Vector Control Collaborative
Tarrant County and City of Abilene, Texas
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Overview

- Review of Tarrant County and TC program
- Pre-applying
  - Amarillo
  - Abilene
  - Confusion
- Pre-visit questionnaire
- Review website
- First visit to Abilene
  - Gravid water making
  - Trap setting
  - Pesticide storage and equipment review
  - Data review and daily activities
  - SOPs
- Abilene visit to Tarrant County
  - Gravid water making
  - Trap setting route
  - Pesticide storage and equipment review
- Second visit to Abilene
  - Trap maintenance
  - Review of new database
- Data fields creation
- Final Visit
  - VCC talk and final review
  - Present additional materials
Tarrant County, Texas and Municipality Duties

- North Texas
- Fort Worth is the county seat
- Approximately 2 million people
- Urban, suburban, rural
- 902 square miles or 577,280 acres
- 42 municipalities
- Every municipality does its own vector control, can develop their own response plans, sets traps supplied by us and delivers them to TCPH
- Includes departments for food inspectors/RS/environmental health, storm water, code compliance, fire, police, emergency management, animal control, neighborhood services, community development, parks department, public works

https://nl.wikipedia.org/wiki/Tarrant_County
What do we do?

- **Tarrant County Public Health**
  - **Environmental Division**
    - Trap, identify and enumerate mosquitoes
    - Enter data into database/GIS online
    - Risk assessment (MLE and VI)
    - Reporting to cities, state and public
    - Mosquito control in unincorporated
    - Public outreach/education
    - Develop response plans
    - Develop contracts for additional help
    - Offer consultation/training
  - **North Texas Regional Lab**
    - Test mosquito samples WNV/SLEV
    - Tests blood serum for ZIKV, CHIKV, DENV
    - Report to environmental health
  - **Epidemiology**
    - Human case investigation
    - Report to Environmental Health
Mosquito lab
BREA lab
Before Abilene...

- Director is involved in TACCHO
- Observed Amarillo folks speak at AMCA
- When filling out the forms...
  - Albuquerque, NM
  - A bit of confusion
    - Statement that NACCHO will pair a mentee with a mentor??
- Abilene
Grant awarded! What to do?

• Deciding what to do with the funding was not easy or obvious
• Gather intel
  – Pre-visit questionnaire:
  – Website

Abilene survey:

1. How many people does Abilene-Taylor County Public Health Department service?
2. How big is the area?
3. How many people are involved in the program?
4. How many hours per week does each of your staff work on vector activities?
5. What is your trap inventory?
6. Have you ever collected mosquito eggs?
7. Do you have light traps?
8. Do you have access to dry ice?
9. What are your main vector species?
10. How often do you set traps?
11. Where do you set these traps?
12. Are these traps set in the same locations week after week?
13. Are you aware of where your high-risk areas are?
14. What is your current chemical inventory?
15. What is your current pesticide applications equipment inventory for larvicde and adulticide?
   a. Larvicide:
   b. Adulticide:
16. What is your educational material inventory?
17. List your internal stakeholders:
   a. (Will see staff in mentee app)
   b. People you notify of disease surveillance results
   c. People who notify you of human disease cases
   d. People who are involved with budget assessment and approval
   e. People who talk to local and social media
18. List your external stakeholders:

a. TDSHS
b. CDC
c. Other health departments
19. What associations are you involved with whom might give information about vector control activities?
20. Do any of your folks hold a non-political commercial pesticide applicators license?
21. Do you have any contractors?
22. Do you have a phased response plan with actions thresholds?
   a. For WNV/SLEV
   b. For Zika/Dengue/Chikungunya/Yellow Fever
23. Do you have *Aedes aegypti* and *Aedes albopictus* present in your county?
24. How much money is dedicating to shipping samples to DSHS?
25. How many mosquito respirators do you have (to suck the mosquitoes out of the traps)?
26. Do you have access to resistance testing?
27. How many dippers do you have?
28. How many mosquito breeders do you have?
29. What programs do you have to record data?
   a. Disease surveillance
      i. Human positives
      ii. Mosquito pool positives
   b. Mosquito species and abundance
   c. Larval sources
   d. Pesticide applications
20. List your PPE inventory (respirators, gloves, Tyvek suits, goggles, spill kits etc.)
First Visit

• Observations
  – Chemical/equipment shed
  – Gravid water production
  – Trap set up
  – Trap locations
  – Some treatment locations
  – Data from state
  – Database?
  – SOPs?
First Visit

• Observations
  – Chemical/equipment cage
  – Gravid water production
  – Trap set up
  – Trap locations
  – Identification presentation/collection
  – Database
  – SOPs
Second visit

- Trap maintenance
- Purchase review
- Explanation of CDC gravid traps vs Reiter Cummings gravid trap
- Presentation of arthropod-borne diseases
- Their database set-up
- What do they need? ...
Prepared documents/money spent

Mosquitoes
Tarrant County

Mosquito has flattened broad scales present on the wings and body (Figure 13). Mosquito does not have flattened scales present (Figure 14).

Flattened scales rounded (Figure 15). white lateral patches are basal. Flattened scales foliar in shape (like leaves on a tree) (Figure 16); abdomen curves upwards posteriorly (Figure 17). Abdomen curves upwards posteriorly (Figure 18).

Mosquito small, most possessing iridescent blue or purplish scales (Figure 17); h2 cell w short.

Iridescent scales; usually either lateral patches or triangles present. No iridescent scales.

Range Plants of North Central Texas - curly dock

Rose mallow - Hibiscus spp.

Rose mallow are showy perennials in the mallow family. Native species in North Texas are found in wet soils near bodies of water growing three to seven feet tall. They are easily identified by their gorgeous flowers. An example is the swamp rose mallow, Hibiscus moscheutos. They flower from June to September, which are usually white with a red center, but can be rose colored with a deep maroon center and has five petals. The flower looks very similar to the very common ornamental Hibiscus available from many nurseries. The leaves are simple, broad-waste to lanceolate with a serrated margin. If rose mallow are found a source of water is very close.

Arrowhead - Sagittaria spp.

Joseph Carr - Swamp rose mallow

BE MOSQUITO FREE
PREVENT. PROTECT. TAKE CONTROL.

Can you find the places where mosquitoes can breed around this house?

HINT: Wherever water can collect and pool, mosquitoes can breed.

HOW TO STOP THEM:
Check your property weekly, especially after it rains. Dump, drain and clean up excess water.

Tarrant County Public Health
Prepared documents/money spent

- Manual of Nearctic Diptera
- Equipment
  - Traps
  - Batteries
  - Gravid bins
- Travel
  - Multiple Abilene visits
  - Baylor university
  - Texas Mosquito Control Association meeting
Final visit

- Jump drive
  - Educational material
    - Pamphlets: Zika, Chikungunya, West Nile virus
    - 3x5 cards: Backyard checklist, Keeping mosquitoes away
    - Doorhangers: mosquitoes suck!
  - Documents
    - SOPs
    - Policies
    - Response plan
    - Tarrant County Public Health Guide to Scouting and Larviciding
For the future...

• Statistics
  – MIR/MLE
  – Vector Index

• Database adjustments
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Website:
health.tarrantcounty.com

Social Media: