JOSH GREEN, M.D.
Governor

SYLVIA LUKE
Lt. Governor

SHARON HURD
Chairperson
Board of Agriculture & Biosecurity

DEAN M. MATSUKAWA
Deputy to the Chairperson

State of Hawai'i
DEPARTMENT OF AGRICULTURE & BIOSECURITY
KA 'OIHANA MAHI'AI A KIA'I MEAOLA
1428 South King Street
Honolulu, Hawai'i 96814-2512
Phone: (808) 973-9560 FAX: (808) 973-9613

TESTIMONY OF SHARON HURD
CHAIRPERSON, BOARD OF AGRICULTURE AND BIOSECURITY

BEFORE THE SENATE COMMITTEE ON COMMERECE AND CONSUMER PROTECTION

THURSDAY, FEBRUARY 26, 2026
9:45 A.M.
CONFERENCE ROOM 229 & VIDEO CONFERENCE

SENATE BILL NO. 2103 SD1
RELATING TO PESTICIDES

Chair Keohokalole, Vice Chair Fukunaga and Members of the Committee:

Thank you for the opportunity to testify on Senate Bill 2103, SD1, relating to pesticides. This bill requires the Department of Agriculture and Biosecurity to use consistent units of measurement in its summary to the public and establishes a one-half mile buffer zone for restricted use pesticides (RUPs) around schools and state and county public parks on January 1, 2027. Certain exemptions were established. The Hawaii Department of Agriculture and Biosecurity ("Department") respectfully offers the following comments on this bill.

As of reporting year 2023, the Department has updated its reporting units for the public summary report to pounds of active ingredients and percentage of active ingredients. This was based on previous bills and requests by stakeholders.

With the passage of Act 45, Session Laws of Hawaii (SLH) 2018, and the enactment of one-hundred-foot buffer zones around schools, the Department found unintended consequences. Water treatment plants which used chlorine gas, which is an RUP pesticide, could not operate well during school hours. Additional wells may be impacted by the buffer zone expansions. This would produce consequences for the quality and safety of drinking water.

The Department recommends a later implementation date such as January 1, 2028, to allow outreach to applicators regarding the expansion of the school buffer zone and the additional buffer zones for public parks. This ensures applicators are aware of

the new requirements and allows time for impacted users to adjust their practices and operations.

The Department is concerned that there are no time restrictions for the buffer zones around parks, unlike the schools. As such, RUPs would not be able to be used within one-half mile of a park at any time. The Department recommends inclusion of reasonable time restrictions for parks, similar to schools, if buffer zones are to be expanded.

The restriction of all RUPs, with the exception of the usages listed in the bill, does not serve the purpose of Hawaii Revised Statutes §149A-28 to address drift, as certain formulations such as granules and rodent bait blocks, application methods, such as injections, and use types such as use in a laboratory setting have little to no potential to drift.

Should buffer zones be increased, the Department recommends the need to clarify what pesticide formulations, application methods, and usages are or are not allowable based on their potential to drift.

In addition, the Department has initiated some preliminary analysis. The following are the number of agricultural tax map keys that used RUPs in 2024 and will be affected by the increased buffer zones:

- Kauaʻi – 15 parcels
- Oʻahu – 58 parcels
- Maui – 21 parcels
- Hawaiʻi – 48 parcels

These parcels do not include agricultural parcels which may decide to use RUP products. This analysis is also based solely on agricultural RUP use, and no other uses such as on ornamental and turf which includes sites such as golf courses and landscaped areas.

Finally, the Department is currently involved in conducting a drift monitoring study, as required by Act 45, SLH 2018. Since that study is intended to determine whether drift is taking place, and the impact of drift is occurring within schools, it would be prudent to wait for the results of that study to determine the drift potential in Hawaiʻi, rather than using distances provided from mainland counterparts with vastly different geography, ecology, and use patterns. The report is expected to be completed in 2028.

Thank you for the opportunity to testify to this measure.

JOSH GREEN, M.D.
GOVERNOR | KE KIA'ĀINA

SYLVIA LUKE
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

STATE OF HAWAIʻI | KA MOKUʻĀINA ʻO HAWAIʻI
DEPARTMENT OF LAND AND NATURAL RESOURCES
KA ʻOIHANA KUMUWAIWAI ʻĀINA
P.O. BOX 621
HONOLULU, HAWAII 96809

DAWN N.S. CHANG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RYAN K.P. KANAKAʻOLE
FIRST DEPUTY

CIARA W.K. KAHAHANE
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

Testimony of
RYAN K.P. KANAKAʻOLE
Acting Chairperson

Before the Senate Committee on
COMMERCE AND CONSUMER PROTECTION

Thursday, February 26, 2026
9:45 AM
State Capitol, Conference Room 229

In consideration of
SENATE BILL 2103, SENATE DRAFT 1
RELATING TO PESTICIDES

Senate Bill 2103, Senate Draft 1 requires the Department of Agriculture and Biosecurity to use consistent measurement units in its public summary of restricted-use pesticide applications. Starting 1/1/2027, it establishes a half-mile buffer zone for pesticides around schools during normal school hours, as well as around state and county public parks. **The Department of Land and Natural Resources (Department) provides the following comments and recommended amendments.**

According to the Environmental Protection Agency (EPA), restricted-use products (RUPs) cannot be purchased or used by the public. RUPs can cause serious environmental damage and injuries to applicators or bystanders if used without additional restrictions. The "Restricted Use" classification limits a product's use to certified applicators or individuals working under their direct supervision.

The EPA approves pesticides for specific pests and conditions. For example, "Pesticide A," approved for use on apples, may not be legally applied to grapes, and an insecticide labeled for "outdoor use" may not be legally used indoors. Sometimes, the use of a registered pesticide may be limited to applicators with special training. Restrictions on the use of each product depend on factors such as the product itself, the application site and method, and its potential risks.

While the Department supports the safe use of any toxicant and the exemption in this bill for the Department of Health and its rapid response to control vectors, it believes the restriction is too narrow. The Department recommends amending the bill to extend the exemption to include

invasive species control conducted by the Department of Agriculture and Biosecurity, the Department, and its agents, including the Invasive Species Committees, when responding to biosecurity threats.

Other questions include the reasoning for extending the buffer to 2640 feet (half a mile). This radius could encompass a large area that the Department would recommend mapping to fully evaluate the impact on biosecurity. The Department supports science-based decisions and would appreciate a reference to the research justifying this significant buffer increase.

The Department notes that not all RUPs are being sprayed. Many are in solid form and are unlikely to travel far from where they are applied. For example, many rodenticides come in solid pellets or blocks and are often used in bait boxes. Even though some rodenticides are RUPs, they do not drift. It is better to consider that the buffer size depends on the type and form of application. In other words, the buffer could be larger for liquid sprays, smaller for solids, and even smaller for solids used in bait boxes where drift is unlikely. The Department recommends amending this bill to set a buffer for solid RUPs at 50 feet and 20 feet if applied in bait boxes, given the unlikeliness of solid pesticides to drift from where they are applied, or whatever a solid RUP's label requires, whichever buffer is greater.

The Department promotes the safe use of any toxicant. Department staff are well-trained and take their responsibilities seriously. However, invasive species do not recognize land ownership boundaries, and the Department or its agents need access to areas where invasive species may be present.

Mahalo for the opportunity to comment on this measure.

OFFICE OF THE COUNTY CLERK

Jade K. Fountain-Tanigawa, County Clerk
Lyndon M. Yoshioka, Deputy County Clerk

Telephone: (808) 241-4188
Facsimile: (808) 241-6349
Email: cokcouncil@kauai.gov

Council Services Division
4396 Rice Street, Suite 209
Līhuʻe, Kauaʻi, Hawaiʻi 96766

February 25, 2026

TESTIMONY OF FERN HOLLAND
COUNCILMEMBER, KAUAʻI COUNTY COUNCIL
ON
SB 2103, SD 1, RELATING TO PESTICIDES
Senate Committee on Commerce and Consumer Protection
Thursday, February 26, 2026
9:45 a.m.
Conference Room 229
Via Videoconference

Dear Chair Keohokalole and Members of the Committee:

Thank you for this opportunity to provide testimony in STRONG SUPPORT of SB 2103, SD 1, Relating Pesticides. My testimony is submitted in my individual capacity as a member of the Kauaʻi County Council.

I serve as Chair of the Parks & Recreation / Transportation Committee, and I am confident that this bill is grounded in sound science and basic public health principles. Children are not just small adults. Their developing brains, organs, and immune systems are far more vulnerable to toxic exposures, and they breathe more air per pound of body weight than adults. They are extremely susceptible to pesticide drift and exposure. Numerous peer-reviewed studies have linked pesticide exposure to adverse neurodevelopmental outcomes, learning disabilities, asthma, endocrine disruption, and increased risk of cancer. Schools and parks are places where children should be protected, not placed at heightened risk from chemical drift they cannot see, smell, or avoid.

Pesticide drift is not hypothetical. Restricted Use Pesticides (RUPs), particularly fumigants, are designed to volatilize and move through air and soil. Air monitoring has detected hazardous levels of pesticides more than half (1/2) a mile from treated fields, and in documented cases on the continent, harmful levels were detected from sources miles away. Wind, temperature inversions, and Hawaiʻi's unique microclimates further increase the unpredictability of drift. A one-half mile buffer is a reasonable, science-based safeguard that reflects what we already know about how these chemicals behave in the real world.

I also strongly support the reporting provisions of SB 2103, SD 1. I deeply understand the importance of this section deply because I have personally attempted to transcribe, calculate, and analyze Hawai‘i’s pesticide use data. The current reporting system contains inconsistent units, missing entries, and data gaps that make accurate analysis extremely difficult. This creates uncertainty, underestimation, and confusion for researchers, policymakers, and the public. Improving clarity and consistency is essential if reporting is to fulfill the intent of Act 45, which was passed to make pesticide use transparent and publicly accessible.

Equally important is improving the location framework for pesticide reporting. The current reliance on tax map keys (TMKs) introduces significant uncertainty, as TMKs can cover large areas and do not show where pesticides are applied within a parcel. This prevents pesticide data from being used meaningfully in epidemiological studies, environmental assessments, or exposure modeling. Without better geospatial precision, it is nearly impossible to evaluate proximity to schools, parks, homes, waterways, and wells, or to assess cumulative impacts. Better spatial reporting is critical for science-based decision making and public health protection.

SB 2103, SD 1 sets reasonable boundaries to protect *keiki*, families, and the public while improving transparency. At the same time, we must acknowledge the larger picture: Hawai‘i must support farmers in transitioning away from a heavy reliance on toxic chemicals toward non-toxic, regenerative, and sustainable practices. That transition requires investment, technical assistance, and time. While we work toward that future, this bill represents an immediate, necessary step to reduce harm and protect communities right now while ensuring transparency and clarity about what is being used, when, and where.

Protecting children where they learn and play should not be controversial. SB 2103, SD 1 is a prudent, evidence-based measure that fulfills the fundamental responsibility to safeguard public health and the environment.

Mahalo again for this opportunity to provide testimony in strong support of SB 2103, SD 1. Should you have any questions, please feel free to contact me or Council Services Staff at (808) 241-4188 or via email to cokcouncil@kauai.gov.

Sincerely,

FERN HOLLAND
Councilmember, Kaua‘i County Council

RM:dmc

HAWAIʻI STATE TEACHERS ASSOCIATION

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Executive Director

TESTIMONY TO THE HAWAI'I SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

Item: SB 2103, SD1 – Relating to Pesticides

Position: Support

Hearing: Thursday, February 26, 2026, 9:45 am, Room 229

Submitter: Osa Tui, Jr., President - Hawaiʻi State Teachers Association

Dear Chair Keohokalole, Vice Chair Fukunaga, and members of the committee,

The Hawaiʻi State Teachers Association (HSTA) **supports** S.B. 2103, SD1, which prohibits the application of restricted use pesticides on or within one-half mile of a school property during normal school hours. It also extends this buffer zone to state or county public parks and requires the department of agriculture and biosecurity to use consistent units of measurement when publishing public summaries of restricted use pesticide applications.

As educators, the health and safety of our students is a priority. The legislature notes that pesticide use is associated with neurological deficits and acute health effects in children. Scientific research shows that pesticide drift from agricultural fields can travel up to 4,224 feet, or 0.8 miles, through spray, mist, fumes, odor, or volatilization. Expanding the existing one-hundred-foot buffer zone to one-half mile is a helpful step, supported by scientific evidence, to prevent long-term neurological impacts on the children of Hawaiʻi.

Ensuring a safe, healthy environment supports student learning and well-being. We respectfully ask the committee to pass this legislation.

Mahalo.

HFUU
Hawai'i Farmers Union United
Kaua'i · O'ahu · Moloka'i · Maui · Hawai'i

Aloha Chair Keohokalole, Vice Chair Fukunaga, and Members of the Senate Commerce and Consumer Protection Committee,

The Hawai'i Farmers Union is a 501(c)(5) agricultural advocacy nonprofit representing a network of over 2,500 family farmers and their supporters across the Hawaiian Islands. **HFU supports SB2103.**

Requiring the Department of Agriculture and Biosecurity to use consistent units of measurement in reporting pesticide use ensures transparency and clarity. This change will facilitate better understanding among all stakeholders, including farmers, policymakers, and the community, of the extent and impact of pesticide usage across the state. Consistent reporting empowers us with the information needed to make informed decisions that support sustainable agriculture while protecting our natural ecosystems.

The establishment of a one-half mile buffer zone around schools and public parks during school hours is a precautionary measure that safeguards children and families from potential exposure to harmful pesticides. Such a buffer zone reduces the risk of inadvertent exposure to restricted-use pesticides, ensuring that public spaces remain safe and welcoming for all.

Farmers in Hawaii are invested in nurturing the land responsibly, and with appropriate guidelines like those outlined in SB2103, the agricultural sector can continue to thrive harmoniously alongside our communities.

Mahalo for the opportunity to testify.

Hunter Heaivilin
Advocacy Director
Hawai'i Farmers Union

SB-2103-SD-1
Submitted on: 2/21/2026 10:37:24 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Sylvia Dolena	Testifying for Kulia I Ka'nuu Outreach Services	Support	Written Testimony Only

Comments:

My niece died of leukemia because of toxic farm chemicals.

SB-2103-SD-1
Submitted on: 2/22/2026 8:45:59 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Diane Koerner	Testifying for Greener Hawaii	Support	Written Testimony Only

Comments:

Aloha and Mahalo for reading my testimony. The science is clear, keiki are the most vulnerable to pesticide exposures, and we must provide protections. Please support SB 2103 SD1.

An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they play.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift-prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I get numerous calls from teachers who are getting sick as well as their students from pesticide drift. On Kauai, there are more and more parents who feel they must home school their children to protect their keiki from pesticide exposure.

As a State Senator and pediatrician, our now-governor Josh Green was always concerned about how many keiki were getting illl from pesticide exposure. Despite how much money chemical companies put into re-election campaigns, I can assure you that the public is watching and will no longer vote for people who feel their chilldren's lives don't matter.

Please protect our keiki and pass SB 2103 SD1 and join the fight in protecting our keiki from a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Mahalo,

Diane Koerner

420 Molo St., Kapaa, HI 96746

Greener Hawaii Steering Committee Member

SB-2103-SD-1
Submitted on: 2/22/2026 11:06:48 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Susan B Roberts Emery	Testifying for Green Party of Hawai'i	Support	Written Testimony Only

Comments:

Aloha Chair Keohokalole, Vice Chair Fukunaga, and honorable members of committee,

My name is Susan RobertsEmery, CoChair of the Green Party of Hawai'i. The Green Party members are in VERY STRONG SUPPORT of SB2103 SD1. Pesticide drift is real, it cannot be washed off it absorbs in the skin, and in inhaled by the keiki as they innocently play at the playground.

A strong buffer zone is the Least we can do. We would suggest a mile buffer or complete ban of RUPs. But this is what we have before us so let's do this!

Please pass SB2103 SD1.

Susan RobertsEmery

Green Party of Hawai'i

Paauilo

LEAGUE OF WOMEN VOTERS® OF HAWAII

Senate Committee on Consumer Protection and Commerce
Chair Keohokalole, Vice Chair Fukunaga
Thursday, 26 February, 9:45 AM
Room 229
SB 2103 SD1 – Increased RUP Buffer Zones

TESTIMONY
Sheryl McCarthy, Legislative Committee, League of Women Voters of Hawaii

Chair Keohokalole, Vice Chair Fukunaga, and Committee Members:

The League of Women Voters of Hawaii strongly supports SB 2103 SD1, which will expand the no-spray pesticide buffer zone around schools and parks. This bill helps protect Hawaiian children by stopping the spray of pesticides in school and park areas, increases the public's understanding of the impact of pesticide use in their communities, and will likely contribute to the reduction of overall pesticide use in Hawaii through the education of Hawaiian residents and a greater understanding of pesticide impact.

Hawaii's current pesticide law, established in 2018, requires at least a 100-foot buffer zone for Restricted Use Pesticides (RUPs) but there are concerns that this is insufficient due to the ability of pesticides applied to nearby areas to drift offsite. Additional studies are needed in Hawaii to better understand and measure the drift of pesticides. This bill expands the buffer zone to a full half-mile. There is reporting that over 25 schools in Hawaii are located within a mile of agricultural operations known to use RUPs impacting potentially thousands of children, who are especially vulnerable to pesticide exposure.

The League of Women Voters US (LWVUS) believes that the preservation of the physical, chemical and biological integrity of the earth's ecosystems is essential for the protection of public health and the environment and the interrelationships of air, water and land resources should be recognized in designing environmental safeguards. With respect to pesticides and chemical pollution specifically, the LWVUS supports comprehensive measures to provide maximum protection to human health and the environment from the adverse effects of hazardous materials, including pesticides, taking an integrated approach to prevent harmful exposures through soil, surface and groundwater contamination, bioaccumulation, air pollution and direct contact. The LWVUS believes that the public has the right to know the potentially harmful effects of materials they encounter and that citizens should be included in the planning and decision-making processes of hazardous material management. SB 2103 SD1 is consistent with the LWVUS' longstanding commitment to protecting public health,

advocating for the rights of communities most affected by environmental hazards and ensuring that the government takes a precautionary approach when children's safety is at stake.

Thank you for the opportunity to submit testimony and for the work you are doing to protect Hawaii's children and environment.

Testimony in Support of SB2103: Establishing Buffer Zones to Protect Children from Pesticide Exposure

Hawaii Chapter, American Academy of Pediatrics

The Hawaii Chapter of the American Academy of Pediatrics (AAP) strongly supports SB2103, which seeks to establish buffer zones around schools and other places where children congregate to protect them from the harmful effects of pesticide exposure. As pediatricians, our priority is the health and well-being of children, and it is our responsibility to advocate for policies that safeguard their future.

The Health Risks of Pesticide Exposure

The American Academy of Pediatrics has long recognized the dangers of pesticides, particularly to infants, children, and pregnant women. In 2012, the AAP published a Policy Statement on Pesticides and Children, emphasizing that chronic low-level pesticide exposure can lead to developmental delays, neurobehavioral disorders, respiratory illnesses, and even life-threatening conditions such as cancer.

Children are uniquely vulnerable due to their developing bodies, increased exposure relative to body weight, and behaviors such as playing on the ground and hand-to-mouth activity.

Currently, in Hawaii, many schools are located in close proximity to agricultural fields where pesticides are frequently applied. Classrooms with open windows—designed to take advantage of Hawaii's natural climate—are particularly susceptible to pesticide drift. Our keiki spend hours in these environments, exposing them to harmful chemicals without adequate safeguards in place. Many of the teachers are also pregnant women and their developing fetuses are particularly at risk of not only premature labor but of physical defects and developmental abnormalities.

Scientific Support for Buffer Zones

Scientific research overwhelmingly supports the need for protective buffer zones around schools. A study published in *PLOS Biology* examined the effectiveness of California's pesticide regulations, which prohibit applications within 0.4 km (approximately 0.25 miles) of schools and childcare facilities during school hours. The study found that pesticide exposure is linked to poorer birth outcomes, neurodevelopmental impairments, respiratory issues, and increased risks of chronic diseases. While no single buffer distance can fully eliminate risk due to varying pesticide properties and application methods, implementing protective zones is an essential step in reducing exposure.

Findings from the CHAMACOS study, which has followed children in agricultural communities for over two decades, reveal significant associations between prenatal pesticide exposure and lower IQ, increased ADHD symptoms, and impaired lung function.

These long-term effects highlight the critical need to prevent exposure before irreversible harm occurs.

The Urgent Need for Legislative Action

Hawaii has an opportunity to follow California's lead by establishing strong, evidence-based buffer zones to protect children from unnecessary pesticide exposure. While additional research is always beneficial, there is already ample scientific evidence to justify urgent action. Implementing buffer zones is a simple yet effective policy that prioritizes child health without imposing undue burdens on agricultural operations.

SB2103 represents a necessary step toward protecting our keiki from the well-documented dangers of pesticide exposure. We urge the legislature to act swiftly to pass this bill and establish meaningful safeguards for Hawaii's children.

Mahalo for considering our testimony.

Hawaii Chapter, American Academy of Pediatrics

February 23, 2026

To: The Honorable Jarrett Keohokalole, Chair
Members, Senate Committee on Commerce and Consumer Protection

From: Lindsay Stovall
Director, State Affairs

RE: SB 2103 SD 1 – COMMENTS; AMENDMENT REQUEST

The American Chemistry Council (ACC) appreciates the opportunity to submit the following comments relative to SB 2103 SD 1, legislation that establishes a one-half mile buffer zone for pesticides around schools during normal school hours and state and county public parks.

Structural insulation treated with pesticides serves as a critical tool for deterring termites and other destructive pests while simultaneously improving a building's thermal efficiency and comfort. In Hawaii, where termite pressure is severe and year-round, this insulation provides a passive, built-in layer of protection within walls and other cavities. It effectively complements other standard prevention practices such as inspections, moisture control, and proper construction detailing. For Homeowners, it represents a practical way to combine energy efficiency, fire resistance, and pest deterrence in a single building material.

Prohibiting pesticide-treated structural insulation in Hawaii would remove a vital protective measure against termite activity. Such a restriction would increase the risk of structural damage, raise long-term repair and maintenance costs for residents, and reduce access to the durable, energy-efficient materials necessary to meet code requirements in termite-prone environments.

For these reasons, ACC is seeking an additional exemption for structural insulation and proposes the following amendment language:

> *Beginning January 1, [~~2019,~~] 2027, no person shall apply a restricted use pesticide on or within [~~one hundred feet~~] one-half mile of a school property during normal school hours[;] or a state or county public park; provided that this section shall not apply to whole structure fumigation[;], pesticides specifically used for the purposes of treating and preserving wood or structural insulation, pesticides specifically used by the department of*

health for the purposes of rapid response and control of vector, or pesticides applied by pest control operators licensed pursuant to 460J; provided further that if this section is determined to conflict with any pesticide application information listed on the pesticide label, the more restrictive provision shall apply."

Thank you in advance for considering our views. If you have any questions, please do not hesitate to contact me at 916-448-2581 or via email at Lindsay_Stovall@americanchemistry.com. You may also contact ACC's Hawaii based representative Ross Yamasaki at 808-531-4551 or via email at ryamasaki@808cch.com

SB-2103-SD-1
Submitted on: 2/23/2026 7:13:26 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Nancy Redfeather	Testifying for Ka Ohana O Na Pua	Support	Written Testimony Only

Comments:

There have been terrible examples of why this Bill is necessary such as the Waimea Canyon Elementary School poisoning on Kauai. Our Keiki have enough hurdles to jump without harming their ability to think or have a healthy life. Let's draw this very obvious line and support teachers and keiki in Hawaii's schools. Mahalo

HAWAII CROP IMPROVEMENT ASSOCIATION

SB2103, SD1 – In Opposition
Relating to Pesticides
Senate Committee on Agriculture and Environment

Date: Thursday, February 26, 2026
Time: 9:45 AM
Place: Conference Room 229

Aloha Chair Keohokalole, Vice Chair Fukunaga and Members of the Committee:

The Hawaii Crop Improvement Association (HCIA) appreciates the opportunity to provide testimony **in opposition to SB2103, SD1** which requires the Department of Agriculture and Biosecurity to use consistent units of measurement in its summary to the public on the amounts of restricted use pesticides applied and establishes a one-half mile buffer zone for pesticides around schools during normal school hours and state and county public parks.

HCIA's opposition is to the provisions of the bill related to the half-mile buffer zone. The U.S. Environmental Protection Agency (EPA) already regulates the use of pesticides to protect the environment, applicators, and community. Based on scientific research and data, pesticide labels will require applicators to use buffers when necessary. The half-mile buffer zone proposed in this bill is not based on science.

The negative impacts of a half-mile buffer zone would be significant for local agriculture. It would reduce a farmer's ability to maximize their property to grow food. For smaller farms, this could represent a sizable portion of their land. Proposals like half-mile buffer zones just create unnecessary additional hardship and disincentives to enter into or grow Hawaii's agriculture industry.

Act 45 (2018 legislative session) already put into law a 100-foot buffer and this is workable for farmers. We ask the committee to defer a bill that only makes conditions more difficult for our local agriculture producers, especially when scientific data does not support the proposal.

Mahalo for the opportunity to submit our testimony in opposition.

The Hawaii Crop Improvement Association is a Hawaii-based non-profit organization that promotes modern agriculture to help farmers and communities succeed. Through education, collaboration, and advocacy, we work to ensure a safe and sustainable food supply, support responsible farming practices, and build a healthy economy.

EARTHJUSTICE

SENATOR JARRETT KEOHOKALOLE, CHAIR
SENATOR CAROL FUKUNAGA, VICE CHAIR
SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

TESTIMONY IN **SUPPORT** OF SENATE BILL 2103

Thursday, February 26, 2026, 9:45 a.m.
Conference Room 229, State Capitol
415 South Beretania Street, Honolulu, Hawai'i

Aloha Chair Keohokalole, Vice Chair Fukunaga, and Committee Members:

Earthjustice **supports Senate Bill 2103** to establish half-mile buffer zones for restricted-use pesticides ("RUP") around schools and public parks during school hours. This bill is necessary to protect our keiki, educators, and other school staff from the lifelong harms that can result from RUP exposure.

For over a decade, our office has advocated for safeguards against pesticide spraying operations in Hawai'i. We have represented communities in West Kaua'i, Maui, Moloka'i, and Hawai'i Island in the fight for stronger policies to reduce community pesticide exposure and protect human health.

RUPs are designated as "restricted" because of their inherent health risks. Scientific studies have shown that pesticide use has long-lasting, even life-long, effects on human health. Children are most susceptible because they are not fully developed. Increasing the buffer zone from 100 feet to a half mile would add a necessary layer of protection between dangerous pesticides and our keiki, ensuring safe access to education and public spaces.

This bill will not end RUP use in Hawai'i, nor will it make it impossible for farmers to continue to farm. Instead, it institutes commonsense measures that will protect keiki and their futures while also allowing for RUP usage at a safer distance.

Mahalo nui for the opportunity to testify on this measure.

Harley M. Broyles, Esq.
Associate Attorney
Earthjustice, Mid-Pacific Office

Chair Keohokalole
Vice Chair Fukunaga
Senate Committee on Commerce and Consumer Protection

Tuesday, February 26, 2026
2:00 PM

TESTIMONY IN STRONG SUPPORT OF SB2103 SD1 RELATING TO PESTICIDES

Aloha Members of the Senate Committee on Commerce and Consumer Protection,

The Hawai‘i State Youth Commission was first created through Act 106 in 2018, “to advise the governor and legislature on the effects of legislative policies, needs, assessments, priorities, programs, and budgets concerning the youth of the State.” The Hawai‘i State Youth Commission’s Legislative Committee on the Environment is in **strong support** of **SB2103 SD1**.

As mentioned in the bill, pesticide use is associated with neurological deficits and acute health effects in children. These risks carry particular weight for our youth, whose developing brains and bodies are more vulnerable to environmental toxins and who have little choice over where they attend school or spend time outdoors. When pesticide drift reaches these spaces, it places children at risk during activities that should be safe and supportive of their growth.

SB 2103 matters because it confronts the reality that the current one hundred foot buffer zone around schools is unacceptable and does not reflect the level of care or commitment our leaders should have to Hawai‘i’s youth. As stated in the bill’s findings, scientific evidence shows that pesticide drift can travel up to one-half mile from the site of application. Maintaining a

buffer zone that falls so far short of this reality leaves children inadequately protected and undermines the intent of existing pesticide regulations.

While a one-half mile buffer zone may not eliminate all risk, it represents a meaningful step in the right direction, and a step that is grounded in science and centered on prevention rather than reaction.

As young people who will live longest with the consequences of today's environmental decisions, the Youth Commission believes that protecting our youth from preventable pesticide exposure is a fundamental responsibility. Therefore, the Hawai‘i State Youth Commission strongly urges the committee to **PASS SB2103 SD1**.

Mahalo for the opportunity to testify,

Hawai‘i State Youth Commission
hawaiistateyc@gmail.com

SUGARLAND FARMS, INC.
PO BOX 27
KUNIA, HAWAII 96759
(808) 688-2892

SB2103sd1 Pesticides
Sen CPN Decision Making Hearing – 9:45 AM
Thursday, February 26, 2026
Testimony By: Jonathan Jefts

Chair Keohokalole, Vice Chair Fukunaga, and Members of the Senate CPN Committee:

I am Jonathan Jefts, Manager of Sugarland Farms, Inc. Our family farms on Oahu and Molokai grow approximately 1 million pounds of import replacement produce weekly. These crops include bananas, green bell peppers, cabbage, Chinese cabbage, cucumbers, and several varieties of tomatoes and watermelons.

We respectfully oppose SB2103sd1, which proposes a consistent unit of measurement for active RUP ingredients and requires changing the 100-foot buffer zone to a one-half-mile buffer zone for schools and parks. We note that SB2103sd1 exempts from the buffer zones the 1) use of wood treatment, 2) DOH Vector Control treatment and 3) 460J pest control operators, who use RUP applications for households and other structures. Yet there are no exemptions for licensed pesticide applicators in agriculture.

As a commercial agricultural business, we use the tools of Integrated Pest Management, general and restricted use pesticides that include organic pesticides when necessary to grow produce that is competitive with imported mainland or international produce. We use pesticides registered by the US EPA, which have been vetted for safety and ensure the protection of communities, farm workers and sensitive populations. We follow federal and state requirements for application and reporting.

Oppose Expansion of Buffer Zones Near School Properties, State and County Parks:
Expanding the buffer zone from 100 feet to 2,640 feet (half a mile) can lead to the taking of active agricultural production lands and increase local food insecurity. We ask for due diligence in mapping how much productive ag lands will be lost from the collective proposed buffer zones of 2,640 miles (SB2713 and SB2103). The loss of farming with responsible and legally approved general and restricted use pesticides due to buffer zones and the prohibition of pesticide application may make Hawaii-grown produce non-competitive with imported mainland and international produce. It raises the question of who compensates the farmer for the taking of land in production.

Bad actors, those not in compliance with pesticide applications, should be caught and face the consequences, and have the opportunity to be educated on appropriate pesticide applications. Adverse policies and laws should not restrict the majority of farmers who comply. Sufficient resources for DOA inspectors with the flexibility to conduct site visits in the evening, on weekends, and on holidays, during daytime hours are needed because farmers are working those hours

Thank you for the opportunity to present testimony.

Date: February 24, 2026

To: Sen. Jarrett Keohokalole, Chair
Sen. Carol Fukunaga, Vice Chair
Members of the Senate Committee on Commerce & Consumer Protection

RE: Support for SB 2103 SD1, Relating to Pesticides

Hrg: Thursday, February 26, 2026, at 9:45 AM, Conference Room 229

Hawai'i Public Health Institute (HIPHI)[1] **supports SB 2103 SD1**, which establishes a one-half mile buffer zone for pesticides around schools during normal school hours and state and county public parks.

A Preventable Harm

In our state today, restricted-use pesticides are used in significant quantities, with nearly 215,000 pounds applied on O'ahu in a single year, much of it near residential and school communities.[2] Under current law, however, buffer zones around schools may be as little as 100 feet during school hours.

For volatile or drift-prone pesticides, that distance may not be sufficient to protect children, whom the American Academy of Pediatrics has found to be subject to significantly increased risks of illness and other adverse health and development impacts from prolonged pesticide exposure.[3]

Acute Health Risks

Scientific evidence shows that pesticide exposure is associated with increased risks of asthma, neurodevelopmental harm, endocrine disruption, and cancer. Children are particularly vulnerable because their bodies are still developing, meaning they experience greater exposure relative to their body weight.

Studies have linked pesticide exposure to impaired cognitive development, attention and behavioral disorders, and lower IQ, as well as respiratory problems and endocrine-related developmental effects.[4] Research has found that children with higher prenatal exposure to pesticides had average IQ scores about 7 points lower than those with the lowest rates of exposure, demonstrating measurable

[1] Hawai'i Public Health Institute's mission is to advance health and wellness for the people and islands of Hawai'i. We do this through expanding our understanding of what creates health of people and place, fostering partnerships , and cultivating programs to improve policies, systems, and the environments where people live, learn, work, age, and play.
[2] The Scope Of Heavy Pesticide Use On Oahu Is Finally In The Public Domain, Honolulu Civil Beat, 2023.
[3] Pesticide Impacts on Communities and Schools, Richard G Ames, International Journal of Toxicology, October 2002.
[4] Pesticide Exposure and Child Neurodevelopment, Workplace Health and Safety, 2012.

impacts of pesticide drift on brain development.[5]

Advancing Health Equity
Because many pesticides can drift beyond their application sites, communities near treated fields may be exposed simply by proximity, including at schools and nearby residential areas. Moreover, exposure to pesticide drift is not experienced equally. Communities located closest to agricultural operations are often rural, Native Hawaiian, or of lower socioeconomic status. Therefore, strengthening buffer zones around sensitive areas is a matter not just of mitigating exposure, but of promoting overall health equity.

Building On Prior Success
Hawai'i is a leader in pesticide regulation. In 2018, Hawai'i became the first state in the nation to ban the neurotoxic pesticide chlorpyrifos because of its well-documented health hazards, setting a national precedent for states taking independent action against pesticide abuse.[6]

Across the country, jurisdictions have adopted stronger buffer zones to protect children and communities from pesticide exposure. California has established a statewide pesticide buffer zone of approximately one-quarter mile around schools and childcare facilities during school hours.[7] Other states have adopted expanded setback distances, notification requirements, and streamlined reporting systems to minimize the environmental harm of agrochemical operations on nearby residents.

A Sensible Solution
Establishing stronger buffer zones is an evidence-based public health strategy to prevent illness caused by chemical toxicity, particularly for children, who are biologically more vulnerable to environmental toxins. We urge you to pass this bill to continue Hawai'i's legacy of prioritizing the health of our keiki.

Mahalo,

Kris Coffield

Kris Coffield
Policy and Advocacy Associate

[5] Prenatal exposure to organophosphate pesticides and IQ in 7-year-old children, Environmental Health Perspectives, 2011.
[6] Hawaii Bans Pesticides Containing Chlorpyrifos, National Caucus of Environmental Legislators, 2018.
[7] New Rule Puts Limits on Pesticide Use Near Schools, Californians for Pesticide Reform, 2017.

Senate Committee on Commerce and Consumer Protection

Hawai'i Alliance for Progressive Action (HAPA) Strongly Supports: SB2103 SD1

Thursday, February 26th, 2024 9:45 a.m. Conference Room 229

Aloha Chair Keohokalole, Vice Chair Fukunaga and Members of the Committee,

HAPA strongly supports SB 2103 SD1, which requires the Department of Agriculture and Biosecurity to use consistent units of measurement in its summary to the public on the amounts of restricted use pesticides used. Establishes a one-half mile buffer zone for pesticides around schools and state and county public parks.

The buffer zone proposed in SB 2103 SD1 will provide a buffer between children while in school or in parks and the use of highly toxic Restricted Use Pesticides (RUPs) that is supported by peer-reviewed epidemiological research. This measure aims to provide a small layer of protection for Hawai'i's children from the potential impacts of highly toxic RUPs drifting through their schools by increasing RUP buffer zones schools from 100 feet to ½ mile during school hours and around parks where our keiki recreate.

Despite mounting evidence of the dangers even more common general use pesticides pose, such as RoundUp/Glyphosate, have on children's health[1]; **this measure would not impact any general use pesticide application or provide buffers for use.** This measure only applies to the State listed class of highly hazardous toxic pesticides that are already restricted in Hawai'i (RUPs).

Background

HAPA was founded in response to community members living near large agrochemical fields asking for the right to know what pesticides are being used adjacent to their homes, schools, waterways and other sensitive areas. After over a decade-long effort to provide residents with clear information on what they may be exposed to, the implementation of Act 45 still has not provided communities with that information.

We applaud the legislature and the Ige Administration for taking the important first step of establishing 100 foot RUP buffer zones around schools during school hours in 2018 by passing Act 45 and starting to require self reporting along with the ban on chlorpyrifos. However, an abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for extending these buffer zones to ensure even greater protections for Hawaii's children as well as school teachers and staff.

[1] Evslin, Lee MD (2021) Breakfast at Monsanto's

It is worth noting that although California has enacted similar legislation requiring ¼ mile pesticide buffer zones around schools, the farmworkers and communities living near agricultural areas had originally advocated for 1 mile buffer zones due to the abundance of research documenting pesticide drift and related health impacts up to a mile or further from the fields where they were applied. If Hawaiʻi enacts ½ mile buffer zones we will lead the nation on RUP buffers protecting our children in schools.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure. [2]

We are very concerned about long-term pesticide exposure at school [3], which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions. Public and scientific research is increasingly raising concerns about the combined effects of pesticide "cocktails," or exposure to mixtures. In the last six years, pesticide companies submitted over 140 patents containing multiple active ingredients, 96 of which "had at least one … application that claimed or demonstrated synergy between the active ingredients in the product, a total of 69 percent."[4] Combination effects are the norm not the exception, yet have not been considered in the pesticide regulatory system.

Findings from 2019 RUP Usage Data

2019 marked the first year RUP reporting data became publicly available. Analysis of this data has revealed that specific communities in Hawaiʻi, such as North-Central Oʻahu (Waialua-Wahiawā) are consistently and heavily exposed to drift prone pesticides in close proximity to schools.[5] Specific communities in Hawaiʻi, such as West Kauaʻi are facing large combinations of RUP usage, and likely chronic exposures from frequent applications.

The data suggests that additional public health and environmental protections are needed to protect our communities. Widespread protections for communities and sensitive environments are needed, but buffer zones around schools and parks are common sense when addressing children's exposure to such toxic RUPs.

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[2] American Academy of Pediatrics, Pesticide Exposure in Children, December 2012, vol. 130, issue 6.

[3] Ames, Richard G. "Pesticide Impacts on Communities and Schools." International Journal of Toxicology 21, no. 5 (October 2002): 397–402. doi:10.1080/10915810290096621.

[4] Donley, N. "Toxic Concoctions: How the EPA ignores the dangers of pesticide cocktails." Center for Biological Diversity, July 2016: 3-4.

[5] Jedra, Christina CivilBeat "The Scope Of Heavy Pesticide Use On Oahu Is Finally In The Public Domain" https://www.civilbeat.org/2023/02/the-scope-of-heavy-pesticide-use-on-oahu-is-finally-in-the-public-domain/

An in-depth analysis of data from 2019-2021[6] shows particularly concerning heavy use of fumigants, 1,3-dichloropropene (1,3-D or trade name Telone II) and Metam Sodium. Data suggests approximately between 100,000-200,000 lbs of these active ingredients are being applied to north central Oʻahu, annually. These fumigants are known to be carcinogenic and highly prone to drift and cause respiratory illness. In 2020, 1,3-D was found in the air at high levels that significantly increase cancer risk up to seven and a half miles away from the closest known application sites.[7] These fumigants are capable of increasing cancer risk for adjacent communities.[8] They are used as fumigants to sterilize the soil, killing beneficial organisms and the life of the soil. 100 foot buffer zones are simply not supported by scientific research, which widely demonstrates pesticides are known to drift over a mile and cause health impacts.[9]

Data obtained from 2019-2021 was mapped (via TMK parcel) and the reporting data suggests that these buffer zones will only apply to a handful of rural communities, and schools / parks throughout Hawaiʻi. These areas are west side Kauaʻi (Kekaha to ʻEleʻele), Central Oʻahu, Central Mokokaʻi, Makawao and a handful of other schools upon very close inspection. These few areas are where kids are the most at risk in close proximity to RUP use and need buffers the most.

The 2019 data shows approximately 99% of all the RUP use reported in all of Hawaiʻi for agriculture, landscape, conservation etc was reportedly used by only 10 entities (5 of which grow food) and 97% of all the use reported in Hawaiʻi was only 5 entities. Subsequent years also show that a handful of RUP users dominate usage statewide. This data clearly shows that farmers are not widely using RUPs and therefore not many areas throughout Hawaiʻi would see buffers generated by this measure - the sector on a whole would not be meaningfully impacted. This measure seeks to protect our most vulnerable children from exposure to known highly hazardous toxic pesticides.

Childhood Cancer Threat

Children who live in areas of high agricultural activity in the US from birth to age 15 experience a significantly increased risk of childhood cancers.[10] A 2007 meta-analysis of studies linking pesticide exposure concluded:

> "A number of epidemiological studies consistently reported increased risks between pesticide exposures and childhood leukemia, brain cancer, neuroblastoma,

[6] https://storymaps.arcgis.com/stories/1fbfb09ad12746be8df6df082fe61886
[7] Nathan Donley and Sarah Aird, October 2021, OP ED: California Needs to quit ignoring the public health and climate cost of pesticides
[8] Sharon Lerner, (2021) The Intercept: Environmental Group Charges EPA with Ignoring Evidence of Cancer
[9] EWG: Schools Near Pesticide Spray Zones Could Lose Health Protections, Nov 2 2022
[10] Carozza L et al. "Risk of Childhood Cancers Associated with Residence in Agriculturally Intensive Areas in the US." Environmental Health Perspectives. Jan 2008; 116(4): 559-565.

non-Hodgkin's lymphoma, Wilms' tumor, and Ewing's sarcoma. An extensive review of these studies was published in 1998 (Zahm & Ward, 1998 Zahm, S. H. and Ward, M. H. 1998. Pesticides and childhood cancer. Environ. Health. Perspect, 106(suppl. 3): 893–908.). Fifteen case-control studies, 4 cohort studies, and 2 ecological studies have been published since this review, and 15 of these 21 studies reported statistically significant increased risks between either childhood pesticide exposure or parental occupational exposure and childhood cancer. Therefore, one can confidently state that there is at least some association between pesticide exposure and childhood cancer."[11]

Research continues to confirm the pesticide-cancer link with a 2016 Spanish population-based case-control study finding: "[O]ur result points to the same conclusion as many previous studies and suggests that living in the proximity of cultivated land could be associated with many types of cancer in children."[12]

Harm to Children's Brains

The most recent study of the UC Berkeley research team, CHAMACOS, indicates that combined organophosphate (OP) applications near pregnant women have a negative effect on the IQ of their children, where some individual OPs may not. Every 522 pounds of OPs applied within a 1 kilometer (0.62 mile) radius of a pregnant Salinas Valley woman's home correlated with a 2 point drop in her children's IQ compared to a control group.[13] Recent evidence also suggests that social adversity exacerbates the adverse effects of prenatal OP exposure on IQ.[14]

The science connecting pesticide exposure to neurological impairment is not limited to prenatal studies. Out of the womb, children with higher levels of OP pesticide breakdown products in their urine are more likely to have ADHD.[15] [16]

A study of pre- and postnatal pesticide exposure and neurodevelopmental impairment, concluded that "postnatal and, to a lesser extent, prenatal exposure to pesticides, are negatively associated with children's neuropsychological development, regardless of the way of measuring exposure." In the same study, greater urinary levels of OP breakdown products were associated with poorer performance on IQ and verbal comprehension tests. Increased agricultural acreage

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[11] Infante-Rivard C and Weichenthal S. "Pesticides and Childhood Cancer: An Update of Zahm and Ward's 1998 Review." Journal of Toxicology and Environmental Health, Part B Vol. 10 , Iss. 1-2,2007.

[12] Gómez Barroso et al. "Agricultural crop exposure and risk of childhood cancer: new findings from a case–control study in Spain." Int J Health Geogr (2016) 15:18.

[13] Gunier RB et al. "Prenatal Residential Proximity to Agricultural Pesticide Use and IQ in 7-Year-Old Children." *Environ Health Perspect* June 2016

[14] Stein LJ et al. "Early childhood adversity potentiates the adverse association between prenatal organophosphate pesticide exposure and child IQ: the CHAMACOS cohort." Accepted manuscript in Neurotoxicology (2016). doi: 10.1016/j.neuro.2016.07.010.

[15] Bouchard M et al. "ADHD and urinary metabolites of organophosphate pesticides." Pediatrics 2010 125(6): 1270-1277.

[16] Kuehn B. "Increased Risk of ADHD Associated with Early Exposure to Pesticides, PCBs." JAMA July 2010, 304(1):27-28.

around the child's residence postnatally was used as a proxy for cumulative exposure to pesticides-- and was found to be associated with decreased IQ, processing speed, and verbal comprehension scores. [17]

Epidemiological studies have mainly linked prenatal pesticide exposure to effects on children's neurodevelopment, but we also know that school-age children's brains are still developing. It should be noted that there is scant data on postnatal exposures of children to pesticides, due in part to research challenges that are separate from our concerns.

Despite Hawa''i banning the organophosphate insecticide chlorpyrifos in 2018, there are still several other organophosphates used heavily in North-Central Oʻahu according to the self-reported data HAPA has analyzed.

Harm to Children's Lungs

Exposure of children to OP pesticides can also exacerbate asthma symptoms. A UC Berkeley CHAMACOS Study found that higher levels of OP metabolites in urine were associated with respiratory symptoms and coughing at 5 and 7 years of age.[18]

A wealth of data shows that pesticides drift much further than ½ mile beyond their target application due to wide, dust migration and volatilization.

For example, one national report[19] on drift-related pesticide poisonings found that in eleven states, 85 percent of people impacted would have been protected by a one-mile buffer zone, and 76 percent of the cases occurred at distances more than one-quarter mile from the application site.

A UC Berkeley CHAMACOS study[20] documented chlorpyrifos, (now banned in Hawaii, California and New York) in homes up to 1.8 miles from treated fields. Another UC Davis MIND Institute[21] study documented significantly increased rates of autism in children of mothers who lived up to one mile from treated fields during pregnancy. The California Childhood Leukemia

[17] B. González-Alzaga et al. "Pre- and postnatal exposures to pesticides and neurodevelopmental effects in children living in agricultural communities from South-Eastern Spain." Environment International 85 (2015) 229–237

[18] Raanan R et al. "Early life Exposure to OP pesticides and pediatric respiratory symptoms in the CHAMACOS Cohort." Environmental Health Perspectives, 123:2 179-182. 2015.

[19] Soo-Jeong Lee et al. "Acute Pesticide Illnesses Associated with Off-Target Pesticide Drift from Agricultural Applications: 11 States, 1998–2006" Environmental Health Perspectives [2011]

[20] Harney et al. "Pesticides in Dust from Homes in an Agricultural Area" American Chemical Society, Oct 2006

[21] Shelton et al. "Neurodevelopmental Disorders and Prenatal Residential Proximity to Agricultural Pesticides: The CHARGE Study" Environmental Health Perspectives, Oct. 2014

study[22] found elevated concentrations of several pesticides in dust of homes up to three-quarters of a mile from treated fields.

Importance of Consistent Units of Measurement

SB 2103 SD1 also importantly requires the Department of Agriculture to report out RUP usage in consistent units of measurement, ideally by TMK. The reporting for RUP (Restricted Use Pesticide) use data in Hawai'i, has only recently started to become available, as of 2019. Because of poor reporting, it has taken considerable effort to make sense of the data, do the calculations, and format them into consistent metrics.

HAPA worked with our partners and independent contractors to convert the 2019-2021 data into a consistent unit of measurement (pounds), as data is reported in gallons, pounds and ounces, to GIS map the amounts used per TMK, pounds per acre, frequency of application, and combinations of pesticides. Each RUP formulation requires a different calculation to convert usage data into a consistent unit of measurement. This is important to allow for an "apples to apples" comparison of RUP usage in each community and statewide.

Conclusion

Despite an abundance of evidence documenting the migration of pesticides well beyond the ½ mile buffer zones proposed in SB 2103 SD1 we recognize that ½ mile still will provide a significant improvement on the current 100 feet.

The threats are real and well established and the most at risk are our children in a handful of specific communities throughout Hawai'i. Please don't wait any longer to protect our children in schools from pesticide drift.

Please support SB 2103 SD1.

Mahalo for your consideration.

Respectfully,

Anne Frederick
Executive Director

[22] Gunier et al. "Determinants of Agricultural Pesticide Concentrations in Carpet Dust" Environmental Health Perspectives, July 2011

SB-2103-SD-1
Submitted on: 2/24/2026 9:01:33 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Elaine SanJose	Testifying for Kahua O Kakou, Hui (Corporation)	Support	Written Testimony Only

Comments:

I am in total support of SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawai‘i can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Department of Hawaiian Homes Land Management has been using multiple toxic pesticides to manage lands located here on the Big Island of Hawai‘i specifically on Mānā Road where the ‘Āina Mauna Legacy Program was established for us, Native Hawaiians for the pass 17-years, all the while they have been poisoning all these acres with Roundup Pesticides and other toxic chemicals to erradicate the Australian Gorse that has taken over 49,100 acres of land promised to us, Native Hawaiians. The D.H.H.L had been conducting aerial spraykng of said toxic chemicals to do this erradication and they have even had it posted in The Hawai‘i Tribune-Herald Newspaper to alert the community of their activities. There‘s been reports of these so-called toxic chemicals was being stored up in a Matson Container located on Humu‘ula Sheep Station by a family who has been caretakers of this lands since February 10, 2020 and just recently the D.H.H.L. Land Manager, Joseph Kūali‘i Camera-Lindsey, phone called via text this family that he was on his way to pick up these said toxic chemicals and his main reason he was picking it up was because he didn‘t want these toxic chemicals to be leaking out of the containers. But little

does he know is it was leaking for a very long time in that Matson Container. D.H.H.L. had their oen policy and regulations as far as, these toxic chemicals snd pesticides were not to be used on any D.H.H.L. Lands but obviously they don‘t gollow theie own policies.

Please protect our keiki and pass SB 2103 SD1.

Elaine P.K. SanJose, Hilo Town

Testimony from Scott Dahlman, Senior Director Government Affairs, CropLife America

Testimony in Opposition to SB 2103 – Relating to Pesticides
Senate Committee on Consumer Protection
Friday, Feb. 26, 9:45 am

Aloha Chair Keahokalole and members of the committee,

CropLife America (CLA) is the national association representing manufacturers, formulators, and distributors of pesticides products used in agriculture production. We support and promote scientific-based policy in the regulation of pesticide products at both the state and federal level. We are opposed to SB 2103 – specifically the buffer zone mandate.

Act 179 which was signed into law in 2025 appropriates over $600,000 from the the Pesticide Use Revolving Fund to the Department of Agriculture to continue their Statewide pesticide drift monitoring study. Per the committee report, the "measure supports the timely collection of accurate data to determine whether and how Hawaii's children are impacted by off-target pesticide drift. We applaud the legislature's support of the study and look forward to their findings.

We strongly recommend that the state legislature defer this bill until the DOA completes their study. Farmers continue to struggle with sustainability and viability. This bill would contribute to their challenges by removing valuable agricultural land from their efforts. Mahalo for your time.

HAWAI'I FOOD+ POLICY
Honolulu, HI 96813
food@purplemaia.org

February 25, 2026

To: Chair Jarret Keohokalole, Vice Chair Carol Fukunaga and the Senate Committee on Commerce and Consumer Protection

Subject: **SB2103 SD1**, Relating to Pesticides

Aloha,

I am writing to support SB2103 SD1 with comments. This measure would require the Department of Agriculture and Biosecurity to increase transparency to the public around restricted use pesticides (RUPs). A one-half mile buffer zone would be established for pesticides used around schools during school hours, as well as state and county public parks. In 2018 Act 45 was passed which created a 100-foot buffer zone, so this measure would increase the zone.

There are countless scientific studies that have found that pesticide use can have harmful and lasting effects on our health, which was confirmed by the legislature through the passing of Act 45. Farmers and agriculture companies using RUPs may argue that they rely on these chemicals to provide food for our islands, but it cannot come at the expense of public health and safety. Therefore, an increased buffer zone that would allow for more distance between harmful chemicals and spaces where children and the public inhabit is necessary.

Transparency around the amounts of RUPs applied using consistent measurements is also important. Civil Beat reported that when staff from the Hawai'i Alliance for Progressive Action tried to analyze records related to pesticide use, that "they were hard to make sense of" and "took years" of sifting, transcribing, and plotting in on a map so that the public could understand what was happening around them in their communities.[1] There should be a better system implemented so data can be made more easily available to the public.

This measure was amended to exempt the Department of Health and licensed pest control operators from the increased buffer zone requirement because of their work around mitigating the spread of disease through various pests. It would seem appropriate that there still be standards in place to help ensure the effects of things like pesticide drift do not affect the public.

[1] Jedra, C. (2023, February 1). The Scope Of Heavy Pesticide Use On Oahu Is Finally In The Public Domain. Honolulu Civil Beat. https://www.civilbeat.org/2023/02/the-scope-of-heavy-pesticide-use-on-oahu-is-finally-in-the-public-domain/

HAWAI'I FOOD+ POLICY
Honolulu, HI 96813
food@purplemaia.org

I urge the committee to pass SB2102 SD1. I appreciate the opportunity to testify on this measure and thank you for your consideration.

Mahalo,
Sydney Haas & the Food+ Policy Team
#fixourfoodsystem

The Food+ Policy internship develops student advocates who learn work skills while increasing civic engagement to become emerging leaders. We focus on good food systems policy because we see the importance and potential of the food system in combating climate change and increasing the health, equity, and resiliency of Hawai'i communities.

In 2026, the cohort of interns are undergraduate and graduate students and young professionals working in the food system. They are a mix of traditional and nontraditional students, including parents and veterans, who have backgrounds in education, farming, public health, nutrition, and Hawaiian culture.

SB-2103-SD-1
Submitted on: 2/25/2026 8:54:07 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Hana Diller	Testifying for La?akea Village	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawai‘i can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Hana, pā‘ia

LATE

SB-2103-SD-1
Submitted on: 2/25/2026 2:30:31 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Colehour Bondera	Testifying for Kanalani Ohana Farm	Support	Written Testimony Only

Comments:

Aloha CHair and Committee Members,

As a long-time small-scale farmer, I have had to pay a lot of attention to use of pesticides, primarily by others.

That said, what we need is more consistency and protection from pesticide use, and this legislation supports that...

Please protect those who are vulnerable by approving this legislation. Hawaii must protect itself from these products.

Many thanks for your attention.

Sincerely,

Colehour Bondera

KANALANI OHANA FARM

Honaunau, HI 96726

Hawai'i Nurses' association
The Voice That Makes The Difference
OPEIU Local 50

LATE

Rosalee Agas Yuu, RN
President

1600 Ala Moana Blvd Suite 100
Honolulu, HI 96815

Tel: (808) 531-1628
Fax: (808) 524-2760

TO: Senate Committee on Commerce and Consumer Protection
FROM: Hawai'i Nurses' Association
RE: Testimony in Strong Support of S.B. 2103 S.D.1 - Relating to Pesticides
DATE: February 26, 2026 - 9:45 AM - CR 229

Aloha Chair Keohokalole, Vice Chair Fukunaga, and Members of the Committee on Commerce and Consumer Protection,

The Hawai'i Nurses' Association strongly supports S.B. 2103 S.D.1, which establishes a one-half mile buffer zone for the application of restricted-use pesticides around schools during normal school hours and around state and county public parks, and requires consistent public reporting of pesticide use.

As nurses, we care for Hawai'i's keiki and families every day and see firsthand the health impacts associated with environmental exposures. Scientific evidence shows that pesticide drift can travel significant distances and is linked to acute illness and long-term neurological harm in children. The measure correctly recognizes that the current one-hundred-foot buffer is not sufficient to protect public health and that drift can occur up to 0.8 miles from the point of application.

From the perspective of nurses, our duty is prevention. We are on the front lines treating asthma attacks, skin and eye irritation, headaches, nausea, and developmental concerns in children—conditions that research has associated with pesticide exposure. Reducing exposure through reasonable buffer zones is far more effective, humane, and cost-efficient than treating preventable illness after it occurs.

As parents, nurses share the same concerns as every family in Hawai'i: when our children are in school, playing in parks, or participating in outdoor activities, they should be safe from chemical exposure. Parents should not have to worry that the air their keiki breathe during recess, after-school sports, or time at the playground may contain substances that can affect their neurological development and long-term health.

As park users and community members, we view public parks as places of healing, exercise, and connection. Parks are used by kūpuna, pregnant women, infants, and individuals with chronic illness—populations that are particularly vulnerable to environmental toxins. This bill recognizes that protection should extend beyond school grounds to these shared public spaces.

In addition, the requirement for **clear and consistent public reporting of restricted-use pesticides** is essential for transparency, community trust, and informed health care. When nurses and physicians understand what exposures may be occurring in a community, we are better able to assess symptoms, provide appropriate care, and educate patients.

S.B. 2103 S.D.1 strikes a thoughtful balance by maintaining important exemptions for public health vector control and licensed structural pest control while prioritizing the protection of children and the broader community.

This measure is a proactive investment in the health of Hawai‘i. It aligns with the core mission of nursing: to protect, prevent, and promote the well-being of our communities.

For these reasons, the Hawai‘i Nurses Association urges your strong support for S.B. 2103 S.D.1.

Mahalo for the opportunity to testify.

Respectfully submitted,

Rosalee Agas-Yuu, RN
President, Hawaii Nurses Association

LATE

P.O. Box 253, Kunia, Hawai'i 96759
Phone: (808) 848-2074; Fax: (808) 848-1921
e-mail info@hfbf.org; www.hfbf.org

February 26, 2026

HEARING BEFORE THE
SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

TESTIMONY ON SB 2103 SD1
RELATING TO PESTICIDES

Conference Room 229 & Videoconference
9:45 AM

Aloha Chair Keohokalole, Vice-Chair Fukunaga, and Members of the Committee:

I am Brian Miyamoto, Executive Director of the Hawaiʻi Farm Bureau (HFB). Organized since 1948, the HFB is comprised of 1,800 farm family members statewide and serves as Hawaiʻi's voice of agriculture to protect, advocate and advance the social, economic, and educational interests of our diverse agricultural community.

The Hawaiʻi Farm Bureau respectfully opposes SB 2103, which specifically and unfairly targets farmers and ranchers, but not other RUP users by greatly expanding the current buffer zones on use to over twenty-five times further than what the law is now AND extending the buffer zone to include areas within a half a mile around state and county public parks, any time of day or night.

As active community members, our primary focus is on the safety and health of our families, our employees, and our communities as we produce the food and other products that residents and visitors need and enjoy. **We support evidence-based pesticide laws and regulations, along with appropriate enforcement and penalties for violations.**

The proposed mandates in SB 2103 SD1 impose bans on farmers' use of necessary crop protection tools without providing a clear, demonstrable benefit to public health or environmental safety. Any amendments to pesticide regulations should prioritize practicality and fairness while maintaining accountability and transparency. The public and State leadership want more local food production. They are beginning to fully recognize that invasive species have taken over our State and must be controlled; however, many do not comprehend that farmers have been dealing with these destructive imported species for decades and it is a constant battle. **Measures like this will make it impossible for farmers to continue to farm.**

No farmer can buy or use RUPs without undergoing the rigorous certification process required by the Department of Agriculture and Biosecurity
SB 2103 was amended to exempt the Department of Health and licensed pest control operators from the restricted use pesticides one-half mile buffer zone requirement. Why

aren't Hawaiʻi's farmers also exempted from this requirement? Are they any less important than these other categories? Each user of an RUP must comply with very stringent pesticide laws and regulations; in fact, the State regulations encompass 27 pages of requirements regarding prerequisites, qualifications, training, examinations, continuing education, recordkeeping, annual reports, and more. Agriculture producers who need to use RUPs must go through this rigorous process to become certified by the Department of Agriculture and Biosecurity ***before*** they can purchase or use an RUP.

Health Study does not indicate need for expanded buffer zones
A study of over 89,000 farmers who use pesticides, and their spouses is relevant to this discussion since the health of the pesticide users and spouses would likely indicate how pesticides may affect disease risk. The Agricultural Health Study (a collaborative effort of the National Cancer Institute, the National Institute of Environmental Health Sciences, the Environmental Protection Agency, and the National Institute for Occupational Safety and Health) is the largest, longest (over 25 years) and most referenced study of cancer and other health outcomes of farmers who use pesticides.
A key finding is that farmers have lower rates of disease compared to the rest of the population.

Why does this bill target agriculture?
SB 2103 SD1 is especially troubling because it targets agriculture – making farmers look bad – while failing to consider some important facts.

- There have been no recent reported incidents of pesticide issues around schools that would justify expansion of the current restrictions.
- The bill focuses on farming operations' use of restricted use pesticides (RUPs) but ignores the evidence about pesticide-related incidents.

  Here's what the data shows: of all documented pesticide-related incidents at schools in Hawaiʻi, ***none*** were caused by the farming operations targeted in this bill. Of all poisoning incidents involving children in Hawaiʻi, the vast majority happen inside a home, not because of a nearby farming operation. More than a dozen reports have studied pesticide residue in air and water samples across the islands. They show no indication that Hawaiʻi's farmers are posing any significant risk to the environment.

Who uses RUPs?
In fact, the combined use of RUPs by farms in Hawaiʻi is a fraction of that used by non-farmers. The large majority of restricted use pesticides sold in Hawaiʻi is used by public agencies and non-agricultural businesses to protect public health, and to protect private residences, commercial facilities and other property from termites. However, for some unexplained reason, the current restrictions and those of this bill target agriculture.

Existing Laws Already Address Drift:
Current regulations mandate that pesticide users prevent drift, with violations enforceable under State and federal law. DAB actively enforces these regulations and investigates any suspected drift violations.

- Drift prevention is already the applicator's responsibility, regardless of the distance

or pesticide type.

- Federal and state regulations establish an Application Exclusion Zone (AEZ), which prohibits applicators from applying pesticides in areas where people are present. The AEZ distance depends on the application type and is set at either 25 or 100 feet. This ensures public safety without unnecessarily burdening agricultural operations.

Pesticides are necessary tools

In Hawaiʻi, a primary State goal is to become more self-sufficient, especially with regard to food production. However, this goal is proving difficult to achieve because of our year-long perfect climate for pests and disease, and the continuous influx of near impossible-to-control noxious and invasive species that make farming here a constant battle. Pesticides are among the necessary tools that farmers use to minimize damage and loss of their crops.

No justification for expanding the buffer zone

Expanding the buffer zone to one-half mile unfairly penalizes farmers, reduces usable agricultural land, and exacerbates food insecurity in Hawaiʻi. Any amendments to pesticide regulations should prioritize practicality, fairness, and science-based decision-making while maintaining accountability and transparency.

We respectfully ask our leaders across the state to please set aside unjustified legislation that discourages farming, and instead, support laws and policies that will strengthen agriculture's foundation in Hawaiʻi.

Thank you for your continued support of our local farmers who look forward to providing more of Hawaiʻi's agricultural needs.

LATE

SB-2103-SD-1
Submitted on: 2/25/2026 5:56:21 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Jocelyn Whei-Tsi Grandinetti	Testifying for Sustainable Coastlines Hawai?i	Support	Written Testimony Only

Comments:

Sustainable Coastlines Hawai‘i supports SB2103. Because of our organization’s mission to inspire communities to care for coastlines, we are very concerned about how actions up mauka affect the health of our oceans. Pesticide use is one of the many applications on land that in turn contaminates our waterways, negatively affecting humans and coastal ecosystems. SB2103 serves as an important step away from irresponsible pesticide use by creating buffer zones around schools for the safety of Hawai‘i’s keiki.

LATE

LAND USE RESEARCH
FOUNDATION OF HAWAII
1100 Alakea Street, Suite 408
Honolulu, Hawaii 96813
(808) 521-4717
www.lurf.org

February 26, 2025

Senator Jarrett Keohokalole, Chair
Senator Carol Fukunaga, Vice Chair
Senate Committee on Commerce and Consumer Protection

Strong Opposition to SB 2103, SD1 RELATING TO PESTICIDES (Requires the Department of Agriculture and Biosecurity to use consistent units of measurement in its summary to the public on the amounts of restricted use pesticides applied. Beginning 1/1/2027, establishes a one-half mile buffer zone for pesticides around schools during normal school hours and state and county public parks. Establishes certain exemptions. [SD1].)

Thursday, February 26, 2025, at 9:45 a.m.
State Capitol, Conference Room 229, & Videoconference.

The Land Use Research Foundation of Hawaii (LURF) is a private research and trade organization originally founded in 1979, whose members include major Hawaii landowners, developers, utility companies, and land use professionals. LURF's mission is to research, educate, and advocate for reasonable, rational, and equitable land use planning, laws, and regulations that encourage well-planned economic growth, agriculture, housing, renewable energy, commercial and industrial uses, health care, and tourism, while safeguarding Hawaii's significant natural, historic, and cultural resources, public health, and safety.

LURF members have been strong supporters of agriculture, collectively have led the state in agricultural lands and production over the past decade, and have partnered with the Hawaii Farm Bureau Federation and its Neighbor Island chapters (Hawaii Farm Bureau) to advocate for, and pass numerous laws that support agriculture, including the Right to Farm and Important Agricultural Lands (IAL) laws. The Hawaii Farm Bureau and LURF have consistently supported initiatives, programs, funding, and incentives for diversified agriculture, a broad range of farming and ranching, and the use of safe farming practices to sustain and improve Hawaii's agricultural industry and food safety and security. In addition to land stewardship, LURF members consistently employ Sustainable Agriculture and compliance with Good Agricultural Practices (GAPs).

LURF appreciates that this bill may be well-intended, however, under the circumstances, we must respectfully state our **strong opposition to the current version of SB 2103, SD1**, which proposes an unnecessary one-half mile buffer zone.

SB 2103, SD1. This measure would require the Department of Agriculture and Biosecurity (DAB) to use consistent units of measurement in its summary to the public on the amounts of restricted use pesticides applied; and establish a one-half mile buffer zone for pesticides around schools during normal school hours and state and county public parks.

LURF's Position. LURF **strongly opposes the current version of SB 2103, SD1,** based upon, among other things:

- **The proposed on-half mile buffer zone is arbitrary, and not justified based on facts, or scientific research and data ("science").**

- Based on science, **the U.S. Environmental Protection Agency (EPA) already regulates the use of pesticides to protect the environment, applicators, and community. The EPA does not require half-mile buffer zones.**

- **Also, based on science, pesticide manufacturers and labels already require applicators to use buffers when necessary. We understand that the manufacturers and labels do not require a half-mile buffer zone.**

- **Act 45 (2018) already imposes 100-foot buffer zones around school properties.** We believe that the current buffer zone is working for the community and farmers.

- **Prior data from DAB's predecessor, the State Department of Agriculture (DOA) confirmed that 68% of the actual sales of Restricted Use Pesticides (RUP) in Hawaii are to homeowners and other users - NOT to commercial agricultural producers.**

- **According to a prior DOA study, homeowners (not commercial agricultural production) are responsible for the majority of pesticide incidents and evacuations relating to Hawaii's schools, and that none were due to the actions of commercial agricultural operations.**

- This bill would have **the unintended negative consequences of a half-mile buffer zone would be to severely limit the farming area, or making it impossible to farm for agricultural operations by *bonafide* farmers, new farmers, small family farms,** and other groups engaged in agricultural production; and

- This measure is **counter-productive to the State Plan's agricultural goals relating to agricultural sustainability,** including, but not limited to, promoting agricultural viability, diversified agriculture, and the IAL law.

For the above reasons, LURF **strongly opposes SB 2103, SD1,** and respectfully urges your favorable consideration in **deferring this measure and holding it in these Committees**. Thank you for the opportunity to present testimony for this matter.

SB-2103-SD-1
Submitted on: 2/21/2026 10:10:10 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Kendall Krumm	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Kendall Krumm, Kailua

SB-2103-SD-1
Submitted on: 2/21/2026 10:24:24 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
emily gambino	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Mahalo,

Emily Gambino
Makawao, HI

SB-2103-SD-1
Submitted on: 2/21/2026 10:34:53 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Lori Kizer	Individual	Support	Written Testimony Only

Comments:

Please protect us and pass this important bill relating to pesticide drift. Mahalo.

SB-2103-SD-1
Submitted on: 2/21/2026 10:39:55 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Nicki Tedesco	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Nicki Tedesco, Kihei, HI

SB-2103-SD-1
Submitted on: 2/21/2026 10:41:19 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
cheryl hendrickson	Individual	Support	Written Testimony Only

Comments:

Long-term pesticide exposure of keiki while they are at school or at play in our parks constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

This is even more immediate with the recent federal government executive order to ramp up glyphosate production. Which in turn equates to more applications.

SB-2103-SD-1
Submitted on: 2/21/2026 10:51:01 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Ruta Jordans	Individual	Support	Written Testimony Only

Comments:

I would like to say that this is and should be a no-brainer. Our children are the future. Why blast them with pesticides? Why allow any pesticides near them? (Why allow pesticides in the first place?) The health of our keiki matters. Please support this measure.

SB-2103-SD-1
Submitted on: 2/21/2026 11:00:13 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Kate Smithers	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Kate Smithers, Kalaheo

SB-2103-SD-1
Submitted on: 2/21/2026 11:08:41 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
William Caron	Individual	Support	Written Testimony Only

Comments:

Aloha Chair, Vice Chair, and Members of the Committee,

I am testifying in strong support of SB2103, which would establish science-based pesticide buffer zones to protect our most vulnerable communities, especially our keiki.

An overwhelming body of scientific evidence confirms that pesticide drift poses a serious threat to public health, and that children are uniquely susceptible to its harmful effects. Their developing bodies absorb toxins more readily, and exposure is linked to increased risks of cancer, neurological damage, and respiratory problems. When keiki are at school or play in our parks, they deserve an environment free from this preventable danger.

Our current protections are not aligned with this science. A generic 100-foot buffer zone is woefully inadequate. Research demonstrates that certain volatile pesticides can drift over a mile from the application site, exposing entire communities without their consent. Analysis of Hawai‘i’s own pesticide use data confirms that many neighborhoods remain heavily exposed to these drift-prone chemicals.

SB2103 is a common-sense, precautionary measure that follows the evidence and follows the lead of states like California, which has successfully implemented protective buffer zones around schools while maintaining the nation’s most robust agricultural economy. This bill proves that protecting public health and supporting a productive local food sector are not mutually exclusive goals; they are both essential to a sustainable future for Hawai‘i.

The American Academy of Pediatrics has been clear: we must take additional precautions to shield children from unintended pesticide exposure. Establishing meaningful buffer zones around schools, childcare facilities, hospitals, and parks is a fundamental step in fulfilling that duty.

We have the scientific imperative and the moral obligation to act. I urge you to pass SB2103 to ensure that our laws provide real, equitable protection for every resident, and to prioritize the health of our keiki over the convenience of outdated and hazardous application practices.

Thank you for the opportunity to testify.

SB-2103-SD-1
Submitted on: 2/21/2026 11:09:44 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Amy	Individual	Support	Written Testimony Only

Comments:

Thank you for considering this important bill that protects our children and our community.

I am in favor of SB2103 SD1. Our health and safety is a priority over landscaping and the health of our most vulnerable should be at the forefront.
A half mile radius between spraying chemicals and schools and parks is an easy way to safeguard our people.

Thank you,

Amy Jindra

Kapaa, HI

SB-2103-SD-1
Submitted on: 2/21/2026 11:14:48 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Lindsay Roth	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

SB-2103-SD-1
Submitted on: 2/21/2026 11:18:36 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Christy Shaver	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Christy Shaver
Lahaina

SB-2103-SD-1
Submitted on: 2/21/2026 11:20:56 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Jeannine Johnson	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1

SB-2103-SD-1
Submitted on: 2/21/2026 11:26:28 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Will M Davis	Individual	Support	Written Testimony Only

Comments:

The rapid rise of Roundup is correlated with the rapid rise of 22 US diseases, including autism, and their associated mortalities. Reference: Swanson, et al., GENETICALLY ENGINEERED CROPS, GLYPHOSATE AND THE DETERIORATION OF HEALTH IN THE UNITED STATES OF AMERICA, Journal of Organic Systems, Vol. 9, No. 2 (2014).
Link: https://www.organic-systems.org/journal/92/abstracts/Swanson-et-al.html

The corrupted and corporate dominated FDA and EPA declare Roundup is safe.

Buffer zones will protect our children in schools from Roundup and other dangerous pesticides.

SB-2103-SD-1
Submitted on: 2/21/2026 11:29:47 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Clinton Brewer	Individual	Support	Written Testimony Only

Comments:

Please for the future of our aina and keiki. Everything is poisoned enough.

SB-2103-SD-1
Submitted on: 2/21/2026 11:45:03 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Regina Gregory	Individual	Support	Written Testimony Only

Comments:

We have needed this for a long time.

SB-2103-SD-1
Submitted on: 2/21/2026 11:45:52 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
kimdonghyeon	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

kimdonghyeon

SB-2103-SD-1
Submitted on: 2/21/2026 11:50:14 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Jonathan	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

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I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Jonathan Simonds, Hilo

SB-2103-SD-1
Submitted on: 2/21/2026 12:02:38 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
B.A. McClintock	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

SB-2103-SD-1
Submitted on: 2/21/2026 1:13:11 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Ken Schwartz	Individual	Support	Written Testimony Only

Comments:

Dear Council.. I am surprised that there is even the need to write testimony for a Bill so necessary to protect the citizens of Hawaii from the deadly effects of pesticide drifts that have plagued the state for decades. Protect the future now! With Aloha, Ken and Stephanie Schwartz ~ Koloa, Hawaii

SB-2103-SD-1
Submitted on: 2/21/2026 12:53:20 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Annalise Hart	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Aloha,

Annalise Hart

SB-2103-SD-1
Submitted on: 2/21/2026 1:48:25 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Cristina Bacchilega	Individual	Support	Written Testimony Only

Comments:

I am writing in support of SB2103 SD1 which establishes "a one-half mile buffer zone for pesticides around schools during normal school hours and state and county public parks." Who would want persticides any closer to our Hawai‘i keiki? Please, do the right thing!

SB-2103-SD-1
Submitted on: 2/21/2026 1:50:57 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Lisa Galloway	Individual	Support	Written Testimony Only

Comments:

Please do the right thing.

SB-2103-SD-1
Submitted on: 2/21/2026 1:57:46 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Susan Douglas	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

S Douglas, Kihei

SB-2103-SD-1
Submitted on: 2/21/2026 2:02:15 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Elizabeth Hansen	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1 . An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.Mahalo

Elizabeth Hansen

Hakalau HI 96710

SB-2103-SD-1
Submitted on: 2/21/2026 2:06:23 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Rodger Hansen	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1 . An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Mahalo

Rodger Hansen

Hakalau HI 96710

Testimony in Support of SB 2103 SD1

Increased Restricted Use Pesticide (RUP) Buffer Zones Around Schools & Parks

Aloha Chair and Members of the Committee,

My name is Brit M Ashe. I'm a childcare professional with over fourteen years of experience as a nanny, postpartum doula, and educator. I have cared for children from infancy through early elementary years in private homes, schools, and community environments across multiple states.

I respectfully submit this testimony in strong support of SB 2103 SD1.

Children are not small adults. Their bodies are still developing. Their neurological, respiratory, and immune systems are more vulnerable to environmental exposure. In my work, I have supported children with asthma, sensory sensitivities, immune fragility, and developmental variability. I have seen firsthand how environmental stressors, even those considered "within acceptable limits", can disproportionately impact young children.

Schools and parks are meant to be safe environments for learning, regulation, and play. Establishing a one-half mile buffer zone for restricted use pesticides during school hours and around public parks is a reasonable, prevention-oriented policy.

Prevention matters.

Caregivers operate with precaution every day; from safe sleep practices to food preparation to air quality awareness. We do not wait for harm to be proven catastrophic before acting. We mitigate risk because children deserve that level of protection.

This bill also strengthens transparency by requiring consistent units of measurement in public reporting. Clear information allows families and communities to make informed decisions about their health and safety.

As someone whose professional responsibility is safeguarding children's physical and emotional well-being, I believe SB 2103 SD1 reflects thoughtful, evidence-informed policy. Protecting children from pesticide drift exposure is not partisan, it's practical.

Care is infrastructure. Infrastructure requires standards.

I urge you to support SB 2103 SD1.

Mahalo for your time and consideration.

Respectfully,

Brit M Ashe

Independent Childcare Professional

Justbritthanks.com

SB-2103-SD-1
Submitted on: 2/21/2026 2:08:38 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Mark Martella	Individual	Oppose	Written Testimony Only

Comments:

Have you ever had to watch a child succumb to cancer? How about a teenager or an adult? We have an opportunity here to do the right thing for our children, our families and our Islands.

Please help keep our kids save from cancer causing harmful pesticides. Creating a sufficient buffer zone is a powerful 1st step and should be followed by a complete sitewide ban.

The harmful effects of patricide use has been scientifically proven in many places over the past few decades. These chemicals cause long term health problems for those close to the zones where they are being used. Here in Hawaii, the rains wash remnants of the dangerous chemicals into our oceans and onto our beaches and reefs. The places where we live, play and get our fish.

These chemicals have detrimental effects to the people (especially children), the land, the ocean and the underwater ecosystems. This is a proven scientific fact.

Please do not let the interests of large chemical companies dominate our unique paradise any longer. Do the right thing and prevent any and all pesticide use, especially in close proximity to our most valuable resource, our children.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks. The use of these chemicals cause health threats that can lead to cancer, neurological, and respiratory damage, among multiple other medical conditions.

Please protect our keiki and *pass SB 2103 SD1*.

SB-2103-SD-1
Submitted on: 2/21/2026 2:19:30 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
joe kassel	Individual	Support	Written Testimony Only

Comments:

As A Physician with an awareness of the toxicity of many pesticides and the vulnerability of children's developing systems, I am grateful to see this legislation and sincerely hope that it passes.

Dr Josewph Kassel, N.D.

SB-2103-SD-1
Submitted on: 2/21/2026 2:19:41 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Ramona Hussey	Individual	Support	Written Testimony Only

Comments:

Senators, I urge you to vote in support of SB2103, which would increase the No Spray zone for various pesticides around schools and parks. This protection in the very least we owe our keiki - not to poison them while they play or go to school.

Much aloha for doing the right thing with this bill.

Ramona Hussey

Mother of 3 children born in Hawai'i.

SB-2103-SD-1
Submitted on: 2/21/2026 2:44:51 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Charlene K. Rowley	Individual	Support	Written Testimony Only

Comments:

Aloha e Senators,

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Kiana Rowley, Kula Maui

SB-2103-SD-1
Submitted on: 2/21/2026 3:08:50 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Mary Lu Kelley	Individual	Support	Written Testimony Only

Comments:

Aloha.

I support this bill that calls for the Department of Agriculture and Biosecurity to use consistent units of measurement in its summary to the public on the amounts of restricted use pesticides applied. Beginning 1/1/2027, establishes a one-half mile buffer zone for pesticides around schools during normal school hours and state and county public parks.

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Thank you,

Mary Lu Kelley

Koloa, Kauai

SB-2103-SD-1
Submitted on: 2/21/2026 3:41:41 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Val Hertzog	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Three years ago the HIDOT sprayed 1.3 miles from our school in Anahola and a month later .3 miles from school. Everyone got sick both times. There must be strict regulations for spraying especially near schools.

Please protect our keiki and pass SB 2103 SD1.

Val Hertzog, Kilauea

SB-2103-SD-1
Submitted on: 2/21/2026 4:08:53 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Valerie Weiss	Individual	Support	Written Testimony Only

Comments:

I am in full, strong, support of this bill for the health of those nearby.

SB-2103-SD-1
Submitted on: 2/21/2026 5:32:02 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Judith White	Individual	Support	Written Testimony Only

Comments:

This is important, common sense protection of our keiki's health. Please pass!

Judith White, Kapaa

member, Kauai Indivisible

SB-2103-SD-1
Submitted on: 2/21/2026 6:52:24 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Xiaoyun Neo	Individual	Support	Written Testimony Only

Comments:

I strongly support the passing of SB 2103 SD1.

An abundance of scientific literature on pesticide drift and the susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides.

The current distance of buffer zones is not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift. California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

SB-2103-SD-1
Submitted on: 2/21/2026 8:37:52 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Ezgi Green	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1 to protect Hawai‘i’s children from pesticide exposure at schools and parks.

Scientific research shows that pesticide drift can travel far and that children are especially vulnerable to its effects. Many Hawai‘i communities remain exposed to dangerous pesticides. A 100-foot buffer is not enough, as studies show some pesticides drift over a mile and cause harm.

California has adopted similar buffer zones and remains a leader in agriculture. Hawai‘i can protect our keiki and still support local farming.

The American Academy of Pediatrics warns that children face higher health risks from pesticides. Long-term exposure can cause cancer, neurological, and respiratory problems.

Please pass SB 2103 SD1 to keep our keiki safe.

Ezgi Green, Waialua

SB-2103-SD-1
Submitted on: 2/21/2026 9:39:09 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
pamela burrell	Individual	Support	Written Testimony Only

Comments:

Aloha Senators,

Please protect our keiki and pass SB 2103 SD1.
This is a common sense bill. Please do your job to protect the people that live here.

Mahalo,

Pamela Burrell, Kalihiwai, Kaua'i

SB-2103-SD-1
Submitted on: 2/22/2026 7:26:30 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Ann Dorsey	Individual	Support	Written Testimony Only

Comments:

I urge yuo to support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of children while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our children and pass SB 2103 SD1.

Thank you

SB-2103-SD-1
Submitted on: 2/22/2026 9:10:18 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
cheryl burghardt	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Commttee Members,

I strongly support SB 2103 SD1.

Cheryl Burghardt

Nuuanu Oahu

SB-2103-SD-1
Submitted on: 2/22/2026 9:29:51 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Georgia L Hoopes	Individual	Support	Written Testimony Only

Comments:

Aloha Committee Members!

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Mahalo!

Georgia Hoopes, Kalaheo

SB-2103-SD-1
Submitted on: 2/22/2026 10:01:58 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Lei Fisher	Individual	Support	Written Testimony Only

Comments:

As the parent of a public elementary school child, I **strongly support** this bill to protect our most precious treasures, our keiki, from unnecessary pesticide exposure while at school. It seems really paradoxical that toxic chemicals that would be allowed anywhere near schools where our children are trying to improve their knowledge and lives. Please **PASS** this measure, and we need stronger protections overall against toxic pesticides & other chemicals that are Not essential to grow food or other kinds of plants here in Hawaii.

Mahalo for considering my testimony.

Lei Fisher, Hale'iwa

SB-2103-SD-1
Submitted on: 2/22/2026 12:38:53 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Robert Petricci	Individual	Support	Written Testimony Only

Comments:

Robert Petricci

SB2103 Feb 26, 2026: 9:45am

Strong support

Aloha chair Keohokalole, vice chair Fukanaga, committee members
Thank you for the opportunity to be heard on bill SB 2103. While I would prefer that these dangerous pesticides be banned, protecting our keiki from drift exposure should be a priority. The data shows restricted use pesticides (RUP) in Hawaii can drift much further than 100 feet with some exposures up to a mile away. Pediatricians tell us our keiki are at risk and experiancing serious health impacts from these types of exposures.

The half mile proposed buffer zone around schools and our public parks is necessary to protect our keiki. Our children have some of the worst health problems and outcomes in the industrialized world. The science says exposure to these dangerous pesticides contributes significantly to that. Please put our keiki first.

Mahalo

Robert Petricci

SB-2103-SD-1
Submitted on: 2/22/2026 1:55:36 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Jessica Kuzmier	Individual	Support	Written Testimony Only

Comments:

Aloha, I am writing in favor of SB2103 SD1. I believe creating a buffer zone to protect our keiki from pesticides is a good, ethical policy. Mahalo for your consideration.

SB-2103-SD-1
Submitted on: 2/22/2026 2:35:52 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Maki Morinoue	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Members of the Committee,

My name is Maki Morinoue, from Hawai'i Island, and I strongly support SB 2103 SD1.

This bill is about protecting keiki from preventable harm. Pesticide drift is real, well-documented, and dangerous—especially for children, whose developing bodies are far more vulnerable to toxic exposure. Scientific studies show that some restricted-use pesticides can drift over a mile from the site of application. A 100-foot buffer is simply not protective.

Here in Hawai'i, we have already seen the consequences. On Kaua'i, preschool children became violently ill—collapsing on the playground—after pesticide drift from a nearby field, which created the movement into law around a 100-foot buffer zone. These were not isolated incidents; they were warnings. Our children were exposed at school, the very place meant to keep them safe.

The American Academy of Pediatrics is clear: children exposed to pesticides face significantly increased risks of cancer, neurological harm, respiratory illness, and developmental disorders. Schools and parks are not appropriate places for chemical exposure—ever.

SB 2103 SD1 takes two commonsense steps:

1. It requires ***clear, consistent public reporting*** of restricted-use pesticide applications.
2. Beginning in 2027, it establishes ***a ½-mile buffer zone*** around schools during school hours and around public parks.

This is not anti-agriculture. California already has pesticide buffer zones around schools and still maintains the nation's strongest agricultural economy. Hawai'i can grow food and protect children.

Our keiki should not be the collateral damage of outdated policies. They deserve clean air while learning and playing.

Please pass SB 2103 SD1 and put children's health first.

Mahalo nui loa,
Maki Morinoue
Hawai’i Island

SB-2103-SD-1
Submitted on: 2/22/2026 3:30:54 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
jeanne wheeler	Individual	Support	Written Testimony Only

Comments:

PLEASE pass this extremely crucial bill SB2103SD1- to protect children & school staff alike from pesticide drift... we need to lessen our toxic chemical exposure in general, but especially for kids! Mahalo, JW

SB-2103-SD-1
Submitted on: 2/22/2026 3:44:04 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Shannon Rudolph	Individual	Support	Written Testimony Only

Comments:

Support

SB-2103-SD-1
Submitted on: 2/22/2026 3:52:54 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Marcia Kemble	Individual	Support	Written Testimony Only

Comments:

Greetings Committee Members,

Please support SB2103 SD1. We need strong buffer zones to protect children at school and where they play from dangerous pesticide drift. 100’ buffer zones are not supported by scientific research, as certain pesticides can drift over a mile and cause health impacts. Please follow California’s model of requiring pesticide buffer zones around schools. Long-term pesticide exposure of keiki while they are at school or in our parks can lead to cancer, neurological, and respiratory damage, among other medical conditions.
Please protect our keiki and pass SB 2103 SD1!

Mahalo for your attention,
Marcia Kemble
Makiki

SB-2103-SD-1
Submitted on: 2/22/2026 5:12:01 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
janice palma-glenie	Individual	Support	Written Testimony Only

Comments:

Aloha,

why is only hand-written testimony being allowed for this bill? i've never seen that before.

please contact me at palmtree7@earthlink.net so that i know the rules and can share the info with other interestd citizens.

mahalo and sincerely,

janice palma-glennie

kailua-kona

SB-2103-SD-1
Submitted on: 2/22/2026 6:29:01 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
ANDREW ISODA	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Andrew Isoda
Lahaina, Mau'i

SB-2103-SD-1
Submitted on: 2/22/2026 6:33:48 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Thalia Fajans	Individual	Support	Written Testimony Only

Comments:

Mahalo for intruding this bill. Please protect the children with a greater buffer zone around schools and playgrounds.

SB-2103-SD-1
Submitted on: 2/22/2026 6:41:27 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Robert Douglas	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Bob Douglas

Pana'ewa

Hilo

SB-2103-SD-1
Submitted on: 2/22/2026 8:00:19 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Carolyn Eaton	Individual	Support	Written Testimony Only

Comments:

Aloha, Chair Keohokalole, Vice Chair Fukunaga, and Members of the Committee,

My name is Carolyn Eaton and I am a resident of Oahu. I express my strong support of this measure, particularly in relation to the buffer zones the measure establishes. It is inconceivable that rules have not been in place already to limit exposure of school children, faculty and staff to dangerous chemicals applied on fields by commercial growers within half a mile or less. I question whether "normal school hours" is clear enough to exclude pesticide application when school athletic facilities, outdoor tracks, fields and pools are in use.

I am very pleased to see this measure includes protection of the public from exposure to pesticide drift when visiting our State and county parks.

Please pass this common sense bill, if you are satisfied that "normal school hours" and the half mile restriction are sufficient. The health of our children, our families, our educators, hangs in the balance.

Mahalo for this opportunity to testify and for your work to improve the quality of life our citizens.

SB-2103-SD-1
Submitted on: 2/22/2026 9:34:39 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
John Fitzpatrick	Individual	Support	Written Testimony Only

Comments:

Aloha Chair Keohokalole, and Members of the Committee,

My name is John "Fitz" Fitzpatrick, and I am a science teacher at Kūlanihākoʻi High School. I am writing in **strong support of SB2103**, which seeks to establish a half-mile buffer zone for Restricted Use Pesticides (RUPs) around our schools and require consistent reporting of pesticide use.

The Reality at Kūlanihākoʻi As a teacher at Kūlanihākoʻi, I am acutely aware of our geographic position. We are located just a few miles downwind from large-scale industrial agricultural operations where chemical companies, like Bayer, conduct experimental GMO research. This research involves the frequent application of toxic Restricted Use Pesticides. Because of our location, my students and colleagues are in the direct path of "pesticide drift."

On a daily basis, we shouldn't have to wonder if the air our students breathe while playing sports or walking between classes contains neurotoxins or endocrine disruptors. Currently, the law only provides a 100-foot buffer, which is scientifically insufficient to protect developing children from chemical drift.

Why SB2103 is Essential (Data from Safe Farms, Safe Food) According to research highlighted by the *Safe Farms, Safe Food* coalition, the current protections are failing our keiki:

- **Drift Distance:** Scientific evidence shows that health harms can be associated with pesticide applications up to **2.5 miles away**. A half-mile buffer is a moderate, common-sense compromise to ensure that schools are not "ground zero" for exposure.
- **Vulnerability of Keiki:** Children are more susceptible to the effects of pesticides because their bodies and brains are still developing. Exposure is linked to neurological deficits, respiratory issues like asthma, and increased risks of childhood cancer.
- **The Scale of the Problem:** In Hawaii, over 150 tons of RUP active ingredients are reported used annually. Without the consistent units of measurement and transparent reporting required by SB2103, it is nearly impossible for the public or health professionals to accurately track the cumulative impact on our community.

Teachers have a responsibility to keep students safe. However, we cannot control the air quality coming across the fields. We need the Legislature to act where federal regulations have failed.

SB2103 is not about stopping agriculture; it is about establishing a "Good Neighbor" policy that prioritizes the health of our children over the convenience of chemical application. I urge you to pass SB2103 to ensure that Kūlanihākoʻi and all Hawaii schools are truly safe places to learn.

Mahalo for the opportunity to testify.

E malama pono,
Fitz

SB-2103-SD-1
Submitted on: 2/22/2026 11:51:46 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
L. Osterer	Individual	Support	Written Testimony Only

Comments:

There has been limited reports and access to actual use of RUP pesticides on Kauai. That needs to change. Research has shown that certain pesticides are known to drift over a mile and cause health impacts. The public, and particularly public areas such as schools, deserve protection.

Why not learn from California's precedents to enact similar legislation requiring pesticide buffer zones around schools. They maintains the best agricultural production and economy in the US.

Hawaii's customer base is more oriented to organic production rather than large scale production with pesticides. These pesticides do not break down. They are in the air we breathe and the water we drink. They have to be reduced or eliminated until better methods are found.

Thank you for your consideration.

L. Osterer, Kauai resident and registered voter

SB-2103-SD-1
Submitted on: 2/23/2026 4:59:57 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Kristen Young	Individual	Support	Written Testimony Only

Comments:

Please support SB2103 SD1 to protect keiki who are must vulnerable to pesticide exposure. They deserve to be safe, especially while they learn and play. It is our responsibility to ensure that.

SB-2103-SD-1
Submitted on: 2/23/2026 7:06:48 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Madison	Individual	Support	Written Testimony Only

Comments:

Dear Honorable Members of the Kauai City Council,

I'm submitting my testimony to you today not only as a concerned resident but as a devoted mother whose heart is heavy with the weight of our community's health and safety. I earnestly urge you to consider the pressing need to pass the bill aimed at prohibiting the spraying of pesticides near schools and hospitals—areas where our children and families should feel safe, protected and secure.

During my pregnancy, I was employed on a ranch on Kauai, during which time I unwittingly consumed tap water that I later learned was contaminated and deemed unsafe. At just 12 weeks into my pregnancy, I was informed the water I was drinking was tested and results came back that it was highly contaminated with environmental toxins. Only 2 months later I learned at my ultrasound my baby would be born with a debilitating birth defect known as gastroschisis, a condition where his intestines were located outside of his body. Medical experts and scientists have drawn connections between this devastating birth defect and the chemical atrazine, a herbicide that was all too prevalent in Kauai's agricultural practices.

My son has bravely endured a grueling series of nine surgeries, a challenging three-and-a-half-month stay in the NICU, and for the first year of his life, he was reliant on a feeding tube to receive nourishment. Recently, we faced yet another harrowing experience when he required an emergency medivac to Oahu due to a life-threatening bowel obstruction—a complication arising from his previous surgeries. This recent health scare has amplified my concern and fueled my determination to fight for the implementation of stronger laws that will safeguard the children and families of Kauai from the perils of hazardous pesticide use.

As a mother, I carry an intrinsic responsibility to protect not only my child but all children in our community from preventable health risks. It is an unbearable burden to witness your child suffer, and it compels me to take action.

I urge not most of you, but each and every one of you to reflect deeply on the implications of passing SB2103. This bill represents not just a legal measure but a profound commitment to safeguarding our most vulnerable, our children and families, from the harmful effects of pesticide exposure. We stand at a pivotal moment where our actions can create a lasting impact on the health and well-being of our community. By establishing safer buffer zones for pesticide spraying, we are taking a courageous step towards ensuring that one day our children can grow up in an environment free from harmful toxins. This legislation is not merely about regulations; it embodies our responsibility as stewards of this beautiful island and protectors of future generations.

Let us not forget the voices of those who have suffered and the families who live in fear of what these chemicals could mean for their loved ones. We have the power to make a difference and to lead by example.

Passing SB2103 is an opportunity for us to affirm our commitment to health, safety, and the well-being of our community. Together, we can foster a Kauai where children can thrive, families can feel secure, and our environment is respected.

I implore you to support this vital bill and help create a healthier, safer future for all. Let us unite in this effort to ensure that no other mother has to endure the pain and anxiety that my family has faced. The decisions made within these walls today will reverberate for years to come, shaping the legacy we leave for those who will inherit this beautiful island.

Thank you for your attention and for considering this critical matter.

Madison Strecker

Resident of Kauai

SB-2103-SD-1
Submitted on: 2/23/2026 8:15:07 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
noriko donna	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Noriko Morisaki Donna, Holualoa, HI

SB-2103-SD-1
Submitted on: 2/23/2026 8:31:23 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Marsha Bellinger	Individual	Support	Written Testimony Only

Comments:

I'm writing in support of this measure because pesticide exposure is especially toxic and harmful to children. In a breezy climate like Hawaii's, the drift from pesticide application is especially likely to travel to schools, parks, and public places.
Please vote to confirm this measure and strict monitoring of valid adherence by agriculture and other users of these poisons.

Thank you,

Marsha Bellinger

SB-2103-SD-1
Submitted on: 2/23/2026 9:22:29 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Nanea Lo	Individual	Support	Written Testimony Only

Comments:

Hello Chair, Vice Chair, and Members of the Committee,

My name is Nanea Lo, and I am writing in strong support of SB 2103 SD1.

This bill takes important and necessary steps to protect public health by requiring the Department of Agriculture and Biosecurity to use consistent units of measurement when reporting restricted use pesticide (RUP) applications to the public. Just as critically, beginning January 1, 2027, SB 2103 SD1 establishes a one-half mile buffer zone for restricted use pesticides around schools during normal school hours and around state and county public parks.

There is an abundance of scientific research demonstrating that pesticide drift travels far beyond current 100-foot buffer zones and that children are uniquely vulnerable to pesticide exposure. Studies show that certain pesticides can drift over a mile and pose serious health risks. Analysis of RUP usage data in Hawai‘i confirms that many communities remain heavily exposed to highly hazardous, drift-prone pesticides, making current protections inadequate and unsupported by science.

Children are particularly at risk. The American Academy of Pediatrics has found significantly increased health risks associated with pesticide exposure in children and has emphasized the need for additional safeguards to prevent unintended exposure. Long-term exposure is associated with cancer, neurological damage, respiratory illness, and other serious health conditions.

Other states have shown that protecting children does not mean sacrificing agriculture. California has enacted pesticide buffer zones around schools while continuing to maintain the most robust agricultural economy in the nation. Hawai‘i can and must do the same—supporting local food production while ensuring that keiki are safe at school and while playing in public parks.

I am deeply concerned about the ongoing exposure of children to pesticide drift in places meant for learning and recreation. SB 2103 SD1 is a commonsense, science-based measure that prioritizes transparency, accountability, and the health of our most vulnerable residents.

Please protect our keiki and pass SB 2103 SD1.

me ke aloha ‘āina,

Nanea Lo, 96826

Sierra Club of Hawai‘i Member

Hawai‘i Workers Center Board Member

Honolulu Tenants Union Member

350 Hawai‘i Member

Carbon Cashback Hawai‘i Member

Hawai‘i Tax Fairness Coalition Member

SB-2103-SD-1
Submitted on: 2/23/2026 11:55:53 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Jean Jewell	Individual	Support	Written Testimony Only

Comments:

I am concerned about the long-term pesticide exposure of our keiki while at school or in parks.

The use of pesticides pose a health threat to our community.

Please pass SB 2103 SD1

Mahalo,

Jean Jewell

Holualoa 96725

SB-2103-SD-1
Submitted on: 2/23/2026 12:17:35 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
G. L. Hutchinson	Individual	Support	Written Testimony Only

Comments:

There are long term health consequences from pesticides we don't even know about. Children are more suseptible. Please ensure we protect our keiki.

SB-2103-SD-1
Submitted on: 2/23/2026 1:29:32 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Francesca Woolger	Individual	Support	Written Testimony Only

Comments:

I absolutely oppose pesticides being used anwhere near schools and on our land. All they do is destroy and cause sickness and disease. Therefore I support this bill. We must protect our Keiki Frankly I want to see pesticides BANNED completely.

SB-2103-SD-1
Submitted on: 2/23/2026 2:49:21 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Carol Philips	Individual	Support	Written Testimony Only

Comments:

Aloha Chair, Vice Chair, and Members of the Committee on Commerce & Consumer Protection,

My name is Carol Philips, and I am a resident who lives near Kaiaka Beach and uses the park regularly with my family. I am writing in strong support of S.B. 2103 S.D.1.

For many of us, our neighborhood park is an extension of our home. It is where our children play after school, where we exercise, walk with our kūpuna, meet our neighbors, and spend time outdoors for our physical and mental health. We rely on these spaces being safe and healthy.

This measure recognizes that pesticide drift does not stop at property lines and that exposure can travel significant distances. Scientific findings cited in the bill show that pesticides can drift far beyond the area where they are applied and that children are especially vulnerable to the neurological and acute health effects associated with these chemicals.

As someone who is in the park almost every day, this is not an abstract issue. Families are there for hours at a time. Keiki are running on the fields, toddlers are sitting and playing in the grass, and people are breathing deeply while they exercise. We do not have any way of knowing when or where restricted-use pesticides are being applied nearby, and we cannot control what drifts into the air we breathe.

The proposed one-half mile buffer around schools and public parks is a reasonable and common-sense step that will help ensure that the places we gather for health, recreation, and community connection are not also places of potential chemical exposure.

This bill is not only about environmental policy—it is about quality of life. Parks should be spaces that promote health, not places where families have to worry about invisible risks. As a resident who depends on our park for daily well-being, I strongly believe we must take preventive action to protect these shared community spaces.

Mahalo for the opportunity to testify and for your commitment to protecting the health and safety of Hawai‘i’s residents.

Respectfully submitted,
Carol Philips,
Haleiwa

SB-2103-SD-1
Submitted on: 2/23/2026 3:48:14 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Malia Chun	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Mahalo,

Malia Chun, Mother, Educator

Resident of Kekaha, Kaua‘i

SB-2103-SD-1
Submitted on: 2/23/2026 5:51:19 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Sherry Pollack	Individual	Support	Written Testimony Only

Comments:

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions. Please protect our keiki and pass SB 2103 towards increased buffer zones around schools and parks.

SB-2103-SD-1
Submitted on: 2/23/2026 6:15:23 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Nate Millheim	Individual	Support	Written Testimony Only

Comments:

We have already seen detrimental impacts of what drift can do to our keiki. The proof is already there. We must stop this. I am in support of SB2103

SB-2103-SD-1
Submitted on: 2/23/2026 8:02:49 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
KEALA FUNG	Individual	Support	Written Testimony Only

Comments:
Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Keala Fung, Honolulu

SB-2103-SD-1
Submitted on: 2/23/2026 8:26:42 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Joshua kaina	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Joshua Kaina, Kahuku

To: Senator Jarrett Keohokalole, Chair
Senator Carol Fukunaga, Vice Chair
Committee on Commerce and Consumer Protection

From: Veronica Moore, Individual Citizen

Date: February 23, 2026

RE: Senate Bill 2103 SD1
Measure Title: RELATING TO PESTICIDES.
Report Title: DAB; Pesticides; Buffer Zones; Restricted Use Pesticides; Consistent Unit of Measurement; Exemptions

To All Concerned,

My name is Veronica Moore and I support Senate Bill 2103 SD1. Thank you for your consideration.

Sincerely,

Veronica M. Moore

SB-2103-SD-1
Submitted on: 2/24/2026 7:17:22 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Danielle Jones	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Danielle Jones, Waimea

SB-2103-SD-1
Submitted on: 2/24/2026 7:32:58 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Kaulana Smith	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. I am a retired Soecial Education teacher and school administrator. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Kaulana Smith

Hakalau, Hawaii

SB-2103-SD-1
Submitted on: 2/24/2026 7:53:45 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Joell Edwards	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Members of the Committee,

I strongly support **SB 2103 SD1**.

Across our entire island, steady trade winds and interconnected rivers and streams mean pesticide drift does not stay contained. From rural communities to areas near schools and parks, our keiki learn and play outdoors where exposure is a real concern.

Scientific research confirms that children are uniquely vulnerable to pesticide exposure. The American Academy of Pediatrics warns of increased risks including cancer, neurological harm, and respiratory illness.

A 100-foot buffer zone is not supported by the science. Research shows that certain pesticides can drift well beyond that distance—sometimes over a mile—resulting in measurable and documented health impacts.

Hawai‘i can support agriculture while strengthening protections for children.

Please pass SB 2103 SD1 to protect our keiki.

SB-2103-SD-1
Submitted on: 2/24/2026 10:10:38 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Isla Grace Saifoloi	Individual	Support	Written Testimony Only

Comments:

Aloha my name is Ku'ulei Saifoloi! I come from Halau Ku Mana Public Charter School and is a haumāna in 6th grade. Although I agree with bill SB2103, I feel it could improve in some aspects. Some things I think this bill can change is how the pestiside buffer zone only lasts during school hours. I feel the buffer zone should last throughout the entire day. The reason is because there are still teachers, staff, and custodians after school hours working. Also because there might be kids playing in certain places like community parks, and jungle gyms. Another aspect this bill can improve on is how the buffer zone is only 1/2 a mile long. I feel this isn't fully safe, and that you should push it to at least 1 mile travel. Is there a scientific reason that 1/2 mile buffer zone is long enough to keep people safe? Therefore, I think it would be a good idea to push it to 1 mile. Overall I disagree with pesticides in general. Pesticeides can cause cancer, and even fatal diseases. I also think it's important to use consistent units of measurements to ensure accuracy. I advocate for 1 mile buffer zones, extending the buffer zones for the whole day not just in school hours and, to use more consistent with measurements when
using pesticides. Mahalo Nui Loa!

SB-2103-SD-1
Submitted on: 2/24/2026 10:11:02 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Izek Reign Lani	Individual	Support	Written Testimony Only

Comments:

Aloha, my name is, Izek Reign Lani

I am a 6th grade student of Halau Ku Mana PCS. we are researching about , "Bill 2103 SD", and some things I would like to point out is very unusual. such as, I see that the Department of Agriculture and Biosecurity (D.A.B) has use of RESTRICTED pesticides, which is really unusual, knowing that the departement is about agriculture and biosecurity. Pesticides are dangeous for us, and, its important to use conistent use of measurement. also, regarding the buffer zone, is research about a 1/2 mile buffer zone thatll be good? some of us think 1 mile buffer zones would be safer. Also, if youre saying that they cant spray during scholl hours, what about some students and people whom are there after hours? they would be affected, if they‘re only sprayed during school.

Mahalo, Izek

SB-2103-SD-1
Submitted on: 2/24/2026 10:13:41 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Zavier Makana Campania	Individual	Support	Written Testimony Only

Comments:

Aloha, My name is Makana Campania, and I am a 6th grader at Hālau Kū Māna Public Charter School. I am writing this to help SB2103, which is talking about the pesticides issue in Hawaii. I think this bill is fantastic, but I think there are some things you can do to make even more maikaʻi. I think you guys should make the buffer zone to at least a mile for safety for schools and parks all over the islands. I also think that this bill should include the after school staff, as it states in the bill, "Beginning 1/1/2027, establishes a one-half mile buffer zone for pesticides around schools during normal school hours and state and county public parks." which means that the after school staff will get affected and can lead to diseases. And lastly, I think these big orginizations should already be using the same unit of measurement for each amount of pesticides used to ensure accuracy. Mahalo for your time.

SB-2103-SD-1
Submitted on: 2/24/2026 10:20:19 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Huaka?imaikalani Relacion	Individual	Support	Written Testimony Only

Comments:

Aloha, my name is Huakaʻimaikalani Relacion and I am a 6th grader at Hālau Kū Māna Public Charter school. I belive in this "SB2103" bill, but I do think it could be fixed in many ways. For example, I disagree in giving exemptions to certain businesses. I believe it should be fair for all and we can depend on ourselves if we want it in our air and ʻāina. I also believe that using different units of measurement is a 6th grader thing and it is very off and weird that you guys are doing different measurements everytime you guys measure the limits of pesticides. Next, I do belive in the bill but I donʻt think that we need anymore pesticides knowing that its already in our foods. I also think that a 1-mile buffer would be safer than a half-mile. I think that if you say that you cannot spray during school hours, what about the teachers, student athletes, and study hall people that stay after school? I lastly belive that if you guys do this too much, lots of people can get sick or have a possibility of passing away! Remember this is just my hypothesis of what could happen but thank you for taking time to listen to what I think about your bill and change in our world.

Mahalo, Huakaʻi Relacion

SB-2103-SD-1
Submitted on: 2/24/2026 10:20:19 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Addison Millan	Individual	Support	Written Testimony Only

Comments:

Aloha, my name is Addison Millan and I am a 6th grader haumana of Hālau Kū Māna Public Charter School. Although I agree with this bill SB2103 I think you guys could improve in many ways. First, you guys should be using the same units of measurements so you guys could be accurate. Second, regarding the buffer zone, we know that it is 1/2- miles away but I think we can expand that amount to 1-mile. Your saying that they can't pray pesticides during school hours, what about the other students, teachers, school staff and custodions who are there after hours? They will be affected by these chemicals and potentaialy get sick and can cause fatal and respiratory issues. Finally, pesticides pollute our air and like I said it can be fatal. So I plead that you guys should improve on your actions.

Mahalo thank you for your time

Addison

SB-2103-SD-1
Submitted on: 2/24/2026 10:21:58 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Eriksson Yoshimoto	Individual	Support	Written Testimony Only

Comments:

Aloha, My name is Eriksson or Kūli`u and I am a 6th grader and Hālau Kū Māna PCS. I am writing in support of SB2103 regarding pesticides in Hawaii. First I think it is important to use consistent units of measurement because a less amout of a unit of measure can be greater than a greater amout of a different mesurement. Second I think the the buffer zone of 1/2 mile is there any reasearch that amout of space is adequate, I think 1 mile could be safer. Third regarding school hours, I think "school hours" could be extended to 1 day. Because of haumana who do after school clubs or activities and staff that stay after school hours to finish work could be breathing all of the pesticieds that can cause respatory issues. In conclusion I think the pesticides people could use these tips to keep alot of people healthy.

Mahalo,

Kūli`u

SB-2103-SD-1
Submitted on: 2/24/2026 10:23:41 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
kuamu maka'iwi pelekai	Individual	Support	Written Testimony Only

Comments:

Aloha, my name is Kuamu Pelekai and I am a six grader and at Halau Ku Mana Public Charter school. I am in support of SB2103 because the pesticides is too close to the school and it can get the kids sick, you guys have to go back to kindergarden to learn about the unit of measure. And the buffer zone has to be more then half a mile it should be around 1 mile because we don't know where the pesticide land, and do guys know about the teacher, kids,people sometimes jog and people have practices and pestiside is poisonous it goes in the air and that, so im sorry I'm was a little mean but i hope it works in the future mahalo for your
time.

SB-2103-SD-1
Submitted on: 2/24/2026 10:24:47 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
jordyn kawehilani jefford	Individual	Support	Written Testimony Only

Comments:

Aloha, my name is Jordyn Kawehilani Jefford and I am a 6th grader student from Halau Ku Mana Public Charter school in Makiki.

I'm writing this in support of SB2103 regarding the pesticidies in Hawaii. This is super important to use consistent units of measure. Second of all, the buffer zone should be 1/2-mile zone,it will be safer and they say not to spray during school hours but think about the teachers and students after the school hours, they will get sick, get cancer and it will even make them die. Think about other people. Please make Hawaii safe and stop spraying these pestidicies. Mahalo

SB-2103-SD-1
Submitted on: 2/24/2026 10:24:55 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Stuart Sakoeki	Individual	Support	Written Testimony Only

Comments:

Aloha, my name is Stuart Sakoeki and I am a 6th grade teacher at Halau Ku Mana Public Charter School in Makiki. I am writing in support of SB2103 regarding pesticides in Hawaii. First, it's super important to use consistent units of measure to ensure accuracy. Second, regarding the buffer zone, is there scientific research that shows a 1/2-mile buffer zone is adequate? I think a 1-mile buffer zone would be better and safer. Also, if you're saying they cannot spray during school hours, what about other students, teachers, school staff, and custodians who are there after hours? They would be affected if the rule states spraying is prohibited "only during school hours." Finally, we hope in the future, steps are taken to rule out pesticide use altogether. There has been decades of research that shows pesticides end up in our food systems and are extremely harmful for people and the environment. We have already had problems with Monsanto on Kauai for decades. Please help keep Hawaii safe and free from these terrible poisons that have a significant effect on our quality of life. Mahalo

SB-2103-SD-1
Submitted on: 2/24/2026 10:25:23 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Auriel Judith Lana Tsutsui-Keuma	Individual	Support	Written Testimony Only

Comments:

Aloha! My name is Auriel Judith Lanakamana'ō'ōnohipulelehuaululani Tsutsui-Keuma, I attend as a student in Hālau Kū Māna public charter school in Makiki as a 6th grader. I am writing in support of SB2103 regarding pesticides in Hawai'i. To start off, I believe that there should be the same equal amount of unit of measure in order to be accurate with the measuring. Putting different amounts every time is very inaccurate and unecessary. We wish and plead that we advocate for a 1-mile buffer zone for extra safety, wind could blow the pesticide mist or spray and it could get to us. Having 1/2 mile could not be safe for the citizens health. And during school hours? It's a risky chance to take considering the fact that janitors, subs, teachers, stuff, and students still stay out at school past ending hours. It could get to them and there's a high possibility they could inhale pesticided air which increases the chance of falling seriously ill. This also seriously pollutes our air with poisonous gas or more known as pesticides, we already have smoke going up into the air every day, do we seriously need more pollution to the air we, animals and plants breath daily. So can we please stop using them for the sake of everyone's health? Once spraying it on food we eat our bodies immediately absorbs it and worsens our health. Mahalo for taking the time!

SB-2103-SD-1
Submitted on: 2/24/2026 10:39:08 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Gaius	Individual	Support	Written Testimony Only

Comments:

I am in full support for this bill more regulations on pesticides usage should be implemented for safe farming and environmental purposes

SB-2103-SD-1
Submitted on: 2/24/2026 11:49:16 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Hunter Mahiehie Iaea	Individual	Support	Written Testimony Only

Comments:

TESTIMONY IN SUPPORT OF SB2103

RELATING TO PESTICIDES

Dear Chair Gabbard, Vice Chair Richards and Members of the Committee,

Aloha mai kakou!. O Waimanalo ka ahupua'a. O Ko'olau Poko ko'u moku. O Olomana ko'u mauna/pu'u . O O'ahu ka mokupuni. O Inoaole ko'u kahawai. O Limulīpu'upu'u ka makani. O Naulu ka ua.

O Mahiehie Iaea ko'u inoa. I come from the school Halau Ku Mana Charter school and I would like to talk to you about how I support the bill SB 2103

I support this bill because we want the Hawaiian keiki to be safe, to eat healthy without getting sick. This bill is extremely important to the schools of Hawaii because the keiki are the next generation. When our foods are poisoned by pesticides, we have a high risk of cancer, infertility, and brain injury. Coming from a school where we are taught to

Aloha 'aina, to stand up for the future of our next generation, and learn to restore Hawaii nei. We are based on learning how to care for ourselves through the 'aina. In doing so we do a lot of planting. To know that our plants could be at risk of pesticides is very disappointing.

In conclusion, I will support this bill to my fullest, hopefully being able to protect the kids of Hawaii more. Mahalo nui for reading this testimony.

Mahalo, Mahiehie Iaea

SB-2103-SD-1
Submitted on: 2/24/2026 11:50:33 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Lili'u Sylva	Individual	Support	Written Testimony Only

Comments:

Aloha Chair Gabbard, Vice Chair Richards and Members of the Committee,

‘O Lili’u ko’u inoa, No maunalaha Mai au. I am from Halau Ku Mana Public Charter school and I’m supporting this bill. I’m supporting this because the farmers could have ignored this problem by not using pesticides. They shouldn't have used pesticides in the first place, pesticides affect more than just spread to schools. Pesticides at Halau Ku mana we have mala that we grow our food on then the pesticides would go to our mahi’ai then when we eat it we’ll get sick. Pesticides can also give us keiki and kumu cancer, infertility, and neurological damage. It can contaminate our water and soil giving us a higher risk of getting sick. Pesticides kill non-target species like pollinators and worms. We need our keiki safe for our future generations, if they see that they can use pesticides it can take away the traditional way we mahi’ai. This not only affects health, life, and food but also our cultural traditions.

This is important to me because I grow food at my tutu’s house along with pua/ resources to make lei which can affect how grounded I can be with my Kupuna its also important to me because if I have kids one day I want them to be safe, healthy, and grounded in our cultural traditions and values, this is why I support this bill.

Mahalo for reading this testimony,

Lili’u Sylva

Makiki, O’ahu

SB-2103-SD-1
Submitted on: 2/24/2026 11:54:05 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
izijah	Individual	Support	Written Testimony Only

Comments:

TESTIMONY IN SUPPORT OF SB2103

RELATING TO PESTICIDES

Aloha Chair Gabbard, Vice Chair Richards and Members of the Committee,

‘O Kupa’a ko’u inoa. No kalihi mai au.

I'm in support of this bill because if we put pesticides in all our food it could affect our health and mental function. Don't put pesticides in our food, it could hurt us. As a student we don't want pesticides next to our school. I think having a bigger buffer zone would better because pesticides could spread fast.

Mahalo for reading this testimony,

Kupa’a

Kalihi Oahu

SB-2103-SD-1
Submitted on: 2/24/2026 11:55:56 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Gabriella Gonzalez	Individual	Support	Written Testimony Only

Comments:

Aloha mai kakou. O Gabriella Gonzalez ko'u inoa. I live in Kalia O'ahu in the Ahupua'a of Kona. I support this bill. I go to Halau Ku Mana and we have a lot of mala's and we have to take care of them all the time. So when pesticides come into our mala it's a real threat to our plants. It also is not healthy for our body to consume stuff like that because it can cause cancer and life problems. So I want the miles to increase farther away from school to protect them and our mala's.

Mahalo for reading this testimony,

Gabriella Gonzalez

Kalia, O'ahu

SB-2103-SD-1
Submitted on: 2/24/2026 12:08:21 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Avyanna	Individual	Oppose	Written Testimony Only

Comments:

Aloha Chair Gabbard, Vice Chair Richards and Members of the Committee,

‘O Avyanna Kamelealohaho’opōmaika’i McPeek Ko’u inoa

I am in opposition to SB2103 because not only are pesticides bad for our aina and environment, but they are bad for our keiki and makua. Pesticides cause acute and chronic side effects in people. These side effects include Headaches, dizziness, muscle twitching, weakness, confusion, nausea, vomiting, stomach cramps, diarrhea, Irritation of the nose and throat, coughing, wheezing, difficulty breathing, Skin rashes, irritation, blisters, stinging, or blurred vision in the eyes. In severe cases, high exposure to pesticides can cause poisoning and can lead to seizures, loss of consciousness, respiratory failure, and death, especially with certain pesticides like organophosphates or paraquat. All of these effects will soon cause huge damage to our keiki and lāhui. Not only can you breathe in pesticides, but it can also get into our “clean” drinking water and absorb into the soil where our food is grown, causing us to ingest it. One way we could stop this is by not using pesticides and finding natural repellents like peppermint, strong smells, or gates. Pesticides are not only harmful to our keiki but to the bees and other animals in the area, including endangered native animals like birds. If keiki start getting sick, then they will be less productive in school and get less education. In conclusion, pesticides are bad not only for us but for our aina. It can cause really bad side effects, including death. It is not only in the air but in our water and food.

Mahalo for reading this testimony. I hope you consider this,

Avyanna Kamelealohaho’opōmaika’i McPeek-Batlin

Hālau Kū Māna PCS

Mo’ili’ili, ‘Oahu

SB-2103-SD-1
Submitted on: 2/24/2026 12:15:28 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Leo Nahe Smith	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Leo Nahe, Nu‘uanu

SB-2103-SD-1
Submitted on: 2/24/2026 12:09:00 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
naue	Individual	Support	Written Testimony Only

Comments:

`TESTIMONY IN SUPPORT OF SB2103

RELATING TO PESTICIDES

Aloha Chair Gabbard, Vice Chair Richards and Members of the Committee,

o Naue ko'u inoa no kalihi mai au

I am in support of the SB2103 because we should not have any pesticides near the school because some schools like Halau Ku Mana have plants that we take care of. We don't want our plants to die and when we harvest our plants, we don't want any pesticides on our plants when we it eat so we don't get sick.

This is important because we could get cancer, neroutoxicity, and endocrine disruption from pesticides and we could potentially die.

Mahalo for reading this testimony,

Naue

Kalihi,Kona

SB-2103-SD-1
Submitted on: 2/24/2026 1:37:20 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Richard	Individual	Support	Written Testimony Only

Comments:

Please support this and every effort to eliminate negative effects of pesticides and other chemicals on our people.

Richard Bodien

Hāwī

SB-2103-SD-1
Submitted on: 2/24/2026 1:41:00 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
ko'i	Individual	Support	Written Testimony Only

Comments:

TESTIMONY IN SUPPORT OF SB2103

RELATING TO PESTICIDES

Aloha Chair Gabbard, Vice Chair Richards and Members of the Committee,

O ko’i kalauawa haupu ko’u inoa. No kailua mai au.

I support the bill 2103 to move chemicals far from school. Bill 2103 helps the development and growth of students. If toxins are close to students it may affect them in school or daily life. Pesticide is full of harmful toxic chemicals and it causes life problems like cancer, liver problems, also kidney problems. This bill is important to keep future generations healthy.

Mahalo for reading this testimony,

Ko’i

Oahu kailua

SB-2103-SD-1
Submitted on: 2/24/2026 2:31:38 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Harue Pililani Kyota	Individual	Support	Written Testimony Only

Comments:

Aloha Chair, Vice Chair, and Members of the Committee,

My name is **Pililani Kyota**, and I am a senior at Hālau Kū Māna Public Charter School in Makiki, Hawai‘i. I strongly support HB 2103.

This bill is important because it protects our keiki, our communities, and our ‘āina. Requiring the Department of Agriculture and Biosecurity to use consistent units of measurement when reporting restricted use pesticides may seem small, but transparency matters. If the public cannot clearly understand how much pesticide is being applied, we cannot truly understand the risks. Consistent measurements make the information accessible, honest, and accountable to the people of Hawai‘i.

More importantly, establishing a one-half mile buffer zone around schools during normal school hours and around state and county public parks is about basic safety. Keiki should not have to worry about exposure to restricted use pesticides while they are learning, playing, or simply being children. Families should not have to question whether the air their children are breathing near parks or campuses is safe.

As someone who was raised in Hilo and now lives on O‘ahu, I have seen how closely our communities live to agricultural lands. In Hawai‘i, schools, homes, and farms often share boundaries. Because of that proximity, stronger protections are necessary. Restricted use pesticides are classified that way for a reason. They are recognized as potentially harmful and require certified applicators. If they require that level of caution, then buffer zones around our most vulnerable populations should be common sense.

This bill does not eliminate agricultural practices. It includes reasonable exemptions for situations like whole structure fumigation, wood preservation, rapid response vector control by the Department of Health, and licensed pest control operators. It strikes a balance between public health and necessary operations. What it does do is prioritize the well being of our keiki and community members during normal school hours and in shared public spaces.

As a young person in Hawai‘i, I think about the kind of future we are inheriting. We talk often about mālama ‘āina and caring for our people. Supporting this bill is one way to put those values into action. Protecting our schools and parks from pesticide drift is about prevention, not reaction. It is about choosing health first.

I respectfully urge you to pass HB 2103.

Mahalo for the opportunity to testify.

Pililani Kyota

SB-2103-SD-1
Submitted on: 2/24/2026 2:33:45 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Mina Elison	Individual	Support	Written Testimony Only

Comments:

Aloha mai,

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103,

Mina Elison, Ke'ei, Hawai'i

SB-2103-SD-1
Submitted on: 2/24/2026 2:34:10 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Ikualono jackson	Individual	Support	Written Testimony Only

Comments:

Testimony in Strong Support of SB2103

Aloha Chair, Vice Chair, and Members of the Committee,

My name is Ikualono, and I am a Native Hawaiian haumāna who believes deeply in being poʻe aloha ʻāina. I attend Hālau Kū Māna Public Charter School, where we are taught to care for our land, our community, and our future.

I am writing in strong support of SB2103.

As students, we should not have to worry about being exposed to harmful pesticides while we are learning, playing, and growing at school or in our public parks. Creating stronger buffer zones around schools and parks helps protect our health and gives our families peace of mind. Our keiki deserve clean air, clean water, and safe places to learn.

Being poʻe aloha ʻāina means recognizing that the health of the land and the health of our people are connected. When chemicals drift into spaces where children gather, that connection is harmed. This bill takes an important step toward greater accountability and transparency by improving reporting and setting meaningful protections around sensitive areas.

I urge you to pass SB2103 to protect our keiki, our ʻāina, and future generations.

Mahalo for the opportunity to testify.

Me ka haʻahaʻa,

Ikualono Jackson

SB-2103-SD-1
Submitted on: 2/24/2026 2:38:20 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Zacceryah Lani	Individual	Support	Written Testimony Only

Comments:

26 February 2026

TO: Aloha Chair and Members of the Senate Committee

SUBJECT: In STRONG SUPPORT of HB 2103

Aloha Chair and Members of the Committee,

My name is Kaulana Lani, and I am a student from Oʻahu, Hawaiʻi. Mahalo for the opportunity to testify today. I am submitting this testimony in strong support of HB 2103.

I support HB 2103 because it helps protect the health and safety of students, families, and communities across Hawaiʻi. Restricted use pesticides are chemicals that can be harmful to human health, especially for children whose bodies are still developing. Establishing a one-half mile buffer zone around schools during normal school hours and around public parks is a responsible and necessary step to reduce exposure and protect vulnerable populations.

As a student, I spend many hours at school and in public parks, and these places should be safe environments for learning, exercise, and community activity. Students should not have to worry about being exposed to harmful chemicals while attending school or participating in outdoor activities. This bill prioritizes the wellbeing of youth and ensures that our educational and recreational spaces remain safe.

Additionally, requiring the Department of Agriculture and Biosecurity to use consistent units of measurement when reporting pesticide use will improve transparency and accountability. Clear and consistent reporting allows the public to better understand how pesticides are being used and ensures that government agencies are acting responsibly in protecting public health and the environment.

HB 2103 is an important measure that supports public health, protects students, and promotes transparency. It reflects a commitment to safeguarding the future of Hawaiʻi and its people.

Mahalo for the opportunity to testify. I respectfully urge the Committee to pass HB 2103.

Me ka haʻahaʻa,
Kaulana Lani
Makiki, Kona, Hawaiʻi

SB-2103-SD-1
Submitted on: 2/24/2026 2:39:10 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Kona Kealoha	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Members of the Senate Committee,

My name is Kona Kealoha, I am a high school senior at Hālau Kū Māna PCS. I am writing in strong support of SB2103. This bill is an important step in protecting the health and safety of our keiki by increasing the distance between farms using pesticides and nearby schools.

Children are especially vulnerable to environmental exposure. Their bodies are still developing, and exposure to pesticides, even in small amounts, can pose risks to respiratory health, neurological development, and overall well-being. When farms operate close to schools, there is potential for pesticide drift to affect the air students breathe, as well as the soil and water they interact with daily. Schools should be safe spaces where children can focus on learning without concern for environmental hazards.

SB2103 prioritizes prevention. By increasing the buffer distance, we reduce the likelihood of contamination and help ensure that students, teachers, and school staff are protected. This measure does not oppose agriculture; rather, it encourages responsible practices that balance farming with community health.

Protecting our children should always be a top priority. I respectfully urge you to support SB2103.

Mahalo for your consideration.

SB-2103-SD-1
Submitted on: 2/24/2026 2:40:44 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Elilai Louch	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Committee Members,

My name is Elilai Louch. I am writing to express my strong support for SB2103 SD1, which requires consistent reporting of restricted-use pesticides and establishes a buffer zone around schools and public parks. Protecting our children and communities from harmful pesticide exposure is vitally important.

I especially support the intent to create a ½ mile buffer around schools during school hours, as scientific studies show that pesticides can drift hundreds of feet and pose risks to children's health, including neurological and respiratory effects.

However, I respectfully urge the committee to consider increasing the buffer beyond ½ mile. Children are particularly vulnerable, and a larger distance would provide stronger protection from pesticide drift and accidental exposure, especially for schools near agricultural operations or heavily sprayed areas.

Additionally, consistent reporting in clear, understandable units will improve transparency and allow parents, teachers, and the public to make informed decisions about safety.

In conclusion, I strongly support SB2103 SD1 for its protections and transparency measures, and I request that the Legislature amend the bill to extend the school buffer for maximum safety.

Mahalo for your consideration.

Sincerely,
Elilai Louch
Honolulu, Kona, Hawai‘i

SB-2103-SD-1
Submitted on: 2/24/2026 2:42:30 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Christian Navoa-Auza	Individual	Support	Written Testimony Only

Comments:

26 February 2026

Aloha Chair and Members of the Ssenate Committee

My name is Christian Navoa-Auza , and I live in Kalihi on Oʻahu, Hawaiʻi. I am in strong support of SB2103. This bill is a necessary and responsible step to protect the health and safety of our keiki by increasing the required distance between schools and areas where agricultural chemicals are applied. Children are more vulnerable to pesticide exposure because their bodies and immune systems are still developing, and even low levels of exposure have been linked to respiratory issues, skin irritation, headaches, and potential long-term health concerns. Schools should be safe spaces dedicated to learning and growth, not places where students and educators risk exposure to chemical drift from nearby fields. Establishing a greater buffer zone is a practical, preventative measure that reduces the likelihood of airborne chemicals reaching campuses while still allowing agricultural operations to continue responsibly. This bill reflects a balanced approach that prioritizes public health, community well-being, and common-sense protections for those who cannot protect themselves.

Once again I am in strong support SB2103 because it puts the health of Hawaiʻi's children first by creating stronger safeguards around our schools. Increasing the distance between chemical application sites and educational facilities is a proactive and reasonable solution that supports both community safety and responsible agriculture. I respectfully urge you to pass this bill.

Mahalo no kou ho'olohe ana mai ,

Christian Navoa-Auza

SB-2103-SD-1
Submitted on: 2/24/2026 2:43:35 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Luna Mahiai	Individual	Support	Written Testimony Only

Comments:

Aloha,

I am in support of SB2103 to increase the buffer zone of pesticide use surrounding schools and parks. As a kumu at a Hawaiian charter school I do not want any harm to come to my haumāna. There should not be any harsh chemicals used on our ʻāina, for the health of the land, as well as the health of kanaka. In a Hawaiʻi Business Magazine article, they discuss the harmful health effects of pesticide use, specifically glyphosate (i.e: cancer, obesity, inflammation, etc.) being amplified by close proximity. Dr. Lee Evslin, a Kauaʻi pediatrician, explained his urgent concern for the negative health repercussions from constant pesticide exposure, especially in children. So yes this bill would be a good start to lessen the exposure in terms of distance, but more needs to be done. Especially with the varying weather conditions in our pae ʻāina, wind and rain run-off can spread pesticides further than one-half mile. Mahalo for taking the time to consider this testimony.

Luna Mahiai

Waikīkī, Kona, Hawaiʻi

SB-2103-SD-1
Submitted on: 2/24/2026 2:43:57 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Taimane Seleni	Individual	Support	Written Testimony Only

Comments:

Aloha mai, My name is Taimane Seleni and I am writing in strong support of SB2103, which strengthens protections for our keiki, families, and communities by establishing a science based one-half mile pesticide buffer zone around schools during normal school hours and around public parks. This bill also improves transparency by requiring the Department of Agriculture and Biosecurity to use consistent units of measurement when reporting restricted-use pesticide applications to the public.

Scientific evidence demonstrates that pesticide drift can travel significant distances from application sites and is associated with acute and long-term health impacts, particularly for our keiki. By expanding buffer zones and clarifying measurement reporting, SB2103 takes proactive steps to reduce harmful exposures and build greater public trust in agricultural and regulatory practices. This measure balances the needs of agricultural operations with the health and safety of our communities. If you guys fight to say that you are for the Keiki or Lahui than I respectfully urge the committee to pass **SB2103** and help ensure a healthier, safer environment for all residents of Hawai‘i.

mahalo

SB-2103-SD-1
Submitted on: 2/24/2026 2:45:28 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Jahrai David	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and members of the Senate Committee,

I am in strong support of HB 2103. My name is Jahrai David, and I am a senior at Hālau Kū Māna.

I support this measure because it will positively impact our community and create meaningful opportunities for students like me. Policies that invest in education and community well-being have been shown to improve student success, increase engagement, and strengthen long-term outcomes for families across Hawai‘i. When we provide the right support and resources, students are more likely to graduate, pursue higher education or careers, and give back to their communities.

HB 2103 represents an important step toward ensuring fairness, opportunity, and support for those who need it most. As a student who is directly affected by the decisions made in this building, I believe this bill will help create a stronger and more equitable future for my peers and future generations. Thank you for the opportunity to testify and for your commitment to serving our community. I respectfully urge you to pass HB 2103.

Jahrai David
Honolulu, O'ahu, Hawai'i

Mahalo.

SB-2103-SD-1
Submitted on: 2/24/2026 3:43:38 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Tiffany Ing	Individual	Support	Written Testimony Only

Comments:

26 February 2026

Aloha Chair and Members of the Senate Committee,

SUBJECT: In STRONG support of SB 2103

I am a kumu at Hālau Kū Māna and present my testimony in strong support of SB 2103 in order to mālama all students, staff, and faculty at schools throughout our pae ʻāina. The buffer zones between pesticide-treated crops and schools should be expanded to distances that exceed .5 miles, and thus SB 2103 is a good start. In 2026, pesticides that present neurological and other physical risks to consumers should be completely eliminated from farming. This bill brings this concern to light, and I mahalo those who have introduced the bill and worked tirelessly to see it become a law.

Mahalo for the opportunity to submit my support for SB 2103,

Tiffany Lani Ing

Mānoa, Oʻahu, Hawaiʻi

SB-2103-SD-1
Submitted on: 2/24/2026 3:52:44 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Kristi Desaucido	Individual	Support	Written Testimony Only

Comments:

I support increasing buffer zones between pesticide use and schools to protect our keiki. Children are especially vulnerable to chemical exposure, and even small amounts can affect their health and learning. Schools must be safe places where families do not worry about toxic drift. Larger buffers are a practical, preventive step to put children's well-being first and ensure healthier communities.

SB-2103-SD-1
Submitted on: 2/24/2026 11:39:17 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Jubilee Johanna	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Jubilee Westergaard, Kailua

SB-2103-SD-1
Submitted on: 2/25/2026 7:15:36 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Kencho Gurung	Individual	Support	Written Testimony Only

Comments:

Please support SB 2103 SD1. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Kencho Gurung, Hilo

SB-2103-SD-1
Submitted on: 2/25/2026 7:47:09 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Lawrence Hose	Individual	Support	Written Testimony Only

Comments:

Aloha -

The only reason to oppose SB2103 is greed or blackmail. Put your, my, and all of our children's interests and health first. Put your, my and all of own health and interests there as well. There is next to zero independent research that puts pesticides and pesticide drift in any classification other than a danger to the public.

If the public is truly who you represent, this bill should be the very bare minimum, because this is not even close to enough.

These are foreign entities, that absolutely harm your constituancy, communities, and environment. The negative impacts outweigh the positives? wait, what positives - their profits leave your state. Support the regulation.

Do whats right. Mahalo

Testimony in support of SB 2103

My name is Kawai Warren. I live in Kekaha, Kauaʻi, which is home to Hawaiʻi's largest footprint of seed crops and ground zero for pesticide usage and testing. I am a resident of Kekaha Hawaiian Homestead lands and a member of Nā Kiaʻi Kai, a hui of lawaiʻa practitioners from West Kauaʻi who have fought for years to protect West Hawaiʻi's lands, waters, and communities from pesticide exposure, and a former worker at the Pacific Missile Range Facility in West Kauaʻi for 43 years. I am in **strong support** of SB 2103, which would increase the buffer zones between the use of restricted pesticides and schools from 100 feet to .5 miles, and apply those buffer zones also to public parks.

I have seen first-hand the heavy and extreme use of restricted use pesticides on our ʻāina in West Kauaʻi, including on lands abutting my back yard, and the complete disregard for the safety and welfare of West Kauaʻi residents from these spraying operations. In 2012, the Kekaha Hawaiian Homes organization embarked on the Puʻu Opae Farm and irrigation project, which necessitated my travel along the Mānā cane haul road to Niu Valley and up to Puʻu Opae. During these travels, I witnessed corn companies applying such heavy applications of poison spray that the tractors were barely visible through the mist. I also observed corn company workers cleaning their chemical tanks on the road fronting Waiawa Valley, a place historically known as "poison valley" from the sugar plantation era. Around the same time, I was assisting a young taro farmer in Waiawa Valley, who aspired to teach children in his taro patch. Shortly thereafter, I witnessed the Department of Land and Natural Resources, the Kekaha Agriculture Association, and a chemical company, with personnel dressed in Level B hazmat suits, excavating and removing stainless steel barrels buried in the ground in that area.

It is because of these events that I became involved in a community group that conducted air sampling in homes along Kekaha Road. Our efforts yielded direct positive results for Lorsban insecticide. Subsequently, I assisted a local doctor in sampling soil in various locations frequented by children, including the Kaumakani preschool corridors, Kekaha baseball park dugouts, Kekaha elementary school corridors, and MacArthur Park. Disturbingly, all these sites tested positive for insecticides and herbicides.

The science is clear, and unfortunately, the damage is already done. These harmful chemicals are in the soil where our keiki go to school and play. There are studies that show how dangerous and damaging this can be to the growth and long-term health of children.

This bill is a small and necessary step for protecting our community. Greater buffer zones around schools and parks would help minimize the extreme threat of pesticide exposure that we are currently experiencing in West Kauaʻi, and have been experiencing for the past

decade. We cannot allow these practices to continue at the expense of the health and safety of West Kaua‘i’s keiki and educators. Please pass SB 2103.

SB-2103-SD-1
Submitted on: 2/25/2026 8:13:59 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Klayton Kubo	Individual	Support	Written Testimony Only

Comments:

Support. Mahalo for scheduling this measure

Klayton Kubo

Waimea, Kaua'i

SB-2103-SD-1
Submitted on: 2/25/2026 8:38:52 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Sierra Mcveigh	Individual	Support	Written Testimony Only

Comments:

I Sierra Mcveigh Support SB2103. We need to increase the buffer zones to lessen the drift of pesticides. Our people and lands are being poisoned. We are at an all time high for cancer which these pesticides cause. We need to ban pesticides throughout our islands but in the meantime increasing the buffer zones will lessen the drift affecting homes, schools and farms. Our peoples health and our lands should be top priority when it comes to decision making. Please do the right thing and support SB2103 and also work towards creating a bill that would ban toxic pesticides throughout our islands as there are natural alternatives that are safe.

SB-2103-SD-1
Submitted on: 2/25/2026 9:31:41 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Kinohi Jimenez	Individual	Support	Written Testimony Only

Comments:

Aloha Chair and Members of the Senate Committee,

In strong support of HB 2103

Aloha! My name is Kinohi Jimenez and I am a student at Hālau Kū Māna Public Charter School. I am testifying in strong favor of SB 2103.

Our children deserve to learn and grow in safe, healthy environments. Exposure to chemicals puts our keiki at risk to long-term health effects. Our people are not pests and should not be treated like them. Pesticides are for pests, not for Kānaka.

Mahalo for the opportunity to testify,

Kinohi Jimenez

Pālolo, Oʻahu, Hawaiʻi

SB-2103-SD-1
Submitted on: 2/25/2026 9:43:18 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Blaine De Ramos	Individual	Support	Written Testimony Only

Comments:

I support SB2103

Date: February 25, 2026

Subject: ½ Mile Pesticide Buffer Zones Are Needed Near Schools Day Care Centers and Parks; Support for S.B. 2103 SD1

From: J. Milton Clark, Ph.D.
Former Senior Health and Science Advisor
U.S. Environmental Protection Agency, Region 5, Chicago
Former Associate Professor of Environmental and
Occupational Health Sciences
University of Illinois School of Public Health
clarkenviro.com

As state senators you have heard from me several times before to support the expansion of pesticide buffer zones to protect children. I served as a pro bono expert to the Joint Fact Finding on Pesticide Use and GMOs in Kauai. While with U.S. EPA and the University of Illinois School of Public Health, I conducted and published over one hundred human health risk assessments dealing with exposure to pesticides and toxic chemicals.

To protect children from autism and neurological risks restricted pesticides must not be used near schools, day centers, and parks. *As documented below, leading academic institutions have published peer reviewed research, some funded by EPA, that clearly demonstrates that a ½ mile buffer zone is required to provide adequate health protection for children.*

Several studies have shown that proximity to agricultural fields at distances up to 0.9 mile results in maternal exposure to pesticides that is associated with neurological deficits in children, including autism, autism spectrum disorders, and cognitive impairments (1-6, 31-36). *The science is especially strong that children living within ½ mile of agricultural fields show neurological impacts.* A University of California Berkeley study, partially funded by U.S. EPA, demonstrated that proximity to agricultural fields was associated with a reduction in child IQ and verbal comprehension at distances up to 0.6 mile (31,32,34,36). This science is based upon a statistical relationship between the amounts of pesticides in maternal umbilical cord blood or urine and the severity of adverse neurological health effects in their children.

Hawaii has a very limited data base on pesticide health incidents as compared to California and other much larger states. In 2018, California passed regulations to restrict the application of *all* agriculturally applied pesticides within ¼ mile of schools and day care centers during the hours of 6 am to 6 pm and when schools are open. While an important step forward, California's regulation is not fully protective. California's decision was primarily based on pesticide incidences of airborne drift causing *acute* health effects, not *chronic* health effects that have been clearly documented at distances greater than ¼ mile.

Agricultural Pesticide Drift Occurs at Distances of Nearly a Mile

While EPA defines spray drift as pesticides that are carried off target as mists, droplets or powders, it been well documented that pesticides in agricultural soils and dusts are transported from fields at distances greater than ¼ mile, including as documented (by photographs) in numerous homes in Waimea, Hawaii (7,8,9,34-37). Pesticides are also transported by their volatilization from soils. Homes within 0.8 mile of agricultural fields have higher concentrations of pesticides than homes at greater distances (34).

An analysis of several household pesticide dust studies revealed detectable residues of chlorpryifos and other pesticides at distances up to 0.7 mile from fields and a statistically significant increase in pesticide levels within homes based upon proximity to agricultural fields (35). As previously discussed, adverse health effects have been reported in children at distances up to 0.9 mile.

California's ¼ Mile Regulation

Lee et al., evaluated 2,945 acute cases of pesticide illnesses associated with 643 drift events in eleven states (37). California used the work of Lee to develop regulations for schools and day care centers (38). 1,565 (53%) of the acute cases were non-occupational and approximately 400 cases involved were children. Drift was defined as "pesticide exposures outside there intended area of application by: (1) spray, mist, fumes, or odor during application; (2) volatilization, odor from a previously treated field, or migration of contaminated dust; and (3) residue left by offsite movement. *Soil fumigation was responsible for the largest number of cases (738) with 606 (82%) occurring greater than 0.25 miles from the application site.* In 2012 EPA implemented new regulations for soil fumigants (size of field, distance, and 36 hour time for re-entry) that may reduce cases of acute exposure.

California's Department of Pesticide Regulation (DPR) considered (1) pesticide drift episodes causing *acute* cases near schools (2) greater neurological sensitivity of children to pesticides (3) pesticide air monitoring data to implement the ¼ mile pesticide application restriction (between the hours of 6 am and 6 pm or when schools are in session) (38). The basis for passing the regulations are as follows:

- From 2005-2014, California documented 34 cases of pesticide caused acute illnesses at schools related to five episodes of pesticide drift.

- DPR concluded that if the ¼ mile regulation had been in effect these 34 acute pesticide related illnesses at schools would not have occurred. However, this conclusion was not supported by the much larger data set of Lee from eleven states that found that *the majority of acute poisoning cases (primarily fromsoil fumigation) occurred at distances greater than 1/4 mile.*

- DPR concluded that a margin of safety for school children was required to reduce the chances of unintended pesticide drift.

- DPR found that the costs of the ¼ mile regulation (with 3,500 schools possibly impacted) to each agricultural grower were low, ranging from $1,300-$3,500 per year. No significant impacts were found on jobs or small businesses.

A ¼ Mile Part Time Restriction Is Not Strong Enough

While an important step forward, the California ¼ mile regulation is not based upon known chronic pesticide health effects, such as autism and reduction in IQ, and therefore does not adequately protect the developing child, infants, and young children. The California regulation only applies part time (while teachers and children are at school) and does not fully address pesticide exposures caused by volatilization and the transport of pesticides from agricultural soils and dusts into residential properties. In homes, studies have shown that infants and children are exposed to pesticides in dusts and soils by hand to mouth contact.

To protect Hawaiian women and children, restricted use pesticides should not be applied within ½ mile of any occupied structures, including residential structures. The ½ mile buffer distance is based upon University of California Berkeley study, that strongly documented neurological health impacts in children living at distances up to 0.6 mile from agricultural fields and findings of agriculturally used pesticides in household dusts at similar distances (7-9, 31-36).

There has often been discussion of a 100 foot spay buffer for Hawaii schools and day care centers. *A 100 foot buffer zone is scientifically insupportable and grossly inadequate.*

In addition to buffer zones, Hawaii should adopt a strategy to regulate the types and amounts of restricted pesticides that can be used on agricultural and residential lands. Hawaii's, California's and New York's (and now U.S. EPA's) recent bans and phase-outs on chlorpryifos are excellent examples of appropriate regulatory action to protect the public from a neurologically damaging pesticide.

A Hawaii Pesticide Buffer Regulation is Needed

In conclusion, Hawaii needs to provide children and women protection from potentially harmful exposure to restricted use pesticides by prohibiting their application pesticides within ½ mile of schools, day care centers, and parks.

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SB-2103-SD-1
Submitted on: 2/25/2026 10:17:48 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Priscilla Stuckey	Individual	Support	Written Testimony Only

Comments:
Aloha, Chair and Members of the Committee,

Please support SB 2103 SD1. Children are especially susceptible to absorbing pesticides in their bodies. Pesticides endanger children in unique ways. There need to be ample buffer zones around schools so keiki can breathe and play outside safely.

Pesticides can drift much farther than 100 feet away. Some can drift a mile or more. The air and wind do not obey human boundary lines. The research is clear: more than 100 feet is needed.

Please follow the advice of the American Academy of Pediatrics (AAP), who say there is much more health risk for children exposed to pesticides, and children need special protection.

Please protect our keiki! Please pass SB 2103 SD1.

Mahalo,

Priscilla Stuckey, PhD, Kihei

LATE

SB-2103-SD-1
Submitted on: 2/25/2026 11:10:46 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Jackie Keefe	Individual	Support	Written Testimony Only

Comments:

Aloha Chair Keohokalole, Vice Chair Fukunaga, and Members of the Committee,

My name is Jackie Keefe and I am in **strong support of SB2103 SD1**, which establishes a one-half mile buffer zone for pesticides around schools during normal school hours and state and county public parks. We understand the harm these toxins cause, and it's time we do something about it.

An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawai‘i has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100’ buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.
Mahalo for the opportunity to testify,

Jackie Keefe, Lahaina

LATE

SB-2103-SD-1
Submitted on: 2/25/2026 11:50:21 AM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Dennis O'Shea	Individual	Support	Written Testimony Only

Comments:

Please stop the poisoning of us, our aina, and our keiki.

Mahalo nui.

LATE

Aloha Chair Keohokalole, Vice Chair Fukunaga, and Members of the Committee,

I am submitting testimony in **strong support of SB2103**, which would expand buffer zones for restricted-use pesticides near schools and public parks.

At **Pūʻōhala Elementary in Kaneohe**, Bay View Golf Course is located directly across the street. Despite repeated attempts, we have not received any information about the pesticides they use. This creates a **serious health concern for our keiki**, who can be exposed to harmful pesticide drift.

Studies show that **living within 1 mile of a golf course was associated with 126% increased odds of Parkinson Disease** compared with those living farther than 6 miles away from a golf course.

This underscores the urgency of establishing protective buffer zones. SB2103's proposed one-half mile buffer aligns with research and is a critical step to safeguard children's health.

I urge you to **pass SB2103 to protect our keiki from pesticide exposure**.

Mahalo,
Kaleo K.

JAMA Network Open

Original Investigation | Neurology

Proximity to Golf Courses and Risk of Parkinson Disease

Brittany Krzyzanowski, PhD; Aidan F. Mullan, MA; E. Ray Dorsey, MD; Sai Shivani Chirag, MS; Pierpaolo Turcano, MD; Emanuele Camerucci, MD; James H. Bower, MD; Rodolfo Savica, MD, PhD

Abstract

IMPORTANCE The role of pesticide exposure from golf courses in Parkinson disease (PD) risk remains unclear.

OBJECTIVE To assess whether proximity to golf courses is associated with increased PD risk and to use information on groundwater vulnerability and municipal well locations to investigate drinking water contamination as a potential route of exposure.

DESIGN, SETTING, AND PARTICIPANTS This case-control study included patients with incident PD and matched controls from the Rochester Epidemiology Project from 1991 to 2015. Data were analyzed between June and August 2024.

EXPOSURES Distance to golf courses, living in water service areas with a golf course, living in water service areas in vulnerable groundwater regions, living in water service areas with shallow municipal wells, and living in water service areas with a municipal well on a golf course.

MAIN OUTCOME AND MEASURES Risk of incident PD. All models adjusted for age, sex, race and ethnicity, year of index, median household income, and urban or rural category.

RESULTS A total of 419 incident PD cases were identified (median [IQR] age, 73 [65-80] years; 257 male [61.3%]) with 5113 matched controls (median [IQR] age, 72 [65-79] years; 3043 male [59.5%]; 4504 White [88.1%]). After adjusting for patient demographics and neighborhood characteristics, living within 1 mile of a golf course was associated with 126% increased odds of developing PD compared with individuals living more than 6 miles away from a golf course (adjusted odds ratio [aOR], 2.26; 95% CI, 1.09-4.70). Individuals living within water service areas with a golf course had nearly double the odds of PD compared with individuals in water service areas without golf courses (aOR, 1.96; 95% CI, 1.20-3.23) and 49% greater odds compared with individuals with private wells (aOR, 1.49; 95% CI, 1.05-2.13). Additionally, individuals living in water service areas with a golf course in vulnerable groundwater regions had 82% greater odds of developing PD compared with those in nonvulnerable groundwater regions (aOR, 1.82; 95% CI, 1.09-3.03).

CONCLUSIONS AND RELEVANCE In this population-based case-control study, the greatest risk of PD was found within 1 to 3 miles of a golf course and risk generally decreased with distance. Associations with the largest effect sizes were in water service areas with a golf course and in vulnerable ground water regions.

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Key Points

Question Does living within proximity to a golf course affect the risk of Parkinson disease (PD)?

Findings This case-control study found the greatest risk of PD within 1 to 3 miles of a golf course, and that this risk generally decreased with distance. Effect sizes were largest in water service areas with a golf course in vulnerable groundwater regions.

Meaning These findings suggest that pesticides applied to golf courses may play a role in the incidence PD for nearby residents.

+ Supplemental content

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Introduction

Parkinson disease (PD) is a neurodegenerative disease likely caused by a complex interaction between environmental factors[1-3] and genetic predisposition.[4-6] Among the environmental risk factors, pesticide exposure has been linked to increased risk of PD.[7-12] Golf courses are often treated with pesticides to maintain the aesthetic standards for putting greens and fairways,[13] and in the US, pesticide application to golf courses can be up to 15 times higher compared with countries in Europe.[14] One report anecdotally implicated proximity to golf courses as a risk factor for PD.[15] Furthermore, pesticides applied to golf courses can leach into the groundwater and contaminate drinking water.[16,17]

Despite the possible risks, research on pesticide exposure from golf courses and PD remains sparce. For this reason, we conducted a population-based study using data from the Rochester Epidemiology Project (REP) medical records–linkage system to explore the association between incident PD and proximity to 139 golf courses within a 16 119 square mile multicounty study region in southern Minnesota and Western Wisconsin. We hypothesized that individuals with addresses history in proximity to golf courses would have greater risk of incident PD compared with those who lived further away. Additionally, we hypothesized that we would observe greater risk of PD in individuals living within water service areas: (1) with a golf course, (2) on vulnerable groundwater regions, or (3) with shallow municipal wells.

Methods

A review waiver and exemption of informed consent was granted by the Mayo Clinic institutional reviewer board, and use of medical records had Minnesota research authorization. Results conform to Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline.

Assessment of Parkinson Disease

We identified patients with PD in Olmstead County from 1991 to 2015 using codes from the *International Classification of Diseases, Ninth Revision (ICD-9)* (332.0, 333.0, 331.82) and *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)* (G20, G21, G23.1, G23.2, G31.83) within the REP medical records–linkage system.[18] The medical records of all patients identified by *ICD* codes were reviewed by a movement disorder specialist (R.S.) to confirm the diagnosis and determine date of motor symptom onset. Both motor and cognitive symptoms were reviewed during diagnosis,[18] and concordance between clinical and pathological diagnoses was confirmed in a subset of patients who underwent brain autopsy.[19] Although PD cases were required to be living in Olmsted County at symptom onset, they were not required to have lived in Olmsted County before that date. Controls were identified from the 27-county REP study region in Minnesota and Wisconsin.[20] Controls were matched to PD cases on sex and age at index date (date of PD symptom onset for the matched case) using a 20:1 match because we expected controls to have less residency information compared with PD cases given the prodromal period and the arbitrary nature of the index date. All controls were required to not have any *ICD* codes for PD prior to the index date or up to 5 years following.

Proximity to Golf Courses

Data on golf course locations in 2013 were collected from Esri Business Analyst[21] for 139 golf courses within the 27-county REP study region. We included golf courses beyond the perimeter of the study area so that we could calculate accurate distance values for those living at the edge of our study region. Golf course center points were converted to polygon boundaries outlining the course using manual digitization and satellite imagery in ArcPro version 10.0 (Environmental Systems Research Institute) (**Figure 1**). The distance in miles to the edge of the nearest golf course specific to each PD

patient and control was identified based on the latitude and longitude of their home address of residency (eFigure 1 in Supplement 1). The home address 2 or 3 years prior to PD symptom onset (for individuals with PD) or index date (controls) was used to calculate distance to allow for a delay between potential environmental exposure and the development of PD motor symptoms.

Water Service Area, Groundwater Vulnerability, and Municipal Wells

Data on 224 water service areas in our 27-county REP study area were collected from the US Geological Survey. Water service area data were categorized as either service areas where tap water comes from (1) groundwater resources, (2) surface water resources, or (3) private wells, wherein everyone living within the same water service area is often distributed water from the same shared or community drinking water resource (groundwater or surface water) and everyone outside of water service areas gets their drinking water from private wells. Water service areas were also categorized as either containing a golf course or not containing a golf course. Additionally, we also obtained high resolution data on groundwater vulnerability for the state of Minnesota from the Minnesota Department of Agriculture wherein groundwater vulnerability was defined as regions with coarse textured soils, shallow bedrock, or karst geology. Groundwater vulnerability is relevant to drinking water sourced from groundwater and private wells. We assigned water service areas as being either within a vulnerable groundwater region or within a nonvulnerable groundwater region (eFigure 2 in Supplement 1). Finally, we obtained data on the locations of 711 municipal wells in southeastern Minnesota from the Minnesota Geospatial Information Office and assigned water service areas as having either no municipal wells on golf courses or at least 1 municipal well on a golf course; and water service areas containing deep municipal wells (100 ft or deeper) or at least 1 shallow municipal well (less than 100 ft deep).

Statistical Analysis

In our case-control study, we modeled the exposure (distance to nearest golf course) as a continuous variable (in miles). The association between risk of PD and proximity to nearest golf course was evaluated using piecewise linear splines to account for differences in the association at closer or farther distances.[22] The placement of an intersection knot between linear splines was determined

Figure 1. Overhead Satellite Image of Golf Course Map With Polygon Boundaries

Golf course center points were converted to polygon boundaries outlining the course using manual digitization and satellite imagery for the year 2022 from ESRI, Maxar, and Earthstar Geographics. Imagery from Esri, Maxar, Earthstar Geographics, and the GIS User Community, 2024.

using bootstrap resampling[23] optimized on the out-of-bag area under the receiver operating characteristics (ROC) curve. Candidate knots were considered at all half-mile intervals. Additionally, we also modeled the distance to the nearest golf course as a categorical variable (less than 1, 1 to 2, 2 to 3, 3 to 6, and over 6 miles) to allow our results to be more easily compared with other studies.

Logistic regression was used with PD as the outcome and distance to nearest golf course as the exposure variable, adjusting for age, sex, race, ethnicity, year of index, block group–level median household income in 2010,[24] residency Rural Urban Commuting Area (RUCA) from 2010,[25] and health care utilization. RUCA designation was categorized as urban (coded as 1), suburban (2 to 6), and rural (7 to 10). Health care utilization prior to the index date was defined as the mean number of days per year with at least *ICD-9* or *ICD-10* code recorded in the medical record, averaged over the 5 years prior to the index date. Results were reported as adjusted odds ratios (aORs) with 95% CIs. Secondary analysis evaluated the association between water service area characteristics and risk of developing PD. The primary water service area characteristics were type of water service area (groundwater with a golf course, groundwater without a golf course, and private well), groundwater vulnerability (vulnerable groundwater with a golf course, vulnerable groundwater without a golf course, nonvulnerable groundwater with a golf course, and nonvulnerable groundwater without a golf course), minimum well depth in the water service area (shallow [less than 100 ft] or deep [100 ft or deeper]), and location of municipal wells (at least 1 well on a golf course vs no wells on a golf course). As a sensitivity analysis, we repeated our analysis after stratifying by RUCA (comparing our results with results of those living in urban areas). A secondary sensitivity analysis was performed which restricted to controls selected from Olmstead County. Analysis was conducted with R version 4.2.2 (R Project for Statistical Computing). All tests were 2-sided with a threshold of significance of $P < .05$.

Results

Characteristics of Incident Cases

There were 450 incident cases of PD from Olmsted County identified from 1991 to 2015 with 9000 controls matched by age and sex. After excluding PD cases and controls for incomplete residency data prior to the index date (6.9% of cases and 39.0% of controls), there were 419 individuals with PD (median [IQR] age at diagnosis, 73 [65-80] years; 257 male [61.3%]) and 5113 controls (median [IQR] age at index, 72 [65-79] years; 3043 male [59.5%]) included for analysis (**Table 1**). Although all PD cases had an Olmstead County address at the time of symptom onset, address history data revealed PD cases with previous addresses in 22 of the 27 counties in the study region. The median (IQR) number of addresses recorded in the medical record was 1 (1-2) and the median (IQR) time lived at these addresses was 18.5 (6.0-43.1) years, suggesting that our population was relatively stable in terms of their mobility.

Risk of Parkinson Disease

The proximity to the nearest golf course prior to the index date was a median (IQR) distance of 1.72 (1.21-2.27) miles among individuals with PD and 1.98 (1.19-4.28) miles among controls (Wilcoxon rank-sum, $P < .001$). When modeled linearly, the odds for PD decreased by 9% (aOR, 0.91; 95% CI, 0.85-0.98) for every 1-mile increase in distance from a golf course up to 18 miles. The nonlinear association between odds of PD and proximity to a golf course is shown in **Figure 2**. The odds of PD were relatively constant within close proximity to a golf course and decreased linearly as distance increased; individuals living farther from a golf course had reduced odds of PD, decreasing relative to the distance from the nearest golf course. This was characterized by using linear splines with a regression knot optimized at 3 miles. The odds of PD were not associated with distance from the nearest golf course for those with a pre-index address within 3 miles (per-mile increase: aOR, 0.98; 95% CI, 0.84-1.11) whereas for those farther than 3 miles from a golf course, each additional mile farther from a golf course reduced the odds of PD by 13% (per-mile increase: aOR, 0.87; 95% CI, 0.77-0.98). A likelihood ratio test comparing the spline model with a linear model favored the nonlinear

spline for modeling risk of PD ($P < .001$). There was also positive association between living in proximity to golf course and risk of PD when proximity was modeled as a categorical variable, wherein living within 1 mile of a golf course was associated with 126% increased odds of PD compared with those living farther than 6 miles away from a golf course (aOR, 2.26; 95% CI, 1.09-4.70) (**Table 2**). There was a modest dose response wherein the odds of PD increased by 198% at 1 to 2 miles (aOR, 2.98; 95% CI, 1.46-6.06), 121% at 2 to 3 miles (aOR, 2.21; 95% CI, 1.06-4.59), and 92% at 3 to 6 miles (aOR, 1.92; 95% CI, 0.91-4.04) when compared with those living farther than 6 miles away. Our fully adjusted model demonstrated good model fit (Hosmer-Lemeshow $P = .12$) and very good calibration (Brier score = 0.060) (eFigure 3 in Supplement 1). As a sensitivity analysis, we also repeated our primary analysis after stratifying by RUCA and found that the association between proximity to golf course and PD were stronger in urban areas (eTable 1 in Supplement 1). In our secondary sensitivity analysis, in which we used controls selected from Olmstead County, we found that results remained consistent (eTables 2-3 in Supplement 1).

Individuals getting their tap water from groundwater water service areas with a golf course had nearly doubled odds of PD compared with individuals getting tap water from groundwater water service areas without golf courses (aOR, 1.96; 95% CI, 1.20-3.23) and 49% greater odds of PD compared with individuals getting drinking water from private wells (aOR, 1.49; 95% CI, 1.05-2.13) (**Table 3**). Our analysis using data on groundwater vulnerability revealed that individuals getting their

Table 1. Characteristics of Incident Parkinson Disease (PD) Cases and Controls

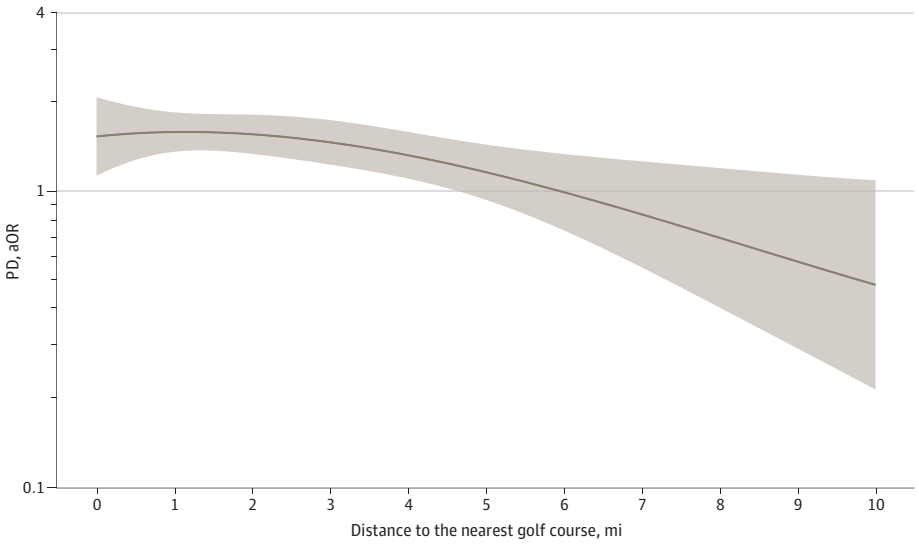
Characteristics	Individuals, No. (%)	
	PD cases (n = 419)	Controls (n = 5113)
Age at index, median (IQR), y	73 (65-80)	72 (65-79)
Sex		
Female	162 (38.7)	2070 (40.5)
Male	257 (61.3)	3043 (59.5)
Race		
American Indian or Alaskan Native	1 (0.2)	9 (0.2)
Asian	6 (1.4)	54 (1.1)
Black or African American	5 (1.2)	29 (0.6)
Hawaiian or Pacific Islander	1 (0.2)	1 (<0.1)
White	403 (96.2)	4504 (88.1)
Other[a] or multiple races	5 (0.7)	77 (1.3)
Unknown or did not disclose	0	449 (8.9)
Ethnicity		
Hispanic or Latino	7 (1.7)	46 (0.9)
Not Hispanic or Latino	412 (83)	4621 (90.4)
Unknown or did not disclose	0	446 (8.7)
Median household income, median (IQR), thousands $	63.4 (51.4-83.4)	55.6 (46.2-68.0)
RUCA classification		
Urban	337 (80.4)	1557 (30.5)
Suburban	77 (18.4)	2329 (45.6)
Rural	5 (1.2)	1227 (24.0)
Water source		
Groundwater	363 (86.6)	3913 (76.5)
Surface water	0	56 (1.1)
Private well water	56 (13.4)	1144 (22.4)
Pre-index health care utilization, median (IQR), d	8.4 (4.0-15.1)	0.6 (0.0-4.8)
Distance to nearest golf course, median (IQR), miles	1.72 (1.21-2.27)	1.98 (1.19-4.28)

Abbreviation: RUCA, Rural Urban Commuting Area.

[a] Other was reported directly in medical record and not otherwise defined.

tap water from water service areas with a golf course in vulnerable groundwater regions had 82% greater odds of PD compared with those in nonvulnerable water service areas with a golf course (aOR, 1.82; 95% CI, 1.09-3.03) and 92% greater odds of PD compared with individuals living in water service areas without a golf course (aOR, 1.92; 95% CI, 1.06-3.45) (Table 3). Additionally, after adding an adjustment for proximity to golf course (as a categorical variable), individuals in vulnerable water service areas had nearly twice the odds for PD compared with individuals getting water from nonvulnerable service areas (aOR, 1.99; 95% CI, 1.30-3.04; *P* = .001). Similar results were found when adjusting for proximity to golf course as linear splines (vulnerable water: aOR, 2.02; 95% CI, 1.33-3.09; *P* = .001). Finally, our analysis of municipal wells revealed no association between PD risk and living in water service areas with a shallow municipal well (aOR, 0.63; 95% CI, 0.24-1.64) or with a municipal well on a golf course (aOR, 0.56; 95% CI, 0.21-1.50) (eTable 4 in Supplement 1).

Figure 2. Nonlinear Association Between Odds of Parkinson Disease (PD) and Proximity to a Golf Course



Cubic spline fit for the relative risk of Parkinson Disease by proximity to nearest golf course, adjusted for age, sex, race, ethnicity, median household income, rural or urban classification, and health care utilization. aOR indicates adjusted odds ratio; shaded areas represent 95% CIs.

Table 2. Association Between Proximity to Golf Courses and Risk of Parkinson Disease (PD) Compared With Those Living Farthest Away in the 27-County Rochester Epidemiology Project Study Region

Proximity to golf course, miles	All patients, No. (%)[a]		Adjusted for patient demographics[b]		Further adjusted for region characteristics[b]		Further adjusted for vulnerable groundwater[c]	
	PD (n = 419)	Controls (n = 5113)	aOR (95% CI)	*P* value	aOR (95% CI)	*P* value	aOR (95% CI)	*P* value
Categorical								
>6	9 (1.1)	807 (98.9)	1 [Reference]	NA	1 [Reference]	NA	1 [Reference]	NA
<1	78 (7.3)	987 (92.7)	7.23 (3.60-14.51)	<.001	2.26 (1.09-4.70)	.03	2.43 (1.16-5.09)	.02
1-2	207 (11.4)	1605 (88.6)	12.38 (6.31-24.27)	<.001	2.98 (1.46-6.06)	.003	2.62 (1.28-5.39)	.01
2-3	82 (9.3)	801 (90.7)	9.53 (4.75-19.12)	<.001	2.21 (1.06-4.59)	.03	2.06 (0.97-4.35)	.06
3-6	43 (4.5)	913 (95.5)	4.38 (2.12-9.04)	<.001	1.92 (0.91-4.04)	.09	2.01 (0.96-4.21)	.07
Cubic splines								
0-3[d]	367 (9.8)	3393 (90.2)	1.05 (0.92-1.19)	.49	0.98 (0.84-1.11)	.63	0.97 (0.77-1.22)	.79
>3[e]	52 (2.9)	1720 (97.1)	0.62 (0.54-0.71)	<.001	0.87 (0.77-0.98)	.03	0.87 (0.77-0.99)	.03

Abbreviations: aOR, adjusted odds ratio; NA, not applicable.

[a] Percentages were calculated row-wise.

[b] Demographic variables included age, sex, race, and ethnicity. Region characteristics included median household income, Rural Urban Commuting Area classification, and health care utilization.

[c] Excludes populations outside of Minnesota.

[d] aORs for 0-3 miles represent the change in odds for PD per 1-mile increase in distance to a golf course within 3 miles.

[e] aORs for more than 3 miles represent the change in odds for PD per 1-mile increase in distance to a golf course beyond 3 miles.

Discussion

In this population-based case-control study, living close to a golf course was associated with an increased risk of developing PD. We observed that risk of developing PD was greatest for those living within 1 to 3 miles of a golf course and that the risk of PD generally decreased with increasing distance from a golf course. We also found that individuals getting their drinking water from water service areas with a golf course had nearly double the odds of PD compared with individuals getting drinking water from water service areas without a golf course. Additionally, the largest effect sizes were for the association of living within a water service area with a golf course in a vulnerable groundwater region.

For years pesticides including organophosphates,[26] chlorpyrifos,[27] methylchlorophenoxypropionic acid (MCPP),[28] 2,4-dichlorophenoxyacetic acid (2,4-D),[28] maneb,[28] and organochlorines,[29] known to be associated with the development of PD, have been used to treat golf courses. Some studies have identified a link between golf courses and increased risk of adverse health outcomes.[26,30,31] Pesticides such as paraquat and rotenone have been shown to induce Parkinson-like neurodegeneration in the substantia nigra, primarily through mechanisms involving oxidative stress, mitochondrial dysfunction, and dopaminergic neuron apoptosis.[10,32] However, despite the biological plausibility, very few studies have explored the role of pesticide exposure from golf courses on risk of PD. One study of golf course superintendents found a pattern of pesticide related cancers with a small portion of participants (2 individuals) developing PD.[30] Another report provided anecdotal evidence of the possible role of golf courses in the development of PD, finding that 19 of 26 patients with PD in a study cohort lived within 2 miles of a golf course.[15]

In our study, after adjusting for socioeconomic and demographic characteristics, the risk of PD was greatest near golf courses. However, there was no difference in PD risk within 3 miles and decreasing levels of risk beyond 3 miles. One possible explanation for the lack of an association within 3 miles was a possible ceiling effect at the higher levels of exposure. Another possible explanation was that exposure may occur through the consumption of a shared, contaminated, groundwater resource in a water service area. Groundwater collected from municipal wells is sent to a water tower where it is treated, pressurized, stored, and distributed to all the residents within the water service area. In our study, 90% of individuals living within 3 miles of a golf course also lived within the

Table 3. Association Between Living Within a Water Service Area With and Without Golf Courses on Vulnerable and Nonvulnerable Groundwater Regions and Risk of Parkinson Disease (PD) in Southern Minnesota

	All patients, No. (%)[a,b]		Adjusted for patient demographics[c,b]		Further adjusted for region characteristics[c,b]	
Water service area type	PD patients (n = 418)	Controls (n = 3996)	aOR (95% CI)	*P* value	aOR (95% CI)	*P* value
Groundwater with golf course[d]	342 (13.3)	2227 (86.7)	1 [Reference]	NA	1 [Reference]	NA
Groundwater without golf course	20 (2.1)	948 (97.9)	0.13 (0.08-0.20)	<.001	0.51 (0.31-0.83)	.01
Private well	56 (6.4)	821 (93.6)	0.41 (0.31-0.55)	<.001	0.67 (0.47-0.95)	.02
Groundwater vulnerability						
Total, No.	362	3175	NA	NA	NA	NA
Vulnerable groundwater with golf course	319 (16.4)	1629 (83.6)	1 [Reference]	NA	1 [Reference]	NA
Vulnerable groundwater with no golf course	14 (2.8)	484 (97.2)	0.14 (0.08-0.23)	<.001	0.74 (0.43-1.27)	.28
Nonvulnerable groundwater with golf course	23 (3.7)	598 (96.3)	0.18 (0.12-0.29)	<.001	0.55 (0.33-0.92)	.02
Nonvulnerable groundwater with no golf course	6 (1.3)	464 (98.7)	0.10 (0.06-0.16)	<.001	0.52 (0.29-0.94)	.03

Abbreviations: aOR, adjusted odds ratio; NA, not applicable.

[a] Percentages were calculated row-wise.

[b] Excludes populations outside of Minnesota.

[c] Demographics included age, sex, race, and ethnicity. Region characteristics included median household income, Rural Urban Commuting Area classification, and health care utilization.

[d] aORs are reported using the exposed group as the reference in this table and reported for the exposed group in the text (inverse).

boundaries of a water service area serviced with groundwater. Thus, individuals living within the same water service area usually rely on a shared groundwater resource and would therefore receive the same exposure. Nevertheless, we acknowledge that the complexity of the water distribution process varies from city to city and therefore it is possible that not all individuals within the same water service area share the same water resource (eg, in the case of a water service area with multiple water towers). Our study area reflects rural, suburban, and relatively slow-growing major metropolitan cores; thus, we expect the water distribution process to be less complex compared with that of faster growing cities.

Several studies have provided evidence of the ability for pesticides applied to golf courses to leach into the ground and contaminate drinking water supplies.[16,17,33,34] For instance, 1 study[16] found that the groundwater under 4 different golf courses in Cape Cod was contaminated with 7 different pesticides, including chlorpyrifos and 2,4-D among others. In this study, 1 pesticide was present in the drinking water at levels more than 200 times greater than the health guidance level. In our study, 77.3% of our patient population (86.6% of cases and 76.5% of controls) lived in water service areas that relied on groundwater resources.

Airborne exposure to pesticides may also drive the relationship between PD risk and proximity to golf courses. In our study, we found that the association between proximity to golf course and PD remained (for those living within 1 to 2 miles) after adjusting for groundwater vulnerability. Moreover, we found larger effect sizes for the association between distance to golf course and PD risk in the urban areas, and thus we speculate that greater city density surrounding golf courses in urban areas may lead to higher levels of airborne pollutant exposure for the nearby residences. Taken together, our study complements, and expands on, the limited research on golf courses as a risk factor for PD and further suggests that both vulnerable drinking water and airborne pollutant exposure may contribute to risk for developing PD near golf courses. Public health policies to reduce the risk of groundwater contamination and airborne exposure from pesticides on golf courses may help reduce risk of PD in nearby neighborhoods.

Strengths and Limitations

Our study has several strengths. First, we used population-based incidence data, which allows us to better answer questions of PD etiology. Second, rather than relying on *ICD* codes alone, all identified cases were screened by a movement disorder specialist to confirm the onset and diagnosis of PD. Third, our study used address-level data to assign exposure, which provides more accurate distance-to-exposure values compared with studies using less precise location information (eg, zip code centers). Fourth, we digitized and screened our golf course data manually to confirm the correct placement of the golf course boundaries in 2013. Fifth, we integrated data on water service areas, which enabled us to determine whether an individual received drinking water from a groundwater resource, surface water, or a private well.

Our study also has limitations. Our population-based dataset had a limited geographical extent. However, the REP captures data from patients for all health systems within our study area, making it a comprehensive population-based dataset.[20] Our study was limited in that the population is predominantly White given the demographics of the study region and therefore might limit the generalizability of our results. However, our REP data well replicates other PD-exposure relationships found in diverse cohorts such as the US Medicare population.[1] Additionally, we acknowledge that requiring PD cases to have an Olmsted County residence at the time of diagnosis is a limitation in our study design. Despite this constraint, our sensitivity analysis, which used controls selected from Olmstead County, provided consistent results. We did not have information on occupational history, thus results may be vulnerable to exposure misclassification errors (ie, for patients who spend more time at locations other than their home address). Our study did not consider other relevant PD risk factors (eg, head trauma, genetic predisposition). Due to the long prodromal period of PD,[35] we obtained data on golf course locations for the earliest possible year of data available (2013). Although this year of exposure data provided a minimal exposure window, we speculate that most of the golf

courses identified in our study existed for many years prior to 2013. Notably, given the long prodromal period of PD, our study uses distance as a proxy to estimate exposure to pesticides occurring many decades ago, which may not reflect the same pesticides applied on these golf courses in recent years. Nevertheless, even if golf courses were present decades earlier, our results were based on home address information 2 to 3 years prior to symptom onset, which does not capture the complete prodromal period. Our population was relatively stable, living at their address for approximately 6 to over 43 years. We were unable to extend address history back further than 3 years because residency data becomes more incomplete the further we move back in time due to lack of interaction with the health care system.

Conclusions

This population-based case-control study provides evidence in support of an association between living within proximity to golf courses and the risk of developing PD. Shorter distances from golf courses were associated with an increased risk of PD compared with those living farther away. Associations with the largest increase in odds was found in individuals living within water service areas with a golf course and in vulnerable ground water regions.

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Conflict of Interest Disclosures: Dr Dorsey reported receiving honoraria from Adivo Associates France, American Neurological Association, Dartmouth College, Elsevier, HMP Education, International Parkinson and Movement Disorder Society, Massachusetts Medical Society, Michael J. Fox Foundation, National Institutes of Health, National Multiple Sclerosis Society, Northwestern University, Patient-Centered Outcomes Research Institute, Philadelphia Neurological Society, Stanford University, Stony Brook University, Sutter Health, Texas Neurological Society, and University of Toronto; he reported receiving consulting fees Abbott, Abbvie, Acadia, Acorda Therapeutics, Advarra, Aspen Neuroscience Inc, Bial Pharmaceuticals, Biogen, Biohaven Pharmaceuticals, BioSensics, Boehringer Ingelheim, Caraway Therapeutics, Cerevance, CuraSen, DConsult2, Denali Therapeutics, Eli Lilly, Genentech, HanAll BioPharma, Health & Wellness Partners, HMP Education, Kairos Cinema LLC (PBS), Karger, KOL Groups, Life Sciences Consultant, Mediflix, Medrhythms, Merck, Mitsubishi Tanabe Pharma America Inc, MJH Holdings, NACCME, Novartis, Otsuka, Praxis Medicine, Remepy, Sanofi, Seelos Therapeutics, Spark Therapeutics, Springer Healthcare, Theravance Biopharmaceuticals, VivoSense, WebMD; he reported receiving grants from Averitas Pharma, Biogen, Burroughs Wellcome Fund, Michael J. Fox Foundation, National Institutes of Health,

Pfizer, Photopharmics, and Roche, Safra Foundation; and he reported ownership interests in Included Health, Mediflix, SemCap, and Synapticure outside the submitted work. Dr Bower reported grants from Novartis and Amylyx Pharmaceuticals outside the submitted work. No other disclosures were reported.

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Data Sharing Statement: See Supplement 2.

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SUPPLEMENT 1.

eTable 1. Sensitivity Analysis for RUCA

eTable 2. Differences Between Olmsted and Non-Olmsted Controls

eTable 3. Primary Analysis With Olmsted Controls

LATE

SB-2103-SD-1
Submitted on: 2/25/2026 3:52:14 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Kaiakahinalii Kaopua-Canonigo	Individual	Support	Written Testimony Only

Comments:

Aloha e nā luna hoʻokele me ke komike,

I am testifying today in support of SB 2103 SD1, and requesting that the committee pass this measure. An abundance of scientific literature on pesticide drift and the unique susceptibility of children to pesticide exposure provide a sound argument for establishing meaningful buffer zones to protect children at school and where they recreate.

Analysis of restricted use pesticide (RUP) usage data in Hawaiʻi has revealed that many communities are still heavily exposed to highly hazardous drift prone pesticides. 100' buffer zones are simply not supported by scientific research. Research has shown that certain pesticides are known to drift over a mile and cause health impacts.

California has enacted similar legislation requiring pesticide buffer zones around schools, yet still maintains the most robust agricultural production and economy in the US. Hawaii can both meet its goals to increase local food production and protect our most vulnerable from pesticide drift.

The American Academy of Pediatrics (AAP) finds there to be a significantly increased health risk for children exposed to pesticides, and additional precautions must be taken to protect them from unintended exposure.

I am very concerned about long-term pesticide exposure of keiki while they are at school or at play in our parks, which constitutes a health threat that can lead to cancer, neurological, and respiratory damage, among other medical conditions.

Please protect our keiki and pass SB 2103 SD1.

Kaiakahinalii Kaopua

Oahunuialua

LATE

SB-2103-SD-1
Submitted on: 2/25/2026 5:46:00 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Von Kaanaana	Individual	Support	Written Testimony Only

Comments:

I strongly urge you to support this bill! There is mountains of research surrounding the fallout of pesticides and it's affects on the health outcomes of children. Hawai'i must stand up against the use of dangerous pesticides and look better alternatives. Agriculture corporations must be held accountable for poisoning the land and water!

LATE

SB-2103-SD-1
Submitted on: 2/25/2026 7:29:53 PM
Testimony for CPN on 2/26/2026 9:45:00 AM

Submitted By	Organization	Testifier Position	Testify
Patrick Yuasa	Individual	Support	Written Testimony Only

Comments:

The decison for this bill should be clear. Pesticides with chemicals that can never leave the body, cause a range of health effects, are especially dangerous to children, are able to travel 0.8 miles and greater. These permanent dangers should not be allowed just 100 feet from schools, which is why SB 2103 needs to pass.