

## A SUMMARY REPORT ON THE AMCA'S 2008 PESP ACTIVITIES

The following report summarizes the American Mosquito Control Association's (AMCA) Pesticide Environmental Stewardship Program (PESP) activities during 2008. The attached Microsoft Excel spreadsheet contains detailed information provided by "PESP Partners under the AMCA's auspices". The AMCA's state and regional PESP Partners are the Florida Mosquito Control Association, Louisiana Mosquito Control Association, Michigan Mosquito Control Association, Mosquito and Vector Control Association of California, North Carolina Mosquito and Vector Control Association, New Jersey Mosquito Control Association, Northeastern Mosquito & Vector Control Association, and the North Pacific Mosquito and Vector Control Association. The reports of four AMCA Individual PESP Partners" constitute a portion of the regional reports for their areas, and therefore are not reported separately. These are the Indian River (Florida) Mosquito Control District, the Pasco County (Florida) Mosquito Control District, the Cape Cod (Massachusetts) Mosquito Control Project, and the Central Massachusetts Mosquito Control Project. Teton County (Wyoming) Mosquito Abatement (TCMA), the fifth AMCA Individual Partner, does not report to a state or regional partner.

**GOAL 1 & TACTICS: WORKING WITH MANAGERS OF PUBLIC LANDS.** As part of our IMM (Integrated Mosquito Management) approach, the AMCA will work with managers of public lands to implement focused and environmentally sound intervention strategies to control mosquitoes. These activities will typically include appropriate source reduction and the use of biopesticides to control mosquitoes early in their life cycle. In some cases, highly focused applications of adulticides directed at specific mosquito populations may be required. These IMM strategies will prevent mosquitoes from developing and dispersing from public lands. The overriding goal in selecting strategies will be to reduce the risk of disease transmission by intervening at critical points in the mosquito life cycle. The AMCA's PESP Partners will describe their IMM projects on public lands; list the number of acres under source reduction, surveyed, and/or targeted for pesticide applications; and summarize the outcomes. The EPA can support our efforts by continuing to encourage public land management agencies to work with mosquito agencies to develop IMM strategies to resolve control issues. More IMM projects will help document the long term success of these efforts.

The AMCA's PESP partners reported on a variety of IMM strategies which they employed. These included source reduction projects, larval control strategies, and interagency cooperative efforts. Although every activity could not be reported, representative activities included 24, 346 acres under source reduction; 29,092 acres surveyed for projects; and 14, 212 acres targeted for source reduction. The Florida Mosquito Control Association is completing its revision of *Florida Mosquito Control: The State of the Mission as defined by mosquito controllers, regulators and environmental managers*. This revision should enjoy the same national and international success as the first edition, and it should again serve as a model for Integrated Mosquito Management practices.

**GOAL 2 & TACTICS: TRAINING MOSQUITO CONTROL WORKERS.** The AMCA believes that the best way to reduce pesticide risk is through continuous education of mosquito control staff on pesticide use and safety. Numerous states have educational programs which lead to certifying workers as proficient in "Public Health Pest Control" (or similar title). The AMCA strongly encourages implementing and enhancing such education/certification programs. The

AMCA's PESP Partners will submit annual reports detailing the number of workers that received training, the type of training received, the number of "certified workers", the number of new "certified workers", and additional pertinent information. The data should indicate trends in training and certification. The EPA can help by providing and distributing educational information on pesticide use and safety and by providing speakers on these subjects at regional and state mosquito control meetings.

A variety of educational activities were reported. A total of 2,856 workers received mosquito control training while 1,176 attended recertification (regional) training. The total annual state and regional conference attendance was reported as 730 and 729 workers, respectively. Twenty-one individuals attended pertinent college courses and 1,694 workers received other special training. A total of 520 workers received new certifications.

The AMCA has long been dedicated to educating public health professionals. In 2001 the University of Florida, in conjunction with the AMCA, received a federal grant to prepare a national training guide for public health applicators. The document, completed in 2002, covered the biology, control and public health issues related to most of the pests and vectors that we deal with. To ensure that it would remain timely, recommendations were not included for specific pesticides. Readers were advised to contact the pesticide coordinators and public health entities in their own states to determine which pesticides they should use following the methods provided in this manual. This approach not only avoids the need for updating the manual regularly due to withdrawn and newly introduced chemicals, but it also keeps the pesticide "chain of command" within each state.

The finished document was put online (visit <http://entomology.ifas.ufl.edu/fasulo/vector> for a quick look) and both hardcopies and electronic copies were sent to every state so that they could use the original document or portions thereof for training and/or to copy in order to expedite preparation of their own state manuals. Vendors, including AMCA, were given major discounts for purchasing and reselling the document, which has needed to be reprinted several times. The online version has also thrived. Page views have increased from ca. 42,000 in 2002 to over 147,000 in 2008, and there have been thousands of downloads annually. These records attest to the usefulness of the manual as a public health advisory at the national level. The AMCA cites these purchases, distributions and free downloads as a major PESP contribution. Furthermore, the general public is advised to visit the website to gain accurate information about public health pests, their control, and the responsibilities of public health pest-related governmental control agencies.

**GOAL 3 & TACTICS: DISEASE SURVEILLANCE.** Important strides in reducing pesticide risk are achieved through careful surveillance for mosquito-transmitted pathogens of public health significance, e.g., the viruses that cause St. Louis Encephalitis, West Nile Encephalitis, Eastern Equine Encephalomyelitis, and Western Equine Encephalomyelitis. If a pathogen is discovered through surveillance, appropriate actions can be taken which may include more carefully directed pesticide applications. The AMCA's PESP partners will submit annual reports documenting pathogen surveillance methods, provide overviews of pathogen ecology, and indicate whether pesticides were used to ameliorate conditions. The data will allow an analysis of the relationship between disease surveillance and pesticide applications. The EPA can help by supporting more

flexible label language for pesticide applications when mosquito-borne pathogens have been identified by surveillance.

A variety of pathogen surveillance techniques were used around the United States. Surveillance numbers were reported as follows: 130,109 mosquito pools were tested; 411 sentinel flocks were maintained; 38,271 dead birds were noted; 6474 wild birds were tested; 4,955 wild bird sera and 1,313 mammals were tested. Human arbovirus infections noted by the AMCA's PESP Partners included 612 West Nile Virus cases, 4 St Louis Encephalitis Virus cases, 1 Eastern Equine Encephalitis Virus case, and 2 LaCrosse Virus cases. West Nile Virus was recorded for 2,771 dead birds, 394 wild birds, and 645 sentinels. Corresponding numbers for Eastern Equine Encephalitis Virus were 3, 9, and 128, respectively. West Nile Virus was found in 4757 mosquito pools, St Louis Encephalitis Virus was found in 8 pools, and Eastern Equine Encephalitis Virus was found in 34 pools. Overall, West Nile Virus was not as prominent as it had been in 2007, but it, along with other pathogens, is still a significant threat.

**GOAL 4 & TACTICS: INCREASE THE NUMBER OF AMCA's PESP PARTNERS.** No new potential partners have applied for acceptance during 2008. We are not aggressively pursuing new members just to increase numbers as we would prefer that all of AMCA's Partners are participating because they are committed to the goals of the PESP. However, the AMCA's PESP subcommittee, a working group consisting of representatives from each of the current AMCA's Partners, has been actively communicating with AMCA members. A lot of interest has been generated, and we anticipate applications in 2009. To help ease reporting issues, which may have prevented past participation, the AMCA has constructed a web-based report form. We also are in the process of revising the AMCA website's PESP page, making it more informative and including downloadable information, in an effort to educate potential PESP Partners as well as showcase all of the good work that we are doing. AMCA PESP Partnerships have been discussed and promoted as part of the presentations given by the AMCA President Elect while participating in a number of mosquito control association meetings around the United States.