Mission Statement

*Michigan State University Extension helps people improve their lives through an educational process that applies knowledge to critical issues, needs and opportunities.*
MESSAGE FROM THE DISTRICT COORDINATOR

2016 saw the continued partnership of Michigan State University Extension and Oakland County. Through this partnership, county residents experienced over 43,000 points of contact where they received resources to enrich their lives. MSU Extension continues to work with local residents to improve their environment, develop their youth, live healthier and much, much more. We thank you again for your continued partnership. We look forward to the future and all that it will bring in service of Oakland County residents!

Sincerely,
Richard Wooten
District Coordinator, District 11

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MEASURING IMPACT

4-H Youth Development ............................................................... 11,104
Volunteers .................................................................................... 439
Health Nutrition & Wellness ......................................................... 5,238
Natural Resources ................................................................. 2,024
Volunteers .................................................................................... 154
Community Food Systems and Safety ........................................... 4,350
Community & Financial Development ........................................... 1,063
Product Center ............................................................................. 150
Master Gardener/Consumer Horticulture ........................................ 16,476
Volunteers .................................................................................... 673
Garden Hotline ............................................................................ 2082
TOTAL IMPACT ........................................................................... 43,753

DIGITAL OUTREACH

Technology has come to shape almost every aspect of the lives of Michigan’s residents. Michigan State University Extension has spent the past several years working to integrate technology into the delivery of many of its resources. In addition to the diverse array of services MSU Extension has provided directly to Oakland County residents, the expanded digital reach of our resources can not be ignored!

In 2016, the MSU Extension website received 107,290 visits from Oakland County.

Those Oakland visitors produced 230,490 individual page views while browsing the Extension site.

54% of website visitors accessed the site through mobile devices.
MSU Extension’s 4-H Youth Development Program is designed to uniquely prepare Oakland County’s youth to be successful in present and future endeavors. It provides developmentally appropriate opportunities for participants aged 5-19 to acquire life skills and utilize them throughout their lives. Youth are able to participate in experiential learning opportunities across the county through 4-H clubs, after-school programs, school enrichment programs, camps, mentoring programs and local, state, and national events. In 2016, MSU Extension staff recruited, trained and provided oversight to over 400 adult and teen volunteers. These volunteers delivered 4-H educational programs focused on life skills, science literacy, leadership, civic engagement, and workforce preparation throughout Oakland County. Some key program highlights from 2016 include:

4-H Club Programming
Interests of club members expand and change throughout the years. In 2016, there were 55 community clubs and 2 after-school clubs throughout Oakland County where 903 youth met regularly to explore a variety of project areas.

4-H Tech Wizards Mentoring Programs
National 4-H and the Office of Juvenile Justice and Delinquency Prevention (OJJDP) provided funding to Michigan State University Extension to coordinate the 4-H Tech Wizards program. This funding allowed for a fourth year of successful mentoring at Owen Elementary and Alcott Elementary Schools in the Pontiac School District; and Webber Media Arts Academy, a charter school in Pontiac. 4-H staff partnered with Chrysler Corporation, the Pontiac Optimist Club, Pontiac Downtown Business Association and the Pontiac School District to recruit mentors. Eight caring adult volunteers worked as mentors to 33 youth on a weekly basis for an entire calendar year. Each two-hour site meeting allowed for the mentors and their mentees to develop strong relationships. Exploring STEAM (Science, Technology, Engineering, Art and Math) activities facilitated communication and helped strengthen these relationships. With the employment field increasing its number of new jobs in STEAM industries, 4-H staff designed many of its hands-on activities to correlate with common core standards. Empowering youth to develop their confidence, communication, critical-thinking and collaboration skills is a focus of 4-H Youth Development.
Developing Youth and Communities, continued

4-H Animal Programming Expanded during 2016

Animal projects have been around since 4-H youth development was established. In Oakland County, 5,884 youth participated in programs with animal projects where they learned how to raise, train, and show many types of animals.

With the help of a $15,000 grant from the Michigan 4-H Foundation as well as the support of the Americana Foundation, the animal programs at MSU Tollgate Farm & Education Center were greatly expanded. Equipment was purchased to help house and care for the addition of many new animals. With the addition of sheep and calves at the farm this year, three livestock workshops were attended by youth ages 9-19 providing hands-on experience with calves, goats and sheep. Participants learned basic terminology, anatomy, care and nutrition as well as fitting and showing tips for the fair increasing their knowledge of farm animal management.

4-H grant funds, along with the construction of an outdoor fenced riding arena funded, in part, by the Americana Foundation allowed Tollgate to hold its first week-long beginners horse camp. Twenty-four campers ages 9-15 along with seven 4-H teen counselors worked together developing relationships in trust and horsemanship with six horses loaned to Tollgate by 4-H members. Educational sessions included history, function, breeds, colors/markings, nutrition, parasites, and grooming. Campers also benefitted from some special guest instructors, including professional trainers, a veterinarian and farrier. And, of course, the hands on activities included a stick horse craft and beaded horse shoes! It was a terrific event - developing a new generation of equestrians!

4-H Science Comes in All Shapes and Sizes

Science can be found everywhere and cuts across all program and project areas. Below are just a few highlights:

- 4-H Eco-Challenge 2016- Explore the Deep: A 5-day experience where youth were exposed to water-based ecosystems and built underwater ROV’s to explore the depths of the freshwater pond at Indian Springs Metropark. During this camp, participants built an ROV from a kit comprised of low-cost, easily accessible parts, following a curriculum that teaches basic engineering and science concepts with a marine engineering theme. Youth learned many life skills and technical skills including teamwork, electronics, buoyancy, native and invasive plants, ecology, community service, communication, resilience, overcoming obstacles and setbacks, engineering and microbiology.

- 4-H Lego Legion hosts Robofest: The 4-H Lego Legion Club along with support from the Oakland County 4-H Office and Lawrence Technological University hosted a regional qualifying event for Robofest. Robofest is a festival of competitions and events with autonomous robots that encourages students to have fun while learning principles of Science, Technology, Engineering, and Math (STEM) and Computer Science. Students design, construct, and program the robots.
Developing Youth and Communities, continued

- **Maker Girl Mania**: a day where girls from Kindergarten through 7th grade come together and become artists, coders, inventors, makers and builders. Held at Clarkston High School, participants experienced an interactive activity that served approximately 500 youth and their parents in April, 2016.

- **4-H National Youth Science Day**: a day designated for all 4-H youth to celebrate science. This year’s experiment, Rockets to the Rescue, was delivered to 100 youth from across Oakland County. Youth designed and built an aerodynamic food transportation device that could deliver a payload of nutritious food to disaster victims.

**4-H Prepares Youth for the Workforce**

- **The Stewards and Stewards in Training (SIT) program**: The MSU Tollgate Education Center summer camp nearly doubled in size in its second year. Youth ages 12-19 served as mentors and role models for younger campers while honing their leadership skills. This program also focused on career development with opportunities to talk with professionals such as a veterinary technician and the Oakland County Water Resources Commissioner. Youth in this program also had the opportunity to attend resume and interview workshops.

- **Exploration Days**: Oakland County 4-H sent 109 participants to Youth Exploration Days at MSU’s campus. Youth from all over the state gathered on campus to spend three days and two nights taking mini-classes in everything from canoeing to business management and fashion. This pre-college program helps youth imagine themselves in a college setting and their career beyond.

**4-H Day Camps**

Oakland County 4-H had 12 youth participate in the Oakland County 4-H Cloverbud Camp. This 3-day camp experience is designed for 5-8 year olds to learn skills like cooperation, teamwork, and communication. Youth participated in active play at the Paradise Peninsula Playscape as well as took part in projects like chemistry, nature hikes, crafts, and more. Additionally, 5 teen volunteers gained leadership experience by helping during the camp.
Ensuring Safe and Secure Food

Reducing foodborne illness through education of individuals, small businesses

The National Institutes of Health estimates that every year, 48 million people in the United States become ill and 3,000 die from pathogens in food. Causes range from outdated home food preservation practices to unsafe sanitizing practices at public events and small businesses. Since 2013, MSU Extension food safety and preservation programs have taught almost 10,500 Michigan residents safe food handling, food preservation and methods to reduce foodborne illness.

Participants include youth, nonprofit organizations that prepare food for the public and food preservers who want to create safe products for their small businesses.

Through face-to-face and online learning, Michigan communities receive high-quality, research-based education using U.S. Department of Agriculture guidelines for safe food preservation.

- 95% of participants report they will follow research-based and tested recipes for home food preservation.
- 86% of youth participants gained knowledge about food spoilage organisms and learned how the organisms’ growth can be slowed or prevented.
- 91% know correct methods of cleaning and sanitizing surfaces.

Food Safety

The purpose of the Food Safety and Nutrition Hotline in Oakland County is to reduce the incidence of food borne illness caused by unsafe food handling practices and disseminate research based information on food safety, food preservation and nutrition.

The Oakland County Food Safety and Nutrition Hotline received over 4,350 calls and emails in 2016. The most commonly asked questions were in reference to dates on packaged foods, safe preservation methods and internal temperatures for prepared foods as well as keeping food safe during or after a power outage. Many calls are seasonal in nature. Holidays, and the days immediately following a holiday prompt calls about cooking foods safely, especially with regard to preparing foods ahead of time or how long leftovers may be safely kept. Preservation calls increase greatly at the end of the summer and food safety questions increase after power outages following severe weather.

A follow-up survey was done to evaluate callers’ satisfaction with the hotline. Of those surveyed, 67% were return callers; 97% said they would call again in the future if they had another question; 92% were satisfied with the advice they received and 90% said they followed the advice given.
Ensuring Safe and Secure Food, continued

**Farmers Market Programming**

In partnership with the Oakland County Parks and Recreation Department and a grant through Genisys Credit Union, 31 presentations were given at Farmers Markets throughout Oakland County. Some focused on healthy programs and activities for children, including a collaboration with the Healthy Oakland Partnership and two Family Market Days where free produce was handed out to residents along with information on food safety and nutrition and accessing food assistance benefits. Other activities included cooking demonstrations, pressure canner gauge checks and information used to increase awareness of locally grown produce. These programs not only promoted healthy, safe eating, but also impacted the local economy. On a number of occasions, vendors would sell out of a product that was used in a demonstration at the market. Through these farmers’ market programs, there was direct and indirect contact with over 3,000 people.

**Senior Market FRESH**

This program includes nutrition education and access to healthy non-processed fruits and vegetables to low income seniors throughout Oakland County. Educational programs were presented at senior centers, farmers markets, libraries and senior housing complexes. Barriers such as transportation difficulties were addressed and reduced by working with the senior centers and SMART buses. This helped to increase redemption rates of the coupons in Oakland County.

Through education and understanding of safe food preservation and handling, seniors were able to use their Senior Market FRESH coupons to purchase fresh produce and preserve it so that they could have nutritious food to eat throughout the year. Participants also received information on managing food assistance benefits including “Double Up Food Bucks” and matching SNAP funds.
MSU Tollgate Farm and Education

MSU Tollgate Farm is a special place that brings together a community of passionate and responsible stewards of our agricultural community. Each day we embark on an educational journey exploring the forest, fields, pond and open spaces. Whether it is with a group of young people, teachers, or families, MSU Extension strives to bring knowledge and resources from MSU to communities in a way that is engaging, exciting and impactful.

Scholarships Making a Difference

MSU Extension places a major emphasis on reaching people of all backgrounds, income levels, and abilities. Through grant funding provided by the Americana Foundation, Tollgate Farm was better able to support healthy, placed-based programming for all community members at Tollgate in 2016. Scholarships were provided to schools, campers, and stewards-in-training to reduce the cost for participants and at the same time maintain high quality programming.

- Scholarships were awarded to 14 high need schools and 18 families
- $5,303 of aid was provided to schools, families, and Fall Farm Sprouts

Project-Based Learning Field Trips for Schools

What is project-based learning? One example is the “Chick Hatching Journey” that two classes from Novi Schools participated in. A Tollgate educator visited the classrooms to enlist the students’ help in incubating and hatching chicken eggs for the farm. As citizen scientists in the classroom, students researched and set to work, visiting the farm to experience embryology and the chickens in their farm habitat. The project culminated with a classroom celebration for parents and children where Tollgate was highlighted for their part in the project. Eventually, the newly hatched chicks were returned to the farm to become our egg layers in the fall. A full cycle collaboration. Project-based learning stresses this full-cycle, real world approach.

Responding to requests from farm visitors, several new programs were piloted in 2016. One of these was started by the area Lego League Junior and First Lego League teams. They were researching the plight of the honeybee and animal human interactions. Tollgate provided the opportunity for the clubs to meet with master beekeepers who shared information about bees and beekeeping that connected to their clubs projects.
Area schools have high standards for students in STEM education. Tollgate’s project-based approach to field trips compliments the school setting by allowing students to learn from experience and provides a real-world context for learning. Programs such as Maple Sugaring, Baby Animals, Nutrient Trail, or Sheep to Sweater, to name a few, provide an academically rigorous and fun setting for learning. We take pride in meeting the needs of local schools through our field trip opportunities.

In 2016, school programs reached:
- Over 48 schools and school age groups
- More than 2,800 school-age children
- Southfield, Hazel Park, Farmington, Novi, and Walled Lake

**Reaching our Community’s Youngest Members**

Tollgate offers an ideal setting for preschool-age children to engage in experiential learning. By offering programs that involve young children in the farm community, they begin to mature in their self-confidence and sense of independence with the guidance of the educational staff. The farm quickly becomes a place in which our young visitors feel safe and comfortable to ask questions, test new ideas, and take risks in order to grow in their skills and abilities, in addition to developing an appreciation for our local environment.

**Connecting Preschoolers to Local Food Sources**

“I want to be a farmer when I grow up!” exclaimed a four-year-old preschooler on her way to visit the goats residing in the Community Supported Agriculture (C.S.A.). She had participated in the Spring Farm Sprouts Preschool Program and returned in the fall with great enthusiasm. Children in the program immerse themselves in authentic tasks and active learning. The preschool years are a particularly important period in developing lifelong habits and preferences. The opportunity to grow, tend, harvest, taste, and compost produce is a central focus of the Farm Sprouts curriculum and are skills they carry with them as their reach into the community grows.

**Farm Story Hour with Novi Public Library**

This summer Tollgate partnered with Novi Public Library to host the first Children’s Garden Story Hour series. A Novi librarian engaged children ages 2-5 years through children’s literature and music. Then visitors were guided through hands-on learning activities complimenting the story portion. Program themes such as gardening, farm animals, and food systems provided visitors with the opportunity to participate in a variety of activities, including hands-on experiences with the farm animals, process-based art projects, and science experiments. This program reached 84 youth with their accompanying caregivers during a series of four, bi-weekly story hours taking place in June through August.
2016 MSU Tollgate Farm Pumpkinfest

Pumpkinfest 2016 drew the community together for a festive fall event celebrating the harvest and raising funds for educational programming. Starting in 2014, the event has grown to become an iconic harvest time destination for metro-Detroiters. Tollgate’s 2016 Pumpkinfest included educational exhibits and collaboration with community members far and wide, including our primary sponsor, Vibe Credit Union. Vibe’s involvement increased in 2016 to include larger support and creative marketing of the event. Support and in-kind donations from Meijer and several community restaurants helped us feed over 300 volunteers. The Ann Arbor Hands-On Museum provided experiential learning stations, and the MSU Bug House brought exciting entomology exhibits. Face painting, bounce house, target practice booths, archery, and pumpkin decorating kept young ones squealing with delight. Novi and Walled Lake Public Libraries partnered with local children’s authors to provide story time. New this year was a living history component at the pumpkin patch where costumed interpreters reenacted French colonists and Native Americans cooking harvest foods. Plans for 2017 include more learning opportunities and new family experiences. Thank you to our many partners for helping make this event a success yet again!

- 2016 attendance - 5,500 visitors
- Over 300 volunteers for two days
- 1,000 volunteer hours valued at over $23,000

Tollgate Conference Center: A Destination

As a destination for corporate, MSU, and community organizations to hold gatherings, the Tollgate Conference Center and barn are one of a kind. This year a commitment was made to updating these facilities to keep our patronage coming back. New photography was hung, the rooms were painted, and new carpeting was installed. We welcomed over 4,800 people through the Conference Center doors this year. The Conference Center is a full-service meeting facility ideal for the business and educational communities. Picnics, hayrides, and tours can contribute to the experience. If you are looking for a unique venue, Tollgate is the perfect choice for your special event!
Entrepreneurial Education

MSU Extension and the MSU Product Center help Michigan entrepreneurs develop and commercialize high-value, consumer-responsive products and businesses in the food, agriculture, natural resources and bioeconomy sectors. When you support MSU Extension, you help participants understand the economic, environmental and social benefits of purchasing local and regional foods. You also help young people develop business skills that will help them succeed as adults and help communities capitalize on their ecological, social and cultural assets. This fuels the economy by creating and retaining jobs, and helps ensure a healthy tax base.

Building Entrepreneurial Spirit and Skills

As the backbone of the economy, small business owners play a critical role in the prosperity of the nation. But to be a successful entrepreneur, one must have not only the ambition to take a risk, but also the business sense and skill to make a profit. To ensure the business owners of tomorrow are triumphant in their future endeavors, they need to learn the entrepreneurial concepts that pave the way for success.

MSU Extension is helping to meet this need by providing youth and the adults that support them with the skills and resources necessary to turn ideas into business ventures. Through simulations and workshops, youth learn how to develop business plans and operate their own companies, as well as how to be more entrepreneurial in their everyday 4-H experiences. In 2016, these programs were delivered to nearly 1,200 people statewide.

In 2016, MSU Extension formed a new partnership with Samaritas (formerly Lutheran Children Services) in order to provide health and nutrition programming as well as entrepreneurship education to Samaritas clientele who were newcomers to the United States and who had fled wars in their home countries. MSU Extension staff successfully delivered 2 eight week sessions of the Healthy Food Matters curriculum, ServSafe Food Safety training and information about the Michigan Cottage Food Law.
The result was approximately 60 Iraqi and Syrian refugees receiving nutrition and food safety classes and an introduction to the MSU Extension Product Center with the Cottage Food Law course. In addition to the classes, a field trip with all participants and their children was attended at MSU Tollgate Farm and Educational Center in Novi, MI. At the Tollgate Center, participants saw the farm operation and animals, picked organic apples, visited the vegetable gardens, saw the beehives and talked to the beekeeper, as well as buy fresh, organic honey, and learned first-hand how maple syrup is made!

As a result of these efforts, the following changes occurred:

- 81% improved in one or more food resource management practices.
- 56% increased their fruit consumption.
- 40% more often planned meals in advance.
- 73% more often used “Nutrition Facts” on food labels to make food choices. 88% improved in one or more nutrition practices.
- 56% improved in level of physical activity.

Participants now have food safety knowledge for home and food handlers’ jobs as well as information on business start-ups in cottage food or commercial production with the Product Center. They have gained knowledge about food safety practices, including hand washing and personal hygiene. These classes were designed to help refugees acclimate to the American system of food safety, nutrition and starting a successful business in cottage food, utilizing information with possible job opportunities in food handling, and food service.
Keeping People Healthy

When you support MSU Extension, you help participants learn safe food handling practices, increase their physical activity and improve the quality of their diets. Encouraging these healthy behaviors helps reduce food and healthcare costs by helping prevent chronic health conditions and providing safe environments throughout a person’s life span.

Improving Nutrition and Increasing Physical Activities in Michigan Communities

Limited income and poor nutrition affect quality of life and can increase healthcare costs. The Centers for Disease Control and Prevention reports that more than 30 percent of Michigan adults are considered obese, and one out of every three deaths in Michigan is caused by cardiovascular disease, influencing the quality of life and adding billions of dollars each year in economic burden.

MSU Extension delivers affordable, relevant, evidence-based education to help residents in urban and rural communities stay healthy throughout their lifespans. Programs teach participants how to buy and prepare nutritious, budget-friendly foods and increase physical activity. In 2015 alone, these programs reached more than 112,000 adults and youth across the state in over 1,600 different locations.

- 79% of youth participants improved their abilities or gained knowledge about how to choose foods according to Federal Dietary Guidelines.
- 79% of adult participants made a positive change in at least one nutrition practice, such as preparing foods without adding salt, or using the Nutrition Facts labels to make food choices.
- 73% of adult participants made a positive change in at least one food resource management practice, such as planning meals in advance or comparing prices when shopping.

In 2016, the MSU Extension Nutrition and Physical Activity team has reached the following numbers of SNAP-Ed and EFNEP participants throughout Oakland County:

- 230 SNAP-Ed and EFNEP adult series participants.
- 339 SNAP-Ed adult presentation participants
- 1620 SNAP-Ed and EFNEP youth series participants.
- 49 SNAP-Ed youth presentation participants
Policy, System and Environmental Interventions

In 2016, MSU Extension Nutrition and Physical Activity (NPA) work team launched Policy, System and Environmental (PSE) Interventions. PSE uses comprehensive interventions that address multiple levels of the socioeconomic model (SEM) to reach the SNAP-Ed target population in ways that are relevant and motivational to them, while addressing constraining environmental and/or social factors. The approaches complement the direct education. The organization that receives the consultation and technical assistance is ultimately responsible for adopting, maintaining, and enforcing the PSE change. In Oakland County, the NPA team has completed PSE interventions at one school, and two worksites.

Comida Saludable Familias Saludables (Healthy Food, Healthy Families)

Comida Saludable Familias Saludables is a 6-week program that offers participants knowledge of MyPlate, food groups, nutrition label reading, food safety, healthy meals on a budget, and portion sizes. This program helps participants, especially those with children, and their families with gaining skills and knowledge to maintain healthy lifestyles. At the end of the program, each participant will receive a small gift as well as a graduation certificate. Two different series were held in Oakland County and the participation numbers were captured in the Snap and Efnp numbers stated earlier in the article.

Strong Women, Healthy Bones

Strong Women, Healthy Bones program is a 12-week program geared towards midlife and older women that encourages participants to eat clean and to exercise (Men are not excluded from participating in this program). Clean eating means to consume whole foods such as grains, vegetables, fruits, beans, nuts, seeds and to reduce the amount of processed foods consumed. Research has shown that this program helps to increase muscle mass, strength and balance. It also has been shown to improve bone density and reduce risk for osteoporosis, diabetes, heart disease, arthritis, depression and obesity; while aiding in improved sleep.

Healthy Eating Adds Up

Healthy Eating Adds Up is a 6-week program geared toward helping adults with cognitive abilities learns the basics in regards to cooking, nutrition and physical activity. Participants are able to identify foods from the five food groups and learn about MyPlate and how it relates to them and their food choices. They also learn hands on how to prepare healthy meals, snacks and learn exercises and movement as it relates to physical activity.
When you support MSU Extension’s natural resources education programs, participants learn about income-generating opportunities, ecological principles, natural resource issues and the role of natural resource professionals. They also explore public policy issues related to environmental stewardship. Our programs can lead to increased income for families that retain their natural resource assets, help landowners become better stewards of their land, and protect land management opportunities for future generations. Better land stewardship benefits communities by protecting and enhancing Michigan’s natural resource assets.

In 2016, participants engaged in a number of natural resource programs, including classes, programs, hands-on demonstrations, displays/exhibits, and one-on-one consultations. Total numbers served in 2016: 2,024 (1,705 adults + 319 youth)

**Michigan Conservation Stewards Program**

2016 marked the return of a new Michigan Conservation Stewards Program (CSP) to Oakland County. The Mission of CSP is to deliver high-quality, locally-based training opportunities to create an informed Michigan citizenry who will practice community-based volunteer conservation management activities, and who will play an integral role in restoring and sustaining healthy ecosystems throughout Michigan.

Last offered in 2013, the program underwent some significant changes, including an updated ecosystem-based management curriculum delivered using a blend of in-person, field, and online learning modules, a reduction in the number of class sessions, more in-person instructional time spent outdoors and focused on outdoor, hands-on learning, and sessions being sited at particular locations which could best support the topic being presented. Sixteen individuals were trained through the Oakland training program.

Field-based, classroom, and online sessions offer hands-on learning opportunities focused on Michigan conservation heritage, ecological foundations, terrestrial ecosystems (grasslands and forestlands) and management, aquatic ecosystems (lakes, streams, wetlands) and management, and ecosystem threats (climate change and invasive species). Participants also completed a capstone, or applied project on a topic of interest, either working with a group of participants or independently.
CSP Oakland partners, in 2016, included Oakland County Parks, Oakland County Economic Development & Community Affairs, MSU Tollgate Farm, E.L. Johnson Nature Center, North Oakland Headwaters Land Conservancy, Oakland County Cooperative Invasive Species Management Area, Cranbrook Institute of Science, Michigan Natural Features Inventory, Michigan Nature Association, Clinton River Watershed Council, Huron Clinton Metropolitan Authority, Michigan Department of Natural Resources, and Friends of Highland Recreation Area. Participants learn about Grasslands Ecosystems and Management from Michigan Natural Features Inventory staff at Lakeville Swamp in Addison Township.

A few participants shared how their participation in the program impacted them:

- “It is very helpful to connect with individuals and organizations and resources that I may have been interested in volunteering or participating with but did not want to do so on my own/as an individual. I now feel part of the local conservation community and brave enough/connected enough to continue with organizations.”
- “Being part of a program of engaged, curious and dedicated students that get to meet with experts and practitioners in the conservation field isn’t just a unique experience—it is inspiring.”
- “I have gained a much deeper appreciation for the local ecosystem, its natural history, and the complex web of interactions among plants, insects, birds, people, and systems that determine the health of the ecosystem. I feel energized to be introduced to a community of volunteers working to conserve our environment for the future.”

The Oakland county program has now trained a total of 154 volunteers in 6 total programs held since it was first piloted in 2006. Additionally, MSU Extension in partnership with a diverse group of conservation partners helped coordinate the Conservation Stewards Program in Washtenaw County, in which 13 individuals were training. Finally, 17 individuals were also trained in Kalamazoo County. In the 10 years of the program’s existence, 413 individuals have completed the Conservation Stewards Program.

In 2016, 22 Oakland County Stewards submitted a total of 2195.25 volunteer hours. The total value of this volunteer service, multiplied by $23.54 (value of a volunteer hour as determined by Independent Sector) is $51,676.19. Additionally, these volunteers also completed 487 continuing education hours to continue building and keeping current with their technical conservation knowledge.

In 2016, the six-week, cohort-based “Introduction to Lakes Online” was delivered. This program is designed for lake residents, elected officials, educators, and lake professionals interested in learning about inland lakes. Throughout the course, participants learn how to understand the ecological and economic values associated with Michigan’s inland lakes. Inland lakes management is multifaceted and requires stakeholder involvement, and use federal, state, and local resources to improve inland lake water quality. Course instruction is provided via Michigan State University’s D2L course management interface.

In 2016, 136 participants participated in this online course, with 87% (118 people) completing course requirements and earning a Certificate of Completion. Participants represented 39 different Michigan counties as well as 7 different states (Michigan, Illinois,
Making the Most of Our Natural Assets, continued

Massachusetts, New York, Ohio, Pennsylvania, and Wisconsin). The course was taught on a week-by-week basis, allowing for online communication between classmates and instructors through topical discussion forums. The course also included pre-scheduled live chat sessions with instructors and outside experts.

From the comfort of home or office, participants have 24/7 access to six online units complete with close captioned video lectures, interactive activities, discussion forums, additional resources, quizzes and live chats with MSU Extension team members and state and local water resource experts. The six core topics of the curriculum include: (1) lake ecology; (2) lakes and their watersheds; (3) lakes and their shorelines; (4) Michigan water law; (5) aquatic plant management; and (6) citizen involvement in lake management.

As a result of having taken this course, surveys indicated the following:

- 93% of participants indicated that after the course, they planned to volunteer time to a lake association, local conservation district, watershed council, or other water related organization.
- 89% of participants indicated that after the course, they planned to educate the public about lake and stream stewardship.
- 100% of participants indicated that after the course, they planned to purchase phosphorus-free lawn fertilizer.
- 99% of participants indicated that after the course, they planned to avoid using herbicides and pesticides in sensitive shoreline areas.
- 95% of participants indicated that after the course, they planned to slow or divert storm water (rain runoff) from entering waterways (e.g. ditches, creeks, rivers or lakes).
- 89% of participants indicated that after the course, they planned to maintain a natural shoreline (strip of vegetation) along the water’s edge of their lakefront property.

Wastewater Education

Southeast Michigan has issues with water quality from a variety of sources - both point and non-point. One source that has been repeatedly mentioned is malfunctioning septic systems. MSUE has partnered with county health departments, industry consultants and other organizations to provide education on proper use and maintenance of these systems to protect the health of families, communities and the environment.

In 2016, MSUE organized four face to face workshops (3 in Macomb and 1 in Oakland) and 1 statewide webinar. Ninety-seven residents attended the in person workshops, 64 from Macomb and 33 from Oakland. Of 300 registrations, 147 sites participated in the statewide webinar, including participants from five other states.

Post program evaluations are used to identify knowledge gains and number of participants who plan to make changes based on information learned from the program. MSUE then does an annual 6-12 month email follow up survey to determine how many participants made changes in their behavior regarding use and maintenance of their system and what types of changes were made.

In 2016, MSUE completed the 2015 follow up evaluation for the in person workshops and the statewide webinar. The same survey monkey questionnaire was used for both the in person and webinar programs but separated them to see if there was any difference in behavior changes based on method of program delivery:

- Both delivery methods showed a 100% increase in knowledge about some aspect of septic use and maintenance.
- 74.3% of in person program participants changed one or more behaviors regarding their septic.
- 61.5% of webinar participants changed one or more behaviors.
Making the Most of Our Natural Assets, continued

The top 3 behaviors changed were the same for both delivery groups just in different order:
- Space laundry throughout week was #1 for both in person and webinar participants with 60.7% and 53.9%, respectively
- Reduce garbage disposal use was 2nd for in person participants (53.5%) and third with webinar (30.8%)
- Reduce water use was 3rd for in person participants with 46.3% and 2nd for webinar participants at 42.3%

The percentage of participants making specific changes was higher for all in person participants than webinar. Because MSUE and its partners offer Homeowner Septic System Use & Maintenance workshops, home and business owners are making positive changes to take better care of their system to protect their families, the community and local water resources.

MSU Extension Oakland County “Conservation Connections

2016 marked the first full year of the monthly MSU Extension Oakland County “Conservation Connections” Newsletter, with 12 full editions published. This newsletter is an electronic newsletter issued by MSU Extension-Oakland for Conservation Stewards volunteers and those interested in natural resources, volunteer opportunities, and educational trainings/resources. This newsletter offers the latest volunteer and educational opportunities. MSU Extension news articles, and conservation-related job opportunities. An average of 1,013 received this newsletter monthly, with 239 new subscribers added in 2016.

In addition, 10 bulk email blasts were sent in 2016, notifying subscribed individuals of upcoming MSU Extension Natural Resources classes. This list reached 1,214 subscribers, of which 256 were added as new subscribers over the course of 2016.

Conservation Connections
December 2016

Caring for Michigan’s lakes and streams through education, leadership and citizen action
The Michigan Lake and Stream Leaders Institute Class of 2017 will be the 7th session of this popular program, which is typically held every other year. Participants develop their technical and people skills in an atmosphere of openness, trust, friendship and camaraderie. Past participants include citizens, students, and professionals.

Apply Today! Application forms are available on the Institute web site [http://bit.ly/MSU-LSLI]. Applications will be evaluated as they are received. Notification of acceptance will be issued within three weeks of submission. Space is limited to 25 participants, and we reserve the right to limit the number of individuals from any single organization. Applications will be accepted until the class limit is reached.

Application Deadline: March 30, 2017

If accepted, a registration fee of $400 will be required, which covers all materials, room and board, boats, field trips, and equipment. Participants pay their own travel costs to session locations and may encounter some expenses for their chosen applied project. Registration fees should not be sent with applications.

Scholarships are available! If you have questions contact: Dr. Jo Latimore, Michigan State University Phone: 517-432-1491. Email: jolatimore@msu.edu

Endorsed by the Michigan Inland Lakes Partnership

Michigan State University Extension
Consumer Horticulture and Master Gardeners

**Consumer Horticulture**

In 2016, 8415 Oakland County residents were served, directly or indirectly, by MSU Extension Horticulture programs. Extension strives to answer the questions that every gardener will have at some point. The MSU Horticulture staff has developed several tools and programs to address all of the needs of the local gardener and landscaper.

- The Toll Free Lawn and Garden Hotline (1-888-678-3464 or 1-888-MSUE-4MI) staffed by MSU Extension consumer horticulture educators and Macomb County Master Gardener volunteers, assisted 2,082 Oakland residents with their questions in 2016.
- Educational classes are offered to the public on community gardening, vegetable gardening, lawn care, Integrated Pest Management, Household and Nuisance pests and other garden related topics.
- Diagnostic services are available at the Oakland County MSU Extension office to help identify insects, plants, and plant problems.

**Master Gardener Volunteer Program**

MSU Extension offered its first Master Gardener Volunteer Program in 1978. Today, more than 30,000 residents across Michigan have earned and enjoyed the Master Gardener Volunteer designation. The program serves two functions:

- To provide instruction in basic, research-based horticulture science to motivated and activate gardeners through an adult educational program offered through MSU Extension.
- To provide MSU Extension with trained gardeners who will educate others in the community about environmentally and economically sound practices through horticulture-based volunteer activities.

- In 2016, the Master Gardener program saw 571 volunteers recertify for the year with 102 new volunteers trained. Upon completion of the educational component and 40 hours of volunteer service, the Master Gardener trainees will receive their Master Gardener Volunteer certification.

As part of their continued volunteer work within their communities, these 673 Master Gardeners provided 30,664.53 hours of volunteer time in Oakland County during 2016. Through these volunteer hours, Master Gardeners provided programming and resources to 56,663 county residents.
## MSU Extension Staff Serving Oakland County

### Agriculture & Agri-business

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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<td>Garrett Owen</td>
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<td>248-347-0269</td>
</tr>
<tr>
<td>Bob Tritten</td>
<td>Educator, Tree &amp; Small Fruit</td>
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### Community Development: Community Food Systems, Financial Stability, Public Policy & Land Use

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<th>Position</th>
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<tbody>
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### Horticulture & Natural Resources

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<th>Name</th>
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<tr>
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</table>

### Nutrition, Health & Wellness

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</tbody>
</table>
MSU Extension Staff Serving Oakland County, Continued

Youth Development

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Ellen Koehler    Program Instructor, Tollgate Farm 248-347-0269 x227
Lisa Kelley      Program Coordinator, Tech Wizards 248-858-1524
Brooke Larm      Program Coordinator, Tollgate Farm 248-347-0269
Debra Morgan     Program Coordinator 248-858-0894
Jason Scott      Program Coordinator 248-858-0892
Nicole Simmons  Program Coordinator, Tollgate Farm 248-347-0269
Gary Williams    Educator, NR-Outdoor Education 313-494-4884

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Edward Scott    Associate District Coordinator 248-858-0905
Aba Holmes      District Support Staff 248-380-9103
Sheila Leddy    Supervisor of Administrative Services 248-858-0885

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