Eastern US Floodwater Summit:
Solutions for Floodwater Mosquito Control
Thursday, January 21, 2021 (EST)

Sponsored and hosted by Valent BioSciences

9:00 am Introduction - Leanne Lake
Technical Development Specialist; Valent BioSciences, LLC

9:10 am "Ecology of floodwater mosquitoes"
Presented by: Barry Alto PhD., Associate Professor of Arbovirology; Florida Medical Entomology Laboratory (FMEL)

Floodwater species biology and their role as vector of arboviruses and as pests.

9:30 am "Larvicide active ingredients and their role in Integrated Mosquito Management"
Presented by: Elmer W. Gray, Research Professional IV; Department of Entomology University of Georgia

An overview of available larvicides active ingredients traditionally used in floodwater mosquito control, including larvicides' classes and modes of action.

9:55 am "Pyrethroid resistance in *Culex tarsalis* in regions of Northern California"
Presented by: Tara Thiemann, Associate Professor of Biological Sciences; University of the Pacific

This study looks at pyrethroid resistance in 17 *Culex tarsalis* populations across 5 counties. We assessed the prevalence of permethrin resistance using bottle bioassays, and we explored mechanisms of resistance by testing the levels of detoxifying enzymes and by looking for the presence of the knockdown resistance (kdr) genetic mutation.

10:15 am "Floodwater Mosquito Control in New Jersey, Freshwater Species"
Presented by: Scott Crans, Administrator; Office of Mosquito Control Coordination; DEP, NJ

Overview of floodwater mosquito control in NJ.

10:30 am "Aerial Larviciding for Floodwater Mosquitoes of the Salt Marshes of Ocean County, NJ"
Presented by: Mike Senyk, Superintendent; Ocean County Mosquito Control, NJ

I plan on covering the floodwater species we encounter, how the marsh floods, the different marsh habitats we treat (vegetation/elevation), and I will go into why we select the products we use (VectoBac 12AS, VectoPrime FG, MetaLarv SPT).

10:45 am "Florida Keys diverse operations and response methods"
Presented by: Joshua Kogut, Director of Aerial Operations and Mikki Coss, Director of Operations; Florida Keys Mosquito Control District

The Director of Operations Mikki Coss will be discussing the monitoring and active reporting of diverse management areas throughout the Florida Keys while Director of Aerial Operations Joshua Kogut will be discussing the real time aerial response methods and tools utilized by the District.

11:00 am Break

11:10 am "Wide-Area larviciding with a Buffalo Turbine and VectoLex WDG"
Presented by: Mark Clifton, PhD, Executive Director; North Shore Mosquito Abatement District, IL

A review of field research trial data using a buffalo turbine air blast blower and VectoLex WDG to control floodwater mosquito larval populations in flooded woodlands.

11:25 am "Collier MCD use of UAS platforms in areas of Salt Marsh Mosquitoes"
Presented by: Peter Brake, Director of Technical Development; Collier Mosquito Control District, FL

Floodwater control including drone work for applications.

11:45 am "Larval Control of Floodwater Mosquitoes in Mercer County New Jersey" Presented by: Nick Indelicato, Supervisor of Mosquito Control; Mercer County, NJ

Operational methods for controlling spring *Aedes* using VectoPrime

12:00 pm "Applying low Methoprene rates by aircraft"
Presented by: Mr. Mark E. Smith, Purchasing & Supply Chain Manager; Metropolitan Mosquito Control District

I will provide technical background of MMCD operations, importance of helicopter swath characterization, how we decided upon products/application rates we use, how Methoprene integrates with other control materials within our operations and on how we evaluate the control program.

12:15 pm "Technical Challenges and Solutions for Low Rate Applications"
Presented by: Banugopan Kesavaraju, PhD., Global Technical Manager, Valent BioSciences, LLC

Technical challenges of delivering low rate applications with consistency and the solutions to those equipment challenges.

Speaker Bio:
Dr. Kesavaraju holds a Doctoral degree in Biology specializing on invasion biology of *Aedes albopictus* from Illinois State University and is currently working with Valent Biosciences as Technical Manager managing field research for both new and existing products. Before joining Valent Biosciences, he worked at Salt Lake City Mosquito Abatement as an Assistant Manager overseeing laboratory and operational control. His postdoctoral training was with Rutgers University aiding in research on *Aedes albopictus* operational control.

12:30 pm Panel Discussion/Open Q and A (All Speakers)

12:55 pm Closing remarks – Leanne Lake
Technical Development Specialist; Valent BioSciences, LLC