

Pesticides on School Grounds

Cass-Clay Community Snapshot

May 2020

Introduction

School gardens have made a regular appearance in Fargo-Moorhead and around the country as a way to provide kids the opportunity to learn about gardening, to gain access to healthier foods, and to increase exposure to vegetables. Parents, teachers, and community members have the health of the community's children in mind and, for some, this has extended to the low-level pesticide exposure children receive at school.

Kids are more vulnerable to the harmful effects of pesticides due to playing at ground-level, putting their hands on their face and mouth regularly, and their rapid development and cell division. A child's neurological and behavioral development may be particularly affected even at low-level exposures to pesticides. Two ways school districts can reduce exposure to students are by implementing Integrated Pest Management strategies and having a pesticide application notification procedure for parents and students.

With schools and pesticides, balance is needed. School districts have voiced concerns about neighbor complaints if they do not spray for dandelions, while some parents want zero spraying on school grounds. There is room for education and negotiation, like with Moorhead Area Public Schools which is trying a test site at Ellen Hopkins Elementary School where they will not be spraying near the school garden and nature playground. They will compare this site with sprayed sites to see if they can continue a no-spray area. The local school districts need community backing and support to make test sites like this successful.

This balancing act cannot begin without a conversation, a starting point. This document aims to be that starting point so parents and community members know the process for pesticide application and who to contact with questions. This community snapshot is a companion document to the *Pesticides on Public Land Snapshot* and the related *Pesticides on Public Land Issue Brief*, both found on the Cass Clay Food Partners' website.

Below is a pest control narrative from local school districts and a section of possible community action steps. The resource section provides some helpful websites, and an appendix contains a list of the school districts' pesticide products. Appendix B consists of a letter from a Moorhead resident to the Moorhead Area Public Schools, which led to a meeting of the letter-writer and school officials to discuss weed control at the school near his house. The resident, Steve Lindaas, later won a seat on the Moorhead City Council.

Cass-Clay Pesticide Use on School Grounds

Cass County

For rural school property, residents should contact the school district's Building and Grounds staff to find out what pest control options they use.

Fargo Public Schools (FPS)

FPS has over 11,500 students enrolled, 25 sites, 324 acres of green space, and a Grounds Department with 4 full-time staff and 2 seasonal positions. They have two staff members who are licensed pesticide applicators, and the bulk of the weed control focuses on dandelions and clover (broadleaf weeds).

The weed control is mostly done externally on an annual contract, and their current contractor is Team Lab out of Detroit Lakes, MN. The contractor is on a broadleaf weed control schedule where the district is split into two zones: Fall and Spring. These zones are based on site acreage. FPS Grounds crew occasionally applies broadleaf control products to manage smaller trouble areas. They spot spray in pavement cracks and around new trees to control plants growing too close to the trunk so they do not damage the trunk of the trees with the string trimmer.

To reduce the risk of exposure to children, Grounds plans the broadleaf control schedule around school-out days and weekend days. They notify the community of their upcoming weed control applications by running a notice in the newspaper, and emails are sent to the schools with their application schedule. Both Grounds and their contractor flags treated sites to notify those who may come on site after application.

Insect control is handled externally. FPS operates Trollwood/Bluestem Center for the Arts in south Moorhead, and the events at this site usually occur in the evening when mosquitoes are most active. They use The Mosquito Man for larvicide in standing water as well as a barrier spray to the site. If there is a surge in mosquitoes, FPS will hire Airborne Custom Spraying to apply a mosquito adulticide prior to a scheduled performance.

As part of their Integrated Pest Management strategy, they use crop selection, cultivation in high traffic areas, and irrigation. For crop selection, they plant grass varieties appropriate for the local climate and the site it will be grown. For example, for a fresh site or repairing a damaged area that has high sun exposure and no available irrigation, they select a drought tolerant seed variety. Regarding cultivation practices, if they have a high traffic site they will aerate regularly to counteract soil compaction. Lastly, they use adequate irrigation, when available, to sustain healthy turf growth. Last season there were cooler temperatures and regular rainfall which allowed unirrigated sites to thrive and avoid dormancy. Avoiding dormancy allowed these sites to better fend off weed growth.

*Contact: Blake Mikesell, Maintenance & Operations Director, mikeseb@fargo.k12.nd.us
<https://www.fargo.k12.nd.us/domain/101>*

West Fargo Public Schools (WFPS)

WFPS has over 11,500 students enrolled, 26 buildings, 326 developed acres, and a Grounds Department of 7 full time staff and 5 seasonal positions. Two staff members have been licensed pesticide applicators for a total of over 40 years, and the main weeds they aim to control are dandelions, clover, and Canadian thistle.

In the spring, Grounds staff puts down granular herbicide on the mulch beds to control grasses and broadleaf weeds. The district hires a contractor annually for broadleaf control applications, and the current contractor is Team Lab out of Detroit Lakes, MN. The contractor sprays for broadleaf weeds the week

after the school year ends to minimize the risk of exposure to students. Spot spraying of weeds in mulch beds and sidewalk cracks and parking lots is monitored and spot-sprayed when weeds have accumulated.

To notify the community and students, applicators flag the areas that have been treated, notice of pesticide applications are posted to the district website, and the administration at each school is sent an email notification of upcoming applications.

Minimal insect control is performed outside of the buildings. Last season Midwest Pest Control was called in to take care of one hornet's nest and one wasp's nest.

The Grounds Department employs Integrated Pest Management strategies to reduce pest levels. They promote healthy turf to out-compete the weeds, and they choose varieties of grasses that thrive in this climate and need minimal maintenance. On their athletic fields, they irrigate, fertilize, overseed, aerate, and topdress the turf to keep it healthy. They also hire summer help through their Vocational Training Services for Individuals with Disabilities to pull weeds in their mulch beds. Beyond these, the Grounds Department explores other methods before turning to pesticides.

*Contact: Jeff Goebel, Director of Buildings & Grounds, jgoebel@west-fargo.k12.nd.us
www.west-fargo.k12.nd.us/domain/99*

Clay County

For rural schools, residents should contact the school district's maintenance personnel to find out what pest control options they use.

Moorhead Area Public Schools (MAPS)

MAPS has over 7,000 students enrolled, 9 sites, 129.2 grass acres, and 48.5 FTE Building and Grounds staff to serve these sites. Most of these staff are for Buildings because they hire out for Grounds on a two-year contract. They are currently putting out a request for bids and will start a new contract this spring. Their last contract was with JT Lawns. The contractor sprays the entirety of the grounds the second week in June, then monitors and spot-sprays after that. Their weed control focuses on cosmetic weeds like dandelions, not noxious weeds.

To reduce the risk of exposure to children, they spray early in the morning before the YMCA kids are on the grounds. They also send a notice out to kids at the beginning of each year through the school district in case anyone has an allergy or sensitivity.

Prior to his election to Moorhead City Council, Steve Lindaas started advocating with MAPS. He met with Jim Smith (Director of Property Services) and Kristin Dehmer (Executive Director of Human Resources and Operations), which led to the district agreeing to post on its website what is being sprayed and when, along with links to the Material Safety Data Sheet (MSDS) of the products used. Also due to this meeting, they will do a no-spray test site at Ellen Hopkins Elementary School around the nature playground, near the fruit trees and garden. They have expressed concern about receiving complaints from neighbors about dandelions blowing into adjoining yards.

Contact: Jim Smith, Director of Property Services, jsmith@moorheadschoools.org
www.moorheadschoools.org/About/District-Office/Departments/Property-Services

Dilworth-Glyndon-Felton Public Schools (DGF)

DGF has over 1,600 students enrolled, two school sites - one in Glyndon and one in Dilworth, and three Building and Grounds staff who oversee these locations. For weed control, these staff members do some of the herbicide spraying where about once per month they will spray the sidewalk cracks and along the fence perimeters.

Most weed control is fulfilled by Dave's Spray Service out of Glyndon, MN who holds an annual contract with the district. Beyond spraying, he is in charge of the health of the turf, fertilizing it in the spring and overseeding it for it to remain healthy to reduce weed growth. He sprays twice per year - once in the spring when school is out and once in the fall after school when there are no scheduled activities. He flags the treated areas so people walking past are aware he has sprayed. Further, he will come spot spray if the Grounds staff alerts him of weeds after they mow. He sprays for many types of weeds, such as dandelions, thistle, clover, lawn violet, and leafy spurge.

Contact: James Nettleton, Building Maintenance Supervisor, jnettleton@dgf.k12.mn.us
<https://www.dgf.k12.mn.us/dgf-departments/facilities-maintenance>

City of Horace

The City of Horace is a part of the West Fargo Public School system. See "West Fargo Public Schools" above for more details on weed control.

Community Actions

Local school districts can:

- Continue implementing Integrated Pest Management strategies, and reviewing what school districts across the country have implemented.
- Continue improving the pesticide application notification systems for parents and community members.
- Consider creating a no-spray, buffer zone around playground areas and near school gardens.
- Collaborate with parent groups or local gardening and wildlife groups to hand-weed problem areas.

What can I do?

- Volunteer at your child's school to hand-weed or create a parent group to do so.
- Work to make your school a Honey Bee Haven (honeybeehaven.org).
- Connect with your school district's Grounds Department if you have questions regarding weed or insect control strategies at your child's school.

Resources

Beyond Pesticides - Safer Schools

<https://www.beyondpesticides.org/assets/media/documents/schools/publications/IPMSuccessStories.pdf>

IPM (Integrated Pest Management) Institute of North America

ipminstitute.org

Pesticide Action Network (PAN)

<https://www.panna.org/resources/schools-playgrounds>

Pesticide Exposure and Child Neurodevelopment

Liu J and Schelar E. Workplace Health Saf. 2012 May; 60(5): 235-243.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4247335/>

For more information, please contact Kim Lipetzky with the Fargo Cass Public Health Office at 701-241-8195 or

klipetzky@fargond.gov

Appendix A: List of Pesticides Used on School Grounds

Table 1: Pest control products used by Cass-Clay Schools in 2019

Jurisdiction	Product
Fargo Public Schools (FPS)	Team 33 Tri-kill - Applied by Team Lab Razor Pro – Limited application by FPS Millennium Ultra 2 – Limited application by FPS Escalade 2 – Limited application by FPS MARC 60 – Applied by FPS
West Fargo Public Schools (WFPS)	T33 Tri Kill Plus: Application for broadleaf control by Team Lab T36 Prometon: Spot treatments on hard surfaces by WFPS SureGuard SC: Spot treatments on hard surfaces by WFPS GlyphoMate 41: Spot treatments on hard surfaces and mulch beds by WFPS Quali-Pro T/I 2.5 G: Pre-emergent granular on mulch beds by WFPS
Horace	Part of West Fargo Public Schools System
Moorhead Public Schools	Roundup (Buccaneer) 2, 4-D (Amine)
Dilworth-Glyndon-Felton	Roundup - Applied by DGF Escalade 2 - Applied by Dave's Spray Service Mec Amine-D - Applied by Dave's Spray Service Trimec - Applied by Dave's Spray Service Strike 3 - Applied by Dave's Spray Service

Appendix B: Letter from Resident to Moorhead Area Public Schools

August 29th, 2019

Hello,

We are writing this letter to have you consider helping create healthier lawns for kids and critters by implementing a no-spray policy.

We live across the road from Ellen Hopkins Elementary School, and have lived there for 20 years. We enjoy seeing children and their parents and caregivers playing in the playground anytime there is daylight - our community loves gathering in this space all four seasons. There is a track to walk or jog around, a small basketball court, and a baseball diamond in addition to the soccer, football, and old-fashioned chasing games we see children of all sizes participating in. We see our neighbors walk with friends or their dogs around the schoolyard. It is an active place!

We also have a front row seat to see the type and frequency of care the Moorhead School district takes of the grounds. Snow removal, de-icing the parking lot, mowing, trimming, and spraying the schoolyard are activities we are acutely aware of from our dining room window. We walk or bike to MSUM every day all year round, and travel through the south school parking lot and across to the north side.

We have a question about the spraying. In most recent times, there has been no markers indicating that spraying has occurred, even though we have watched the spray vehicles zipping across the grounds and have felt the chemical spray droplets hit our faces as we bike to work. Children are sometimes actively playing on the playground. And they frequently play on the grass right after a spraying event. We are wondering what the school district's goal is for spraying the lawn? How will it serve our children and their outdoor activities? Who is aware of, and approves the chemicals that are used? Who is aware of, and approves the frequency of chemical application? How do these chemicals impact the pollinator diversity and the bird life in the area, and potentially the health of the children and dogs who play there?

In these times of increasing loss of habitat (i.e. adding more parking lots, reducing the diversity of vegetation in lawns, killing off species at the bottom of the food chain, etc.) our wildlife species are taking a huge hit on a global scale as well as a local scale. The science is clear - we are in the beginnings of the sixth mass extinction of species on our planet, with impacts for our food and agricultural systems. The fruit trees and gardens that were lovingly planted and are being cared for at Ellen Hopkins need pollinators. The plants need microorganisms in the soil to maximize their uptake of soil nutrients. They need decomposers to do their job and work through the dead plant materials above and below ground.

Minnesota is becoming a leader in the education and engagement of homeowners to consider rethinking their lawn care to encourage healthier lawns for plants, animals, people, and pets. Our state was even featured in the Smithsonian magazine for a new grant program, and the response to the program has been overwhelming! The rusty patched bumblebee is identified by Minnesota as an endangered species, yet making lawn habitats for it to thrive is easy to do. Dandelion flowers are one of the first spring flowers and are an important source of food for bumblebees and other pollinators. Clover are legumes and fix nitrogen in the soil which improves the health of the ecosystem (lawn) that they are in, plus they also serve as food for bumblebees. Monocultures are not as resistant to temperature and humidity swings. Our lawn, which has not been sprayed for 20 years, does not look much different than the school lawn. In fact, when we have had moderate droughts our lawn stayed greener since it had a variety of species.

We did call JT Lawn Services and Landscaping last night and asked for a bit of information about the types of chemicals they are spraying. We also looked up some information on their website. The pesticides they spray have some concerning warnings associated with their application. We have noticed that the workers don't routinely wear protective clothing and eye cover. In addition, as we stated earlier, children are often playing on

the freshly sprayed areas immediately following application. As scientists we don't think that the chemicals we have researched pose an alarming concern for people if they are applied safely and people are kept off, but it is a different story for wildlife.

Applying the precautionary principle would suggest that it would be best to avoid or minimize the application of chemicals if at all possible. Please consider implementing a district wide no-spray policy. Alternatively, consider implementing a no-spray policy at selected properties and/or locations (i.e. high traffic and sensitive to wildlife and plantlife). Ultimately the public needs to be better informed about what is being applied. This information could be posted online using the MHD School District announcements or calendar (and/or on individual school websites). Spraying information should be able to be posted at least the day prior to any planned application, including what is being applied.

Above all, we hope that the school district knows what is being sprayed for, the goal of the spraying, and how applying pesticides will serve the kids and community.

We understand that some neighbors of the school properties might have concerns but we would gladly walk around and talk to neighbors about why the school district is not spraying. This policy could also be incorporated into school literature and even some science lessons.

The school district is currently considering a RFP to provide lawn care and snow removal for the next three year cycle. Hence it would be a good time to consider making a change.

Thank you for your consideration.

Steve Lindaas and Alison Wallace
1123 22nd Ave South
Moorhead, MN 56560

PS: Our children, Jakob (age 28) and Maija Lindaas (age 25), had a wonderful education provided by the Moorhead School District and we cannot speak highly enough of the care and guidance from the community that they received.

UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating'
<https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/https://www.beelab.umn.edu/sites/beelab.umn.edu/files/floweringlawninfoenrtflogo.pdf>

Minnesota Will Pay Residents to Grow Bee Friendly Lawns - Smithsonian, July 2019
<https://www.smithsonianmag.com/smart-news/minnesota-will-pay-residents-grow-bee-friendly-lawns-180972430/>

To help bees, skip herbicides and pesticides, keep lawns naturally diverse
<https://phys.org/news/2016-10-bees-herbicides-pesticides-lawns-naturally.html>

Scientists show cities can serve as a refuge for insect pollinators
<https://phys.org/news/2016-09-scientists-cities-refuge-insect-pollinators.html>

Bee Lawns video - University of Minnesota Extension
<https://extension.umn.edu/lawns-and-landscapes/flowers-pollinators#planting-bee-lawns-1130611>