

# MOSQUITO ABATEMENT

ST. TAMMANY PARISH



# 2024

## ANNUAL report

St. Tammany Parish Mosquito Abatement



# TOP 5 stories of 2024

**2024 is a wrap and it was a great one for capacity building at St. Tammany Parish Mosquito Abatement.**

1.



**We welcome three new commissioners: Glen Boyer, Jacob Groby, and Terri Lewis Stevens.**

Pictured on bottom row (left to right) - Terri Lewis Stevens, Dr. Vicki Traina-Dorge, and Kathryn Townsend. Back row (left to right) - Jacob Groby and Glen Boyer.

**Opened a new building with expanded laboratory and training capacity.**



2.

3.



Pictured - Molecular Biologist Tara Richard

**Began testing mosquitoes in-house for arbovirus with greatly improved turnaround time.**

4.



**Welcomed a renowned mosquito research and mosquito control operations scientist in Dr. Isik Unlu.**

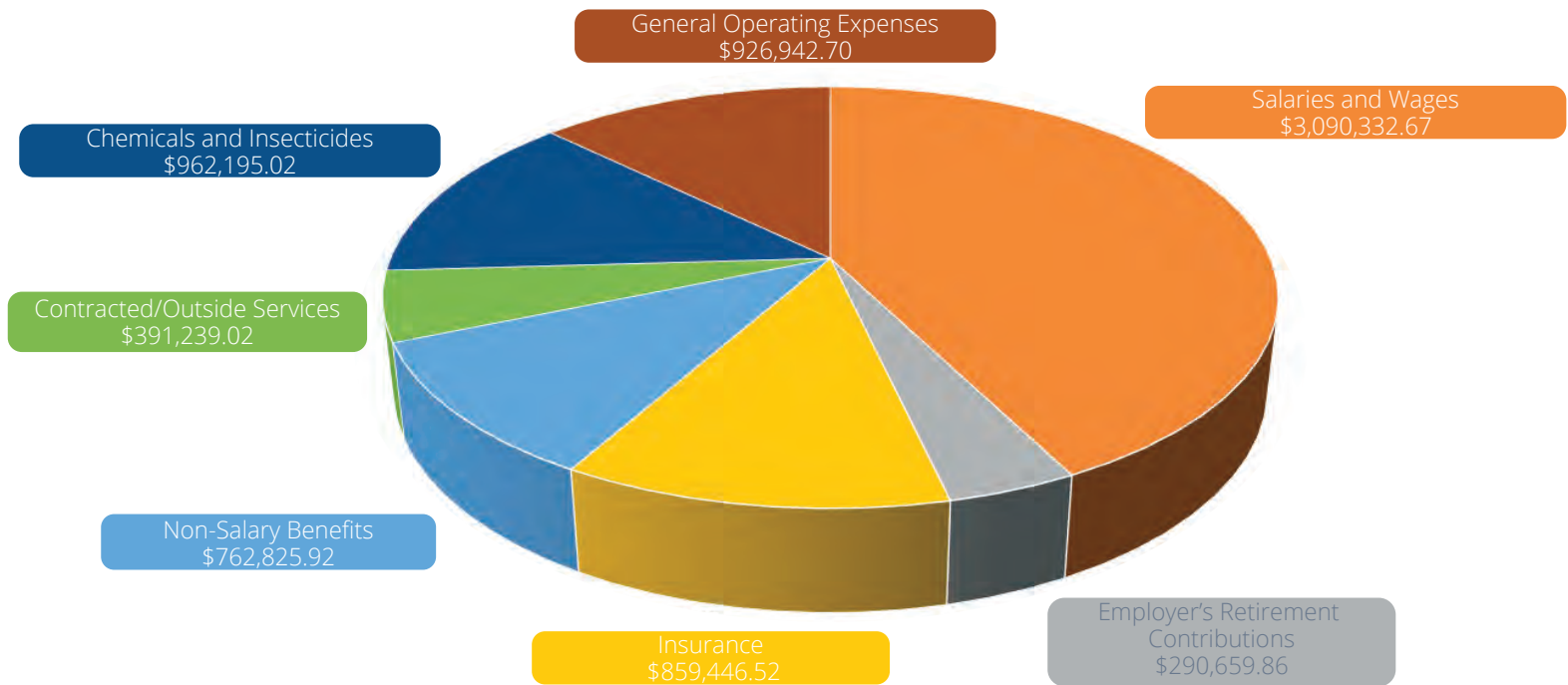
5.



**Hurricane Francine, which dumped nearly 10 inches of rain within a 24-hour period, challenged our team with an outbreak of floodwater mosquitoes.**

Pictured - Pilots Buddy Hollis (left) and John Sable

# 2024 Expenditures



The Mosquito Abatement property tax millage remained stable at 3.35 for 2024 funds and lowered to 3.1 for 2025 collection. Operating expenses in 2024 of \$8.7 million were lower than anticipated and \$100k lower than total revenue collected, and unanticipated interest earned on investments in 2024.

In April, the search for a new financial institution began. Mosquito Abatement follows best practices by re-bidding financial banking services every three years. We received two financial services proposals. When selecting, we determine the best fitting bank by ensuring a secure environment for public funds, and then consideration is given to the financial institutions' high yield interest rate. Additionally, we strive to find businesses with "brick and mortar" locations in St. Tammany Parish that can meet these criteria. Once it's narrowed down, we conduct face-to-face interviews with the financial institution's team before awarding the services. After this process, a new financial institution, First Horizon bank, was selected for our financial services.



St. Tammany Parish Mosquito Abatement Financial Director Chad Simon and Office Manager Sarah Malasovich.



# Growing Our Team

St. Tammany Parish has experienced population growth every year since 2010, according to worldpopulationview.com. Some years saw growth of almost two percent. The current population is listed as approximately 277,000 people. Also, ours is one of the largest parishes by area in the state as well. It is no surprise that, to best serve the residents, our team has to grow as well! We were delighted in 2024 to welcome some excellent talent to our group. Additionally, several of our existing team members have completed master's programs, including **Mollie Davies**, who is now an Entomologist, and **Haley Marquette**, Mosquito Biologist II.

Our new hires included three interns who worked all summer in both the field and the lab, assisting our team with a variety of processes and procedures while expanding their understanding of mosquito abatement. **Alyssa Luke**, **Isaac Anderson**, and **Joshua Davies** were valuable assets during the summer months!

We also welcomed two new mosquito biologists to our team, **Whitney Look** and **Anthony Baldini**. They work hard to support the residents in St. Tammany Parish, measuring mosquito counts, treating populations, trapping, and responding to service requests. Additionally, two new Night Drivers joined in 2024, **Jackwin Thorner** and **Jonathan Singletary** (who returned after a few years away).

We were also really privileged to welcome some new lab support in 2024. Association of Public Health Laboratories Fellow **Heather Penton** joined us mid-year for a multi-year fellowship to assist with projects and research. **Meghan Lackner** started as a part-time lab assistant in the fall. And we were delighted to welcome **Dr. Isik Unlu** to our organization as our new Research Entomologist. Dr. Unlu brings extensive experience and knowledge and will continue to help our organization support the growing needs of the growing parish.



## Campus Expansion

With the growth of our parish, so came the need to expand our capacity to serve St. Tammany Parish! In addition to new team members, that also came in the form of much-needed space! We were very excited to break ground on a new lab, mechanic shop, and training facility in 2022, and we were proud to open the doors to that facility in January of 2024. The facility, which includes an increased truck bay, additional office space, training facility for approximately 60 people, and a fully functional lab, insectaries, PCR Lab, trap room, and identification room will now allow the residents of St. Tammany to receive improved services, including a much quicker identification of mosquitoes carrying West Nile. This will improve the district's response time to treat those areas more aggressively and protect the residents. The approximately 30,000 square foot campus expansion allowed functionality to fully continue while a much-needed remodel could be done on the existing administrative building. That remodel resulted in the addition of a fully functional meeting space, locker and shower facility, additional office space, and extended storage facilities. These beautiful and functional workspaces increase productivity and allow the district to perform at even higher levels. That being said, the parish continues to grow... so don't be surprised if we do too!



# Field Operations Team Rises to the Challenge of Rising Mosquitoes

This was quite an eventful year for mosquitoes, but our field operations department didn't let this slow us down. Despite overcoming a few hurdles, we achieved many of the goals we set for ourselves this year and accomplished many unanticipated tasks along the way. The obstacles started early in the year when our traps began collecting record-high mosquito counts. This led to an unusually early start to our mosquito season. Our aerial department and ground operations completed their first missions in February of 2024, several weeks ahead of our typical season start of mid-March.

During the first quarter of the year, we trapped a staggering quarter of a million mosquitoes - 258,720 to be exact. *Culex salinarius* trap counts were at a nine-year high for the first quarter. At the close of the first quarter, they accounted for 79% of all mosquitoes trapped with a total of 204,833 collected across the parish. During this time, we performed 157 night-time truck treatments, treating 97,366 acres. We also completed seven helicopter missions, treating 87,760 acres, and two airplane missions, treating 61,440 acres.

Later in the year, we experienced a second outbreak after the September landfall of Hurricane Francine. The mosquito surge after this storm pushed our operations to maximum capacity requiring us to contract third-party aerial treatments. In the weeks following the hurricane, we received approximately 407 service calls. In stark comparison, throughout August, we received 59 service calls. The week preceding Francine, our area had a few rainstorms pass through and saturated the environment. This meant that when Hurricane Francine dumped an additional nine inches of rain across St. Tammany, the already saturated landscape was unable to absorb it.

Around September 20th, approximately nine days after Hurricane Francine, the mosquito numbers skyrocketed. The following week our night fleet was operating at max capacity. There were 39 truck missions the week of September 23rd operating alongside our aerial applications via the helicopter and airplane which completed a combined 120,510 acres. Additionally, we heavily relied on one of our contract companies, Dynamic Aviation, to help us ensure aerial coverage across the parish for a swift response to reduce the mosquito population. In response to Francine, Dynamic Aviation covered 70,000 acres, our helicopter treated 22,000 acres, and our airplane treated nearly 240,000 acres, totaling roughly 330,000 acres of aerial treatment throughout the parish. The night trucks completed 92 missions, treating approximately 53,078 acres post-storm. Thank you to our pilots, night drivers, and mosquito biologists for your tireless efforts for our community.

## MOSQUITO CONTROL 2024 NUMBERS



**1,270,532**  
acres treated aerially



**736,078**  
acres treated by truck

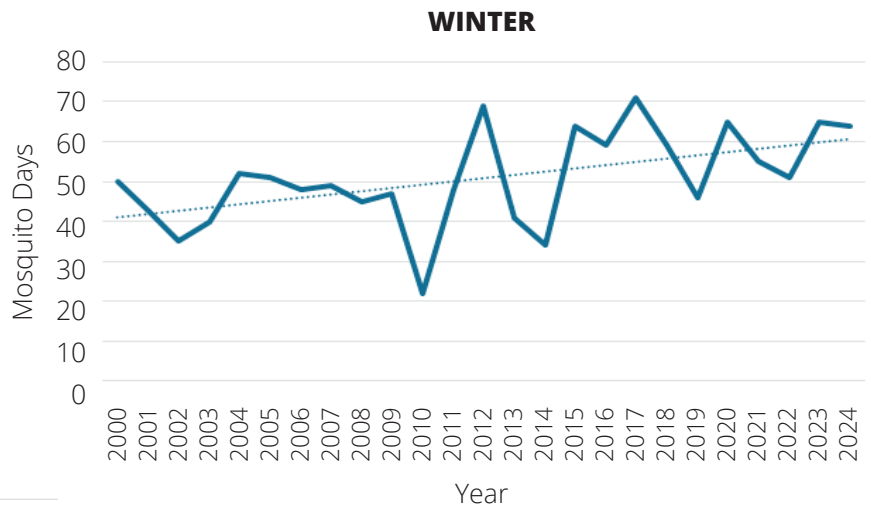


**1,626**  
property inspections

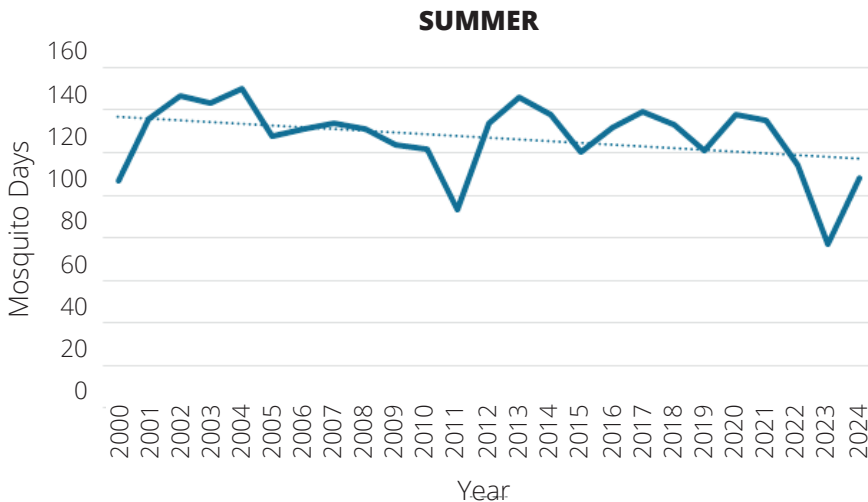
# Mosquito Days and Longer Seasons

A 2023 report by Climate Central, an independent collective of scientists, found that the number of active mosquito days per year has steadily increased over a 43-year period and the Southeastern United States has on average 218 such days per year (<https://www.climatecentral.org/climate-matters/mosquito-days-2023>). This analysis called the Mosquito Days model, assessed whether the temperature and relative humidity were conducive to mosquito activity each day since 1979. The Mosquito Days model quantifies what was described as the “Goldilocks effect” in the Director’s letter in the STPMAD July 2024 monthly. Pertaining to mosquitoes, the “Goldilocks effect” is a concept that certain temperatures can be too cold or too hot for mosquitoes. In the analysis, days with temperatures between 50-95° F and relative humidity > 42% are considered active Mosquito Days.

Curious about this analysis for St. Tammany Parish, we recently analyzed temperature and humidity data for Slidell, LA from 2002-2024 to calculate the number of Mosquito Days. This data showed that Slidell has more Mosquito Days on average (229 days considered mosquito activity days) than the rest of the Southeastern U.S. Counter to the Climate Central report we found no significant change (increase or decrease) in the number of Mosquito Days during this 22-year period. However, when the data is subset by season (Winter and separately Summer) significant trends appear across the years analyzed. **A significant increase in Mosquito Activity days was noted during the winter months locally—14 more Mosquito Activity days in 2024 compared to 2000.** Conversely, the opposite trend was noted during the summer months - on average 23 fewer summer Mosquito Days from 2000-2004 compared to 2020-2024.



**14 more  
Mosquito Activity days  
in 2024 compared to 2000.**



What does this all mean? It means that relatively warmer days in winter expand days when we expect mosquitoes to be more active and that extreme heat days in summer months decrease mosquito activity. Unfortunately, the viruses mosquitoes transmit speed up their development time in warmer temperatures, so while mosquito activity may be lower virus transmission and human risk is enhanced.



# Faster Testing, Faster Response

With the larger lab space afforded us through the STPMAD campus expansion, the laboratory team began testing for arboviruses at our facility with RT-qPCR. In-house testing is now performed for West Nile, St. Louis encephalitis, and eastern equine encephalitis viruses. These are avian viruses found naturally circulating in our St. Tammany Parish ecosystem. The ability to perform same-day testing with mosquitoes collected in our traps provides a huge advantage to residents of St. Tammany.

The most notable positive impact of testing our mosquito samples in-house is the rapid turnaround from virus detection to mosquito treatments. In prior years, samples collected from our traps were sent to the Louisiana Animal Disease Diagnostic Laboratory (LADDL) in Baton Rouge. Samples collected on a Wednesday were not received until the following Friday (even longer delays were experienced with holidays and closures). To complete an RT-qPCR test at our facility takes about 4.5 hours. This means our team knows the day traps are received if pathogens are circulating in an area. In addition to this, if a new virus of interest begins to circulate in the southeast Louisiana area, we now have the infrastructure to test for this pathogen. This flexibility in our setup is critical for monitoring changes in our ever-evolving, dynamic ecosystem.

Introducing a new, advanced technology is never without obstacles, but these were quickly managed by our experienced team. The two biggest challenges were machine optimization and test interpretation. We selected our PCR equipment because it is a complex and flexible test that allows us to adjust parameters and timing. Being able to grind mosquitoes for three minutes versus five minutes can affect how long it takes to run the samples. Developing a protocol for interpretation of results first required diagnostic troubleshooting, and understanding the flexibility in interpretation of test results. With PCR, many assume that the results are a simple yes/no answer when looking at the presence versus absence of a pathogen. However, issues such as primer/dimer formation, PCR inhibition, and manufactured chemical impurities can cause the test results to be ambiguous. For example, if PCR inhibition is present, an amplified line may be seen that doesn't quite reach a set amplification range. As a result of this ambiguity, it is up to the lab to determine what they will consider a positive sample. For example, one lab in Texas will only consider a test a positive if it contains a relatively high pathogen concentration present, due to the large number of samples coming through their lab. Another lab we are in contact with will consider every line that is present on a test as a positive, even if this pathogen concentration is low, to ensure that they are not missing any virus presence in their environment. Both of these have pros and cons that have to be heavily considered by both lab and field teams, as how these graphs are interpreted directly impacts how the field team responds.

The most important takeaway from 2024 was how collaborative and excited people are to further the goal of controlling mosquito populations in the name of public health. The STPMAD laboratory team is thankful for the outside support we received to get our team fluent in RT-qPCR work. Every lab is unique and has set standards that work for the unique mosquito problems of their landscape and community. STPMAD now has the ability, knowledge, and resources to create a program designed with our residents in mind to provide optimum service and protection of their health and wellness.

Moving forward, all mosquito samples will be tested in-house for arboviruses using the standards set and developed in 2024. We want to use this year to explore ways to reduce costs while still maintaining quality standards. In addition to this, we will begin using our RT-qPCR machine for resistance testing to help save time and better serve our field team.



**PCR testing lab bench.**



**Lab Manager and Entomologist Nick DeLisi and Molecular Biologist Tara Richard.**

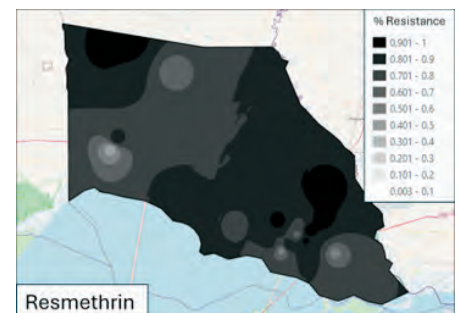
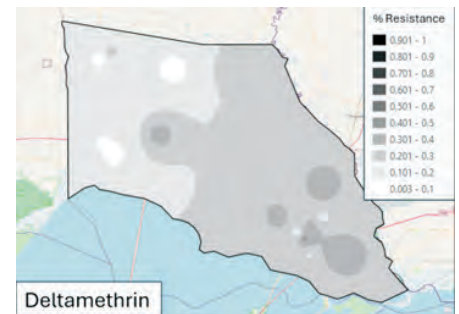
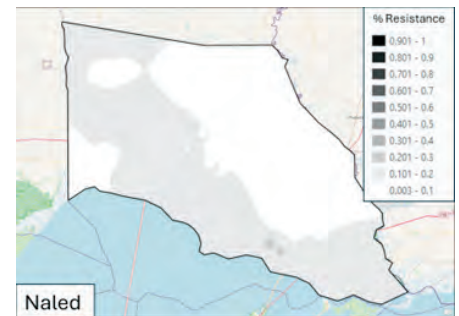
# Managing Resistance for Continued Protection

The loss of effectiveness of an insecticide after repeated uses, also known as insecticide resistance, is a significant problem for insect management. Our Integrated Mosquito Management (IMM) plan details the requirements needed to trigger and perform an insecticide treatment. Nevertheless, insecticides remain an important tool in our belt for when mosquitoes or the arboviruses they transmit become a problem. With repeated uses, all insecticides will eventually foster resistant pest populations. Much like our mission to abate mosquitoes, the STPMAD laboratory's goal is to monitor and slow the development of insecticide resistance to a manageable rate, with the understanding that it, like mosquitoes, will forever be an issue. With that in mind, 2024 was the second year of a large-scale, parish-wide resistance surveillance program.

While we have monitored resistance within local mosquito populations for decades, we have only recently begun testing mosquitoes from the same sites annually. An understanding of resistance at any point in time is useful; understanding how resistance may be ebbing or flowing over time informs how well our IMM plan may be working (or not). Two years is insufficient for major analyses of resistance trends over time. Still, it is exciting to be able to begin to look for patterns, and we have included a few charts to bring you up to speed on our findings from 2023 - 24.

In summary, we have detected minimal resistance to our primary aerial insecticide (active ingredient [AI]: naled), some resistance to one of our truck-based insecticides (AI: deltamethrin), and strong resistance toward one of our older truck-based insecticides (AI: resmethrin). Resmethrin was removed from rotation during the active mosquito season early in 2024. Deltamethrin, one of the insecticides used in rotation by our night-trucks, has seen an increase in resistance since 2023, but it is too soon to determine if that can be attributed to annual variation, increased use/selective pressure by STPMAD, or other unmeasured factors. The relative efficacy of deltamethrin, combined with general susceptibility toward naled, is reassuring for future mosquito or arbovirus outbreaks. Resmethrin was replaced in rotation by malathion in early 2024, with results from prior years showing minimal resistance concerns upon introduction. We will begin to measure malathion resistance annually at all sites beginning in 2025.

Finally, we have begun to spatially map resistance across St. Tammany Parish with the help of our geographic information system (GIS) manager, **Dr. Hieu Duong**. It is impossible to measure resistance everywhere, but GIS interpolation allows us to predict likely scenarios of resistance based off of results from nearby neighbors. Geographically, our resistance story is similar to that told by the numbers – likelihood of encountering resistant mosquitoes is widespread for resmethrin, somewhat widespread for deltamethrin, and infrequent for naled. We are eager to follow trends not just in time, but now across space thanks to GIS assistance. Will these maps be significantly different in 2026? What about 2036? Time will tell, but now that we're looking a bit harder, we may very well be able to adapt to any problems we will discover along the way.



Active ingredient	Deltamethrin		Naled		Resmethrin	
	2023	2024	2023	2024	2023	2024
How much of the parish was resistant?	12%	23%	1%	11%	68%	81%
How significant was the resistance?*	30x	43x	8x	4x	>200x	>200x

\*Resistance intensity is a measure of how much more insecticide is needed to kill an average mosquito from a wild population in comparison to one from a susceptible lab colony.

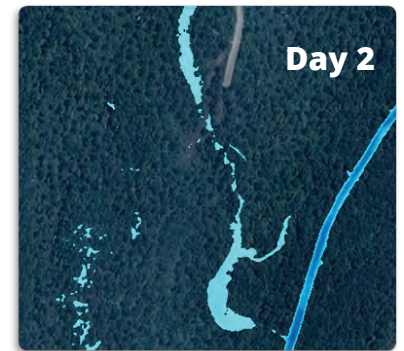
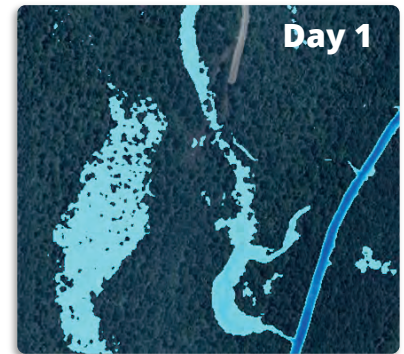
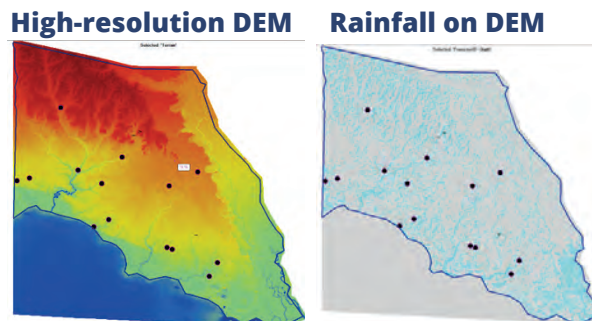


# LIDAR Remotely Sensing Technologies for Ground Pools Detection

Most years, St. Tammany residents are faced with a surge of woodland mosquitoes, or floodwater mosquitoes, that inhabit ground pools commonly found after heavy rainfall. These mosquitoes are a significant nuisance for our residents and are important vectors of disease transmission in humans and animals. The standing water left after a storm serves as a primary habitat for mosquito larvae so developing a larvicide treatment plan for these ground pools is critical for Integrated Mosquito Management.

Manual assessment of these ground pools is labor-intensive and often impractical, especially across large and remote areas that are not easily accessible to our mosquito biologists. The STPMAD field operations team has been working with GIS manager **Dr. Hieu Duong** to evaluate if LiDAR remote sensing technology could be leveraged to efficiently identify these low-lying areas that may serve as potential mosquito habitats. Once equipped with the habitat models our field operations department can develop optimized larvicide application strategies.

This project integrates high-resolution Digital Elevation Models (DEMs) with hydrologic modeling to estimate ground pool formation following rain, tide, or flooding events. While hydrologists have traditionally modeled the water cycle, these techniques have not yet been extensively applied to predict mosquito breeding habitats. By combining LiDAR-based DEMs and hydrologic models, we aim to provide daily mosquito-to ground pool habitat projections to support field operations.



## Key Features & Functionalities

- High-Resolution Terrain Analysis: Utilizing 30 points per square meter LiDAR data for highly accurate Digital Elevation Models (DEMs).
- Hydrologic Modeling Approach: Simulating ground pool formation using observed precipitation, tidal, and flooding events.
- Predictive Mapping: Generating daily ground pool probability maps to help guide targeted mosquito control efforts.

## Technology Stack

- HEC-RAS software: Hydrologic modeling for water flow and retention predictions.
- ArcGIS Tools: GIS-based spatial analysis & visualization of ground pool formations.
- Field Validation: 15 on-site cameras have been placed across St. Tammany for ground truth data collection, calibration, and validation of model predictions.

While this project is in its early stages, initial model results have been obtained. The next step our team will take is to validate model accuracy using ground-truth images from field cameras. With the information gathered during this stage, the hydrologic model parameters will be refined and adjusted based on validation results. Improvements to real-time data integration and enhanced predictive accuracy. The ultimate goal for this model is to publish these ground pool prediction maps onto our operational software system Fieldseeker, so that our mosquito biologists can access the maps after storm events and determine which areas need to be prioritized for larvicide treatment.



# 1000 Sewage-polluted Ditches Survey with APHL Fellow

During the summer of 2024, STPMAD was excited to welcome APHL-CDC Public Health Laboratory Fellow **Heather Penton, MPH**, onto our team for a year of research and laboratory aid. Heather received her Master of Public Health from Tulane University in May 2024 and shortly after graduating was accepted to the highly competitive APHL-CDC Public Health Laboratory Fellowship. This fellowship is jointly facilitated by the Association of Public Health Laboratories and the Centers for Disease Control and Prevention, placing highly qualified recent graduates at public health laboratories across the nation.

Welcoming Heather to the STPMAD team is an important milestone for our organization. With the expanded capacity and technology afforded to us through the addition of the new laboratory, STPMAD now meets the parameters of what the APHL has outlined for a “public health laboratory” designation. These laboratories “...monitor[s] and detect[s] health threats...Equipped with sophisticated instrumentation and staffed by highly trained scientists, these unique institutions deliver services that may be unavailable or cost-prohibitive elsewhere.” As you have read in our prior article, our laboratory has undergone extensive training and our lab is now equipped to perform PCR testing on-site as mosquitoes are collected in the field. STPMAD is the only laboratory in Louisiana with an APHL fellow on our team.

During her time in St. Tammany, August to December, Heather has worked in tandem with the St. Tammany Parish Government Environmental Services Department to conduct a pilot study to assess onsite sewage disposal systems (OSDS). The primary elements being evaluated were the water quality conditions produced by these systems and the presence of mosquito larvae and mosquitofish. One thousand addresses with an OSDS were randomly selected and visited by the Environmental Services team to determine the type of system and assess its functionality. A week later, Heather inspected the ditch associated with each address. A dip cup was used to determine the presence of mosquito larvae and pupae, the ditches were visually scanned for presence of mosquito fish, and a water quality probe was used to test water conditions.

Out of the 1000 ditches selected, STPMAD visited 553 sites, with the remainder excluded due to numerous reasons: not accessible from the road, had a functioning septic tank with no ditch, had confirmed overland flow or spray irrigation with no ditch, or the homeowner declined to participate in the study. Of the visited sites, 159 of the ditches had standing water and were inspected. We found that oxidation-reduction potential was significantly linked to mosquito presence, fish presence, and inspection status, indicating it to be an important measure of ditch water quality. Oxidation-reduction potential (ORP) measures the water’s ability to clean itself, with a higher oxidation-reduction potential being associated with fish presence and likelihood of a passing inspection status for the OSDS, whereas a lower ORP was associated with mosquito presence. Other water quality measures, such as dissolved oxygen (ODO), total dissolved solids (TDS), and salinity, were important as well, with ODO being linked to fish presence and TDS and salinity being linked to inspection passing status.



**Heather Penton, MPH, joins team as APHL-CDC Public Health Laboratory Fellow.**



Heather inspects sewage influenced ditch for mosquito larvae.



# Building Successful Partnerships

Mosquito Control agencies have a long history of sharing research, best practices, innovations, and mosquito knowledge for the benefit of improving public health across the country. Over the years, the STPMAD team has built relationships with many external agencies and this has resulted in several collaborative efforts this past year. These collaborations have helped our organization build capacity, expand knowledge, and improve the services we provide our residents.

## Here is are a few examples of projects we are working on with outside partners in 2024:

- University of Louisiana at Lafayette- Flood modelling and mosquitofish research.
- LSU - Biological control (weevil release for invasive water plants)
- Tulane University – Determination of mosquito age and anti-mosquito antibodies in wild birds
- University of Louisiana at Lafayette- Mosquitofish research
- LSU - Ticks
- City of New Orleans Mosquito, Termite and Rodent Control Board - Mosquito bloodmeal analysis
- USDA - Wild resistant *Cx. quinquefasciatus* colony
- Senecio - AI identification
- University of Southern Mississippi – N/C ratio student research
- USDA - Specimen exchange- Resistance profile for *Cx. salinarius* and *Cx. nigripalpus*
- LSU- Dr. Crespo- Socioeconomical factors in relation to container-inhabiting mosquitoes
- Jahangirnagar University – Research proposals and Full bright exchange program

## 2024 Arbovirus Report

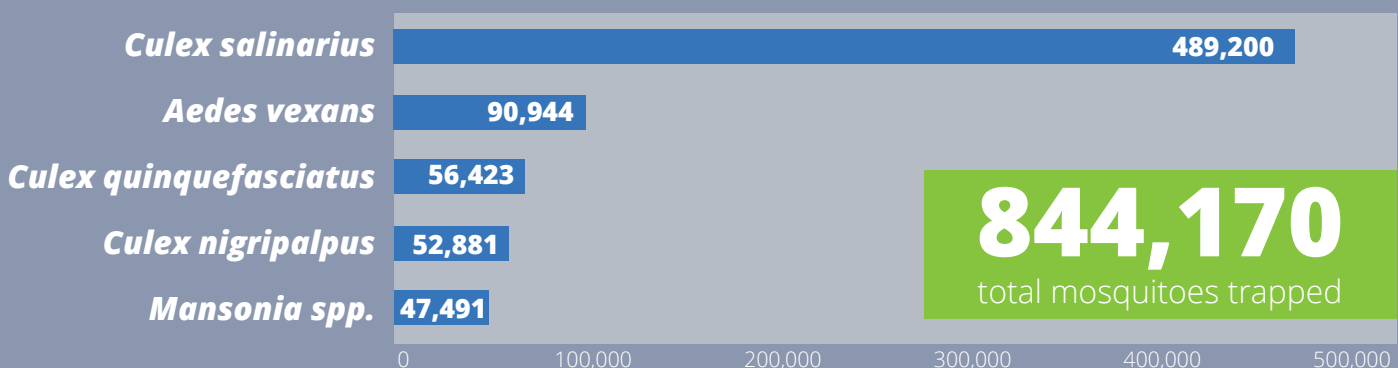


**During 2024, 33 of the 6,844 pools of mosquitoes (0.4%) tested were positive for West Nile virus (WNV) infection.** Adult mosquitoes are collected using No Light CO<sub>2</sub>-baited CDC traps and tested in pools (or groups) via RT-PCR, by the Louisiana Arbovirus Disease Diagnostic Laboratory (LADDL) in Baton Rouge.

A total of 270,529 mosquitoes were collected and tested for WNV during third quarter 2024 across St. Tammany Parish. *Culex salinarius*, a secondary WNV vector, accounted for 54.4 % of mosquitoes submitted for virus testing. Populations *Aedes vexans*, another secondary WNV vector, consisted of 16.8 % of the mosquitoes collected and tested for WNV.

**The Louisiana Department of Health reported one neuro-invasive case of West Nile disease in St. Tammany Parish in 2024.**

## Top Five Species Trapped in 2024





# Employee Spotlight: Chad Kirkley

Mosquito Biologist- Nine years of service



**Tell me about your background and what led you to take a position with Mosquito Abatement.** I grew up in Slidell. I graduated from Northshore High, Class of 2000. I have an Associate's Degree in Drafting and Design from Louisiana Technical College and a Bachelor's Degree in Biology from Southern Arkansas University. My professional background is in ecology education, land surveying, and residential service. I've worked as an educator for Arkansas State Parks, and as a life science teacher. I spent a few years as a land surveyor and draftsman. I also had several years of experience doing residential services such as lawn care, landscaping, and nuisance wildlife removal. I spent 15 years in Arkansas and after a few particularly difficult ones I came "home" hoping to find a better situation for my family. STPMAD was looking for a new field biologist shortly after I arrived in 2016. My combination of skills and experience was a great match for what we were doing and what was planned for the future.

## **What is the most asked question you receive from residents?**

The most common question from residents is, "Why do mosquitoes even exist?" My response: mosquitoes do serve a purpose. Their primary ecological function is carried out as larvae. They live in highly polluted water and consume organic waste. They're an important part of many aquatic food chains. They don't serve much purpose as adults. Like many insects, they only become adults in order to lay eggs and make more mosquitoes. It's only the females that bite because they need protein from blood to make their eggs.

## **How would you describe your role with Mosquito Abatement?**

First, I would say that I am a senior Field Biologist. I have my 8D - Mosquito Supervisor Certification. Only one other person, Mark Bunch, has been a field biologist longer. My nine-year anniversary with STPMAD is in April.

Beyond that, I would say I'm "the FieldSeeker guy." My experience in surveying, drafting, and as an outdoorsman, went hand in hand with our field data collection software - FieldSeeker. I was able to pick things up and explore the software with ease. This led to me being the one that communicates issues and problems we are having with the program to their support team, and reporting back their communications to our staff. I've created an entire FieldSeeker training library, which I continue to edit and expand.

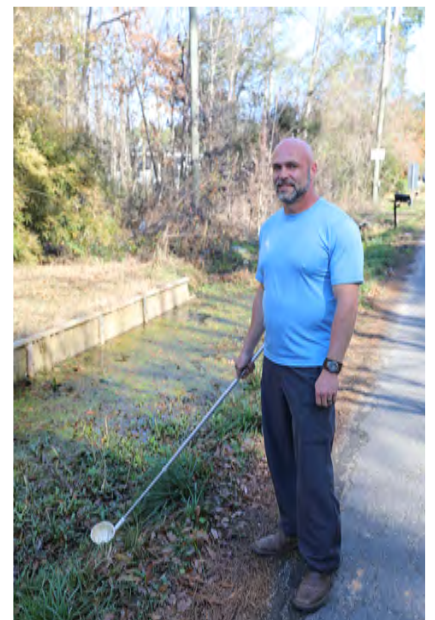
**What does a typical day look like for you?** A typical day, during the spring, summer, and fall, usually begins with landing rates. I do about 7 or 8 landing rates each morning - which essentially involves me counting the number of mosquitoes that land on me in 60 seconds. I then complete any tasks the lab may have requested during this time. When I'm done with my landing rates and lab data collection, I move on to try to complete any service requests in my zones. I spend any time I have left treating septic discharge and performing floodwater inspections.

**What are you most proud of from your time here at Mosquito Abatement?** I'm probably most proud of my work with FieldSeeker. I feel that it has made me an important part of the STPMAD family. I received an AMCA Grassroots Award in 2020 for that work.

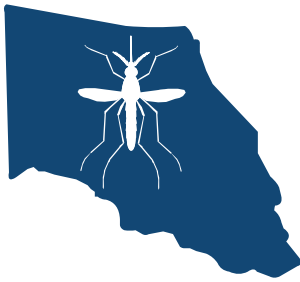
**What is something your coworkers might not know about you?** I've had 16 procedures that required anesthesia.

## **What do you consider your biggest personal or professional accomplishment?**

Marrying my wife, Breanna Kirkley, without a doubt. Convincing her that spending her life with me was a good idea and is my greatest accomplishment, for sure. Our family is my reason for doing everything. I would not be here - or who I am today - without her.







# MOSQUITO ABATEMENT

ST. TAMMANY PARISH

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