



THIS ISSUE:

- ➔ ***Aedes Aegypti* Found in Windsor**
- ➔ **Zika 'Replicates and Persists' in Fetal Brain**
- ➔ **Tom Putt Retires**
- ➔ **Pyrethroid Comment Period**
- ➔ **Photo Salon MMCA**
- ➔ **Mosquito Populations in North America over the Past Century**
- ➔ **Annual Conference Agenda**
- ➔ **Conference Registration Information**
- ➔ **Rebecca Brandt new Director at BCMC**
- ➔ **Around the Districts**

PUBLISHED BY THE
MMCA PUBLIC
INFORMATION
AND EDUCATION
COMMITTEE



www.mimosq.org

President's Message



Happy New Year to all! As we say goodbye to 2016, I am hopeful that 2017 will be a year of great progress for the MMCA. It has been 30 years since the MMCA was founded, and the organization continues moving in a great direction. However, I am not leaving the organization in any better shape than it was in before I took the president's position. You might be thinking, "what? is he saying he didn't do a good job? Did he do anything at all?" Please let me explain. "I" am not the reason for the success of the organization. The success of the MMCA is completely dependent upon an active membership, and the dedicated professionals that volunteer to serve as officers, board members, and committee members. Many of the professionals serving in these positions volunteer to help every year, and have a great passion for promoting advancements in mosquito control, educating the future mosquito control workforce, and making the public aware of the critical importance of mosquito control. I have personally learned a great deal about mosquito control, IMM, and the challenges faced by both public and private mosquito control providers through this great group of people. This is my final president's message and I would like to extend thanks to all of you for helping to make the MMCA one of the best mosquito control associations in the country.

This past year had its challenges and successes. 2016 brought another long field season, stretching our budgets, and straining our staff. These long field seasons also bring about greater risk for arbovirus transmission much later in the year, which we saw unfortunately with West Nile virus and Eastern Equine Encephalitis in 2016. Longer field seasons also bring about discussions about the potential impacts of climate change. Will Michigan's climate be more conducive to emerging mosquito species or emerging arboviruses in the U.S.? To that end, the MMCA has partnered with local and state public health organizations to help train and guide them in conducting surveillance for potential Zika virus vectors. This partnership has been extremely successful, with eight county health departments participating in 2016, and IMM being practiced in several new jurisdictions based upon the surveillance data. This partnership will continue in 2017, with an expansion to 20+ counties conducting surveillance.

The MMCA 7F Training Committee and many volunteers went above and beyond this year with another successful event. This training is a huge endeavor, and has been important in helping to grow the MMCA. Over 80 people attended the training this year, which promotes IMM and gives hands-on examples for experienced and inexperienced 7F applicators. Various other committees have been busy planning the annual MMCA Conference in Port Huron, February 1-2, and it's bound to be another great year of networking and the newest science. Other successes include MMCA's (continued page 2)

President's Message Continued

participation in the Michigan Pollinator Protection Plan drafting process, and in the American Mosquito Control Association's Washington Day Conference. Both of these endeavors help the MMCA to engage policy makers in promoting mosquito control as a science-based practice that positively impacts communities, and protects the public health in an environmentally sensitive way.

One more thing, please get involved! If you haven't ever volunteered for a MMCA committee, give it a shot, there will be opportunity to sign-up at the annual conference. You'll find that the experience and networking it provides are invaluable, and you'll also be helping out a great organization. I want to thank all of you for the support you've provided me over the past year, and the opportunity to serve as president. I am confident that 2017 will be another year of progress and achievements for the MMCA. Best of luck to the incoming board and the new President Bill Stanuszek, he's been there before and we are in good hands.



***Aedes Aegypti* Found in Windsor**

The Windsor-Essex County Health Unit says a yellow fever mosquito was discovered in Windsor. The health unit announced the news Friday morning and said it will continue to monitor the situation. This type of mosquito is thought to be responsible for the majority of human cases of the Zika virus worldwide.

The health unit's Dr. Gary Kirk believes it's the first in Canada, but said there is "no risk of the Zika virus." Public health officials don't think the yellow fever mosquito can survive Canadian winters.

Although it is unknown exactly how the larvae arrived in Ontario, one possibility is that the eggs were transported from the U.S. in shipping containers or other cross-border vehicle traffic. The eggs could also have been imported in recycled products, such as tires or other containers. Given that this is a tropical mosquito, the extremely hot temperatures this past summer allowed for the species to exist in Windsor.

"The discovery of the yellow fever mosquito larvae through enhanced surveillance of the *Aedes albopictus* mosquito is an important reminder that we should continue to protect ourselves and our families from mosquito bites," Kirk said.

Zika 'Replicates and Persists' in Fetal Brain, Placenta

Study strengthens tie to microcephaly

Zika virus RNA was found in both fetal brain and placental tissue of Zika-related pregnancy losses and infants born with microcephaly, indicating the virus continues to replicate in a fetus months after a mother's initial infection, and even after birth, researchers reported.

Examining infant brain tissue, relative levels of Zika RNA were over 1,000-fold higher than those found in second trimester, third trimester, or full-term placentas. In placental tissue, relative levels of Zika RNA in first trimester placentas were 25-fold higher than in second trimester, third trimester, or full-term placentas, reported Julu Bhatnagar, PhD, of the CDC in Atlanta, and colleagues.

There was a mean 163 days in between the time of maternal symptom onset and detection of Zika virus RNA in brain tissue, and a mean 81 days to detection in placental tissue, they wrote in [*Emerging Infectious Diseases*](#).

"These findings demonstrate that Zika virus replicates and persists in fetal brains and placentas, providing direct evidence of its association with microcephaly," the authors concluded.

"We don't know how long the virus can persist, but its persistence could have implications for babies born with microcephaly and for apparently healthy infants whose mothers had Zika during their pregnancies," Bhatnagar said in a statement. "More studies are needed to fully understand how the virus can affect babies."

The authors stated that Zika virus antigens [were previously detected](#) in human and neonatal brains and the placentas of pregnant women, but "the presence of antigens does not necessarily indicate virus replication," they wrote.

They examined tissue samples from 52 patients with suspected Zika infection, including eight infants who died from microcephaly. They also looked at 44 placental tissue samples -- 22 from women with adverse pregnancy outcomes and 22 from women whose pregnancy outcomes were normal.

Overall, 32 of 52 case patients had fetal brain and placental tissue that tested positive for Zika via reverse transcription polymerase chain reaction (RT-PCR) assays. There were also 24 of 32 patients testing positive for Zika, who reported "adverse pregnancy or birth outcomes." Of these, 23 reported onset of symptoms in the first trimester.

There were 13 infants born with microcephaly -- eight who died within a few minutes to 2 months after birth, and five infants born with microcephaly who lived. While brain tissues of these eight infants tested positive for Zika, tests for kidney, liver, spleen, heart, and rib were negative for the virus.

Mothers of these eight infants all reported symptom onset during the first trimester, but 21 of 22 case patients -- including eight who tested positive for Zika -- who delivered apparently healthy infants reported symptom onset during the second or third trimester. This added to similar research that found the virus is most deadly to the fetus early in pregnancy.

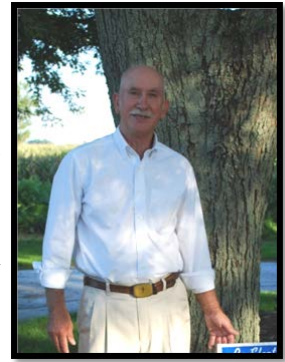
The authors also shed additional light on the mechanism of fetal infection by performing in situ hybridization, which can help identify specific DNA or RNA sequences. In this case, they found Zika virus in tissues of 32 case patients who tested positive for Zika. They also found viral activity in the Hofbauer cells of the placenta, which are involved in preventing the transmission of pathogens from mother to fetus, as well as in neural cells and neurons.

"Our findings indicate that Hofbauer cells may play a role in the dissemination or transfer of Zika virus to the fetal brain, particularly during early pregnancy," they wrote.

The authors cited their Zika tissue-based PCR testing as a critical method of establishing a retrospective diagnosis of Zika virus.

Tom Putt Retires

After a 31-year tenure as Director of Bay County Mosquito Control, Tom Putt announced his retirement on October 21, 2016. Tom has been a key figure in mosquito control in Michigan since he was called to public



service in 1977 as he began his mosquito control career working for the Saginaw Bay Mosquito Control Commission as a Field Technician and then Foreman. On January 1, 1985 he began his long career as Director of Bay County Mosquito Control, dedicating himself to serving the residents of Bay County, then, for 40 years.

Under his direction, two new field stations were completed. Bay County Mosquito Control's newest field station was constructed with three separate buildings -- office, garage/wash bay/cold storage, and chemical storage. It was always Tom's dream to build an up-to-date facility that would truly accommodate our needs and meet MDARD regulations and that dream became reality in 2003. With his guidance, the residents of Bay County overwhelmingly supported the millage-based program he directed, most recently with an 84% approval rating.

Tom has been an outstanding member of the Michigan Mosquito Control Association and received the prestigious H. Don Newson Distinguished Service Award in 1996. He also served as MMCA President in 1992, 2000, 2004, and 2006 and served on many MMCA committees (too numerous to mention). Tom has served as a Williams Township Trustee for 12 years and was re-elected in November 2016 for another 4-year term.

After his long, active and exemplary service to Bay County, Tom will now have the opportunity to spend quality, uninterrupted time with his supportive wife Mary Anne, his two sons John (Ashley) and Patrick (Crystal), and, especially, his three grandsons Dane, Luke, and Jack. Tom also now has extra time to devote to his love of agriculture and you can be sure you'll see him out in the fields in the spring and fall.

Pyrethroid Comment Period Ends January 30th, 2017

Currently the Environmental Protection Agency (EPA) is evaluating whether or not to further restrict pyrethroid use for professionals.

Inappropriate regulations can significantly impact your lives and livelihood, and we need you to voice your concerns and help the EPA better understand the important role that pyrethroids serve in your ability to provide your services and protect the public.

It's never been easier to comment. A portal has been created for mosquito and vector control professionals to get involved in the regulatory process.

Click [here](#) to submit your comments directly to EPA

For more information on pyrethroid registration review click [here](#)!

Photo Salon 2017

Submit digital photos to Randy Knepper (rknepper26@chartermi.net) by 1-24-17. If a sufficient number of photos are received, cash and prizes will be awarded in the following categories: Mosquitoes, Operations, Surveillance, Mosquito Habitat, Nature/Wildlife, and Most-Amusing Title/Intriguing Story.



Call for Nominations: MMCA Board of Directors

The success and strength of any association is determined by the actions and involvement of its members. With this in mind, the Michigan Mosquito Control Association is looking for members to serve on its Board of Directors. The following offices need to be filled at the annual meeting to be held in February 1-2, 2017. The following positions need to be filled:

Vice President - Serves a one-year term then succeeds to the office of president. A new Vice President is elected each year.

Secretary- Serves a two-year term with election to office on alternating years with the treasurer.

Trustees- Serves a two-year term with elections to office staggered so one or two new Trustees is elected each year. In 2017, one Trustee will be elected.

The Board of Directors meets just after the annual meeting and then as needed scheduled by consent of any five members of the Board of Directors.

Elected Board members shall be limited to serving two consecutive terms in the same capacity.

Please contact Alicia Wallace at: wallacea@baycounty.net if you are interested in serving on the MMCA Board of Directors

**Michigan Mosquito Control Association
31st Annual Conference Tentative Agenda
DoubleTree by Hilton, Port Huron
February 1-2, 2017**

Wednesday, February 1, 2017

8:00 am	Registration
9:00 am	Welcome - Erik Foster, MS, 2016-2017 MMCA President
9:05 am	Keynote: An Entomologist's Journey from A (Almost Retired) to Z (Zika) - Thomas Wilmot, PhD, Wilmot Entomology
10:05 am	AMCA Update - Mark Breidenbaugh, PhD, AMCA North Central Regional Director
10:25 am	Emerging Arboviruses in the Americas Update - Erik Foster, MS, Michigan Department of Health and Human Services
10:50 am	Mid-morning Break
William J. Lechel, II Memorial Scholarship Student Presentations	
11:10 am	Insect-Specific Flavivirus Infection is Restricted by Innate Immunity in the Vertebrate Host - Kristopher Kieft, Central Michigan University
11:25 am	Understanding <i>Aedes japonicus japonicus</i> Distribution in Container Habitats - Katherine Demeuse, Michigan State University
11:40 am	Ecological Implications of Large Scale Storm Events on Larval Mosquito Habitats and Microbial Community Response to Larval Control Methods - Joseph Receveur, Michigan State University
12:00 pm	Lunch and MMCA Business Meeting
1:15 pm	Catch Basin Field Evaluation - No Heavy Lifting Required - William Stanuszek, Saginaw County Mosquito Abatement Commission
1:35 pm	Zika Miami-Dade Response - William P. Quinn, Clarke
1:55 pm	Michigan Lyme Disease Update - Jennifer Sidge, DVM, PhD, Michigan Department of Health and Human Services
2:15 pm	Hemolymph and Oil: Tales of a Larviciding Boomtown - Mark Breidenbaugh, PhD, US Air Force, Aerial Spray Unit
2:45 pm	Vendor Introduction/Presentations
3:00 pm	Break
3:15 pm	Comprehensive Community Outreach Program Plans - Tom Lawrence, Michigan Department of Agriculture and Rural Development
3:45 pm	Informing the Public: How MADs are Prepared to Protect Them from New and Unknown Vector-borne Threats Like Zika - Stephen Manweiler, PhD, Metropolitan Mosquito Control District, Minnesota
4:05 pm	Zika Virus Update - Kimberly Signs, DVM, Michigan Department of Health and Human Services
4:30 pm	Genetically Engineered Mosquitoes: Promise and Problems - Michael Kaufman, PhD, Michigan State University
4:45 pm	Pollinator Protection - Carl W. Doud, PhD, Midland County Mosquito Control
5:00 pm	Cocktail Hour
6:00 pm	Banquet, Awards & Entertainment

Thursday, February 2, 2017

8:00 am	Keynote: Sustainability - Lyell Clarke, PhD, The Clarke Group, Inc
9:00 am	Bed Bug Update - Rebecca Reik, MPH, Michigan Department of Health and Human Services
9:30 am	Community Based Mosquito Surveillance and Zika - Sara Simmonds, MPA, REHS, Kent County Health Department
9:50 am	AMCA Washington Conference - Carl Doud, PhD, Midland County Mosquito Control
10:10 am	Break
10:30 am	GIS: How Mapping Can Play a Role in Mosquito Abatement - Vanessa Bader, Bader Mosquito Management
10:50 am	Bed Bugs: Lessons Along the Way - Mark VanderWerp, Rose Pest Solutions
11:20 am	Harborage Barrier - Brian Bader, Bader Mosquito Management
11:40 am	Public Education, an Integral Part of Integrated Mosquito Management - Margaret Breasbois, Saginaw County Mosquito Abatement Commission
12:00 pm	Concluding Remarks - William Stanuszek, 2017-2018 MMCA President

Michigan Mosquito Control Association 31st Annual Conference Registration

DoubleTree by Hilton, 800 Harker St, Port Huron, MI 48060
February 1-2, 2017

Conference Registration - Regular	Attendees	Fees	Total
2-Day Registration (Includes membership, lunch and banquet)		\$100.00	
1-Day Registration for Feb 1 (Includes membership, lunch, and banquet)		\$75.00	
1-Day Registration for Feb 2 (Includes membership)		\$40.00	
Conference Registration - Student	Attendees	Fees	Total
2-Day Registration (Includes membership, lunch and banquet)		\$55.00	
1-Day Registration for Feb 1 (Includes membership, lunch and banquet)		\$30.00	
Conference Registration - Exhibitor	Attendees	Fees	Total
2-Day Registration (Includes one 6-ft table, membership, lunch and banquet)		\$200.00	
Additional Exhibition Space		\$50.00	
Conference Break Sponsorship		\$500.00	
Banquet	Attendees	Fees	Total
Extra Banquet Dinner		\$25.00	
Membership Dues (not attending conference)	Members	Fees	Total
Individual Membership		\$15.00	
Student Membership		\$7.50	
Business Membership (Agency, Association, etc. limited to 3 names)		\$50.00	
Total Amount Enclosed (Registration at the door will incur an additional \$10 fee)			\$

Attending lunch
Wednesday?

Yes No

Attending banquet
Wednesday?

Yes No

PayPal

OR

Enclose payment and mail to:
MMCA.
PO Box 366
Bay City, MI 48707

To use PayPal or credit card go to
www.mimosq.org/paypal/paypalconference.htm

Chuck Pearce, Treasurer
Phone (989) 755-5751
cpearce@scmac.org
www.mimosq.org

Name(s)

Agency/Firm

Address

City

State

Zip

Phone

Fax

E-mail address for the Skeeter Scanner

Website

Cancellation Policy - MMCA will refund conference registration fee if cancellation notification is received 3 days prior to the conference.



Anthropogenic Impacts on Mosquito Populations in North America over the Past Century

Abstract

The recent emergence and spread of vector-borne viruses including Zika, chikungunya and dengue has raised concerns that climate change may cause mosquito vectors of these diseases to expand into more temperate regions. However, the long-term impact of other anthropogenic factors on mosquito abundance and distributions is less studied. Here, we show that anthropogenic chemical use (DDT) and increasing urbanization were the strongest drivers of changes in mosquito populations over the last eight decades in areas on both coasts of North America. Mosquito populations have increased as much as tenfold, and mosquito communities have become two- to fourfold richer over the last five decades. These increases are correlated with the decay in residual environmental DDT concentrations and growing human populations, but not with temperature. These results illustrate the far-reaching impacts of multiple anthropogenic disturbances on animal communities and suggest that interactions between land use and chemical use may have unforeseen consequences on ecosystems.

Read entire paper at:

<http://www.nature.com/articles/ncomms13604>

County Mosquito Control

Bay County Mosquito Control is pleased to announce the appointment of Rebecca Brandt as the Bay County Mosquito Control Director, effective December 28, 2016. She will be responsible for overseeing all personnel, financial, and administrative functions of the program.



Rebecca started working for Bay County Mosquito Control in April of 2000 as a Seasonal Technician while attending Central Michigan University. After graduating she was promoted to the Bay County Mosquito Control Field Supervisor position in November of 2002. Therefore, she brings with her valuable experience in both personnel management and field operations. Rebecca possesses a Bachelor of Applied Arts degree, majoring in Interpersonal and Public Communication with an emphasis on Organizational Communication. Further, she holds the Certified Public Manager certification from SVSU.

Rebecca is a lifelong resident of Portsmouth Township and looks forward to providing fellow Bay County residents with the high-caliber mosquito control program they are accustomed to.

Rebecca's office is located at the Bay County Mosquito Control building at 810 Livingston Avenue in Bay City. You can reach her by telephone at (989) 894-4555 or email at brandtr@baycounty.net

Please join the BCMC staff in congratulating and welcoming Rebecca to her new position with Bay County.

2016 Winner - Kenley Farrel Scholarship

Emma Taylor Tongue

“Integrated Mosquito Management and Its Role in Pollinator Protection”

Read her paper at: <http://www.mimosq.org/scholarshipfarrel/scholarshipfarrel.htm>





News From Around The Districts

MIDLAND

Midland County would like to take another opportunity to say thanks and best wishes to Tom Putt on the occasion of his retirement. Thanks sir, for your many years of service to Bay County and MMCA! At the same time we congratulate Rebecca Brandt on her selection as the next Bay County Mosquito Control Director. We very much look forward to working with you as you serve in this new role.

As we look to the 2017 season we have a couple of projects lined up:

2016 was the first season to use the bike to treat residential catch basins (CB). We started with just one bike to see how it would work. Jessica Fetterman was persistent in requesting this treatment technique, so it was suitable that she spearhead the pilot project. It worked well as a treatment means for those areas where there is not a lot of traffic. It increases efficiency and reduces wear on the trucks avoiding the frequent stop/start in/out inherent with CB treatment in neighborhoods. Due to the good results we experienced, we have purchased a second bike and will have two pedaling around Midland in 2017.

As previously mentioned, Abate (temephos) can no longer be used except in habitats such as containers. Therefore, we look to replacement products that can be applied as a pre-flood to areas such as ditches and fields. Our plan remains to test MetaLarv[®] S-PT and Natular[™] G30. We have identified a test site in the county managed by the city of Midland. In the past, it served as the city nursery where ornamentals were grown and transplanted to areas throughout the city. It makes for a great *Ae. vexans* sight because the ground was intentionally tiered to retain water. As such, it floods with sufficient rain and produces a lot of *vexans*. We have identified a number of areas and have the materials weighed out and ready to apply – if we get a good downpour. In addition to testing the control products, we look to use this sight for ecological studies of *vexans*, which will hopefully lead to better understanding of various life history parameters of the species.

Wishing you all a prosperous and fulfilling 2017. Hope to see you at the upcoming meeting.

SAGINAW

Happy New Year! We hope all experience many successes in 2017. Saginaw is looking forward to new opportunities as we incorporate new strategies, technologies and technicians into our yearly response to disease and nuisance mosquitoes.

As is normal for this time of year staff are busy with winter projects that include: repair and maintenance of application equipment and vehicles; revising sections of the employee manual; body work on damaged vehicles; updates to various maps and data bases; updating yearly program plan; seasonal workforce recruitment; website updates; property owner lists; and the purchasing and outfitting of five new vehicles for our fleet.

Our 2016 annual report/2017 calendar is complete and can be viewed on our website, www.scmac.org. If you would like a hard copy please call Gloria Katch at 989-755-5751 or email her at gkatch@scmac.org and let her know the amount of calendars you would like to receive.

We have submitted permit applications to conduct our limited aerial larviciding program for spring mosquitoes on the Shiawassee National Wildlife Refuge. We have already received treatment permits for the aerial larviciding of the Shiawassee River State Game Area and Gratiot-Saginaw State Game Area. We have also been busy with the State's Pollinator Policy, Scrap Tire Grant, and NPDES Permit renewal.

Our agency is now in the process of hiring for our seasonal workforce. We will accept summer job applications through February 20, 2017. Interested individuals can apply at our facility directly or on-line at www.scmac.org. Interviews will be held in February, with our annual training session scheduled for March 31st and April 1st 2017.

Now is the time to prepare and anticipate for a successful 2017 control season.

Our season wrapped up on October 1st this year. Many employees stayed later into the season due to large numbers of calls during September. We wrapped up our last week with a small crew that handled the detailing of our truck fleet.

We have begun our winter routine of maintenance on our ULV's, handheld equipment and mule. We will also be adding a few new features to our garage in hopes of making our employees everyday tasks a bit simpler.

After the season concluded we got right to work on the MDEQ's NPDES report. We have also been working on finishing our annual report and the process of storing records and updating information for the 2017 season.

Testing and training dates have been set for those returning technicians that are in need of recertifying and new hires.

We will begin accepting applications for the upcoming season this month. With these winter months flying by, the MMCA conference will be upon us shortly. We look forward to another great conference

As many of you know, the biggest change to BCMC in the fourth quarter was the retirement of our long-time Director, Tom Putt, who officially retired on October 21, 2016. More information about Tom's retirement can be found elsewhere in the Skeeter Scanner where an entire article is devoted to honor Tom's service. We are also pleased to announce that Rebecca Brandt has accepted the role of the new BCMC Director and we look forward to a bright 2017!

Another 8-year millage was approved on November 8, 2016. This was the first time in 28 years that we asked Bay County residents for a millage increase – from 0.45 to 0.55 mills. The millage passed with an approval of 84%!

It's once again time to both look back at our fourth quarter accomplishments and think about the upcoming year. The mosquito season wrapped up on September 27 when we finished the last of our clean-up. Since then we've been busy compiling data for the annual report, processing invoices, correspondence, cleaning, taking inventories, ordering supplies, helping organize the 7F Training Session, conducting equipment and vehicle repairs, making database and map updates, and preparing for the 2017 season. The 2016 Annual Report was completed in early December and will be presented to the Mid-Michigan Technical Advisory Committee in March 2017. It will soon be available for viewing at our website www.baycounty-mi.gov/MosquitoControl under the "Resources-Reports, Brochures, Flyers" link. More recently, we have been putting together the 2017 Program Plan that will also be linked to the website.

Staff took part in the MMCA's 7F Training Session in October, giving several presentations to the attendees. At this, our eighth annual training session, there seems to be continued interest in having recertification seminars in the future. Not only are we providing a needed service, but our own staff benefits by attending and qualifying for recertification credits.

The 2017 chemical order was compiled and bid specifications sent to vendors in early December in conjunction with Midland County Mosquito Control and Tuscola County Mosquito Abatement. Chemical bids will be opened in Midland on January 18 and vendors will be notified.

The MDEQ's NPDES annual report was filed in late-November, which was the fourth year we were required to submit a report for compliance. In December we mailed a "2017 Application/Permit to Use State Land" to the Bay City State Recreation Area. The 2016 New Jersey Light Trap summary data (for the trap maintained at the park) was mailed concurrently. We expect to hear that treatment of the park property will continue for 2017. We also filed paperwork with MDEQ for a 2016-17 Scrap Tire grant.

We look forward to meeting with colleagues and hearing presentations at the upcoming MMCA Conference February 1-2 in Port Huron. In the next few months we'll be working on MMCA annual meeting plans, hiring of new seasonal staff, and continuing our mission of mosquito education.

MMCA Conference

February 1-2, 2017



800 Harker Street
Port Huron, MI 48060
(810) 984-8000



Registration Information on Page 6



**Michigan Mosquito
Control Association
P.O. Box 366
Bay City, MI 48707**

Winter