



The Sacrifice Zone Pipeline: Environmental Permitting and the Political Economy of Exclusion in Florida

Sami Haddadin

I. EXECUTIVE SUMMARY

Industrial and agricultural pollution permeates the region from Florida's Polk County through the Immokalee agricultural corridor, disproportionately burdening low-income communities, degrading the Floridan Aquifer System, and entrenching environmental inequality with long-term consequences. The fundamental telos of this brief comprises an analysis of how current legislation and corporate lobbying continue to magnify these harms and widen structural disparities, while outlining targeted, bipartisan policy interventions that can be integrated into existing legislative frameworks to mitigate them.

II. OVERVIEW

The conditions examined in this brief are the cumulative result of decades of inadequate political decision-making, agricultural intensification, and phosphate extraction. The St. John's River Water Management System shows that the Floridan Aquifer System spans approximately 100,000 square miles and supplies nearly 90% of the state's drinking water, while sustaining over 1,000 springs that underpin

ecological stability and regional economies. Two sectors intrinsically linked to Florida's rural economy, phosphate mining in the Bone Valley and industrialized agriculture in the Immokalee region, constitute the primary vectors of that contamination. However, they are not limited to production sites, spilling over into groundwater quality, spring discharge, coastal ecosystems, and, by extension, public health and the economic stability of communities that hinge on them.

Mechanisms of degradation materialize in various forms. Yale Environment 360 contextualizes in 2019 that nutrient loading from nitrogen and phosphorus fertilizers catalyzes eutrophication, where bodies of water become overly enriched with nutrients, triggering massive algal blooms, subsequent oxygen depletion, and ecological collapse — and that global eutrophication could increase by as much as 200% by 2050, with algal blooms producing methane emissions 34 times more potent than carbon dioxide in the short term. Part and parcel is the prevalence of pesticide runoff and mining waste, which percolate through the unconfined aquifer, but take decades to surface in spring water. The implications of this are two-fold: contamination measured today

reflects decisions made a generation ago, and today's contamination will not be fully measurable for decades to come.

The delineating factor in this case is the distribution of harms and the political system's response. The National Institutes of Health defines structural violence as a form of violence where social structures, i.e., economic, legal, and political systems, constrain one's ability to meet basic needs. In this context, environmental degradation operates through such a structure. Communities most exposed to contamination garner limited political leverage in today's legislative ecosystem, resulting in a potent concentration of environmental risk among low-income, majority-minority populations, insofar as they lack the capacity to contest permitting and enforcement decisions. In lieu of such disparities, these communities effectively become sacrifice zones, in this sense forming the fundamental basis of the ontological condition, defining communities by their structural dispensability within the political economy forced upon them.

A. Relevance

A 2020 Florida Department of Environmental Protection (FDEP) water quality assessment finds that more than 75% of monitored Florida springs exceed safe nitrogen levels, reflecting sustained nutrient loading and declining system resilience. Remediation targets, some of which require reductions in agricultural inputs of up to 70%, have remained untenable for nearly a decade, largely due to a coordinated politics of industry opposition.

Pending legislation further reflects the direction

of policy movement, where the discursive framing of environmental degradation undergirds policy choices, becoming a meta-constraint that prestructures the scope of legal responses to material harms. HB 167, currently under consideration by the governor, would remove strict liability for phosphate-contamination sites, effectively weakening one of the final legal mechanisms available to enforce accountability. In implementation, this would shift both financial and environmental risk further onto affected communities.

Infrastructure vulnerability has further compounded these risks. Anderson et al. corroborate in AP News in 2025 that Hurricane Milton in 2024 exposed the instability of Florida's 25 active phosphogypsum stacks, which collectively store over one billion tons of radioactive mining byproduct. The 2021 Piney Point breach, which released 215 million gallons of contaminated wastewater into Tampa Bay, demonstrates the perpetual nature of these risks.

Anderson et al. further find that ongoing groundwater extraction for phosphate mining is reducing spring discharge rates statewide. White Sulfur Springs has experienced near-total flow loss linked to aquifer depletion, underscoring a terminal-threshold dynamic in which policy delays correlate to irreparable ecological loss.

III. HISTORY

A. Current Stances

The environmental impacts that reverberate throughout central and south Florida's communities reflect structural decisions made over more than a century, beginning with the dispossession of Indigenous peoples and

Traditional Ecological Knowledge. This knowledge was developed over thousands of years in relation to Florida's land and water systems, and was severed in tandem with colonization. As Donley et al. articulate in 2022, colonization brought a shift in ideologies that prioritized capital accumulation and expansion over balance and coexistence with the land and people. Parallel dynamics exist in Florida's geopolitical landscape today.

The Bone Valley phosphate formation, stretching across Polk, Hardee, Hillsborough, and Manatee counties, is a U.S. phosphate industrial linchpin, with Florida accounting for more than 60% of production, 11 active mines, and 450,000 acres in use. The Florida Department of Environmental Protection confirms that individual mines range from approximately 5,000 to 100,000 acres. However, the byproduct of phosphate mining, phosphogypsum, carries far-reaching environmental ramifications. It accumulates in stacks as high as 300 feet and contains radioactive and toxic materials, with no feasible long-term disposal solution. The stacks are predominantly located in communities with lower median incomes and higher percentages of non-white residents. Pittman reports in the Florida Phoenix in 2024 that between 2018 and 2024, Florida's sugar industry contributed approximately \$36 million to state political campaigns and committees. Within that total, major firms such as U.S. Sugar and Florida Crystals accounted for more than \$26 million directed primarily through political action committees. This financial influence may alter regulatory incentives, increasing the likelihood of delayed enforcement, weakened standards, and policy outcomes that externalize environmental costs onto affected

communities. Taylor establishes in Florida Politics in 2026 that the Mosaic Company, the largest phosphate producer by domestic measures, reported \$2.2 billion in earnings in 2024 while its waste remains exempt from federal hazardous waste law. The status quo political economy demonstrates, on an empirical level and in real time, that Florida's ecosystems and communities are not the only things being contaminated.

Nevertheless, these dynamics are neither new nor novel, as forces set in motion years ago continue to manifest in the political and environmental landscape. Following decades of intensive agricultural use and a 1979 DDT spill, Lake Apopka became a federal Superfund site after widespread ecological collapse. And while environmental impacts were extensively documented, the long-term health consequences for agricultural workers were evidently not at the forefront of government programs, exemplifying a recurring gap between marginalizing institutional practices and social accountability.

Labor systems further entrench these disparities. The Bracero Program, though primarily concentrated in the U.S. Southwest, extended into Florida's agricultural sector and contributed to the formation of a racialized, low-wage labor system with limited regulatory protections, still persisting in modified form today. As Donley et al. (2022) document, agricultural workers were deliberately excluded from most labor and occupational safety protections at the program's end, which is a legal exclusion that persists. Today, 83% of U.S. farmworkers identify as Hispanic or Latinx, earning below \$20,000 annually, with one-third of families below the federal poverty line. Gazillo establishes in the

American Farmland Trust in 2021 that federal policy and discriminatory lending have resulted in 98% of U.S. farmland owned or operated by white landowners. Structural violence persists by embedding inequality so deeply within the "normal" workings of the social, political, and economic fabric that its harmful effects have become invisible to the naked eye.

IV. POLICY PROBLEM

A. Stakeholders

The primary affected stakeholders are the ten-county corridor, which includes disproportionately low-income, Hispanic, Black, and immigrant communities in Polk, Hardee, Collier, Orange (Apopka), and surrounding counties. Their lack of legal resources and capacity to contest permits has a root-cause effect on inequitable contamination and degradational exposure, which functions as an impact filter to various materializations of structural violence, notably the instillation of economic dependency from industries that aggregate harm.

Key players in the phosphate industry, such as Mosaic, reported \$2.2 billion in 2024 earnings while maintaining a federal hazardous waste exemption. The sugar industry, consisting of US Sugar and Florida Crystals, contributed \$36 million in political contributions in Florida from 2018 to 2024, solidifying its role as the primary political actor sustaining the status quo. Their lobbying infrastructure shapes the political ecosystem, filtering which bills get heard, which amendments are attached, which agency rules face administrative challenges, etc. HB167 would directly benefit Mosaic and corporate polluters more broadly by shifting the burden of proof in contamination lawsuits onto citizens. The passing

of this bill is not only symbolic of the re-entrenchment of structural violence and social inequality facilitated by the policy-makers elected to represent local communities and to give a voice, but also reflects an on-net negative shift in the direction of the libidinal economy towards the normalization and consolidation in trivializing and exclusive frameworks.

Bottling companies form the basis of a third dimension. BlueTriton, which bottles Zephyrhills water, holds a permit allowing withdrawal of millions of gallons of aquifer water in perpetuity for \$115. The asymmetry between the resource's public value and the cost of access reflects the same political economy that governs the entire permitting system.

Florida's tourism, commercial fishing, and coastal real estate industries constitute a cross-partisan coalition with aligned interests. Greene Economics LLC projects in its 2023 report for the Conservancy of Southwest Florida that a major algal bloom event in Lee, Charlotte, Martin, and St. Lucie counties will cost \$460 million in fishing losses, eliminate 43,000 jobs, and reduce property values by \$17.8 billion. Organized civil society, i.e., organizations such as the Farmworker Association of Florida, the Coalition of Immokalee Workers, Earthjustice, the Center for Biological Diversity, and the Florida Springs Council, has an existing legal and advocacy infrastructure to sustain legislative pressure.

B. Risks of Indifference

The costs of inaction are concrete and exponential, as the full ramifications are yet to be seen at a macro level. Nevertheless, nitrate concentrations in aquifer groundwater persist for

decades after surface inputs are reduced, indicating that inaction in the here and now locks in contamination for future generations regardless of what follows. Anderson et al. note in AP News in 2025 that with over 1,000 people moving to Florida every day, expanding development and agricultural fertilizer use will only continue to accelerate nitrogen loading, in tandem with the decade-old remediation plans that remain blocked by administrative challenge.

Springs that lose flow due to aquifer pressure depletion will not recover. White Sulphur Springs in north Florida is riding an ecosystemic red line as a product of mining-related aquifer depletion. Two state remediation plans that could reverse this trajectory have been blocked for nearly a decade by the industries that caused the damage. For farmworker communities, CDC biomonitoring data analyzed by Donley et al. (2022) show Mexican Americans and non-Hispanic Black populations carry higher blood and urinary pesticide concentrations than non-Hispanic white populations for 12 of 14 pesticides tested. Children are the most vulnerable subgroup, with organophosphate pesticides causing neurodevelopmental harm at levels below adult thresholds, and children in Florida's agricultural counties are disproportionately Latinx.

Passage of HB 167 would eliminate legal accountability for phosphate contamination at exactly the moment when public awareness of gypstack risk, inundated by Piney Point in 2021 and Hurricane Milton in 2024, has reached its climax. Once that liability shield is established in statute, reversing it requires the political coalition that currently cannot stop its passage.

C. Nonpartisan Reasoning

The interventions proposed in this brief are designed for cross-partisan viability in the current Florida environment. Three arguments reach legislators across party lines:

- 1) **Aquifer security as fiscal responsibility:** The Floridan Aquifer is Florida's most valuable shared public asset. Its contamination imposes costs on municipal water systems, agricultural operations, tourism businesses, and residential property values across the political spectrum. The cost of remediation, once contamination is embedded, will exponentiate compliance costs many times over.
- 2) **Property values and recreation economy:** Florida's outdoor economy, whether it be fishing, springs tourism, coastal recreation, or real estate, depends on water quality. Algal blooms, spring die-offs, and aquifer contamination destroy the asset value of constituencies across party lines. A coastal Republican legislator whose district includes charter fishing operators and waterfront homeowners has constituent interests identical to those of any environmental advocate.
- 3) **Transparency and community entitlement to know:** No Florida legislator can publicly defend the position that workers should not be told what chemicals they are near, or that communities should not be notified when industrial permits are filed next to their

homes. These are transparency and property rights arguments that achieve identical protective outcomes to equity-based framings while remaining accessible to legislators who would reject equity language.

V. TRIED POLICY

The most instructive precedent is Florida's SB 712, the Clean Waterways Act of 2020, which passed with unanimous bipartisan support and represented the most significant water quality legislation in Florida in decades. The bill updated stormwater rules, created new performance standards, and strengthened nutrient pollution requirements. Its unanimous passage, including from legislators who consistently oppose equity-framed environmental regulation, establishes the political model this brief's recommendations follow.

SB 712's limitation is that it addresses runoff at discharge without tackling upstream permitting decisions, community notification, or independent monitoring. The gap SB 712 leaves is specifically the gap this brief addresses.

A second precedent is the federal Agricultural Worker Protection Standard (WPS). The state previously strengthened federal baselines through the 2004 Alfredo Bahena Act, spearheaded by the Farmworker Association of Florida, which revitalized Florida's Farmworkers' Right-to-Know Law. State-level enhancement of federal worker protection standards has succeeded before in Florida under both Republican and Democratic administrations.

A third precedent, instructive in its failure, is the decade-long attempt to pass nutrient reduction

rules for impaired springs. Both pending state efforts have been blocked for nearly ten years by agricultural lobbying despite scientific consensus. This failure demonstrates that protection of springs, framed as a regulatory burden on agriculture, will not advance; thus, the angle is that it must be framed as protection of a shared public asset whose degradation imposes documented costs on constituencies far beyond the regulated industries.

VI. POLICY OPTIONS

Mandatory Pesticide Buffer Zones

This option would establish mandatory setback requirements for high-volume pesticide applications near designated water recharge areas, residential zones, and school zones, attached as an amendment to the Environmental Resource Permit framework administered by FDEP and the water management districts. California's Department of Pesticide Regulation provides the regulatory precedent, using tiered buffers by toxicity classification and proximity to sensitive receptors.

The legislative path is an amendment to the next stormwater or water quality bill moving through the Senate Environment and Natural Resources Committee. Buffer zones that protect unconfined aquifer recharge areas reduce nitrogen loading at the point of infiltration — exactly the mechanism the blocked springs nutrient reduction plans target, but through a permitting tool rather than a direct mandate on existing operations. The response to agricultural opposition is the aquifer data itself: a 70% reduction in nitrogen inputs is required to meet water quality goals, and nitrate already in the aquifer will persist for decades regardless of future inputs. A buffer zone protects

the freshwater supply that agriculture itself depends on for irrigation.

Multilingual Farmworker Pesticide Notification

This option would require agricultural employers to provide individual written pesticide exposure notification to all workers within 24 hours of any application near a worksite, in the worker's primary language, with documentation maintained for FDACS inspection.

The enforcement gap is severe and well-documented, as seen in the Apopka case, which illustrates a structural asymmetry in which the federal government spent millions studying pesticide impacts on birds and alligators while ignoring the health of the farmworkers in the same fields for decades. The EPA maintains no comprehensive national database of pesticide exposure incidents. Organophosphate pesticides cause neurodevelopmental harm in children at allowable exposure levels and can cause acute poisoning in farmworkers even with correct protective equipment. The political case is direct: no Florida legislator can publicly defend the position that workers should not be told what chemicals they are near.

Independent Aquifer Monitoring Board

This option would establish an independent technical board with authority to conduct and publish aquifer quality monitoring in counties with active phosphate operations, consisting of Polk, Hardee, Hillsborough, Manatee, and DeSoto, along with community representatives included in board composition and annual plain-language reports to the legislature.

The rationale is structural, in that FDEP currently

both approves mining permits and monitors the aquifer in the same counties, a conflict of interest Pittman documents in the Florida Phoenix in 2021, was made visible when Mosaic kept the 2016 New Wales sinkhole from the public for 19 days. Funding can be structured as a fee on phosphate operators proportional to production volume. The fiscal accountability argument for a conservative sponsor could be that Mosaic earned \$2.2 billion in 2024, yet its waste is exempt from federal hazardous waste law and is monitored by the same agency that approves its permits. An independent board is taxpayer protection insofar as it prevents a future administration from being blindsided by an aquifer crisis that internal monitoring failed to disclose.

VII. CONCLUSIONS

The impact distribution of Florida's environmental permitting system is structurally inequitable, and not only as a matter of explicit intent, but as the structural output of a regulatory framework shaped by the nearly \$36 million in sugar industry political contributions, Mosaic's hazardous waste exemption, and a decade of blocked springs-protection legislation. The communities absorbing the greatest burden from phosphate mining, agricultural runoff, aquifer depletion, and pesticide exposure are those with the least capacity to contest the decisions that produced it.

This brief is directed specifically at the Senate Committee on Environment and Natural Resources, chaired by Sen. Ana Maria Rodriguez, and at members representing constituencies with direct economic stakes in the water quality outcomes described here, so particularly members from Pinellas, Lee, Martin, and St. Lucie counties

where the downstream costs of upstream permitting failure are already being counted in lost tourism revenue, diminished property values, and dying fisheries.

The arc of Florida's environmental history does not bend toward justice on its own. Every gypstack that seeps into the aquifer unmonitored, every permit approved without community notification, and every liability shield extended to a billion-dollar polluter is a policy choice made by people who can be voted out, pressured, and replaced. If policymakers and the industries that fund them are not held accountable, ecosystemic destruction and pervasive structural violence will not stay contained to the sacrifice zones they were designed for; they will continue to reverberate outward, reaching every coastline, every water bill, and every generation of Floridians who assumed someone was watching. The springs do not care about party affiliation and the aquifer does not negotiate. Only by reckoning honestly with the history that produced these conditions and refusing to mistake inaction for neutrality, will Florida create the conditions in which economic mobility, poverty alleviation, and justice become possibilities not reserved for those who could already afford them.

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