TEXAS MOSQUITO CONTROL ASSOCIATION NEWSLETTER

Volume 42	January	2022

In Memory: Lee A. Chastant, 1952-2021

Editor – William Sames, Ph.D.

Contributors – Kristin Chastant Patrick, Dr. George Peck, Mike Nichols, Nina Dacko, Dr. Gabe Hamer

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About the Cover: Lee Chastant was the Director of the Jefferson County Mosquito Control District (retired) and former 2-time TMCA President. He was thoughtful and helpful to those around him. A friend to many.

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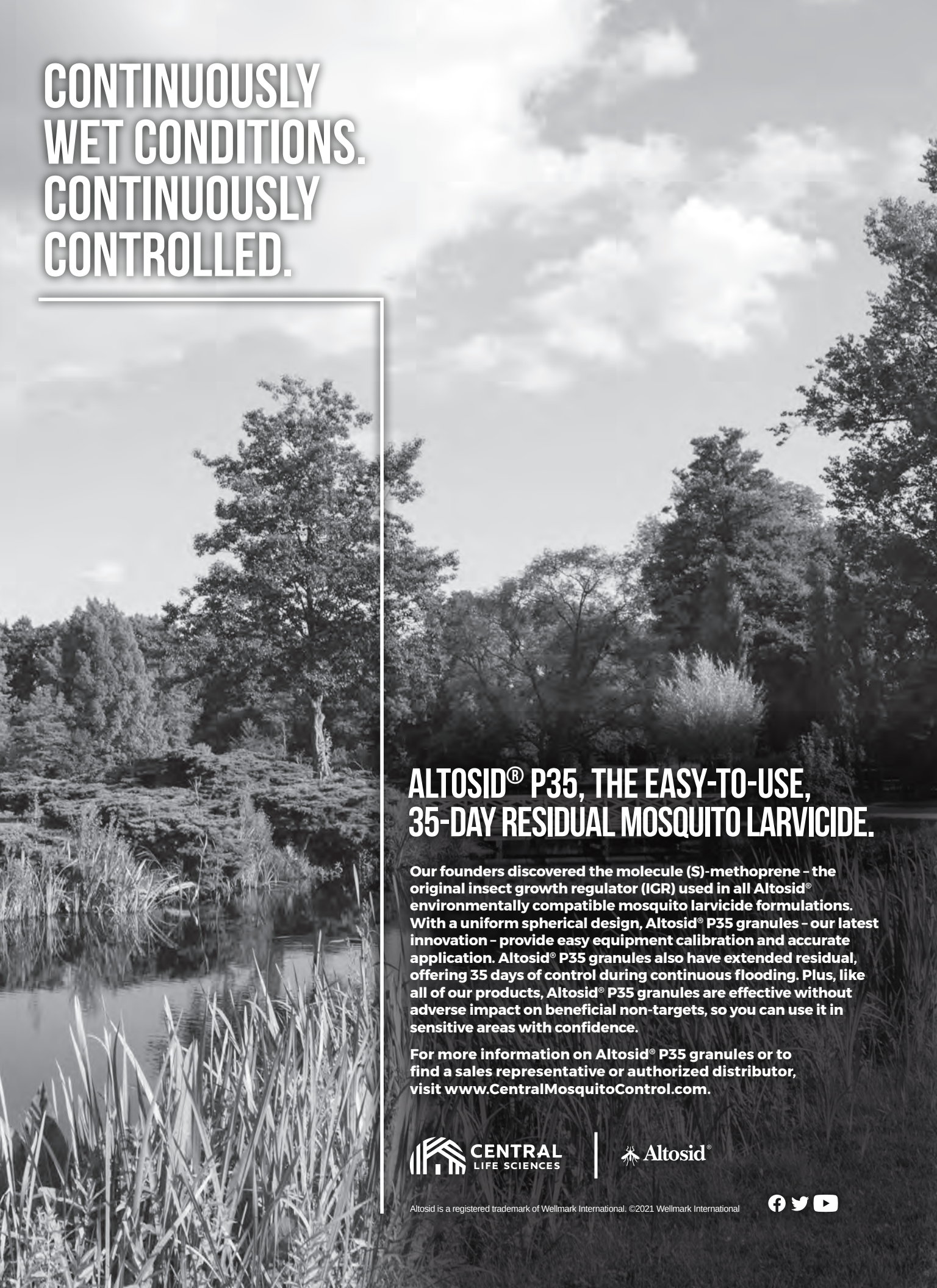

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Nina Dacko

Message from the President
Nina Dacko

Greetings TMCA membership! I hope everyone had a safe and exciting holiday season and new year celebration. Sometimes, I feel mosquito control folks are criticized during the winter months, and I want that to change. Some think, mosquitoes aren't out, and there is no viral transmission. The latter is more likely, but mosquitoes are not gone. Some of our December traps yielded over 200 mosquitoes per trap (*Culex quinquefasciatus*, *Cx. restuans*, *Culiseta inornata*), and we continue to treat sources as we find them. Also, mosquito control technologies and research do not lie stagnant. Some keep up with the latest trends and share that knowledge with others. Some may analyze last season's data (hopefully to publish), and the off-season is when we can take time off from work. So, let folks know we do not sit around twiddling our thumbs during the winter. It is important for us to stay focused on the task at hand.

Many on-going regulatory issues need our attention, and the AMCA biweekly newsletter is a great place to read the latest news. The definition of "the waters of the US" seems to be fluctuating from administration to administration, so be sure you are keeping up with the Clean Water Act language. Changes with whom we will have to communicate with per the Endangered Species Act are coming. It is best to start communicating with your local Fish and Wildlife office and share your mosquito control operational procedures. Most importantly, what thresholds are you using to determine treatment? Is it because there are 10 complaints in an area? Is it because you found greater than 10 mosquito larvae per dip? Is it because there is evidence of viral transmission in the area? Is it because more than 100 *Aedes sollicitans* are in your light trap? Is it the large number of mosquitoes that landed on your arm within a minute? Whatever it might be, be sure that this information is written in a guidance document and based upon local data. Just because it's Tuesday really doesn't cut it. Talk on limiting pesticide use during times of the year when some endangered species are active is ongoing. Get familiar with Bulletins Live at the EPA website: https://www.epa.gov/endangered-species/bulletins-live-two-view-bulletins as there is talk that this website will need to be used for mosquito control purposes.

The last thing I want to mention is upcoming meetings. The AMCA annual meeting is 28 February through 4 March in Jacksonville, Florida, and I hope to see some Texas folks there! The TMCA Spring Workshop will be in Rockwall, Texas near the end of April. More details on this and other AgrLife Extension trainings are in listed in this newsletter, so be sure to register for one that is convenient for you. Stay safe and continue to be the best stewards of protecting our citizens from mosquito, vector, and other diseases of public health concern, and best wishes on your preparations for the 2022 mosquito season.

Opinion: Put VectorSurv on the Map

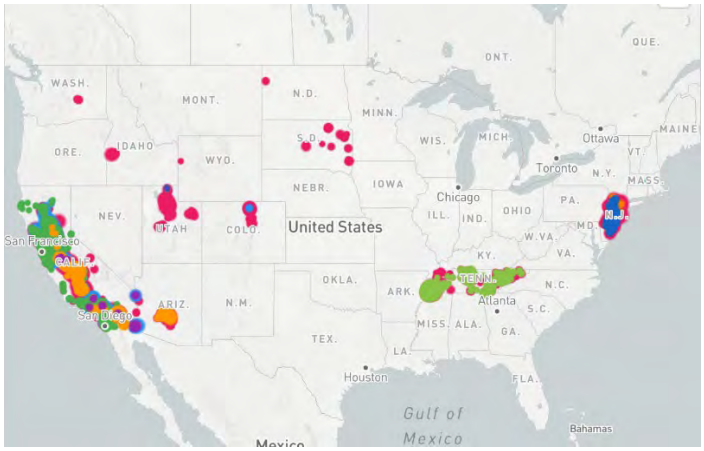
Originally published in the October 2021 edition of Public Health Landscape

Let's take a moment and discuss some key precepts that relate strongly to Public Health and more narrowly, to vector-borne disease management: a proactive vs. reactive approach; cause and effect; the need to measure in order to manage. One might say these easy-to-understand ideas form the backbone of a successful Public Health program.

We'd be remiss if we did not inject another layer of realism to our discussion, however, and include other, unavoidable considerations: money, politics, and the complexity of meeting the needs of a wide range of stakeholder groups at the global, federal, state, and local level. For those who work in publicly administered public health programs, the latter group doesn't often sync well with the former.

What's Wrong with this Picture?

The value of such a tool seems self-evident. Continually updated by all participating districts, the system allows managers to assess mosquito activity at the macro level and stay ahead of the indicators that warn of a potential outbreak of mosquito-borne illness, including West Nile Virus (WNV), dengue, Zika, chikungunya, and others. In addition to surveillance data, districts log their intervention activities including the location, rates, and timing of both larvicide and adulticide applications. The expansion of the application beyond California provided districts with the added benefit of being able to monitor activity in bordering states and counties. This interstate intelligence proved valuable in 2019, for example, when a district in Southern California was able to react quickly based on a high volume of positive WNV samples emerging in Arizona, while the rest of California remained relatively calm.



The VectorSurv Gateway provides a valuable, data-driven tool that helps vector management agencies monitor and respond to potential vector-borne disease outbreaks in real-time. The fact that only thirteen states participate lays bare a lack of vector control funding.

VectorSurv also affords interesting possibilities for the future. With an adequately populated data set, researchers can investigate the impact of vector-borne disease interventions in a real-world setting. In theory, combining trap counts, positive pool data, brood locations, and subsequent response activities, biostatisticians should be able to evaluate the effectiveness of mosquito control interventions – and their resultant impact on the spread of vector-borne disease – as never before. This work is still in its infancy but has incredible potential for the purposes of future planning, operations, and ultimately human health.

Putting this tool in place nationwide seems like a no-brainer, right? Not so fast. That's where money and politics and competing demands come in. The American Mosquito Control Association (AMCA) fully supports expansion of VectorSurv into a nationwide program. No one seems to deny the value of scaling the application, the question simply becomes who's going to pay for it.

Despite its obvious benefits and financial support from local California districts, the state, and the Mosquito and Vector Control Association of California, operational funding for VectorSurv has been an ongoing challenge. In the vector control industry, funding levels and sources can be notoriously temporal and unpredictable. And herein lies the crux of the ongoing battle vector control officials have to wage: in matters of Public Health, governments and societies tend to be painfully reactive.

The 1999 introduction of WNV into the US is one example. The outbreak brought awareness of the importance of vector control to an all-time high, resulting in an influx of new federal monies for vector control. As the specter of WNV waned, however, that level of funding continued to dwindle. In 2016, the Zika outbreak resulted in hundreds of millions in response funding administered through the Centers of Disease Control and Prevention. CDC put those monies to good use including forward-looking improvements such as increased epidemiological laboratory capacity and the establishment of five new Vector-Borne Disease Regional Centers of Excellence across the country. But again, the funding was wholly reactive and most of it, temporary. A significant increase in long-term, proactive, federal support for local vector control programs failed to materialize.

If a shift toward a more proactive approach to vector-borne disease is indeed a federal objective, permanent federal funding for VectorSurv would seem to be low-hanging fruit. The heavy lifting is already done. What remains is to promote its adoption at the national level through CDC, the National Association of County and City Health Officials (NACCHO), AMCA, and state associations. In addition to some federal monies to support ongoing administration of the program, the commitment would also require resources to conduct the prerequisite training and to provide some level of ongoing support for State Departments of Health (including US Territories and Freely Associated States) where vector control funding is already lacking.

It seems like a wise investment.
~ Public Health Landscape

View more articles and resources for Public Health Professionals at:
https://publichealthlandscape.com/current-articles

TMCA Administrative Notes

Publishing in the TMCA Newsletter. The TMCA newsletter is a medium for getting information to TMCA members. Newsletter content is based upon contributions from TMCA officers and members, and the newsletter subcommittee. If you have information of benefit to TMCA members, please submit that information to the TMCA Editor. There are 4 issues per year with each issue coming out shortly after the quarterly Board of Directors meeting. Newsletters are published in January, May, August, and November. Photos and mosquito related humor are also welcomed. Consider submitting artwork for a cover.

Advertise in the TMCA Newsletter. Advertising rates are $50 for 8.5 x 11 inches page ad. Half page ads are $30 (8.5 x 5.5) Submit copy ready artwork in MS Word or PDF to the TMCA Editor.

American Mosquito Control Association Annual Meeting. The 88th AMCA Annual Meeting is scheduled to be in Jacksonville, Florida, 28 Feb – 4 March. Go to https://www.mosquito.org/ for more information.

Texas Mosquito Control Association Annual Meeting. Big Change! No Joint LMCA/TMCA meeting in 2022. However, Local Arrangements Committee will determine a location for the TMCA Annual Meeting in October. The date, location, and other details to be determined and reported in May and August newsletters.

TMCA Committees. Interested in serving on a TMCA Committee? If yes, you may contact the Committee Chair **OR** go to the TMCA website and sign up online at https://www.texasmosquito.org/membership-and-committees. To join a committee, send a request to info@texasmosquito.org.

TMCA Dues – Please Pay

Normally dues are paid at the TMCA Annual Meeting or Spring Workshop. If you attended the 2021 Annual Meeting, you received a 2022 complimentary membership. If you attend the 2022 Spring Workshop, your registration will include a 2022 membership. If you did not or cannot attend either of these meetings, please contact Mark Johnsen for dues payment options. Mark's contact information and the membership form is the last page of this newsletter.

AMCA Meeting – Dallas 2024!

The 2024 American Mosquito Control Association will be held in Dallas, Texas. The last AMCA Annual Meeting in Texas was held in Austin in 2012, so these do not come around too often. The meeting normally takes place in late February or early March, and the TMCA provides volunteers to help at the registration desk and with other activities. Hopefully, COVID will be in our forgotten past and this will be an in-person meeting. Past AMCA meetings in Dallas have been exceptionally good and I anticipate that this one will continue that trend. More to follow!

Job Announcement

Williamson County – Public Health and Prevention Specialist

We received this announcement on January 25th, and it did not have a closing date on it. Follow this link for more information: Employment Opportunities | Employment (governmentjobs.com).

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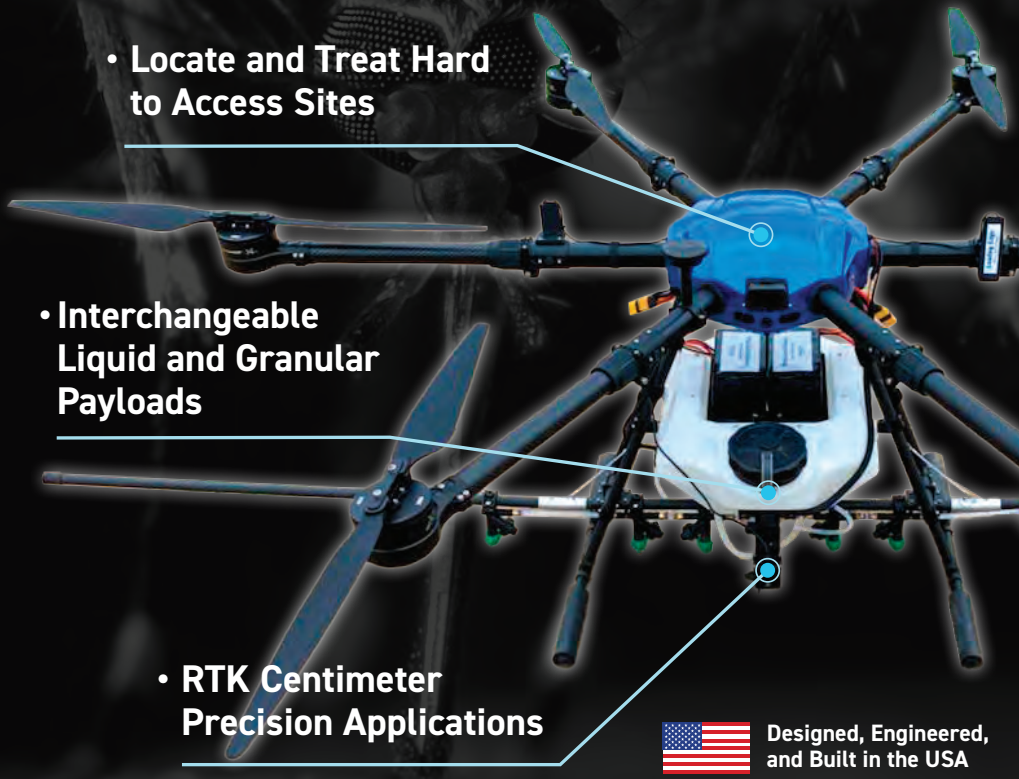

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Lee Chastant – Mosquito Worker Extraordinaire

When Hurricane Ike's rainfall and storm surge covered the land, it set up a vast mosquito incubator.

The eggs all hatched at the same time, went through the larval period and recently appeared on the scene as bloodsucking adults.

"Think of them as tiny little time bombs, and they're just waiting for the right conditions," Chastant said. (Beaumont Enterprise, Sep 23, 2008, article by Sarah Moore)

Official Obituary. Lee Alain Chastant, 69, of Lumberton, TX, passed away on December 23. Lee was born in New Orleans, LA, on March 15, 1952, to geologists Lester A. Chastant and Kathryn Ross Chastant, both of whom preceded him in death. From an early age, Lee embraced the outdoors and became an enthusiastic hunter and fisherman. He developed an appreciation for the natural environment and loved being in it.

In high school, Lee played football and was popular among his friends. His two younger sisters looked up to him, at least when he wasn't playing tricks on them. He knew New Orleans well and also enjoyed time with his bayou-living grandfather. Additionally, Lee enjoyed visiting his mother's family and spending time on their west Texas ranch. Here he learned what hard work really meant but reveled in the experiences and adventures to be found there. In later years, Lee liked spending time with his mom and aunt on a family farm near Granger, TX.

After high school, Lee worked in a veterinary clinic and then in the oil fields for a while before heading off to Texas A&M University to study Entomology. After graduation, he worked for Jefferson County, TX, as the head of Mosquito Control. His expertise in cockroaches, mosquitos and other unpopular critters would serve him well as his reputation grew. Meanwhile, he married and had two beautiful children, Kristin and Stuart, of whom he was extremely proud.

Eventually single, Lee retired and realized a dream by building a home in the wilds outside of Lumberton. He loved his little paradise and constantly worked to improve the acreage. Despite alligators, feral pigs, floods and hurricanes, this was where he wanted to be. He loved animals and rescued several. His four dogs and two cats gave him great pleasure and brightened his days.

Throughout his life, Lee was known for his wicked wit and odd sense of humor. His laugh was unpredictable and infectious.

Sometimes you weren't sure if he was laughing with you or at you. Lee could be generous and often helped family, friends, and neighbors, as well as people he didn't really know. He was also truly grateful for the assistance he received as his own health faltered, especially the assistance of his children.

Lee is survived by his children, Kristin Chastant Patrick (Danny) of Tomball, Stuart Chastant (Ashley) of Lumberton, grandchildren Cole, Conner, Rylee and Bradyn, sisters Renée Chastant (Steve Canton) and Andrée Chastant Kienitz, as well as Aunt Betsy Ross of Granger and Uncle Joe David Ross (Frances) of Sonora, and many cousins, nieces, nephews and friends.

Lee and his family in 2021.

In lieu of flowers, the family welcomes donations to the American Cancer Society, P.O. Box 22478, Oklahoma City, Oklahoma 73123.

A memorial service will be held at a later date. Lee's cremation arrangements were handled through Broussard's Crematorium under the direction of Broussards, 490 Cemetery Road, Silsbee.

Editor Comment. While at Texas A&M University, Lee Chastant served as the laboratory director for Dr. Jimmy K. Olson. In 1994, he was replaced by Rudy Bueno, who when he left to become the Director at the Harris County Mosquito Control District, who then was replaced by Mark Johnsen, who stayed until Dr. Olson retired in 2007. While working with Dr. Olson, Lee conducted pesticide resistance and pesticide drift tests and became involved with the Texas Mosquito Control Association. His contributions to the TMCA continued through his years at the Jefferson County Mosquito Control District. Lee was a 2-time TMCA President (1993-1994 and 2004-2005), which means he was probably on the TMCA Board of Directors for at least 16 years. He was also the newsletter editor or

assistant editor from 1994-2003, and actively participated in the preparations and execution of annual meetings, spring workshops, and the TMCA Fly-Ins (remember those?). He was thoughtful and helpful to those around him. A friend to many.

L to R: Roy Burton, Lee Chastant, Greg Marciniak

L to R: Lee Chastant, Mike Nichols

Lee Chastant speaking on one of the many TMCA Fly-Ins and “chilin” at one of the annual meetings.

Left to right, front row. Dr. Jimmy K. Olson, Lee Chastant. Back row, Mike Nichols, Mark Johnsen, Patrick Sutton, Jennifer Murrell, Bill Sames, and Tom Janousek. At Joint LMCA/TMCA Annual Meeting in Beaumont.

NEDERLAND ★ PORT NECHES ★ GROVES ★ STONEGATE ★ BEAUXART GARDENS ★ CEN

County wages war against mosquitoes

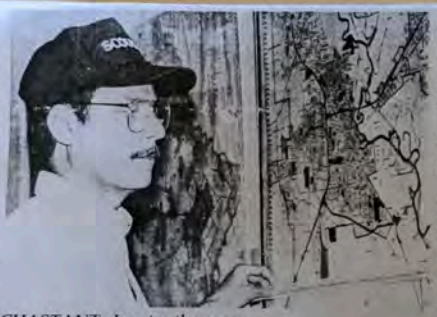
By Elizabeth Pruitt
Reporter

NEDERLAND-There's a war raging in Jefferson County! It's us against them, those thirsty bloodsuckers.

The commander of our defense is Lee Chastant and he wages war from his command post at the Jefferson County Mosquito Control office at the airport.

"This is war and the enemy is winning," Chastant said. He is director of the county mosquito control office. The emphasis is on the word "control."

The enemy is the mosquito and they begin their invasion just as the weather permits increased outside activity. Alone or in groups, these pests come with the territory.



CHASTANT -Locates the enemy.

"We have three airplanes and eight spray trucks. Two of the planes are single engine models which fly in the rural areas, with the twin engine reserved to fly over the residential sections," Chastant noted. "We are outnumbered by the vastness of the mosquito population. Malathion is the chemical used to spray because it is a safe and relatively inexpensive chemical. Another effective chemical used is Scourge. Texas A&M University has agreed to test mosquitoes from our area at no charge this year to determine which insecticides the mosquitoes resist and which work most effectively."

"When an area is sprayed it will clear of mosquitoes, but there will be another influx in the same area as soon as the spraying is completed. It will seem the spraying has been ineffective when it has actually killed those mosquitoes it touched. The trucks spray oil into culverts and standing water, suffocating developing mosquitoes," Chastant revealed.

Tracking maps are located in the Control office to spot the movement of the insects. Some areas are traditional hot spots such as Pleasure Island, the channel, Neches River and west end of Beaumont.

People call in to report areas of large infestation. Employees of the district physically stand in suspect areas for one minute and count the number of mosquitoes that land on them.

Known problem areas are sprayed two or three times a week.

"We spray the rural areas hoping to stop them before they hit town," he said. "Sometimes we find out about illegal tire dumps or other water holding places from these calls."

and stay around until late fall. A cold winter helps, but the mosquitoes are always here. In winter people wear thicker clothing and don't stay outside for long periods of time. Winter mosquitoes, a different variety, are not such a problem.

While mosquitoes are a nuisance it should be remembered the Culex variety is capable of carrying St. Louis encephalitis which poses a health hazard.

It is within the power of county commissioners to establish a mosquito control district in their county. According to Chastant there are some counties in Texas that have established districts, but the commissioners have not voted to fund them.

In Jefferson County, funds for the mosquito district are taken from county taxes collected, without an additional tax for the service. The mosquito control district is a part of the county health department and the state is not involved in the local district.

The local office is responsible to the Jefferson County Commissioners Court and each member of the court may appoint a member to the district board. These local citizens appointees serve without compensation.

The district director and employees are paid.

Lee Chastant is the director. He supervises 14 fulltime positions of which at this time only 12 part-time seasonal employees may be hired.

Chastant is a graduate of Texas A and M University with a degree in entomology. The first of May an additional entomologist is expected to be hired.

District personnel are trained by the entomologist and these employees must operate the equipment, repair and maintain it and mix chemicals in amounts directed by the entomologists.

"It is critical they do the job exactly as taught. The employees are reliable, follow EPA standards and are in compliance with the health department rules," Chastant said.

Surveillance is the method used to locate trouble spots but community education is important.

Three things that help the district stay effective are: a good surveillance program, reliable, conscientious employees who realize the importance of their work, and luck.

"You are working with Mother Nature and she can be spiteful. A warm wet spring, wet summer and late winter give the mosquitoes a good environmental situation. A dry spring and fall would be ideal. Working in this business along the Gulf Coast you know you have to deal with summer rain!" Chastant stresses.

If this war can't be won, the Jefferson County Mosquito Control District is working to con-

Port Arthur News staff photo by Dave Cruz

Lee Chastant, Jefferson County director of mosquito control, holds picture of bothersome insect

Mosquito man battles enemy

By JAMES CASTILLO
Port Arthur News Staff Writer

NEDERLAND — Military strategy and surveillance will help Lee Chastant, Jefferson County director of mosquito control, eliminate the enemy: the mosquito.

"You have to have a military mindset to be in this business. The only advantage is they can't fight back," Chastant said.

Chastant, the former director of mosquito control in Orange County, said having both airplanes and trucks to spray the pests gives him an advantage. Orange County doesn't have any planes to assist with spraying and Jefferson County has three.

Without planes you have to wait until the mosquitoes are "in town and on the street" before you can spray them, Chastant said.

"The aircraft are very effective. They cover a large area very rapidly," he said. The only drawback is the planes can't be used over heavily populated areas.

If you spray in an area when the weather conditions aren't right or after the mosquitoes have moved out of the area, using planes can be ineffective and expensive, Chastant said.

A surveillance program and giving the pilots some latitude on their spraying missions are ways to overcome the problems, he said.

"The spray has no residual effect. You have to hit them with it to kill them," he said.

Using surveillance minimizes the application of chemicals because areas are sprayed only when it is most effective, he said.

"It both protects the environment and saves tax dollars," Chastant said.

Chastant, an entomologist, said he collected insects, both dead and live ones, when he was a child. He got the bug to study entomology while taking pre-veterinary courses and decided to make a career of it.

"I have a degree in bugs from Texas A&M University," he joked.

Some mosquitoes travel up to 400 miles in their lifetime, others only fly four blocks, Chastant said.

Mosquitoes live about three weeks on the average and only the female mosquito bites, he said.

"They don't live on blood, but simply use the protein to produce eggs. They live on nectar and plant sap. Every

See MOSQUITO, page 2A

Lee was featured or mentioned in numerous regional newspapers to include the Beaumont Enterprise, The Port Arthur News, The Silsbee Bee, and the Oklahoman.

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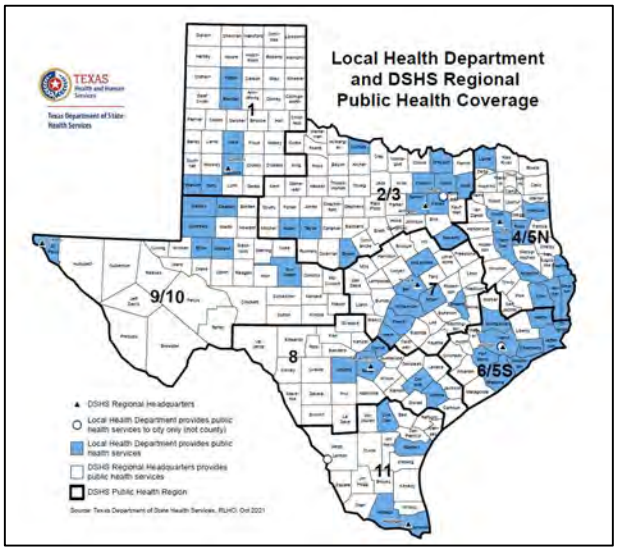
The State Medical Entomologist and Highlights of the Zoonosis Control Branch's Strategic Plan

Dr. George Peck

My name is George Peck, and I am the State of Texas Medical Entomologist for the Texas Department of State Health Services (DSHS). I have been in the position for about 17 months and am getting oriented to the many demands and roles the job requires. I am also seeing much of Texas and getting to know the people, wildlife, and landscape. I may have met a few of you and you may have heard my talk on Invasive Aedes mosquitoes given at the 2021 in-person meeting of the Texas Mosquito Control Association. I would like to take this opportunity to tell you a little bit about the Department, its philosophy and mandate for mosquito and vector surveillance and control, and a few other important facts.

The DSHS has 47 staff within Zoonosis Control, with field offices in each of the 8 main public health regions and a central office in Austin. The public health regions have their own unique needs but work closely with the central office to collaborate on a variety of issues including investigations, trainings, projects, and consultations.

The DSHS recently updated its strategic plan and I want to share some essential content from those planning meetings.



Our Vision: A Healthy Texas. **Our Mission**: To improve the health, safety, and well-being of Texans through good stewardship of public resources, and a focus on core public health functions. **Key Values**: leading with a vision, demonstrating actions and policy driven by science and data, being an approachable and reliable partner with a purpose, and engaging stakeholders to connect as a team.

The entomology team within the Zoonosis Control Branch is responsible for policy recommendations for vector and nuisance mosquito control during regular operations and after flooding events. Examples of these recommendations and their context were recently published by the American Mosquito Control Association in a special issue focused on Mosquito Control Emergency Preparedness and Response to Natural Disasters (Connelly and Borchert 2020) . In this special issue, Qualls (2020) outlines how DSHS assists local health departments following severe weather events and other public health emergencies. More specifically, the document provides guidance to local jurisdictions requesting mosquito abatement assistance from the State in response to a proliferation of

nuisance mosquitoes that may hinder governmental response and recovery efforts after a severe weather incident. It also provides background information on mosquito surveillance and control and identifies tasks, roles, and responsibilities for local jurisdictions, state, and federal partners. In Qualls and Breidenbaugh (2020) within the same special issue, we tell the story of how we responded to Hurricane Harvey, the wettest cyclone in United States history that generated catastrophic flooding along the Texas Gulf Coast. In the aftermath of Hurricane Harvey, DSHS activated two mosquito control contractors and the US Air Force Reserve's Aerial Spray Unit and treated 6,765,971 acres in 29 Texas counties. In Ward and Qualls (2020), we faced a key issue in mosquito control throughout most of Texas, efficient use of scarce resources and having a modern and evidence-based mosquito control plan. In an ideal world, all mosquito control programs would have public health–driven and nuisance population–focused components in their mosquito control plan. However, due to resource limitations many mosquito control programs focus attention on adulticiding.

Programs run by public health departments with limited resources are frequently focused on vector control, targeting a few mosquito species that are locally relevant in human and animal disease cycles. Focusing their mosquito management on only vector species can create problems after hurricanes and severe flooding events that create a need for nuisance mosquito control. Floodwater nuisance species that emerge are not routinely a public health threat, but hinder operations related to response efforts and can negatively affect the lives of people in areas recovering from these disaster events. Staff, training, equipment, and facilities, when aimed at public health vector control, may not have the experience, knowledge, or tools to effectively respond to post-disaster, floodwater mosquito populations. Therefore, all mosquito management programs should have plans in place to handle not only known vectors of public health concern in response to mosquito-borne disease, but also to manage floodwater mosquito populations after natural disasters to safeguard public health and facilitate recovery operations. Ward and Qualls (2020) discusses the severe weather events in South Texas in 2018 and the resulting integrated nuisance floodwater mosquito control guidance developed by the Texas Department of State Health Services.

The DSHS Zoonosis Control Branch Entomology Crew partners with our Epidemiologists to maintain a passive surveillance program for ticks and Triatomine kissing bugs. The public is invited to submit ticks and triatomine kissing bugs via instructions at these web sites: Tick Submission and Testing or Triatomine Kissing Bug Testing. Through this passive surveillance program, the DSHS is able to roughly track vector distributions in space and time. Most ticks submitted are of four species: *Amblyomma americanum, Amblyomma maculatum, Dermacentor variabilis* and *Ixodes scapularis*.

The Zoonosis Control Branch Health Topics link provides human data on a wide array of Zoonotic Diseases including data on WNV.

We participate in trainings with the TAMU AgriLife that prepares students for taking the Public Health Pesticide Applicator License, and we provide educational seminars to a diverse assemblage of agencies needing expert information on vectors and vector borne diseases. We provide insect IDs, consultations, and give general advice on arthropod control and vector borne disease transmission interventions. We assist the Centers for Disease Control and Prevention (CDC) with grant oversight and management, including the Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases (ELC) Cooperative Agreement and special federal funding after disasters, such as the Hurricane Harvey Crisis Cooperative Agreement grants which supported over 20 Texas vector control agencies. We do case investigations for a variety of vector borne disease outbreaks, such as

Anthrax, Eastern Equine Encephalitis, Saint Louis Encephalitis, West Nile Virus, Zika Virus, Dengue Virus and others. We host quarterly meetings of the Texas Tick Working Group, and facilitate collaborations between and among academic, government, and industry stakeholders.

My passions are vector ecology, experimental design, statistical analysis, mathematical models, interpretation of statistical results, and insect population dynamics. I am always available to the citizens of Texas in my role as the State Medical Entomologist.

George W. Peck, MS, PhD

State Medical Entomologist

Zoonosis Control Branch

Texas Department of State Health Services

1100 W. 49th Street, T-203, MC 1956

Austin, TX 78756

Office: 512.776.2884

Mobile: 512.662.3234

Visit our webpage at: https://dshs.texas.gov/idcu/health/zoonosis/

References

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2021 DSHS Arbovirus Activity Report
Week #52 (ending January 1, 2022)
Report Date: January 4, 2022

Table 1. 2021 Arbovirus Activity Summary, Texas, Week 52

Arbovirus	Positive Mosquito Pools	Avian	Equine	Sentinel Chicken	Human					
					Febrile Illness	Neurologic Illness	Severe Dengue	TOTAL (HUMAN)	Deaths	PVD[2]
California Serogroup[1]								0		
Chikungunya								0		
Dengue					10		1	11		
Eastern Equine Encephalitis	2		6					0		
St. Louis Encephalitis	34			4				0		
West Nile	1515	10	9	12	9	68		77	7	48
Zika								1		
TOTAL REPORTS	1551	10	15	16	19	68	1	89	7	48

[1]California Serogroup includes California encephalitis, Jamestown Canyon, Keystone, La Crosse, snowshoe hare, and trivittatus viruses.
[2]PVD - Presumptive viremic blood donors are people who had no symptoms at the time of donating blood through a blood collection agency, but whose blood tested positive when screened for the presence of West Nile virus or Zika virus. Unless they meet the case reporting criteria, they are not counted as a case for official reporting purposes and are not included in the "Total (HUMAN)" column.

Note: Human mortality from arboviral conditions is aggregated and reported monthly once documentation has been received and verified.

For more detailed information about West Nile virus, including past weekly and annual reports, please visit http://www.dshs.texas.gov/idcu/disease/arboviral/westNile/

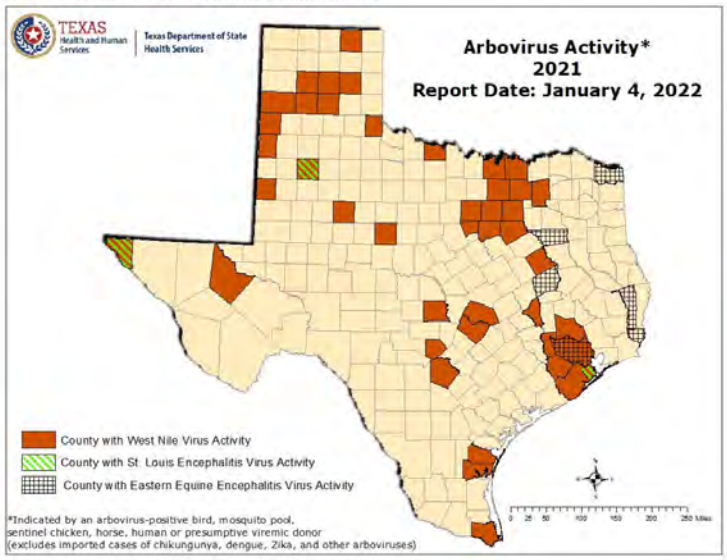
For more detailed information about Zika, please visit http://www.texaszika.org/

Table 2. 2021 *Aedes*-Associated Arbovirus Activity by County†, Week 52

County	CHIKV		DENV*		ZIKV*		
	M	H	M	H	M	H	PVD
Bexar				2			
Brazoria				1			
Collin				1			
Dallas				1			
Denton				1			
Harris				1			
Maverick				1			
Montgomery				1			
Tarrant				1			
Travis				1			
Total Number of Reports	0	0	0	11	0	1	0

M - mosquito H- human
CHIKV - Chikungunya Virus
DENV – Dengue Virus
ZIKV – Zika Virus
* All reported cases are imported.
†County level data is not reported for conditions with <5 cases reported in a year.

Figure 1. Texas Counties Reporting Arbovirus Activity, Week 52



For by-county distribution of cases and more information go to: https://dshs.texas.gov/idcu/disease/arboviral/westNile/reports/weekly.aspx?terms=arbovirus%20weekly%20summary

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Volume 28, Number 2—February 2022

Dispatch

Public Acceptance of and Willingness to Pay for Mosquito Control, Texas, USA

Katherine L. Dickinson✉, Natalie Banacos, Ester Carbajal, Nina Dacko, Chris Fredregill, Steven Hinojosa, Jose G. Juarez, Caroline Weldon, and Gabriel L. Hamer

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Cite This Article

Abstract

Mosquito control is essential to reduce vectorborne disease risk. We surveyed residents in Harris, Tarrant, and Hidalgo Counties, Texas, USA, to estimate willingness-to-pay for mosquito control and acceptance of control methods. Results show an unmet demand for expanded mosquito control that could be funded through local taxes or fees.

Download a **Free Copy** at: Public Acceptance of and Willingness to Pay for Mosquito Control, Texas, USA - Volume 28, Number 2—February 2022 - Emerging Infectious Diseases journal - CDC

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Legislative News
Mike Nichols, Chair TMCA Legislative Committee

1) Definition of Waters of the United States

Important for your NPDES permit - The U.S. Environmental Protection Agency (EPA) and U.S. Department of the Army announced a proposed rule to re-establish the pre-2015 definition of "waters of the United States" (WOTUS), updated to reflect consideration of Supreme Court decisions. "Waters of the United States" (WOTUS) is a threshold term establishing the geographic scope of federal jurisdiction under the Clean Water Act. According to EPA, this action advances the agencies' goal of establishing a durable definition of WOTUS that protects public health, the environment, and downstream communities while supporting economic opportunity, agriculture, and other industries that depend on clean water. This proposed rule would support a stable implementation of "waters of the United States" while the agencies continue to consult with states, Tribes, local governments, and a broad array of stakeholders in both the implementation of WOTUS and future regulatory actions. This action repeals the Navigable Waters Protection Rule (NWPR) which had provided certainty to landowners by removing from federal regulation features that contain water only in response to rainfall such as roadside ditches and stock watering ponds.

Source: AMCA Bi-Weekly News Update, January 6, 2022

2) Drone Regulations

Based on a new interpretation of the law by the FAA, the UAS Subcommittee recommends mosquito control agencies who operate UAS under PAO and/or Part 107, make sure that for each specific mission, the remote pilot in control (RPIC) designate what flight rules are being used for that particular mission. For example, a small UAS (under 55lbs) conducting a mission to collect images of standing water could fly would normally operate under Part 107 rules. A small UAS conducting a mission applying larvicide to an agricultural area would not be able to be flown under Part 107 rules, however, it could be flown under a PAO (or Part 107 and part 137) with exemptions.

Source: AMCA Bi-Weekly News Update, January 6, 2022

3) RISE (Responsible Industry for a Sound Environment)

RISE Convened a Meeting with EPA Leadership to Highlight Stewardship of the Specialty Pesticide Industry. In early December, AMCA participated in a meeting organized by the Responsible Industry for a Sound Environment (RISE) to introduce the new Deputy Assistant Administrator and the Office of Pesticide Program (OPP) leadership staff to the specialty pesticide industry and highlight stewardship and conservation practices that our industry has already successfully implemented. The meeting included a discussion of how vastly different specialty use applications are from crop protection applications and how these distinct uses should be accounted for in the models under the Endangered Species Act (ESA). The meeting was well received and concluded with a discussion on mitigation practices in the specialty pesticide industry.

Source: AMCA Bi-Weekly News Update, January 6, 2022

4) EPA Announces Updated Registration Review Schedule

EPA announced the release of its registration review schedule for the next four years through fiscal year

2025. While EPA has historically updated this schedule once each year, EPA announced the schedule will be updated on a quarterly basis going forward.

Source: AMCA Bi-Weekly News Update, January 6, 2022

5) Endangered Species Act (ESA)

A) From EPA…..

Announced January 11, 2022 - Effective today, before EPA registers any new conventional AI, the Agency will evaluate the potential effects of the AI on federally threatened or endangered (listed) species, and their designated critical habitats, and initiate ESA consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services), as appropriate.

Under today's policy, if EPA finds through its analyses that a new conventional pesticide AI is likely to adversely affect listed species or their designated critical habitats, EPA will initiate formal consultation with the Services before granting a new AI registration. As part of its analysis and under its existing authorities, EPA will consider the likelihood that the registration action may jeopardize the continued existence of listed species or adversely modify their designated critical habitat and provide its findings to the Services. To determine or predict the potential effects of a pesticide on these species and habitats, EPA will use appropriate ecological assessment principles and apply what it has learned from past effects determinations and the Services' biological opinions.

If EPA determines that jeopardy or adverse modification is likely, the Agency will only make a registration decision on the new AI after requiring registrants to implement mitigation measures that EPA determines would likely prevent jeopardy or adverse modification. If EPA finds that a new AI is likely to adversely affect listed species or their critical habitat, but that jeopardy/adverse modification is not likely, it may nonetheless require registrants to include mitigation measures on their registration and product labeling to minimize the effects of incidental take to listed species that could result from use of a pesticide. In both situations, formal consultation with the Services is still necessary. Further, EPA may determine that it is necessary for registrants to incorporate a link to Bulletins Live! Two—an online system that describes use limitations for EPA-registered pesticides by geographic area—into the product's labeling.

When identifying necessary mitigations to prevent jeopardy/adverse modification, EPA will consider a variety of factors including how species or critical habitats are exposed to a pesticide and what the likely effects of the pesticide exposure will be. Because listed species are often exposed to pesticides on treatment sites or in off-site habitats that receive spray drift and runoff, EPA expects that mitigation measures will often include avoiding or minimizing these exposure routes. Where possible, EPA intends to provide several mitigation options to allow flexibility for growers while ensuring protections for listed species.

EPA is also continuing to explore applying these new ESA approaches to new biopesticide AIs and new antimicrobial AIs. EPA is currently developing a detailed work plan to outline additional improvements to further the Agency's compliance with the ESA, including steps to implement protections for high-risk species more efficiently, provide growers with more flexible mitigation measures, and increase stakeholder engagement.

Source: https://www.epa.gov/newsreleases/epa-announces-endangered-species-act-protection-policy-new-pesticides

B) From AMCA…..

In 2019, an interagency working group consisting of officials from the relevant federal departments tasked the USEPA and USFWS with revising the overall consultation process as well as improving the species range maps, usage information, and assumptions that underpinned the last consultation. The AMCA played a vital role during this revised consultation process when our members had a chance to meet with EPA, FWS and NMFS at the EPA's headquarters in Washington DC in 2019. During this meeting, it became clear that federal regulators were not completely aware of the best management practices employed by vector control agencies, or the work being done at the local level to protect endangered species. It also became clear that there is a glaring data gap regarding where, when, and how much mosquito control materials are being applied.

After a re-initiation of the consultation process and armed with more current information on best management practices, species ranges, local agreements, and actual product usage data, the USFWS released an updated BiOp this last year. This updated analysis found a "jeopardy" determination for 78 species and adverse modification for 23 critical habitats. When it comes to malathion as a mosquitocide, the USFWS has narrowed down their concern to approximately 17 endangered species. When you put the two BiOps side by side and compare, it is amazing how some simple starting assumptions can dramatically affect the outcome. The glaring differences between the earlier unreleased BiOp and this current one is exactly why we do the Washington Conference, designate legislative and regulatory funds, and maintain an L&R committee. Without the best information, our regulators cannot make the best regulations. It's that simple.

It is tempting to think that this entire wrestling match is over a single adult control material that you may or may not employ in your program. However, what's at stake here is not just a malathion re-registration, but instead the process that will be used to evaluate every single control material in the future. The EPA must now, and forever more, consult with the services when doing pesticide registrations. The interagency consultation process and USFWS BiOps is here to stay. Against the reality that Legislative & Regulatory Committee Report Mark Clifton, PhD • Endangered Species Act Subcommittee Chairman mosquito.org 7 Winter 2022 AMCA Newsletter Legislative & Regulatory Committee Report (Continued) the USFWS is now in the pesticide regulation business, the AMCA engaged in a series of meetings with the USEPA and USFWS over this past summer and fall to discuss workable language that could be employed to protect endangered species.

It is likely that future product labels will contain binding and enforceable label amendments on the EPA's Bulletins Live! Two website. Bulletins Live! houses the EPA's "Endangered Species Protection Bulletins" (ESPB) which identify geographic and temporal product-use limitations. Endangered Species Protection Bulletins have typically been employed to offer location or season-specific endangered species label language for agricultural applications of pesticides. Mosquito adulticide labels (starting with malathion and likely to extend to other materials) will probably contain language that directs the applicator to the Bulletins Live! Two websites prior to any application. Once there, the user will input the application month and active ingredient under consideration for use. A GIS-based map will populate with product-specific polygons that delineate the areas where a use-limitation exists. This map is only valid for the month indicated and contains a description of the product(s) that have a limitation and what their limitation will be. Some ESPBs will exist for a species' entire definable range, some will have only habitat within their range defined, and some will have areas defined based on other biological or geographic criteria. Use-limited areas defined in an ESPB may or may not be synonymous with defined "critical habitat" so trying to just avoid Federally held lands without consulting the ESPB will not always result in a compliance

success. The Endangered Species Protection Bulletin is part of the product label and would have to be followed just like any other label language. Either the product label itself, or it's associated bulletin is also very likely to have language which indicates that if an applicator cannot adhere to the product-use limitation, then they must contact their regional USFWS office for further guidance prior to application. As you might have guessed, it will probably be necessary to maintain documentation of discussions or agreements with local USFWS field offices if you have one of the designated polygons in your program area. Many mosquito control districts currently engage with their local USFWS office for technical memoranda and other agreements, and in general, this process seems to be productive and functional. It also seems likely that this sort of discussion with USFWS will become much more commonplace and in many ways, this is good (or maybe just as good as it gets?) because local considerations that shouldn't be written broadly into a product label are usually better incorporated at a local level. In my opinion, the USFWS's goal is to drive applications away from broad coast-to-coast standard language and towards a much finer scale that incorporates local (or in some cases hyperlocal) endangered species limitations and discussions. While it hasn't been stated directly, I see no reason why this approach will not be utilized on future labels for products containing naled and all the pyrethroids. It might be a good time to update your holiday card mailing list to include your local USFWS officials because I think it is safe to say the local USFWS field office will become a larger part of our regulatory world.

Source: AMCA Newsletter, Volume 51, Issue 1, Legislative and Regulatory Committee Report, Page 6, by Mark Clifton, PhD

TMCA Spring Workshop

Yes, a TMCA Spring Workshop is being planned. However, our organizers have had problems with getting responses and commitments from hotels. This is probably due to scheduling complications related to the recent surge of COVID.

However, the TMCA Spring Workshop will be in Rockwall, TX with a tentative date of April 26-27. Additional information will be emailed and posted on the website and social media platforms when it becomes available. As usual, Continuing Education Units (CEUs) will be available, and it will be good to see everyone before the normal start of the mosquito season.

AND ANOTHER JOB ANNOUNCEMENT

This announcement is for a DSHS Region 11, Program Specialist III (Regional Medical Entomologist) in Harlingen (Cameron County). For a job description, salary, and other information, control+click on this link: State of Texas.

2022-2023

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El Paso - April 12 - 14, 2022
Houston - May 24 - 26, 2022
Dallas - June 28 - 30, 2022
Victoria - July 12 - 14, 2022
Brownsville - August 23 - 25, 2022
Beaumont - September 27 - 29, 2022
Corpus Christi - October 18 - 20, 2022

Day 1: General pesticide information, laws and regs and equipment usage

Day 2 : Mosquitoes, flies, and rodents

Day 3: Testing

**Agendas may vary*

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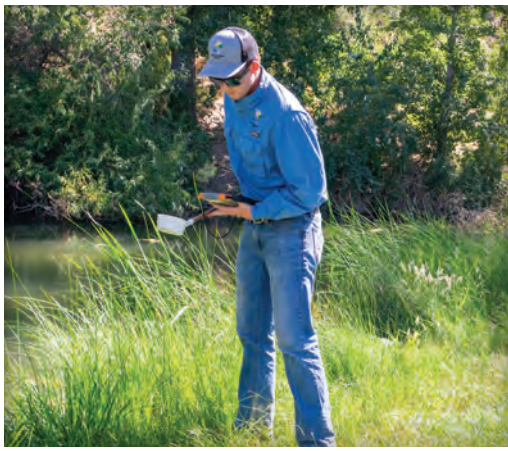

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Texas Mosquito Control Association
Membership Application

Purpose: To assist in promoting public health and comfort through the control of disease transmitting and pestiferous mosquitoes, to provide for the scientific advancement of Association members, and to stimulate public interest in mosquito control activities.

Publications: A Newsletter is published quarterly and emailed to active members. The Association web site is located at **http://www.texasmosquito.org**

TMCA Annual Fall Meeting: Held in October at an announced site within the state. Papers presented at this meeting are primarily technical reports dealing with new and improved methods of mosquito control, new insecticides, and application techniques. Basic research related to mosquito life cycles, bionomics, diseases, and natural histories are also presented. Distributors display and answer questions about their equipment and chemicals. A registration fee is required to attend.

TMCA Spring Workshop: Held each year during February or March at an announced site within the state. This is a basic training workshop on the operational aspects of mosquito control. Topics include general mosquito biology, mosquito borne diseases, sampling and surveillance techniques, methods of mosquito control, public relations, equipment maintenance, chemicals and chemical safety, record keeping, administrative problems, and advanced operational training in calibration, droplet size determination, mosquito identification, and surveillance devices and techniques. Distributors are present to display and demonstrate their products. Registration is free, and several meals are usually provided by the TMCA to help reduce costs to attendees.

CEU's: CEU's for the Texas Department of Health Vector Control Certified Applicator License are offered at the Spring Workshop. Fees are $20 per hour of CEU requested for non-members, free to all TMCA members. A copy of the TDA regulations can be downloaded from the TMCA web site at **http://www.texasmosquito.org**

Annual Dues: Dues are payable on a calendar year basis. Active Memberships are $30 per year, and Supporting Memberships are $60 per year.

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Affiliation: _____ Position: _____

Work Mailing Address: _____

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Return application & remittance to:

Dr. Mark Johnsen,
Chair, TMCA Membership Committee
10213 Buckwood Ave
El Paso, Texas 79925

Phone: 979-595-7711 Email: TMCAmembership@gmail.com