Port of Savannah

America's Fastest-Growing Container Port — With No Emissions Controls

~650 t
criteria pollutants emitted at berth annually

200K+
below-median-income residents in surrounding communities

$30M+
estimated annual public health cost of port emissions

ZERO
mandatory at-berth emissions controls

Sources: ICCT Port Emissions Screening (2024); EPA Port Emissions Inventory Guidance; Georgia Ports Authority statistics; U.S. Census ACS

Port Overview

The Port of Savannah is the third-busiest container gateway in the United States and the fastest-growing major port on the East and Gulf coasts. The Georgia Ports Authority handled 5.6 million TEUs in 2024, a 12.5% increase over 2023. Garden City Terminal — at 1,345 acres, the largest single-container terminal in North America — sees 35 ship calls per week, 42 doublestack trains per week, and 14,000 daily truck gate moves.

The port is in the midst of a $4 billion expansion. The Savannah Container Terminal on Hutchinson Island is slated to open by 2030, adding 3 berths and 3.5 million TEUs of annual capacity — growing the port to 12.5 million TEUs by 2035. This expansion makes Savannah's health impact trajectory a critical question: without at-berth emissions controls, the health burden will grow in direct proportion to vessel traffic.[1]

Who Is Affected

The communities nearest to Garden City Terminal and Ocean Terminal are predominantly low-income and communities of color. West Savannah and Garden City sit immediately adjacent to terminal operations, rail yards, and the truck corridors that connect the port to I-16 and I-95.

Community	Population	Key Health Burden
Garden City	10,000+	Immediately adjacent to Garden City Terminal; truck and rail corridor exposure
West Savannah	8,000+	Low-income; proximity to port and industrial operations along the Savannah River
Port Wentworth	10,000+	Adjacent to terminal expansion areas; growing truck traffic
Thunderbolt / Isle of Hope	5,000+	Downwind of port operations along Wilmington River
Chatham County (broader)	295,000	County-wide exposure to port-related truck and vessel emissions

Environmental Justice

Garden City and West Savannah are majority-minority communities with elevated environmental justice indicators. Unlike established port EJ communities in California, New York, or Houston, Savannah's port-adjacent neighborhoods are relatively new to the environmental justice conversation — yet they face a rapidly accelerating emissions burden as the port grows toward 12.5 million TEUs. Georgia has no state environmental justice legislation, no mandatory emissions reporting for port operations, and no plans to conduct a comprehensive port-wide emissions inventory.[2]

Health Impact Analysis

Using the ICCT's Port Emissions Screening data, EPA emission factors for container vessel at-berth operations, and the EPA's concentration-response methodology, we model the health outcomes attributable to at-berth vessel emissions and the benefits of their reduction.

The scenario below models outcomes using the performance of currently deployed, CARB-certified barge-mounted capture systems (99% PM2.5, 95% NOx removal — independently verified by Yorke Engineering LLC).

Health Outcome	Current Annual Burden	With At-Berth Capture
PM2.5 emissions at port (tonnes/yr)	~150 t	69–99% reduction
NOx emissions at port (tonnes/yr)	~400 t	Up to 95% reduction
Premature deaths from port PM2.5	Estimated 5–14/year	4–13 lives saved/year
Cardiovascular & respiratory hospitalizations	Estimated 20–55/year	14–53 avoided/year
Childhood asthma ED visits	Estimated 30–80/year	21–77 avoided/year
Monetized public health benefit (EPA VSL)	**$30M+/year**	**$20–$35M saved/year**

Methodology Note

Premature death estimates use EPA's concentration-response function for PM2.5 (Krewski et al. 2009, ACS CPS-II) and EPA Value of Statistical Life ($11.8M, 2024-adjusted). Emissions estimated from vessel call frequency (35/week), vessel type distribution, and EPA emission factors for at-berth auxiliary engine operations. The Georgia Ports Authority has not published a comprehensive emissions inventory, so estimates rely on proportional scaling from ports with published inventories and comparable vessel traffic. Ranges reflect this additional uncertainty. All estimates are conservative — they exclude SOx and secondary PM2.5 formation, which would increase totals.

The Expansion Problem

Savannah presents a scenario that no other port in this assessment portfolio faces: the health burden is growing as fast as the port itself.

The Georgia Ports Authority's $4 billion expansion plan will nearly double the port's container capacity by 2035. If vessel calls increase proportionally — from the current 35 per week toward 60 or more — at-berth emissions could nearly double absent regulatory intervention.

The Mason Mega Rail Terminal, which achieved record volumes of 540,850 containers by rail in 2024, reduces truck emissions but does not affect at-berth vessel emissions.

The expansion also means construction-phase emissions, increased drayage truck traffic on local roads, and additional rail movements through residential neighborhoods. Garden City and Port Wentworth are directly in the path of this growth.

The Georgia Ports Authority has made significant investments in operational efficiency — electrifying rubber-tired gantry cranes (reducing diesel use by 95%), replacing drayage trucks through EPA DERA funding, and reducing an estimated 6.8 million gallons of diesel fuel annually. But these investments address landside equipment, not at-berth vessel emissions. Without vessel emissions controls, Savannah's growth trajectory means the health burden will increase even as equipment gets cleaner.[3]

The Regulatory Gap

California's CARB At-Berth Regulation has been in effect since 2014 and was strengthened in 2020. In October 2023, the EPA authorized California's regulation under the Clean Air Act, which legally enables other states to adopt the identical standard. **Georgia has not adopted at-berth vessel controls, has no equivalent rulemaking underway, and has not conducted a comprehensive port-wide emissions inventory.**

The Georgia Ports Authority participates in voluntary environmental programs and has achieved meaningful reductions in landside equipment emissions. However, voluntary measures have not produced mandatory at-berth emissions controls — and the port has stated publicly that there are no plans to conduct a new emissions inventory or set concrete emissions reduction targets because they are not required to.

Pathways to Action

Several pathways exist for reducing at-berth emissions at the Port of Savannah:

- **State adoption of CARB-equivalent regulation**: Georgia could adopt California's at-berth standard under the EPA authorization
- **Georgia Ports Authority voluntary commitment**: GPA could require at-berth controls as a condition of terminal leases or as part of its expansion permitting
- **Expansion-linked requirements**: The $4 billion expansion could include at-berth emissions controls as a condition of environmental review or community benefit agreements
- **Carbon credit incentives**: Voluntary carbon market frameworks currently under development could provide revenue to fund capture deployment
- **Federal EPA Clean Ports funding**: The $3 billion Clean Ports Program (IRA Section 60102) — disbursement status under current administration requires FOIA verification

What Comes Next

This assessment is a screening-level analysis using publicly available data and proportional scaling. A full site-specific assessment for the Port of Savannah — with dispersion modeling, localized health data, and census-tract-level environmental justice analysis — is available through our research services. Such an assessment would be particularly timely as the port's expansion advances through environmental review.

Port Health Watch is also developing:

- **Air Quality Health Units (AQHUs)**: The first tradable health benefit asset class for port pollution reduction, under development for submission to Verra's SD VISta program. Learn more →
- **Carbon credit methodology**: A Verra VCS methodology for at-berth maritime carbon capture, targeting July 2026 submission. Learn more →

The Opportunity

The Port of Savannah is growing toward 12.5 million TEUs by 2035 — nearly doubling its current capacity. At-berth emissions capture deployed today could save 4–13 lives per year, prevent dozens of hospitalizations, and deliver $20–$35 million annually in monetizable health benefits. As the fastest-growing major port in the country with no emissions controls, Savannah represents both the greatest near-term risk and the greatest near-term opportunity for health impact intervention outside California.

1. Georgia Ports Authority, "By the Numbers" and press releases (2024); ICCT, "Nationwide port emissions screening for berthed vessels" (September 2024). ↩
2. Inside Climate News, "Efforts to Cut Georgia Ports' Emissions Lack Concrete Goals" (February 2020); EPA EJScreen; U.S. Census ACS 5-year estimates. ↩
3. EPA, "Georgia Ports Authority Reduces Diesel Emissions, Improves Efficiency, and Saves Costs"; Georgia Ports Authority sustainability reporting. ↩

This assessment was produced by Port Health Watch, a research initiative of Civil Ledger Lab, operated by EcoAsset Lab LLC. For site-specific assessments with higher-resolution modeling, contact research@porthealthwatch.org.