

Hearing on HB 53—House Transportation Committee
Testimony of Pamela Miller, Alaska Community Action on Toxics
March 10, 2015

Thank you, Co-Chairs Foster and Hughes and members of the Committee for the opportunity to testify today. My name is Pamela Miller, Biologist and Executive Director with Alaska Community Action on Toxics (ACAT). ACAT is a statewide environmental health organization of scientists, public health professionals, and community advocates that conducts research and provides educational programs, technical assistance, and training. We support HB 53 because it would establish common sense measures to protect salmon streams and drinking water sources by requiring buffer zones. HB 53 would also restore public participation in decision-making about pesticide use.

The regulations adopted by the Alaska Department of Environmental Conservation in 2013 removed regulatory and oversight authority from decisions about pesticide use on public lands and rights-of-way. This change in the regulations also eliminated the public's right to participate in the decision-making process. The public lost the decision-making and oversight authority of ADEC concerning particular pesticide products, application methods, sensitive locations, and threats to environmental and public health. These regulations weakened democratic participation in decisions that affect water quality, fish habitat, and public health. Alaskans have a right-to-know and right to participate in decisions about pesticide spraying on our public lands. Since pesticide spraying may affect land, waters, and fish that are public trust assets, the public is entitled to notice and the ability to comment before their reasonable concurrent use is affected. People should have the right to participate in decisions about herbicide/pesticide applications that might affect their health.

We have a long history in Alaska of constructive citizen participation in decisions about herbicide and pesticide use. Alaskans have long been concerned about protecting water quality and human health and actively engaged in decisions about herbicide/pesticide use in public places, including rights of way and other public lands. Pesticide right-to-know issues have enjoyed bipartisan support as evidenced by a bill that was sponsored and successfully passed by then Representative Kevin Meyer in 2005—a bill that improved notification about pesticide use in public places (including parks, public buildings, sports fields, and multi-family dwellings) and established registration fees for pesticides. Improved notification about pesticide use in schools was also achieved on a statewide basis in 2001. As early as 1978, Jay Hammond, then-governor of Alaska, issued a directive which banned the use of herbicides by state agencies because of citizen concerns about the health effects of these chemicals. For more than three

decades, a broad diversity of Alaskans effectively prevented the unnecessary use of herbicides by the Alaska Railroad through Republican and Democratic administrations. The ADEC effectively ignored public concern and allowed the railroad to apply herbicides beginning in 2010, despite the evidence that the railbelt could be effectively maintained with safe alternatives. The agency enacted regulations in 2013 that eliminate public right-to-know provisions and citizen involvement in decisions about pesticide use in public places, including transportation rights-of-way. Although we agree for the need to address problems of invasive and noxious weeds, herbicides are not necessary to accomplish solutions to this problem.

Pesticides are toxic chemicals that are both ubiquitous and unique. The term “pesticide” includes herbicides, fungicides, rodenticides, and insecticides. Pesticides are designed to kill, repel, or otherwise harm living organisms [U.S. Environmental Protection Agency (EPA) 2005c], and they are one of the few toxic substances that are intentionally applied to the environment [National Research Council (NRC) 1993]. Given their inherent toxicity and tendency to disperse from the area of application, the State should ensure regulatory oversight and full public participation in decisions about the use of pesticides and do everything in its power to minimize harm to drinking water sources, salmon streams, and public health from exposure to pesticides. HB 53 includes buffers that will limit runoff of pesticides and thus provide protection of drinking water sources and salmon streams.

Pesticides can cause damage to salmonids that reduces their chances for survival and can also kill them directly. Many pesticides cause reproductive harm, reduce survival of young salmon as they transition to seawater, impair migration, or cause behavioral changes that limit survival. Some pesticides/herbicides also affect salmon indirectly by changing the abundance of food, cover, or other conditions of the aquatic environment.

I believe that there are risks to public health from the application of herbicides and pesticides on public lands and rights-of way. The peer-reviewed scientific literature supports this assessment. Exposure to herbicides/pesticides can result in adverse health outcomes such as neurological damage, hormone disruption, developmental and reproductive disorders, and cancers, sometimes from a single exposure. People can be exposed through drift of the chemical in air, water (these chemicals can contaminate surface or groundwater sources of drinking water), from the harvest of berries and plants, or through consumption of contaminated fish. The Department of Transportation has stated its intent to use herbicides, including such formulations containing active ingredients such as glyphosate, imazapyr, triclopyr, aminopyralid, clopyralid, 2,4-D, fluroxpyr, dicamba, metsulfuron methyl, and chlorsulfuron. These herbicides are associated with a range of adverse environmental and human health

effects. For example, glyphosate is associated with birth defects, neurological disorders, reproductive harm, and a rare type of non-Hodgkin's lymphoma. Recent studies link exposure to formulations of glyphosate with interference with hormone production associated with pregnancy problems, low birth weight, and miscarriages and possibly leading to abnormal fetal development. Children and people of reproductive age are particularly vulnerable as are those with chronic illnesses and the elderly.

EPA assesses the safety of pesticides/herbicides under the federal law known as FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). The majority of pesticide products (and herbicides are considered a type of pesticide) are approved for use without adequate toxicity testing, and then remain on the market. EPA has a system that requires re-registration of pesticide products every 15 years and the regulatory system has not kept up with current science. Toxicity studies that are required to register a pesticide do not include many disease endpoints such as immune system toxicity, endocrine disruption, learning and developmental disorders, or chronic diseases such as Parkinson's disease. Yet, all of these have been linked to pesticide exposure in the peer-reviewed scientific literature. Due to flaws in the federal regulatory system and failed implementation, pesticides are introduced to the market with unknown and unevaluated risks to human and environmental health. While manufacturers may eventually submit information, it often takes years before EPA acquires relevant data and often not in time for decisions concerning re-registration that all registered pesticides must go through only every 15 years. Regulatory decisions are rarely altered once data are submitted. Agency decisions concerning pesticide registrations are not keeping pace with science concerning harmful low-dose endocrine and epigenetic effects of pesticides on fish, wildlife, and people.

Components of pesticide mixtures such as solvents, dispersants, and adjuvants are not required to be disclosed because they are considered "inert" ingredients. An ADEC spokesperson was quoted in a recent Anchorage Press article¹ concerning the pesticide regulations stating: "I want people to focus on the fact that these pesticides go through a very rigorous [EPA] process." This statement is not supported by the facts. According to the 2010 *Report of the President's Cancer Panel*²: "Registered pesticides contain nearly 900 active ingredients, many of which are toxic. Many of the inert ingredients in pesticides also are toxic, but are not required to be tested for causing chronic diseases such as cancer." "Approximately 40 chemicals classified by the International Agency for Research on Cancer as known, probable, or possible human carcinogens, are used in

¹ Christianson, S. Pesticide Permits Spark Spraying Debate. Anchorage Press, July 19, 2012.

² National Cancer Institute Report, Reducing Environmental Cancer Risk. Report of the President's Cancer Panel, April 2010.

EPA-registered pesticides now on the market.” According to Schettler et. al in “*Generations At Risk*”³: “Toxicity testing for many pesticides that have been in use for many years is inadequate. One source estimates that complete toxicological data are available for only about 100 of the six hundred active pesticide ingredients [note—this number is considerably larger now and EPA is farther behind in testing of active ingredients]. Reproductive and developmental toxicity data are often particularly deficient.” Inert ingredients comprise over ninety percent of the product formulation—when *Generations At Risk* was published (in 2000), there were about 1,200 inert ingredients present in about 20,000 pesticide formulations [that number is much higher now and yet EPA toxicity testing has not kept pace with the introduction of new products]. Colborn states⁴ that “an entirely new approach to determine the safety of pesticides is needed. It is evident that contemporary acute and chronic toxicity studies are not protective of future generations. The range of doses used in future studies must be more realistic, based on levels found in the environment and human tissue. In this new approach, functional neurologic and behavioral end points should have high priority, as well as the results published in the open literature. In every instance, the impacts of trans-generational exposure on all organ systems must be meticulously inventoried through two generations on all contemporary- use pesticides and new pesticide coming on the market. To protect human health, however, a new regulatory approach is also needed that takes into consideration this vast new knowledge about the neurodevelopmental effects of pesticides, not allowing the uncertainty that accompanies scientific research to serve as an impediment to protective actions.”

The State of Alaska has acknowledged the inadequacy of the regulatory system that governs pesticide registration. On August 1, 2006 the Attorney General of Alaska announced that Alaska “joined with 13 other states and the U.S. Virgin Islands to petition the Environmental Protection Agency (EPA) to require pesticide manufacturers to disclose on the label of their product all hazardous ingredients...The EPA currently requires that pesticide labels disclose only the product’s “active” ingredients that contain toxic materials intended to kill insects, weeds, or other target organisms. Pesticide products also contain many other “inert” ingredients, which are intended to preserve or improve the effectiveness of the pesticides’ active ingredients. These “inert” ingredients may be toxic themselves...” The news release further states that “people who use or who are impacted by the use of a pesticide should have notice of all that product’s potential health risks.” According to a review by Cox (2006): “In the United

³ Schettler, T. M.D. et al. 2000. *Generations At Risk: Reproductive Health and the Environment*. Cambridge, MA:MIT Press.

⁴ Colborn, T. 2007. 2006. A Case for Revisiting the Safety of Pesticides: A Closer Look at Neurodevelopment. *Environmental Health Perspectives* 114:10-17.

States, the regulatory system for pesticides differs from other toxic chemical regulatory programs. Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA 2002), active ingredients—those which “prevent, destroy, repel, or mitigate any pest”—are subject to greater scrutiny than inert (or sometimes other) ingredients (U.S. EPA 1997). The combination of active and inert ingredients, as marketed and used, is called a formulation (U.S. EPA 2006b). In ordinary usage, the word “inert” refers to something that is physically, chemically, or biologically inactive. The U.S. EPA recognizes that the statutory nomenclature for pesticides under FIFRA engenders public misunderstanding, stating that “many consumers have a misleading impression of the term ‘inert ingredient,’ believing it to mean water or other harmless ingredients” (U.S. EPA 1997). In fact, an inert ingredient “may have biological activity of its own, it may be toxic to humans, and it may be chemically active” (U.S. EPA 2002). The arbitrary distinction between active and inert ingredients is well illustrated by the > 500 inert ingredients that, according to the U.S. EPA (2006a), have been or are currently used as active ingredients.”⁵

Public participation improves agency decisions and provides locally-based information that serves to identify and protect drinking water sources, sensitive habitats, and subsistence resources, as well as promote safer and more economical alternatives. Please support HB 53 because it ensures the right of Alaskans to participate in decisions that affect our health and livelihoods and establishes protective buffer zones.

⁵ Cox, C. and M. Sturgan. 2006 Unidentified Inert Ingredients in Pesticides: Implications for Human and Environmental Health. *Environmental Health Perspectives* 114:1803-1806.