To: Nesci, Kimberly[Nesci.Kimberly@epa.gov]
Cc: Corbin, Mark[Corbin.Mark@epa.gov]; Jones, LindaV[Jones.LindaV@epa.gov]
From: Peck, Charles
Sent: Mon 7/10/2017 2:55:45 PM
Subject: Upcoming ACS Meeting in August

Hi Kimberly,

Just a note regarding the upcoming ACS meeting in Washington in August. ACS has accepted two oral presentations that I've submitted for the AGRO session. Details about the talks and other co-authors are provided below. One of the other co-authors can give the talk if I'm not selected to go, or we may be able to add a co-author, if there is someone else who can go. FYI – I'm not an ACS member. Also of note, Gabe is listed as a co-author for the first talk, but as he is leaving at the end of July, I figure he would not be a consideration to give the talk.

AGRO: Division of Agrochemicals

144 - Estimating exposure from volatile and semi-volatile pesticides

August 22: 8:15-8:40

Charles Peck, Gabe Rothman, Shalu Shelat, Charles Smith, Faruque Khan, Jeff Dawson

EPA, Washington, District of Columbia, United States

Abstract: Since the 2009 FIFRA SAP on Field Volatilization of Conventional Pesticides, EPA's Office of Pesticide Programs has been developing methodologies and models to evaluate exposure from the volatilization of pesticides from treated fields. Techniques have been developed to evaluate exposure to humans and terrestrial organisms on and off a treated field, as appropriate. EPA's approach using the Tiered Inhalation model, PERFUM, and AERSCREEN/AERMOD to estimate ecological and human health exposure, as well as updates to the models, will be discussed.

AGRO: Division of Agrochemicals

382 - Tools for estimating the magnitude of population effects to endangered species using predicted pesticide exposure concentrations, extent of overlap of species ranges with pesticide use sites, and refined toxicity data

August 24: 10:55-11:20

Colleen Rossmeisl, Charles Peck, Connolly Jennifer, James Hook, Kris Garber, Melissa Panger, Nancy Golden, George Noguchi, David Baldwin

Abstract: The U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS), with assistance from the U.S. Department of Agriculture (USDA), are working together to develop an approach for evaluating risks of pesticides to species listed as threatened and endangered under the Endangered Species Act. Recently, Biological Evaluations and draft Biological Opinions were completed for the organophosphate insecticides chlorpyrifos, malathion and diazinon. In order to aid in the population-level assessment, Excel/Python based tools (called the "Terr MAGtool" and "Aqua MAGtool") were created to integrate species exposure (i.e., modeled exposure concentrations), the overlap of the species range with potential use sites, and effects data (i.e., dose-response relationships) to assist in the determination of the magnitude of the effect of potential pesticide use to the species on a population scale. The tools integrate this information with available species data, including dietary items and life history information, to predict an anticipated magnitude of mortality or frequency of exceedance of sublethal effects endpoints. Probabilistic output is also reported using multiple years of overlap data and ranges of available exposure concentrations. Inputs allow for the use of multiple toxicity endpoints, allowing a range of effects data to be utilized, including those from a species sensitivity distribution (SSD) or surrogate data more closely related to a species when available. Additional options in the tool include the ability to assume a uniform or non-uniform distribution of a species within its range and the use of Hydrologic Unit Code (HUC) - 12 specific data for aquatic species or critical land attributes (e.g., USGS National GAP Analysis program) for terrestrial species. Output from the tool graphically depicts the contribution of individual pesticide use layers to population-level impacts, allowing for a more refined interpretation of results and options for possible mitigation.

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