

# Melinda Mueller

I'm writing to urge you to reject the permit to allow the use of imidacloprid in Willapa Bay and Grays Harbor.

Imidacloprid is a dangerous pesticide that many scientific studies have found to cause significant harm to nontarget species, including aquatic invertebrates (1). The use of this pesticide in Willapa Bay and Grays Harbor could result in serious unanticipated negative impacts to these ecosystems, including imperiled fish and bird species: "Of the neocotinoids, imidacloprid is the most toxic to birds and fish (2)."

This class of pesticides is also shown to be harmful to pollinators, many of which are already in decline, and whose loss is a threat to our state's ecosystems and agriculture (2 and 3).

Instead of allowing this dangerous pesticide to be sprayed, I urge the Department of Ecology to work with growers to find creative alternatives to imidacloprid that will not threaten important ecosystems.

Thank you for your thoughtful consideration of these comments.

(1) Morrissey, Christy A., et al. "Neonicotinoid contamination of global surface waters and associated risk to aquatic invertebrates: a review." *Environment International* 74 (2015): 291-303.

(2) Fishel, Frederick M. "Pesticide toxicity profile: neonicotinoid pesticides." University of Florida, IFAS (2005).

(3) Alaux, Cédric, et al. "Interactions between *Nosema* microspores and a neonicotinoid weaken honeybees (*Apis mellifera*)." *Environmental microbiology* 12.3 (2010): 774-782.

(4) Henry, Mickaël, et al. "A common pesticide decreases foraging success and survival in honey bees." *Science* 336.6079 (2012): 348-350.