

# FREQUENTLY ASKED QUESTIONS ABOUT THE NITROGEN POLLUTION REDUCTION ACT—A.B. 2447 (BAUER-KAHAN)

## WHAT DOES AB 2447 DO?

The Nitrogen Pollution Reduction Act (A.B. 2447) directs state officials to establish, by January 1, 2028, clear limits on how much nitrogen fertilizer can be applied to croplands and leach into waterways. The act encourages the adoption of sustainable farming practices that reduce nitrogen pollution and allows for streamlined compliance pathways for smaller, diversified farms.

## WHY IS A.B. 2447 NEEDED NOW?

California officials and researchers have been documenting the harms of fertilizer pollution since the 1960s. A 1988 report published by the State Water Board called for the state legislature to explore regulatory actions to reduce nitrogen pollution, including limiting fertilizer applications in vulnerable areas. Instead of limits, the State Water Resources Control Board created the Irrigated Lands Regulatory Program (ILRP); in the more than two decades since, the program has focused on technical assistance, education, outreach, data collection, and monitoring. Unfortunately, the program is failing to protect people and ecosystems. [Wells continue testing](#) above safe drinking water thresholds, harmful algal blooms are larger and more frequent, and nitrous oxide emissions from fertilizer continue unabated. This act adds clear water quality protection goals and deadlines to the ILRP so California can safeguard clean water for people and ecosystems.

## WHY IS TOO MUCH NITROGEN A PROBLEM?

Excess fertilizer threatens public health. When it leaches into groundwater aquifers, excess nitrogen fertilizer can contaminate drinking water as nitrate. Nitrate-contaminated drinking water is [linked](#) to “blue baby” syndrome and higher rates of leukemia, lymphoma, and childhood brain cancers. “Blue baby” syndrome is a condition that prevents infants from maintaining sufficient blood oxygen levels, causing them to suffer and sometimes die. Between 2011 and 2019, an estimated 1,730 [cases](#) of blue baby syndrome were reported in California, primarily clustered in Central Valley areas with elevated nitrates in drinking water.

Excess fertilizer threatens biodiversity. When it runs off into lakes and rivers, it [fuels](#) harmful algal blooms that sicken animals and children [across](#) California. Seventy-eight imperiled species in the United States, including California’s Bay checkerspot butterfly and arroyo toad, are [threatened](#) by nitrogen pollution.

Excess fertilizer also undermines our efforts to combat climate change by releasing nitrous oxide (N<sub>2</sub>O), a greenhouse gas [273 times more potent](#) than carbon dioxide. Nitrous oxide also [depletes](#) the ozone layer, which protects people from skin cancers and cataracts. A United Nations report [estimates](#) that this ozone loss will cause 4 million premature deaths around the world in the next decade and 20 million premature deaths by 2050.

## IS IT POSSIBLE TO LIMIT NITROGEN RUNOFF FROM AGRICULTURAL LAND WHILE MAINTAINING CROP YIELDS?

Yes. Preliminary analysis of the nitrogen fertilizer data reported by the Central Valley agricultural coalitions and the Central Coast Water Board’s ILRP [shows](#) that many farmers are already meeting nitrogen discharge limits that are protective of drinking water quality. The limited publicly available data from parts of the Central Valley show that a minority of fields are responsible for a majority of the nitrogen pollution. By directing the State Water Board to set nitrogen limits, the act will address outliers who are disproportionately contributing to water pollution.

Many California farmers are already implementing practices that reduce the need for nitrogen fertilizers (e.g., composting, diversifying crop rotations, soil testing, cover cropping) and measures that keep existing nitrogen on their farms (e.g., cover cropping, improved irrigation management and planting riparian buffers). The California Department of Food and Agriculture has several grant programs (e.g. the Healthy Soils Program, Organic Transition Program, and State Water and Energy Efficiency Program) to help farmers implement sustainable farming practices and find out what works best for their operations. The consistent, high demand for these grants shows that farmers are curious about shifting their farming practices to those that are more sustainable. The act encourages farmers to take advantage of current grant programs to help them meet nitrogen limits.

### **AREN'T THERE ALREADY EFFORTS TO ADDRESS THE NITROGEN POLLUTION CRISIS IN CALIFORNIA?**

Existing efforts to address nitrogen pollution in California lack clear guardrails and adequate time frames. For instance, while the CV-SALTS program helps provide temporary drinking water solutions in California's Central Valley, it postpones any regulatory action to reduce nitrogen pollution from agriculture at the source for 35 years. That's 35 years of continued pollution, which adds decades to groundwater cleanup time frames and makes the problem even more costly to address. Likewise, while the ILRP provides valuable data, monitoring, and technical assistance, it does not currently include limits on nitrogen fertilizer overapplication or runoff to protect water quality.

The Central Coast Regional Water Quality Control Board proposed a regulation similar to the policies envisioned by this act in its 2021 Agriculture Order 4.0. However, the State Water Board remanded the numeric limits portion of the regulation in 2023, before any limits could take effect. Since then, the State Water Board has convened an expert panel to consider numeric limits on nitrogen pollution, and a final report by the panel is forthcoming this year. Even if the expert panel recommends some form of numeric limits, there are no statutory deadlines or requirements for the State Water Board to implement rules with such limits. The act will help ensure that solutions are implemented with the urgency they deserve.

### **WILL THE ACT HARM FARMERS OR CALIFORNIA'S AGRICULTURAL ECONOMY?**

No. Other countries have experienced water pollution from nitrogen fertilizer and implemented policies similar to those in the act without impeding agricultural productivity. According to data from the European Union—which implemented a Nitrate Directive in 1990 to regulate nitrogen applications and discharges—agricultural production has [increased](#) since the nitrogen regulations were adopted. It is [worth noting](#) that countries with the most intensive agricultural production and most stringent nitrogen regulations (Germany, Denmark, Belgium) saw both growth in agricultural output and a decrease in inputs used between 2008 and 2023.

The act will help speed the transition to a healthier agricultural economy by steering more farmers toward sustainable farming practices that help reduce the need for nitrogen fertilizers (e.g., composting, diversifying crop rotations, soil testing, cover cropping) and measures that keep existing nitrogen on their farms (e.g., cover cropping, improved irrigation management and planting riparian buffers). Just as the clean energy revolution in the automobile and energy industries were fortified by concrete policy standards and goals (e.g., California's Renewable Portfolio Standard, A.B. 32, and Clean Cars Rules), the agricultural sector is poised for a similar revolution grounded in the clear standards and goals outlined in A.B. 2447. The act will establish California as a leader in showing that a thriving agricultural economy and clean water can go hand-in-hand.