



Animal Industry Division 2012 Annual Report



Michigan Department of
AGRICULTURE
& Rural Development



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Animal Industry Division 2012 Annual Report

An Introduction

Michigan Department of Agriculture and Rural Development's (MDARD) Animal Industry Division (AID) had a year full of successes through day-to-day activities preventing the spread of animal diseases, and in doing so, protecting animal health and food safety.

We enhanced collaboration with our stakeholders. An inter-agency One Health Communication Group was established to consult on activities relating to zoonotic diseases. We also expanded education and outreach to animal health stakeholder groups through publication and dissemination of a State Veterinarian's newsletter. Additionally, we worked with trading partners on emergency preparedness so we all respond in a unified manner when a major disease outbreak occurs.

Disease investigations and response in the past year included: Leptospirosis and Rabies in dogs; West Nile Virus and Eastern Equine Encephalitis in horses; a zoonotic H3N2v influenza prevention campaign for swine at county fairs; Scrapie in sheep; Epizootic Hemorrhagic Disease in domestic deer; and three bovine Tuberculosis (TB) positive cattle herds. In addition, AID partnered with the Michigan Department of Natural Resources (DNR) to update the state's Chronic Wasting Disease (CWD) Response plan for cervids.

Staff also contributed to the department's rural development arm in a few different ways. First, we've been streamlining and laying out clear regulations for aquaculture in Michigan. Secondly, staff worked with the fiber industry to educate and identify opportunities. Finally, staff worked with the Detroit Planning Commission as part of an Urban Agriculture Working Group to develop an urban farming ordinance.

The Animal Industry Division is committed to protecting animal health in order to safeguard animal agriculture, the food supply, public health, and animal well-being. Our daily activities focus around this mission through collaboration with industry, and state and federal partners. This report summarizes our activities and accomplishments for 2012. Division staff has done an outstanding job this past year and I am happy to share this report.



James Averill

*Dr. James Averill,
Animal Industry Division Director*



Animal Shelter Program

Animal control shelters and animal protection shelters are registered with MDARD; there is no registration fee. The regulatory program covers animal care, facility design and maintenance, record keeping, and holding times for animals before disposition.

AID is responsible for registering and inspecting the 195 animal shelters throughout the State of Michigan.

There are two types of animal shelters registered through AID:

1. Animal control shelters are government operated shelters with the purpose of housing stray, confiscated (usually in relation to animal cruelty cases), or owner surrendered animals, and whenever possible, finding new homes for them.
2. Private protection shelters are operated by private organizations such as humane societies for the purpose of housing and finding permanent new homes for homeless animals.

There are four types of shelter inspections conducted by AID field staff:

1. Routine annual inspections are conducted to verify the shelters are maintaining standards compliant with AID regulations.
2. Complaint based inspections are conducted in response to complaints made against a shelter alleging a violation of AID regulation(s).
3. Re-check inspections are conducted to follow-up on violations found during routine and complaint-driven inspections to be sure the shelter has come into compliance.
4. Pre-registration inspections are conducted to ensure new facilities are compliant with AID regulations prior to housing animals.

In 2012, AID field staff conducted 211 annual inspections, 40 complaint-based inspections, 81 re-check inspections, and two pre-registration inspections.



MDARD inspectors:

- Check to ensure required records are in place.
- Confirm the cages are appropriate and cleaned at least once a day.
- Confirm pet food is kept in a safe manner to prevent contamination.
- Ensure the animals are receiving adequate water and food.
- Confirm walls and cages can be easily cleaned – surfaces in the facility should be easily sanitized to minimize illness and disease.
- Confirm the shelter uses the services of at least one licensed veterinarian.
- Confirm shelter seeks licensed veterinary services whenever a health issue arises. We encourage them to work with their veterinarian whenever an animal in the shelter is ill or injured.
- Educate on proper euthanasia.

The Animal Welfare Fund Program

The goal of the Animal Welfare Fund is to provide money for the sterilization of pets before adoption, to increase the knowledge and awareness of Michigan's anti-cruelty laws, and to help fund the care of animals as it relates to the enforcement of those laws.

The Animal Welfare Fund was established in 2007 and allows individuals to contribute money via the state income tax return form. Money collected by the fund is distributed via grants to licensed animal shelters primarily to help defray the cost of spaying, neutering, and adopting animals in shelters. The fund is also used for other activities such as education and outreach on the importance of spay-neuter programs and training related to Michigan's anti-cruelty laws.

For the Fiscal Year (FY) 2012 grant period, AID received a total of 32 proposals requesting more than \$280,000. Fifteen of 32 proposals from Michigan shelters were funded from the 2011 tax year totaling \$133,813.

The selection process is competitive with each proposal being evaluated and rated on its own merit. The call for proposals required shelters to be registered with MDARD. From 2010 through 2012, the Animal Welfare Fund allocated \$356,000 to 39 facilities throughout the State of Michigan. The number of requests indicates the magnitude of the need for these services.



MDARD Bovine Tuberculosis Eradication Program

Bovine Tuberculosis (TB) is a disease caused by the bacterium *Mycobacterium bovis*. The disease is found primarily in cattle, but has also been found in privately owned cervidae (deer and elk), bison, goats, and carnivores such as coyotes. It can affect any warm-blooded animal, including humans.



Animals infected with bovine TB may not show any outward signs of illness, but may eventually exhibit weight loss and a gradual decline in general health. TB lesions may be found in any organ or body cavity of diseased animals. Because the lungs are often affected, the animal may display symptoms such as coughing and difficulty breathing.

Bovine TB is most commonly spread through respiration. Invisible droplets (aerosols) containing TB bacteria may be exhaled or coughed out by infected animals and then inhaled by other animals or humans. Animals who come in close contact with infected wild deer, or those kept in close contact with other infected

animals in enclosed areas like barns, are at greatest risk for exposure to bovine TB. Livestock may also be infected by ingesting water or feed that has been contaminated with saliva and other discharges from other infected animals. Animals and humans may contract bovine TB when they drink unpasteurized milk from infected cows or consume raw or undercooked contaminated meat from infected animals.

The purpose of this AID program is to eradicate bovine TB from Michigan.

Economists at MSU estimated the economic impact of bovine TB to cost Michigan agriculture \$156 million over the past 10 years. The disease has also cost the wildlife community approximately \$25 million annually. The U.S. Department of Agriculture (USDA) and the State of Michigan together have spent \$200 million trying to eradicate the disease from Michigan. From FY1995 through FY2010, Michigan has spent \$106.6 million trying to eradicate bovine TB, \$78.9 million dollars of that amount (74 percent) has been allocated to MDARD.

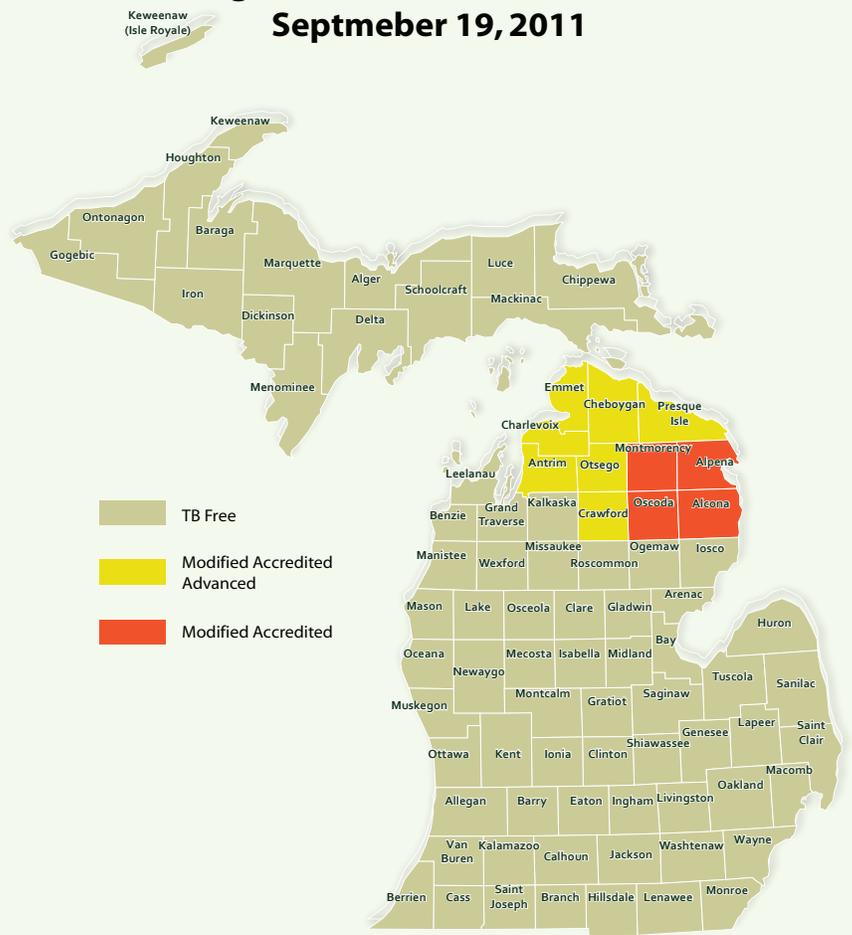
Eradication of bovine TB is necessary for a variety of reasons, including the reputation of Michigan's quality agricultural products and the health of our natural resources. Michigan is now one of several states in the U.S. that still has bovine TB; and the only state where the disease has become established in wild deer. Until bovine TB is eradicated, other states will continue to impose strict importation requirements to protect their livestock.



MDARD tested all bison, cattle, goats, and privately owned cervidae herds in Michigan at least once by December 31, 2003. Since then, MDARD and USDA have been slowly shrinking the bovine TB zone (known as Modified Accredited Zone) to just a small area in Northeastern Lower Michigan. Simultaneously, the Michigan Department of Natural Resources (DNR) expanded its testing and surveillance efforts in Michigan's wildlife population. The Michigan Department of Community Health (MDCH) continues to offer TB testing for people concerned about possible exposure to the disease.

With the combined efforts of the three state departments, and with help from MSU and USDA, the eradication of bovine TB in Michigan should be successful. Historically bovine TB was found in every state of the nation. In 1917, the USDA began an intensive and aggressive campaign to eradicate TB in livestock.

Michigan Bovine Tuberculosis Zones September 19, 2011



MDARD Bovine Tuberculosis Surveillance

For calendar year 2012, there were 428 whole herd tests in the MAZ, 335 whole herd tests within the Modified Accredited Advanced Zone (MAAZ), and 26 whole herd tests in the special surveillance zone (northern portions of Iosco and Ogemaw counties). For calendar year 2012, surveillance testing led to the identification of three new bovine TB infected herds.

Bovine Tuberculosis Affected Herds

TB Infected Herd #53

A medium-sized beef herd in Alpena County was confirmed positive in January 2012.

TB Infected Herd #54

A medium-sized Alpena County TB positive dairy herd is following the test-and-remove process. If tests are negative, the herd may be released from quarantine once a new herd plan is signed.

TB Infected Herd #55

A medium-sized dairy herd in Alpena County was discovered as a result of routine TB testing and was designated as infected November 1, 2012. The farm is following the test-and-remove process. The herd had its first removal test November 27-30, 2012. The herd continues under quarantine until all testing is complete.

Presque Isle County - Cheboygan County Testing Completed

All testing in Presque Isle and Cheboygan counties, within 10 miles of the three TB positive deer discovered in Presque County in 2011, has been successfully completed. Seventy herds were tested since the high-risk area was declared on February 10, 2012.

MDARD Bovine Tuberculosis Eradication Program *continued*

Wildlife Risk Mitigation Project

The Wildlife Risk Mitigation Project began in 2008 with a goal to enroll 950 commercial farms with biosecurity practices that reduce the risk of cattle coming into direct or indirect contact with bovine TB infected free-ranging white-tailed deer. Farmers in Northern Lower Michigan, whose cattle have been identified as at risk for bovine TB transmission from wildlife, are using the steps below to prevent disease transmission and to market their cattle:

- Fence in feed – and keep the fences closed
- Store feed in buildings
- Feed cattle away from deer cover
- Feed cattle daily
- Provide water to cattle where it cannot be contaminated by deer
- Use disease control permits from DNR to keep deer numbers down on cattle farms

As of December 31, 2012, there were 916 commercial farms and 47 freezer beef farms enrolled in the project. Currently, 941 (98%) of these farms' mitigation plans have been verified. Field staff conducted winter inspections on 892 farms in northern Lower Michigan.



Horse Program

Equine Reportable Diseases

The Equine Reportable Diseases (ERD) program involves follow-up on reportable disease cases in horses. There are currently 24 equine diseases that are reportable. AID typically conducts between five and ten equine disease investigations each year.

Eastern Equine Encephalitis

Eastern Equine Encephalitis (EEE), commonly called sleeping sickness in horses, is a viral disease transmitted by infected mosquitoes. The primary host is birds, but horses, humans, and other mammals can become infected if bitten by an infected mosquito. EEE requires a bite from an infected mosquito and cannot be transmitted directly from infected horses to other horses or humans. Mosquito precautions for horses are recommended and horses should be vaccinated against the disease to protect them throughout the year. Tips for preventing mosquito-borne sickness in horses include vaccination, mosquito repellants, stabling horses during prime mosquito exposure hours (dusk and dawn), and eliminating standing water. Hot, wet weather can increase the mosquito population, increasing the risk of EEE.



In 2012, there were no cases of EEE in Michigan horses. Interestingly, an eight-week-old female Boxer puppy from Van Buren County was confirmed to be infected with EEE in 2012. The puppy had been housed in the home until five weeks of age when the puppy was moved to an outdoor kennel along with her littermates. The puppy developed sudden neurologic signs around eight weeks of age including aggression, seizures, paddling, and a loss of reflexes. The puppy was euthanized. Although dogs can become infected with EEE, it is rare. This is the first case of EEE confirmed in dogs in Michigan.

Equine Infectious Anemia

Equine Infectious Anemia (EIA) is an incurable viral disease of horses transmitted by biting flies. There is no vaccine and no treatment. Once an animal is infected with EIA, it is infected for life, regardless of the severity of the symptoms. While some animals die after becoming infected, some appear to recover and become carriers of the virus. Equidae (horses, asses, jacks, jennies, hinnies, mules, donkeys, burros, ponies, and zebras) are the only known animals affected by this virus. A blood test (Coggin's Test) can determine if animals are infected.

Testing requirements for Michigan equines were first established in 2001. MDARD requires testing for interstate movement into Michigan as well as for intrastate movement, including shows and events where horses congregate, and for sales when the animal permanently leaves the premises. A test is valid for 12 months from the date drawn. AID veterinarians follow-up on cases in which animals were not properly tested, as well on cases of infected animals, including retesting. In 2012, MDARD staff investigated five complaints of horse owners alleged to be in violation of state EIA testing requirements. Preventing the spread of disease is the goal and is accomplished by quarantine and/or euthanasia. Preventing the spread of EIA is an important component of horse health and management and will save horse owners from undue veterinary expenses.

Horse Program *continued*

In 2012, there were two cases of EIA in Michigan horses - a 17-year-old Quarter Horse/Arabian cross mare in Mecosta County, and a 21-year-old Quarter Horse/Arabian cross gelding in Gladwin County. Both horses were born and raised in Michigan. Prior to 2012, neither horse had been screened for EIA. The Mecosta County horse was tested in order to attend the local county fair. The Gladwin County horse was tested as a result of traces stemming from the Mecosta County horse. It is important to note that the Mecosta County horse was moved and sold in early 2011 when EIA testing requirements were temporally sunsetted from law, emphasizing the importance of the state maintaining these testing requirements in order to successfully eradicate the disease.

West Nile Virus

West Nile Virus (WNV) is caused by a virus that primarily infects and multiplies in birds, which serve as reservoirs for the virus. The virus is spread between birds through the bite of an infected mosquito. Like EEE, WNV requires a bite from an infected mosquito and cannot be transmitted directly from infected horses to other horses or humans. Mosquitoes can spread the disease to humans and other animals, including horses. Mosquito precautions for horses are recommended and horses should be annually vaccinated against the disease.

In 2012, the state, as well as much of the nation, experienced an outbreak of West Nile virus due to the hot, dry conditions. Michigan was one of the hardest hit states. The Michigan Department of Community Health (MDCH) reported 201 cases of West Nile virus in humans in 2012 (compared to 34 cases in humans the previous year), including 15 deaths. This marks the worst season for West Nile virus in the state since 2002. MDARD reported four cases of WNV infection in horses, one case each from the following counties: Barry, Ionia, Montcalm, and Sanilac. None of the horses had been vaccinated against West Nile Virus.

Equine Piroplasmiasis

Equine Piroplasmiasis (EP) is a disease caused by a blood borne parasite. The parasite can be spread by a tick or via transferring blood from an infected equine through contaminated needles or equipment (surgical, farrier, dental, etc). Infected equine may be weak, off feed, have an elevated fever, discolored (red to brown) urine, or be jaundiced (seen as yellow gums). There is no vaccine; infected horses remain infected for life. A treatment has been discovered using an antiprotozoal drug called Imidocarb, but it can be expensive and poses risks to the horse.

The United States has been experiencing an outbreak of EP stemming from a ranch in Texas and several states have found infected horses. Despite this, there were no cases of EP in Michigan in 2012. To protect Michigan equine, as of June 8, 2011, MDARD requires imported equine originating from states that have had a positive case of EP in the past 12 months to have a certified statement from a veterinarian that the animal is not showing clinical signs of piroplasmiasis and is either free of ticks/or has successfully been treated for ticks.



Companion Animal Programs

Animal Control Officer Program

Most, but not all, counties have animal control agencies. Many local cities and townships, especially in southeast Michigan, also have animal control agencies. Animal control officers are the primary enforcers of the Dog Law. When a jurisdiction has no animal control, enforcement of the Dog Law falls to local law enforcement.

The Dog Law is important because it provides for the rabies vaccination and licensing of dogs, inspection and licensing of dog kennels, remuneration of livestock owners for damage to livestock caused by dogs, leash restraint of dogs, animal control officer training, and establishment of animal control agencies. The Dog Law protects both public health and livestock.



While the Dog Law is largely enforced by animal control officers and local officials (clerks, prosecutors, law enforcement officers, governmental boards), MDARD's Animal Industry Division is the state agency responsible for its oversight. AID reviews and approves animal control officer training and serves as a resource to local agents.

To be employed as an animal control officer in Michigan, an individual must be either a certified police officer or have had a minimum of 100 hours of training approved by AID. Individuals serving in animal control for at least three years prior to 1973 are exempted from this requirement. To become familiar with state laws and regulations, animal control officers are advised to have eight ride-along hours with AID staff. In 2012, animal control officers conducted 12 ride-along trainings and MDARD approved the training of 21 individuals.

Animal control officers enforce Michigan's cruelty and dog licensing laws. To enhance the division's partnership with individuals performing animal control, AID has been conducting regular visits with animal control officers to provide updates, discuss ways animal control agencies can assist AID, and determine how AID can better serve animal control agencies. In 2012, the division conducted 123 visits with individuals performing animal control activities. Likewise, AID assists animal control agencies in animal welfare and cruelty investigations. In 2012, AID assisted in 14 animal welfare investigations.

Companion Animal Reportable Diseases

Diseases of companion animals that could affect humans, domestic animals, agriculture, or the economy are reportable to MDARD. Depending on the specific circumstances, investigations and trace backs from the index case may be conducted. Some reportable diseases are considered zoonotic diseases since they are capable of infecting humans.

Psittacosis

Psittacosis is a bacterial disease primarily affecting pet birds, but can also affect humans. Infection typically occurs from inhalation of infected droppings, feather dust, or respiratory discharge. There is no vaccine currently available for birds. Prevention of the disease includes testing and a four-week period of isolation for newly acquired birds, practicing good husbandry practices, and maintaining proper sanitation and records. People are advised to wear gloves, protective clothing, caps, goggles, and a mask when cleaning or handling ill birds.

Companion Animal Programs *continued*

In 2012, there were two cases of Psittacosis, both occurring in budgerigars at separate Oakland County pet stores. The two cases appear to be linked as each bird had been purchased around the same time from their perspective store by the same owner and had direct contact with each other. The owner had later returned the birds to their perspective stores when one became ill and found to be positive for the disease. The pet store elected to euthanize this bird. The other bird was isolated from other birds and people upon its return to the store, but developed illness and subsequently tested positive shortly thereafter. This bird was placed under quarantine until successfully treated.

To protect the public and other birds, MDARD quarantines pet stores with Psittacosis positive birds until all exposed birds have been treated and subsequently tested negative.

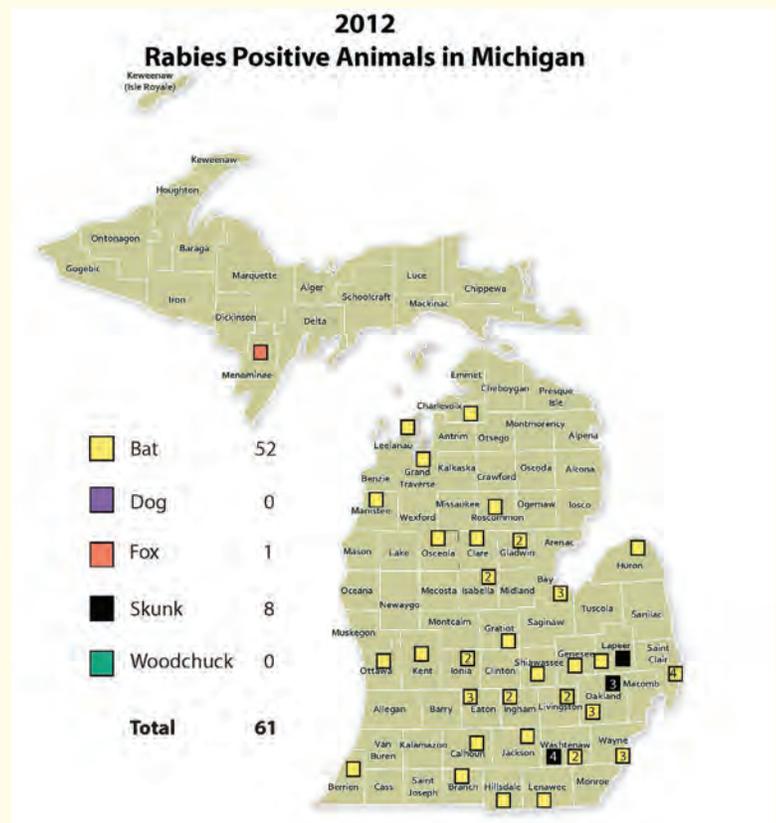
Rabies

Rabies is a viral disease that can infect all mammals, including humans. Rabies infection is most often the result of a bite or scratch from an infected animal and is considered universally fatal. Rabies is endemic in Michigan's skunks and bats. Vaccination of domestic animals, particularly dogs, is used to create a barrier between wildlife and humans. There are licensed and approved rabies vaccinations available for dogs, cats, ferrets, cattle, sheep, and horses, as well as humans. In 2012, there were 61 rabies positive animals in the state.

AID monitors all cases of rabies reported in the state assuring domestic animals are considered in an outbreak. This includes epidemiological investigation of possible contacts, determination of rabies vaccination status, issuing and monitoring quarantines, making recommendations based on standard rabies control documentation (Rabies Compendium, etc.). AID staff also serve as resources to groups, associations, and communities in providing education concerning rabies virus, disease, prevention, prophylaxis, and control.

Table 4: Rabies positive animals

Rabies positive animals	2012	2011
Bats	52	57
Skunk	8	5
Fox	1	1
Cat	0	0
Dog	0	1
Horse	0	0
Woodchuck	0	1
TOTAL	61	65



In 2011, 57 bats, 5 skunks, 1 fox, 1 dog and 1 woodchuck tested positive for rabies.

Canine Leptospirosis

Leptospirosis is a bacterial disease that can affect animals and humans. There are many different strains of the bacteria. The disease is usually contracted by contact with infected urine, soil, water, or other surfaces, but can be contracted via bites or by eating infected tissues.

Wild rodents are common shedders of the disease in the environment. The disease can cause liver and/or kidney disease in dogs, and can lead to death. Treatment includes undergoing a course of antibiotics. There is a vaccine available for dogs that protects against some of the most common strains.

In addition to vaccination, prevention for dogs includes:

- Not allowing dogs to drink from rivers, stream, ponds, lakes, or stagnant water
- Minimizing the dog's contact with wildlife, livestock, and other dogs
- Preventing the dog from ingesting animal carcasses

Prevention measures for people include wearing gloves when cleaning or handling animal urine, promptly cleaning and disinfecting areas contaminated with animal urine, and hand-washing. Rodent control is important in reducing cases of leptospirosis as well. In 2011, there was an outbreak of leptospirosis in Michigan dogs.

MDARD received a total of 60 reported cases of canine leptospirosis in 2012. Cases were identified in the following Michigan counties: one in Allegan, two in Bay, one in Branch, one in Eaton, three in Genesee, two in Jackson, one in Kalamazoo, three in Kent, 17 in Macomb, 11 in Oakland, three in Saginaw, one in St Clair, 12 in Wayne, and one in Wexford.

Leptospirosis strains identified in these cases included *L. autumnalis*, *L. bratislava*, *L. grippityphosa*, and *L. icterohaemorrhagiae*, *L. pomona*. In 2011, MDARD saw a significant increase in Leptospirosis cases in dogs, especially *L. icterohaemorrhagiae*, a strain which can cause severe disease and is often found in rats. MDARD has since increased its activities related to Leptospirosis, including conducting further epidemiologic investigating of the cases.



Cervids, Sheep, Cattle, and Other Non-TB Programs for Ruminants

Scrapie:

Scrapie is a fatal neurological disease of sheep and goats. It is classified as a type of transmissible spongiform encephalopathy and is caused by an abnormal protein called a prion. Scrapie is not transmitted between species. There is a genetic component for susceptibility to scrapie – the QQ genotype is susceptible to scrapie, while RR is highly resistant and QR is resistant.

Genetic testing of animals, especially breeding rams, and not using QQ rams for breeding stock can be used to reduce the risk of scrapie in the population.

The presence of scrapie in United States' sheep and goats prevents the export of breeding stock, semen, and embryos to many other countries, and limits movement of animals between states. USDA has a goal eradicate scrapie by 2017. In order to successfully obtain that goal, all sheep and goats are required to have official scrapie identification tags.

In April 2012, an Iosco County flock of sheep was found positive for scrapie through slaughter surveillance. The flock was placed on a flock clean-up plan to remove all genetically susceptible animals from the flock. Another animal in the flock was found to be positive for scrapie through additional testing. The remainder of the flock will be inventoried by USDA personnel for five years to continue to monitor for disease. USDA conducted slaughter surveillance testing on 2,339 sheep and 281 goats; and producers submitted 36 sheep and four goats for testing in 2012.

Michigan exceeds requirements for scrapie tag identification as 98 percent of the sheep and 92 percent of the goats were tagged with farm premises identification.

There were 101 scrapie violations where owners were transporting animals without proper identification. MDARD's compliance unit sent 104 scrapie warning letters in 2012. USDA's Veterinary Services (VS) has indicated Michigan sheep and goat owners do a great job identifying their animals with tags. Michigan had 81,728 sheep and 33,676 goats in 2012 on 4,869 farms.

AID monitors compliance activities regarding movement of sheep and goats with official identification presented at licensed livestock markets throughout the state. In order to increase traceability of animals back to the flock of origin, Michigan will no longer allow untagged animals to be tagged with white scrapie tags at a licensed livestock markets without providing either documentation showing the flock of origin, or a signed statement from the owner of the flock of origin.

Blue meat tags for the scrapie program are no longer available to markets, unless they apply to be an approved market with USDA. Michigan has one approved market for sheep and goats. In 2012, scrapie slaughter surveillance testing was conducted on 2,620 Michigan animals in the federal slaughter surveillance program. Showing Michigan producers do a great job ensuring that their animals are tagged before going to market.



Cervids:

In December 2012, Michigan had 407 Privately Owned Cervid (POC) (deer, reindeer, elk, and caribou) facilities.

There are four classes of POC facilities in Michigan, they differ in their identification and record requirements, ability to purchase, sell and move live animals, requirements for disease testing, and containment of animals (fencing/gates). In 2012, there were 30 facilities in Class I (Hobby); 39 in Class II (Exhibition); 138 in Class III (Ranch); and 200 Class IV (Full).



Chronic Wasting Disease (CWD)

CWD is a neurological disease classified as one of the transmissible spongiform encephalopathies. Michigan has a CWD Certification Program. Facilities in the program are required to submit all death losses (including cull or harvested animals) over 12 months of age for CWD testing, and submit an annual inventory that includes all sales, deaths, natural additions, and purchases. Certification status is obtained after five or more years of participation in the program with no positive samples.

Regardless of a certification program or not, all Michigan cervid facilities are required to submit all death losses due to injury or illness over 12 months of age, and 25 percent of culled or harvested animals over 12 months of age. Michigan has 95 CWD Certification Program herds. The total number of cervids tested under the CWD surveillance program in 2012 was 1,557; and there were no cases of CWD in Michigan in 2012. USDA published new federal herd certification program standards during the summer of 2012. Michigan submitted an application to USDA for approval in the new federal program in August 2012. USDA is currently reviewing the applications, and Michigan has been granted temporary provisional approval allowing Michigan cervid producers to continue to export animals to other states.

The importation process allows Michigan cervid producers, whose herds are Bovine TB Accredited (116 herds) and CWD Certified, to apply for approval to import animals from other states. Each state must be consistent with the new Federal Herd Certification Program for CWD, and producers wishing to move animals into Michigan must meet Michigan fencing and certification requirements on their facilities.

Livestock Marketing and Dealer Program

The Livestock Dealer Program provides regulatory oversight regarding licensing, fiscal surety, animal welfare, and disease control issues as they pertain to livestock marketing activities.

Entities engaged in the business of buying, selling, transporting, and/or negotiating the sale and transfer of livestock are required to be licensed and bonded, when appropriate, and to maintain records of such activities. Facilities and transport vehicles are required to be maintained in such condition to assure animal welfare and prevent the spread of disease. Licenses are issued on a fiscal year basis.

There has been some type of Livestock Marketing Program in the state of Michigan since 1937. Today, we have 221 licensed livestock dealers, truckers, auction markets, and collection points in Michigan.

Field activities for Fiscal Year (FY) 2012 included education and outreach to licensed dealers at livestock markets. Inspections, with a focus on record keeping, were conducted on five percent of the licensed livestock dealers in 2012.

Emergency Management Program

MDARD must be ready to aid in response and recovery efforts and prevent the spread of disease in the event of a disaster that affects animals or an animal health emergency. In the event of an animal health emergency, trained response teams can rapidly decrease exposure and risk of spreading disease by quarantining premises, curtailing movement of livestock, and providing vaccination (if available). Training exercises and simulated events assure MDARD personnel are ready for a response.

The Michigan State Animal Response Team (MI-SART), working with MDARD, received a grant from the American Veterinary Medical Foundation (AVMF) that sponsored a series of emergency response courses at the January 2012 Michigan Veterinary Conference. The course covered responding to all types of hazards veterinarians and their personnel might encounter during an emergency event.

In April, the Michigan Veterinary Corps and MI-SART hosted a Technical Large Animal Emergency Rescue (TLAER) training course in Lansing. The course brought together 94 first responders, including veterinarians, veterinary technicians, county sheriff departments, fire departments, animal control officers, humane societies, state and local departments of public health, members of Michigan's National Guard, high school students, and animal rehabilitators who learned how they would collaborate when responding to various scenarios that included large animal trailer accidents, animals stuck in mud, animals that fell into water hazards from flooding, etc.

In May, the 4th International Mortality Symposium was held in Dearborn. Members of MDARD were part of the conference planning committee working with Michigan State University Extension who hosted the event. The conference brought in 150 participants from as far away as Canada, Ethiopia, and Nigeria to discuss mass animal mortality management and best practices learned from recent animal disease outbreaks. MDARD gave presentations on the Polybrominated Biphenyl (PBB) contaminated feed tragedy that occurred in 1973, permitted movement during emergency events, and arranged a demonstration with the Martin Fire Department regarding the use of foam during an emergency disease outbreak.

In May and June, the Michigan Veterinary Corps received a national training grant and hosted an entry level Incident Command System training for first responders in East Lansing. The event was made available to all veterinary personnel interested in joining the corps, and to all members of the Michigan Medical Reserve Corps, as well as the general public.

MI-SART completed a memorandum of understanding (MOU) with the Michigan American Red Cross regarding co-located pet and human sheltering for statewide disasters. This is the first MOU approved by the National American Red Cross with a state animal response team.

In June, MDARD worked with the Be Aware, Be Prepared group, consisting of livestock industry stakeholders, and federal and state government emergency preparedness organizations, and held a joint information exercise with USDA, Michigan State Police, and industry stakeholders in determining how to deliver a uniform message during a disease event. A new workgroup, called the Michigan Food Animal Communication Team (MI-FACT), was formed as a result of the meeting. Their request is to receive direct communications from MDARD's PIO and the Joint Information Center in the event of a disease outbreak so that they may quickly disperse information to their stakeholders.

MDARD continues to work with Michigan State Police on Radiation Emergency Preparedness (MSP-REP) in addressing the need to incorporate animals into emergency plans after observing the events that occurred in the Fukushima disaster in 2011. MDARD worked with MSP-REP, Michigan Department of Environmental Quality (MDEQ), and several county Emergency Management offices – (Fermi II – Monroe County; Palisades – Allegan County, Berry County, Calhoun County, and Van Buren County) in developing and holding household pet decontamination drills with the MI-SART and Michigan Veterinary Corps teams. The Fermi II exercise included participation from canine handlers who are part of the Michigan Task Force. The Palisade exercise also included participation from local American Red Cross chapters, Baker College Veterinary Technician first year students, Allegan County Animal Shelter, and Camp Critter Country.

MDARD continues to be involved in many regional and national level projects, including the National Alliance of State Animal and Agriculture Emergency Programs (NASAAEP), an organization composed of state government representatives and non-governmental organizations working with various departments at the federal level to discuss best practices in implementing animal emergency responses. MDARD participated in a USDA funded conference in September.

MDARD is a member of the Multi-State Partnership for Security in Agriculture. This is a 14-state consortium that allows member states facing similar issues to pool resources to prepare for agricultural emergencies (whether disaster or disease). This regionalization effort allows a state to further plan efforts that would not otherwise be accomplished. In October, through a contractor hired by the Multi-State Partnership, MDARD met with members of Indiana and Ohio to develop a memorandum of understanding (MOU) for permitted movement of animals and agriculture products in the event of a disease outbreak. The following day, MDARD met with Ontario, USDA APHIS VS, and members of the U.S. Customs and Border Protection to discuss shared resources should a significant animal disease event occur.

In November, MDARD personnel received a request to participate in the Hurricane/Super storm Sandy response at FEMA's National Response Coordination Center (NRCC) in Washington, DC. Funding for this involvement was paid through the Multi-State Partnership. This was the first time personnel from states were requested to attend and help with animal issues on a national level.

In December, MDARD presented the importance of incorporating the Pets Evacuation Transportation Standards (PETS) Act into local emergency management planning to 88 participants at the Michigan Citizen Corps Conference.

National Animal Reportable Diseases

MDARD is a participant in USDA's voluntary National Animal Health Reporting System (NAHRS). NAHRS uses the World Organization for Animal Health (OIE) reportable animal disease list to track incidences of livestock animal diseases. In 2012, MDARD reported the following diseases (listed in the following table) occurred in Michigan to NAHRS:

2012 Animal Disease Investigations

Disease Type	Species	Cases Reported	Investigated	Action Required	Carry into 2013
Anaplasmosis					
Bovine TB	Cattle herds	3	yes	euthanasia	yes
Bovine TB	Cervid herds	0		none	no
Brucellosis	dogs				
CAE	goat	2	yes	E & O	
EEE	Puppy	1	yes	N/A	no
EHD-1	Horse	1	yes	quarantined	yes
EIA	Horse	2	yes	euthanasia	no
Enzootic bovine leukosis	Cattle herds	2	yes		
Epizootic Hemorrhagic D:	Cervid herds	12	yes	E & O	no
Feral Swine	Swine	42 killed	yes	none	yes
H3N2-V	Swine	Not Reportable		MDCH All fairs still in progress	yes
Leptospirosis	dogs	60	yes	treatment	
mycoplasmosis	Turkey	2 flocks	yes	E & O	
Ovine Progressive Pneu	sheep	1	yes		
Paratuberculosis (John)	goat	2	yes		
Paratuberculosis (John)	Cattle herds	14	yes	E & O	no
Porcine Reproductive &	swine	3	yes		
Rabies	all mammals	59 wildlife	yes	E & O	
Scrapie	Goat or sheep herd	1	yes	euthanasia	no
West Nile Virus	Horse	3 (214 human cases with 10 deaths)	yes	none	no
Total cases investigated		145			

KEY	
E & O	Education and Outreach
N/A	Not Applicable
Quarantined	Animals must not move from farm
MDCH	Michigan Department of Community Health
Investigation	Traces in and out, contact of animal, owner interviewed
Euthanasia	Painless death

Aquaculture Program

Aquaculture in Michigan - the "AIM" project registers and regulates aquaculture facilities in Michigan. AID has a MOU with DNR to address fish health in aquaculture and wildlife. There are 26 aquaculture reportable diseases including Viral Hemorrhagic Septicemia (VHS) for which MDARD has entered into a Cooperative Agreement with USDA, APHIS, VS to educate and conduct outreach to Michigan growers.

In 2011, a multi-faceted group, which includes MDARD, DNR, DEQ, the Michigan Economic Development Corporation, the Michigan Aquaculture Association, MSU, Originz, and other interested parties, was formed to address "growing aquaculture in Michigan." Continuing in 2012, this group made significant progress on the initiative and worked with contractors to develop a "roadmap through regulation" for prospective aquaculturists. The AIM team also made strides to reduce regulatory barriers for the industry, identify markets for aquaculture products, and nurture development of financial support for the sector. This group continues work to pave the way for the growth of the aquaculture industry in Michigan.

Avian Disease Program

There has been a reportable program for avian diseases since the early 1900s. The most recent updates to the National Poultry Improvement Plan (NPIP) program occurred in 1994.

MDARD follows-up on any avian diseases reported (there are 22 reportable avian diseases) and participates in the NPIP program in order to maintain Salmonella Pullorum-Free status. MDARD also administers the new Low Pathogenic Avian Influenza (LPAI) H5H7 component of the NPIP program under a USDA Cooperative Agreement. This agreement focuses primarily on surveillance for avian influenza, education and outreach, and emergency preparedness.



AID maintains and updates the Michigan Avian Emergency Disease Manual and the LPAI emergency response plan in coordination with the Emergency Management Program Manager. In 2012, AID conducted annual emergency preparedness exercises with industry and other stakeholders.

The Avian Influenza surveillance program, initiated in 2006, monitors the health of Michigan's poultry flocks. In 2012, 3,100 birds were tested and found to be negative for notifiable avian influenza. In addition, AID continues to work with the Michigan Allied Poultry Industry (MAPI) and other parties on preparedness in case an avian influenza outbreak occurs. In 2012, working with USDA, industry stakeholders, and Michigan State University's Diagnostic Center for Population Animal Health (DCPAH), we completed an update of the state's National Poultry Improvement Plan (NPIP), AID State of Michigan Initial State Response, and Containment Plan (ISRCP) for Notifiable Avian Influenza. Exercises to test the response plan are scheduled for 2013.

In 2012, AID responded to multiple reports of illness in backyard poultry flocks, most of which resulted in the need for education on husbandry and care of poultry. MDARD also responded to three cases of Infectious Laryngotracheitis, all of which were the result of exposure to the vaccine strain of virus and did not impact export of Michigan poultry or products. In addition, we were involved with resolving cases involving salmonella in people exposed to live poultry or poultry products from live markets.

Swine Program

Feral Swine:

AID's Feral Swine Program is conducted with a cooperative agreement between MDARD and USDA, APHIS, Wildlife Services (WS) to monitor prevalence of pseudorabies virus (PRV) in feral swine, primarily through USDA activities. Additional goals are to reduce feral swine numbers.

Feral swine are hogs that have either escaped from facilities or have been placed in the environment by unscrupulous individuals. When feral swine become established, they are a threat to the health and welfare of domestic swine. Feral swine can host many parasites and diseases that threaten humans, domestic livestock, and wildlife; and can cause extensive damage to forests, agricultural lands and Michigan's water resources.



Samples are taken, whenever possible, from feral hogs that are trapped or shot and are tested for a variety of diseases of concern to swine producers, including classical swine fever, brucellosis, PRV, bovine TB, trichinosis, toxoplasmosis, Hepatitis E Virus, and swine influenza.

Since 2007, there have been 140 feral swine tested, resulting in 10 positive samples for PRV (most occurred in 2008 and 2009) and four positive Toxoplasmosis samples. MDARD partners with USDA WS to work with private landowners who are willing to trap feral hogs on their property. In 2012, 42 hogs were trapped and sampled as a result of this effort. WS also follows up on all reports of hog damage, sightings, or hunter shot feral hogs to confirm the reports.

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Domestic Swine:

AID's focus for the swine industry is to maintain Stage V. PRV status through testing and monitoring of pigs, maintain swine brucellosis free status, monitor for, and follow up on, all reportable swine diseases, and ensure the health of commercial swine operations by collaborating with USDA APHIS WS and DNR on control of feral swine.

In 2012, much attention was centered on human influenza variant, H3N2v, illnesses associated with exposure to swine at county fairs. MDARD worked with our public health partners, MSU Extension and the swine industry to provide accurate and timely information to fairs in an effort to prevent spread of disease.



We also provided testing of swine prior to some shows to demonstrate animals tested negative. Michigan had far fewer cases of human illness (two) than surrounding states. MDARD will continue to be involved with surveillance, education, and outreach efforts for swine influenza for the 2013 fair season.



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