.
[60] Section 376.91(2)(a), F.S.
[61] Section 376.301(8), F.S.
[62] *See generally* Fla. Admin. Code Ch. 62-777.
[63] DEP, *PFAS Dynamic Plan*, 10 (2022), *available at* https://floridadep.gov/sites/default/files/Dynamic_Plan_March_2022.pdf.

Provisional CTLs		
Groundwater	Soil	
	Residential	Commercial/ Industrial
70 ng/L	1.3 mg/kg	25 mg/kg

ng/L = nanograms per liter (parts per trillion)

mg/kg = milligram per kilogram (parts per million)

The DEP has also developed screening levels for irrigation and surface water, which are not considered CTLS and are not enforceable.[64] The screening levels for surface water consider the protection of human health for the consumption of freshwater and estuarine finfish and shellfish.[65]

Provisional Surface Water Screening Levels			
	Human Health*	Ecological	
	Freshwater and Estuarine Finfish and Shellfish	Freshwater	Marine
PFOA	0.5 µg/L	1,300 µg/L	*Not enough data*
PFOS	0.01 µg/L	37 µg/L	13 µg/L

µg/L = microgram per liter (parts per billion)

* Human Health values are based on a Probabilistic Risk Assessment

Provisional Irrigation Water Screening Levels			
	Residential	Commercial/ Industrial	Produce
PFOA	6.7 µg/L	750 µg/L	NA
PFOS	72 µg/L	370 µg/L	0.6 µg/L

µg/L = microgram per liter (parts per billion)

1,4-Dioxane

1,4-dioxane is a man-made chemical widely used in laboratory and manufacturing processes and has been a byproduct of chemicals used in personal care products, laundry detergents, and food.[66] It has also been used as a stabilizer for chlorinated solvents and in the production of

[64] *Id.* at 10-11.
[65] *Id.* at 10.
[66] DOH, *1,4-Dioxane*, 1 (2021), *available at* https://www.floridahealth.gov/environmental-health/hazardous-waste-sites/contaminant-facts/_documents/final-faq-

medicines and glues. 1,4-dioxane is found in paints, lacquers, dyes, waxes, greases, cosmetics, detergents, and other consumer products. It is also found in food from packaging material, in some food supplements, and on crops treated with pesticides containing 1,4-dioxane.[67] 1,4-dioxane is released into the environment in places where it is produced and used, contaminating the air, groundwater, and soil.[68] While 1,4-dioxine does not accumulate in plants or animals over time, it normally does not break down in groundwater.[69]

1,4-dioxane has been identified as a contaminant of emerging concern and as a likely human carcinogen.[70] Exposure to 1,4-dioxane can cause nausea, drowsiness, headache, irritation of the eyes, nose, and throat, liver and kidney damage, and death. People can be exposed to this chemical by:

- Drinking contaminated water sourced from surface water contaminated with 1,4-dioxane discharged from industrial facilities;[71]
- Breathing it in after it has been released into the air during bathing or laundering clothes with contaminated water;
- Getting it on their skin from contaminated soil;
- Eating contaminated foods.[72]

Regulations and Guidance

The DEP has established CTLs for 1,4-dioxane in groundwater, surface water, and soil pursuant to Chapters 62-780 and 62-777 of the Florida Administrative Code as follows:[73]

Groundwater	Surface Water	Soil	
		Residential	Commercial
3.2 µg/L	120 µg/L	23 mg/kg	38 mg/kg

µg/L = microgram per liter (parts per billion)
mg/kg = milligram per kilogram (parts per million)

14dx.pdf#:~:text=The%20current%20EPA%20Health%20Advisory%20Level%20%28HAL%29%20for,added%20to%20approximately%20150%20million%20gallons%20of%20water.
[67] *Id.*
[68] *Id.*
[69] *Id.*
[70] *Id.*
[71] EPA, *Final Risk Evaluation for 1,4-Dioxane*, https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/final-risk-evaluation-14-dioxane (last visited Jan. 25, 2024).
[72] DOH, *1,4-Dioxane*, 1 (2021), *available at* https://www.floridahealth.gov/environmental-health/hazardous-waste-sites/contaminant-facts/_documents/final-faq-14dx.pdf#:~:text=The%20current%20EPA%20Health%20Advisory%20Level%20%28HAL%29%20for,added%20to%20approximately%20150%20million%20gallons%20of%20water.
[73] *Id.*

The EPA has not established a drinking water MCL for 1,4-dioxane. However, the EPA and the DOH have set a drinking water HAL of 0.35 micrograms per liter (µg/L).[74] There is no required routine sampling of public or private drinking water wells for this chemical.[75]

III. Effect of Proposed Changes:

Section 1 creates s. 376.92, F.S., regarding contaminants of emerging concern. The bill creates the Per- and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane Pretreatment Initiative within the Department of Environmental Protection (DEP). The bill defines "PFAS" as per- and polyfluoroalkyl substances, including perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). The purpose of the initiative is to prevent contaminants of emerging concern, including PFOS, PFOA, and 1,4-dioxane, from entering the waters of the state through wastewater facilities. The bill requires the DEP to coordinate with wastewater facilities to implement the pretreatment of contaminants of emerging concern pursuant to this bill. The bill defines "pretreatment" as the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater before or in lieu of discharging or otherwise introducing such pollutants into a wastewater facility. The reduction or alteration may be obtained by physical, chemical, or biological processes, by process changes, or by other means, except as prohibited by rule 62-625.410(5) of the Florida Administrative Code.[76]

The bill defines "wastewater facility" as a facility that discharges waste into waters of the state or which can reasonably be expected to be a source of water pollution and includes any of the following:

- The collection and transmission system.
- The wastewater treatment works.
- The reuse or disposal system.
- The biosolids management facility.

The bill provides that by November 1, 2024, the DEP must provide specific guidance to wastewater facilities with an industrial pretreatment program on the types of industrial users to be included in a required inventory of industrial users that are probable sources of PFOS, PFOA, or 1,4-dioxane. The bill defines "industrial user" as a nondomestic source of a discharge. Upon issuance of the DEP's guidance, each such wastewater facility must conduct such an inventory and submit it to the DEP by July 1, 2025.

Within 30 days after submitting the inventory to the DEP, the wastewater facility must send all industrial users identified in the wastewater facility's inventory a written notice that the industrial user has been identified as a probable source of PFOS, PFOA, or 1,4-dioxane. The notice must:

- Inform the industrial user that it will be issued permits, orders, or similar measures to enforce applicable pretreatment standards for PFOS, PFOA, or 1,4-dioxane, including specific

[74] DOH, *1,4-Dioxane Fact Sheet* 1 (2016), *available at* https://www.floridahealth.gov/environmental-health/drinking-water/_documents/dioxanefs2016updated.pdf.
[75] *Id.*
[76] Rule 62-625.410(5) of the Florida Administrative Code prohibits dilution as a substitute for treatment.

discharge limits, as early as 1 year after the date the written notice has been sent to the user by wastewater facility; and
- Encourage the industrial user to take action to reduce the probability that PFOS, PFOA, or 1,4-dioxane discharges exceed specific discharge limits before permits, orders, or similar measures are issued to enforce applicable pretreatment standards and requirements.

The bill provides that all industrial users identified as probable sources of PFOS, PFOA, or 1,4-dioxane discharges must be issued permits, orders, or similar measures to enforce applicable pretreatment standards and requirements for PFOS, PFOA, or 1,4-dioxane by July 1, 2027. Each permit, order, or similar measure must include monitoring, sampling, reporting, and recordkeeping requirements.

The bill provides that a wastewater facility that begins implementing an industrial pretreatment program after July 1, 2024, must complete an inventory of industrial users to identify probable sources of PFOS, PFOA, or 1,4-dioxane discharges and must issue a permit, an order, or a similar measure to enforce applicable pretreatment standards and requirements consistent with this bill.

The bill allows the DEP to expand the initiative to other wastewater treatment plants to include wastewater facilities permitted under the National Pollutant Discharge Elimination System (NPDES).

The bill also provides that, by July 1, 2025, the DEP must complete an inventory of all industrial users that are major facilities that discharge directly to surface waters to identify probable sources of PFOS, PFOA, or 1,4-dioxane discharges. The bill defines a "major facility" as a facility or an activity permitted under the NPDES which is classified as such by the United States Environmental Protection Agency with the concurrence of the department. The DEP must issue a notice to such a major facility specifying that the facility has been identified as a probable source of PFOS, PFOA, or 1,4-dioxane discharges. The DEP must issue to the major facility a permit, an order, or a similar measure to enforce applicable pretreatment standards and requirements consistent with this bill.

The bill also provides that, beginning July 1, 2025, the following interim specific discharge limits and surface water quality standards for PFOS, PFOA, and 1,4-dioxane are established for industrial users until new specific discharge limits are established:
- For PFOS, 10 nanograms per liter.
- For PFOA, 170 nanograms per liter.
- For 1,4-dioxane, 200,000 nanograms per liter.

The bill allows a wastewater facility to develop and propose local limits for PFOS, PFOA, or 1,4-dioxane to the DEP and may include the local limits in permits, orders, or similar measures once they are approved by the DEP.

In addition, the bill provides that an industrial user is not subject to civil or criminal penalties for violations of applicable pretreatment standards and requirements for PFOS, PFOA, or 1,4-dioxane during the first two years after a permit, an order, or a similar measure is issued to the industrial user. A wastewater facility and the DEP must take into consideration the costs of

implementing best management practices and other corrective actions when taking enforcement action for violations of discharge limits and other applicable pretreatment standards and requirements for PFOS, PFOA, or 1,4-dioxane.

Section 2 provides that the Legislature finds that this act fulfills an important state interest.

Section 3 provides an effective date of July 1, 2024.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

Article VII, section 18 of the Florida Constitution provides in part that a county or municipality may not be bound by a general law requiring a county or municipality to spend funds or take an action that requires the expenditure of funds unless certain specified exemptions or exceptions are met. However, an exception to the county/municipality provisions of Article VII, section 18 of the Florida Constitution may apply. The bill is expected to impact wastewater facilities with industrial pretreatment programs, which are programs administered by a public utility.[77] Under current regulations, a public utility is defined as any state, county, or municipality owning, managing, controlling or operating a domestic wastewater treatment facility.[78] Because the bill would have the same impact on state and local wastewater facilities, it likely complies with the constitutional exception for all persons similarly situated, including the state and local governments. Accordingly, the bill may be accepted from the mandate provisions if the Legislature determines that the bill fulfills an important state interest.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None.

[77] *See* Fla. Admin. Code R. 62-625.200(18).
[78] Fla. Admin. Code R. 62-625.200(21).

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

Private industrial users may incur costs related to complying with applicable pretreatment standards and requirements.

C. Government Sector Impact:

Public wastewater facilities may incur costs related to fulfilling the requirements under this bill, including identifying and providing notice to industrial users and monitoring and enforcing compliance with the bill's discharge limits. In order to implement the provisions of this bill, the Department of Environmental Protection's (DEP) Wastewater Management Program would require four new full-time equivalent positions for the additional duties required for implementation. These four positions would be housed within the Wastewater Management Program, Division of Water Resource Management. The total cost to the DEP for the four positions is $507,625 from the Water Quality Assurance Trust Fund.
.

VI. Technical Deficiencies:

When material other than Florida law is incorporated in a statute by reference, only the version of that material in existence at the time the Legislature made the incorporation will be given effect. Instead of codifying a reference to a rule, staff recommends revising the sentence on lines 73-76 to read, "The reduction or alteration may be obtained by physical, chemical, or biological processes, by process changes, or by other means, except dilution."

In addition, because "wastewater treatment plants" is not defined in the bill, staff recommends removing this language on line 131 of the bill so the sentence reads, "The department may expand the initiative to other wastewater facilities permitted under the National Pollutant Discharge Elimination System."

VII. Related Issues:

The bill does not provide criteria or guidelines on how the Department of Environmental Protection would determine if a proposed local limit should be approved.

VIII. Statutes Affected:

This bill creates section 376.92 of the Florida Statutes.

IX. Additional Information:

A. Committee Substitute – Statement of Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS by Environment and Natural Resources on January 23, 2024:
The committee substitute:

- Narrows the definition of "industrial user" to a nondomestic source of a discharge;
- Extends the deadline for the Department of Environmental Protection (DEP) to issue guidance to wastewater facilities from September 1, 2024, to November 1, 2024, and amends other deadlines;
- Changes the date the interim discharge limits go into effect from July 1, 2026, to July 1, 2025;
- Removes the provision allowing recommendations from members of the public on industrial users that should be included in the inventory;
- Removes requirement that wastewater facilities complete a grab sampling at each identified industrial user's facility;
- Requires the DEP to create an inventory of industrial users that are major facilities discharging directly to surface waters (the DEP's inventory is separate from that required of wastewater facilities), provide notice to such facilities if they are identified as a probable source of PFOS, PFOA, and 1,4-dioxane, and issue permits or other enforcement measures accordingly;
- Defines "major facility" as a facility or an activity permitted under the National Pollutant Discharge Elimination System which is classified as such by the United States Environmental Protection Agency with the concurrence of the DEP;
- Allows wastewater facilities to propose local limits for PFOS, PFOA, and 1,4-dioxane, which must be approved by the DEP;
- Amends the penalties provision to provide that an industrial user is not subject to civil or criminal penalties during the first two years after a permit, an order, or similar measures is used to the industrial user (instead of allowing such penalties after July 1, 2027); and
- Provides that this act fulfills an important state interest.

B. Amendments:

None.