

Update: Guam Mosquito Surveillance and Control Program (MSCP) and Guam Environmental Public Health Laboratory (GEPHL)



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PURPOSE

Provide status update of the Guam Mosquito Surveillance and Control Program (MSCP) and Guam Environmental Public Health Laboratory (GEPHL) and its impact to Guam and the region.

QUICK BACKGROUND

- ▶ Pre-2017: MSCP had no dedicated staff and inactive
- ▶ GEPHL: Foundation for the MSCP
- ▶ GEPHL constructed in 2016; occupied in 2017
 - ▶ Zika Outbreak
- ▶ Assistance
 - ▶ Direct assistance: PIHOA, CDC, WRBU, PacVec-COE
 - ▶ Interest: SPC, WHO, DoD

GEPHL - Goal

- ▶ Regional mosquito laboratory for the prevention and control of mosquito-borne diseases
 - ▶ Surveillance
 - ▶ Control
 - ▶ Training
 - ▶ Research
- ▶ First Guam, then expand
 - ▶ Dengue Outbreak

GEPHL - Staffing

- ▶ 5 Environmental Public Health Officers
- ▶ 3 Environmental Technicians
- ▶ Classroom and field trained
- ▶ Entire Division available to respond

GEPHL - Surveillance

▶ Field

- ▶ Equipment
 - ▶ Various adult traps and ovitraps
- ▶ Routine trapping of adult mosquitoes at sentinel sites
 - ▶ Tier I, Tier II, and Tier III

▶ Laboratory

- ▶ Sort, identify, rear, and archive
- ▶ Test for dengue virus (RAMP 200)
- ▶ Pesticide resistance

GEPHL - Control/Abatement

- ▶ All staff certified pesticide applicator
 - ▶ CORE and Cat. 7
- ▶ Control equipment and supplies
 - ▶ Blowers and sprayers
 - ▶ Adulticides and larvicides
- ▶ Hands-on training (Fiji and Guam)

Mosquito Data

▶ FY2019

- ▶ Data uploaded to CDC MosquitoNet and CalSurv
- ▶ 2,200 traps were set/retrieved
- ▶ 2,600 entries into MosquitoNet
- ▶ 4,300 mosquitoes identified

National & Regional Collaborations

- ▶ Pacific Island Health Officers Association (PIHOA)
- ▶ Pacific Southwest Center of Excellence Vector-Borne Diseases (PacVec)
- ▶ Secretariat of the Pacific Community (SPC)
- ▶ World Health Organization (WHO)
- ▶ Walter Reed Biosystematics Unit
- ▶ CDC, National Center for Emerging and Zoonotic Infectious Diseases, Arboviral Diseases Branch/Dengue Branch
- ▶ Northern Pacific Environmental Health Association (NPEHA)
- ▶ Pacific Island Vector Management Council (PIVMC)

Northern Pacific Environmental Health Association (NPEHA)

- ▶ Guam, CNMI, FSM, RMI, Palau, Nauru, and Kiribati
- ▶ Promotes EH profession and service in the North Pacific
- ▶ One of priorities: Mosquito Control
- ▶ Great potential for EH in region

Pacific Island Vector Management Council (PIVMC)

- ▶ Guam; Commonwealth of the Northern Mariana Islands; Federated States of Micronesia (Pohnpei, Kosrae, Yap, and Chuuk); Federated Republic of Palau; Republic of Marshall Islands; Majuro; and American Samoa
- ▶ Identification of mosquitoes - sent taxonomic keys to members
- ▶ Protocol for shipping mosquitoes for identification
- ▶ Pathogen testing (RAMP 200, PCR)
- ▶ Regional training

Dengue Fever Outbreak Response

- ▶ We have a plan and it was implemented
 - ▶ Provided guidance and confidence
- ▶ Enhanced mosquito surveillance
 - ▶ Able to rule out *Ae. aegypti* and other potential vectors
- ▶ Implemented control measures
 - ▶ Source reduction and pesticide application
- ▶ Pathogen testing of adult mosquitoes (RAMP 200)
- ▶ So far - managed and controlled

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Questions?

Thank you