

Vector and Code Enforcement IPM Subcommittee

May 10, 2006

Participants:

Chauncey Anderson – USGS

Steve Hazzard – Portland Bureau of Environmental Services

Kari Lyons – Multnomah County Health Dept.

Sue Peterson – VCE Advisory Committee member

John Reed – Portland Parks IPM manager

Elaine Stewart – VCE Advisory Committee member

Jill Townzen – Oregon State University entomologist

Chris Wirth – Multnomah County Vector and Nuisance Control

Elaine began the meeting with introductions. She then reviewed the 2004 work of the West Nile Task Force. She explained that some members of that task force felt that there were continuing concerns left unaddressed. The current VCE Advisory Committee discussed the concerns and instructed Elaine to form an IPM subcommittee to address 4 areas of concern from a technical perspective. These concerns were basically stated in a Y/N question format. It is Elaine's hope that this committee will examine each and make an appropriate recommendation.

The members then reviewed the four questions. Chauncey proposed a fifth question: Are there parallel processes at work and are we taking those into account (i.e., are entities aware of and coordinated with each others' activities, or could they be operating at cross purposes)? All agreed that this should be explored as well. Chauncey and John both felt that at the top of the list should be whether or not public health is being addressed. All agreed this should be the overriding concern. The revised list of questions is:

1. Is public health being adequately addressed?
2. Is the sampling plan robust?
3. Are multiple objectives being addressed?
4. Are there parallel processes that may be at cross purposes?
5. Is the effectiveness of control measures documented and connected to IPM practices?
6. Are non-target effects addressed?

After some discussion on the best way to proceed, the group began by examining how Vector Control makes decisions at a specific site. The group discussed the processes and procedures at Oaks Bottom. Chris related that there are about 6 species (mostly *Culex*, some *Aedes*) at the site. Mosquitoes are present nearly year-round, thus sampling occurs nearly year-round. Vector Control has good documentation of the species that occur there and their seasonality.

Chris briefed the group on Vector Control's sampling strategy for larval mosquitoes. Sampling at Oaks Bottom is directed toward confirming the presence or absence of mosquitoes, as well their abundance and species composition. Vector Control focuses its control efforts on those species that are (or could be) disease vectors. The timing and

frequency of sampling is adjusted for current hydrology and weather conditions. Sampling locations are non-random and results are biased upward because sample sites are chosen to focus on good breeding habitat. Sample results can serve as indexes of mosquito abundance for the sample locations but cannot be extrapolated to the populations/sites as a whole. Sampling is closely linked to larvicide applications; the same staff person conducts the sampling and plans and conducts the treatment.

Chauncey asked how communication works between VCE and Portland Parks or stormwater managers. Chris explained that VCE has a point person at the site who is contacted with 72 hours notice before larvicidal treatment. VCE returns within 24 hrs. to sample for efficacy. Post-treatment sampling is not directed to other invertebrates but their presence is noted; Vector Control has not evaluated any of the data for effects on them. Chauncey suggested that it would be interesting to look at data on the effect of these treatments on non-target species. Elaine flagged this point for further discussion when the IPM subcommittee contemplates recommendations to VCE. Jill T. explained that there is an excellent bibliography from the New Zealand Ministry of Health regarding effects of control measures on non-target species; she believes that it is available online.

Chris then outlined the four types of sampling gear used for adult mosquitoes. Adult sampling is not necessarily associated with water. Vector Control focuses on greenspaces between aquatic breeding areas and where the adults go to feed. Sampling tools include the CO2 trap, the Gravid trap, the Resting box and the New Jersey light trap. The CO2 traps are placed in wooded areas to attract resting adults. Gravid traps are baited with water and are effective for trapping 3 species of mosquitoes. The resting box is designed to capture adults (females) that are resting to digest their blood meals. New Jersey Light Traps are baited with pheromones. Sometimes these traps are used in combination. The traps are placed at permanent sampling sites throughout Multnomah County and the data are compared from year to year.

The data are compiled by species and sex. If the data suggest numbers outside normal variability, more traps are set and targeted controls like increased education in the surrounding area may begin. Vector Control will also conduct enhanced trapping in response to complaints. Jill T. discussed some of her work on a blood study to determine the species on which the mosquitoes are feeding. Chris mentioned that the (adult) trap results often allow Vector Control to infer where the larval mosquitoes were produced. For example, if they capture males, they are within a few hundred feet of the breeding site (males do not travel far).

The group wondered at what point a decision to spray adult mosquitoes is made. Chris said that he would get back to the group with the exact threshold amount and the policy. He will also bring the VCE policy book to the next meeting for anyone who is interested.

Vector Control's efforts are directed primarily at larvae (perhaps 90 percent). The adulticiding work is a mix of treating the same problems from year to year and responding to nuisance complaints.

Regarding the authority to control mosquitoes, Vector Control has authority under state law but does not have a uniform local ordinance across the county at this time.

Elaine stopped the discussion at 10:45. The group discussed the “case study” approach taken today and agreed that it was useful. Field visits would be interesting and are available to members (e.g., shadowing Vector Control staff in the field). For the next meeting, the IPM subcommittee will review nuisance control work and/or examine mosquito control in the stormwater system. Chauncey mentioned that there is a state IPM coordinator based out of OSU, Tim Stock; the group asked Chauncey to invite him to participate.

It was agreed that the subcommittee would meet again on June 14th from 9:00-11:00 a.m., to capitalize on the momentum achieved today. The group’s third meeting will probably occur in August or September.