MESSAGE FROM THE DISTRICT COORDINATOR

Michigan State University Extension is the community-based educational arm of Michigan State University (MSU), working in partnership with counties throughout the state. We help people improve their lives by bringing the vast resources of MSU directly to individuals, communities and businesses.

For more than 100 years, Michigan State University Extension has helped grow Michigan’s economy by equipping Michigan residents with information they need to do their jobs better, raise healthy and safe families, build their communities and empower their children to dream of a successful future.

We provide the highest quality research- and evidence-based educational programs to meet the needs of our local communities. Our staff have access to MSU AgBioResearch scientists, other MSU researchers, and land-grant university researchers throughout the nation.

This report is a snapshot of work done by MSU Extension staff with Ottawa County residents over the past year. We value our relationship with the leadership in Ottawa County and with all of your constituents. Working in partnership, we make a positive difference for people across the county.

Thank you for your support.

Betty Blase
District 7 Coordinator

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MISSION:
Michigan State University helps people improve their lives through an educational process that applies knowledge to critical issues, needs and opportunities.

4-H CONNECTIONS

4-H Children and Youth programs ........................................... 4,976
4-H members (traditional club enrollment) ............................. 1,041
Special Interest program participation ................................. 526
Youth in school enrichment programs ................................. 3,409
Teen volunteers ................................................................. 41
Adult volunteers ............................................................... 223

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MSU Extension’s Expanded Digital Reach

More than 3.7 million people viewed more than 7.2 million pages on MSUE website

~1.3 million newsletters covering 90 topic areas were distributed to about 16,900 email addresses

More than 3,500 Facebook followers and more than 2,800 Twitter followers.

Based on data for 2015-16 program year.
Keeping Businesses Strong

MSU Extension and the MSU Product Center Food-Ag-Bio assists county residents in developing products and businesses in the area of food, agriculture, natural resources and the bio economy.

MSUE Product Center educators have special training to deliver these services. Business Counseling is conducted on a one-on-one basis. The assistance provided is tailored to meet the needs of the client and may include things like developing a business plan, navigating the regulatory maze, accessing the supply chain or seeking funding options. The educator also assists clients in accessing specialized services they may need through Michigan State University, such as feasibility studies, food processing, nutritional labeling, and packaging assistance.

MSU Product Center innovation counselors served 17 Ottawa County entrepreneurs with 165 counseling sessions in 2016. As a result, one new venture was launched with $148,510 of new sales. One new job was created and two jobs were retained when an existing business owner retooled their product line. The partnership between MSUE and the MSU Product Center Food-Ag-Bio is providing support for entrepreneurs in supporting economic development across the west Michigan region.
MSU Extension staff provide education and research in many areas important to local producers. Participants learn profitable and efficient business and production practices as well as how to optimize and reduce the use of pesticides and fertilizers, and conserve and protect water resources.

Blueberry production:

Michigan leads the nation in the production of blueberries, which is considered one of the healthiest foods due to their high levels of antioxidants and vitamins A and C. Ottawa County is one of the highest producing blueberry areas of the state with over 5,900 acres of blueberries in production by 88 family farms.

One of the greatest threats to the Michigan berry crops is an invasive species insect called Spotted Wing Drosophila or SWD. This fly species in native to Asia and was detected in North America (California) for the first time in 2008. Since then it has spread through many of the primary fruit production regions of the United States, including Michigan, where it was detected in 2010 and now is well established in all fruit growing counties of Michigan. In 2012, growers estimated $2.7 million in economic losses due to the SWD.

In 2016, Michigan State University Extension conducted a series of activities to provide berry growers with technical information and assistance, and tools to ameliorate the economic impact of this pest. The Michigan State University Small Fruit Team conducted two Twilight Meetings and one curriculum-based, hands-on workshop to teach growers about how to incorporate Spotted Wing Drosophila management into their current Integrated Pest Management (IPM) programs. This helps them to optimize their pest management strategy to reduce the threat from this insect.

During those events, growers learned to develop a successful IPM program to manage the SWD. Results from MSU Extension education activities measured at the end of the crop season indicated that growers who attend the workshop and Twilight Meetings saved over $100 per acre in pest control expenses and had a substantial reduction in crop losses due to SWD. In addition, 70% of growers had no crop losses or fruit downgrading.

MSU Extension has also been monitoring another invasive species threat, the Brown Marmorated Stink Bug. This insect is also a native of Asia, first detected in 1998. It has been found all over the U.S., including Michigan. In 2014, the MSU Extension fruit team implemented a network of monitoring sites including sites in Ottawa County. Traps for this insect are checked, recorded and published on a weekly basis during the growing season at http://msue.anr.msu.edu/topic/news/blueberries/P60
MSU Extension provides farm business education on a statewide basis. Dr. Adam Kantrovich is the MSU Extension farm business educator based in Ottawa County. Dr. Kantrovich and Roy Black, also with MSU Extension, developed a program and video in 2016 to help farmers understand how they can utilize the federal Noninsured Crop Disaster Assistance Program. This educational effort supported eleven businesses from Ottawa County in 2016 and many others statewide. In addition, Dr. Kantrovich held a training in July 2016 for tax preparation firms, farmers, and independent labor contractors to help this audience understand the complexities of tax issues and best practices for tax preparation with non-resident legal alien agricultural workforce (H2-A). This program was conducted in partnership with La Posada Tax Clinic, the MSU Tax School and Michigan Farm Bureau. Dr. Kantrovich works with several Ottawa County farms on an ongoing basis in the areas of agricultural tax management, financial analysis of the farming business and in farm succession planning.

On-farm energy conservation tour

Helping Michigan farmers reduce their energy expenses was the focus of the August 2016 Agricultural Energy Conservation Tour sponsored by MSU Extension, the Michigan Farm Energy Program and the Michigan Agricultural Energy Council. While farming operations use an extraordinary amount of energy, the cheapest energy is the energy not used. MSU studies have shown that, on average, Michigan farms can realize a 40 percent reduction in energy expenses when energy-audit-recommended energy practices are implemented. This tour highlighted the effective energy conservation practices at two Ottawa County farms, GDW Turkey Farms and Langeland Farms. Tour participants included Ottawa County local government officials and staff members of Congressman Bill Huizenga and U.S. Senator Gary Peters. 89% of tour participants reported that their understanding of on-farm energy conservation increased.

Supporting beginning farmers

MSU Extension also works to support people interested in becoming farmers through a variety of programs, including:

- The MSU Extension Beginning Farmer Webinar Series
- The MSU Vets to Ag program
- The MSU Student Organic Farm Certificate Program
- The MSU Institute of Agricultural Technology
Optimizing Dairy Farm Profit

This program highlighted information relevant to dairy farms staying profitable even with low milk prices in 2016. MSU Extension dairy educators and MSUE farm management educators presented information on key financial indicators to monitor on dairy farms and the major differences between high and low profit farms. Several critical factors for successful dairy herd management were highlighted, including heifer raising strategies, optimum stocking density in dairy cow housing, labor productivity on farms, and benefits of custom forage harvesting.

A total of 15 people from Ottawa County attended this meeting on February 24, 2016. The most commonly listed changes that participants intended to make were using partial budgets and cash flow budgets for improved financial planning, increasing labor efficiency, and identifying bottlenecks in herd management. Each person received a USB drive containing useful on-farm management tools.

Calf Care School

Faith Cullens and Kathy Lee, Michigan State University Extension dairy educators, conducted a Calf Care School on January 27, 2016. Proper care and management of heifer calves has a tremendous impact on their future profitability as lactating dairy cows. The program provided information and training that can be implemented on any dairy farm. Participants learned and reviewed concepts and skills associated with profitable calf management from the birth to weaning (first two months of life).

Dairy Nutrition Roundtable Discussions

The roundtable was held on December 12, 2016 in Comstock Park. It provided an open forum for participants to discuss current issues in dairy cattle feeding and nutrition. This session was attended by five dairy nutritionists and feed company reps that serve dairy farmers in Ottawa County. Participants asked questions of the MSU dairy nutrition researchers and specialists, and of their peers.

Veterinary Feed Directive Informational Meeting

The Veterinary Feed Directives changes that took effect on Jan. 1, 2017 have limited the use of some antimicrobials administered in feed and require veterinary oversight to obtain these products. MSU Extension meetings were held during late fall, 2016 to provide an opportunity for dairy producers, farm employees and industry professionals to learn about what actions were needed to be prepared for the changes. Presentations were followed by a panel discussion led by local veterinarians, nutritionists and feed mill managers.
Ottawa County leads the state in the production of many types of flowers for gardens and landscaping. Ottawa County has the second largest square feet of greenhouse production in Michigan behind Kalamazoo County.

There are 97 greenhouse operations in Ottawa County with 11.7 million square feet of production per year according to the USDA NASS report from 2015. In addition, Ottawa County has the largest number of nurseries in Michigan with 68 nursery businesses with over 2,890 acres of production.

Heidi Wollaeger Lindberg is the greenhouse and nursery educator (starting in this role in late 2016) based at Ottawa County for MSU Extension. She serves greenhouses and plant nurseries throughout western Michigan. Her major program initiatives include: lighting for efficient production of greenhouse crops, biological control in greenhouses, promoting pollinators, and marketing of ornamental plants.

MSU Extension provides regular training workshops for greenhouse and nursery producers in the summer months (the off-season for this type of business). Meetings are held to discuss issues and provide MSU research on topics such as: irrigation, insect management, and pesticides. Meetings in June and July of 2016 were attended by 42 people. In addition, MSU Extension organized a West Michigan Summer Nursery Tour in August of 2016 that was attended by 47 people. The tour visited three Ottawa County nurseries to discuss the new conifer diseases, to introduce a new pathology specialist from MSU, to discuss container media issues, techniques for using a drone to speed up plant inventorying, and to provide an update on Hemlock Wooly Adelgid.
**Reducing foodborne illness through education**

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. MSU Extension food safety training workshops include: 16-hour ServSafe trainings, 8-hour ServSafe trainings, food preservation, Cottage Food Law, and Cooking for Crowds.

**On-farm food safety**

MSU Extension has been working with several partners around the state to ensure Michigan farmers are informed on the Food Safety Modernization Act (FSMA) and its potential impacts on their businesses. FSMA is the most sweeping reform of our food safety laws in more than 70 years. This is a significant impact to fresh produce growers because it calls for new standards and training programs.

In addition, MSUE is partnering with Cherry Capital Foods to build the first statewide USDA Certified Group GAP program in the nation. MSUE is providing compliance education through a robust suite of resources, events, and trainings, which will assist growers in obtaining GAP (Good Agricultural Practices) certification.

**Personal finance**

MSU Extension held a workshop on techniques for passing on non-titled personal property (family heirlooms for example) to the next generation at the Grand Haven Loutit Library in May 2016. MSU Extension also offers classes on money management and best practices for purchasing a home both in-person and online. For more information about MSU Extension finance and housing programs, please contact Jinnifer Ortquist at ortquisj@anr.msu.edu.
Youth participants in 4-H club and after-school programs learn life skills that prepare them for the workforce – especially for highly sought after jobs in science, technology, engineering and mathematics (STEM). They also learn leadership and decision-making skills in 4-H that increase their likelihood of becoming civically active. Participation in Ottawa County traditional club 4-H Programs increased by around 8% in 2016. This included three new 4-H clubs. We also added five new sites for after-school programming.

Many 4-H club members raise animal projects as part of their educational experience. As outlined in “Showcasing the science in ‘animal science’,” youth use science in all aspects of raising animals. Anatomy, physiology, biochemistry, chemistry, ethology (study of behavior), virology (study of viruses), bacteriology, endocrinology (study of hormones) and many more scientific fields play a large role in animal production.

**4-H Tech Wizards:**

4-H Tech Wizards is a group mentoring program for youth ages 8-17 that focuses on the importance of STEM Education and exploration. In Ottawa County, 4-H Tech Wizards collaborates with Hope College and Step Up Mentoring to offer weekly 4-H Tech Wizards meetings on Hope’s Campus. During meetings youth meet with their mentor and explore hands-on STEM projects while building positive relationships with their mentor and their peers. Having 4-H Tech Wizards at Hope College is a great way for youth and their families to experience a college campus right in their own community.

**Ottawa County Mentoring Collaborative:**

Ottawa County Mentoring Collaborative (OCMC) is a group of mentoring programs working to make mentoring visible, viable, and valuable. The vision of the OCMC is to strengthen effective mentoring in our communities by networking, sharing resources, providing events for matches, building relationships and by recognizing mentors and programs throughout Ottawa County. Current members included 4-H Tech Wizards, Total Trek Quest, Kids Hope, Heights of Hope Mentoring, Young Life, and The Bridge Youth Center and meets monthly in Holland.
With MSU Extension support, the Ottawa County Food Policy Council secured a $100,000 grant in 2016 to expand access to healthy, locally grown food.

MSU Extension has been working for several years to help develop and add capacity to the Ottawa County Food Policy Council (OCFPC). During 2016, two MSU Extension educators, Stephanie Marino and Garrett Ziegler, provided support to the county by chairing two of the three subcommittees: Local Food Purchasing and Healthy Eating for All.

In these roles, Marino and Ziegler played a key role in the OCFPC being awarded a $100,000 grant from the Holland/Zeeland Community Foundation and the Grand Haven Community Foundation. These funds are being directed to several programs of the OCFPC, including a CSA to Pantry Program that is being managed by Ziegler. This project will use grant funds to provide up to 30 families at two food pantries half CSA shares beginning in June of 2017. CSA or Community Supported Agriculture works like a subscription service for locally produced foods (mostly vegetables). In addition to the CSA shares, participants will also receive a “Cooking Your CSA” nutrition and cooking skills class taught by MSU Extension SNAP-Ed Program Instructors to increase their ability to use the CSA share.

The Healthy Eating for All subcommittee, chaired by Marino, has four overarching goals for the next 3 years: 1) To support the development of policies that focus on healthy eating by all in Ottawa County; 2) To expand pantry offerings of healthy foods; 3) To increase use of gardens (personal, school and community); and 4) To promote and expand education of food, cooking and nutrition. In 2016, the subcommittee surveyed the 25 largest food pantries in the county to determine their baseline level of healthy food offerings. 17 pantries responded to the survey.

Marino and Ziegler have also been assisting the OCFPC develop a comprehensive marketing campaign, which will include new branding and marketing for the Council and its programs.
Improving nutrition and increasing physical activities in Michigan communities

MSU Extension delivers relevant, evidence-based education to help people in Michigan stay healthy throughout their lifespans. Programs teach participants how to buy and prepare nutritious, budget-friendly foods and increase physical activity.

In 2016, Ottawa/MSU Extension nutrition education programs reached 697 adults and youth from Ottawa County. MSU Extension staff conducted 31 adult face-to-face workshops in a series and 26 youth face-to-face workshops in a series in 2016. These programs are supported with funds from the USDA grant for Supplemental Nutrition Assistance Program Education (SNAP-Ed).

Results from a statewide evaluation of all MSU Extension nutrition programs in 2016 showed that:

- 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 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.

Encouraging healthy behaviors helps reduce food and health care costs by helping prevent chronic health conditions and providing safe environments throughout a person’s life span.
Encouraging healthy behaviors helps reduce health care costs by providing safe environments throughout a person’s life span.

Children can be taught how to pay attention and pause before reacting to stress.

Photo credit: Pixabay.

Social and Emotional Health

Provided in collaboration with West Virginia University Extension, Stress Less with Mindfulness introduces participants to the experience and practice of mindfulness to reduce stress. Mindfulness can be defined as paying attention in a particular way: on purpose, in the present moment and non-judgmentally. Research has shown that practicing mindfulness is effective in reducing stress-related symptoms such as worry, depression and physical tension, and may be helpful in managing chronic conditions such as cardiac disease and diabetes. In 2016, Ottawa/MSU Extension reached 19 youth and adults from Ottawa County. Locations included: Harbor House, Escape Ministries, Pathways, American House, Love Inc., and the Center for Women in Transitions.

RELAX: Alternatives to Anger is an educational program that actively engages participants to gain knowledge and skills to constructively deal with anger. The core concepts include recognizing anger signals, empathizing, listening, accepting that others’ anger is not about you, and letting go of the past in order to maintain a present perspective. Participants learn to better manage their anger and stress at home, in the workplace and in school. In 2016, 40 adults from Ottawa County in four locations were reached by this program. In addition, MSU Extension educators provided a Nurturing Parenting workshop at Pathways as part of our on-going partnership with this organization.

Communicating with Farmers Under Stress is a new program of MSU Extension, developed as a result of increased suicide and mental illness rates among the farming community brought on by declining farm-based income over the past several years. Since October 2016 eight workshops have been held throughout the state with 160 participants. Evaluation data shows that 92% are now able to recognize the warning signs of depression, suicide and mental illness; 85% increased their understanding of the impact of stress on their bodies; and 97% learned where to send people for help within their community.
Making the Most of Our Natural Assets

District Council Invited Lawmakers to Learn on the Water

On September 23, 2016, members of MSU Extension’s District 7 Council headed out on the D.J. Angus, a vessel owned and operated by GVSU for the purpose of educating people about the Great Lakes and inland waters. Also in attendance were State Representatives Amanda Price and Ken Yonker, now the Kent County Drain Commissioner.

Council members and leaders participated in water quality sampling in Spring Lake and Lake Michigan led by GVSU staff. In addition to learning about how invasive species have dramatically affected our lakes, the group heard from MSU Extension’s District Sea Grant Educator Dr. Dan O’Keefe on connections between our waterways and coastal economies.

The group learned about Michigan Sea Grant’s work with the Lake Michigan salmon and trout fishery, a cornerstone of the $7.1 billion Great Lakes sport fishery. Sea Grant has been instrumental in helping anglers understand their fishery and share data with biologists through the Salmon Ambassadors and Great Lakes Angler Diary programs. In 2016, many anglers were caught off guard by the Chinook stocking cut proposal. MSU Extension News articles helped people better understand the issue by addressing some common misconceptions.

- Most Chinook salmon caught in Lake Michigan are wild, not stocked. According to the U.S. Fish & Wildlife Service’s Mass Marking Program, wild-spawned Chinook salmon made up 71 percent of the Chinook catch for Michigan anglers in 2014-2015.
- Even ports that are not near spawning rivers rely mostly on wild fish. Grand Haven is a good example of a port that does not support natural reproduction. Volunteers with the Salmon Ambassadors program found that 74 percent of Chinook salmon caught in the Grand Haven area in 2015 were wild.
- Alewife are at a historic low. The USGS Great Lakes Science Center’s bottom trawl survey found that yearling and older alewife biomass density dropped to the lowest levels since monitoring began in 1973.
- Natural reproduction is a huge factor. In 2017, Lake Michigan stocking is being reduced from 1.80 to 1.35 million Chinook salmon. If wild reproduction returns to normal, we could see an increase of over 3 million young Chinook salmon entering Lake Michigan in 2017. This could completely overwhelm the effect of the stocking cut in terms of the total number of Chinook salmon available in Lake Michigan. In other words, there is a good chance that people will not notice any decrease in the quality of fishing over the next few years. The bad news is that Lake Michigan still appears to have too many mouths to feed and too little food.

Michigan Sea Grant helps to foster economic growth and protect Michigan’s coastal, Great Lakes resources through education, research and outreach.

A collaborative effort of the University of Michigan and Michigan State University Extension, Michigan Sea Grant is part of the NOAA-National Sea Grant network of 33 university-based programs.
Salmon Ambassadors is a volunteer program managed by Dr. Dan O’Keefe with MSU Extension in Ottawa County. The program is a Michigan Sea Grant initiative developed in coordination with the Michigan, Wisconsin, Illinois, and Indiana Departments of Natural Resources and the U.S. Fish and Wildlife Service.

The purpose of the program is to engage anglers in learning about their fishery and providing useful information on stocked and wild Chinook salmon. Stocked Chinook salmon are easy to identify thanks to a fin clip.

Volunteer anglers participating in the program check each fish caught over the course of the season. They also carefully measure each fish and record the date and location of each catch. In 2016, 56 anglers participated in the program and recorded data on 2,015 Chinook salmon. This data helps scientists and anglers determine the health of the Chinook salmon population and informs stocking needs.

Since the Lake Michigan program began in 2013, wild Chinook salmon have outnumbered stocked in all areas of the lake, with percent wild being the highest at ports like Manistee and Ludington where nearby rivers offer excellent spawning habitat.

The 2016 program was made possible by partnerships with the Michigan Steelhead & Salmon Fisherman’s Association, the Michigan Charter Boat Association and Detroit Area Steelheaders. For more information visit, http://www.miseagrant.umich.edu/explore/fisheries/salmon-ambassadors/
The Michigan Pollinator Initiative (MPI), managed by Michigan State University, works to address current and future issues related to bees and other pollinators. The mission of the initiative is to develop a coordinated research, education, extension and policy driven effort to address priority issues related to pollinators. MPI works in pursuit of research-based solutions for beekeepers, growers, land managers, and policy makers to promote economic vitality and ecological stability.

Most researchers agree that a combination of factors is causing declines in bee and pollinator populations. These factors include: pathogens, loss of habitat, and pesticide exposure. Home gardeners have an important role to play in protecting pollinators because flowerless landscapes such as large paved areas and mowed lawns with strict weed control contain little or no food for pollinators.

MSU Extension offered the following educational events serving Ottawa County residents in 2016 to encourage home gardeners to plant flowers and adopt pollinator friendly practices in their home gardens:

- The March 5, 2016 Smart Gardening Conference at DeVos Place with 225 participants from Ottawa County.
- 83 Ottawa County residents participated in MSU Extension consumer horticulture programs in 2016 including Master Gardener and Master Naturalist.
- 53 Ottawa County residents used the MSU Soil Testing web resources in 2016.

For more information, please read MSU Extension’s new publication, “Protecting and enhancing pollinators in urban landscapes” or visit https://pollinators.msu.edu

You can also access Smart Gardening tip sheets on a variety of important topics from MSU Extension at http://msue.anr.msu.edu/topic/home_gardening/tip_sheets
Only with healthy, vibrant communities can Michigan residents be expected to thrive. To help Michigan prosper in a sensible, sustainable fiscally responsible way, MSU Extension launched the Center for Local Government Finance and Policy in late 2015. MSU Extension has been engaged in the education and training of local government officials in Michigan for over 50 years. The Center will build upon this work and will institutionalize research and outreach on state and local governments at MSU for years to come.

The mission of the Center is to be a leader in the production and dissemination of the best research and teaching on issues of local government finance and related policy issues. The Center will work through a broad and diverse network of affiliates from within and outside of MSU. The Center is supported by many key partners, including the Mott Foundation, Pew Charitable Trust and the Michigan Association of Counties.

Recent research reports from the Center:
- Legacy costs
- Fiscal distress indicators
- The ability of local governments to deliver services
- County revenue sources in other states
- County revenue sharing
- The impact of the Headlee millage rollback provision on county property tax revenues

The Center is led by Dr. Eric Scorsone, who is on temporary leave from MSU to serve as the Senior Deputy Treasurer for the State of Michigan. Robert Kleine is serving as interim director in Dr. Scorsone's absence.
### MSU Extension Staff Located in Ottawa County

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### MISSION:

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

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Additional Extension Staff Serving Ottawa County

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Members of the MSU District 7 Extension Council—2016

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- Mark DeYoung (Allegan)
- Carrie Jo Anderson (Kent)
- Dick Bethel (Kent)
- Harold Mast (Kent)
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MSU’s talent and expertise help position Michigan as an uncompromising competitor in a global market, and we make vital contributions to the state’s economy.

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In 2016:

Number of students from Ottawa County enrolled in Michigan State University: 686

Number of Michigan State University Medical Students from Ottawa County: 42

Number of Ottawa County residents employed by Michigan State University: 49
Thank you to the Ottawa County Board of Commissioners for their continued support of the educational and outreach programs of Ottawa County MSU Extension.

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