## Form Letter (Multiple) Protect Willapa from Neonics

Findings of Ecology's SEIS, taken together with the Environmental Protection Agency's (EPA) recent aquatic risk assessment, make it imperative that Ecology deny the permit to use imidacloprid to control burrowing shrimp in Willapa Bay and Grays Harbor. Ecology finds that use would result in "Immediate adverse, unavoidable impacts to juvenile worms, crustaceans, and shellfish in the areas treated with imidacloprid and the nearby areas covered by incoming tides."

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. 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."

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 bay.