

The School Environment Protection Act of 2009

Myths and Facts

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Parents do not want their children exposed to chemicals that cause cancer, asthma, neurotoxic and immune system effects, endocrine disruption, developmental disabilities and more ... especially when their use is not necessary. Towns and cities across the country, schools, hospitals and homeowners want the same thing. The good news is that it is possible today to manage buildings and grounds without pesticides that cause these effects.

The *School Environment Protection Act of 2009* (SEPA) is cutting edge federal legislation that embraces the experiences of schools and communities across the country that have rejected the old arguments and are meeting the challenges of land and building management with new and creative approaches that manage pests and protect health and the environment at the same time. Those who say that unwanted insects, rodents and plants cannot be managed without hazardous pesticides are out of step with up-to-date management practices.

Many states have already adopted statewide pest management requirements for their schools that limit toxic chemical use and advance safer practices. SEPA takes the best of the state laws and ensures that all children can go to school in a healthful learning environment, protected from pests and pesticides.

The following myths and facts reflect some of the major misconceptions, inaccuracies and truths about effective pest management and SEPA.

Myth: *SEPA gives little consideration to the states with existing laws for schools or even general pest control laws. It would require states that have had plans and programs in place for 15 years to move back to square one, which could create chaos and confusion not only among pest management professionals, but in school districts across the country.*

Fact: SEPA is based on the 35 existing state laws regarding school pesticide use (See Beyond Pesticides' report, *The Schooling of State Pesticide Laws – 2010 Update*). Although these laws constitute a patchwork of provisions and are quite varied in their definition and approach to allowable pest management, pesticide use and public disclosure practices, together they are the very foundation and impetus for this critical piece of federal legislation. Without these existing laws, we would not have the knowledge and experience to know that SEPA's requirements are feasible.

SEPA does not undermine existing state laws, rather it builds on them. This bill takes states forward with the tools to manage schools without toxic pesticides, and in the process protects the health of children and school staff. This bill will require states and their school districts to move beyond antiquated pest control methods dependent on chemicals with safer pest management strategies that focus on using non-chemical preventive management tools and the least-toxic pesticide as a last resort. SEPA is crafted to create a streamlined approach so that there will be



plenty of time to get the necessary information to the states and school districts, and creates a process for sharing existing information and strategies.

Myth: *SEPA will preempt even the most comprehensive school IPM programs in the country –laws that have been painstakingly developed over years in coordination with regulators, schools, IPM experts and the public.*

Fact: The legislation does not preempt states or localities. Rather, states or localities that already have policies that meet or exceed this act can continue with their implementation. In this way, SEPA brings all states to the same level of protection. Since many of the implementation and outreach materials are already developed, school districts and states can share their resources with others to facilitate SEPA implementation. Section 34(l) states that the Act “not preempt requirements imposed on local educational agencies and schools related to the use of integrated pest management by State or local law (including regulations) that are more stringent.”

Myth: *SEPA will compound health issues in schools.*

Fact: SEPA is public health legislation. Given that children spend a significant part of their young lives in school buildings and on school grounds, pesticide residues in and on school property should not continue to be overlooked. SEPA is an excellent solution to the problem because it carefully balances the need to manage pests at schools, while ensuring that children are learning in a safe, healthy and pest-free environment. Toxic pesticide use at schools is a serious health issue that needs attention. Student and staff poisoning at schools is not uncommon. Adverse health effects, including nausea, dizziness, respiratory problems, headaches, rashes, and mental disorientation, may appear even when a pesticide is applied according to label directions. Low levels of pesticide exposure can adversely affect a child’s neurological, respiratory, immune and endocrine system. Of the 40 commonly used pesticides in schools, 28 can cause cancer, 14 are linked to endocrine disruption, 26 can adversely affect reproduction, 26 are nervous system poisons, and 13 can cause birth defects. The Government Accountability Office (GAO) in 2000 documented over 2,300 reported pesticide poisonings in schools between 1993 and 1996. Because most of the symptoms of pesticide exposure, from respiratory distress to behavioral and concentration problems, are common in school children and may be assumed to have other causes, it is suspected that pesticide-related illness is much more prevalent than typically assumed.

SEPA does not just address pesticide use, but also seeks to prevent insect, rodent and plant (weed) problems. The pesticide lob-



by pushes the notion that without toxic pesticides school buildings and lawns would be overwhelmed by disease-carrying pests and unsightly and dangerous weeds. This is not true. Experience shows that school pest problems can be effectively managed without toxic pesticides. The vast majority of insect and weed pests may be a nuisance, or raise aesthetic issues, but they do not pose a threat to children’s health. Where they do present a threat, they can be prevented or managed effectively without toxic chemicals.

Myth: *SEPA will unnecessarily restrict rational use of certain pesticides on and near school grounds to reduce risk posed by arthropods that burden health (directly or as vectors), and the bill would ultimately compromise the public health of the population it seeks to protect.*

Fact: There is no rational use of a toxic pesticide linked to asthma, cancer, learning disabilities or other adverse health effects in a school environment to manage pest problems when safer alternative non-chemical and least-toxic pest management strategies exist. In the rare circumstances when a pest presents a public health problem and cannot be managed using the integrated pest management (IPM) system defined in the Act, the school IPM coordinator may approve the use of any necessary pesticide. The use of a pesticide for a public health emergency requires advance notification (24-hour prior-notification and posting of notification signs) and reentry restrictions (area unoccupied for 24 hours following application) to go into effect in order to protect students and school staff.

Myth: *The requirement of posting signs is a bit much. There is already sufficient language in the bill for notification of parents and staff and since areas treated will be under a 24-*



hour reentry interval anyway, there is not much value in the posting of signs. Who is left to notify? Visitors? Why should visitors be notified? What special circumstance does a school present to adult visitors that other public institutions do not? Sign postings create more “sky is falling” craziness from over-reactive people than benefits.

Truth: The public has a basic right-to-know when pesticides are being used at a school. Posting notification signs informs not only those students, parents and school staff that somehow missed the prior written notification, but also informs others using school facilities for sporting events, boy and girls scouts, enrichment classes, and other community events. If signs were not posted, parties that may use the school grounds would otherwise unknowingly be exposed to the chemicals. Thus, those at higher risk or concerned can take the necessary precautions to avoid the exposure.

Myth: *The clarity between “least-toxic pesticide” and “pesticide” is very vague. A “least toxic pesticide” is a “pesticide,” and the definition is misleading and confusing in the bill.*

Fact: SEPA specifically spells out what can and cannot be considered a “least-toxic pesticide” in the definitions section of the bill. Pesticides that may be listed as a “least-toxic pesticide” are the only non-hazardous pesticides that may be used as part of a school IPM program. However, if a school has a pest management problem, deemed a “public health emergency,” that is not effectively being managed through the IPM program and the use of a least-toxic pesticide, a school may choose to use *any* pesticide to control that pest problem. If a pesticide, other than a “least-toxic pesticide” is chosen, then certain provisions kick-in, including school IPM coordinator approval, 24-hour prior written notification, posting of notification signs, and no-entry during the applica-

tion and 24 hours following.

Myth: *SEPA notification requirements will slow down pest management professionals’ ability to treat in a timely fashion.*

Fact: The IPM plan and the availability, through the IPM coordinator, of health and environmental effects information on any pesticide that may be used at the school, is published at the beginning of the school year. However, at the time of a least-toxic pesticide application there are no notification requirements. It is only in the rare circumstances when a pesticide, other than a least-toxic pesticide, is used for a public health emergency that the schools are required to provide 24-hour prior notification. Every parent and every staff member in the school has a right to know what chemicals are being used in schools. This is sound public health policy, especially when chemicals that are potentially dangerous or not fully evaluated for health effects are being used. Without notification, parents are unable to make important decisions regarding their children’s attendance in light of specific sensitivities or concerns. Schools regularly communicate with parents through newsletters and other notices and are equipped to send information home with students with little burden or cost.

Myth: *A problem will be encountered with this program where: “the application area must be unoccupied for 24 hours following the application.” We are not able to prevent community members from unauthorized use of our playground fields, nor are we able to prevent school site staff from entering the buildings on their days off. Postings are ignored. Hundreds of people attending a soccer match aren’t going to listen to one guy telling them that it’s only been 21 hours since a Roundup application, so they’ll have to leave.*

Fact: Pesticide applications made on the basis of a public health emergency require the area to be unoccupied for 24 hours following the application. Signs are required to be posted to inform the school occupants and users of the application and requirements. The school will have to schedule the pesticide application when it is unlikely that the area will be used by others. In the scenario provided, the school should send a notice to the organizers of the soccer match informing them of the pesticide application and subsequent requirements. If all parties properly communicate and make the necessary adjustments, everyone will be better off.

According to Beyond Pesticides’ research, 13 states have restrictions on the timing of pesticide applications and establish reentry intervals. Alaska and Maine have the longest re-entry restrictions, requiring that the area treated remain unoccupied for 24 hours after the application.

Myth: *SEPA eliminates nearly all pesticides, except the most primitive products with limited usefulness, for any purpose except public health emergencies. This would leave schools with few alternatives for termite control, nuisance pest control and turfgrass management. Telling schools that they must do IPM, while at the same time taking away all the best pest management tools in their toolbox, will make IPM unsuccessful.*

Fact: The definition of IPM includes techniques and products that can be used to effectively manage pests while not exposing children to toxic hazards. It is not necessary to expose kids to carcinogens, neurotoxins and endocrine disruptors when there are proven, effective management methods that do not rely on these chemicals. SEPA advances pest management strategies that are not dependent on pesticides that have identified risks. The Act embodies the precautionary principle for schools. Despite the proven effectiveness of techniques, including exclusion, sanitation, habitat elimination, and a new generation of products, many in management are stuck in the past. Essential to the management of a pest problem are solutions based on preventing pest outbreaks from occurring in the first place. Improving a school's sanitation can eliminate cockroaches and ants. Caulking cracks and screening openings will keep insects and rodents from entering school buildings. Effective monitoring ensures that pests are detected and the source of the problem identified before unacceptable outbreaks occur. Successful pest management requires identifying the source of the problem, determining the cause of the pest problems, and modifying the conditions that attract or support the pest. Weed management is directly related to soil health. Since weeds tend to like compacted soil, the solution is not the temporary control achieved by killing them, but the adoption of practical strategies to build soil conditions. Most insect and plant pests may be a nuisance, or raise aesthetic issues, but do not pose a threat to children's health. Therefore, children should never be exposed to potentially harmful pesticides for this reason. Increasingly, the public is calling into question the use of pesticides for aesthetic results alone. Examples from around the country prove that IPM without toxic chemicals is effective and successful. In fact, Massachusetts and Oregon prohibit high hazard pesticides from being used in an IPM program.

Three decades ago, many in industry and the extension service said that organic was impossible to commercialize, that it was unrealistic, that it "takes away the best pest management tools." Today it is a nearly \$20 billion industry with increasing support from extension and practitioners worldwide.

Myth: *The definition of toxic pesticides is flawed because it does not take into account the basic formula that we all learn in pesticide applicator training: Hazard = toxicity x likelihood of exposure (where even toxicity is a function of dose).*

Fact: Risk assessment calculations under the *Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)* and the *Food Quality Protection Act (FQPA)* – the federal pesticide registration and residue tolerance laws, respectively – are fraught with limitations in fully evaluating health effects and false assumptions about daily toxic exposure and individual sensitivities. Risk management decisions under these laws assume the benefits of toxic pesticide products to society or to various sectors of users, then make a determination that the risks are "reasonable." Even under FQPA, which has been touted for its health-based standard, there is an inherent assumption that if a pesticide meets a highly questionable "acceptable" risk threshold, it has value or benefit. This is the practice even though there are typically less or non-toxic methods or products available. Absent altogether is any analysis of whether the so-called "pest" (insect or plant) has been accurately defined. EPA does not regularly consider non-chemical alternatives (such as organic agricultural methods), nor does it evaluate the need for or the benefit provided to society (do we need to use toxic chemicals to kill clover in our yards?). The agency assumes 100 percent compliance with pesticide product labels, ignoring real world violations or accidents, which cause widespread exposure.

In addition, we now know that in all circumstances it is not the dose that makes the poison, that even low dose exposure can cause significant adverse health effects. For example, there is significant scientific evidence of the endocrine disrupting mechanism –which defies classical "dose-makes-the poison" toxicological theory with exquisitely low doses causing effects based on timing of exposure. Risk assessments justify use patterns for widely used pesticides based on assumptions about toxicity and exposure, which are limited by the lack of data on endocrine disruption. The analyses are skewed in favor of the continued use of hazardous chemicals. Beyond Pesticides has urged EPA and local decision makers, because of this and other regulatory inadequacies, to embrace the precautionary principle, and promote the avoidance of toxic pesticide use in favor of non-chemical practices.



Myth: *The listing of pesticides that are prohibited is way too complicated for schools to figure out.*

Fact: SEPA clearly defines chemical characteristics considered least-toxic. The definition is based on established governmental databases and chemical characteristics. It is the responsibility of the National School IPM Advisory Board to screen pesticides and develop a list of products that can be used in the school environment in accordance with the Act's definition of least-toxic. In this way, schools are not required to research the allowable ingredients and products.

Myth: *The approach that SEPA takes runs counter to the IPM concept which emphasizes use of multiple control tactics. Pesticides play a valuable role in effective IPM.*

Fact: IPM is an evolving methodology. Years ago IPM practitioners did not differentiate among all the pesticides available in the marketplace. They were highly dependent on very hazardous materials, except they only used them when their monitoring told them it was necessary. So, in most cases, even the least chemical-dependent IPM system was still dependent on highly toxic chemical products. Today's IPM system that is a part of the "green" movement and not stuck on pesticide-dependency puts much more emphasis on practices and management and only use selected products as a last resort. As a result, many are finding that pesticide products become the exception rather than the rule and when they use them, as a last resort, they rely on "green" products that meet the health and environmental screen in SEPA.

IPM is pest management that is sensitive to the health of students, school staff and the environment. Pesticide use is unnecessary because safer alternatives can successfully manage insects, rodents and unwanted plants. The goal of an IPM program is to minimize

and, to the extent possible, eliminate the use of pesticides and the associated risk to human health and the environment while controlling a pest problem. IPM does this by utilizing a variety of methods and techniques, including cultural, biological and structural strategies. Pesticides that are linked to adverse health effects should not be a tool when effective non-chemical pest prevention and management strategies are available. State IPM laws in California, Illinois, Maryland, Massachusetts, Minnesota, and Oregon have comprehensive IPM definitions that allow only the least-toxic pesticide to be used as a last resort.

Myth: *SEPA is an additional and unnecessary burden, completely eliminating any IPM-ready companies from even considering working in schools, throwing our efforts at IPM implementation further back.*

Fact: The development of the legislation is based on the real world experience working with school facility managers and commercial sector/pest management operators in implementing this level of IPM. While many companies have not modernized their approach to pest management, others have. When the customer asks, many national and regional companies say that they can deliver this level of IPM and, in fact, are implementing it in health care facilities and schools. SEPA-style IPM is being done and can be done on a national level.

Myth: *SEPA seems to throw EPA "under the bus" by implying that its registration process does not protect the public, hence a separate list of "least-toxic products" is needed.*

Fact: We know from National Academy of Sciences' report *Pesticides in the Diets of Infants and Children* (1993) that EPA standards for pesticides are not adequately protective of children. EPA is in the process of reviewing pesticides on the market, but that process takes a very long time. Even under the best of circumstances, the current laws will allow continued use of these pesticides in and around schools. Since there are documented weaknesses in the protections provided by federal and state laws, it is prudent to avoid systems that rely on toxic pesticides. A study in the July 2005 issue of *Journal of the American Medical Association* confirms the importance of this legislation, finding that students and school employees are being poisoned by pesticide use at schools. The study, "Acute Illnesses Associated with Pesticide Exposure at Schools," (Vol. 294, No. 4, pp 455-465), by Walter A. Alarcon, M.D. (National Institute for Occupational Safety and Health) et al., analyzes 2,593 poisonings from 1998 to 2002 from three surveillance systems. While the analysis finds overall incident rates of 7.4 cases per million children and 27.3 cases per million employees, the authors conclude, "[T]hese results should be considered low estimates of the magnitude of the problem because many cases



of pesticide poisoning are likely not reported to surveillance systems or poisoning control centers.” The authors recommend that strategies be adopted to reduce the use of pesticides at school and reduce drift. The study finds that the incidence rates among children increased significantly from 1998 to 2002. Children need to be better protected. This legislation identifies a place where young children spend most of their time, the school, and tries to make the school the safest place possible.

Myth: *Instead of resubmitting the same impractical, unpopular and expensive bill year after year, Rep. Holt and others should consult with states and figure out a way to provide a simple bill that requires licensing of all school pesticide users (a very basic requirement still needed in many states).*

Fact: The requirements of this legislation can be met with little administrative or financial burden. The legislation is modeled on a variety of tested, efficacious, and cost-effective state and local programs. On the ground experience proves there is enough information now to know that what is being proposed in SEPA works. This legislation allows us to put these experiences to work at the national level and ensure adequate protection of all children. SEPA is based on more than a decade of state and local school pest management and pesticide use policies and on-the-ground experience from across the country. The 35 state laws that have a patchwork of many provisions included in SEPA is the foundation for this legislation. In addition, SEPA does require that applications of pesticides, other than least-toxic pesticides, are made by state certified applicators.

Myth: *SEPA is a one-size fits all legislation that would require schools in Alabama to manage pests the same as schools in Alaska. A better bill would be to mandate states to develop their own incentives-based IPM programs—which they can design.*

Fact: SEPA allows states the necessary flexibility to craft school pest management plans that address the various pest pressures in each state. Each state is required to develop an IPM plan that is then provided to school districts. School districts can then take that plan and tailor it to their own needs. The only restriction is that schools cannot use toxic pesticides through its IPM program. The strategy a school uses to prevent and manage different pest problems is up to the state and school district plan, leaving them plenty of flexibility.

Myth: *There is not a school district in the U.S. that would be able to comply with this bill. It is totally unworkable as written.*



Fact: SEPA is based on practitioners’ experience managing buildings and grounds without the hazardous pesticides that the pro-pesticide lobby says are necessary. These managers are focused on the systems in place that exclude unwanted organisms from their site by managing sanitation, harborage, entryways and conducive conditions that enable pest problems. Yes, sometimes a pesticide product will be necessary. The question is which ones. Here is where SEPA utilizes modern approaches, green chemistry on the cutting edge of technology that has made obsolete the chemicals that the pro-pesticide lobby doesn’t want to lose. Some may refer to this new modern technology as “the most primitive products with limited usefulness.” Beyond Pesticides knows that if you ask many companies in the marketplace selling services to parents and other customers that are looking for “green” services, they will tell you that they have all kinds of modern tools in the toolbox, from mechanical, biological, to chemical products derived from natural substances that meet the standards of SEPA and work just fine when they are needed. But, the great thing is that these same folks will tell you that if an IPM program is operating effectively with all the systems in place, they simply do not need to use much pesticide product at all.

Myth: *The enforcement piece is what is lacking and should be addressed. SEPA is another unfunded mandate.*

Fact: Each state is required to develop its IPM plan as part of its existing state cooperative agreement with and financially supported by EPA. In this context, the Congressional Budget Office found that EPA already funds the states through its primary enforcement grant program (in fiscal year 2009, EPA granted \$18 million to the states through this program) and the SEPA requirement for an IPM plan becomes a part of an existing allocation. Similarly, the federal government and states fund local school districts, with this bill simply amending the requirements attached to the funding. Many states have already placed such requirements on their local school



districts. The bill appropriates \$7 million a year to cover costs for implementing the legislative requirements for EPA.

Myth: *SEPA would force schools to use more costly fertilizers. There is just as much or more risk from the application of manures as there is from synthetic fertilizers and if you require schools to use products that don't work very well, they will make more applications which may lead to more exposure and possibly greater risks. The risk of bacterial contamination in organic fertilizers is a real risk and the amount of soluble nitrogen in an organic fertilizer can be just as bad as the nitrogen in a urea or ammonium based synthetic fertilizer. Just because something is natural does not mean it is safer.*

Fact: It should be clearly noted that the problems associated with the use of synthetic fertilizers are more significant than natural organic fertilizers. Yes, over-application of everything is a problem, but that does not justify using synthetic chemicals over compost. In order to develop and maintain a healthy soil, schools must eliminate synthetic fertilizers, which damage soil life that is essential for a non-toxic system to work. To have healthy turfgrass, fertilization techniques focus on feeding the soil, not the plant, which builds soil microorganisms, earthworms, fungi, and soil life. Composted materials contain the essential nutrients for plant life, while not presenting health and environmental hazards. Also, the cost for fertilizers will decrease when using those that are natural, organic-based because they are long lasting. Chemical fertilizers release their nutrients quickly, with significant amounts of product being washed away and contaminating streams and rivers.

Myth: *Schools see indoor IPM as well-established and straightforward with lots of different tools, and for the most part is strongly supported by industry; while outdoor IPM is less straightforward, not so well-established, and not supported by industry.*

Fact: Yes, school IPM for structural, indoor pest management is well-established across the country, but so too is outdoor IPM and organic turf and landscape management as required by SEPA. There is a rapidly growing movement spreading throughout the U.S. of communities adopting pesticide-free zones and IPM program for managing town and city-owned property, such as playing fields, parks and public lawns, including: (i) 31 communities in New Jersey; (ii) the New York State Office of Parks, Recreation and Historic Preservation; (iii) Chicago City Parks; (iv) more than 50 parks in the Northwest U.S.; and (v) communities throughout Massachusetts, Maine, New York and Connecticut. This is just the tip of the iceberg, as new policies and programs are continually being implemented by local and state government entities as well as schools and homeowner associations.

In a Cornell University study of turf, chemically maintained turf is more susceptible to disease. The reason was found to be very low organic matter content and depleted soil microorganisms. A key component of organic management is topdressing with compost, adding a steadily available source of nutrients, adding thousands of beneficial microorganisms that help fight disease. Research at Cornell demonstrates that topdressing with compost suppresses some soil-borne fungal diseases just as well as conventional fungicides. In fact, chemical turf is generally hard and compacted because there is not much soil biology (life in the soil). Organic management focuses on cultural practices, such as aeration, that alleviates compaction and provides a softer, better playing surface. The organic turf manager recognizes the value of clover and other unwanted plants, sets a reasonable tolerance level, and uses sound horticultural practices such as pH management, fertilization, aeration, overseeding with proper grass seed, and proper watering to control them. While initial costs to transition a chemical-dependent turf to organic care can be higher, in the long-run costs will be lower as inputs, like fertilizer and water, decrease. Annual chemical treatments are eliminated.

The typical playing field is deluged with a mixture of poisons designed to kill fungus, weeds, and insects. A conventional maintenance plan includes the use of a fungicide on a regular basis to prevent fungal pathogens, a post-emergent herbicide (such as 2, 4, D) to kill crabgrass and dandelion seed, a selective herbicide (such as Trimec or Mecoprop) to kill clover and other broadleaf weeds, and an insecticide (such as Merit or Dylox) to kill insects such as grubs. Their use on playing fields is particularly troubling because children come into direct contact with the grass, and have repeated, and prolonged exposures. In addition, a 1996 study found that the herbicide 2,4-D can be tracked from lawns to indoor spaces, leaving residues of the herbicide in carpets, rugs and dust. While much is known about the effects of individual pesticides, the health effects of the mixtures are not evaluated by EPA. Many people think that the pesticides "wear off," and children are not being exposed. However, the Centers for Disease Control (CDC) found multiple pesticide residues, including 2,4-D, in the bodies of children ages 6-11 at significantly higher levels than all other age categories.