



IOWA DEPARTMENT OF
**AGRICULTURE &
LAND STEWARDSHIP**

2019 ANNUAL REPORT



November 30, 2019

Iowa State Capitol
1007 E Grand Ave.
Des Moines, Iowa 50319

Dear Legislators:

Iowa continues to feed and fuel the world. As Iowa's Secretary of Agriculture, I have the honor of working to promote Iowa's leadership in both of these areas, while also supporting our state's proud history of land stewardship.

Since I was elected to lead the Iowa Department of Agriculture & Land Stewardship (IDALS) in 2018, we have made substantial progress in key areas: expanding global markets, urban and rural partnerships on water quality, supporting land stewardship, and promoting agriculture through the "Choose Iowa" initiative. As Secretary, I have reinforced the importance of cultivating the next generation of agricultural innovators, researchers, operators, and leaders with the help of external programs such as FFA, 4-H, Future Ready Iowa, the World Food Prize, and more.

This progress has been possible despite some serious headwinds facing Iowa agriculture. In 2019, our state's farmers and farm economy have been especially resilient in the face of catastrophic flooding, increased trade tariffs, and regulatory uncertainty regarding the Renewable Fuel Standard (RFS) and Small Refinery Exemptions (SREs) for renewable fuels blending. Despite these setbacks, the Iowa Department of Agriculture and Land Stewardship (IDALS) continues to collaborate with Iowa farmers and agriculture leaders to advance our state's position as a global food- and fuel-producing leader.

On the global markets front, Iowa exported \$13.2 billion in ag products to 185 countries in 2018. Iowa was first in the nation for exports of pork (\$2 billion), corn (\$1.58 billion), feed grain (\$1.22 billion). Our state was also the second-largest exporter of soybeans (\$3.05 billion) and fourth in beef exports (\$437 million). Our Department worked with USDA, IEDA, and Iowa exporters to forge new strategic partnerships with buyers and stakeholders in Panama, Colombia, and Japan through trade missions. In Japan, Iowa will see millions of dollars in export gains from the newly-passed US-Japan tariff reduction agreement on agriculture and food products. Upcoming trade missions in Taiwan, Mexico, and South Korea will aim to continue growth opportunities for Iowa producers.

However, as of this writing, the United States-Mexico-Canada Agreement (USMCA) remains stalled in Congress. USMCA would mean 83,400 jobs and \$10.3 billion in trade for Iowa alone. The market security

benefits of USMCA are amplified given the on-going status of trade negotiations with China and the current set of retaliatory tariffs the nation has imposed on US agricultural products.

As Secretary, I will remain focused on protecting and growing markets for Iowa products. This includes animal agriculture, a critical area for our state's economy. Our team has led and participated in several Foreign Animal Disease (FAD) prevention and preparedness workshops this past year to help protect this market of Iowa agriculture from potential disease-related disruption. In September, we led a four-day African Swine Fever functional exercise that included the US Department of Agriculture, pork producers, Iowa State University, and several state agency partners.

Yet Iowa's exports are only as good as the soil and water used to grow them, which is why the Department is undertaking historic efforts to collaborate with farmers and urban landowners on long-term strategies for water quality and land stewardship. One key example is the Department's effort to continue scaling up resources in support of the Water Quality Initiative (WQI).

Our Department is implementing our state's innovative Nutrient Reduction Strategy by facilitating diverse options for low-burden, high-impact conservation partnerships among private landowners, public entities, and private organizations. For example, we have supported the construction of dozens of nitrate-reducing wetland sites in Iowa. We are also embracing conservation programs and incentives that reflect Iowa's diverse topography. Our Department is collaborating on conservation incentives for practices such as buffer strips, pond dams, terraces, cover crops, and sediment control basins. These programs allow farmers and landowners to optimize conservation impact by tailoring projects specifically to what will work best for their lands.

Department officials are also overseeing several rules changes, notably to animal welfare standards and Iowa's hemp program. These were two priority areas for the Iowa State Legislature in 2019, and the Department is working to make sure such rules are appropriately written and implemented efficiently.

The enclosed report contains an overview of the current functions and priority programs of each of the bureaus within the Department. As Secretary, I am committed to working with our state's farmers, landowners, elected officials at every level, private and nonprofit sectors, and communities to make sure Iowa stays on the leading edge of agriculture for years to come.

Please do not hesitate to contact my office if you have any questions or if you have suggestions for future opportunities to advance Iowa agriculture.

Sincerely,



Mike Naig
Iowa Secretary of Agriculture

AG DIVERSIFICATION & MARKET DEVELOPMENT BUREAU

Overview: The Ag Diversification and Market Development Bureau processes applications for organic certification and works to ensure approval of those applications that meet state and federal regulations. This bureau also provides marketing opportunities for diversified agricultural products throughout the state. Agricultural marketing, horticulture, and farmers' markets are important components of these programs.

Highlighted programs:

Iowa Farm to School Program

The Iowa Farm to School program links schools with Iowa farmers. In turn, participating farmers provide schools with fresh, minimally-processed, Iowa-grown food for inclusion in school meals and snacks and offer ways for children to develop healthy eating habits. The program also often includes hands-on learning activities related to local agriculture. To date, twelve (12) initiatives have been created impacting over 135,000 students.

Organic Certification Program

The Organic Certification Program is accredited by the United States Department of Agriculture's (USDA)/National Organic Program (NOP) and has been since 2002, when the NOP was first implemented. Iowa Code Chapter 190C established an Organic Certification Program and adopts the National Organic Program by reference.

Iowa Renewable Fuels Infrastructure Program (RFIP)

This grant program offers financial incentives to Iowa retail fuel distributors (sellers) for the installation of new equipment capable of handling the newer bio-based fuels such as biodiesel, E-15 and E-85 ethanol. An 11-member board of directors is responsible for the program with IDALS serving as the funds administrator. To date, the program has distributed or obligated more than \$33 million to help fund 317 E-85 ethanol dispensers/blenders, 317 biodiesel dispensers/blenders, and 140 biodiesel terminals throughout the state.

ANIMAL INDUSTRY BUREAU

Overview: The Animal Industry Bureau oversees multiple programs to protect animal health and the public, plus the licensing of veterinarians and veterinary technicians. This includes the licensing, inspection and regulation of commercial establishments (animal breeders, shelters, and kennels),



auction markets, and dealers. The Bureau also regulates the importation of animals and animal movement within the state — as well as the investigation, control, and eradication of diseases.

Highlighted programs:

Commercial Establishment Program

This program includes all commercial establishments provided in Iowa Code chapter 162, including pet shops, commercial breeders of dogs and cats, animal shelters, commercial kennels, boarding kennels, dealers, pounds, and research facilities. The program also covers privately owned pounds and public auctions of dogs and cats. Pursuant to Iowa Code, the fees collected from licensing and renewals support the inspection of all licensees, maintenance of records, and addressing complaints at licensed commercial establishments.

Foreign Animal Disease

The \$13.45 billion Iowa animal industry has seen significant growth in recent years. The industry employs thousands of Iowans and adds value to Iowa grown corn and soybeans. The Iowa Department of Agriculture and Land Stewardship Animal Industry Bureau supports this important and growing industry.

Animal diseases present an ever-present threat to the Iowa animal industry. Iowa Department of Agriculture veterinarians and livestock inspectors are on the front line of efforts to work with industry and USDA to prevent, prepare and respond.

One example of these efforts is the Department's Foreign Animal Disease (FAD) preparedness program, which aims to prevent outbreaks among Iowa's livestock population and develop comprehensive crisis response plans for emergency situations. This year, the Department implemented statewide simulations through the FAD program that involved an array of stakeholders, including livestock farmers, private sector agriculture companies, USDA, state agencies, and many others. Following the simulations, Department veterinary and technical experts held a debrief session with participants to examine performance and explore areas for program and response improvements.

CLIMATOLOGY BUREAU

Overview: The primary emphasis of the Bureau is the collection, quality control, summation, and archiving of Iowa weather records. The weather section of the USDA National Agricultural Statistics Service (NASS) "Iowa Crops and Weather" is written by the State Climatologist each week from the beginning of April through the end of November. The Bureau issues a brief summary of the state's weather and climate is issued within the first few business days of the month in the "Iowa Preliminary Monthly Weather Summary." Another monthly report, "Iowa Climate Review" is prepared later and



contains a detailed daily summary of temperature and precipitation records across Iowa and is suitable for court use.

The Climatology Bureau also provides input each week to the U.S. Drought Monitor and offers detailed weather records to support pesticide drift investigations conducted by the Department's Pesticide Bureau.

COMMERCIAL FEED AND FERTILIZER BUREAU

Overview: The Commercial Feed and Fertilizer Bureau licenses feed mills and commercial feed manufacturing facilities. This bureau also registers feed and stock tonic products, collects commercial feed tonnage fees, and inspects medicated feed in accordance with Food and Drug Administration (FDA) rules and regulations. State and private sector organizations cooperate with this bureau to obtain licenses and register fertilizer plants and products. Additionally, the Bureau collects, compiles, and distributes data on plant food consumption. Other duties include collecting commercial fertilizer tonnage fees and groundwater protection fees, and regulating all anhydrous ammonia installations in the state. Because this bureau oversees both feed- and fertilizer-related matters, it is also instrumental in regulating licensing for a wide array of entities, from limestone quarries to egg handlers.

Highlighted program:

Feed contract

The State of Iowa is under contract with FDA to perform eight (8) various types of feed inspections. This contract also includes collection of various types of feed samples. This contract allows the Bureau of Feed and Fertilizer to fulfill Iowa Code requirements regarding inspections and samples with some of the costs covered by the FDA.

DAIRY PRODUCTS AND CONTROL BUREAU

Overview: The Dairy Products and Control Bureau has three programs to protect the health of the public and the dairy industry's ability to participate in interstate commerce. The Dairy Products Control Bureau oversees licensing for plants, farms, grader/haulers, milk trucks/tankers and sample/couriers per Iowa Code and rules. In addition, the Dairy Bureau conducts FDA survey work that is part of the Cooperative Agreement.



Highlighted program:

Dairy Entity Inspections

The Dairy Bureau Field Staff inspects dairy farms a minimum of twice a year, dairy plants a minimum of four times a year, grader/haulers once a year, and milk truck/tankers once a year. Additionally, staff perform hundreds of pasteurization inspections and equipment tests every year.

ENTOMOLOGY AND PLANT SCIENCE BUREAU

Overview: The Entomology & Plant Science Bureau is responsible for implementing laws on pests, weeds, seed, and bees. Duties include listing plant, insect, and disease pests and carrying out control, annually inspecting nursery stock (hardy woody perennials) and inspecting and certifying plant products destined for sale outside of Iowa, including foreign destination (phytosanitary certificates). The Bureau also charged with establishing the labeling requirements of agricultural and vegetable seeds, establishing the required tests for sale of agricultural and vegetable seed, and issuing seed permits.

The state hemp program, which was passed by the Iowa Legislature in 2019, will also be administered through this bureau.

FIELD SERVICES (SOIL AND WATER) BUREAU

Overview: The Field Services Bureau provides technical support for the 100 Soil and Water Conservation Districts (SWCDs), the 500 elected SWCD commissioners and their staff (approximately 150 employees). Staff within the bureau works very closely with many partners. However, the core partnership between the Natural Resources Conservation Service (NRCS) and Conservation Districts of Iowa (CDI) is the foundation for the success of this bureau's programs. The cooperative working agreement has provisions in which NRCS provides, office space, employee training, equipment, and vehicles for field staff employees and SWCD employees. In exchange, staff assist with federal workload implementation. The Bureau also administers low and no-interest loan programs.

Highlighted program:

Soil Conservation Cost Share Program

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SOIL CONSERVATION COST SHARE

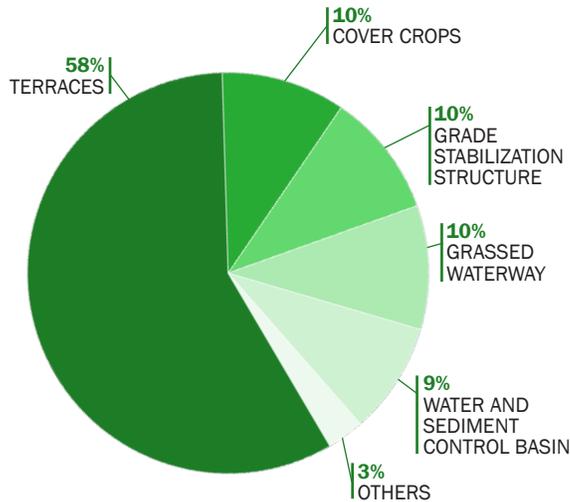
COST SHARE IN 2018

State contribution	\$7.3 million
<i>(includes cost share and administrative support)</i>	
Iowa farmer contribution	\$9.1 million
Total investment	\$16.4 million

TODAY
we have **33 Technicians**
and **89 Conservation Assistants**
covering **100 offices**.
Staff cover multiple Districts to support conservation work in all 99 counties.

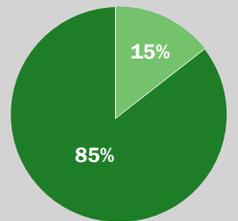
1,246 Iowa farmers used cost share to install conservation practices.

Conservation practices included...



Why so many terraces? They are an effective, long term conservation practice and trap up to **95%** of the sediment and phosphorus from a field.

DID YOU KNOW? There were **303** miles of terraces installed using state cost share in SFY 2018. As a crow flies, this is the distance from Sioux City to Dubuque!



FUNDING

85% of the funds directly benefit the land
15% used for administration



“Soil conservation cost share is a great partnership between the state and farmers that gets proven practices on the ground that protect our soils and help improve water quality. We continue to see tremendous interest by farmers who invested \$9.1 million of their own money on these practices last year.”

- Mike Naig, Iowa Secretary of Agriculture



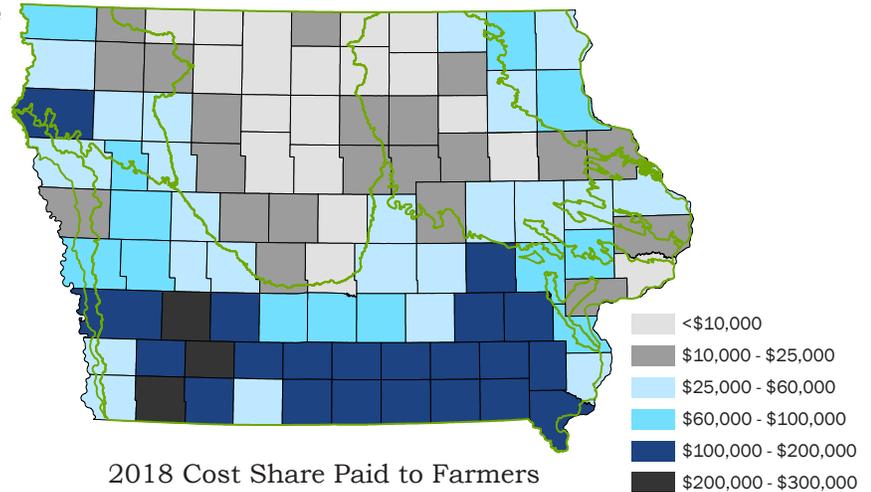
SOIL CONSERVATION COST SHARE

IOWA DEPARTMENT OF AGRICULTURE & LAND STEWARDSHIP

HOW COST SHARE WORKS

1 Iowa Department of Agriculture & Land Stewardship (IDALS) receives appropriation from the Legislature.

Diverse landforms across Iowa directly affect the cost and type of conservation practice best suited for each field. This impacts the funding a county needs and receives.



2 Funds are distributed to Iowa’s 100 Soil & Water Conservation Districts (SWCDs) based on land use, soil erodibility and landowner demand.

WHAT’S A Soil and Water Conservation District?

Soil and Water Conservation Districts work with farmers and landowners to promote soil and water conservation work in their county and help administer state and national conservation programs. Each SWCD is led by five locally elected Commissioners.

State staff in most field offices include:

TECHNICIANS:

Work with landowners and contractors. Provide technical support, develop surveys, and layout and design conservation practices.

CONSERVATION ASSISTANTS:

Work with commissioners and landowners. Provide assistance and support for district activities and outreach, and process cost share applications and claims.



Districts and local groups partner to host educational events and field days in their communities throughout the year.

3 Farmers and landowners apply for cost share by visiting their local SWCDs.



Applications are accepted year round.

Cost share can be used for both annual management practices and permanent conservation infrastructure practices.



SOIL CONSERVATION COST SHARE

4 Soil & Water Conservation District **Commissioners approve applications** in their own SWCD.

WHAT'S A Commissioner ?

Someone elected to promote conservation in their county, help administer state and federal programs, and direct activities such as field days, water quality projects, educational meetings, contests and awards programs.

“Commissioners work to educate our fellow Iowans on the continued importance of conservation and assist them in implementing the practices most appropriate for each situation.”

- Cherokee SWCD Commissioner Ramona Nitz



5 **Farmers hire a local contractor** to do the work. Conservation practice plans are developed by staff working with landowners and local contractors.

Modern survey and design tools help in the design, customizing practices for each field.

6 **Practices are installed** and the soil conservation and water quality benefits begin.

Investing in soil conservation not only improves productivity on the farm by keeping soil in our fields, it also helps keep soil and nutrients out of the water.

PRACTICE EXAMPLES:



TERRACES



MANAGEMENT (COVER CROPS)



GRASSED WATERWAY



WATER & SEDIMENT CONTROL BASIN



GRADE STABILIZATION

THE IMPORTANCE OF PARTNERSHIPS

Our technicians and conservation assistants are a part of the 100 Soil & Water Conservation Districts (SWCDs), which are housed within federal USDA-Natural Resources Conservation (NRCS) Service Centers. They use federal equipment and other resources. Therefore, the *partnership* between IDALS, SWCDs and NRCS is critical.

Other partners working together include the Conservation Districts of Iowa (CDI), USDA Farm Services Agency (FSA), USDA Rural Development, State Soil Conservation and Water Quality Committee (SSCWQC), ISU Cooperative Extension Service, county conservation boards, county board of supervisors, drainage districts, levee districts and other local groups.



SOIL CONSERVATION COST SHARE

THE IMPACT OF COST SHARE

1 Iowa's conservation cost share has **partnered with farmers and landowners for more than four decades** to support the adoption of proven conservation practices. A statewide effort to identify and map six types of common conservation practices has been recently completed and provides the most comprehensive inventory of conservation practices in the nation, including:

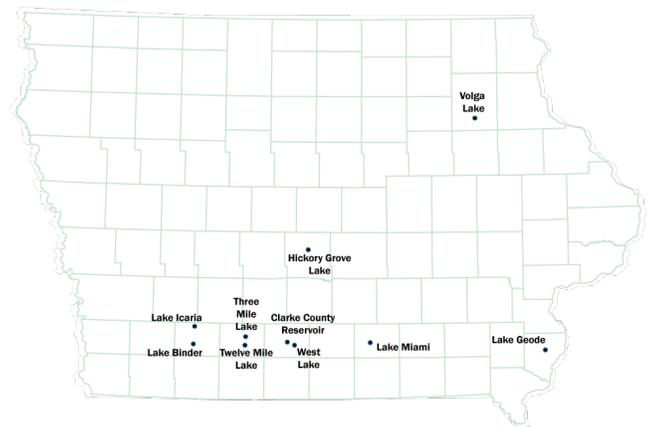
- 114,000** POND DAMS
- 325,000** ACRES OF GRASSED WATERWAYS
- 460 million** FEET OF TERRACES
- 240,000** WATER AND SEDIMENT CONTROL BASINS

These existing practices would require an **estimated \$6.2 billion** to build today!

2 5% of each year's cost-share appropriation goes toward **protecting the water quality of publicly owned lakes** in Iowa.

SWCDs submit applications to the Iowa Department of Natural Resources to become a designated lake.

This map shows eligible lakes for SFY2018. Farmers living within the selected lakes' watersheds can apply for up to 75% cost share in order to establish practices to protect water quality.



“Publicly owned lakes funding has provided hundreds of thousands of dollars in cost share for the protection of Lake Icaria, Lake Binder, and the Corning Reservoir. This money, combined with landowners willingness to conserve their farms and protect the watershed, has led to cleaner water and an overall more enjoyable outdoor experience.”



– Dan Case, Watershed Project Coordinator

3 **It's good for Iowa's economy.** Money gets reinvested in Iowa's local economies benefiting local communities.

GRAIN WAREHOUSE BUREAU

Overview: The Grain Warehouse Bureau licenses and regulates warehouse operators and grain dealers. The Bureau regulates warehouse operators to protect individuals and businesses who hold title of grain stored in the warehouse operator's facilities. The Bureau enforces laws to protect producers who sell grain to licensed grain dealers. Grain inventories are checked for quantity and quality to verify that they are sufficient to cover the grain obligations on the licensee's records as required by law.

The Bureau is also charged with the administration of the Grain Indemnity Fund. This fund provides coverage for grain stored in a warehouse licensed by the Iowa Department of Agriculture. The fund also provides coverage for grain sold and delivered to a grain dealer licensed by the Iowa Department of Agriculture. The coverage is 90% of a loss up to a maximum \$300,000 per claimant. Grain sold on credit sale contracts is not covered. The fund reimburses the Iowa Department of Agriculture for expenses connected with the administration and protection of the fund.

The Bureau also completes audits for the corn and soybean promotion boards. These audits certify that the correct assessments are received from the producer and then correctly paid to the respective corn and soybean promotion boards.

IOWA LABORATORY BUREAU

Overview: The Iowa Laboratory Bureau works on issues related to food safety, economic assurance, and the environment. Testing focuses on label guarantees, pathogens in food products, and misuse of agricultural products. There are several laboratories within the Laboratory Bureau that each focus on specific products and work closely with other Department of Agriculture bureaus. Inspectors from the Dairy Products Control Bureau, the Meat and Poultry Inspection Bureau, the Pesticide Bureau, and the Commercial Feed and Fertilizer Bureau collect and submit samples for testing. Samples entering the Laboratory are considered official samples and viable for regulatory actions. The Laboratory is strictly regulatory in nature and does not perform testing for the general public or for industry on a fee-basis. The laboratories use verified methods and participate in accreditation testing and/or "check sample" programs to verify that methods, staff, and equipment are performing well. When the testing is completed, the results are provided to the associated Bureau in the Wallace Building.

Highlighted program:

ISO Certification

In February of 2019, the Laboratory Bureau received ISO 17025 accreditation from the American Association for Laboratory Accreditation (A2LA). This certification will allow the Iowa Department of Agriculture to build upon its reputation of quality research by providing accurate and reliable testing.



The ISO certification is important, as results from accredited labs tend to be more readily accepted by other laboratories, federal agencies and the courts which will save taxpayer time and resources.

ISO 17025 is the highest recognized quality standard in the world for calibration and testing laboratories. For an organization to be accredited in ISO 17025, its laboratory must be able to consistently produce precise and accurate results and have implemented a rigorous quality management system.

The additional expense of establishing an accredited laboratory was provided through the support of an FDA cooperative agreement.

MEAT AND POULTRY INSPECTIONS BUREAU

Overview: The Iowa Meat and Poultry Inspections Bureau assures a safe, wholesome, and truthfully labeled supply of meat and poultry products from the establishments under the Bureau's inspection. The Bureau enforces, Iowa Code Chapter 189A, the Meat and Poultry Inspection Act. This Chapter's objective is "to provide for meat and poultry products inspection programs that will impose and enforce requirements with respect to intrastate operations and commerce that are at least equal to those imposed and enforced under the Federal Meat Inspection Act and the Federal Poultry Products Inspection Act". To this end, the Bureau has adopted Federal meat and poultry inspection regulations for the administration of the mandatory inspection requirements in the state inspected establishments.

USDA Food Safety and Inspection Service (FSIS) completes ongoing oversight through self-assessments and on-site reviews to assure that the state program provides a system of inspection that is at least "equal to" the provisions found in the Federal Acts.

The Bureau also cooperates with industry, academia, government, and the citizens of Iowa to enhance their knowledge of safe food production and handling practices at all levels in the food chain.

Highlighted program:

Cooperative Interstate Shipment (Expected in 2020)

In June of 2019, Secretary Mike Naig applied for a Cooperative Interstate Shipment (CIS) agreement with the USDA Food Safety and Inspection Service for the State of Iowa. The program will allow participating state-inspected meat and poultry processors to distribute their products across state lines.



This program can open new markets for Iowa livestock producers and meat processors, and give more consumers the opportunity to choose Iowa meat products through new sales channels, such as online stores.

State-inspected meat processors are smaller than their federally-inspected counterparts but are held to equal standards.

Iowa's small meat processors generate \$1.5 million in total economic output, \$596,000 in labor income and about 15 jobs for every \$1 million in sales, according to a study by David Swenson at the Iowa State University Department of Economics. Much of this economic activity occurs in Iowa's rural communities.

To qualify for the CIS program, a meat processor must have fewer than 25 full-time employees and comply with all federal food safety, sanitation and facility regulations.

The Iowa Department of Agriculture and Land Stewardship has submitted a formal application to the USDA Food Safety and Inspection Service, which is the first in a series of steps required to finalize the agreement. The changes will likely go into effect in 2020.

MINES AND MINERALS BUREAU

Overview: The Mines and Minerals Bureau is responsible for licensing mining operations in the state, enforcing appropriate environmental regulations during extraction and reclamation, and performing reclamation of coal mine locations. The goal is to assure that extraction occurs in a manner that is environmentally safe and restores the landscape following mining to appropriate standards of reclamation and soil productivity.

Highlighted program:

Abandoned Mine Land Reclamation

Iowa has more than 13,000 acres of abandoned coal sites that were mined prior to 1977 and are eligible to be reclaimed under Title IV of the Federal Surface Mining Control and Reclamation Act (Public Law 95-87). The Department was granted primacy for its Abandoned Mine Lands (AML) Program in 1983 by the Secretary of Interior and works cooperatively with the U.S. Office of Surface Mining, Reclamation and Enforcement (OSMRE).

While abandoned coal sites may include processing facilities, waste banks, and hoisting shafts from old underground mines, most are former surface mines where the material lying above the coal was removed to extract the coal, without any provision for reclamation following mining. Some 300 Iowa



sites, located mostly in the southeastern part of the state, are part of an inventory maintained jointly by the Department and OSMRE.

The Department receives grant funding annually to reclaim eligible sites selected from this inventory. Criteria for selecting sites are based on potential hazards to public health and safety, as well as environmental problems. The inventory is continually updated to add more site specific information and to reflect the elimination of problem areas as a result of project completions.

The AML staff develops potential projects by preparing a site inventory, an environmental analysis, and a reclamation design prior to expending grant funds for construction. Construction solutions eliminate dangerous highwalls, acid mine drainage, clogged streams, and hazardous water bodies. Ridges of acid-forming shale are also graded and vegetated. Priority is given to eliminating health and safety hazards, restoring impacted land and water resources, and eliminating off-site environmental impacts.

Secondary benefits of completed projects include improved water quality and reduction of sediment deposition and clogging of streams off-site. The AML program works with landowners in the design and development of a reclamation plan that will provide a suitable land use following completion of the project. While the sites remain fragile, landowners see their property returned to a manageable condition that allows some productive or beneficial use.

Both private and public landowners are eligible participants. Working partners include the U.S. Army Corps of Engineers, the Iowa Department of Natural Resources, the U.S. Fish and Wildlife Service, the State Office of Historical Preservation, and other federal, state, and local agencies.

One successful Iowa project can be found in the City of Logan (Harrison County). The project there won the National Award for Abandoned Mine Land reclamation in 2018.

PESTICIDE BUREAU

Overview: The Iowa Department of Agriculture & Land Stewardship Pesticide Bureau facilitates the judicious use of pesticides through state regulatory programs, education, and outreach in order to protect human health and the environment and to ensure access to safe, effective pest control measures.

Regulatory programs administered by the Bureau are mandated under the Pesticide Act of Iowa found in Chapter 206, Iowa Code, including primary enforcement responsibility for pesticide use/misuse violations under sections 26 and 27 of the Federal Insecticide, Rodenticide and Fungicide Act (FIFRA, 7 U.S.C. §136). Established regulatory programs involve a state/federal/public relationship to meet federal requirements for enforcement and applicator certification programs (7 U.S.C. §136). These



programs are supported by state and federal funds through a cooperative agreement with the U.S. Environmental Protection Agency.

Highlighted program:

Certifications and licensing

The Iowa Department of Agriculture Pesticide Bureau oversees licensing for pesticide dealers, commercial pesticide applicators, aerial applicators, and registration for consultants. The Pesticide Bureau also collaborates with Iowa State University Extension, which offers private and commercial applicator certification training through the University.

The Pesticide Bureau is also charged with crafting the joint State of Iowa-EPA plan for pesticide compliance. Certification exams and review of programs offered by Iowa State University Extension and industry also fall within the purview of the Pesticide Bureau.

The Pesticide Bureau within Iowa Department of Agriculture and Land Stewardship is responsible for responding to complaints and helping protect citizens from misuse of the products. In addition, education and testing on the safe use of pesticides is administered to all licensed pesticide applicators in conjunction with Iowa State University Extension and Outreach. The Department's pesticide investigator gathers information by providing notification of inspection, conducting interviews, obtaining statements, reviewing application records and pesticide labels, taking photographs and making on-site assessments. The information gathered helps document whether a violation of state and/or federal pesticide law occurred.

WATER RESOURCES BUREAU

Overview: The Water Resources Bureau is responsible for implementation of several programs and initiatives within the Division of Soil Conservation and Water Quality, including support for special projects, wetlands and water quality improvement initiatives, watershed planning and projects, and programs that are not explicitly carried out through field offices or Iowa Financial Incentives cost-share. Over the last few years, changes in legislation and funding patterns have redefined the role of the Water Resources Bureau, and presently much of the work being completed in the bureau is connected to the Water Quality Initiative and a series of state-federal partnerships.

Additionally, Water Resources Bureau staff serve on various intergovernmental working groups and provide technical and administrative support to the Iowa Water Quality Initiative (WQI).



Highlighted programs:

Agricultural Drainage Well Closure

Agricultural drainage wells (ADWs) were developed in the early to mid-1900's and discharge cropland tile drainage water to underground aquifers. As part of the Groundwater Protection Act passed by the Iowa Legislature in 1997, a program was created to protect drinking water aquifers by cost-sharing with landowners to close agricultural drainage wells and develop alternative drainage outlets to surface streams or install alternative management practices. Projects are typically constructed through drainage districts, although some projects are undertaken by individual landowners.

At the time the program was created, a total of 300 ADWs were registered in Iowa and were permitted by the DNR. Today, there are only 17 wells that are left to be addressed through the program.

The ADW closure program provides landowners or drainage districts with 75% cost-share assistance for eligible expenses, which include engineering costs and construction costs associated with well closure and alternative drainage outlets. Alternative systems can be built to meet a ½" drainage coefficient; if a landowner or district opts for a higher drainage coefficient, they are fully responsible for the additional costs associated with that upgrade.

The expense associated with the remaining wells is due to the need for significant alternative drainage and physical challenges associated with the installation of that drainage (i.e. shallow limestone, topography). The remaining wells are operating under continued use permits issued by DNR which expire in 2020 and 2021.

Conservation Reserve Enhancement Program

The Iowa Conservation Reserve Enhancement Program (CREP) was initiated in 2001 and is a joint effort of the Iowa Department of Agriculture and Land Stewardship and the USDA Farm Service Agency to protect Iowa drinking water and reduce hypoxia in the Gulf of Mexico. It is a highly targeted water quality program focusing on the reduction of nitrate loads to surface waters through the restoration of strategically located and designed wetlands that intercept tile-drainage water from upper-lying cropland. Research and monitoring by Iowa State University has shown that CREP wetlands remove 40-90% of the nitrate in tile-drainage water. In addition, these wetlands provide high quality wildlife habitat and recreational opportunities.

Enrollment is on a continuous basis. Land must be in one of the 37 eligible counties in North Central Iowa and must meet CREP eligibility requirements. Specific eligibility criteria are as follows:

- Watershed area feeding to wetland must be between 500-4000 acres
- Wetland area must be between 0.5% and 2% of its watershed area (i.e. a 1000 acre watershed



- would require a wetland between 5 and 20 acres in size)
- The buffer to wetland ratio should not exceed 4:1
- Deep water area (>3ft deep) of the wetland should not exceed 25% of the total wetland area
- All tile drainage outlets entering the wetland must have at least 1 foot of separation above the design water level of the wetland in order to protect drainage rights

Landowners enrolling in CREP receive:

- 15 years of annual rental payments from USDA for all enrolled acres paid at a rate equal to 150% of the weighted average soil rental rate
- 100% cost-share for wetland restoration and buffer establishment. 90% of construction costs paid by USDA
- 10% of construction costs paid by State
- A one-time, up-front incentive payment from the State to enter into either a 30-year or perpetual easement.

To date, 95 nitrate-reducing wetlands have been completed or are currently under construction or design. These sites total up to over 891 acres of wetland treating a combined 122,300 acres of watershed. Over their lifetimes, it is estimated that they will remove over 100,300 tons of nitrate-nitrogen. Annually, these sites remove over 1.3M lbs. of nitrogen at an average N-removal cost of \$0.26/lb.

In addition to these sites, IDALS has an inventory with hundreds of potential sites suitable for CREP wetland installation. These sites were identified early in the creation of the program using contour maps to delineate watershed boundaries and soils maps to show hydric soils in targeted locations. This mapping work has proven useful in determining landowners that have sites where projects could work.

The CREP Program receives \$1 million annually from the Environment First Fund. In addition to state funds, the Department has been able to access USDA funds historically to assist with engineering expenses. The Department has also partnered with non-governmental entities who have contributed funding for specific sites (e.g., The Nature Conservancy and Ducks Unlimited).

WATER QUALITY INITIATIVE

(SEE NEXT PAGE)





IOWA WATER QUALITY INITIATIVE



2019 Legislative Report



2018: FIVE YEARS OF PROGRESS THROUGH THE WATER QUALITY INITIATIVE

Collaboration and implementation continues to build around the Nutrient Reduction Strategy since it was released in 2013. Iowans are engaged and new partners are participating and providing additional resources and expertise.

In 2018:

- Due to increasing interest, record funding was obligated to participants to install cover crops and other in-field management practices to reduce nutrient loss.
- Completed initial year of first-of-its-kind cover crop-crop insurance partnership with USDA's Risk Management Agency (RMA) to expand cover crop usage in the state.
- Secured \$240,000 in contributions from private entities to advance WQI-based projects
- Developed new public-private partnerships with two companies to help advance conservation planning targeted to three HUC 8 watersheds in support of the Midwest Ag Water Quality Partnership Regional Conservation Partnership Program (RCPP).
- Extended three Targeted Demonstration Watershed Projects and four Targeted Practice Demonstration Projects to build on early success of the projects and continued engagement with local farmers, landowners and partners.
- Received \$1 million cooperative agreement from EPA-Gulf of Mexico Program to demonstrate practices and concepts to advance conservation drainage practices.
- Continued to measure efforts and practices underway that support the Iowa Nutrient Reduction Strategy. 2018 report can be found here: nutrientstrategy.iastate.edu/documents



**Iowa Secretary of Agriculture
Mike Naig**

ABOUT THE IOWA WATER QUALITY INITIATIVE

The Water Quality Initiative was established during the 2013 legislative session to help implement the Nutrient Reduction Strategy (NRS). The NRS provides a road map to achieve a 45 percent reduction in nitrogen and phosphorus losses to our waters using an integrated approach that includes point and non-point sources working together for improvement.

The WQI seeks to harness the collective ability of both private and public resources and organizations to rally around the NRS and implement proven conservation practices to reduce nutrient loss and improve water quality.

STATEWIDE BEST MANAGEMENT PRACTICES MAPPING RESULTS

A statewide effort to identify and map six types of conservation practices (terraces, ponds, grassed waterways, water and sediment control basins, contour strip cropping and contour buffer strips/prairie strips) has been completed and provides a comprehensive inventory of conservation practices in the state by watershed.

This mapping effort shows the scale and investment made by farmers, landowners, state and federal agencies, conservation partners and many others over several decades to reduce erosion and protect our natural resources. While the practices identified are focused on reducing soil erosion and phosphorus loss, seeing the progress that has been made illustrates how we can make similar progress with a long-term focus and investment in proven conservation practices targeted at reducing nitrogen loss.

Iowa is the first state to analyze every watershed within its borders using LiDAR and aerial imagery to create a detailed assessment of conservation practice implementation. This data allows for a much more detailed and accurate analysis of soil conservation efforts focused on phosphorus reduction because it includes all practices implemented by farmers, including those done without government cost share.

Maps and additional information about the project can be found at <https://www.gis.iastate.edu/gisf/projects/conservation-practices>.

Iowa Department of Natural Resources, Iowa State University GIS Facility, Iowa Nutrient Research & Education Council, Iowa Department of Agriculture and Land Stewardship, Iowa Nutrient Research Center, and the National Laboratory for Agriculture and the Environment provided the resources to complete the project.

STATEWIDE MAPPING OF EXISTING CONSERVATION PRACTICES USING AERIAL IMAGERY SHOWS A STRONG FOUNDATION

114,000 POND DAMS

325,000 ACRES OF GRASSED WATERWAYS

460 MILLION FEET OF TERRACES

240,000 WATER AND SEDIMENT CONTROL BASINS

THESE EXISTING PRACTICES WOULD REQUIRE AN ESTIMATED \$6.2 BILLION TO BUILD TODAY

IOWA NUTRIENT RESEARCH CENTER (IOWA STATE UNIVERSITY)

The Iowa Nutrient Research Center (INRC) at Iowa State University has funded 16 new projects related to water quality.

The INRC was established by the Board of Regents from legislation passed in 2013 and works in cooperation with IDALS. The center addresses identified needs or gaps in nitrogen and phosphorus research of importance to Iowa in reducing the loss of nutrients to the environment. Its research is evaluating the performance of current and emerging practices, providing recommendations on implementing new or tested practices and developing tools to help decision-making in adopting effective management practices. The center has funded more than 60 projects led by scientists at Iowa State University, the University of Iowa and the University of Northern Iowa in cooperation with other interested partners.



More information on the center and projects can be found on the center's web site: www.cals.iastate.edu/nutrientcenter. The site also includes previous projects and quarterly progress reports of each study.

POINT SOURCE PROGRESS (IOWA DNR)



The point source portion of the NRS established a process to achieve significant reductions in the amounts of nitrogen and phosphorus discharged to Iowa’s rivers and streams by the largest industrial and municipal wastewater treatment plants. Major point sources will be required to assess the feasibility and reality of reducing the amounts of nitrogen and phosphorus discharged to Iowa surface waters. Improvements determined to be feasible and affordable will be required to be implemented.

The process is unique and innovative. In the traditional approach, limits are established in a permit and treatment facilities are constructed to meet those limits. In this approach, nutrient reduction facilities are constructed, sampling is performed and technology-based limits are developed using actual treatment plant performance data.



Of the 154 municipal wastewater plants and industrial facilities required to assess their nutrient removal capacity, 125 have been issued new permits. Of those, 82 have also submitted feasibility studies on potential technology improvements. Additionally, 14 cities and 10 industries met the NRS point source reductions targets for nitrogen removal this year (66% removal). 8 cities and 3 industries met the NRS point source reduction targets for phosphorus removal this year (75% removal). 27 wastewater treatment plants have committed to construct upgrades to remove nitrogen and phosphorus.

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 Iowa DNR
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URBAN STORMWATER CONSERVATION PARTNERSHIPS



The program provides technical assistance to communities in developing programs and specific projects to address stormwater runoff following well established criteria and procedures detailed in the Iowa Stormwater Management Manual.

Five urban conservationists serve as technical resources for communities and individuals interested in implementing storm water protection practices. In 2018, efforts built upon recent expansion in the urban conservation area. 10 new urban conservation demonstration projects were funded with \$789,100 from WQI combined with \$3.2 million in partner contributions:

- Algona - East Fork Des Moines Water Quality Demonstration Project
- Ames - Grand Avenue Extension Urban Water Quality Project
- Atlantic - Atlantic Urban Conservation and Education Project
- Cherokee - 2018 Stormwater Improvements
- Clive - Angel Park Soil Quality Restoration Demonstration Project
- Coralville & North Liberty - Coral Ridge Avenue (Ranshaw Way) Reconstruction Phase Two Improvement Project
- Garnavillo - Stormwater Quality Improvement Project
- Grimes - Grimes Main Street Park Project
- Muscatine - Muscatine Parking Lot Runoff Solutions
- Sioux City - Sioux City Expo Center Water Quality Improvement Project



Gov. Reynolds, Lt. Gov. Gregg and Sec. Naig attend ribbon cutting at new Ankeny stormwater wetland.

IDALS is in the process of selecting more Urban Demonstration projects with an anticipated funding announcement to be made in April 2019.

WEIGHTS AND MEASURES BUREAU

Overview: This Bureau inspects and licenses for commercial use all weights and measures or weighing and measuring devices, which includes many consumer-facing devices used to measure everything from petroleum products (e.g., fuel pumps) to food (e.g., commercial food scales). Additionally, this bureau conducts petroleum product sampling and testing, tests and certifies antifreeze, and conducts random package and labeling inspections of products offered for sale.

The Weights and Measures Bureau oversees bonds for commercial scale installations, registers and licenses all service agencies and persons who service or repair commercial measuring devices, and approves blueprints for new scale installations. The Bureau follows the rules and regulations of the National Institute of Standards and Technology (NIST) and uses weights and measures standards that are traceable to NIST. The Bureau facilitates increased production and consumption of products made from Iowa's agricultural commodities by encouraging the production and use of renewable fuels and coproducts.

Highlighted program:

Fuel Pump Inspections

Iowa currently has over 42,000 fuel meters, which is up from 39,811 meters in 2016. During such inspections, experts examine the functionality of pumps to ensure that the display readings consumers view correspond accurately with the quantity of product actually dispensed. Inspectors also examine the technical and physical integrity of pump components. Additionally, pump examiners have been briefed on how to look for credit card “skimmers,” which are devices thieves use to steal personal information from unsuspecting customers. Local law enforcement partners with inspectors and conducts an investigation in the event that fuel pump payment system tampering is suspected.

