Neonicotinoids or “neonics” are neurotoxic insecticides linked to massive bee and insect losses around the globe and, increasingly, to vast water and soil contamination, ecosystem-wide harms, and human health concerns in New York. The Birds and Bees Protection Act’s (A7639A-Englebright/S5816-Hoylman) five-year moratorium on outdoor uses of these pesticides protects the state—and New Yorkers—while further study is conducted.

Neonics Are Toxic, Persistent, and Everywhere — As the world’s most widely used insecticides, neonics have made U.S. agriculture 48 times more harmful to insects since their introduction in the mid-1990s. Neonics permeate plants—turning their nectar, pollen, and fruit toxic. They can be applied to a plant’s roots or as a coating on a crop seed, which the entire plant then absorbs as it grows. Neonics also persist in soil, where they are easily carried long distances by rain or irrigation water. Today, neonics broadly contaminate New York’s water, soil, and plants, concentrating in areas of year-after-year use.

Neonics Kill Bees — Neonics are extremely toxic to insects, including bees. A robust body of scientific evidence links neon use to massive bee population losses, including two comprehensive worldwide academic assessments, Cornell University research, and even a major pesticide-industry-funded field study—the largest to date. In New York, beekeepers have lost more than 40% of their bee colonies nearly every year for the last decade—suggesting possible similar catastrophic losses for the state’s 400+ native bee species. These losses threaten both the state’s ecosystems and the estimated $1.2 billion per year that pollination-dependent crops—including apples, squash, blueberries, and cherries—contribute to the state’s agricultural economy.

Neonics Kill Birds — Scientific research increasingly identifies neonics as a leading cause of mass bird losses—such as the 30% decline in North American birds in the last 50 years. Eating just one neonic-treated seed is enough to kill some songbirds, and even at low doses, neonics can harm birds’ immune systems, fertility, and navigation, and cause rapid weight loss—reducing birds’ chances of surviving in the wild. As neonics kill insect populations, birds also starve. In Europe, for example, declining bird populations were linked to very low levels of neonics in water, and neonics are a suspected cause of the steep decline in French farmland birds.

Neonics Contaminate New York Water and Debilitate Ecosystems, Harming Fish, Deer, and Other Wildlife — Neonics frequently show up in state surface-water testing as well as roughly 30 percent of Long Island groundwater samples—indicating a “very high probability” that the pesticides are causing “ecosystem-wide damage” in New York. Neonics hollow out ecosystems by eradicating aquatic insect populations that birds, fish, amphibians, and other animals depend upon for food. For instance, recent research shows a Japanese fishery collapsed within a year of the introduction of neonics in nearby agricultural fields—and neonic levels later measured at the site match those commonly seen in New York water. Diminishing trout, salmon, and wild bird populations, in turn, threaten New York’s billion-dollar tourism and recreation industries. Neonic water contamination has also been linked to harm to bats and birth and developmental defects in white-tailed deer.

Neonics May Harm New Yorker’s Health — According to the U.S. Centers for Disease Control, half the U.S. population is exposed to neonics on a regular basis—a concerning statistic given that studies suggest that neonics may increase risk of developmental or neurological damage in humans, including malformations of the
developing heart and brain, memory loss, and finger tremors. Conventional drinking water treatments generally do not remove neonicotinoids from neonics-contaminated water, and neonicotinoids commonly contaminate produce and baby food. Because neonicotinoids permeate foods, they cannot be washed off.

**Alternatives to Neonics** — For nearly all uses, neonicotinoids are replaceable—with the best and most cost-effective alternative often being nothing. For example, neonics corn and soybean seed treatments account for an estimated 73% of the neonicotinoids used in New York agriculture, yet provide little to no benefits to farmers. New research also shows that neonics may often actually decrease yields by killing pollinators or pest predators (i.e., “good bugs”). For growers and homeowners, non-synthetic or less-harmful synthetic substitutes exist, including organic and minimum-risk pesticides.

**New York Must Act** — Europe has banned outdoor use of several neonics, and Canada is moving to do the same. The Trump administration, however, has done nothing, and no state has yet addressed the heart of the neonics crisis. With more damage done every day and no federal help in sight, state legislators must act to pass the Birds and Bees Protection Act—which would make New York a national leader in protecting its pollinators, water, and people, while providing state regulators time for further study required by the act.

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2. See Pierre Mineau, *Impacts of Neonicotinoids in New York Water* (2019), [https://on.nrdc.org/2lXo0Q0](https://on.nrdc.org/2lXo0Q0) [hereinafter “Mineau 2019”].