

# 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

# Questions?

Thank you