The following talking points and background are provided for informational purposes.

Background on the Debug Approach

- Debug utilizes the Incompatible Insect Technique (IIT), a specialized form of the Sterile Insect Technique (SIT). SIT has been successfully used for decades in the United States to control agricultural pests such as the screwworm and the Mediterranean fruit fly.

- The technique involves releasing male mosquitoes carrying *Wolbachia*, a naturally occurring bacterium. When these males mate with wild females, the females become the insect equivalent of pregnant (gravid), and lay eggs, but the resulting eggs do not hatch due to cytoplasmic incompatibility. With sustained releases, the local target mosquito population declines progressively and measurably.

- Debug mosquitoes are NOT genetically modified organisms (GMOs). They carry naturally occurring *Wolbachia*; neither the DNA of the bacteria nor the mosquito is modified in this process.

- Debug releases only male mosquitoes. Debug uses an automated, AI-powered system to inspect every individual mosquito and remove females. This is a critical point because male mosquitoes do not bite; they feed on nectar and sugar. Only female mosquitoes bite and transmit diseases.

- The majority of insect species naturally carry *Wolbachia*. While Debug does not release biting females, residents in the United States are already frequently bitten by wild mosquitoes that naturally carry these bacteria.

- Debug always works in close collaboration with communities to integrate into existing mosquito control efforts rather than replacing them. IIT is intended to serve as an additional tool in the toolbox for vector control districts.

Environmental Impact

- Of the 200+ mosquito species in the U.S. (and 80+ in Florida), Debug only targets three invasive, non-native species that are major nuisance biters and potential disease vectors: *Aedes aegypti*, *Aedes albopictus* (vectors for Dengue, Zika, and Chikungunya), and *Culex quinquefasciatus* (a vector for West Nile virus and St. Louis Encephalitis).

- The intervention is species-specific. Released males will only mate with females of their own species, ensuring no impact on native mosquito populations or other insects that may play an important role in the broader ecosystem.

- Released males live less than a week and do not persist in the environment, making this a temporary and targeted biological control method with no known negative impacts on the broader ecosystem.

Regulatory Framework and Results

- Debug works closely with federal, state, and local regulators to ensure compliance with all relevant regulatory policies and laws.

- Debug has a proven track record of safety and efficacy in the U.S., with successful field trials of *Aedes aegypti* males conducted in Fresno, CA, and Ponce, Puerto Rico, under EPA-authorized Experimental Use Permits (EUPs). In total more than 122 million *Aedes aegypti* males carrying *Wolbachia* were produced by Debug and released as part of these trials.

- Following these successful trials and further supported by data from international programs, Debug has applied for Section 3 commercial registration with the EPA for our *Aedes aegypti* solution. If approved, this would permit for releases of Debug aegypti males in collaboration with vector control districts and other licensed pest control specialists across the United States.

- Building on our success with *Aedes aegypti*, Debug has filed EUP applications for field trials of two additional invasive mosquito species. For *Culex quinquefasciatus*, we have requested to release up to 32 million males in Florida and California per year for both 2027 and 2028. For *Aedes albopictus*, we have requested to release up to 48 million males in Florida, New Jersey, and California per year for both 2027 and 2028. The actual number of released males will be determined by the size of the release areas and the duration of treatment. We expect the actual number of mosquitoes released to be far less than the maximum requested

About Debug

- Founded in 2015, Debug is a long-standing project that harnesses Google's expertise in automation, AI, and software to enable the mass production of *Wolbachia*-carrying male mosquitoes for cost-effective, environmentally friendly control of invasive disease-transmitting mosquito populations.

- The Debug team is not just engineers; it includes world-class scientists with deep expertise in mosquito biology, who have dedicated their careers to reducing the global burden of mosquito-borne diseases.

- Debug has conducted suppression programs on four continents, routinely achieving >90% reduction in wild populations of target species. For example, the Fresno, CA trial saw a >95% reduction in the number of biting female *Aedes aegypti* mosquitoes in the most isolated treatment area.