## Gloria McClintock

Please consider critical new information that should be included in the Supplemental Environmental Impact Statement for the proposal by the Willapa Grays Harbor Oyster Growers Association (WGHOGA) to apply imidacloprid to Willapa Bay and Grays Bay. Information in a new U.S. Environmental Protection Agency (EPA) aquatic risk assessment shows that imidacloprid cannot be safely used by oyster growers. (USEPA. 2017. Preliminary Aquatic Risk Assessment to Support the Registration Review of Imidacloprid. Office of Chemical Safety and Pollution Prevention. Washington DC) EPA found, "[C]oncentrations of imidacloprid detected in streams, rivers, lakes and drainage canals routinely exceed acute and chronic toxicity endpoints derived for freshwater invertebrates."

The assessment also found chronic risk concerns with imidacloprid exposure to saltwater invertebrates. The agency evaluated an expanded universe of adverse effects data and found that acute (short-term) and chronic (long-term) toxicity endpoints are lower than previously established aquatic life benchmarks.

EPA found risks from imidacloprid exposure to ecologically important organisms not previously evaluated as part of its regulatory review.

A 2015 scientific review by Christy Morrissey, PhD, Pierre Mineau, PhD, and others, on the impacts of neonicotinoids in surface waters from 29 studies in nine countries finds that these chemicals adversely affect survival, growth, emergence, mobility, and behavior of many sensitive aquatic invertebrate taxa, even at low concentrations. (Morrissey, C, Mineau, P et al. 2015.

Neonicotinoid contamination of global surface waters and associated risk to aquatic invertebrates: A review. Environment International 74: 291–303.) Neonicotinoids were also recently evaluated by a large panel of international experts chartered under the International Union for the Conservation of Nature (IUCN), which found that these chemicals have "wide ranging negative biological and ecological impacts on a wide range of non-target invertebrates in terrestrial, aquatic, marine and benthic habitats." (Van der Sluijs J.P., et al. 2014. Conclusions of the Worldwide Integrated Assessment on the risks of neonicotinoids and fipronil to biodiversity and ecosystem functioning. Environ Sci Pollut Res doi:10.1007/s11356-014-3229-5.)

I urge you to consider this and other new scientific data in your review of the permit application by the WGHOGA. I believe that if you do so, you will find that imidacloprid cannot be used in the proposed way without harming the ecology of the bays.