Lack of modern pollution control standards: The 1972 federal Clean Water Act requires the EPA to limit discharges of industrial pollutants based on the best available wastewater treatment methods. The agency must tighten those technology-based standards (called effluent limitation guidelines, or ELGs) at least once every five years where data show treatment technologies have improved. Despite this legal mandate, the guidelines for 40 of the 59 industries regulated by EPA were last updated 30 or more years ago, and 17 of those date back to the 1970s. Outdated standards mean more water pollution is pouring into U.S. waters than should be allowed.

- **Oil refineries:** The Environmental Integrity Project found that 81 refineries across the country discharged over 15.7 million pounds of nitrogen, 60,000 pounds of selenium, and 1.6 billion pounds of chlorides, sulfates, and other dissolved solids into U.S. waterways in 2021. EPA has not revised the guidelines for petroleum refineries since 1985. The current effluent guidelines for refineries include no limits for selenium, benzene, nickel, cyanide, lead, mercury, chlorides, sulfates and many other contaminants that EPA’s own 2019 report identified as being discharged by refineries.

- **Plastics and chemical manufacturing (organic chemicals):** EPA estimates that this industrial sector includes 609 facilities that manufacture end products like plastic resins, PFAS “forever chemicals,” synthetic fibers (rayon, polyester, etc.), benzene, solvents, and a host of other chemicals and discharge to waterways. These facilities release millions of pounds of pollution, including benzene, salts, nitrogen compounds, oil and grease, and metals like aluminum, zinc, and lead into waterways, according to EPA’s latest review of industrial dischargers. The technology-based standards for this industry are 30 years old, with EPA not updating them in any way since 1993 and most of them not since 1987. The current limits do not include any controls on small plastic pellets – called “nurdles” – that are sometimes released from plastics manufacturing facilities into stormwater and wastewater.

- **Plastics molding:** EPA estimates that 120 facilities in this industrial sector discharge pollutants to waterways. Among the toxic pollutants of concern discharged without any federal limits include phthalates, PFAS, nitrogen, N,N-Dimethylformamide, and microplastics in stormwater. EPA has not revised its technology-based limits for plastics molding and forming plants since the agency first set the limits in 1984, almost 40 years ago, even though the standards are supposed to reflect “best available technology.”
• **Chemical fertilizer:** EPA’s most recent estimate identified 59 chemical fertilizer plants discharging pollution into waterways in the United States. Among these are 21 nitrogen fertilizer (ammonia) manufacturing plants that released an estimated 7.7 million pounds of total nitrogen pollution in 2021. EPA has not updated standards for fertilizer plants since 1986. The current limits do not control other fertilizer-related pollutants, like selenium, total chromium, zinc, iron, nickel, cadmium, cyanide, and lead. The largest ammonia manufacturing plant in the U.S. -- CF Industries’ Donaldsonville, LA, Nitrogen Complex -- discharged an average of over 8,000 lbs. of nitrogen per day in 2021.

• **Metal smelting:** EPA estimates that 56 facilities in this metals manufacturing sector (“nonferrous” means not including iron or steel) dumped over 100 million pounds of pollution into waterways in 2019. This sector includes some of the most noxious industrial processes – smelting and metals recycling. The national pollutant limits for this category have not been revised since 1990, but wastewater treatment has vastly improved in the last 30 years. The current limits for this industry do not include any controls on stormwater pollution, meaning that contaminated runoff from these sites usually has no limits. For instance, there have been high levels of fluoride, zinc, nickel, cadmium, and potentially other metals in stormwater runoff from aluminum smelters.

• **Pesticide manufacturing:** EPA estimates 31 pesticide chemical plants in this sector discharge pollution into waterways, including pollutants like the pesticide active ingredients being manufactured, nitrogen, benzene, cyanide, and more. But EPA has not updated the guidelines for pesticide manufacturing since 1998. Nitrogen remains unregulated by the federal rule despite significant discharges. For example, the Syngenta facility in Saint Gabriel, Louisiana, discharged over 303,000 pounds of total nitrogen in 2021, more than twice as much nitrogen as the average municipal wastewater treatment facility.

• **Inorganic chemicals:** 229 inorganic chemicals facilities dumped over 2 billion pounds of pollution into waterways in 2019, according to an EPA estimate. This category includes wastewater from the production of many toxic chemical products, like vinyl chloride. It is one of the largest industrial dischargers of toxic pollution in the United States, and the 13th largest nitrogen discharger. EPA has not updated pollution limits for inorganic chemicals since 1984. The current limits don’t control other pollutants that are associated with inorganic chemical manufacturing, like total nitrogen, phosphorous, dioxins, manganese, and PCBs.