

MCTF Best Practices Subcommittee Meeting Minutes 10 25 21

Minutes for the Mosquito Control for the Twenty-First Century (MCTF) Task Force Meeting

Subcommittee Meeting: Best Practices

October 25, 2021, 12:00 p.m. via Zoom

Richard Robinson (Chair) called the meeting to order at 12:00 p.m. and conducted a roll call. A quorum was established. Subcommittee members in attendance included Richard Pollack, Priscilla Matton, Helen Poynton, Kimberly LeBeau, Kathleen Baskin, and Russell Hopping. Richard Robinson provided a brief recap of the full task force meeting. Cheryl Keenan (ERG Facilitator) addressed procedural notes with subcommittee members.

- Presentation on What Could/Should MCDs Do Better – Priscilla Matton

Priscilla Matton noted that she felt that MCDs were always striving to do their best regarding Integrated Pest Management (IPM). Bristol County MCD used all the available tools in their toolbox given the constraints of time and funding. Priscilla commented that while people expressed the greatest amount of concern about adulticiding, that comprised a tiny fraction of what the MCD does. The MCD does water management all year round, larval control when appropriate, source reduction all year round, surveillance, education, maintaining equipment, etc.

Priscilla noted that she felt that the Commonwealth generally did a good job with surveillance, a cornerstone of any IPM program. Private companies do not conduct much surveillance, if any, and only respond to resident requests. A significant amount of MCD time and energy was spent conducting targeted surveillance. Priscilla noted that there were fifty-three (53) different mosquito species found in Massachusetts and showed a slide with the top 21 species considered vectors of disease.

Priscilla then showed slides with surveillance data from the past fifteen years in Bristol County. Of the mosquito samples collected, 96% of the species were potential vectors for EEE and 97% for WNV. Adulticiding by truck took place from June through September. Priscilla noted that the MCD handled surveillance proactively versus reactively. Priscilla noted that in terms of room for improvement, surveillance can only ever capture snapshots in time and cannot serve as a perfect predictor. Another facet for consideration was DPH's ability to provide testing services. With the effects of climate change, warming temperatures mean longer seasons, which means that funding will need to go further for mosquito control.

Priscilla mentioned that Bristol County MCD does education and outreach. The MCDs have open and continuous conversations with member cities and towns (e.g., Boards of Health, Conservation Commissions, Road and Bridge Divisions, School Departments, Councils on Aging). Bristol MCD was trying to expand their ability to target mosquito larvae. Mosquitoes implicated in EEE are particularly difficult to control in larval form and not all active ingredients work equally well against all species. Bristol County MCD was also looking into pesticide resistance, the spread of *Aedes albopictus* (Asian tiger mosquito, a recent invasive species), and water management techniques, particularly for reducing standing water in salt marshes.

Potential improvements included having access to new tools (e.g., drones, which are potentially less expensive than aircraft and less invasive) and technical support from state agencies. Priscilla emphasized that their mandate was to control mosquitoes, and other state agencies can help fill in the gaps related to protecting human health and nontarget organisms.

- Discussion About MCD Best Practices

Richard Pollack mentioned that he had heard complaints that MCDs engaged in "spray and pray" operations and wanted Priscilla to help educate him on what drives applications of pesticides. Priscilla noted that there were a variety of measures that drove truck-based spraying. When a resident complains, the complaint gets put on a map

and the MCD evaluates the overall picture to make their decision. Bristol MCD tended not to spray large areas unless there seemed to be a cluster of either resident requests or positive mosquito samples. It was noted that it was important to be on a no spray list if you wished to have your property excluded from spraying. With EEE, the habitat for the mosquitoes that drive the virus cycle was usually far off the road, so the MCD tried to address areas with bridge vectors like cattail marshes and floodwater areas.

Helen Poynton noted that she had looked into the efficacy of vehicle-based spraying. The Reddy 2006 study in MA did not find benefit from spraying but many papers and review articles seem to report mixed results. Helen wanted to clarify whether Priscilla's slides showed efficacy data, since it didn't look like there were decreases in mosquito populations after spraying.

Priscilla clarified that the slides did not exactly show efficacy, and that there was no control area so they could not tell whether what they were seeing was different from what would have happened without spraying. In some cases, they saw decreases at traps after spraying, but the trap data was only a snapshot. The MCD checked traps on a weekly basis, and pyrethroids don't last that long, so there wouldn't necessarily be a big decrease from week to week.

Richard Pollack explained that mosquitoes are coming off the wetlands constantly, and even if there was a reduction immediately after spraying, there would still be new, younger mosquitoes appearing afterwards. Helen and Priscilla discussed how funding for research worked in the MCD's. Priscilla noted that research in Bristol County MCD had been funded through their own budget and on occasion in conjunction with other entities such as Save the Bay. Richard Pollack noted that up until a few years ago, the SRB didn't allow the MCDs to do their own research.

Helen inquired about the budgeting process related to outreach and education. Priscilla noted that the Commission helped the MCDs in budgeting. She pointed out that capturing costs of outreach and education wasn't easy; whereas it was easy to look at the price tag of pesticides. Richard Pollack noted that there are monthly meetings that are open for the public. The superintendent for the Project proposed a budget (that included outreach, equipment, etc.) and after being debated, it gets sent to the state for final certification. Richard Pollack noted that although sometimes education works, he felt that in many cases education was not very successful. For example, he was involved with the 2006 Reddy study that Helen cited as it was performed at Harvard School of Public Health (HSPH).

Kim LeBeau asked about what the staffing of a successful MCD would look like, and how much interaction Bristol County MCD had with private applicators. Priscilla mentioned that some towns pay more, and some pay less to the MCD. At a minimum, the staff needed to have an entomologist to conduct surveillance. Bristol County MCD had twenty member towns and five applicators. When adulticiding happened, the MCD was in a town once per week for less than three hours of application at a time. Larviciding tended to be more costly and there had to be more people available to do the applications. For safety, the MCD would send people out in pairs for water management.

Priscilla noted that the MCD barely deals with private applicators. Private applicators are required to log how much they use with the state at the end of each year, but they don't have to provide information on where the pesticides were applied or any other information. Taryn LaScola (EEA Staff) submitted in the chat: "Private companies are required to keep records on every application they make. The record includes site, amount used, product, applicator etc. All licensed individuals are required to send in an annual use report to MDAR which is what Priscilla was referring to."

Russell Hopping asked about how high of a priority salt marshes were for controlling potential disease vectors. Priscilla commented that there were two species of salt marsh mosquitoes capable of transmitting EEE. Because of the tides in salt marshes, there can be massive influxes at one time. Bristol County MCD pays more attention when there are cedar swamps and salt marshes in a similar area. Russell posed a question of whether assessing MCDs by

their budget was the right way of gauging how a district was spending its resources on mosquito control. Priscilla agreed that looking at the budget probably wasn't the best way of figuring this out as there are certain things that are easy to track, like water management jobs and the manual work there, but others, like educational outreach are harder. Alisha Bouchard (EEA Staff) mentioned that MCDs receive funding through DOR, essentially via trust accounts for operating expenses and capital investments. Because of this, it was hard to itemize expenditures.

Kim LeBeau asked whether there were opportunities for MCDs to come together to learn from each other. Priscilla provided examples such as the Northeastern Mosquito Control Association annual meeting, site visits by water management districts, and monthly meetings of MCD superintendents. Richard Robinson suggested that the subcommittee start to clarify some of the takeaways from the discussion related to education and current mosquito control funding structures.

Richard Pollack brought up that some of the most relevant mosquitoes for transmission risk cannot currently be adequately controlled by larviciding. He argued that MCDs don't have the desire to apply products just for the sake of doing so. Richard Robinson asked what would happen if we didn't do any adulticiding? Richard Pollack commented that many people have asked this, and no one knows. Some groups have calculated that without certain aerial adulticiding interventions, there could have been "X" number of additional cases or deaths.

Helen Poynton brought up the outbreak of EEE in the 1930s, when modern insecticides were not available. Priscilla Matton mentioned that this year there were record numbers of mosquitoes, but not that much EEE. She mentioned that the distinction between spraying for nuisance mosquitoes and disease-carrying mosquitoes might be relevant. Richard Pollack noted that another task force member, Sam Telford, had noted that virtually every nuisance mosquito can be a potential vector.

Richard Pollack noted that the hypothetical scenario in which there was no MCD spraying could result in increased use of private applicators and individuals taking it upon themselves to buy their own chemicals and use them. He mentioned that the status quo with MCD spraying could be the lesser of two evils. Richard Robinson agreed and noted that the possibility of individuals taking action frightened him. Russell Hopping returned to the idea of education, wondering how to improve messaging and to reach more people. He noted that the Local Engagement subcommittee was probably covering this, but Richard Robinson said that this could also play a role in this subcommittee.

Kim LeBeau suggested building upon successes, noting that it seemed like some MCDs were more experienced than others. She noted that in addition to education, the state could help with consistent messaging. Priscilla Matton noted that in 2019, that was the biggest outbreak year the state had ever seen and there was a lot of messaging that year. The two big questions were (1) how to get people who don't normally care to care, and (2) how to make sure people who don't care are still being protected. For example, some people might assume someone else was dealing with the mosquitoes and not take any personal protective measures. Priscilla acknowledged that DPH pushed the personal protection messaging and said that Bristol County MCD made sure to end every call with a reminder for that as well.

- Presentation on Certified Organic Farms – Richard Robinson

Richard Robinson noted that because of the success of the organic movement, organic farming started developing a bigger market share. The word "organic" was used to attract consumers. Not all farmers liked this, and the federal government eventually stepped in. Being labeled "organic" meant adhering to a strict set of definitions, but that still left out quite a lot of farms. There are a number of thriving small farms that use organic practices but on land that the farmers don't own (and therefore cannot get certified). Some farmers also do not want to pay the certification fees. Richard Robinson noted it costs around \$800/year to stay certified, but he gets reimbursed for part of this by the state. Some farms don't like how the certification feels like a marketing ploy.

In Richard Robinson's personal experience, he heard about spraying and was alarmed. After making some calls, he did see that the plane clearly avoided his farm. Richard Robinson also noted that he has seen pollinators on his farm even though he doesn't manage them himself and was worried about spray effects on them and the ecosystem at large. If a farmer's crops are sprayed, that meant that they cannot sell that year's crops as organic. Richard Robinson hoped that the subcommittees charge could be to consider all those who consider themselves organic farmers, not just certified ones. He wondered why the task force would not consider excluding all farms. He also noted that many organic farms are in central Massachusetts, away from most of the mosquito activity.

- Discussion About Organic Farming

Richard Robinson asked how people felt about the question of protecting certified vs. non-certified organic farmers. Priscilla Matton noted that the pesticides Bristol County MCD uses for adulticiding have been tested on crops as part of the EPA registration process and wondered whether that meant that non-organic farms aren't as much of a concern. Given that getting exclusion requests for certified organic farmers was already a burdensome process and setting up aerial spraying was also extremely difficult, adding more farms to the list created even more of a challenge. Priscilla Matton also asked whether all farmers would be willing to provide their exact locations to the government to be properly excluded from spraying.

Richard Robinson felt that it was the farmer's responsibility to make sure their farm was protected by supplying the necessary information. He acknowledged that there was probably a way to make the opt-out process more efficient, perhaps through renewals. He wondered whether small farms could even be meaningfully excluded from spraying. He agreed that there was some rationale for using the certified vs. non-certified delineation; the certified organic label carries financial implications. Whether it's fair or not, it was a market reality that organic farmers can sell produce for more than someone who was not certified.

Helen Poynton asked about whether there was any verification for produce marketed as organic. Richard Robinson explained that although no one in practice checked, someone could check and if fraud were discovered they could go out of business. He also said that he didn't feel like any certifying agencies would go out of their way to inspect in direct response to aerial spraying. Helen Poynton noted that the residues from aerial spraying were likely too small to effectively measure in most cases. Richard Robinson clarified that as a certified organic farmer, if he was sprayed, he could not sell his produce as organic for the upcoming year.

- Next Steps

Richard Pollack asked whether a request could be made for Dr. Catherine Brown of DPH to give a short overview of their summary of efficacy in terms of reducing abundance and viral risk. The subcommittee agreed they would like to hear Dr. Brown and allotted 10-15 minutes at the next meeting. Alisha Bouchard mentioned that Caroline Higley was collecting questions for DPH to avoid duplication and Dr. Brown's input might come at the next subcommittee meeting or full task force meeting. Seeing no other questions or comments, Richard Robinson entertained a motion to adjourn from Richard Pollack, seconded from Priscilla Matton. All in favor said aye. The meeting was adjourned at 2:00 pm.