AGENDA

HUMAN SERVICES COMMITTEE

111 S. Michigan Ave., Room 200, Saginaw, MI 48602

Monday, April 1, 2024 – 4:00 p.m.

Members: Gerald Little - Chair, Tracey Slodowski - Vice-Chair, Michael Webster, Lisa Coney,

Christopher Boyd

Others: Administrator, Finance Director, Civil Counsel, Board Staff, Media

- I. Call to Order
- II. Welcome
- III. Correction/Approval of Minutes (March 4, 2024 Attached)
- IV. Public Comment
 - Speakers limited to 3 minutes
- V. Agenda
 - 1. William Stanuszek, Director, Mosquito Abatement Commission, re:
 - **4-16-1** Presenting its 2024 Program Plan for review and discussion
 - 2. Karen Lawrence-Webster, League of Women Voters, re:
 - **4-16-2** Presentation of a proposal to create a Saginaw County Youth Commission
 - 3. Any other matters to come before the committee
- VI. Miscellaneous
- VII. Adjournment

MINUTES

DRAFT

HUMAN SERVICES COMMITTEE

111 S. Michigan Ave., Room 200, Saginaw, MI 48602

Monday, March 4, 2024 – 4:00 p.m.

Present: Gerald Little - Chair, Tracey Slodowski - Vice-Chair, Michael Webster, Lisa Coney,

Christopher Boyd

Others: Mary Catherine Hannah, Koren Thurston, L. William Smith, Jennifer Broadfoot, Richard Spitzer,

Jessica Sargent, Gene Schmidt, Darcie Totten, Mark Rankin, Derek Plotkowski, Barslund Judd,

Kevin Zoromski, Darien Wilkerson, Darron Bagley, Marissa Sawdon and Catherine Hicks

- I. Call to Order ---Little at 4:00 p.m.
- II. Welcome
- III. Correction/Approval of Minutes (February 5, 2024)
 - ---Moved by Boyd, seconded by Slodowski, to approve. Motion carried.
- IV. Public Comment
 - Speakers limited to 3 minutes
 - ---Barslund Judd, Darron Bagley, Derek Plotkowski, Kevin Zoromski, Darien Wilkerson and Mark Rankin from MSU Extension discussed their specific programs and outreach provided to citizens of Genesee and Saginaw County and offered the addition of services if requested.
- V. Agenda
 - 1. <u>Jessica Sargent, Director, Commission on Aging, re:</u>
 - 8-19-1 Requesting approval to place a renewal and increase of its current millage from 0.59 mills up to 0.69 mills on the August 2024 ballot for the years 2025 2030, both inclusive, which if fully levied is estimated to raise \$4,547,105 in the first year of the levy.

The committee discussed the timing and reason for increase of the millage renewal. Historically the renewal is placed on the August ballot every six years and the increase is necessary to continue daily operations and cover excess costs for upcoming capital improvements.

- ---Moved by Webster, seconded by Coney, to approve. Motion carried. (Board Report)
- 2. Any other matters to come before the committee
- VI. Miscellaneous ---None
- VII. Adjournment --- Moved by Boyd, seconded by Coney, to adjourn. Motion carried; time being 5:02 p.m.

Respectfully Submitted, Gerald Little, Committee Chair Marissa Sawdon, Committee Clerk





March 27, 2024

4-16-1

Christopher Boyd, Chairman Saginaw County Board of Commissioners County of Saginaw 111 S. Saginaw Ave. Saginaw, MI 48602

RE: MOSQUITO ABATEMENT 2024 PROGRAM PLAN

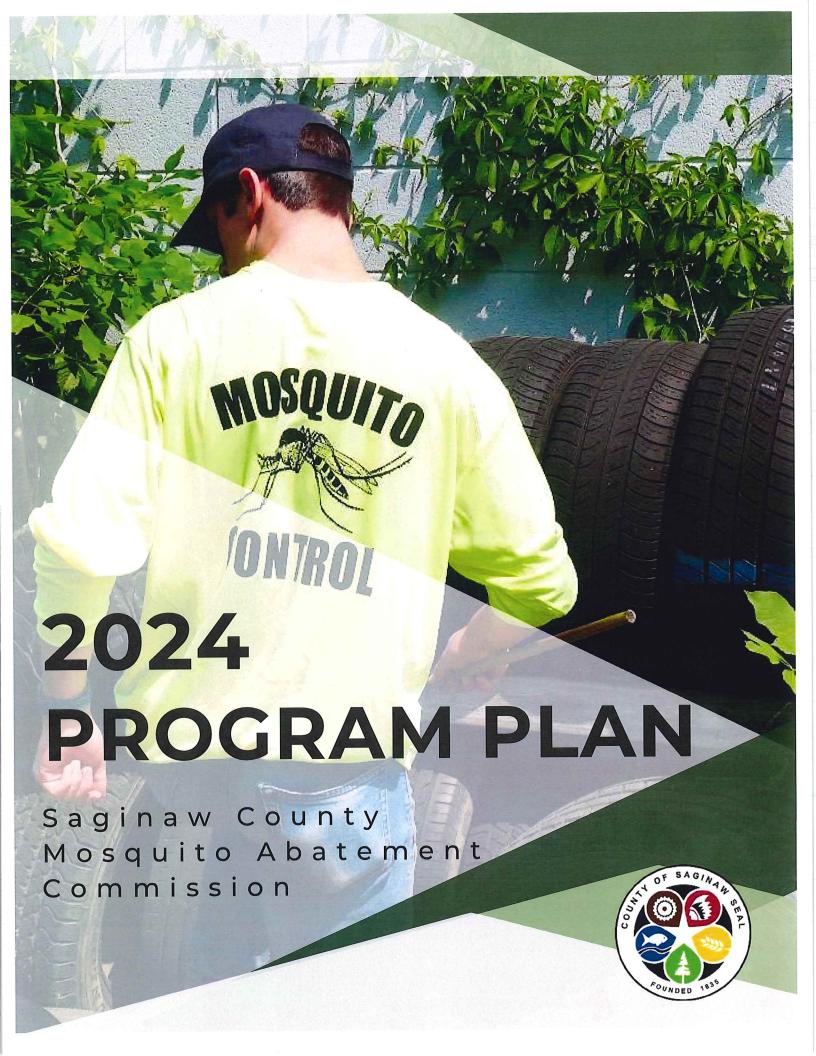
Dear Chairman Boyd:

I will be attending the April Human Services Committee meeting to present and address any questions related to Mosquito Abatement Commission's <u>2024 Program Plan</u>. This document provides a general synopsis of our operations, and serves as public notification for the upcoming mosquito control season.

Respectfully,

William W. Stanuszek

Director



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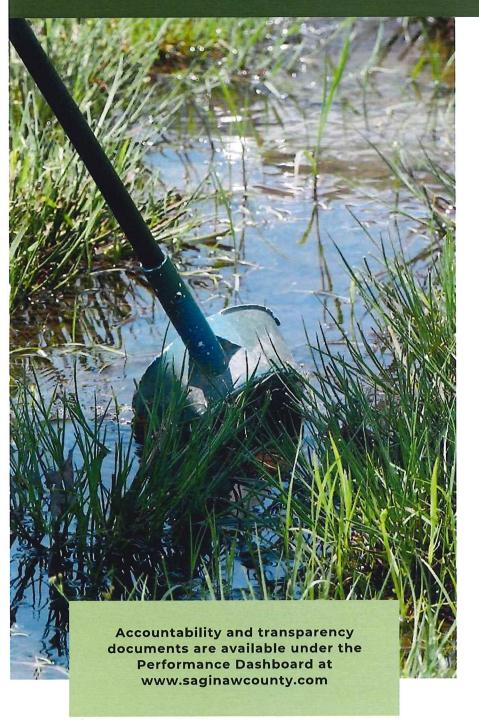
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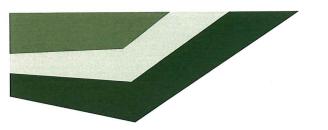
Vehicle & Equipment MaintenanceMaintenance, Vehicle Care, and Fueling
Facility

Back Cover

Mosquito Outbreak Emergency Response Guidelines

Outbreak Criteria and Response





BOARD OF TRUSTEES

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Chief Mechanic:

Office Manager:

Jeremy Fabera

Courtney Eggebrecht

Education Coordinator:

Operations Manager:

Mathys Kotze

Isaac Blackmon

CONSULTANT

Entomologist:Edward Walker, Ph.D., Michigan State University





Saginaw County Mosquito The Abatement Commission's (SCMAC) Program Plan presents methods and responsibilities for continuing to Integrated provide Mosquito Management (IMM) for the entire Saginaw County community in 2024. SCMAC is a county governmental agency which serves to promote public health through the control of nuisance and disease carrying mosquitoes.

Careful consideration and attention are given to environmental concerns. SCMAC is dedicated to a **quality environment for both man and animals.** The Board of Trustees for SCMAC meets monthly and determines policies for the agency.

The Commission is advised by a Technical Advisory Group (TAG) stakeholders' composed of representative of many disciplines involved with mosquito control in Michigan, including researchers, industry, and regulators. Within the TAG is a consultant from Michigan State University, the Saginaw County Environmental Health Services Director, and the Saginaw County Public Works Commissioner.

SCMAC's funding is through a 1.0 mil, 20-year millage, which passed in 2022 with 70% countywide approval. A homeowner with a home/property valued at \$150,000 (\$75,000 SEV) pays \$75 annually.

CONTACT US

211 Congress Ave., Saginaw, MI 48602 (989) 755-5751 www.saginawmosquito.com Facebook.com/saginaw.mosquito Saginaw Mosquito Notification App

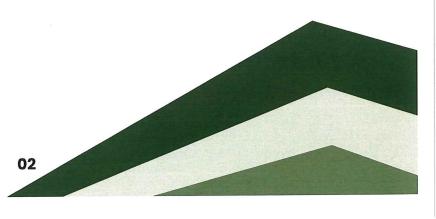
Introduction

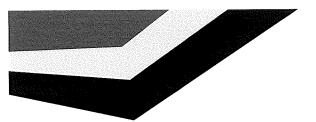
SCMAC has embraced the concept of IMM for many years. This multifaceted approach uses a combination of methods to reduce the level of nuisance and disease bearing mosquitoes.

Control strategies are chosen after careful consideration of efficacy, health effects, ecological effects, and cost benefit analysis of the various options. Mosquitoes will never be eliminated but can be controlled to tolerable levels. The basis for all our programs is disease prevention. Today's nuisance mosquitoes may be tomorrow's disease vectoring mosquitoes.

additional desire Should you information about a specific aspect of the program, please contact the office at 989.755.5751. Visitors are always welcome to tour our facility. We encourage you to visit our website at saginawmosquito.com and follow our activities on social media. Any suggestions, comments, and/or questions may be submitted e-mail address through our info@scmac.org.

For notification on adult treatment please download our Saginaw Mosquito notification app on any mobile device.





Personnel

SCMAC employs 10 permanent staff members. In addition, 54 seasonal employees are hired among the following positions: 3 office assistants, 6 biology assistants, 43 vector control technicians, 1 GIS technician, and 1 education assistant. Seasonal employees work approximately 40 hours per week for 18-20 weeks, depending upon the program needs. Beginning the first week in April, a few seasonal staff are employed to evaluate our aerial larviciding. The remaining staff begins work as they become available May through the middle of June.

Seasonal Employee Qualifications

The Commission follows guidelines set forth by Saginaw County and agency policy. SCMAC is an **equal employment opportunity employer** and makes **no discrimination** pertaining to race, religion, color, sex, age, height, weight, national origin, gender identity, orientation or disability. Seasonal recruitment begins in December and applicants must meet the following requirements:

- At least 18 years of age by April 1st of each year.
- Must possess a valid Michigan driver's license, at the time of application, with no more than five points on their record and be insurable by the Commission.
- Must pass a drug test, physical examination, and criminal background check.

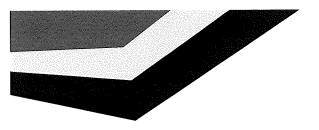
The Commission is under no obligation to rehire past seasonal employees.

Safety

Each technician is issued **personal protection equipment** with specific instructions for its proper use. Safety vests are required for specific tasks and identification purposes. Every employee is required to attend **regularly scheduled safety meetings**. Instructions are given in reference to the Employee Right to Know Law which includes Safety Data Sheets (SDS) and potential hazards in the building.

Training

SCMAC's annual training session will take place online April 19, 2024. All 1st and 2nd year employees in the Biology and Field Departments are required to pass a written test administered by the Michigan Department of Agriculture and Rural Development (MDARD) prior to employment. All new employees must pass an examination covering the National Pesticide Applicator Certification core manual to become a Registered Pesticide Applicator. An intensive ten days of "hands-on" training begins the first day of work. All 2nd year employees must pass the Category 7F, "Mosquito Control" test to become a Certified Pesticide Applicator. Training continues throughout the season covering policies, safety, products, and methods. Each employee is furnished an Employee Training and Resource Manual which covers all aspects of employment at SCMAC.



Administration

The Administrative Department has a multitude of responsibilities. Some of the most essential roles are coordinating activities with the Field and Biology Departments. This department handles the day-to-day business of the agency ranging from: citizen service requests, mosquito-borne disease concerns and questions, household scrap tire collection, and general questions about services. This department notifies residents on the State Pesticide Sensitive Registry prior to all pesticide treatment scheduled in their immediate area. Other responsibilities include management of service schedules and program records, logging and auditing all pesticide application records; and the administration of the *Bti* Distribution Program.

SCMAC is a governmental agency that applies insecticides in addition to other mosquito control methods. Therefore, the agency is required to keep public records of all insecticide applications. SCMAC continues to incorporate technology to improve the efficacy, efficiency, and accountability of our control program. We are able to track all control operations utilizing GIS and compatible equipment. All adult spray operations are tracked, and larval control operations are logged as they occur in the field. The Administrative Department reviews the records to verify accuracy.

The Administrative Department manages the following programs:

Medical Certification Program

The agency has developed a special program for residents who exhibit severe reactions to mosquito bites. Annually, interested residents must fill out a Medical Certification (Medcert) Request Form and obtain a doctor's stamp or prescription confirming a special medical need exists. Residents meeting SCMAC requirements receive yard treatment when a ULV zone sweep is conducted in their township (no more than once every 10 days). Any treatment that requires the technician to drive off the designated driveway requires the resident to sign a Liability Release Form. This form states that SCMAC and the County of Saginaw are not held responsible for damages associated with any treatment requested off the property owner's driveway. Request forms are available on our website.

No Spray Program

Residents may request their **property not be treated** by completing a No Spray Request Form annually. Reflective yellow signs are furnished to no spray residents to post along the road at each end of their property line. The property owners' information is located on agency maps and within GIS software, noting the exact location of the no spray area. Organic agricultural operations are identified within this "opt-out" program.

Long Drive Program

To promote effective adult control, long drives are treated when requested by the homeowner if the following criteria are met: home must be 300 feet or greater from the edge of the road, adjacent roads, and long drives; provide adequate approved significant vegetation possess turnaround: and providing mosquito harborage. Upon citizen request, SCMAC inspects and may add the address to the "Long Drive Program" if qualifications are met. All approved long drives are designated on ULV route maps and within the GIS software. Reflective markers are placed at the entrance of all approved driveways serving as a visual reference for technicians. SCMAC reserves the right to remove long drives as services as current best practices dictate.



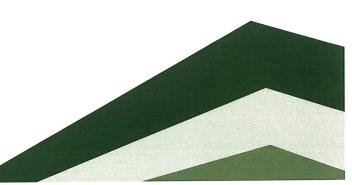
Service Requests

Residents contact SCMAC to perform or inquire about a variety of available services. This can range from requesting the treatment of **standing water** (larval mosquito habitat) or request a **property-level adult treatment**. These are directly entered and/or managed into our operations, depending on availability for service.

Community Use Sites

Sites that are frequently utilized by the public such as parks, campgrounds, and clubs are routinely checked and treated for mosquitoes to **promote community enjoyment and use**. Each site is unique and receives site-specific IMM. While most sites receive routine larval treatment, adult control may occur as needed, event-based, or not at all.

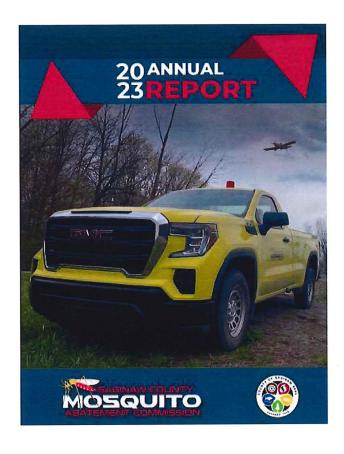






Annual Reporting and Community Outreach

Once the mosquito control season ends, reports are generated, compiled, and data is analyzed. The department begins working on the **Annual Report** which serves as an accounting for all SCMAC services and activities occurring in that given year. It is distributed in December to the SCMAC Board, SCMAC Technical Advisory Group, Saginaw County Board the and Commissioners. The Program Plan must be updated and ready for distribution by March of each year. Additionally, the plan is sent to the Michigan Department of Agriculture and Rural Development to fulfill our yearly community outreach responsibilities described in Regulation 637, Rule 11 (5)(b)(ii).

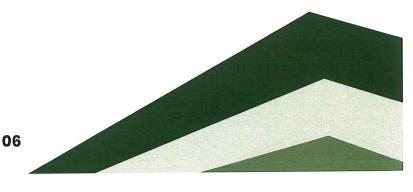


Notification

SCMAC has increased access to information, forms, and services through our website and social media. We also offer a **Public Notification App** that is available for residents to download onto their smart devices, which offers treatment notifications and other important information.

Bti Distribution Program

As part of our self-help larviciding program, SCMAC solicits participation from Saginaw County residents. Administration of this self-help program necessitates that the distribution of this *Bti* control product occur at SCMAC's headquarters. In addition to answering questions, each participating resident is provided an instruction packet regarding the proper procedure for applying the product, including the product label. Product availability is based on resident's property size and is limited by a fixed annual inventory.



Public Information & Education

Public education is an important part of SCMAC's Integrated Mosquito Management Program aiming to engender a cultural awareness of both SCMAC's and the public's responsibilities. It is important for residents to understand the primary purpose of our control efforts is to reduce mosquito-borne diseases while realizing the impact they also have on mosquito habitat within

provides

our community. It is truly a collaborative effort.

Education Programs

SCMAC's educational program

presentations to pre-K through college level students. In-person or virtual presentations are presented upon request. Educational material such as videos, presentations, and fun worksheets are available on our website. All materials focus on mosquito development and habitat; mosquito-borne disease: surveillance methods; insecticide safety; and methods for personal protection and control. Our **Education Coordinator** is available to speak to community service groups and organizations about the importance of our program and how to make a difference by mosquitoes in their control helping neighborhoods.





Community Outreach

SCMAC attends community events such as Friday Night Live, Saginaw Children's Zoo, Saginaw County Park Programs, and the Saginaw County Fair. These events allow SCMAC to address frequently asked questions and concerns, which promotes community participation and awareness resulting in better mosquito control.

SCMAC also sponsors an annual Creative Arts Contest to Saginaw County students. The contest is conducted via our website and pushed through social media. Students have the opportunity to creatively express their understanding of mosquitoes, and how they can help control mosquitoes around their homes and community. The best artwork may be used in some of SCMAC's education campaigns.



Educational Tools and Materials

SCMAC's website, **saginawmosquito.com**, contains a wealth of information about our programs, services, and related mosquito topics. A visual representation of our treatment and surveillance efforts are displayed along with other important announcements. In addition to the website, social media such as Facebook provide relevant information and developments. To follow us on the **social media** of your choice (if available) please visit our website.

Resources

Employees and Trustees stay abreast of current science, practices, and information on a routine basis. Attending conferences, classes, and seminars increases staff knowledge and awareness. Our **Technical Advisory Group** (TAG) is comprised of academics, public health professionals, regulators, industry members, and leaders in the field of mosquito control. The TAG provides the agency with new developments and important data in the areas of biological and environmental sciences as they pertain to our operations. SCMAC is also an active member of the Michigan Mosquito Control Association (MMCA).

Cooperative Relationships

The Saginaw County Health Department has been helpful in utilizing the Public Health Code to resolve nuisance problems involving sanitation and neglected swimming pools. In addition, SCMAC works with the Health Department providing tick surveillance to establish baseline tick presence, abundance, and risk.

SCMAC also continues to work in collaboration with the Midwest Center of Excellence Vector-Borne Diseases (MCE-VBD), assisting with coordinated surveillance and resistance monitoring and standardization. The MCE-VBD focuses on the Upper Midwest to better monitor, understand, control, and share information about disease-carrying mosquitoes and ticks. Additionally, SCMAC works cooperatively with other professional associations, such as the American Mosquito Control Association (AMCA), the Entomological Society of America (ESA), the Michigan Mosquito Control Association (MMCA), and the Michigan Pest Management Association (MPMA) to ensure that our staff receives the most current information. SCMAC carefully tracks proposed legislation as it relates to mosquito control. Members of our permanent staff serve on Michigan regulatory committees and work groups when needed.



Biology

Mosquito-borne disease surveillance is crucial as it promotes public health within Saginaw County. Monitoring virus activity and mosquito populations throughout the season dictates SCMAC's control strategies both preventive and responsive as well as public notification and education. SCMAC samples for mosquito-borne virus activity, which includes Eastern Equine Encephalitis (EEE), Jamestown Canyon virus (JCV), La Crosse Encephalitis (LAC), St. Louis Encephalitis (SLE), and West Nile virus (WNV).

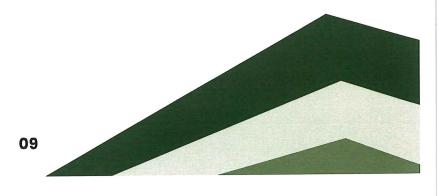
Quality control is an important element of the Biology Department's operation. Mosquito control products are scrutinized, as are application crews, to ensure effective, consistent, and high-quality mosquito control. New insecticides and formulations are tested routinely to ensure the most environmentally acceptable and effective products are utilized. Monitoring insecticide resistance and changing management strategies is critical to ensuring effective mosquito control and maintaining a successful control program. Research is conducted by SCMAC annually. Only through improved knowledge and understanding of mosquitoes, mosquito-borne diseases, insecticides, and application techniques are we able to enhance our Integrated Mosquito Management Program.

Larval and Pupal Surveillance

Monitoring the presence and abundance of mosquito larvae and pupae in various standing water habitats **directs larval control** efforts. The Biology Department routinely samples all types of breeding habitat, noting type, abundance, and mosquito life stage. This helps maintain a current inventory of breeding sites.



Larval surveillance begins in March as spring mosquito larvae begin to hatch and develop in flooded woodlands. The department samples this habitat prior to and after our spring aerial larviciding program. Routine larval surveillance continues throughout the season as dictated by weather and time of year. Permanent water habitats like catch basins and neglected swimming pools are routinely checked for *Culex* mosquito infestation, as they are important sources of this WNV vector.



Adult Mosquito Surveillance

Routine adult mosquito surveillance is conducted using a variety of trapping methods. Adult mosquitoes collected in these traps determine where and if adult control is needed; presence of mosquito habitat; potential mosquito-borne disease threats; and control strategy efficacy.

The New Jersey Light Trap (NJLT) Program is conducted every Monday, Wednesday, and Friday during the mosquito season. Twenty-five of these traps are placed at geographically assigned locations throughout Saginaw County and manned by citizens. These traps monitor changes in local mosquito populations. General trap location has changed very little since 1977, offering insight into mosquito population change overtime, including throughout the season or one year to the next. This is very important as seasons and control strategies change over time.

The CDC Trap Program is conducted Monday through Thursday during the mosquito season. Spring and Summer Aedes nuisance mosquitoes are highly attracted to carbon dioxide (CO2) released by the dry ice bait. Five CDC traps are placed in tandem with gravid traps. When resources are available, five additional traps are utilized. CDC traps are placed individually at locations where increased mosquito population resolution is needed. Ten CDC traps allow us to survey four townships a night.

Elevated CDC traps are used to monitor disease, efficiently sampling **summer Culex mosquitoes** which are the primary vectors of West Nile virus. These customized traps baited with CO2 are placed 15-20 feet off the ground into the tree canopy where the *Culex* feed on birds; a primary host for mosquito virus. Elevated trapping begins in June with up to four traps deployed every Wednesday night.

Gravid traps are used to monitor **mosquito-borne disease** in Saginaw County. Gravid traps use highly organic water to attract female mosquitoes, especially *Culex*, looking to lay their eggs. These female mosquitoes have taken a blood meal and therefore are capable of transmitting arboviruses. Deployment occurs Monday through Thursday with five gravid traps paired with the aforementioned CDC traps.

The BG-Sentinel 2 traps and its lure are designed to attract and catch Aedes aegypti and Aedes albopictus. This is an important tool for targeting the aforementioned invasive mosquitoes should populations migrate into the Saginaw Bay region. Incorporating new technology into adult trapping, the BG-Counter is a remote monitoring device that counts the number of mosquitoes collected in the BG trap. This device also collects environmental data and transmits the data in real time. This data will be analyzed along with the trap collections to provide insight into daily adult mosquito activities, their response to weather, and effectiveness of our control activities.

Oviposition traps are used to monitor the egg laying behavior of **container breeding mosquitoes**. They are placed at select sites in early June and monitored on a weekly basis. The eggs can be collected and reared in the lab for identification.

Mosquito-Borne Disease Surveillance

During 2023, the agency's disease surveillance program noted 1 Jamestown Canyon virus (JCV) positive mosquito sample; 19 mosquito samples and 5 birds positive for West Nile virus (WNV); and 1 positive Eastern Equine Encephalitis (EEE) mosquito collection. There were no human cases of mosquito-borne disease reported in Saginaw County. During 2023, the State of Michigan reported 21 human WNV cases as well as 4 human cases of JCV. There were also 21 birds and 124 mosquito samples found positive for WNV. The state also reported one human case of another mosquito-borne virus. These results and others demonstrate that WNV and other mosquito-borne disease continue to maintain their presence within the State of Michigan. Our program suppresses these mosquito threats providing benefit to the public health of Saginaw County.

The threat posed by mosquitoes and the diseases they transmit may change over time. The recent statewide Eastern Equine Encephalitis (EEE) outbreak in 2019 through 2021, arrival of Zika virus to the U.S., and the regional re-emergence of Jamestown Canyon virus serves as evidence for this. Climate and seasonal changes are resulting in changes to our mosquito populations. As mosquito populations change, so does the threat of native and exotic diseases they may transmit. **Each mosquito season is unique** and varies from the last. SCMAC monitors and responds to current mosquito threats and will change with future threats.

mosquito species are capable Certain transmitting one or more mosquito-borne disease, but not all mosquitoes can transmit disease. In Michigan, mosquito-borne viruses are responsible for disease in not only humans but animals as well. Mosquito species responsible for transmitting certain viruses are submitted to the Michigan Department of Health and Human Services' (MDHHS) Bureau of Laboratories for their respective virus testing. Adult mosquito collections are processed within our lab, and then shipped to MDHHS for polymerase chain reaction (PCR) determine mosquito-borne virus testing presence and abundance. These test results direct control operations to reduce risk to the public. Approximately 1,500 to 2,000 samples are submitted annually. The following species are tested for their respective viruses: Aedes triseriatus, Ae. japonicus, Ae. canadesis, Coquillettidia **Anopheles** quadrimaculatis, perturbans, Culex erraticus, Cx. pipiens, and Cx. restuans.





Mosquito-Borne Disease Surveillance (Cont.)

Dead Bird Reporting

Birds in the Corvidae family, which include **crows and blue jays**, are very susceptible to WNV often resulting in death. Residents are encouraged to report dead crow and blue jay sightings. Depending on the condition of the dead bird, an oral swab is taken. The swabs are sent to the **Veterinary Diagnostic Laboratory at Michigan State University** for WNV testing. This reporting further allows the agency to monitor and respond to WNV activity in Saginaw County.

Insecticide Resistance and Efficacy

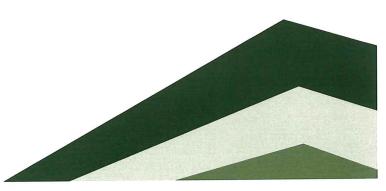
Adult mosquitoes from various areas within the county are routinely tested for resistance by exposing them to lethal doses of various insecticides. If resistance appears to be present or developing in a given mosquito population, control strategies are altered to lessen the likelihood of future or continued resistance. A resistant population is harder to control, and resistance may be amplified if the use of the insecticide is continued.

Annually, CDC Bottle Bioassays are utilized in the detection and tracking of insecticide resistance in resident mosquito populations. Caged mosquito trials are performed to ensure current and perspective adult control products perform in the field. Adult mosquitoes are placed in cages and subjected to truck mounted ULV treatment. The above testing allows for an operational understanding and expectation for the control product prior to use in the field. Mosquitoes used for testing are collected in the field and/or reared in our lab.



Equipment Calibration

In coordination with the Field Department, all application equipment is routinely calibrated to ensure the proper amount of control product is applied. The type of equipment and product amount are determined based on effectiveness and product label. Our Ultra Low Volume (ULV) spray equipment delivers very small amounts of insecticide via droplets and must be within a 12-25-micron size range in order to be effective against mosquitoes, for reference an average human hair's thickness is 100 microns. The ULV control material controls adult mosquitoes offering no residual control. Monthly tests are conducted to determine the mass median diameter (MMD) droplet size of the ULV equipment. MMD's are also completed on all repaired ULV equipment before it is returned to service. By determining the MMD's, the biology staff knows if the equipment is producing droplets within the optimal range, and meeting adulticide label requirements.





The **Field Department** is responsible for conducting all **community mosquito control operations** including larval and adult control, performing property-level services such as long-drive treatment, larval surveys, and adult priority treatment. Community treatment involves a variety of strategies and equipment from aerial treatment to dropping individual packets into catch basins. Other responsibilities include source reduction efforts such as community habitat surveys, neglected swimming pools, and the collection and handling of tires associated with

our community scrap tire collection efforts.

Larval Control

Larval control, or larviciding, involves the introduction of control products into aquatic habitats. The mosquito larva is the least mobile, most concentrated, and accessible life stage of the mosquito. By targeting numerous larvae in habitats such as ditches, flooded yards, roadside catch basins, and others, countless mosquitoes are eliminated before they reach the adult biting stage. Larviciding is the "first line of defense" for any environmental mosquito management program. Twelve hours of SCMAC's 16-hour workday is spent larviciding.



Spring Larval Control

Aerial larviciding of seasonally flooded woodlots is tentatively scheduled to begin the week of April 15, 2024 (weather dependent). Fixed wing aircraft treat approximately 53,000 acres of mosquito breeding habitat using granular Bacillus thuringiensis variety israelensis (Bti), attached to ground corn cob, at the low application rate of 2.5 to 3 pounds per acre. Aerial treatment is monitored in real-time and recorded using GIS technologies. The Bti bacteria is naturally occurring, and when eaten by mosquito larva results in rapid death. Bti is specific to mosquito, blackfly, and midge larvae and non-toxic to mammals, birds, fish, and many insects, including honeybees. Bti bio-degrades quickly and leaves no residue. Seasonal vector control technicians begin larviciding immediately following the completion of spring aerial treatment. They concentrate on woodlots infeasible to treat by aircraft. Ground crews will use Bti or larviciding oil for this treatment depending on the mosquitoes' stage of development.





Summer Larviciding

Most roadside ditches are checked one to three times during the control season and treated when necessary. They are routinely checked after a significant rainfall as this often produces larval activity. Ditches are treated using granular Bti or methoprene. If late fourth instar larvae or pupae are present, larviciding oil may be applied to the water with a pressurized sprayer. If the ditch cannot be accessed by a truck, treatment is made by ground crews.

All villages, cities, and townships with urban and suburban development have **stormwater catch basins**, which are significant sources of *Culex* mosquitoes, the primary vector for West Nile virus. This habitat is treated whenever an area's infestation is 25% or greater. The agency uses a variety of larvicide formulations and methods to treat over **60,000** catch basins annually. **Methoprene**, **Biological** (*Bti & Bs*) and pyriproxyfen products are applied by foot, bicycle, moped, e-scooter, or truck targeting 30 day to season long control, depending on formulation. Targeted catch basins are located in subdivisions, parking lots, yards, and along roads. Catch basins are normally treated one to four times depending on product formulation, mosquito infestation and disease activity.

Saginaw County has 16 **sewage lagoon** sites. This organic rich habitat can produce very large numbers of *Culex* mosquitoes. The Field Department monitors infestation rates throughout the summer and treats if necessary. Treatment is with the bacterial larvicide, **VectoLex® WDG**.

Saginaw County has a large amount of mosquito breeding habitat that routinely floods after significant rain events. This **floodwater habitat** can produce substantial nuisance mosquito populations. SCMAC has an extensive catalog of these known floodwater sites which may be treated multiple times each season, depending on rainfall. These breeding habitats include flooded fields, yards, woodlots, and floodplains. Larval control products used to treat these habitats include **Bti**, **methoprene**, **and larviciding oil**.

Adult Mosquito Control

Adult control, or adulticiding, targets adult mosquito populations. Even the most rigorous larviciding program may not be able to keep adult mosquito populations at acceptable levels. For instance, Saginaw County has a species of mosquito which is very difficult to control in its aquatic stages; larvae of the mosquito, Coquillettidia marsh cattail perturbans attach to aquatic plant roots to obtain oxygen. Another factor is Saginaw County has State and Federal lands located in the center and southwestern portions of the County which are not accessible to larviciding efforts.



ULV Adult Mosquito Control

Our community adult control program relies on truck-mounted Ultra-Low Volume eliminate adult (ULV) spravina to mosquitoes in-flight. Each ULV unit is carefully calibrated monthly to dispense only 0.05 ounces of active ingredient per acre. It is important for these machines to break down insecticides into proper droplet sizes, which are 12-25 microns. All trucks are tracked utilizing GIS technologies which records location, speed, and spray activity. ULV treatment normally takes place from sunset to approximately 12:30 a.m., Monday-Friday to coincide with peak mosquito activity. If mosquito-borne diseases or mosquito populations are high, a second spray shift is conducted in early morning hours during the second peak of mosquito activity prior to sunrise. ULV applications are less at temperatures below 56 effective degrees, if winds are greater than 10 mph, or in rain. Due to these factors, ULV operations cannot be performed every evening. Adulticiding is only performed after careful analysis of biological data from traps, disease surveillance, and citizen complaint calls. Saginaw County is divided into 9 treatment zones based on city, village, or township boundaries. These zones are adulticided when surveillance treatment. Our principal warrants adulticiding material is a 4% permethrin ULV formulation.

Geographic Information System (GIS)

SCMAC's Field Operations relies on our Geographic Information System or GIS to plan, conduct, track, and report our operations and services. This system utilizes ESRI-based computer software, technology, and specialized equipment promoting efficient mosquito control operations. This system catalogues and presents intuitive tracking and mapping of mosquito larval habitats, roads and properties, control operations, and special service considerations. This geographic inventory of important items is accessible and interactive in the office as well as the field utilizing both web-based applications and mobile devices. In addition, other departments use GIS for public outreach and mosquito surveillance. Our Field Technologies Coordinator is responsible for maintaining and promoting GIS and related workflows.







Pollingtor Awareness

SCMAC recognizes the importance of pollinators in Saginaw County. The majority of our insecticide budget is for biological larvicides which are applied directly to the water and do not affect pollinators. Bees and many pollinators are most active from sunrise to sunset. To adequately protect honeybee colonies and other pollinators from possible pesticide exposure, community ULV treatment begins after sunset, well after the time most bees have returned to their hives. SCMAC works with the Saginaw Valley Beekeepers Association to follow the best management practices for bee colony/pollinator health in Saginaw County. With this in mind our control efforts are designed around Pollinator Best Management Practices, using an Integrated Mosquito Management Program. Spray equipment is carefully calibrated to dispense proper droplet size to impact mosquito sized insects, not larger insects like butterflies, bees, or beetles. The spray is a contact insecticide, once released it breaks down rapidly. The treatment has a short range, 300 feet from the treatment path, depending on wind direction and speed. The amount of active ingredient applied for our adult control is much less than in other insect control uses. On average we rely on three thousandths (0.003) of a pound per acre of active ingredient (permethrin) which is hundreds to thousands of times less than other common uses such as those amounts used for lawn and human treatments.

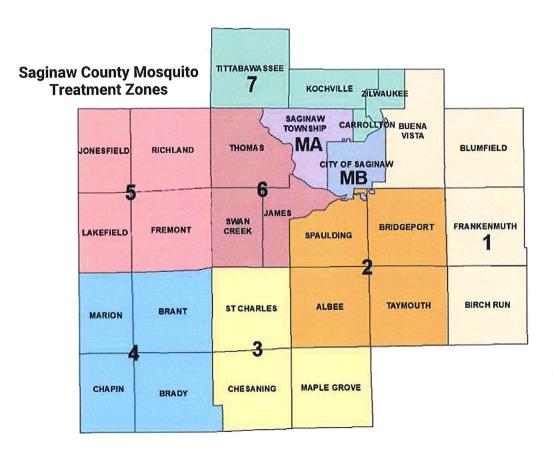


Mosquito Control

- · Locate apiaries annually, communicating regularly with local beekeepers
- · ULV treatment when bees are not flying, late evening/night and early morning
- · Let beekeepers know the insecticide we are using
- Avoid direct application of spray to flowering plants
- Monitor treatment related to wind direction with respect to colonies

Beekeepers

- Report colony movement (location) to mosquito control
- If possible, locate hives 300 feet from the roads
- Beekeepers are responsible to **manage health** of their colonies; healthy hives are less susceptible to disease and possible damage from pesticides



The above **Treatment Zone Map** notes our operational zones that divide the county into serviceable sections, for example our nightly adult shift can normally complete an entire zone in one night. Dividing the county allows us to better track and respond to mosquito threats. There are times when only a portion of the zone may need treatment, i.e. treatment (larval or adult) may not be necessary throughout the entire zone.

Summary of Control Products

Altosid® XR Briquets (2.1% (S)-Methoprene) - larvicide used in catch basins, 1 briquet/CB

Altosid® P35 (4.25%(S)-Methoprene) - larvicide used in floodwater habitat, 10 lbs./acre

Altosid WSP® (4.25% (S)-Methoprene)- larvicide used in catch basins, 1 packet/CB

Bti (Serotype 14) -corn cob granule- larvicide used in a variety of **floodwater** habitat including flooded fields, woodland pools, and roadside ditches, 2.5 - 20 lbs./acre

DeltaGard® (2.0% Deltamethrin) - adult control **ULV product** used in urban and suburban areas during mid to late summer months at 10.5 -12 fl.oz./minute. Active ingredient = 0.00045 to 0.00067 lbs. Ai/A

Duplex™- G (5.35% Bti, 1.6% Methoprene) - larvicide used in **floodwater** habitat, 10 lbs./acre

Fourstar® Briquets -180 (6% Bs, 1% Bti) - larvicide used in neglected pools or catch basins, 1 - 2 briquets/100 sq. ft. or 1 briquet/CB

Larviciding Oil (BVA2) -used where pupation has occurred in **floodwater** habitat, 3 - 5 gallons/acre

MetaLarv® S-PT (4.25% (S)-Methoprene) - larvicide used in floodwater habitats, 2.5 to 10 lbs./acre

MetaLarv® XRP (4.25% (S)-Methoprene) - larvicide used in catch basins, 1 pouch/CB

Permethrin 4 - 4 (4% Permethrin) - adult control **ULV product** used in all temperatures at 5-10.5 fl.oz./minute Active ingredient = 0.001 - 0.007 lbs. Ai/A

Remoa Tri® (4% Fenpropathrina, 0.11 lbs Abemectin, 0.08 lbs. C-8910) adult control product used to manage insecticide resistance, 0.00157, 0.00059, 0.00039 lbs. Ai/A

Sumilarv® 0.5g (0.5% Pyriproxyfan) - larvicide used in catch basins, 1 - 2 packets/CB

VectoBac® WDG (37.4%Bti) - wide area larviciding, 1.75 to 14oz./acre

VectoLex® WDG (51.2%Bs) - sewage lagoon treatment, 0.5 - 1.5 lbs./acre

VectoMax® WSP (2.7% Bs. 4.5% Bti) - larvicide used in **catch basins**, 1 packet/CB

*Product use may change as needed in response to control needs.

Source Reduction

Source Reduction is the removal of mosquito breeding habitat through **eliminating standing** water. This practice is the most effective way to control mosquitoes around the home and community. SCMAC's Source Reduction Program seeks to reduce the number of mosquitoes and mosquito-borne disease within communities through **education and habitat removal**. The following source reduction strategies are employed to achieve this goal:

- Homeowner education and consultation
- Search and Inform Program
- Household Scrap Tire Collection Program
- Neglected Swimming Pool Program

Mosquito breeding habitat (standing water) comes in various forms, varying from artificial habitats such as tires and buckets to natural habitats like floodwater found in low areas. In either case, the elimination of these mosquito sources is often possible; simply dumping or removing artificial habitats or draining standing water can eliminate local mosquito threats.

Public Education

Homeowner Education and Consultations

In addition to providing public awareness via our website and social media of the variety of mosquito breeding habits, homeowners may have questions in regard to eliminating standing water around their home or property. We can **determine breeding habitat**, and if asked, refer the homeowner to other resources which may assist with its elimination. We occasionally refer residents to follow-up with the **Saginaw County Public Works Department** or their **local government** for drainage questions or **Saginaw County Health Department** for man-made mosquito habitats such as swimming pools and scrap tires that cannot be simply "dumped" or removed. There are regulations and codes that define what and how certain habitats can be eliminated and managed.

Search and Inform Program

SCMAC prides itself in providing residents with **useful information** that can help control mosquitoes in and around their yard and community. Our Search and Inform Program entails technicians **canvasing yards and neighborhoods** educating homeowners as to sources of mosquito breeding around their home; specifically, artificial habitats that can simply be emptied or removed. This practice is completed whenever a **resident requests** a habitat check/treatment service, while also prioritizing and surveying entire neighborhoods during periods of increased mosquito-borne disease activity, often targeting urban and suburban communities. The following mosquito habitats are frequently encountered by technicians: buckets, tarps, bird baths, toys, tires, swimming pools, flowerpots, trash cans, kiddie pools, and ornamental ponds.



Household Scrap Tire Collection

In 2004 legislation was passed in Michigan making it illegal to dump scrap tires into landfills. This action resulted in an abundance of tires dumped in ditches, fields, woods, and yards. Annual funding assistance is sought through the Michigan Department of Environment, Great Lakes and Energy's EGLE Scrap Tire Cleanup Grant. This grant helps offset costs associated with our Household Scrap Tire Collection Program and reduces the number of tires that promote mosquito breeding. As a service to Saginaw County residents and an effort to reduce the number of mosquitoes, SCMAC will accept scrap tires at our facility, three off-site tire drives, and continue to work with communities to assist with clean-up efforts that remove tires from the landscape. Our Scrap-Tire program runs from May 1st through August 31st with collected tires processed through Environmental Rubber Recycling (Flint, MI).

Tire collections are limited to the following:

- Saginaw County residents only
- · Limited to 10 household scrap tires (no rims) per address per year
- Passenger-size or smaller tires only, includes car and pickup truck tires
- · No semi, tractor, or larger tires accepted
- · Businesses and other revenue generating enterprises are excluded from program







Neglected Swimming Pool Program

Neglected swimming pools are capable of breeding very large populations of *Culex* mosquitoes, the primary West Nile virus vector. Mosquito Control, along with the **Public Health Department**, take these habitats very serious as they pose a threat to public health. Swimming pools are monitored for mosquito breeding routinely throughout the season, as well as kiddie pools, hot-tubs, and ornamental ponds. This program has achieved much success with many pools removed or reopened.

Historic Source Reduction Projects

SCMAC has drained a large amount of standing water over the last few decades. Mosquito Control provided engineered drainage solutions, **prior to 2015**, to qualified residents through a SCMAC funded drainage program. This program was eliminated due to engineering and construction costs far exceeding those associated with larviciding. Nearly 400 projects were completed with over 1,000 catch basins placed to eliminate standing water in yards, parks, churches, ball fields, and other community areas. It is important that SCMAC **monitor** these projects and **treat** the catch basins for mosquitoes. Digitized plans are available for public and municipalities for reference.

Vehicle & Equipment Maintenance

SCMAC's Vehicle Maintenance Department performs major and routine vehicle maintenance on the agency's vehicle fleet as well as other participating Saginaw County departments. Additional responsibilities include the repair, fabrication, and maintenance of the following mosquito control equipment: truck-mounted and handheld ultra-low volume (ULV) sprayers, compression sprayers, granular applicators, mopeds, bikes, e-scooter, tire trailers, and other agency equipment. The work is completed in a fully equipped 2,500 square foot vehicle maintenance facility. The facility consists of four bays (1 hoist, 1 wash bay, and 2 oil change pits).

Preventative Maintenance

In addition to routine maintenance. preventative maintenance is crucial in proper working order and ensuring longevity of our equipment and vehicles, while prioritizing safety and functionality in the field. The agency utilizes a vehicle and equipment maintenance sheet that is reviewed by the staff at the start of each shift to ensure the equipment is in proper working condition. Seasonal employees assigned a vehicle must complete a "Daily Truck Checklist." This guides them through a thorough inspection of the vehicle which includes checking fluid levels, taillights, blinkers, strobe lights, headlights, tire conditions, tire pressure, etc. While our mechanic maintains the equipment and vehicles all staff are responsible for ensuring that they are in the proper working order.

Vehicle Care

SCMAC takes pride in the appearance of our trucks and equipment; therefore, a finishing and detailing shop was built in the main building. Employees not only paint new vehicles, with our "trademark" optic yellow color, they repair dents, dings, and scratches which occur throughout the season. Most vehicle repairs are performed during the winter months saving the agency money.

Fueling Facility

SCMAC operates a secure 24-hour fueling station providing gasoline for mosquito control, as well as 14 other county departments, and serves as an emergency fuel site for local emergency services. SCMAC utilizes a Fuel Master system which is supplied by a 6,000 gallon above ground tank. The system logs all fuel transactions using a ProKey and pin number combination.

L E V E L	CRITERIA	RESPONSE
	Below Normal to Normal Mosquito Populations All New Jersey Light Traps less than 200 mosquitoes/night CDC Traps average less than 100 mosquitoes/trap/night Complaint/Service Calls average less than 100/ day Disease Detection No Detection of Disease	Control operations target nuisance and/or disease vectoring mosquitoes in locations with highest mosquito densities Target larval breeding sites associated with vector and/or nuisance mosquitoes Continue routine surveillance Priorities accepted: 10 Wednesday, 25 Thursday/Friday Medcerts treated routinely with zone sweeps
	Normal Mosquito Populations Less than 3-5 New Jersey Light Traps greater than 200 mosquitoes/ night CDC Traps average less than 250 mosquitoes/trap/night Complaint/Service Calls average 100-175 /day Disease Detection (Background Activity). Occasional positive detection in mosquito collections and citizen reported dead crows and blue jays. Normal for time of year	Control operations target nuisance and/or disease vectoring mosquitoes in locations of highest mosquito densities Increase larval control in areas with increased virus, vector, and nuisance activity Noted Community Use Sites receive adult treatment during zone sweeps Monitor potential hot spots using various surveillance methods Priorities accepted: 10 Wednesday, 25 Thursday/Friday Medcerts treated routinely with zone sweeps
1 1	Elevated Mosquito Populations 3-5 New Jersey Light Traps greater than 200 mosquitoes/ night for consecutive collections CDC Traps average greater than 250 mosquitoes/trap/night Complaint/Service Calls average 175-200/ day Elevated Disease Detection (Mosquito-Borne Illness Advisory) Noted increase in mosquito and dead bird reporting infection rates Multiple detection noted throughout the county Arrival of new mosquito-borne disease or vector	Repeated nightly spraying in high-risk areas and increased larval surveillance/control in areas most likely to breed disease vectoring mosquitoes Continue spraying nuisance mosquitoes in areas with high mosquito densities Increase disease surveillance in areas with noted mosquito disease activity. News release encouraging citizens to use personal protection Priorities reduced: 5 Wednesday, 10 Thursday/Friday; Priorities for civic/community events only, not for complaint calls Medcerts treated routinely with zone sweeps AM spray shift implemented as needed to assist with nights
ľ	Mosquito Populations Substantially Above Historical Levels New Jersey Light Traps with more than 5 traps greater than 200 mosquitoes/ night for consecutive collections CDC Traps average greater than 500 mosquitoes/trap/night Complaint/Service Calls average greater than 200 per day Highly Elevated Disease Detection During Weekly Testing Period Single human case of mosquito borne disease Mosquito and bird surveillance higher than historical levels Increase in mosquito-borne disease or vector	Focus control efforts to high-risk mosquito populations and areas commensurate with arbovirus indicators for risk Control operations will continue to target nuisance mosquitoes in locations of highest mosquito densities Increased disease surveillance to obtain estimates of mosquito transmission frequency in targeted areas News release encouraging citizens to use personal protection Total ban on accepting new Priorities (ONLY honoring requests already in system) civic/community events treated; Medcerts treated no more than once every 10 working days (treated as a long drive only if within 10-day time frame) Night Shift (adulticiding only): 6 days a week Sunday - Friday AM and weekend spray shift implemented (weather dependent) as needed
v	Mosquito Populations Extremely Elevated New Jersey Light Traps greater than 300 mosquitoes/ night in 5 or more traps for consecutive collections CDC Traps average greater than 1,000 mosquitoes/trap/night Complaint/Service Calls average greater than 300/ day Extremely Elevated Disease Detection During Weekly Testing Period Multiple human cases of mosquito-borne disease Mosquito and bird surveillance infection 75% above historic data Arrival/detection of new arbovirus with multiple infectious pathways	Aggressive adulticiding and larviciding efforts in areas commensurate with arbovirus risk and surveillance Consider aerial adulticiding Consider strategies for increased disease surveillance; canceling outdoor events, closing parks, etc. Consider control on protected lands, includes no sprays and Federal/State lands Increase news releases encouraging citizens to use personal protection Total ban on Priorities except civic/community events; Total ban on Medcerts Night Shift (adulticiding only): 6 days a week Sunday - Friday, AM and weekend spray shift implemented (weather dependent) Consider requesting assistance from Centers for Disease Control (CDC) for increased disease surveillance; State and Federal (FEMA) support for

control operations

HUMAN



4-16-2

Saginaw County Youth Commission

Proposal

RECEIVED
SAGINAW COUNTY
BOARD OF COMMISSIONERS
THE 18 A IO: 57





What is the Saginaw County Youth Commission?

bring an educational experience to the SCYC that will promote voter engagement and advocacy. State University Extension in partnership with the Saginaw County League of Women Voters will Saginaw County who will learn about Saginaw County government and much more. Michigan The Saginaw County Youth Commission (SCYC) will be a group of high school students from

in their communities by become civically engaged at the local level. When young people work to important decisions are made and community members can have a tremendous positive impact In typical K-12 education, government education focuses on the federal level, and does not spend much time on local, state, or tribal governments. Local government is where many improve in their community, they are more invested, and potentially more likely to stay in Saginaw County to live, work, and play as they transition to adulthood.





Who Will Be The Saginaw County Youth Commissioners?

complete an application and one student from each district will be invited to be on district who will be a member of the SCYC. Potential Youth Commissioners will Year 1 - Each Saginaw County Commissioner will mentor a student from their the commission.

Year 2 - The number of SCYC participants may increase in year 2. Returning members may take a leadership role in the program.





How Often and When Will SCYC Meet?

The SCYC will meet monthly at the Saginaw County Municipal Building.

The SCYC will meet a minimum of nine (9) times between September - June.

- Six (6) times with Saginaw County Commissioners, MSU Extension and SLWV
- Three (3) times with MSU Extension and SLWV

Meetings will be held on 3rd Tuesday from 3:30 p.m. - 4:30 p.m. (prior to Saginaw County Commissioners' Board meetings) in the Commissioners' conference and boardroom.





Meeting Topics

September - Understanding Saginaw County, including demographic and other county data, functions of county government*

October - "Day at the County" - students take a day off from school and visit as many county departments as they can in a day - (the jail is usually a highlight) *

November - Issues Identification - youth brainstorm all the great things about Saginaw County - and then talk about the biggest problems and select one as the issue they will tackle

January - Gather additional community partners to speak on the youth's chosen issue*

February - How to advocate for political change, related to their issue

March - Understanding different levels of government* or **

April - Preparing the presentation

May - Presenting recommendations to the Board

June - Graduation, evaluation, and celebration and Introduction of the Class of 2026*

- * Meeting with Saginaw County Commissioners
- ** Potential trip to the State Capitol





SCYC Committee and Partners

Saginaw County League for Women Voters is a non-profit organization that since 1920 has advocated for voter education, registration and advocacy. Our goal is to have 100% of our understand county and local government and learn how to advocate for policies that will Saginaw County high school seniors registered to vote before receiving their diploma, improve Saginaw County.

Government for over 40 years. MSUE has literally "written the book" - The Guide to Michigan been replicated in at least 6 other counties in Michigan, as well as Pennsylvania and Florida. government for young people since 2000. The program started in Genesee County and has Michigan State University Extension: MSU Extension has been working in State & Local County Government. 4-H Youth Development has been doing county, local and tribal





SCYC Budget

- Refreshments (pizza and drinks)
- Saginaw County SWAG
- Printing Materials
- If they go to Lansing for 4-H Capitol Experience it is \$365/person - community donors

Total Budget \$6,000





	Proposed Imeline
March 21, 2024 - 8:30 am SLW	SLWV presentation to Saginaw County Department Heads
April 1, 2024 - 4:00 pm SLW	SLWV presentation to Saginaw County Human Services Committee
April 2, 2024 SLW	W send written communication to Saginaw County judges
April 16, 2024 - 5:00 pm	W presentation to Saginaw County Board of Commissioners
April 30, 2024 writt	written communication to Saginaw County school superintendents
	SCYC Committee Meeting
May 15, 2024 relea	release applications to school districts
June 1, 2024 stud	dent selection
June 5, 2024 Sag	Saginaw County Commissioner Leadership Group announcement





LEAGUE OF WOMEN VOTERS* OF SAGINAW COUNTY **Questions and Answers**

Saginaw County Youth Commission

