POLLINATOR FRIENDLY ALLIANCE
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HF1210: Prohibit neonicotinoid systemic insecticide use in protected areas for fish and wildlife preservation.

Date: February 28, 2021
To: Minnesota House of Representatives, Environment and Natural Resources Finance and Policy Committee

Pollinator Friendly Alliance strongly supports HF1210 which will *prohibit use of neonicotinoid insecticides within protected wildlife areas to include the following DNR managed lands - Minnesota state parks, state forests, aquatic management areas, scientific and natural areas, and wildlife management areas (especially leased crop land).*

Pollinator Friendly Alliance is a Minnesota grassroots pollinator conservation organization. We understand the science and importance of removing lethal and sublethal toxins from the natural environment to preserve and protect pollinators and other wildlife.

Protected wildlife lands are set aside for fish and wildlife preservation. Protecting biological diversity and integrity and conserving the system's wildlife are the central tenets of a refuge system's mission. Neonicotinoids are neurotoxic pesticides that have proven negative impacts on pollinators, migratory birds, and other wildlife. The use of pesticides that have lethal and sublethal effects on wildlife should not be a question since these areas are intended to be a refuge for wildlife species.

Additionally, some protected wildlife areas such as regional parks and DNR scientific and natural areas, lease land for agriculture. Genetically modified (GMO) seeds are often developed to be resistant to a certain pesticide, like a neonicotinoid, ensuring that the pesticide can be used freely without harming the crop yield. Banning the pair (GMO and pesticide-coated seed) and pesticide sprays within wildlife areas protects the lands and wildlife from harmful chemicals.

This bill is not a big ask, park districts, county and regional parks have already removed systemic insecticides and neonicotinoids from their land management toolkits years ago. Currently, there is a verbal or written agreement to prohibit neonicotinoid use in some of these areas, but not all. Neonicotinoid use is still discretionary, and a comprehensive rule needs to be instated to remove this harmful chemical. For lands leased for crops, the lease needs to specifically prohibit the use of pesticide coated seeds and insecticide sprays. *No neonicotinoid insecticides (active ingredients acetamiprid, clothianidin, imidacloprid, thiamethoxam) may be used in the treated seed application or as a spray.*

Recent science shows that neonicotinoid insecticides kill pollinators outright or sicken them at sublethal doses, and contaminate water (Five surface water pesticides of concern, Minnesota MDA 2020), birds are affected (Neonic reduces migration in songbirds, Eng 2019) and most recently effect large mammals (Effects of neonics on physiology and reproduction of white-tailed deer, Berheim 2019). The DNR is about to release data collected in Minnesota from deer spleens showing levels of accumulated neonic pesticides. Two flagship species, monarch butterfly and rusty patched bumble bee (Minnesota state bee) are under the watchful eye of pollinator researchers and the latest 2021 data shows declining numbers of monarchs which means pollinators are still in big trouble requiring immediate action.

Please support HF1210 by voting YES to keeping protected wildlife areas free of wildlife and pollinator-harming pesticides.

Thank you,
Laurie Schneider, Executive Director,
and the Members of the Board of Directors
Pollinator Friendly Alliance
laurie@pollinatorfriendly.org
www.pollinatorfriendly.org

Selected support references:

PESTICIDES IN MINNESOTA WATERS: Minnesota Department of Agriculture, *surface water pesticides of concern* (2020)
https://www.mda.state.mn.us/surface-water-pesticides-concern

POLLINATOR DECLINE: 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

NEONIC EFFECTS ON LARGE MAMMALS: Scientific Reports: *Effects of Neonicotinoid Insecticides on Physiology and Reproductive Characteristics of Captive Female and Fawn White-tailed Deer*. Elise Hughes Berheim, Jonathan A. Jenks, Jonathan G. Lundgren, et al. volume 9, Article number: 4534 (2019)
https://www.nature.com/articles/s41598-019-40994-9

NEONIC 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

German study looks at 63 nature preserves and found that 75% of insect biomass declined from 1989 to 2013 due to nearby agricultural intensification.
http://www.bouldercountybeekeepers.org/wp-content/uploads/2016/02/Orbrioch-Nature-reserve.pdf

Hello Peter,

My name is Andrea and I live in Minneapolis MN. i am writing to you today to express my support for HF1210 bill that works limit the use of neonicitinoids in wildlife management areas. The research makes it abundantly clear how theses chemicals kill important pollinators, birds and other wildlife. There is no place for them on public lands or wildlife management areas!

I am a third generation beekeeper and have seen first hand how neonics effect pollinators. Our environment is full of these chemicals and they must be restricted. I hope you will vote to pass HD1219.

Thanks,
Andrea

Hello,

I am in support of **House Bill HF1210.**

We must support our pollinators!

Sophie Hannig

Dear Mr. Strohmeier, Rep. Hansen, and Rep. Wazlawik,

Thank you for serving on the Environmental & Natural Resources Committee.

I'm Karen Lunde
4322 York Ave S
Minneapolis, MN 5410

I'm writing to support House Bill HF1210 to prohibit pollinator lethal insecticide use in wildlife management areas.

It's good that this Bill has been expanded this year to include the following:
Prohibit use of neonicotinoid insecticides within more protected wildlife areas to include DNR managed lands - Minnesota state parks, state forests, aquatic management areas, scientific and natural areas, and wildlife management areas (especially leased crop land).
WHY: Protected wildlife lands are set aside for fish and wildlife preservation. Protecting biological diversity and integrity and conserving the system's wildlife are the central tenets of a refuge system's mission. Neonicotinoids are neurotoxic pesticides that have proven negative impacts on pollinators, migratory birds, and other wildlife. Additionally, some of these lands are leased out to farmers for crops where pesticides should be prohibited.

Please see that this Bill is passed.

Thank you for your consideration of this matter.

Sincerely,

Karen Lunde (PhD Biology)

I support House Bill HF1210. I believe that we should be protecting our state owned conservation spaces by prohibiting toxic chemical that are harmful to the wildlife, birds, pollinators, and water quality that these spaces are supposed to protect.
The state should be setting an example by prohibiting these chemicals on state controlled lands especially wildlife areas. This should include treated seed, seed coating.

Thanks
Eric Mattson
Buffalo, MN

March 2, 2021
Environment and Natural Resources Finance and Policy Committee

HF 1210: Insecticide use in wildlife management areas prohibited

Chairman Hansen and Committee members:

My name is Margot Monson, I live in St Paul, and am an entomologist and beekeeper.

The MN DNR website describes Wildlife Management Areas for "wildlife watching opportunities include: upland birds, waterfowl, mammals, and more". I want to suggest that you consider "more" to include the many trillions of invertebrates, without which we soon will no longer have the abundance of the wildlife on our landscapes nor in our aquatic habitats . Why, because quite simply invertebrates are, as the famous Harvard biologist E.O.Wilson has said, "the little things that run the world".

We humans are truly dependent on the native insect fauna, because they make it possible for us to have the variety of fruits and vegetables, as well as dairy products, and also provide much of the animal feed needed by livestock. I hope you will consider wildlife management to be seriously concerned about protecting our smallest of animal life.

In my graduate research studying the caddisflies of MN, I worked in several different aquatic habitats, including lakes, rivers, and creeks, including one within a scientific and natural area (SNA) in northern MN, Iron Springs Bog. There are currently over 160 SNAs in MN and each is unique in its ecological description, and often contains many different habitats within its boundaries: for example, Bluestem Prairie SNA, in Clay Co, east of Moorhead includes wet prairie, sedge meadow, dry upland, calcareous fen, and one of the largest remnants of mesic tallgrass prairie in the Midwest. These are special places that deserve to be protected from any disruption, including exposure to chemicals from human activities.

The neonicotinoids are the class of systemic neurotoxic pesticides used most widely all over the world. The different chemicals within this class are used throughout agricultural production in rural MN, and dozens are ingredients in insecticide products on the shelves in every hardware and most of large garden stores throughout MN.

There are many studies that have documented the presence of neonicotinoids, imidacloprid and clothianidin, in aquatic habitats , and when these chemicals are found in excess of toxicity and regulatory thresholds, they may bioaccumulate in aquatic organisms. Studies have shown that these have negatively impacted populations of the invertebrates that are bioindicators of water quality, such as the mayflies and caddisflies, which are integral to maintaining the health of all water bodies.

The amount of pesticides that are accumulating in our waters, in our soil, from agricultural use and even more from some urban areas, is also having devastating effects on all our pollinators.

I am not talking about just honeybees and butterflies, but our native pollinators such as the 20 plus species of bumblebees, and 450 species of other native wild bees. Of the neonicotinoids, studies show that imidacloprid and clothianidin are very toxic to our native bumble bees, such that foraging behavior, growth, and reproduction are impaired.
In addition to our Rusty patched bumble bee, there are other species with declining populations considered at risk.

Pollinator studies also document negative impacts of certain neonicotinoids, clothianidin, dinotefuran, imidacloprid, and thiamethoxam, that are highly toxic to honeybees. Beekeepers have experienced declines in honeybee colonies where these insecticides are used within foraging range of their colonies, coinciding with the introduction of neonicotinoids in agricultural landscapes in early 2000's.

We all know honeybees are critical to the production of certain crops but we need to remember that native bees and other pollinators are the super glue that keeps our wild places together and healthy: our forests, prairies, wetlands, deserts, savannahs, all rely on native pollinators for ecological integrity.

I hope this HF 1210 will be written to include state parks, forests, aquatic management areas, and scientific and natural areas, in addition to what is defined as wildlife management areas for the protection of all wildlife.

Thank you,

Margot Monson
22 Ludlow Ave.
St. Paul, MN 55108

References:

Hladik, M. L., D. W. Kolpin, and K. M. Kuivila. 2014. Widespread Occurrence of neonicotinoid insecticides in streams in high corn and soybean producing region. USA.Environmental Pollution 193:189-196.

Hopwood, J., A. Code, M. Vaughan, D. Biddinger, M. Shepherd, S. Hoffman Black, E. Lee-Mader, and C. Mazzacano. 2016. How Neonicotinoids Can Kill Bees. 2nd ed Xerces Society.

Johnson, J.D., and J. S. Petis. 2014. A survey of imidacloprid levels in water sources potentially frequented by honeybees (*Apis mellifera*) in eastern USA. Water, Air, and Soil Pollution 225(11):2127

Marletto, F., A. Patetta, and A. Manino. 2003. Laboratory assessment of pesticide toxicity to bumblebees. Bulletin of Insectology 56(1): 155-158.

Secord, A., and K. Patnode. 2018. Pilot study to evaluate neonicotinoid pesticides in New York and Pennsylvania streams. U.S Fish and Wildlife Service 1-24.

Starner, K., and K. S. Goh. 2012. Ddetections of the neonicotinoid insecricide imidacloprid in surface waters of three agricultural regions of California, USA, 2010-2011. Bulletin of Environmental Contamination and Toxicology 88(3)316-321.

Tisler, T., A. Jemec, B. Mozetic, and P.Trebse. 2009. Hazard identification of imidacloprid to aquatic environment. Chemosphere76(7): 907-914

Friends of Minnesota
Scientific & Natural Areas

March 1, 2021

Representative Rick Hansen, Chair
House Environment and Natural Resources Finance and Policy Committee
Via e-mail only: Peter.Strohmeier@house.mn

Re: **Support of HF 1210 – A Bill to Ban Neonicotinoid Insecticides on State Land**
Hearing Date: Tuesday, March 2, 2021; 1:00 p.m.

Dear Chair Hansen and Committee Members:

Friends of Minnesota Scientific and Natural Areas (FMSNA) is a Minnesota non-profit, tax-exempt ["501(c)(3)"] corporation organized to protect and enhance Minnesota's Scientific and Natural Areas (SNAs).

These 160+ SNAs are the crown jewels of Minnesota's state land base, protecting some of Minnesota's rarest and most sensitive plant and animal species and the ecosystems upon which they depend.

HF 1210, as introduced, would prohibit neonicotinoid insecticides in state wildlife management areas only. It is our understanding that this bill will be amended on March 2nd to add scientific and natural areas, state parks, state forests, and state aquatic management areas to the list of state lands upon which the use of neonicotinoid insecticides will be prohibited.

Our organization **fully supports HF 1210 and its amendments** that would include SNAs and other state lands. SNAs are often contiguous with other state land classifications, constituting an ecological unit. Insecticides, such as neonicotinoids, used off the SNAs can have adverse impacts on natural resources within the SNAs.

As an example of neonicotinoid insecticides, "**…** the Minnesota Department of Agriculture (MDA) has determined that the **neonicotinoid insecticides** clothianidin and imidacloprid are '**surface water pesticides of concern'** in accordance with the state Pesticide Management Plan (PMP)." [Minn. State Register, December 7, 2020, page 557. Emphasis added.]

Public education efforts to discourage the use of neonicotinoid insecticides have failed to result in meaningful change. Although educational efforts to increase public awareness remain

important, **legislation,** such as HF 1210, **is required to adequately address neonicotinoid insecticide pollution.**

Thank you for all of your excellent work to protect Minnesota's natural resources – and for **your vote in favor of HF 1210, as amended.**

Very truly yours,

Thomas E. Casey

Thomas E. Casey
Board Chair
Friends of Minnesota Scientific and Natural Areas, Inc

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cc: Representative Rick Hansen, via e-mail: rep.rick.hansen@house.mn