



City Manager's Office  
PO Box 580  
300 LaPorte Ave.  
Fort Collins, CO 80522  
**970.221.6505**  
970.224.6107 - fax  
fcgov.com

## **West Nile Virus Technical Advisory Committee**

March 24, 2021 Meeting Minutes

4:30 p.m. – 6:00 p.m.

TAC Members Present: Dana Kunze, Will Schlatmann, Greg McMaster, Roxanne Connelly, and Chet Moore

Additional Important Attendees: Erika Cathey, Matt Parker, Tyler Moore

Public Present: None

Meeting Convened: 4:35 pm

### **Welcome and Introductions, Review Agenda**

- Last planned meeting for the off-season
- Erika Cathey, new member/participant to WNV TAC from Larimer County Health Department.
  - Works with Katie O'Donnell
  - Worked in Florida in epidemiology, vector diseases, and mosquito control

### **Public Comment**

No public present

### **Introduction of new Larimer County staff**

See above for brief bio.

### **Summary/Review of previous human case data**

- Human case data review by Erika
  - 3 confirmed/probable cases in 2020
  - General decline since 2016 (32)
- Questions/requests on data
  - Breakdown of deaths/serious cases?
  - Cases by city sp. Fort Collins, Loveland?
  - County vs State cases?
  - Onset of illness?
  - Geographic/spatial distribution of cases?
- Erika to create a draft report for review, pull together data, and provide to Matt Parker/TAC review.

### **Follow-up on Discussion on the barriers/opportunities of Merus 3.0**

- Matt Parker sent summary/review of other organizations' Merus applications to team prepared by Roxanne Connelly.
- Michigan Department of Health applied Merus, but no true evaluation of the efficacy, or data
- Generally, not seeing remarkable differences between pyrethroids
- Manatee County, FL—found mixed results
- Resistance to pyrethroids suspected including Merus
- General understanding that low Merus application rates are not effective
- Comment: Why are programs using Merus?
  - To have an additional tool in mosquito control
  - To be protective of organic farming
  - Public perception of safety
- Comment: natural pyrethrum is highly allergenic, have there been any studies on this for Merus?
  - Roxanne Connelly to review
- Comment: Studies provided note increased concern of pyrethroid resistance noted in studies, how does this affect efficacy?
  - 2016 assay suggests permethrin resistance was low, but suggests dependency on local conditions and applications
  - Chet mentioned a previous study suggesting evidence of resistance originating in agricultural areas, Roxanne will look for it.

#### **Follow-up on 2021 Budget**

- \$39K reduction in budget
- Unspent 2020 funds (\$27K) due to reduced outreach, now allocated to 2021
- For 2021 will reduce some outreach, particularly light pole banners, but use door hangers primarily. No social media, radio, print media, events this year.
- Looking for savings in trapping/testing to make up approx. \$10K deficit

#### **Update on CSU One-Health Institute collaboration**

- Genesis of potential partnership Mayor Troxell previously suggested City work with CSU's OHI for a holistic approach to mosquito control
- CSU OHI provided a list of (5) potential/ongoing projects and studies:
  - WNV movement and genetic footprint, studying how WNV moves through the region
  - Genetic barcoding of larva; can be used to determine where trapped adults came from
    - Can aid in determining treatment locations and understanding migration
  - Treatment of bird hosts with ivermectin and its effects on mosquito population
  - Spatio-temporal distribution of WNV; involves review of existing historic data; Chet has significant amounts of data available.
  - Role of density/diversity of bird species in WNV prevalence
- Matt Parker to keep TAC informed of progress and developments with this partnership.

#### **2021 Weather Outlook – Guest Russ Schumacher, Colorado State Climatologist**

- PowerPoint presentation—overview of Fort Collins weather patterns and climate
- Annual mean temp increasing since 1900
- Takeaway—Fort Collins not immune to Climate Change and Global Warming!
- Annual precipitation patterns: Apr-Jun are wet, then dry in Jul, wet again thru Aug monsoons, then dropping off thru rest of year.
- Oct 2020-Mar 2021: currently at approx. 6” of precipitation and about an inch above average; snowpack above average as well; however, much can change over the course of next several months
- Close to average water supply due to recent snow
- Drought still significant issue for western part of the state; east of divide has improved due to recent storm
- Seasonal outlook:
  - Based on 30-year averages
  - Apr-May-June: increased odds of above normal temps, increased odds of being drier
  - Jun-Jul-Aug: increased odds of above normal temps, increased odds of near/below normal precipitation
  - La Nina patterns present but typically have low impacts on extremes (hot/cold; wet/dry) in our region
- CoCoRaHS Mapping ([cocorahs.org](http://cocorahs.org)) of citizen supported precipitation data.
- Comments:
  - If 2021 projections are correct (likely warmer, likely drier), what can we expect in terms of mosquito abundance?
    - No predictions offered, but we can find out in October.
    - Would be interesting to plot mosquito prevalence
  - Drought maps: impacts of heavy precipitation events on changing drought designations
    - A 3-4” precipitation event across the front range is rare and greatly impacts drought map
  - Thoughts on timing of overnight lows in context of Climate Change and Global Warming
    - Lows are generally warming more than the highs
    - However, first frost/freezes events have been seen earlier (Oct), last frost/freeze have been seen later.
- Potential annual tradition to have Russ present climate/weather trends
- Russ to provide slide deck to group

### **Closing Thoughts**

A memo to Council will be prepared summarizing 2020 program and a look ahead for 2021.

Meeting adjourned 6:15 pm

Email Correspondence between Miguel Cardenas (Operations Supervisor, Santa Clara Vector Control District) and Matt Parker

Hi Mathew,

*Thank you for your patience. Please note that Santa Clara County has not transitioned to Merus 3.0, our last Merus application was 2.0. You can find my responses to your questions below:*

*Thank you for your response. We are considering the use of Merus 3.0 and are interested in hearing about the following:*

- 1) What determines when and where you all choose to use Merus over other products?
  - a. Two main factors determine the use of Merus. One being rotation of adulticides to avoid resistance, it is always good to rotate products when possible. The second would be the area where the application is taken place. If the area is highly agricultural that might be a determining factor to choose Merus over other products like Zenivex.**
- 2) Are there different pumps/equipment, etc., required when you do use Merus?
  - a. We use a ground ULV, the specific model we use is the Guardian ULV model 95ES. Per the label Merus 2.0 can only be applied using a aerial or ground ULV.**
- 3) Do you all feel there's an advantage to using Merus vs other materials?
  - a. There is no perfect product all products have an advantage over the other. In most cases we do use Zenivex, in my opinion I do feel it to be a better product. This is just anecdotal observation from the field I do not have data to back my opinion, as I have not done more than 10 adulticide treatments in the fourteen years of field operation experience. I have only been in Santa Clara County for 15 months, at my previous employment a major emphasis was placed on larval treatment program. While not always possible have a strong larvicide program will help mitigate the need for adult treatment. None the less Merus 2.0 absolutely has a place in our program, as you do not want to be limited to only one adulticide.**
- 4) What rate do you apply Merus?
  - a. It varies but we always follow the recommended label amount. The nice part of the Guardian is when it is set it regulates output automatically and changes the flow based on the speed of the vehicle.**
- 5) How does the cost of Merus applications compare to treatments using other products?
  - a. Sorry, but we have never done a price comparison to Merus 2.0 and other products. Locally here Clarke is the vendor we use to acquire Merus. I am not sure if they are the same vendor that would provide Merus in your part of the Country as sometimes manufactures award exclusiveness to products based on region. In any case if you would like more of a price breakdown it would be best to reach out to your local pesticide representative.**

*If you have other questions I can assist with, feel free to reach out. Again, thanks for your patience.*

*Best,*



**Miguel Cardenas, MPA**

Operations Supervisor

County of Santa Clara Vector Control  
1580 Berger Dr., San Jose, CA 95112

*Email:* [Miguel.cardenas@cep.sccgov.org](mailto:Miguel.cardenas@cep.sccgov.org) *mobile:* (669) 288-0246