Ports for People
Clean ports for a healthier New Jersey fact sheet

New Jersey's ports play a critical economic role through trade and job creation. However, port-related maritime activities generate significant air and water pollution – harming local communities and the environment.

Port and ship pollution

- Air pollution: Ships at berth often run auxiliary diesel engines, releasing nitrogen oxides (NO_x), sulfur oxides (SO_x), particulate matter (PM) and greenhouse gases (GHGs), worsening air quality and contributing to climate change.
- Ocean contamination: Newark Bay, a key shipping hub, is a Superfund site contaminated with toxic substances like polychlorinated biphenyls (PCBs) and mercury, threatening marine life and human health.
- Disproportionate burden: Port-adjacent communities such as Newark — along with Elizabeth and Bayonne — bear the brunt of pollution, with elevated health risks and environmental injustice.

Health impacts

- Respiratory conditions: In Newark, where 25% of children suffer from asthma, emissions from ships and trucks aggravate chronic illnesses.
- Cardiovascular disease: Long-term exposure to air pollution increases risks of heart attacks and strokes.
- Cancer risks: Prolonged exposure to hazardous pollutants near ports elevates cancer risk. Sites like the Raritan Bay Slag Superfund Site in coastal New Jersey expose residents to carcinogens like lead and arsenic.

Solutions for cleaner ports

SHORE POWER (COLD IRONING)

Shore power involves supplying electricity to ships at berth from the local grid, allowing them to shut down auxiliary engines and thereby reducing air pollution.

- Emissions reduction and improves health: According to the International Council on Clean Transportation, full use of shore power by ocean-going vessels (OGVs) at the Port of NY/NJ can reduce PM 2.5 emissions by 69%, and **avoid at least 16 premature deaths per year.**

Ports for People | Pacific Environment | South Ward Environmental Alliance | PEP | Earthjustice

- Creates jobs: Expanding port electrification can support high-road union jobs. For instance, construction of the East Coast's first shore power port facility at the Brooklyn Cruise Terminal sustained dozens of manufacturing and local installation jobs and resulted in $22 million in economic activity.
- Noise reduction: Decreases noise pollution from idling ship engines, benefiting marine life and people.
- Next steps: The implementation of these policies, along with necessary infrastructure upgrades and vessel compatibility measures, will require coordination between PANYNJ, utilities and ship owners.

CLEAN FUELS

The shipping industry is experiencing a significant shift toward zero-emission fuels and vessel technologies driven by international regulations that require ships to use cleaner fuels such as:

- Green hydrogen: Emission-free but costly and complex to store.
- E-ammonia: Proven potential in trials, zero carbon output.
- E-methanol: Reduces GHGs by up to 95% vs. traditional fuels.

ELECTRIC & WIND-ASSIST VESSELS

- Electric boats: Viable for short routes like ferries and tugboats.
- Wind propulsion: Technologies like Flettner rotors and kite sails cut fuel use.

Learn more about pollution-free ports at **portsforpeople.org**

Operational & policy solutions

- Speed reduction & route optimization: Implementing speed limits for ships can decrease fuel consumption and emissions. Optimizing shipping routes to minimize travel distance and time can lead to lower emissions.
- Incentives: Providing financial incentives for ships that adopt cleaner technologies can encourage industry-wide changes.
- Regulations: Enforcing stricter emissions limits at NJ ports can drive the adoption of greener practices.

Addressing the environmental and health impacts of port and ship pollution in New Jersey requires a multifaceted approach. Implementing shore power, transitioning to alternative fuels, adopting electrification and enforcing supportive policies are crucial steps toward a cleaner and healthier future for the state's port communities.

Ports for People · Pacific Environment · South Ward Environmental Alliance · PEP · Earthjustice