



REQUIRE LOW-SULFUR FUELS

A Simple Solution To Ship Pollution



THE ISSUE

Large commercial vessels entering Virginia's ports must meet a 0.10% sulfur emissions standard, which can be achieved with low-sulfur distillate fuel.¹ But a regulatory loophole allows ships to keep burning high-sulfur heavy fuel oil when using exhaust gas cleaning systems, or "scrubbers."

Scrubbers spray seawater into exhaust stacks to remove sulfur oxides and other contaminants. More than 80% are "open-loop," discharging polluted washwater directly into the Atlantic Ocean and Chesapeake Bay. This discharge contains heavy metals, carcinogenic and persistent polycyclic aromatic hydrocarbons (PAHs), and is highly acidic—threatening marine ecosystems and the seafood economy, while failing to address injurious air pollution that poses a direct health threat to port communities.

¹ US Environmental Protection Agency (EPA). (2010). *Designation of North American Emission Control Area to Reduce Emissions from Ships (EPA-420-F-10-015)*.

WHAT'S AT STAKE?

PUBLIC HEALTH – OUR SEAFOOD ECONOMY – FISH & WILDLIFE

Community & Health Impacts: Scrubber washwater contains heavy metals and PAHs that persist and bioaccumulate up the food chain. Ships burning heavy fuel oil with scrubbers also release significantly more fine-particle soot than ships using low-sulfur distillate fuels, increasing risks associated with asthma, cardiovascular disease, cancer, Alzheimer's disease, and stillbirths.

Virginia's Seafood: Virginia seafood is a \$1.2B economic engine supporting more than 10,000 Commonwealth jobs. Acidic washwater can harm crab and oyster growth, while heavy metals and PAHs can travel from the watermen's catch to restaurant meals and dinner plates.

Food Web Disruption: Scrubber discharge is highly toxic to zooplankton and phytoplankton—the foundation of the aquatic food web supporting oysters, forage fish, larger fish, birds, whales, and dolphins.

THE OPPORTUNITY

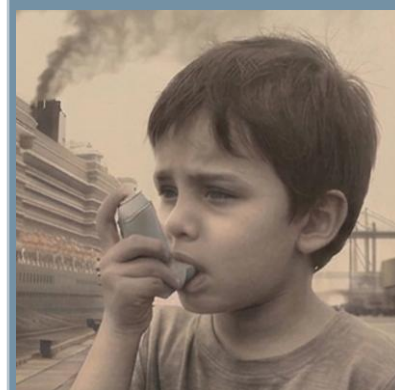
Requiring ships to use cleaner distillate fuels—already required in 45 countries and two U.S. states—is a simple, effective way to protect Virginia's waters, wildlife, and communities.

Having ships switch to low-sulfur distillate fuels requires no new or modified engines, eliminates the need for highly polluting scrubber systems and promotes responsible shipping practices in Virginia waters.

Support Responsible Shipping Practices



ACT NOW to protect Virginia's billion-dollar seafood industry and Chesapeake Bay ecosystems.



Emissions pose major risks to public health, including impacts on pregnant women and children.



Even concentrations as low as 0.001% of toxic scrubber discharges can kill plankton, the base of the food web for Virginia's marine life.