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Studies have shown (Morrissey, c, Mineau, P et al. 2015. Neonicotinoid contamination of global surface waters and associated risk of aquatic invertebrates: A review. *Environment International* 74: 291-303) The water soluble Imidacloprid is toxic to wildlife and highly toxic to aquatic invertebrates (listed on the label for Protector 0.5G and Protector 2F); it affects the survival, growth, emergence, mobility and behavior of many sensitive aquatic invertebrate taxa, even in low concentrations. Spraying or applying Imidacloprid in any manner will have a negative biological and ecological impacts on a wide range of non-targeted invertebrates in aquatic, marine and benthic habitats. Imidacloprid will damage the diverse and unique marine ecosystems of Willapa Bay and Grays Harbor causing a cascading trophic effect, harming a multitude of juvenile and adult fish species (federally endangered/threatened green sturgeon, bull trout, Columbia River Chinook, Columbia River Chum, Columbia River Coho and Steelhead, and Yelloweye Rockfish), birds (federally endangered snowy plover) and a host of other wildlife species that rely on these estuaries for sustenance.

The proposed application of Imidacloprid during the month of May will have irrevocable consequences to the multitude of shore birds that migrate and feed in Willapa Bay and Grays Harbor on their way to arctic breeding grounds. Imidacloprid would kill the aquatic invertebrates the shore birds rely for food to continue migration to breeding grounds. The lack of food could kill many shore bird species or prevent them from having enough energy to breed. The direct ingestion of Imidacloprid by shore birds could harm or kill them, thus drastically reducing the populations of many shore bird species along the Pacific Flyway.

The proposed application of Imidacloprid during the month of May will also have irrevocable consequences to the multitude of fish species that utilize Willapa Bay and Grays Harbor as juvenile rearing habitats. All the Pacific Salmonid species, bottom fish, rock fish and forage fish rearing in these two water ways would be negatively impacted by the application of Imidacloprid, thus reducing the populations of these vitally important species.

The proposed application of Imidacloprid would also kill other juvenile shellfish species in Willapa Bay and Grays Harbor; such as Dungeness crab, shore crabs, red crab and a host of other crab and shellfish species. Juvenile crab species are an important source of food for many species of fish, birds and other marine organisms. What will be the impacts be to the commercial and tribal Dungeness crab fishery when Imidacloprid is sprayed and kills juvenile Dungeness crab? What will the impacts of Imidacloprid application have on the commercial, tribal and recreational salmon fisheries in Willapa Bay and Grays Harbor when juvenile salmonid foraging prey are killed? These are questions that need to be answered.

Considering pesticides are generally not allowed on shellfish beds in Puget Sound, this same practice needs to be applied in Willapa Bay and Grays Harbor. The use of Imidacloprid to control ghost shrimp will be detrimental to the marine and ecological environments of Willapa Bay and Grays Harbor. Other practices such as harrowing have shown great results in reducing the populations of ghost shrimp without the use of pesticides. Sacrificing the multitude of marine organisms and other commercial, tribal and recreational fisheries in Willapa Bay and Grays Harbor to benefit oyster growers is not acceptable.