



# Antrim County

## 2016–2017 ANNUAL REPORT

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## FROM THE DISTRICT COORDINATOR:

MSU Extension staff continue to provide education and outreach on needs facing Antrim County residents. Our recent needs assessment utilized focus groups and online survey input to solicit feedback from the public on what are the most vital needs and priorities for Michigan residents. These results have provided a local direction and educational focus to meet the emerging, critical issues facing Antrim County residents.



Your local MSU Extension staff have linked the knowledge resources of MSU directly to individuals, communities and businesses over the past year. It is my distinct privilege to present these accomplishments in our annual report. This report summarizes the important work done by MSU Extension staff in Antrim County. It has captured most of the significant highlights of our work in 2016 and provides a sense of the direction of our work into the future.

As always, I thank you for your continued support every year. Without you, we would not be here doing this important work with your constituents.

Jennifer Berkey

District 3 Coordinator

## MEASURING IMPACT:

### CONNECTING WITH RESIDENTS

4-H: Developing Youth & Communities .....	441
Keeping People Healthy & Ensuring Safe Food .....	630
Supporting Food & Agriculture, Fostering Strong Communities & Businesses, and Enhancing Our Natural Assets.....	246

**TOTAL PARTICIPANTS IN ANTRIM COUNTY ..... 1317**

### MSU EXTENSION'S EXPANDED DIGITAL REACH IN DISTRICT 3 AND STATEWIDE:



3.7 million visitors viewed more than 7.2 million pages



1.3 million topic newsletters distributed to more than 16,900 email addresses



Nearly 3,500 Facebook and more than 2,800 Twitter followers

Statewide 2015-16 Digital Reach

2014-15



2015-16



27% Increase in District 3 Visitors to MSU Extension Website

## CONTACT US:

203 E. Cayuga Street  
P.O. Box 201  
Bellaire, MI 49615

Phone: 231-533-8818

Hours: Monday-Friday, 8:30am-5:00pm

Email: [msue.antrim@county.msu.edu](mailto:msue.antrim@county.msu.edu)

[msue.anr.msu.edu/county/info/antrim](http://msue.anr.msu.edu/county/info/antrim)

## STAFF HOUSED IN ANTRIM COUNTY:

Stan Moore

Senior Extension Educator  
moorest@msu.edu

Adam Kantrovich

Extension Educator  
kantrov@msu.edu

Gina Cameron

Nutrition Program Instructor  
camer134@msu.edu

David Vachon

4-H Program Coordinator  
vachonjr@msu.edu

Gayle Rider

Office Manager  
riderga@msu.edu

Gloria Campbell

Secretary  
campb536@msu.edu

# DEVELOPING YOUTH AND COMMUNITIES

When you support MSU Extension 4-H programs, youth participants learn life skills that prepare them for the workforce – especially for highly sought after jobs in science, technology, engineering, and mathematics (STEM). Extension programs help children develop early literacy skills that support school readiness. They learn leadership and decision-making skills in 4-H that increase their likelihood of becoming civically active.



## Antrim County 4-H Clubs

4-H Clubs are the foundation of every successful 4-H program. They provide volunteers and youth with unlimited opportunities for learning, relationship building, and fun. Clubs can be single project clubs, after school clubs, in-school clubs, community clubs or SPIN clubs (Special Interest, short term) and are based on the experiential learning model. The primary purpose of 4-H clubs is to support the development of each youth participant's full potential and cultivate a variety of life skills.

- In 2016 Antrim County had 6 clubs with 77 members and 19 volunteers.
- Bellaire Babysitter Training SPIN Club was a 6 session series and included 9 youth participants. Subject areas included child development, first aid, safety, starting a babysitting business, safe sleep and crying, and nutritional/fun snack

## New Partnerships Established

Michigan Farm Bureau - partnered with Michigan Farm for "Antrim Agriculture takes over Preschool Programs" which reached 44 new Antrim County youth.

Camp CLEO - a partnership was established by providing a pond water science activity which reached 63 new Antrim County youth.

## Community Outreach/Presentations

Bellaire Rotary Club – highlighted Antrim County 4-H through a 6 minute video, a PowerPoint presentation, program highlights and a question and answer period. A 4-H member also gave a presentation about his Underwater ROV project and his experiences with 4-H including the breadth of opportunities being a 4-Her' has afforded him.

Annual Community/Business Meeting – sponsored by the Chamber of Commerce, gave a short presentation on 4-H and distributed information about the 4-H program.

## 4-H China Art Exchange Program

The goals of the project are to help children in Michigan and in children in the province, Shandong, of the People's Republic of China, a Michigan 4-H partner, better understand and appreciate one another's culture. It also allows Michigan children an opportunity to create their own artwork, as a "visual letter" to the children in China. In 2016, over 200 Antrim County youth participated in this program.

4-H participants reported higher academic competence in grades 7, 9, 11, and 12, and higher school engagement at grades 11 and 12, than participants enrolled in other out-of-school-time activities.

~ Comprehensive findings from the 4-H Study of Positive Youth Development



Proud 4-H members showing off their China Art submissions.

## Developing Youth and Communities, continued

### The 4-H Livestock Auction

The auction was held on Friday, August 12 with 34 Market Animal Projects being sold and raising over \$33,500 for their youth owners. 4-H members gain life skills, such as record keeping, communication, and self-responsibility through raising and selling livestock animals. In addition, it presents the opportunity to learn valuable entrepreneurial concepts such as: goal setting, identifying target markets and marketing strategies, distinguishing product features, communication strategy and sales pitch, and breakeven price and profitability.



The majority of the auction money raised goes back to the 4-H members and is used for back-to-school needs and college funds.



34 Animals



18 Buyers



\$33,500

### 4-H Leader and Member Trainings

In 2016, there were five leaders and two teens who attended the Veterinary Science Teen & Adult Workshop: one leader and one teen attended the Beef, Sheep and Swine Teen & Adult Leaders Workshop; one leader attended the Shooting Sports Workshop; and one leader and two youth attended the Robotics Workshop.

### 4-H Market Livestock Meat Cutting Clinic

On May 21<sup>st</sup> Antrim County 4-H sponsored and carried out a very successful Meat Cutting Clinic at Alba Public Schools. Ebel's Meat Processing was on hand to demonstrate the proper technique for cutting pork, Cooks Family Farm was available to demonstrate the proper technique for cutting poultry and a local chef was there to prepare the cut meat into a meal that was enjoyed by all participants. Each attendee also participated in various activities that enhanced their knowledge of meat cuts as well as enjoyed some additional 4-H activities including some life skills activities.

### 4-H Expansion and Review Committee

On March 28<sup>th</sup> Antrim County 4-H hosted our 2nd Expansion and Review Committee meeting with a good representation from our community the Sherriff, a school counselor, Community Mental Health staff, 4-H leaders, 4-H members, and a long time Girl Scout leader. There were great ideas and discussions held regarding which groups of adults and youth might be missing from our programming, what are some potential resources that can be utilized, and what we might do to expand our reach to increase the 4-H program in Antrim County.



# KEEPING PEOPLE HEALTHY & ENSURING SAFE FOOD

When you support MSU Extension, you help participants learn safe food handling practices, increase their physical activity, and improve the quality of their diets. Extension programming also helps decrease incidents of violence and bullying. Encouraging these healthy behaviors helps reduce food and health care costs by helping prevent chronic health conditions and providing safe environments throughout a person's lifespan.

## Impacts with Adults:

- 100% of participants showed improvement in one or more nutrition practices like planning meals, making healthy food choices, preparing food without adding salt, reads nutrition labels or has children eat breakfast.
- 95% of participants in Project FRESH will eat more fresh fruits and vegetables per day.

## Impacts with Youth:

- 94% of teachers reported that the children increased their awareness of the importance of good nutrition.
- 69% reported that children were making healthier snack choices.

## Improving Nutrition and Physical Activity

The Supplemental Nutrition Assistance Program – Education (SNAP-Ed) provides nutrition education to income-eligible adults and children. This program focuses on improving dietary quality and increasing physical activity while stretching food dollars. The ultimate goal of these programs is to promote healthy weight maintenance and obesity prevention. In 2016, 565 adults and youth were reached through nutrition education classes at various venues in Antrim County.

- 272 youth were enrolled in nutrition lessons such as Show Me Nutrition. Show Me Nutrition (SMN) is a six-week program for youth from Pre-K through eighth grade. Participants will have the opportunity to engage in age appropriate, interactive, hands-on activities that promote good eating habits, positive body image, physical activity, and food safety. Through each interesting and fun nutrition class, students will gain the skills necessary to make healthy lifestyle choices. SMN is taught at schools where at least 50 percent of students are eligible for the National School Lunch Program.
- 221 adults participated in nutrition presentations in a variety of settings throughout the county including farmers markets and health fairs.

In addition, hundreds of newsletters, fact sheets, and other materials with healthy messages were distributed through food access sites, Health Fairs, and other events.



565 Adults & Youth Reached



1,632 Newsletters Distributed



**FRESH ~ DELICIOUS ~ NUTRITIOUS**

## Keeping People Healthy, continued

### Connecting Kids to Healthy Food in Schools

“In 2nd grade Mancelona school series, a boy approached me quietly as I was setting up for class. He wanted me to know that he has been doing aerobic exercise. He has a chart that he and his parents made for the refrigerator to track his daily activity. He was very proud of his chart and updated me each time I came in.” - Gina Cameron

“In Alba school, the 6/7 class was a very engaged group. The teacher made some changes to her behaviors by "switching from a donut for breakfast to oatmeal" and "parking further away from the store to increase walking". This class surprised me on the last day of our series with a great project they completed. They made a "MyPlate" bulletin board during the week. It was separated into the MyPlate colors and had cutouts from store ads in each group to represent the different food groups. They had great discussions deciding which foods to cut out of the flyer and where to put them on the board. They unveiled it for me on the day of our last class as a present!” - Gina Cameron



Gina Cameron, SNAP-Ed Program Instructor, leads a group of teens at a Babysitter Training on serving healthy snacks to kids.



### Local Fruits and Vegetables through Project FRESH

One of the adult classes MSU Extension staff teach each year is called Project FRESH. In collaboration with the Antrim County Health Department, MSU Extension Program Instructors provide nutrition education to families involved in the Women, Infants and Children program (WIC) on the benefits of including more fruits and vegetables in their diet. Coupons were provided to these participants to purchase locally grown fresh fruit and vegetables from Antrim County farmers markets through Project FRESH. Local farmers then redeem coupons for payment of local produce. In 2016, 240 books were distributed valued at \$4,800. The redemption rate of coupons was 66%, which is significantly above the 58% state average.



240  
Coupon Books



\$4,800  
Coupon Value



66%  
Coupon Redemption



## Keeping People Healthy, continued

### Preventing and Managing Chronic Disease

Chronic diseases are among the most prevalent, costly, and preventable of all health issues. Compared to the national average, Michigan adults suffer from more risk factors (obesity, hypertension, and high cholesterol) that contribute to chronic disease. Chronic diseases such as diabetes increase the financial burden on the healthcare system.

Diabetes is a chronic disease of critical concern. The estimated cost of diabetes in Michigan is \$10.5 billion each year, including medical care and lost productivity. This figure is expected to triple over the next 25 years, reaching \$21.6 billion by 2040. It is estimated that the state can save \$545 million spent across all chronic diseases by investing \$10 in preventive care per person per year. Support of MSU Extension benefits participants and the community by moderating the increase in healthcare costs associated with caring for a growing population of people with diabetes and other chronic conditions.

The County Health Rankings, an annual measure of the overall health of nearly all counties in the nation, ranked Antrim County 33 out of all 83 Michigan counties. Rankings are comprised of several national measures that affect the health of communities, such as high school graduation rates, access to healthy food, rates of smoking, and obesity.

### Delivery of Evidence-based Community Programming

MSU Extension's Disease Prevention and Management programs work to promote health and wellness by reducing and managing the incidence and impacts of chronic diseases among Michigan residents and communities. These community-based, evidence-based core programs provide participants with proven strategies for improved dietary quality, management of chronic health conditions and prevention of chronic diseases.

Dining with Diabetes is a fun and interactive course series targeting individuals with prediabetes, type 1 or type 2 diabetes, members of their support system and/or anyone interested in learning more. Participants learn to make healthy food choices and incorporate balanced menus into the family dining experience. Classes include research-based education, cooking demonstrations and healthy recipe tasting.

National Diabetes Prevention Program (NDPP) is designed to bring to communities' evidence-based lifestyle change programs for preventing type 2 diabetes. The NDPP shows that making modest behavior changes, such as improving food choices and increasing physical activity to at least 150 minutes per week, results in participants losing 5% to 7% of their body weight. These lifestyle changes reduced the risk of developing type 2 diabetes by 58% in people at high risk for diabetes. MSU Extension has achieved full program recognition from the Centers for Disease Control and Prevention and is one of two "fully recognized" program providers in the northwest Michigan region.



**“The Diabetes Prevention Program has been fun and beneficial. Our facilitator from MSU Extension presented the course information in a manner that was easy to understand and fun. My blood sugar level is now in the normal range, I have learned food strategies that I will use for the rest of my life, and I feel surrounded and supported by people with similar food challenges.”**

## Keeping People Healthy, continued

Diabetes Personal Action Toward Health (PATH) is a self-management workshop aimed at empowering people to take an active role in managing diabetes. Over the course of 6 weeks, participants learn strategies to help them deal with difficult emotions, how to develop a healthy eating and exercise plan, goal setting and problem solving, and a variety of other tools to manage diabetes. MSU Extension relies on a longstanding partnership with the Northwest Michigan Area Agency on Aging to deliver this self-management series.

A Matter of Balance is designed to reduce the fear of falling and increase activity levels among older adults. A Matter of Balance includes eight two-hour sessions for a small group led by a MSU Educator and coordinated in with the Northwest Michigan Area Agency on Aging. This nationally recognized program was developed at Boston University.

MSU Extension can support improved health of individuals and communities through delivery of evidence-based programs and engaging in multi-level partnerships with shared goals of reducing the prevalence of chronic disease.



### Working Collaboratively to Promote a Culture of Health

Local MSU Extension Health & Nutrition professional engage with community partners to promote shared goals and reduce the prevalence of obesity and chronic disease. MSU Extension staff holds active membership on the Northern Michigan Chronic Disease Network and Steering Committee. The network is comprised of leaders who represent a variety of health organizations who serve the counties in the 'tip of the mitt,' including Antrim. This new network develops, implements, and supports numerous evidence-based or best practices strategies that are expected to result in the prevention and reduction of the population burden of heart disease, stroke, diabetes and cancer (as measured by State of Michigan and county level data).

In addition, local MSU Extension staff joined in a newly form partnership with other health organizations to form a collaborative to ensure a coordinated implementation of the National Diabetes Prevention Program in the region. This collaborative resides within the Community Health Innovation Region.





## Keeping People Healthy, continued

### Reducing Anger, Bullying, and Stress

#### Stress Less with Mindfulness

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. The MSU Extension program is offered as a five-part series or as a one-time workshop.

#### RELAX: Alternatives to Anger

RELAX is a four-part educational series designed to help adults, parents, teens, and caregivers increase their knowledge about anger issues and put anger management and healthy relationship skills into practice. Through discussion and skill-building activities, participants explore what anger is and what triggers it. This interactive program teaches participants techniques for calming down and de-stressing, the principles of problem solving, effective communication skills, and ways to forgive and let go of the past. It is offered as a series, and also as a one-time workshop, including a Train the Trainer version and *RELAX: For Parents and Caregivers*. RELAX is available as an online course.

During 2016, more than half of program participants left with improved knowledge or new skills designed to promote social and emotional well-being with others in their lives and immediate social environments.

#### Results of the RELAX Program

- 97% can identify three mindfulness tools to help them manage stress.
- 93% practice mindful movement as a way of calming the mind and body.
- 96% describe how a mindfulness perspective can change reactions to daily stressors.

# SUPPORTING AGRICULTURE & AGRIBUSINESS

**Tree Fruit Integrated Pest Management Update Seminars** – District 3 Fruit Educator, Emily Pochubay, coordinated and hosted a total of 42 seminars in northwest Michigan from May – July 2016 (with 9 meetings held at Jack White’s Farm in Antrim County). Over the course of this program, a total of 584 repeating participants comprised primarily of northwest Michigan fruit growers and local crop consultants attended these seminars. A post-program survey polled 72 participants who represented approximately 1,757 acres of apples and 7,065 acres of cherries in northwest Michigan. Participants were asked how valuable attending IPM Updates was for helping them manage production risks.



- 97% improved their knowledge of SWD biology, monitoring, and management strategies
- 46% increased their on-farm SWD monitoring from previous seasons to the 2016 season.

**Grower SWD Trap-Swap and Training Sessions** – The invasive pest, spotted wing drosophila (SWD), has become a significant threat to Michigan’s fruit industry and is the cherry industry’s top priority. To help cherry growers combat the threat of SWD, Extension Educators Emily Pochubay and Nikki Rothwell worked with the Michigan Cherry Committee to secure funding from an MDARD Specialty Crop Block Grant to offer growers an SWD trap-swap program that aims to facilitate on-farm SWD monitoring and detection to reduce the likelihood of economic and crop losses caused by SWD. This program also offered SWD identification, monitoring, and management training sessions.



## Wine Grapes

Ongoing programming in support of the wine grape industry included educational meetings for growers, reports on growing conditions and pest problems, and data collection from wine grape variety test plots.

In February of 2016 a one-day Vineyard Establishment Conference was held at the Northwest Michigan Horticultural Research Center. Presenters from Michigan and three other states provided information on all aspects of vineyard development, from site selection caring for young vines.

A series of meetings, starting with the annual Wine Grape Kick-Off meeting in April of 2016 and followed by monthly “First Friday” sessions in May through August, featured topics related to efficient and environmentally safe pesticide application methodologies.

## Supporting Food and Agriculture, continued

The Northwest Michigan Orchard & Vineyard Show in January 2017 attracted over 70 local grape growers and winemakers to hear the latest news on crop insurance, viral diseases of grapevines, spotted wing drosophila infestations, and harvest-time insect problems.

2016 marked the last year for data collection from the wine grape variety trial at the Northwest Michigan Horticultural Research Center. Several planning sessions were held to gather input from area growers and winemakers on what projects should be conducted next in the research vineyard. The old vines are scheduled to be removed in early 2017 to make space for a new planting which will be used for studies on vine cold-hardiness and sustainable production practices.

### Saskatoon Berries

MSU Extension and campus specialists continued to work with this relatively new crop to Michigan by providing pesticide recommendations, collecting data from a pruning demonstration plot, conducting a summer field day for growers, and studying important insect pests of this fruit. An MSU GREEN (Generating Research and Extension to meet Economic and Environmental Needs) grant was awarded for the establishment of variety trials and plots for pesticide trials at the Northwest Michigan Horticultural Research Center.

### Other Small Fruits

In 2016 crops such as blueberries, raspberries, and strawberries suffered significant losses from spotted wing drosophila. A half-day session on the recognition and management of this insect in small fruit crops was added to the 2017 Northwest Michigan Orchard & Vineyard Show.



## Supporting Food and Agriculture, continued

### Dairy Production and Health

**Focus on the First 24 Hours**— This is a statewide program where speakers, including Stan Moore and other MSU Dairy Team members, shared with participants the latest research and strategies to improve long-term health and growth of dairy replacements from the first day. The following topics were covered:

- Project Recap: Passive Transfer Status on Michigan Dairy Farms
- Managing for High Quality Colostrum
- Importance of Successful Passive Immunity Transfer
- Maternity Pens that Optimize Cow and Calf Performance
- Handling the Newborn Calf
- Opportunities to Reduce Stillbirths

**Michigan Dairy Health Symposium** – District 3 Dairy Educator, Stan Moore, presented and helped coordinate this symposium. This event will be reoccurring each year.

Approximately 50% of the attendees completed an evaluation with the following results:

49% (21) were from dairy herd “owners/managers” or “employees”

57% (24) were “ag professionals” or “veterinarians”

Some were both.

- These 21 owner/manager and employees respondents represented dairies (in some cases, multiple employees from same dairy) with approximately 35,200 cows.
- The Ag professionals and veterinarians worked with a total of 2,076 herds.
- The “level of increase in knowledge” gained (on a scale of 1-5), averaged 3.91.
- 24 participants answered the question about whether they plan to make management changes on the farm based on what they learned.
  - 79% of respondents said “Yes”,
  - 21% of respondents said “Maybe”,
  - 0% said “No”.
- 71% of the respondents who answered the question about making management changes wrote in specific change(s) they planned to make based on what they learned.



**Michigan Dairy Health Symposium** received the following comments:

- *“Well done! Would like to see continued emphasis on training/relating to employees.”*
- *“Keep doing it!”*
- *“Great foundation to continue to build knowledge. Good variety and allowed time for questions.”*
- *“Very informative.”*

## Supporting Food and Agriculture, continued

Through volunteer outreach, Extension Master Gardeners share science-based gardening knowledge and engages citizens and empowers communities in environmentally responsible gardening practices, improving food security, improving community, and developing youth through gardening.

Other Consumer Horticulture programming and services available for residents of Antrim County include:

- Gardening Hot Line
- Gardening in Michigan website
- Ask an Expert system
- Smart Gardening programming
- Soil tests for home gardens, yards and landscape plants
- Master Gardener Training and Volunteer Program



### Assistance to support beginning farmers across MI

The MSU Product Center Food-Ag-Bio assists county residents in developing products and businesses in the areas of food, agriculture, natural resources, and the bio economy. The innovation counselor has special training to deliver these services to local residents. Business counseling is conducted on a one-on-one basis and may take place at the MSU Extension office or the client's home or business location. 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 innovation counselor also assists clients in accessing specialized services they may need that are offered through Michigan State University like feasibility studies, nutritional labeling, and packaging assistance.

Twelve counseling sessions took place to assist four local entrepreneurs in starting new businesses and expanding existing businesses. In Antrim County four new jobs were created. These businesses reported \$100,000 of new sales and \$72,900 in capital investment.

### 2015-16 MSU Product Center Impacts in Antrim County:



34 Counseling Sessions



8 Jobs Created



Increased Annual Sales: \$125,000



Value of Increased Investment: \$200,426



# FOSTERING STRONG COMMUNITIES

When you support MSU Extension, participants learn how to implement best practices in good governance that keeps communities solvent, productive and engaged, learn effective conflict management skills that help leaders and residents work collaboratively on complex issues, and engage youth leaders in decision-making. In the personal finance area, MSU Extension helps youth and adults alike learn the skills they need to increase their savings, manage their spending, avoid predatory lending, and reduce mortgage defaults. All of these outcomes help lower the cost of governmental services and lead to personal and community stability, strong neighborhoods, and safe communities.

**Northern Michigan Counties Association** is organized by MSU Extension and incorporates commissioners from 34 counties in northern lower Michigan. The Association meets 8 times per year to share information and learn from the experiences of others.

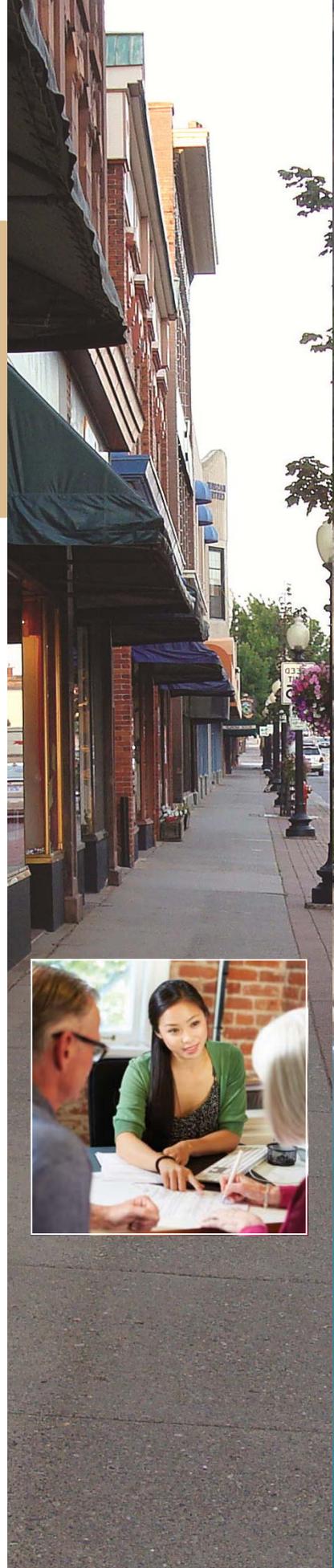
**New County Commissioner Workshops** were held at 7 locations in November and December 2016. Participants included both new and experienced commissioners and other county officials, with 92% indicating that they found the program valuable for their professional (or personal) growth and development. A special version of the New County Commissioner Workshop was done for the Antrim County Board of Commissioners in early 2017.

Registers of Deeds, who are members of the United County Officers Association, learned about **Intergovernmental Cooperation** at their annual meeting in May.

Strategic planning sessions were conducted by MSU Extension for the Antrim County Board and department heads in April 2016.

Kurt Schindler facilitated as technical assistance with Networks Northwest, negotiations and final ordinance/agreement for the formation of the **Mancelona Joint Planning Commission** between one township and one village.

**Meeting Essentials for Banks Township** - developed, delivered, and evaluated an educational program for the Banks Township Planning Commission. Topics covered included understanding the basic principles of parliamentary procedure and how it can improve the productivity of their planning commission meetings. Planning Commission officials also learned how to do the following: develop basic meeting rules, create rules for the public to follow in open meetings, how to record minutes, and how to develop and record findings of fact. They also learned how a public hearing differs from a public planning commission meeting.





## Petoskey Stone Festival—Local Community Development

The Antrim County Petoskey Stone Festival, now in its 12<sup>th</sup> year, celebrates one of Michigan's finest natural resources - the unique Petoskey Stone, Michigan's official state stone. Michigan State University Extension currently provides leadership for this County festival.

- Attracts over 2,000 attendees to this annual event
- Features fun activities and entertainment for the whole family
- Provides a venue for education around our abundant natural resources and our community



### Sea Grant Extension

MSU Extension's Greening Michigan Institute supports efforts to carry out Sea Grant programs throughout Antrim County and the rest of Michigan. Michigan Sea Grant Extension helps apply research, conducts educational activities, and is connected to more than 40 coastal counties. Extension Educators provide technology transfer by interpreting scientific knowledge for decision-makers, public officials, community leaders, businesses, and industries.

Michigan Sea Grant Extension provides targeted support focusing on marinas and other businesses, restoring coastal habitats and related industries, such as commercial and recreational fishing. In partnership with state and federal agencies, Extension Educators are responsive and proactive in addressing local, regional, and national issues relevant to Michigan. Outreach Topics and programs include:

- Economic Impact of Charter Fishing
- Vibrant Waterfront Communities
- Restoring Fish Habitat
- Michigan Clean Marina Program
- Coastal Hazards - Dangerous Currents

Sea Grant educators are working with Northwest Michigan's Water Safety Network on drowning prevention issues, particularly in Lake Michigan. Also, Sea Grant has been active with the Freshwater Roundtable and hosted the sold-out 9<sup>th</sup> annual Freshwater Summit in October, 2016. Over 170 people attended, including many Antrim County residents, and learned about the fight to prevent asian carp in the great lakes; the biology of a new mussel invader in the Boardman River, the New Zealand Mudsnaill; fishery changes to Lake Michigan and water level updates among other topics.

## MSU Extension Staff Serving Antrim County:

<b>Name</b>	<b>Role</b>	<b>Phone</b>	<b>Email</b>
John Amrhein	Government & Public Policy	231-922-4627	amrhein@msu.edu
Mark Breederland	Coastal Communities Development	231-922-4628	breederl@msu.edu
Ann Chastain	Leadership and Community Engagement	231-439-8972	chastain@msu.edu
Julie Crick	Forestry & Natural Resources	989-275-7179	crickjul@msu.edu
Linda Cronk	Extension Health Research	231-922-4621	cronkl@msu.edu
Christina Curell	Environmental/Water Quality	231-745-2732	curellc@msu.edu
James DeDecker	Specialty Field Crops	989-734-2168	dedecke5@msu.edu
Thomas Dudek	Greenhouse/Nursery	616-994-4542	dudek@msu.edu
Phillip Durst	Beef	989-345-0692	durstp@msu.edu
Sarah Eichberger	Disease Prevention and Management	231-922-4836	eichber2@msu.edu
Erwin Elsner	Small Fruit, Consumer Horticulture	231-922-4822	elsner@msu.edu
Elizabeth Ferry	Swine	269-445-4438	franzeli@msu.edu
Merrill Gould	Livestock/Bioenergy	616-994-4547	gouldm@msu.edu
Tom Guthrie	Pork/Equine	517-788-4292	guthri19@msu.edu
Andy Hayes	Community Prosperity	231-582-6482	andy@northernlakes.net
Philip Kaatz	Forage/Commercial Agriculture	810-667-0341	kaatz@msu.edu
Adam Kantrovich	Farm Business Management	231-533-8818	akantrovich@msu.edu
Gerald Lindquist	Grazing Management	231-832-6139	lindquis@msu.edu
Erin Lizotte	Integrated Pest Management	231-944-6504	taylo548@msu.edu
Gerald May	Environmental/Air Quality	989-875-5233	mayg@msu.edu
Ashley McFarland	Malting Barley	906-439-5176	ashleymc@msu.edu
Michael Metzger	Goats & Sheep	517-788-4292	metzgerm@msu.edu
Stan Moore	Dairy/Agricultural Human Resources	231-533-8818	moorest@msu.edu
Jill O'Donnell	Christmas Tees/Ornamental/Landscapes	231-779-9480	odonne10@msu.edu
Dennis Pennington	Biomass	269-838-8265	pennin34@msu.edu
Emily Pochubay	Fruit Production	231-946-1510	pochubay@msu.edu
Emily Proctor	Tribal Governance	231-439-8927	proctor8@msu.edu
Bethany Prykucki	Leadership and Community Engagement	231-258-3320	prykucki@msu.edu
Patricia Roth	Social Emotional Health & Nutrition Supervision	231-882-0025	bannonpa@msu.edu
Nikki Rothwell	Commercial Fruit	231-946-1510	rothwel3@msu.edu
Kurt Schindler	Government & Public Policy	231-882-0026	schindl9@msu.edu
Jeannine Schweihofer	Meat Quality	810-989-6935	grobbej@msu.edu
J Robert Serrine	Community Food Systems/ Hops	231-256-9888	serrine@msu.edu
Sienna Suszek	4-H Supervision	989-354-9870	suszek@msu.edu
Michael Staton	Soybeans	269-673-0370	staton@msu.edu
Curtis Talley, Jr.	Farm Business Management	231-873-2129	talleycu@msu.edu
Marilyn Thelen	Agriculture Systems	989-227-6454	thelen22@msu.edu
Tracy Trautner	Early Childhood	231-779-9480	trautner@msu.edu
Christine Venema	Family Financial Literacy	810-667-0341	venema@msu.edu
Wendy Wieland	Product Center Innovation Counseling	231-348-1770	wieland5@msu.edu
Mary Wilson	Master Gardener	248-347-0269	wilsonm1@msu.edu
Bonnie Zoia	Tourism	989-345-0692	zoia@msu.edu

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