

ORANGE COUNTY VECTOR CONTROL DISTRICT

REPORT OF STAFF'S ATTENDANCE

AT CONFERENCE/EVENT

Name of Conference/Event: Mosquito and Vector Control Association of California
Annual Conference

Date: February 7 – 10, 2010

Location: Hyatt Regency, Sacramento, California

Significant points learned of benefit to the District and its ratepayers:

A major topic at the conference this year was the development of a NPDES Permit and the effects this permit would have on vector control districts throughout the state. There were two main speakers on this topic. The first speaker, Ken Harris, Chief of the Regulatory Section State Water Resources Control Board spoke about the need to have regulations when applying any pesticides to water of the U.S. The concern by the State Water Board is that pesticides are further contaminating water. The speaker did however address that further study and research would be needed to define if there is a significant level of residue left from applications by vector control districts. This research would require monitoring of sites pre-application and post-application to obtain more information.

The second speaker on this topic was Lisa Hunt, a consultant for the MVCAC. Her presentation provided information on levels of pollutants in the water and the implications for vector control. One point that was very clear was that the current monitoring schedule would require millions of dollars to meet the monitoring requirements and would be unfeasible for most, if not all districts within California. Both Ms. Hunt and staff for the State Water Board are working to come to a compromise in order to develop key monitoring sites throughout the state in order to meet the monitoring requirements. If this monitoring schedule was approved for the NPDES Permit it would allow for a state wide program for monitoring and shared costs for monitoring.

Date: Feb 23, 2010

Signed: 

Print Name: LURA PABILO

ORANGE COUNTY VECTOR CONTROL DISTRICT

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Significant points learned of benefit to the District and its ratepayers:

- As it stands right now, the NPDES permit processing, due to start in April 2011, may severely affect the District's ability to apply pesticides for the control of mosquitoes by drastically increasing annual costs from monitoring all treatments for environmental contamination. Agricultural applications will also be affected.
- Smaller districts throughout the State may have to halt treatments altogether because of these high monitoring fees, possibly reaching \$500,000 or more per year.
- One way to help offset these costs would be to substantially increase the benefit assessment rate to homeowners.
- There are no similar requirements in place to regulate and monitor homeowner residential use of pesticides. This means that millions of residents in high density population areas can randomly and, for the most part, irresponsibly, apply chemicals to their properties without consequence if it is causing environmental pollution.
- Field trials and evaluation of a new, more "environmentally friendly" mosquito larvicide "NATULAR" were promising for irrigated pastures and wetlands.

- Brown dog ticks, *Rhipicephalus sanguineus*, may be responsible for an outbreak of Rocky Mountain Spotted Fever on the Mexican border in San Diego County.
- Orange County Pacific Coast ticks, *Dermacentor occidentalis*, can carry as many as 3 different *Rickettsia*, including an undescribed strain. It is not yet known whether this strain is pathogenic to humans.

Date: Feb. 22, 2010 Signed: Stephen Bennett

Print Name: Stephen Bennett

ORANGE COUNTY VECTOR CONTROL DISTRICT

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Significant points learned of benefit to the District and its ratepayers:

The recent changes in legal interpretations of environmental laws governing the use of public health-rated pesticides by vector control agencies has become one of the most pressing issues facing the District. I attended several presentations at this conference which discussed the status of the MVCAC's approach to dealing with these new requirements. The speakers also emphasized the importance for districts to file the proper permits and documents with the appropriate regulatory agencies by the deadline on April 9, 2011, to minimize the risk of being sued by members of the public who question the use of pesticides to control vectors.

I spoke with several representatives of pesticide companies about new products to control mosquitoes in light of these regulatory changes. One company, for example, is marketing an insecticidal spray for adult mosquitoes that does not use piperonyl butoxide (PBO) as a synergist (a chemical that makes the insecticide work better) with a class of sprays called pyrethrins. PBO is one agent that clean-water regulators are scrutinizing as potentially having negative, long-term environmental consequences. Incorporating less-impacting spray formulations into the District's insecticide arsenal has always been part of this agency's goals of having a well-run Integrated Vector Management program.

I also attended several meetings that dealt with a number of vector-borne diseases, such as West Nile virus (WNV), tick-borne Rocky Mounted spotted fever and Lyme disease, and the mounting numbers of cases due to bedbug infestations in homes and hotels.

Date: February 23, 2010

Signed: Robert F. Cummings

Print Name: Robert F. Cummings

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Significant points learned of benefit to the District and its ratepayers:

The main focus in my attendance was to network with researchers and colleagues. I tried to attend all talks that were pertinent to testing that we perform in our lab, or testing that we might incorporate into our surveillance. My goal in attending conferences and workshops has always been to improve our testing for better surveillance.

I attended talks on RNA extraction methods, Invasive virus, Risk assessment, Blood meal IDs, Ticks, Lyme disease, Typhus and Bed Bugs.

Since the conference we have made contact with David Clark, PhD at CVEC, one of the presenters. We plan on collaborating to develop secondary testing for wild bird surveillance. We also want to test the State Risk Assessment model with our rt-PCR results. The MVCAC Conference allows me to meet and confer with colleagues throughout the State in one place. I can see how other districts run their surveillance, and I can discuss theories and techniques to improve our methods of surveillance.

Date: 2/32/2010

Signed: 

Print Name: CARRIE FOGARTY

ORANGE COUNTY VECTOR CONTROL DISTRICT
REPORT OF STAFF'S ATTENDANCE AT CONFERENCE/EVENT

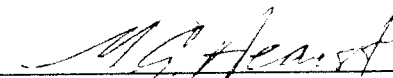
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Significant points learned of benefit to the District and its ratepayers:

- The NPDES Permit will most likely be both a larvicide and adulticide permit.
- Having a document that demonstrates compliance with California regulations will be a prerequisite for the NPDES permit.
- The District will need either a Mitigated Negative Declaration, (MND) or a full blown Environmental Impact Report (EIR)
- CEQA requirements are so specialized that each District will need its own (\$50-\$120k)
- MVCAC will try for a statewide NPDES permit
- Annual cost may equal annual dues for MVCAC (\$8,000)
- Vector control applications account for <0.3% of recorded usage
- 80% of pesticide runoff is the result of homeowner and PCO applications. (Unrecorded usage)
- While expensive, the permitting process is cheap compared to currently required monitoring.
- Bed Bugs are very difficult to control once they have become established in a structure. Treatment can be very intrusive.
- There were many lost opportunities for positive PR with the Light Brown Apple Moth (LBAM) *Independent discussion*
- There are several common-sense ways to make sure numbers in a technical report are less confusing, and more meaningful to everyone.

➤ Signed: 

Print Name: Michael Hearst

ORANGE COUNTY VECTOR CONTROL DISTRICT

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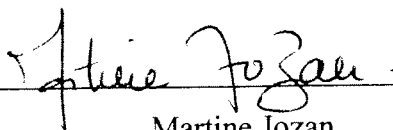
Location: Hyatt Regency, Sacramento, California

Significant points learned of benefit to the District and its ratepayers:

- 1- Although we all know that the State is broke, and therefore funds for mosquito research may dwindle or fade into oblivion, the presentation by the "Honorable Fred Keeley", treasurer of Santa Cruz County was very illuminating and possibly encouraging. There is a general recognition that the support of vector control districts are paramount to good Public Health, and therefore drastic decisions might be delayed for a while.
- 2- The State Water Board perspective on the NPDES permit was less encouraging since the districts would be required to undergo prior testing of the pesticide they intend to use, at a prohibitive price. This of course would be a complete deterrent to adequate and timely control of virus transmission. The intellectual flexibility of the Water Board is questionable. Obviously more haggling and negotiating ahead.
- 3- On the scientific side, numerous studies on different strains of West Nile virus point out to the existence of some minor difference in our California virus, which could have repercussion on coming outbreak and surveillance strategies. Other studies on vaccines for wildlife illustrate the complexity of containment/control of the flavivirus circulating in California and other states.
- 4- Presentations by various districts showed continuous commitment of technicians and scientists, to best surveillance as well as a continuous quest for better techniques.

I think the tax nayers are well served

Date: 2/23/10

Signed: 

Print Name: Martine Joazan

ORANGE COUNTY VECTOR CONTROL DISTRICT
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Significant points learned of benefit to the District and its ratepayers:

Ching-I Chen, Project scientist, CVEC Spoke about Chikungunya Virus and the threat to The L. A. Basin via globalization and tourism.

Gabrielle Worwa, Postdoctoral Scholar, CVEC and Bradley Mullen Ph.D., Professor of Entomology, UC Riverside gave a talk on Blue Tongue Virus and how Culicoides vector the disease.

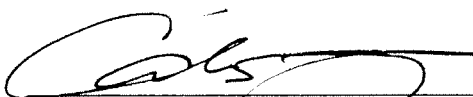
Jamesina Scott, Ph.D., District Manager at Lake County VCD gave a paper regarding the success of VectoMax CG in Wild Rice fields.

Marco Metzger, Ph.D., Senior Public Health Biologist, CDPH presented a study of Storm Water BMP's and Mosquitoes and what has been learned in the last ten years.

Ken Harris, Chief of the Regulatory Section of the State Water Resources Control Board gave a perspective on the NPDES permit process.

Tina Feiszli, MSPH, CDPH, Vector Borne Disease Section gave a talk on The Surveillance for Mosquito-Borne Encephalitis Virus activity in California.

Date: 2/24/2010

Signed: 

Print Name: Carlos Martinez

ORANGE COUNTY VECTOR CONTROL DISTRICT

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Significant points learned of benefit to the District and its ratepayers:

The important points I took from this conference were:

“Efficacy of VectoMax CG for Mosquito Control in Wild Rice in Lake County, California” presented by Jamesina J. Scott, Ph.D., District Manager/ Research Director, Lake County VCD. She gave a very concise description of larvacide control of *Cx. tarsalis* during the summer months of 2009. This talk was educational due to the difficulty in controlling *Cx. tarsalis* in such a large agricultural area.

“An Analysis of Sentinel Chickens Utility for Surveillance in Urban Environments” presented by Jennifer Kwan, Ph.D. Student, Graduate Group in Epidemiology, CVEC. Jennifer emphasized the increase testing of sentinel chickens. She expressed need to increase testing time intervals from every two weeks to every week.

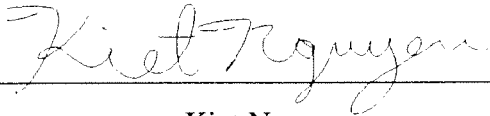
“Evaluation of Three West Nile Virus Vaccines in Western Scrub-jays”, presented by Sarah Wheeler, Ph.D. student, Graduate Group in Entomology, CVEC. Sarah gave an interesting talk on a possible vaccine, used in other vertebrates, to help combat West Nile in Island Scrub-jays. She used Western jays as analogs. I found that her experiment was lacking in sample size.

“High Altitude West Nile Virus and Mosquito Surveillance in Mammoth Lakes, CA”, Steven Ganong, Manager, Mammoth Lakes MAD. Steve gave a fascinating look into the surveillance aspect of a high altitude mosquito abatement district. He submitted one mosquito pool in 2009 and it returned positive for West Nile. His talk highlighted the difficulties with working in such a remote area.

“Using the Collection Bottle Rotator Trap for Mosquito Abundance and Temporal Activity in Fresno County”, Charles W. Smith, Entomologist, Consolidated MAD. Charles, a former employee of OCVCD, gave an update on his mosquito surveillance program. He used a rotator trap on loan from OCVCD. His report highlighted a significant difference in mosquito feeding times amongst different species.

I also had the privilege of giving a talk about the District's 2009 arbovirus surveillance program. My talk covered our mosquito, dead bird, and wild bird surveillance tools. I gave a concise West Nile virus activity report for 2009. Overall my emphasis was the predictability and future indicators of the virus. Using six years of data and Maximum Likelihood Estimates, we hope to identify a pattern in WNV activity.

Date: 2/22/2010

Signed: 

Print Name: Kiet Nguyen

ORANGE COUNTY VECTOR CONTROL DISTRICT
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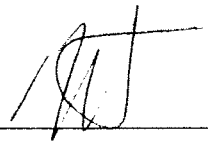
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Significant points learned of benefit to the District and its ratepayers:

I saw a presentation entitled "Fight the Bite Goes Digital" by the PIO from the Sacramento-Yolo District. The presentation was about how that District uses the internet as a means of advertising for the District. The District uses banner ads on news websites and on websites targeted at mothers that lead to click throughs to get to the District website. It was an interesting presentation but as the PIO was evident that the percentage of people that clicked through to the District's website was a fraction of one percent of the area's population. So, while it is an interesting concept, in the end the use of banner ads and pop-ups about the District was not an effective tool for getting information out to the public. I found this fact interesting because I was thinking of doing something similar in this region and now I can see that it is not an effective tool for educating the public.

Date: February 23, 2010 **Signed:** 
Print Name: Tawnia Pett

ORANGE COUNTY VECTOR CONTROL DISTRICT

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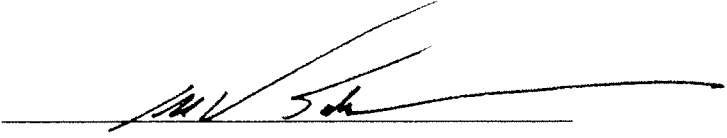
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Significant points learned of benefit to the District and its ratepayers:

My attendance of contributed presentations and my proactive interactions with numerous colleagues at this Conference provided me the opportunity to learn more about and discuss the following: (1) Current environmental policy, including the NPDES Pesticide Permit process and CEQA compliance, both of which effect statewide vector agency mosquito abatement practices; (2) Public health concerns as they apply both statewide and within the jurisdiction of my District, including information on the potential emergence of bed bug infestations in regions of southern California; (3) Insights into improved Best Management Practices for reducing mosquito production in constructed wetlands and other aquatic resources; and (4) Strategies for proceeding with the use of native predatory fishes, such as the Arroyo chub, as additional, effective mosquito control agents in specified regions of southern California. I am confident that the information attained at this Conference and the social networking built through colleague interaction will serve as invaluable resources that will allow me to better shape the most efficacious public health protection, biological, regulatory, and environmental decisions beneficial to both the District and our ratepayers.

Date: 23 February, 2010 Signed: 
Print Name: Michael V. Saba

ORANGE COUNTY VECTOR CONTROL DISTRICT

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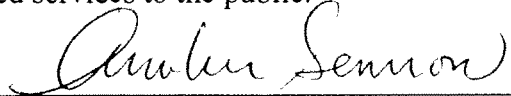
Significant points learned of benefit to the District and its ratepayers:

This conference was especially beneficial for several reasons. First, it offered the opportunity to meet with and discuss relevant issues with many of our colleagues. Second, it provided invaluable information on many topics that are important to the District. The talks on the National Pollutant Discharge Elimination System (NPDES) Permit were very informative and offered us an opportunity to ask questions of the speakers on and off of the podium. The NPDES Permit will significantly change how our mosquito control program operates and it is of vital importance to understand what the District will be required to do under the terms of the permit. It will also cost the District a considerable amount of money to comply with the terms of the permit and therefore staff will need to consider the anticipated/projected additional cost while calculating the budget.

Additionally, it was useful to hear from researchers about new pesticide products coming to market and their effectiveness. This will help the District make decisions about what products to use for control and continue its effort to select the most environmentally sound materials. This directly ties into the NPDES Permit since the permit will be regulating our applications of pesticides as they are discharged directly to and over Waters of the US.

Finally, there were several sessions of talks on operational tools and strategies, surveillance methods, and infectious disease transmission studies that were quite enriching which served to enhance our overall understanding.

In conclusion, staff attendance at the MVCAC Conference is a vital tool in the continuous education, training, and professional enrichment of employees of the District which helps us deliver the most effective, efficient, and advanced services to the public.

Date: 2/22/10 **Signed:** 
Print Name: Amber Semrow

ORANGE COUNTY VECTOR CONTROL DISTRICT

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MVCAC Annual Meeting
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Hyatt Regency Sacramento

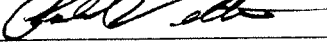
Significant points learned of benefit to the District and its ratepayers:

Gave a talk relating the districts dead bird and micro lab experiences with sampling /testing protocols for West Nile Virus testing of dead birds submitted to the district.

Earned continuing education credits towards state certification as a vector control technician for attending talks regarding surveillance and testing techniques, programs and results from other districts and state employees.

Attended several talks regarding West Nile Virus activity in wild birds of direct relevance to our surveillance program. Attended several talks regarding Rickettsial infections in tick populations of direct relevance to Orange County residents and their pets. Attended review talks regarding potential invasive viruses of concern to vector control agencies in California.

Date: 2/23/2010

Signed: 

Print Name: Robert Velten