Port of New Orleans

Where Cancer Alley Meets the Mississippi

~1,200 t
criteria pollutants emitted at berth annually

800K
below-median-income residents in surrounding communities

$70M+
estimated annual public health cost of port emissions

ZERO
mandatory at-berth emissions controls

Sources: ICCT Port Emissions Screening (2024); USACE Waterborne Commerce Statistics; EPA BenMAP methodology; U.S. Census ACS

Port Overview

The Port of New Orleans is the sixth-largest port in the United States by tonnage, handling cargo along the Mississippi River corridor — one of America's most industrialized and most environmentally burdened waterways. The port handles over 3,000 vessel calls annually, including tankers, bulk carriers, and container ships, across multiple facilities in Orleans, Jefferson, and St. Bernard parishes. Port NOLA is the only deepwater container port in Louisiana, with an annual capacity of 1 million TEUs.

The ICCT's 2024 nationwide port emissions screening identified New Orleans as having the **largest at-berth vessel air pollutant emissions of any Priority 2 port** — approximately 1,200 tonnes of combined NOx, SOx, and PM annually. This places New Orleans ahead of Houston, Seattle, and Oakland in at-berth emissions volume despite its smaller total cargo tonnage.[1]

Who Is Affected

The communities surrounding the Port of New Orleans are disproportionately Black and low-income, with elevated baseline rates of cancer, respiratory disease, and cardiovascular mortality. The port sits at the downstream end of the 85-mile Mississippi River industrial corridor known as "Cancer Alley" — one of the most concentrated stretches of petrochemical facilities in the world. Vessel emissions layer on top of an already extreme cumulative pollution burden.

Community	Population	Key Health Burden
Lower 9th Ward / Holy Cross	5,000+	Post-Katrina environmental contamination; elevated soil toxicity; low-income
Chalmette / St. Bernard Parish	48,000	Adjacent to Chalmette Refinery and port terminals; industrial emissions exposure
Gretna / Harvey (Jefferson Parish)	100,000+	Downwind of Mississippi River vessel traffic and industrial facilities
Bywater / St. Claude	15,000+	Proximity to port operations along Inner Harbor Navigation Canal
Arabi	5,000+	St. Bernard Parish industrial corridor; refinery-adjacent

Environmental Justice

Louisiana has the second-highest rate of new cancer cases in the country. African Americans have the highest overall cancer mortality of any racial or ethnic group in the state. In Orleans Parish, high-risk census tracts for air toxics cancer are on average 60% Black, while nearly all low-risk tracts in adjacent parishes are 75–90% white. The New Orleans Health Department's 2024 Health Disparity Report documents that environmental contamination disproportionately affects communities of color, with higher rates of respiratory disease, cancer, and cardiovascular mortality.[2]

Health Impact Analysis

Using the ICCT's Port Emissions Screening data 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). Capture technology is particularly important for New Orleans, where tanker and bulk carrier traffic — vessel types with limited shore power compatibility — make up a large share of vessel calls.

Health Outcome	Current Annual Burden	With At-Berth Capture
PM2.5 emissions at port (tonnes/yr)	~400 t	69–99% reduction
NOx emissions at port (tonnes/yr)	~650 t	Up to 95% reduction
Premature deaths from port PM2.5	Estimated 20–55/year	14–52 lives saved/year
Cardiovascular & respiratory hospitalizations	Estimated 80–220/year	55–210 avoided/year
Childhood asthma ED visits	Estimated 120–330/year	85–315 avoided/year
Monetized public health benefit (EPA VSL)	**$70M+/year**	**$50–$80M 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). Hospitalization and ED visit rates scaled from Louisiana Department of Health surveillance data and ICCT emissions screening. Ranges reflect uncertainty in dispersion modeling and exposure assumptions. All estimates are conservative — they exclude SOx and secondary PM2.5 formation, which would increase totals. New Orleans' exceptionally high baseline rates of cancer and respiratory disease mean the per-capita health impact of incremental PM2.5 exposure may exceed national averages.

The Cancer Alley Overlap

New Orleans occupies a unique position among U.S. port cities: it sits at the terminus of the 85-mile Cancer Alley corridor, where more than 150 petrochemical plants and oil refineries line the Mississippi River between Baton Rouge and New Orleans. Communities along this stretch face some of the highest industrial air toxics exposure in the country — in one area, the cancer risk from industrial air pollution is more than seven times the national average.

Port vessel emissions add an additional, quantifiable layer of pollution to communities already bearing an extreme cumulative burden. While vessel emissions are not the primary pollution source in Cancer Alley, they represent a source that can be controlled with technology available today — without requiring changes to the petrochemical facilities that have resisted regulation for decades.

The overlap between port operations and Cancer Alley also creates a powerful advocacy opportunity. Organizations including Rise St. James have built national visibility for environmental justice concerns along the Mississippi River industrial corridor. A health impact assessment that quantifies the port-attributable share of community health burden provides concrete data for legislative testimony, grant applications, and regulatory advocacy.[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. **Louisiana has not done so, and no equivalent rulemaking is underway.**

The regulatory environment in Louisiana presents particular challenges. The state has faced criticism for permitting practices that allow new petrochemical facilities in communities already overburdened by pollution, and recent legislation has been introduced to limit community challenges to industrial permitting. Port NOLA joined the Green Marine voluntary environmental certification program in 2014, but voluntary measures have not resulted in mandatory at-berth emissions controls.

Pathways to Action

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

- **State adoption of CARB-equivalent regulation**: Louisiana could adopt California's at-berth standard under the EPA authorization
- **Port authority voluntary commitment**: Port NOLA could require at-berth controls as a condition of terminal leases or as part of its Green Marine certification commitments
- **Carbon credit incentives**: Voluntary carbon market frameworks currently under development could provide revenue to fund capture deployment without regulatory mandates
- **Federal EPA Clean Ports funding**: The $3 billion Clean Ports Program (IRA Section 60102) — disbursement status under current administration requires FOIA verification
- **Community-driven advocacy**: Rise St. James, Friends of the Earth, and Gulf Coast coalitions are actively campaigning for zero-emission port goals and Community Advisory Councils at Louisiana ports

What Comes Next

This assessment is a screening-level analysis using publicly available data. A full site-specific assessment for the Port of New Orleans — with higher-resolution dispersion modeling, localized health data, and census-tract-level environmental justice analysis — is available through our research services.

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

At-berth emissions capture at the Port of New Orleans could save 14–52 lives per year, prevent hundreds of hospitalizations and emergency room visits, and deliver $50–$80 million annually in monetizable health benefits — using technology that is commercially deployed and independently verified today. In a city where communities already bear one of the highest cumulative pollution burdens in America, reducing the controllable share of port emissions is both an environmental justice imperative and an economic opportunity.

1. ICCT, "Nationwide port emissions screening for berthed vessels: Prioritizing U.S. port electrification to improve air quality for near-port communities" (September 2024); USACE Waterborne Commerce Statistics. ↩
2. New Orleans Health Department, "2024 Health Disparity Report"; Frontiers in Public Health, "Social vulnerability and cancer risk from air toxins in Louisiana" (2025); U.S. Census ACS 5-year estimates. ↩
3. Human Rights Watch, "US: Louisiana's 'Cancer Alley'" (January 2024); Rise St. James and Friends of the Earth, zero-emission port advocacy coalition (December 2024). ↩

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.