POLLINATOR FRIENDLY ALLIANCE

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[WWW.POLLINATORFRIENDLY.ORG](http://WWW.POLLINATORFRIENDLY.ORG)

**Date:** February 10, 2023

**To:** Minnesota House of Representatives, Environmental & Natural Resources Finance and Policy Chair Rep. Rick Hansen and Committee Members

**RE:** **Support Testimony for Bill #HF921: *Use of insecticides on state lands prohibited***

**Our Support:** Our coalition is comprised of partnering organizations, farmers, biologists, naturalists, and urban and rural Minnesotans**: We support HF921** to prohibit the use of systemic insecticides including insecticide-coated seed on public lands managed by the Minnesota DNR which includes state parks, forests, wildlife management areas, scientific & natural areas, and aquatic management areas*.*

**Prohibiting insecticides that have lethal and sublethal effects on wildlife should not be a question since these public owned wildlife areas are intended to be a refuge for wildlife.** Protecting biological diversity and integrity and conserving the system’s wildlife are the central tenets of a refuge system’s mission. Bill HF921 proposes changes to prohibit harmful insecticides from Minnesota DNR-managed wildlife and natural areas. Of these DNR-managed lands, a subset of 45,000 acres is leased to private individuals for cultivation for profit, primarily GMO corn.

Currently, DNR land management practices follow an integrated pest management (IPM) protocol. In the best scenario if followed IPM protocol will dictate the least toxic methods without chemicals first. However, **following an IPM plan does not guarantee the removal of harmful insecticides and is subject to each individual land manager’s and tenant’s interpretation.**

The Fish & Wildlife Service and Minnesota’s largest county park districts recognized the need to protect wildlife and biodiversity. Thus have phased out land for lease for croplands in waterfowl production areas and on county park lands.

**There is concern over pesticide-coated corn as feed.** The amount of neonicotinoid on one treated corn kernel is enough to kill a songbird.  
<https://abcbirds.org/wp-content/uploads/2015/05/Neonic_FINAL.pdf>

Recent studies, including **the MnDNR’s own study, have found wildlife sickened from harmful residues** from insecticides in plants, in the water, and soil where pesticides seem to persist season to season, and from insecticide-coated seed.

<https://static1.squarespace.com/static/623c9365af01026ca2eb4c15/t/63bd804decaf924071e86b26/1673363538860/neonic+exposure+deer+2021+DNR+report.pdf>

Pesticide contaminated forage and habitat will contribute to a depleted immune system and an unhealthy animal. The latest research by Dr. Jenks and Dr. Lundgren found **grassland birds, otters and other free ranging animals suffering from systemic insecticide and pesticide coated seed contamination**.

<https://www.nature.com/articles/s41598-019-40994-9>

**Background:**

Beneficial insects and pollinators are keystone species that support the entire food web including fish, aquatics, birds, other wildlife, and humans. **Pesticides and especially systemic insecticides and pesticide coated seed are primary drivers of species decline and loss of life-sustaining biodiversity**. Scientists have been alerting us for decades about climate crisis and species decline. The western monarch population dropped more than 99% since the 1980s. In less than a single lifetime, North America has lost more than one in four of its birds and half of wild animals in the last 40 years. **Insecticides are ubiquitous in our environment, on our food, and in our water.**Songbird decline is driven by loss of insect populations and pesticide use.

**The responsibility to make change must take place in local communities and states.** Federal and state governments are sadly reluctant to impose regulations or bans on toxic insecticides evidenced by the 60 years it took to remove toxic chlorpyrifos from our food. Other countries are banning neonicotinoids and other insecticides. Meanwhile our understanding of the science of pesticide devastation continues to grow and hit the media almost daily.

**Insecticides are designed to kill insects and unfortunately do not distinguish between target pests and the many beneficial insects also harmed.** Systemic insecticides are absorbed into the plant and tree tissues reaching the stem, leaves, roots and flowers. One of the most used systemic insecticides are neonicotinoids which are neurotoxins that have proven lethal and sublethal effects on pollinators, migratory birds, deer, and other wildlife. **Neonicotinoids are listed as a surface water pesticide of concern as they show up commonly in Minnesota streams and groundwater.** Comparison studies show pesticide-coated seed does not increase soy crop yields. In fact, the use of insecticides removes beneficial insects that control pest insects such as beetles thus reducing the total crop yield.

* **Nearly 3 billion bird species are lost in U.S since 1970**, Cornell Lab <https://www.birds.cornell.edu/home/bring-birds-back/>
* **Over half our grassland birds in Minnesota are gone**, 53% (720 million)

<https://www.grasslandbirdtrust.org/recent-news/3-billion-birds-lost/>

* Biodiversity is a must for all creatures from aquatics to salamanders to birds to mammals but in Minnesota, **our biodiverse wetlands have been drained for corn and soybean row crops**. <https://www.sciencedirect.com/science/article/pii/S2214574521000572>
* **In Minnesota only 1% of biodiverse prairie remains** which supported most of our native bird, pollinator and animal species. <https://www.dnr.state.mn.us/prairieplan/index.html>
* Monarch Watch reported this month the **overwintering monarch numbers this year are going to be the all-time lowest numbers ever** (1 hectare or 2.47 acres). <https://monarchwatch.org/blog/2022/01/06/how-many-hectares-in-2021-2022/>

Please help protect wildlife, their habitats and human health by supporting Bill HF921 to remove these harmful insecticides from public lands managed by the Minnesota DNR.

Thank you.

Additional articles and scientific papers

**Effects of Neonicotinoids on Deer, Pheasants, Otters and Other Free-Ranging Mammals, 2022 Study Findings with Dr. Jonathan Jenks:**  [https://youtu.be/qGdHhogZdW0](%20https://youtu.be/qGdHhogZdW0)

**Effects of Neonicotinoids on Physiology and Reproductive Characteristics of Captive Female and Fawn White-Tailed Deer**: Scientific Reports, 2019, Berheim, Jenks, Lundgren et al.

<https://www.ecdysis.bio/_files/ugd/49b043_5c2a015af9ba4ea691604534e4148117.pdf>

**Nuerotoxic effects of neonics on mammals including humans: PubMed Cen, Ferreiera study:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8395098/>

**Lax Pesticide Policies are putting wildlife health at risk from neonicotinoids and neonic seed:**

<https://www.audubon.org/magazine/summer-2021/lax-pesticide-policies-are-putting-wildlife>

**Minnesota Department of Agriculture, Neonicotinoids *surface water pesticides of concern* (2020)**

<https://www.mda.state.mn.us/surface-water-pesticides-concern>

**Insecticide drift and impacts on grassland wildlife on public lands in Minnesota, Study by Goebel 2021:**

<https://conservancy.umn.edu/bitstream/handle/11299/219388/Goebel_umn_0130M_22104.pdf?sequence=1>

**Insecticide Seed Treatments Threaten Midwestern Waterways, Xerces Society (2021):**<https://xerces.org/blog/insecticide-seed-treatments-threaten-midwestern-waterways>

**Neonicotinoid Causes Autism-Like Symptoms Study, November, 2022**. Neurosciencenews.com

<https://neurosciencenews.com/neonicotinoid-asd-21898/>

**Neonicotinoid effects on songbirds:** Science: *A neonicotinoid insecticide reduces fueling and delays migration in songbirds.* Margaret L. Eng, LeBridget, J. M. Stutchbury, Christy A. Morrissey. Issue 13 Sep 2019: Vol. 365, Issue 6458, pp. 1177-1180.

<https://science.sciencemag.org/content/365/6458/1177>

**Pesticide effects on wild partridge study**

<https://www.sciencedirect.com/science/article/abs/pii/S0269749122012192?via%3Dihub>

**Contamination by neonics in barn owls and swifts: Science Direct: Humann, Laurent study**  
<https://www.sciencedirect.com/science/article/pii/S0048969721024748>

**Neonic effects on hummingbirds: English, Sandoval-Herrera study: PubMed Central study**  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7858574/>

**Three billion birds have been lost in North America since 1970**

<https://www.nationalgeographic.com/animals/article/three-billion-birds-lost-north-america>

**Pesticides are leading cause of grassland bird declines**

<https://abcbirds.org/article/new-study-finds-pesticides-leading-cause-of-grassland-bird-declines/>

**Birds, bees, and aquatic life threatened by gross underestimate of toxicity of world’s most widely used pesticide – neonics**

<https://abcbirds.org/article/birds-bees-and-aquatic-life-threatened-by-gross-underestimate-of-toxicity-of-worlds-most-widely-used-pesticide-2/>

**Decline in U.S. bird biodiversity connected to neonic poisoning, University of Illinois**

<https://aces.illinois.edu/news/decline-us-bird-biodiversity-related-neonicotinoids-study-shows>

**Goebel study: Insecticide drift and impacts on arthropod prey resources of birds in public grasslands of Minnesota**

<https://conservancy.umn.edu/bitstream/handle/11299/219388/Goebel_umn_0130M_22104.pdf?sequence=1>

**Neonicotinoid seed-treatment on corn contaminates interseeded cover crops intended as habitat for beneficial insects**

<https://www.ecdysis.bio/_files/ugd/49b043_79d98ccdd8da4e809e61a20063d515bf.pdf>

**Neonics and decline in bird biodiversity in the US, Yijia, Ruiging study:**  
https://www.nature.com/articles/s41893-020-0582-x

**How neonicotinoids, sulfoxaflor and flupradifurone work**: PAN, 2016  
<https://www.pan-europe.info/sites/pan-europe.info/files/public/resources/factsheets/201609%20Factsheet%20What%20is%20a%20neonicotinoid_Flupyradifurone_Sulfoxaflor_EN_PAN%20Europe.pdf>

**Pollinator Decline / Insect Apocalypse:**

Xerces Society: *The science behind the role neonics play in harming bees*. Jennifer Hopwood, Aimee Code, Mace Vaughan et al. (2016)

<https://xerces.org/sites/default/files/2018-05/16-023_01_XercesSoc_ExecSummary_How-Neonicotinoids-Can-Kill-Bees_web.pdf>

**Science, 8/3/2021, Goulson Study combines 232 scientists signatures to restrict neonicotinoids**

Phys Org, 8/2/2021: Study shows common insecticide is harmful in any amount

<https://www.mprnews.org/story/2021/02/26/npr-climate-change-deforestation-threaten-monarch-butterfly-migration>

**Monarch butterflies on verge of extinction**

<https://www.nationalgeographic.com/animals/article/monarch-butterflies-near-extinction>

**Some states are categorizing neonics as restricted use**

<https://www.wbur.org/news/2021/03/05/neonicotinoid-massachusetts-bees>

**Chlorpyrifos Ban and Health Effects for Children**

<https://www.nrdc.org/chlorpyrifos>

**U.S. Senators petition to remove pesticides from National Wildlife Refuges**

<https://secure.everyaction.com/Lwq_f7dn00mugBKAYlfLNw2?contactdata=&emci=706aa919-861a-ed11-bd6e-281878b83d8a&emdi=ea000000-0000-0000-0000-000000000001&ceid=>

Abbreviated list of supporting partners:

Audubon, Minneapolis Chapter

Audubon, River Valley Chapter

Bee Safe Minneapolis

Beyond Pesticides

Friends of Mississippi River

Friends of Roberts Bird Sanctuary

Friends of Scientific and Natural Areas

Great River Coalition

Humming for Bees

LONA, Legacy of Nature Alliance

MEP, Minnesota Environmental Partnership

Minnehaha Falls Landscape

Minnesota Center for Environmental Advocacy

PAN, Pesticide Action Network

Pollinator Friendly Alliance

Pollinate Minnesota

Saint Paul Audubon Society

Sierra Club North Star Chapter

Xerces Society for Invertebrate Conservation

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