# AMMONIA IN LOUISIANA
## Production, Impacts, and Expansion


## WHAT IS AMMONIA?

Ammonia ($NH_3$) is a toxic, colorless gas, known for its pungent smell — described as similar to urine or rotting fish. Ammonia is made by separating hydrogen out of fossil gas (methane, $CH_4$) and bonding it to nitrogen from the air through an energy-intensive reaction. Today, the majority of ammonia is used for fertilizer production (around 70 percent), but plans for this surge in ammonia production hinge almost entirely on speculative markets.

## AMMONIA DRIVES GULF DEAD ZONE

- Nitrogen and phosphorus pollution, in the form of agricultural runoff, are key drivers of the Dead Zone that forms at the mouth of the Mississippi. The Dead Zone, which has stretched thousands of square miles–even reaching the size of New Jersey, is an area where fertilizer pollution-fueled algae blooms cause the depletion of oxygen.
- At least 75% of nitrate in the Mississippi River is anthropogenic (produced through mean means), and a primary example is when fertilizers are applied, seep into freshwater systems, and when they are released into the ocean.
- Existing ammonia production facilities in Louisiana currently discharge 3.2 million pounds of ammonia per year, contributing significantly to this problem.

## WHY DOES IT MATTER?

### Public Safety Threat

- Ammonia is highly toxic and corrosive to skin, causing chemical burns, infections, and even immediate death.
- When released into the air, ammonia gas can react with other gases in the atmosphere to form PM 2.5, an air pollutant estimated to cause millions of premature deaths per year and also linked to asthma, respiratory illness, and cancers.

### Environmental & Health Risks

- Ammonia fertilizers may contribute to nitrate contamination in drinking water.
- Nitrates are linked to multiple forms of cancer, blue baby syndrome, and toxic algae outbreaks, which can cause rashes, stomach or liver illness, respiratory problems, and neurological effects.

### Existing Facilities in Louisiana

- The section of the Mississippi River in Louisianas stretching from Baton Rouge to New Orleans, known as “Cancer Alley” is home to the production of 25% of U.S. petrochemical production. This includes multiple fertilizer production facilities, including the world’s largest: CF Industries Donaldsonville Complex.

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## AMMONIA EXPANSION IN LOUISIANA

Despite the disproportionate concentration of existing fertilizer production facilities, multiple new facilities have been proposed. If proposed facilities discharged what they would be permitted under New Source EPA limits, pollution discharges from fertilizer facilities could increase to 7,052,715 pounds (accounting for only nitrogen increases), resulting in a 119% increase in fertilizer pollution into the Mississippi River coming directly from fertilizer production facilities.

It is not often highlighted that fertilizer production facilities dump millions of pounds of toxic pollution into the Mississippi River every year. Unlike agricultural runoff, individual facilities are directly regulated under the Clean Water Act through limits on how much pollution each facility can discharge.

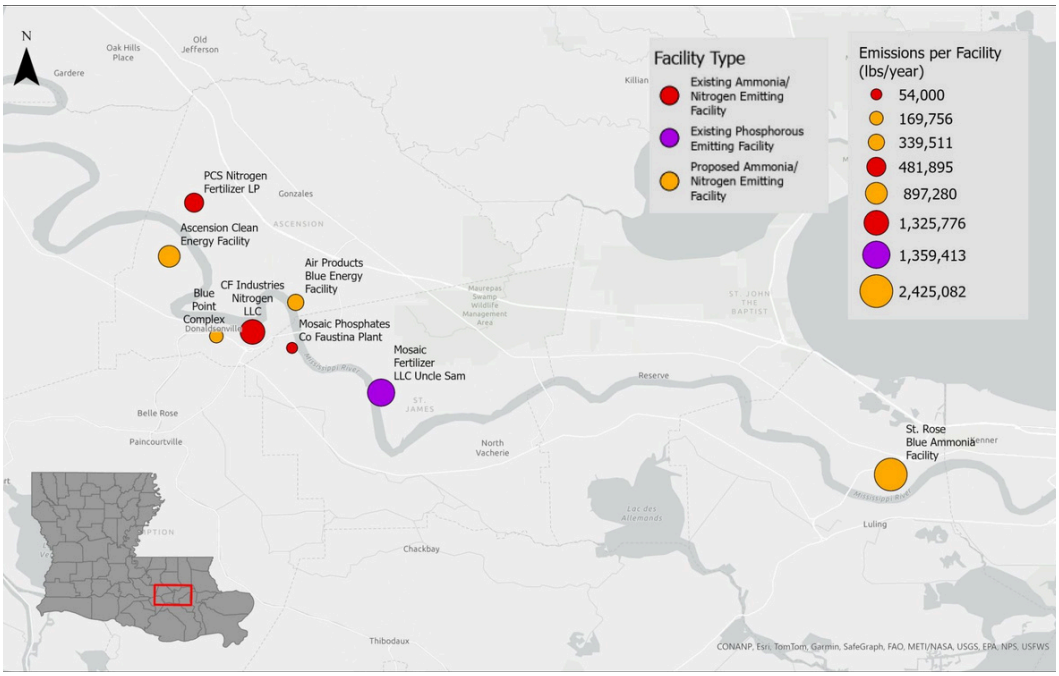


***Figure 1.*** *Map of existing and proposed fertilizer production facilities that discharge production waste into the Mississippi River in Southeastern Louisiana.*

The expansion of ammonia production in Louisiana would not only exacerbate environmental degradation, as previously discussed, but also intensify the cumulative health burden on communities in “Cancer Alley.” Increased ammonia emissions would amplify already elevated exposure levels, further endangering local residents. Many of these communities are predominantly low-income and majority Black, highlighting patterns of unequal environmental exposure that warrant careful consideration.