

## MCTF Best Practices Subcommittee Meeting Minutes 11 08 21

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

#### Subcommittee Meeting: Best Practices

November 8, 2021, 12:00 p.m. via Zoom

#### Meeting Topics:

- Open Meeting, Roll Call, Welcome, and Meeting Purpose (chair)
- Review the agenda (facilitator)
- Subcommittee discussion on selected topic (background)
  - What are the effects of mosquito control practices on arboviral-borne diseases, non-target species, and human health?
    - Share background/expertise on the topic (Richard Pollack)
    - Share background/expertise on the topic (Heidi Ricci)
- Subcommittee discussion on the effects of mosquito control practices (group discussion)
- Review information sources proposed for sharing with the Subcommittee
- Wrap Up (facilitator and chair)
- Closing Remarks and Vote to Adjourn (chair)

The subcommittee meeting was called to order at 12:03 p.m. by Chair Richard Robinson. Members in attendance included Anita Deeley, Russell Hopping, Kim LeBeau, Priscilla Matton, Richard Pollack, Heidi Ricci, and Kathy Baskin. EEA staff lead Jennifer Forman Orth provided a housekeeping update. Cheryl Keenan, ERG Facilitator, noted at 12:30 p.m. the subcommittee meeting would be paused, and it would be opened as a full task force meeting to allow for a DPH presentation.

- What are the effects of mosquito control practices on arboviral-borne diseases, non-target species, and human health? (Richard Pollack)

Richard Pollack recommended reviewing the ERG report, section 4, as well as the 2021 AMCA report which discussed nuisance and vector control as well as nontarget considerations. Jenn Forman Orth posted the link to the manual in the chat:

[https://cdn.ymaws.com/www.mosquito.org/resource/resmgr/docs/publications/hr\\_november\\_2021\\_amca\\_bmp\\_ma.pdf](https://cdn.ymaws.com/www.mosquito.org/resource/resmgr/docs/publications/hr_november_2021_amca_bmp_ma.pdf)

Richard Pollack opened his presentation with a comment regarding larvicide and adulticide products meant to kill or prevent the development of mosquitos. Richard Pollack asked what have we learned? The effects tend to be transient. Mosquito population recover, that was expected and that that was an ok thing. Spraying can have direct effects. Indirect effects can impact prey, predators, or parasites. What about predators? There was no specific predator of mosquitos. Richard Pollack noted that non-target effects can occur directly (via toxicity and growth inhibition) and indirectly (via affecting the abundance of prey and predators). However, many diverse parasites are reliant upon mosquitoes. For example, vector-borne pathogens that carry EEE, WNV, and mosquito-specific infections.

Richard Pollack commented that as far as he was aware no non-target organism had been completely eradicated or suffered a sustained population decline as a result of mosquito larviciding/adulticiding, especially when larviciding/adulticiding was conducted in the way that MA does it. Richard Pollack also noted that these pesticides are not persistent. Example, BTI's and crystal toxins dissolve in alkaline conditions. Vertebrates should not be affected by these products if they are applied correctly. Richard Pollack noted that it would be good to see objective data on whether larger insects are affected. Richard Pollack provided some final food for thought. Just because a substance can kill does not mean it was going to do that in the same manner in the field. Substances might affect non-target organisms in the lab, but lab results do not equal field results. Peer-reviewed studies on larvicides and adulticides seemed to indicate that effects on both target and non-target organisms are transient and populations tended to rebound.

- What are the effects of mosquito control practices on arboviral-borne diseases, non-target species, and human health? (Heidi Ricci)

Heidi Ricci emphasized that lack of data did not mean there weren't any impacts. She agreed that conducting field studies was difficult but noted that many chemicals used in mosquito control are known to be extremely toxic to many organisms. Heidi Ricci commented that when we spray broad-spectrum pesticides, there will inevitably be other effects. Heidi Ricci also noted that honeybees aren't the only relevant bees; there are hundreds of native species of bees as well. Heidi Ricci shared the EPA/CDC joint statement on mosquito control: "The underlying philosophy was that the greatest impact of control will occur when mosquito populations are concentrated, immobile, and accessible. The emphasis was on habitat management and controlling the immature stages". The statement also mentions using Fish & Game and other natural resource specialists.

Heidi Ricci commented that she was hoping to have a lot of conversation about source reduction and other ecologically based methods for managing mosquito populations. For example, upgrading culverts and using eels. Heidi Ricci hoped that the subcommittee could come up with ideas for quantifiable steps for actions moving forward. Heidi Ricci also noted human health impacts and circulated a document by the Utah Physicians for a Healthy Environment and was working on getting some medical experts to provide additional input.

A motion was made to transition to the full task force meeting for the DPH presentation. A motion was made by Kathy Baskin and seconded by Richard Pollack. All subcommittee members voted aye. Cheryl turned the meeting over to Caroline Higley (EEA Staff Lead) for the full task force meeting.

Upon return at approximately 1:19 p.m. from the Full Task Force meeting, Richard Robinson conducted roll call. Subcommittee members in attendance included Anita Deeley, Russell Hopping, Kim LeBeau, Priscilla Matton, Richard Pollack, Heidi Ricci, and Kathy Baskin.

Upon return, the subcommittee group discussed aspects of IPM. Heidi Ricci expressed interest in thinking about other aspects of IPM such as, managing development in the context of stormwater and catch basins. In addition to introducing mosquito predators like eels to breeding grounds to do more source management, as well as education. Many of the source management strategies could have co-benefits. Richard Pollack responded that the goal of mosquito control was not to eradicate mosquitoes, but rather to reduce the amplitude of the peak risk. Richard Pollack mentioned that his opinions on nontarget effects were based on forty years of his experience conducting studies himself and reading the literature. Members of the subcommittee discussed the available research and literature in relation to balancing different factors of risk to non-target organisms and human health impacts. Richard Robinson proposed a hypothetical to the group: What if we said no more adulticiding? What might happen?

Priscilla Matton noted that her county gets between 10,000-15,000 spray requests in three months and assumed that many of those submitting requests would potentially pay for private mosquito control. Richard Robinson agreed that this was likely to happen and was a scary outcome letting homeowners or private applicators spray in less regulated ways. Priscilla Matton wondered whether getting rid of ground-based adulticiding, which might mean more aerial spraying and more private spraying, was an acceptable outcome.

Heidi Ricci emphasized that the MA efficacy data seemed to demonstrate inconclusive results in recent years. Priscilla Matton clarified that some of the sprays in 2019 didn't have available efficacy data for Central MA. She noted that she personally had some issues with how DPH does efficacy calculations, mostly because DPH oversees data from such a large area. Priscilla Matton also felt like she'd seen a decrease in opt-outs in her county. Richard Pollack said from his perspective as Norfolk County MCD Commissioner, was that residents of member towns supported the MCD's actions. Heidi Ricci mentioned that the Sierra Club provided an analysis of opt-out data which showed a decrease in opt-outs, although the decrease might not be on the same order or magnitude as spray requests.

Heidi Ricci, Priscilla Matton, Richard Robinson, and Richard Pollack debated the relationship between spraying and disease. Richard Pollack noted he felt like there were snippets of evidence regarding aerial spraying and human health, and that reducing the abundance of mosquitoes mathematically reduced risk. He agreed that there was limited data but not absolutely zero data. Heidi Ricci acknowledged that there might be evidence showing that aerial spraying could reduce EEE incidence, but she felt there was not enough data on nontarget impacts.

Richard Pollack cited an expert on honeybees as saying there wasn't strong evidence that bees had suffered, but Heidi Ricci stated that comments had been submitted indicating that there might've been harm. Heidi Ricci noted that bees exposed to pesticides are more vulnerable to other threats like mites and diseases, and that honeybees don't make up the complete picture. Anita Deeley commented that she had personally seen impacts on bees, especially with truck-spraying. It was noted that bees are resilient, but they do encounter many chemicals and it's unclear how these chemicals impact them. Anita Deeley also acknowledged that it would be great if native pollinators could be monitored.

Russell Hopping seconded the idea that while there was data on the effects of pesticides on honeybees, the focus was sometimes shifted away from other species and honeybees aren't a perfect proxy for other pollinators, for example, smaller species that are active at night. Kathy Baskins expressed the need to take a step back and that the focus should be on minimizing impacts rather than endless debate of whether there are impacts. Kathy Baskin thought that the goal should be to minimize both the impacts we know about and the impacts that we don't know about. Richard Pollock wanted to make it clear that he didn't want his comments to be construed as implying that he didn't think there were any nontarget impacts. He agreed that we should refocus on the mandate of what can we do better. Richard Robinson agreed and hoped that the group could start thinking concretely about recommendations.

Heidi Ricci noted best practices should be considered in the context of the entire IPM framework. There should be planning and surveillance to understand what's going on and adulticiding (per the CDC/EPA framework) as a last resort. Heidi Ricci emphasized that public engagement and having options available for communities was important, although there may be challenges using private companies for surveillance, some municipalities would like to have surveillance, education, and source reduction without having to buy into being part of an MCD because they don't want spraying of pesticides, such as, Uxbridge. Priscilla Matton noted what municipalities do

outside of MCDs might not be something that the MCTF can guarantee although she was all for recommendations such as, DPWs not using cattail mixes.

Questions were submitted via the Q&A chat function which were read and addressed by subcommittee members. Cheryl Kennan noted that there was information to share with the group and listed resources that Heidi Ricci identified that may be helpful to the subcommittee group. Cheryl Keenan shared her screen so Heidi Ricci could walk through the presented resources. Cheryl Keenan also referenced the AMCA guidance and noted that this was something the subcommittee might want to kick off the next meeting with. Richard Robinson recommended for the next meeting that the group review the understory questions that people proposed earlier. Seeing no other comments from the group, Richard Robinson entertained a motion to adjourn the meeting from Richard Pollack, seconded from Priscilla Matton. All in favor said aye. The meeting was adjourned at 2:30 p.m.