



# Agriculture and Environment Task Force Report

To the Rebuild Iowa Advisory Commission

August 2008





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## Introduction

The Rebuild Iowa Agriculture and Environment Task Force respectfully submits its report to the Rebuild Iowa Advisory Commission (RIAC) for consideration of the impacts of the tornadoes, storms, high winds, and flooding affecting Iowa's agriculture sector and environment.

The Task Force was required to address very complex and multi-faceted issues. Understanding that there were a broad range of immediate concerns, as well as critical issues that need to be addressed in the future, the Task Force structured its work in two sessions. To better address the issues and priorities of the Task Force, this report categorizes the issues as agriculture, conservation, environment, and livestock.

As Iowa works toward preserving and improving Iowa's land, water, and natural resources, it is recognized that there are immediate actions required to restore Iowa's farms and agricultural economy. But to ensure longer-term benefits to Iowa, well-thought-out planning is needed to improve our state's stewardship, and ensure there will be minimum damage to Iowa's farms, communities, businesses and industries, and natural resources in the future.

Weather played a critical role in the floods of 2008. According to the Iowa Department of Agriculture and Land Stewardship, 2007 was the fourth wettest year in 135 years. It was the eighth wettest winter on record. It was a cold and wet spring, and Iowa experienced the second wettest April. There was a record wet 15 day period in early June of 2008. The National Weather Service estimated that rainfall maps showing a band stretching from northeast to southwest Iowa was 300 to 600 percent above normal rainfall.

The floods of 2008 severely impacted crop harvest, with estimates that 1.2 million acres of corn and soybeans have been lost. Flooding has taken 400,000 soybean acres out of production, based on the July 2008 estimates. Iowa is also facing challenges with regard to winter hay availability, storage and handling facilities, and damaged agricultural infrastructure. Farmers face increased transportation costs and less capacity to process meat, ethanol, and grain. In addition, farmers who seek damage relief will need to navigate the new Farm Bill provisions that are pending but not yet enacted. To be better understand the enormity of the 2008 disasters, damages to Iowa's agriculture are 2 1/2 to 3 times greater than the flooding of 1993, estimated at \$2.5 - \$3 billion. Damage to Iowa's environment is less tangible in financial estimates.

While wild animals will run to higher ground when flooding occurs, state, city, and county park facilities and grounds suffered considerably. Roads, trails, and park grounds were damaged throughout the state. Some park structures will need to be repaired or replaced because damage to campgrounds, loss of equipment, and loss of revenue is significant.

Flooding has also resulted in environmental related consequences such as severe soil erosion and pollutants in our streams and rivers. It has raised other environmental concerns with regard to Iowa's

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hydrology, watershed conservation practices, soil quality, and water and soil contamination. Cities are also faced with the issue of landfill use and space as a result of the additional tons of debris.

The damage to Iowa's agricultural sector is in the billions of dollars. It is crucial to incorporate long term sustainability of Iowa's agriculture sector. Also important are considerations to sustain Iowa's soil and crop productivity, while ensuring that Iowa's water and soil remain the best quality.

This report is intended to provide background information on the damage incurred to Iowa's agriculture sector and the environment as a result of the 2008 disasters, as well as provide additional context for policy and rebuilding discussions. This report offers recommendations to the Rebuild Iowa Advisory Commission for steps that might be taken to address these significant and important challenges.

In the aftermath of the severe weather and damages across the state, Governor Chet Culver established the Rebuild Iowa Office (RIO) to oversee the state's strategic recovery efforts and to coordinate state agency programs and initiatives to address recovery and rebuilding that will be required. Executive Order Seven also established the Rebuild Iowa Advisory Commission (RIAC) to oversee the RIO office and to provide 45-day and 120-day reports to the Governor, Lieutenant Governor, and General Assembly. The reports are to address the impacts to recovery and provide recommendations for immediate action. In addition, Task Forces were to develop a longer-term recovery vision for the State.

Also created in Executive Order Seven are nine Task Forces to provide information and recommendations to the RIAC. The Agriculture and Environment Task Force, one of the nine created, worked to ensure the Commission is provided, at minimum, the information required in this Executive Order. The Agriculture and Environment Task Force met in a day-long session on July 30, and in a half-day session on August 13, to identify, prioritize, and develop recommendations for how Iowa can best address immediate and future needs for agriculture and environment. This report is the product of the discussions, public inputs, information presented, and the expertise and experience of the Task Force.



## **Rebuild Iowa Agriculture and Environment Task Force**

- Brent Halling, Chair, Farmer, Perry, Iowa
- Mark Ackelson, Iowa Natural Heritage Foundation, Des Moines
- Senator Jerry Behn, Iowa General Assembly, Des Moines
- Dean Black, Iowa Cattlemen's Association, Somers
- Kamyar Enshayan, University of Northern Iowa, Cedar Falls
- Richard Gerking, West Harrison Community School District, Mondamin
- Warren Kemper, Iowa Corn Growers Association, Wapello
- Carlton Kjos, Iowa Farm Bureau Federation, Decorah
- Ted Kourousis, Northwest Iowa Planning & Development Commission, Spencer
- Representative Mark Kuhn, Iowa General Assembly, Charles City
- Rich Leopold, Iowa Department of Natural Resources, Des Moines
- Regina Lloyd, Iowa Farmers Union, Linden
- Bill Northey, Iowa Department of Agriculture, Spirit Lake
- Denise O'Brien, Iowa Environmental Council, Atlantic
- David Patterson, Iowa Association of County Engineers, Washington
- Mark Rosenbury, Agribusiness Association of Iowa, Des Moines
- Deb Ryun, Conservation Districts of Iowa, Chariton
- Drue Sander, Iowa Institute for Cooperatives, Ames
- Representative Tom Sands, Iowa General Assembly, Columbus Junction
- Ed Ulch, Iowa Soybean Association, Solon
- Carol Vinton, Greenwood



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- Heidi Vittetoe, JWV Pork, Washington
- Wendy Wintersteen, Iowa State University, Ames
- Senator Frank Wood, Iowa General Assembly, Eldridge



## Rebuild Iowa Agriculture and Environment Resource Group

- Donna Buell, Buell Law Office, Spirit Lake
- Paul Govoni, Hydro-Klean, Des Moines
- Laura Hartman, The Office of Congressman Steve King, Creston
- Timothy Helmbrecht, United States Department of Agriculture Rural Development, Des Moines
- Andrew Hug, Environment Iowa, Des Moines
- Tolif Hunt, Whiterock Conservancy, Coon Rapids
- Chad Ingels, Randalia
- JoAnn Johnson, Panora
- Chris Jones, Des Moines Water Works, Des Moines
- Keith Kuper, Ackley
- David McMurray, Upper Mississippi, Illinois, and Missouri Rivers Association, Burlington (**Dissents**)
- Terrence Neuzil, Johnson County, Iowa City
- Gene Parkin, The University of Iowa, Iowa City
- Dennis Pate, Validus, Urbandale
- Jerry Peckumn, Jefferson
- Chris Petersen, Iowa Farmers Union, Clear Lake
- Mark Reisinger, United States Department of Agriculture Rural Development State Office, Des Moines
- Anne Robinson, Iowa Natural Heritage Foundation, Des Moines
- Renata Sack, Waterloo
- Michael Sexton, Twin Lakes Environmental Services, Rockwell City
- Francis Thicke, Fairfield





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- John Torbert, Iowa Drainage District Association, West Des Moines

Task Force members were drawn from an all-volunteer pool of Iowans who expressed interest in serving the state. The response was overwhelming, with many more individuals volunteering than could be accommodated in the balance of a deliberative Task Force body. Rather than turn away volunteers who brought with them experience and expertise, each Task Force welcomed those volunteers to a Resource Group which participated in the meetings through offering presentations, specialized information, and additional inputs and ideas for rebuilding Iowa.

Rebuild Iowa Office staff supporting the work of the Agriculture and Environment Task Force are Lyle Asell, Harold Hommes, Emily Hajek, and Mary Jane Olney.

In support of the Rebuild Iowa effort, Task Force facilitation, staffing, and report development services were provided by State Public Policy Group (SPPG), Des Moines.



## Executive Summary

Consider these two issues: agriculture and environment. Iowa's greatest resources are its land and water. The world depends upon what Iowa produces and grows. Iowans expect to live in a state that values its agricultural assets, while also safeguarding its environment and natural resources. The 2008 disasters provide Iowans with a challenge and responsibility to address the immediate needs of those recovering, but also require a serious and hard discussion that may alleviate future disasters and loss of lives and property. To better understand the enormity of the 2008 disasters it is important to remember that damages to Iowa's agriculture are 2 1/2 to 3 times greater than the flooding of 1993, and are estimated at \$2.5 to \$3 billion. The damage to the environment is also considerable.

The Task Force was required to address very complex and multi-faceted issues. Understanding that there were a broad range of immediate concerns, as well as critical issues that need to be addressed in the future, the Task Force structured its work in two sessions. To better address the issues and priorities of the Task Force, this report categorizes the issues as agriculture, conservation, environment, and livestock.

While 90% of farmers were covered by crop insurance, there were others who were not insured. Depending on growing conditions and if the first frost hits hard, replanted crops may or may not alleviate additional losses. But with water still standing along rivers and in fields downstream, and with people struggling with where to live and work, it is critical that Iowans address the immediate gaps in services and programs. There are people from cities and rural areas who are extremely stressed, and there are concerns about their mental health.

As a result of the floods of 1993 and subsequent flooding in the last 15 years, we have learned tough lessons. Safeguards were put in place, but at the same time, continued building with little regard to water flow and soil erosion in communities and floodplains offset a good deal of the gains made. Aggressive conservation practices have worked to a great extent, but more are necessary to mitigate the same kind of disasters we saw this year.

The agriculture sector, most often affected by the weather, has somewhat of a safety net to include federal farm programs and flood insurance, and many farmers take advantage of the insurance that is made available. However, the myriad of these programs is very difficult to navigate, and a better way to help farmers who need technical assistance should be considered.

Losses and damage to public parks and recreation areas will need to be restored and repaired, but some of this may be accomplished over time, given the challenges the state will have in budgeting for these losses. Already revenue has diminished with the loss of camping fees and fishing licenses. County roads have been damaged and bridges also need repair. The cost of infrastructure repair and improvement will be a part of a long list of needs that will eventually need to be addressed.

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Soon a need to make very difficult decisions regarding our land and water policies will arise. The Agriculture and Environment Task Force has a clear recognition that there is work to be done to ensure better practices are put in place, short and long term planning is completed, and the plans are brought forward. New technology can provide comprehensive mapping to not only help in times of disaster, but to help mitigate future flooding. The issue of floodplain management and watershed planning was a key issue discussed by the Task Force. These same issues have been addressed in the Flood Plain Management and Hazard Mitigation Task Force Report.

As Iowa moves forward, and especially as it moves to rebuild and restore many communities, air and water quality and safety are the highest priorities. Building a stronger surveillance system and determining better ways to engage local communities and organizations in information dissemination is essential. As with dam inspection capacity, floodplain conservation and support, and air and water surveillance, additional resources are necessary.

The Agricultural and Environmental Task Force approached solutions from a perspective of identifying a broad range of issues and gaps. With the understanding that there are needs to address these specific categories, as well as the system as a whole, the priorities and recommendations are identified as immediate and short-term. These issues are the foundation of Iowa's economic well-being and its quality of life. Not addressing the immediate priorities and tenaciously moving forward on other priority elements would diminish the state's goal of building a safer, stronger, and smarter Iowa. These recommendations and strategies are not in any priority order.

1. Initiate and/or strengthen a local system to provide comprehensive case management to those who need it. Connecting all available information to those who need it is critical for individuals, families, farmers, and all affected by the 2008 disaster.
  - Immediate priority. Navigating the morass of information and programs is complicated and confusing to Iowans who especially need support and assistance now. At the same time, there are transitions in rebuilding homes and communities and the creation of new programs to address agriculture, conservation, and the environment. Disaster programs for buyouts, individual assistance, and infrastructure require close attention to rules and details. There must be clear and concise information communicated through local entities.
  - Strategies:
    - State agencies need to link with local partner agencies and organizations to provide critical information that is immediate and transparent to the public.
    - Create localized "one-stop-shop" centers in severely affected cities and towns.



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- Develop state-to-local communications from the Rebuild Iowa Office directly to communities and technical assistance providers in the most affected communities and/or regions.
2. The state should take the lead to address issues of water management, soil erosion, conservation, and floodplain management. Leaders should work with federal agencies, communities, state and federal commissions, and Iowa's greater community to make the necessary changes in policy and practice to mitigate flooding. While implementing these changes will be incremental, immediate planning at the state and local level needs to proceed.
- Immediate priority. Use existing and create new model initiatives that demonstrate a commitment to addressing these issues. The 2008 disasters, unfortunately, demonstrate the technology and practices that are required over time.
  - Strategies:
    - Address repairs to conservation practices immediately after the 2008 harvest. Provide technical assistance and make available the necessary resources from the state and federal government.
    - Pursue opportunities now to create a cover crop model program, as well as other soil and water conservation practices, such as pastures and other conservation plantings, in the state. This is especially significant for fallow crop acres that were impacted by the floods and standing water.
    - Iowa, through the collaboration of state agencies that include the Department of Natural Resources, the Department of Agriculture and Land Stewardship, and the Division of Homeland Security and Emergency Management, should expedite the creation of floodplain and conservation mapping, such as Light and Detection and Ranging (LiDAR) or other comparable information systems.
    - Assemble expert team of ecologists, soil conservationists, floodplain managers, agriculture experts, and people affected by the flood to outline a ten year plan.
3. Improving air and water quality surveillance and information is especially critical in the aftermath of the 2008 disaster and will continue to be required as Iowa recovers and rebuilds. Water and wastewater systems were inundated this past summer and there remains a need to expand testing of water and sediment.
- Immediate priorities. State agencies, either directly or through the Rebuild Iowa Office, will ensure that Iowans will know the status of water and air quality in the affected areas.
  - Strategies:



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- Temporarily expand capacity in the Department of Natural Resources to increase and geographically expand water and sediment testing in the areas affected by the flooding of 2008.
- Working with the University of Iowa Hygienic Laboratory, evaluate and expedite environmental testing results to the public and provide technical assistance to the public about the implications of the results and what they mean.
- Create close relationships with local public health agencies and a local network of local agencies and organizations to share information on air and water quality issues.

There is another priority, but addressing it immediately is very difficult. Iowa's agricultural infrastructure needs repair and help in providing technical assistance and financing is important, certainly before the 2009 harvest. There was significant damage to soil, Iowa's grain storage facilities, roads and bridges, and the rail system. Finally, there is great concern to Task Force members for those families who lost their homes and are waiting for buyouts. Some kind of bridging financial assistance should be seriously considered, in addition to including access to technical assistance and support for sustainable building



## **Damages and Impacts in Agriculture and Environment**

The Rebuild Iowa Agriculture and Environment Task Force undertook a number of areas in which to assess damage. The Task Force examined impacts to agriculture, livestock and animals, conservation structures, state parks, and the environment. As planning efforts proceed, it will be imperative to understand how each area impacts the lives of Iowa's citizens. Estimates and numbers are important to consider, while also considering the less tangible impact to the people who have experienced the disaster firsthand and will continue to live with its repercussions in the future.

Margaret Van Ginkel from Iowa State University Extension and the Iowa Concern hotline shared with the Agriculture and Environment Task Force that there have been an increase in agricultural calls. Hotline counselors have noticed a need for callers to talk through situations and a need to receive encouragement to communicate with service providers and bankers about their concerns. Van Ginkel reported that most callers are experiencing the anger stage of the grief cycle, and she said that rural callers describe that they are feeling abandoned. She noted that some callers express embarrassment about calling. Feelings of anger, abandonment, stress, anxiety, and embarrassment are addressed by Iowa Concern employees and emphasize the need for continued outreach and assistance to rural communities to ensure that needs are being met and citizens feel that their voices are being heard. Resource needs are being met currently; however, with the expected increase in requests, additional support may be necessary.

Agriculture and Environment Task Force members have expressed their desire to highlight and address these needs. The following section outlines the damage and impact estimates to Iowa's agriculture and environment.

### **The Meaning of Data**

Damage estimates are just that: estimates. In some cases, damage data change on a daily basis as additional information is collected or adjusted to reflect new information. In the area of agriculture and environment, data are most likely not comparable across agencies or sources because of the purpose of those data. Numbers provided are often collected and used for an agency-specific purpose, are compiled for that agency's mission only, and have little value or meaning if taken out of that core context. For this reason, the Damage and Impacts in Agriculture and Environment section will provide the source of the information and the context through which the reader may better understand the complexities of gathering comparable data.

It must be clear that there is no tool, agency, or other means to gather and compile the actual costs to repair or replace the damage done to the agriculture and environment arenas in communities as a result of this disaster. There is no universal contractor bid for each nonprofit agency, organization, or government entity related to this topic area that can be totaled to provide an "agriculture and environment damage assessment" for the state of Iowa. Consequently, this report provides examples, communities' best

guesses, agency reports, and anecdotal explanations. Unless otherwise noted, the data are current as of August 13, 2008 and were presented to the Agriculture and Environment Task Force on that date.

## **Damage Reports from Communities and Organizations**

The Agriculture and Environment Task Force examined damages and impacts to four key areas, which include agriculture, livestock, animals, conservation and state parks, and the environment. For the purposes of this report, agriculture includes damages to crops and grain, equipment and agricultural infrastructure, and grain storage and handling facilities. The area of livestock and animals includes losses of livestock, wildlife, fisheries, and pet rescue efforts. Conservation and state parks include damages to conservation structures, state parks, forestry, and law enforcement efforts. The category of the environment includes impacts to water quality, air quality, landfills, and container recovery efforts.

## **Agriculture**

### *Crops and Grain*

Damage to agriculture includes the areas of crop and grain, equipment and agricultural infrastructure, and grain storage and handling facilities. According to Harold Hommes, from the Iowa Department of Agriculture and Land Stewardship, who presented to the Rebuild Iowa Advisory Commission on August 5, 2008, there were 10% of corn acres and 20% of soybean acres that were yet to be planted or needed replanting at the height of the flooding. These acres total 1.2 million acres, and some crops have since been replanted. The actual area lost is significantly less due to replanting efforts but current numbers of lost acres are not yet available. Total loss may not be able to be calculated until the frost date to determine how replanting acres impacted crops.

In his presentation to the Agriculture and Environment Task Force on July 30, 2008 Chad Hart from Iowa State University estimated that the state will harvest 93% of the corn planted and mentioned that yield estimates are unclear. He said 400,000 soybean acres have been taken out by flooding, and soybeans will be more affected than corn. Additionally, hay cutting has been delayed. CRP land has been opened for grazing, which will aid in providing supply, since hay and pasture losses have also been sustained.

Officials from the USDA presented to the Task Force on July 30, 2008 on federal government relief programs. The federal government programs available to agricultural communities include crop insurance, Supplemental Revenue Assistance Program (SURE), Conservation Reserve Program, Emergency Farm Loans, and Emergency Conservation Program. Short-term recommendations include utilizing the Disaster Debt Set-Aside Program and promoting SURE sign-up. The funds for the SURE program will not be available until October 2009 because payments depend on the full year market rates.



Craig Rice, from the USDA's Risk Management Agency, in his presentation to the Agriculture and Environment Task Force, spoke about four issues, namely Prevented Planting, Second Crop, Final Planting Dates and Acreage Reporting. He said that companies are busy due to prevented planting plans. The program is based on the number of bushels raised and price. He said that in total there are \$200 million to \$300 million of insurance coverage. About 20 million acres or 90% of acres in Iowa are insured, although on average, these acres are insured at only 73% of their value.

Kevin McClure, from the USDA Farm Service Agency, presented to the Task Force on the Direct & Counter-Cyclical Program (DCP) and Supplemental Agricultural Disaster Assistance Program. He said that the Farm Service Agency is in the process of putting together handbooks containing rules and regulations for the program. There were no changes to the DCP program from the previous Farm Bill. The program has two parts; the Direct part does not depend on the market, but the Counter-Cyclical part does depend on the market. Eighty-five percent of base acres are used to calculate DCP payment. There are also two limitations on the DCP program. The Direct payment limitation amount is \$40,000 per person and the Counter-Cyclical payment limitation amount is \$65,000 per person. The deadline to enroll for 2008 DCP program is September 30, and there are no extensions.

Kevin McClure from the USDA Farm Service Agency presented on the Average Crop Revenue Election (ACRE). If the producer elects the ACRE program, it takes place of the Counter-Cyclical Payments on the farm and the producer receives 20% reduction in the Direct Payment and 30% reduction in the Marketing Assistance Loan Rates. Producers need to meet two triggers; one is the State Trigger which requires that ACRE Guarantee exceed Actual State Revenue. The second trigger is the Farm Trigger which says that Farm ACRE Benchmark Revenue must exceed Actual Farm Revenue. Once the ACRE program is elected, the farm is locked in until 2012. McClure also talked about the Supplemental Agricultural Disaster Assistance Program which includes the following program:

Supplemental Revenue Assistance Payments Program (SURE) - This program is revenue based and not individual crop specific. There are two ways to qualify. If the county is declared with a Secretarial Disaster Declaration, that automatically qualifies farms to receive this assistance if the total loss of production for the farm is greater than 50% or more. Buy-in fees for SURE are categorized as Crop Insurance (CAT) Insurable Crop and Non-Insurable Crop (NAP). The buy-in deadline is September 16 and the rules will not be available before the deadline. For 2009 forward, a producer needs to have insurance in place to qualify for this. This only covers regular crops. SURE payments are based on yields.

Paul Fredrickson from the USDA Farm Service Agency spoke about two loan programs, namely, Direct Loans and Guaranteed Loans. Direct Loan Programs allow one to borrow directly from the Federal Treasury and offers lower loan limits with lower rates and longer repayment terms. Guaranteed Loans come from a traditional lender and have higher loan limits. There are three loan types: Operating Loans,



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Farm Ownership Loans, and Emergency Loans. Emergency loans require a disaster designation. Eighty-five counties in Iowa are designated as disaster areas. Emergency loans can be borrowed for production losses or physical losses. Emergency loans can be received if there is a crop loss because it is a supplemental loan.

Vickie Friedow from the USDA Farm Service Agency said that the extension of the Crop Reporting Deadline has been changed from June 30 to August 15. She mentioned that producers will need to abide by the state regulation. Their next process will be to compile all the county information by August 6, tally the information, and present it to the Board, who will pass on the recommendations to the federal level of USDA. She said that all counties with Presidential declarations and contiguous counties are eligible.

Jerry Skalek presented to the Task Force. He serves as a FEMA staff member and was deployed from the Army Corps of Engineers, serving from the district in Rock Island. He noted that there was already a Comprehensive Plan concerning the Mississippi River. Many levees, he noted were overtopped and breached, and the Comprehensive Plan, designed to protect at the 100 and 500 year flood levels is looking at ways to address systematic issues. During the emergency response, the Corps provided supplies, technical assistance, water level information, and assistance to FEMA. In the presentation, Skalak noted that the three reservoir systems functioned as designed, but also indicated that reservoirs are not the sole solution to flood control. Levee ownership can vary from private ownership to city and county levee districts. The Army Corps of Engineers has a Levee Rehabilitation program that can provide assistance which requires cost sharing measures. Within the Rock Island District, 20 levees have been identified in the post flood report to review damages. There have been discussions with individuals in Wapello County regarding their levee breaks, but as of August 13, there was no actual repair work underway.

The Corps also participates in flood-proofing buildings, identifying non structure alternatives, and completing cost benefit analysis. In noting the Interagency Levee Task Force current work, they will take into consideration many issues and closely review the consequences of how to rebuild to help mitigate disasters in the future. A study is also being considered that looks at options to include: acquisition of land to allow purposeful flooding, flowage easement, or doing nothing. He indicated that the purpose of reconstruction is to ensure existing systems perform and provide benefits into the future. A conclusion of the report found that existing levees protect against 95% of average annual flooding, but there can be a more systematic look at the issue. The Mississippi River Commission held a hearing on August 14 regarding current issues and the Comprehensive Plan.

### *Equipment, Agricultural Infrastructure, Grain Storage, and Handling*

Transportation damage to barges, railroads, and secondary roads and damage to processing plants and grain elevators have compacted agricultural impacts. Farmers face increased transportation costs and less capacity to process meat, ethanol, and grain. The Iowa Department of Agriculture and Land Stewardship



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(IDALS) reports heavy damages to grain storage and handling facilities. As of August 5, at least two major corn processing facilities and one soy processor were still not online due to flooding. The East Central Cooperative in Cedar Falls has reported over \$2 million in losses of grain and grain storage facilities.



## Livestock and Animals

### *Livestock*

According to Harold Hommes from the Iowa Department of Agriculture and Land Stewardship (IDALS) in his presentation to the RIAC on August 5, 2008, most livestock losses were limited to the areas between Columbus Junction and Oakville. He cited the USDA's Veterinary Services Division of APHIS as reporting about 3,100 drowned swine, with another 1,000 swine estimated to be lost or now feral. Area farmers worked to move more than 37,000 animals before the flooding. Hommes reported that he was unaware of any beef cattle losses. Iowa DNR has indicated that 14 small animal feeding operations (SAFOs) and seven confined animal feeding operations (CAFOs) were damaged in the flooding. IDALS worked in collaboration with the USDA Veterinary Services to locate and remove livestock (both live and post-mortem) from flooded areas in the Oakville area.

Derryl McLaren from the USDA Farm Service Agency has presented information on the following programs available:

- Livestock Forage Disaster Program (LFP): This is applicable for drought or fire.
- Tree Assistance Program (TAP).
- Emergency Assistance for Livestock, Honey Bees, and Farm-Raised Fish (ELAP): This is similar to the old livestock compensation program.
- Livestock Indemnity Program (LIP).

### *Wildlife*

The DNR has found that mammals generally survive rising water by moving to higher ground. Amphibians are expected to have thrived under current conditions. Ground nesting birds have a more difficult time, and a significant impact is expected to affect pheasants, quail, and other game and non-game ground nesting birds. Estimates are expected to be released at a later date. If game numbers have decreased as expected, revenue from hunting licenses is projected to be impacted. The Wildlife Bureau of the DNR estimates the fiscal impact to the Bureau's jurisdiction to be \$5 million and includes \$4 million in estimated damage to structures such as dikes, levees, parking lots, boat ramps, etc. and \$1 million in estimated lost cropping revenue. Lost income from license sales was significant.

### *Fisheries*

According to the DNR Fisheries Bureau there has been a sharp decrease in fishing licenses during May, June and July to total 32,000 licenses and \$670,000 in lost revenue. Two trout hatcheries, Big Spring/



Elkader and Manchester, sustained damage to buildings and loss of fish, and estimates total \$500,000 for the two areas. Damage to fishing related infrastructure, such as shoreline erosions and constructed in-stream trout habitat lost, are estimated to be \$500,000. Trout stocking will have to be reduced 20% for the remainder of 2008. DNR has reported over 2,000 staff hours devoted to clean up.

### *Pet Rescue*

The Iowa Department of Agriculture and Land Stewardship managed volunteers and operations for pet rescue, with over 1,200 pets in Cedar Rapids and 300 pets in Iowa City rescued during the disaster. All animals were evaluated by a veterinarian. Private businesses donated food and equipment to accommodate the animals. Over 50,000 volunteer hours were logged for the Cedar Rapids Shelter, and the Salvation Army fed volunteers three meals per day. One hundred percent of pets at the Iowa City Shelter were returned to owners, and 85% of pets at the Cedar Rapids Shelter have been returned to owners.

## **Conservation and State Parks**

### *Damage to Conservation Structures*

According to Chuck Gipp and Jim Gillespie from IDALS and Marty Adkins from the USDA in their presentation to the Task Force on July 30, there is a 2008 Flood Damage Assessment Survey that requested information from conservation districts. The results estimate that 2.2 million acres experienced a range of up to 20 tons per acre soil erosion, with 55% of grass waterways, 83% of terraces, and 90% of grade stabilization structures and water and sediment control basins that worked properly. Soil conservation damage is estimated at \$48 million, which, will need to be repaired, improved, and paid for. Repairs are needed for 12,157 grassed waterway sites, 8,137 terrace sites, 3,375 water and sediment control basins, and 800 grade stabilization structure sites. IDALS and USDA officials have noted that when used in combination, conservation practices reduced erosion and runoff; when conservation structures were maintained to NRCS standards, they generally functioned and operated as designed and withstood the storms. In Crawford County, two watershed conservation programs prevented Denison from flooding.

Adkins said that three USDA programs will be explored, and the national office has been notified of a \$100 million estimate. Gillespie said that local USDA and FSA offices can provide technical assistance and resources. There is a backlog of work for physical contractors to build conservation structures leftover from last fall and spring, and contracting will be an extended process. According to Dan Rasmussen from the Iowa Land Improvement Contractors Association, there are enough contractors to do the work, but the timetable to be met is concentrated because of CRP regulations. Another issue has been the weather, which prevents work from being done.

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Gerald Miller from Iowa State University presented to the Task Force that Iowa soil resources are in trouble and rebuilding soil organic matter will be important. He said that there has been a decrease of organic material in the topsoil, and that is problematic. Ideal conditions would include organic material to act as porous material to drain water. Poor soil quality has reduced soil organic matter and reduced pore space because of tilling practices. Miller said that the challenge is to stabilize the topsoil loss, rebuild soil organic matter, and reduce soil bulk density.

Robin Holcomb from the USDA Farm Service Agency presented to the Task Force about the Emergency Conservation Program (ECP.) The purpose of ECP is to rehabilitate farmland and conservation structures that have been damaged by natural disasters. The maximum payment limitation for ECP is \$200,000 per person per disaster and the minimum cost share limitation is \$750 per person per fiscal year for all natural damage on all farms. Emergency loans are approved for physical loss, but the recipient has to be an owner of the farm and if something is under maintenance agreement, one cannot use ECP payments. The program will pay to replace damaged CRP fodder strips.

### *State Parks*

As reported in the Iowa Department of Natural Resources brief, "Review of Impact from Statewide Disasters" that was distributed to the RIAC on August 5, 2008, 24 state parks were impacted by the disasters. The Department reports that major impacts include damage to electrical transformers, electrical pedestals in campgrounds, lift stations for wastewater, picnic tables and docks, erosion of roads and trails, undermining of parking lots, wash-outs around buildings' foundations, downed trees and limbs, water damage to park buildings, delayed construction, revenue producing recreation areas under water, and sediment left behind after floods receded. As of August 4, two park campgrounds remained closed, and access was still limited in several other parks. Damage estimates total \$3.6 million, with another \$1,175,000 estimated in lost revenue.

Approximately 15 families that were evacuated from Palo camped at Pleasant Creek Recreation Area, and the maximum stay rule was waived. Geode State Park accommodated stranded residents of Illinois who commuted to Iowa to work on the Highway 34 Bridge over the Mississippi River until the bridge was reopened and they could return to Illinois.

### *Forestry*

The DNR Forestry Bureau estimates that \$250,000 in damage costs were incurred during the tornadoes. The State Nursery saw revenue loss due to weather related planting conditions of \$240,000. The Bureau has instituted a \$10,000 grant program to help replant wind breaks, and is working with the State Forest Nursery to find ways to supply stock to citizens of Iowa.



### *Law Enforcement*

Following the disasters, it was the responsibility of the Iowa Department of Natural Resources to provide boats and staff to the Environmental Protection Agency (EPA), National Guard, and DNR EPD staff to locate hazardous materials and orphan drums that have been displaced by the various disasters. Some officers have been trained in Critical Incident Stress Debriefing (CISD) and are available to debrief emergency workers after the disasters. District offices in Manchester were inundated with water and incurred repair expenses of \$55,000.

Additionally, DNR staff provided services after the tornadoes in Butler and Buchanan counties and the Little Sioux Boy Scout Camp and flooding to help with search and rescues, traffic control, patrolling to prevent looting, providing First Aid, assisting in evacuation efforts, providing environmental impact assessment efforts, and security efforts. These staff hours devoted to public safety total over \$55,000 in salary costs.

## **Environment**

### *Air Quality*

The Environmental Protection Agency (EPA) completes air quality monitoring, and there were no exceedances for airborne asbestos. Health and legal implications prevent burning after floods. Jeff Vansteenburgh from DNR has reported that The University of Iowa Hygienic Laboratory, in addition to private firms, will test for asbestos. Clean up concerns involve controlling dust to prevent airborne asbestos. During the disaster mode, the DNR will not enforce regulations that relate to agricultural or urban entities and waste in affected areas. Vansteenburgh encouraged livestock producers to call their local DNR office to assist with Manure Management Plan compliance.

### *Water Quality*

Jeff Vansteenburgh from the Iowa Department of Natural Resources (DNR) has reported that DNR priorities during a disaster include safety, protection of public water supplies, and protection of public wastewater treatment. He said there has been a lot of public assistance with protecting water and wastewater systems. He reported that the Cedar Falls plant was surrounded by flooding but was not inundated. Pressure within the water system helps keep the water safe; pressure below 20 psi is considered a concern. During the flood, some systems lost pressure. The city of New Hartford was evacuated, but the system was able to keep the water supply safe through use of pressure. The Des Moines Water Works was not inundated. Waterloo has a well field and had 22 wells endangered but not flooded. In Iowa City, there was serious flood damage to water systems, wastewater systems, and the Coralville wastewater system.

The impacts of the damage will be seen in the future, such as the issue of Infiltration and Inflow, which causes overflow problems. In Iowa, there are 34 public drinking water supplies that draw water from

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surface water. The Department was able to visit every drinking water and wastewater treatment plant in flooded areas. By July 24, nine waste water treatments plants (Cedar Rapids, Coralville, Oakville, Elkader, Claremont, Evansdale, Vinton, Palo and Anamosa) were still not functioning to good treatment capacity. Coralville still has a broken sewer line and they are discharging wastewater to the Iowa River that amounts to about 100,000 gallons per day. Oakville is still out of operation because no one is living in town and they are not attempting to remedy the wastewater treatment yet.

The Mason City water treatment plant was shut down due to flooding on June 8. Clean up began on June 9. Soft starts were damaged and there was extensive damage to electronic controls. They could not pump contaminated water to wastewater because of the possibility that storage tanks might collapse. On June 10, oil was found in test results, and they began pumping to tankers. By June 11, results were good and the plant began restoring pressure. Mason City received advice from Des Moines Water Works to ensure that clean up was done in a responsible way to restore water when the safety of the water was certain. By June 13, all samples from 30 test sites were negative for bacteria.

Adequate wastewater treatment can be a significant economic development tool for cities. There were 180,000 people without wastewater treatment in Cedar Rapids. Vansteenburg said that systems have been overwhelmed.

Dr. Mary Skopec, from the Iowa Department of Natural Resources, reported to the Agriculture and Environment Task Force on August 13 that sampling has been undertaken on a weekly basis since June 9, especially in urban areas. Additionally, there was sampling done for bacteria because of wastewater issues. Results from The University of Iowa Hygienic Lab have been received. There have been 25 regular sample locations to cover a variety of geographic areas in the state. Additional sites were added when concerns arose over wastewater and finding dead animals. Sediment sampling is being done for pesticides, volatile compounds, and many toxins. Floodwater provides dilution, and as water recedes, detections of nutrients, bacteria, and common herbicides are being found. There are isolated detections of metals and volatile compounds. There are low concentrations within the water, but there are very high loads of these chemicals moving in the water stream. In July, DNR was still finding sustained high levels of nitrate and E. coli levels. Nitrate and ammonia levels have decreased during August. Levels of bacteria continue to be high downstream of the Cedar Rapids wastewater treatment plant. As the water receded, bacteria levels increased downstream of Cedar Rapids. The DNR has spoken with areas downstream to prevent recreational use of water because of high bacteria levels.

There are isolated detections of various chemicals, but there do not appear to be consistent patterns in detection. There have been detections of motor oil, metals such as zinc and lead, and acetone. DNR has been working with the EPA to put the results into context. The EPA has been working to establish short



term goals for water quality. Oakville is an area of special concern, as they have seen high levels of metals and motor oil. As the water recedes, sediments dry and contaminants are left behind.

According to Skopec, the Iowa Department of Public Health tracks the numbers of cases of bacterial illness, and she was unaware of widespread outbreaks of bacterial disease. She said that surveillance measures are hard to link back to locations, but they have been cautioning people to consider bacteria in clean up measures. Skopec informed the Task Force that dead wildlife has been found, but it is unclear whether their deaths were connected to levels of toxins in the water. When asked about detections of chromium and lead in the water, Skopec said that there are established safety levels for drinking water, but not for sediment. Short term limits are not clear because the population is not drinking sediment. Both Skopec and the Iowa Department of Agriculture and Land Stewardship have recommended testing wells, and Skopec said that people can send samples to The University of Iowa Hygienic Lab or private labs for testing.

#### *Solid Waste and Landfills*

Alex Moon from the Iowa Department of Natural Resources spoke on landfills. He said that landfills today are engineered facilities and have location restrictions. Federal and state regulations involve a need for a liner and a system to keep liquids from reaching groundwater. He said that landfills may only have a few years of capacity and cells are built incrementally. The Cedar Rapids, Black Hawk County, and Iowa City landfills are taking on additional tonnage of waste each day. On average, to build an additional cell costs \$600,000. Transfer costs are also a consideration. The city of Cedar Rapids has a landfill that was closed and was reopened to accept flood debris. This landfill does not have a liner and will be open at least 90 days and probably for one year. In Des Moines County, there was another opening of a previous landfill site that does not have a liner.

Economic impacts include additional costs to open, close, and monitor landfills. Environmental impacts include the implications of pulling the cap off, more waste means more contamination, liners are not in place, and there will be increases in leachate and methane. Immediate concerns are that waste is under control. Wet debris also causes more gas to be released. In the longer term, it would be useful to have a variety of tools to deal with these issues. Given that homes will not be knocked down for a year, the waste generated from the rebuilding process will likely continue for two and three years down the road.

#### *Container Recovery*

One priority for the DNR includes proper debris disposal. The Environmental Protection Agency assisted with retrieving orphan tanks and drums and has brought \$5.5 million to Iowa for hazardous materials recovery. Orphan drums are those sitting in warehouses or homes that are carried to a different location during the flood. As of July 28, 91 large (more than 85 gallons) containers, 2,138 30 – 85 gallon drums, 5,166 5 – 30 gallon drums, and 156,071 small (less than 5 gallons) containers have been recovered. Also



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recovered are appliances and other containers. As of August 13, the DNR reports that 195,805 total containers have been recovered, and numbers are still growing.



## Issues in Agriculture and Environment

In addressing the complexities of the broad subject matter of agriculture and environment, it is important, while these are linked together, to identify the immediate and longer-term issues and priorities in distinct categories. The 2008 floods had a severe effect on Iowa's agricultural sector, on conservation, the environment, and livestock and animals. Recovery and rebuilding with a focus on these individual categories, as well as addressing them in a systemic way must be a priority for the state.

### Agricultural Issues

On August 15, Governor Culver sent a letter requesting a Secretarial Disaster Declaration regarding the damage to plants and significant production losses due to severe storms, flooding, and tornadoes beginning on May 25, 2008. The expected damage to the state's agriculture sector is in the billions of dollars.

While federal government programs such as crop insurance, SURE, the Conservation Reserve Program, Emergency Farm Loans, and the Emergency Conservation program provide some relief, these are difficult for some farmers to navigate and the SURE program will not be available until October 2009 because payments depend on the full year market rates. The good news is that about 20 million acres, which are 90% of Iowa's acres, are insured, however, on average, they are only insured at the 73% of their value. However, many individual farms and acreages, and those producing fruits and vegetables are most likely not insured. Many farms and farmers have been seriously affected by the winds and floods of this spring and summer.

The stress of disaster and income loss remains across the agricultural sector. Increases in agricultural calls to the Iowa State University Extension Iowa Concern hotline indicate increasing stress and concern. Some farmers are angry, very frustrated by the system, and even embarrassed to call and ask for help. The complexities of the programs available are frustrating to many, and a better way to help farmers access and navigate what is available would be helpful. A deeper and more active outreach effort would help more citizens address their problems and make their voices heard.

Damage estimates may change and be updated on a day-to-day basis. Losses will ultimately be determined by the weather – and especially the date of the frost. For farmers who recently planted and re-planted corn and beans in late June or early July, this is certainly an issue, but the damages to equipment and the agricultural infrastructure are quantifiable. There have been heavy losses to grain storage and handling facilities. Many rural and county roads and bridges are crumbling and need attention as the harvest season comes into view, and damages to processing plants and grain elevators will have significant impacts on many Iowans in the very near future.



## Conservation Issues

It is estimated that 2.2 million Iowa acres experienced up to 20 tons per acre soil erosion during the disasters of 2008, with 55% of grass waterways and 83% of terraces working properly. While these measures generally functioned and operated as designed and withstood the storm, an estimated \$48 million dollars in aggregate damage still occurred. Repair will be required for many grassed waterway sites, terraces, water and sediment control basins, and grade stabilization structures. In some locations, as much as one half of the topsoil is gone, and soil bulk density is increasing, which will be a long term barrier to retaining water on the land.

Modernized agricultural practices, as well as the construction of new buildings, homes, and industrial developments in cities and towns, exacerbate the damages downstream. Managing the flow of water across Iowa's landscape and into its rivers and streams and through its cities and towns remain a challenge that must be addressed. Iowa soil resources are in trouble and rebuilding soil organic matter is a critical part of future conservation practices and the mitigation of topsoil loss in the state.

As the water flows into our reservoirs, rivers, and streams, it pushes up against existing levees and other flood control systems. Some suggest that there are not enough inspectors or that a particular revenue or levee system was mismanaged. For all those affected by the flooding, their first priority is an expectation that flood disaster will be mitigated in the future.

We can expect the rains and flooding to continue in future years. In Iowa, there has been dramatic reduction in the historic ability of Iowa's land to absorb and hold back water. While Iowa has made huge gains in conservation practices over the years, it is also recognized that serious attention to a combination of good conservation practices, such as land use and retaining water on the land, is required if the state is to better manage the flow of water and avert soil erosion in future years. More attention must be paid to the hydrologic footprint for both urban and rural land use policies and programs. As noted by many, history should be a good teacher. Iowa policy and public dollars should discourage rather than incent establishment of new flood intolerant land uses in floodplains.

## Environmental Issues

The disasters of 2008 were a blow to the state's environment. Debris from thousands of homes, buildings, and factories needed to be disposed of to not only move along recovery, but certainly to ensure the health and safety of the residents of the state. Propane, diesel, and industrial chemicals were cast onto the landscape and floated down rivers. The sheer volume of materials, the mix of organic and inorganic waste, coupled with scores of very unusual items, forced the state to take extraordinary measures to provide debris and waste facilities over the recovery and beginning of the rebuilding effort. As a result, building or expanding new sites in counties and communities will be required.



Deconstruction and debris removal is a significant issue. Air quality monitoring demonstrated no exceedances for airborne asbestos, but with the clean-up and clean-out of houses, buildings, and neighborhoods, there is a reasonable concern about controlling dust and airborne asbestos. In rural areas, the burning of debris also has severe health and legal implications. Farmers, including many who lost livestock and property, were also faced with these same issues.

A number of cities lost and sustained damage to their water systems, their wastewater systems, and to their equipment from late May through mid-August. In many communities, water supplies were infiltrated as a result of the flooding. Many communities, even at the end of July, did not have water treatment plants functioning at capacity. The costs for repair and necessary upgrading of water and wastewater systems will require significant resources.

With debris in the water, extreme run-off, and water inundating the state, water testing was a high priority. As expected, nutrients, bacteria, and common herbicides continue to be found in the 25 sample locations. In July, sustained levels of nitrate and E. coli were still being found. As serious have been the isolated detections of metals and volatile compounds. Although there are low concentrations in the water, there are very high total volumes of these chemicals moving in the water stream. For the near future, more monitoring and surveillance are critical, and water quality issues remain the highest priority as a matter of public health and safety.

### **Livestock and Animal Issues**

As the waters washed into homes, farmsteads, and animal feeding operations, many animals were swept away to drown or to be lost. While Iowa's cattle feeders were basically not affected, a number of hog operations were affected and more than 4,000 animals were reported to have drowned. In the throes of the flooding, farmers and producers moved thousands of animals out of harm's way.

In addition, small animals including cats, dogs, and other pets were drowned or lost. Rescue operations, like many other disaster responses, were led by hundreds of volunteers. Shelter operations, non-profit organizations, and private companies came together to feed, shelter, treat, and return the pets to owners.

As noted, most mammals find higher ground. As expected, the purchase of fishing licenses over the summer diminished considerably at a cost in revenue to the state of more than \$650,000. Cities, counties, and state parks sustained damage to their fishing-related infrastructure and other facilities. These costs and loss of revenue are not retrievable for any of the entities.

Iowa will need to take a long and hard look at these complex issues, with the recognition that to sustain and enhance the quality of life, solutions are required. For example, there is a genuine concern about how best to address the many facets of Iowa's flood plain, and one should expect a very thorough in-depth



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policy debate. Additionally, a serious deliberation will be necessary given what has been learned through the 2008 disasters.



## Gaps in Agriculture and Environment

For the state to undertake initiatives, and over time, policies, practices, and programs toward resolving the immediate and longer-term issues that come as a result of high winds and flooding, there will need to be considerably more discussion and deliberation. However, in order to move forward, it is essential to take a serious look at the gaps that have been identified in the Task Force process.

Gaps for immediate needs are easier to identify. They are connected to helping those most in need as a result of the disasters, as well as solutions that may be possible in the near future.

People are grasping for organized information and help. Those seeking assistance are shuffled to many different organizations, they need help in fitting together the federal and state programs, and they need help to get any other assistance, whether personal or otherwise, in an easy one-stop kind of venue. Active communications are critical. For some, with winter coming, there will be special needs to resolve before the first frost. Immediate initiatives need to be set up, such as an “ask the expert” system, where questions can be asked of any program and an “expert” will respond within 24 hours.

With harvest season fast approaching, there is a concern that grain storage is lacking and rail and highway transportation may be hindered. In recognizing this is an issue now, agricultural-related transportation infrastructure is a major issue to be addressed as recovery and rebuilding continue.

There is a need to have more information provided to individuals and communities regarding the affects of the flood. This relates to public health and safety issues, economic information, and economic damage information. Collaboration with local entities would strengthen the information flow and give it additional credence. We know communication and information is of the highest priority in every disaster. As we look forward, it may be of value to establish some form of standardized database that is geographically specific to affected communities. This would allow relief workers, contractors, utility companies, government agencies, and all concerned to work cohesively.

There are some examples to improve conservation planning, as well as implement models for conservation practices. New technology can demonstrate what is possible and bring to bear better decisions in policy and disaster mitigation. Immediate repair work and technical assistance are also required for landowners and operators regarding assistance with repairs. Already, landowners and operators are contacting Soil and Water Conservation District offices requesting assistance. While all of the available resources such as the federal cost-share program through the Emergency Watershed Program or Emergency Conservation Program will be used, if federal money is not made available for repairs of practices, the state will need to provide the resources necessary.

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Work has been conducted by a variety of organizations, including state agencies, the Army Corps of Engineers, federal commissions, and others have gathered significant information vital so appropriate flood mitigation policies and practices will be put in place. It will be critical to bridge concerns among points of view that see flood mitigation practices very differently.

As the discussion of environmental issues progresses, it will be important for Iowans to balance the short-term and long-term needs of the state. People from cities and towns, farmers, and those who live in rural areas need to be engaged in the conversation. Federal and state policy and regulations should be on the table, and because these same policies and regulations are often integrated (or sometimes conflict), local, state, and federal agencies should be involved. It would be beneficial to identify and bring together the research, studies, and reports that would be relevant to the discussion.

There needs to be more planning. Studies have been completed or are in the works to lay the groundwork to address issues of soil erosion, water management, and drainage. The planning will need to reach into urban cities and rural towns across the state. Ideally, that process will result in policies, practices, and incentives that would mitigate flooding and damages similar to 2008 in the future. The continuing work of the Task Force is a key step in that direction.



## Agriculture and Environment Recommendations

### Priority Issues

Looking at these issues and sorting out the priorities is daunting. It is fair that giving priority recommendations to specific actions is appropriate, but there are a number of other issues integral to the discussion. The state has a leadership role in addressing these immediate and shorter-term issues, with attention first to those that impact lowans as a result of the 2008 disaster. The recommendations are not in any priority order.

- Connect all available information to those who need it.
- Address issues of water, soil erosion, conservation and floodplain management.
- Improve air and water quality surveillance and information.

#### *Connect All Available Information to Those Who Need It.*

People living in the affected communities and rural areas need a way to easily access the information they need. Whether it may affect their home, family, farm, business, or their public health, income, information on water and air quality, or all of these, some kind of one-stop-shop, communication connector, and technical assistance navigator is essential.

Clear information that is transparent and easy to understand is crucial in accessing farm and agricultural programs at all levels. Families seeking buyouts need information, as well as assistance on better ways they might build and where they might build. Technical assistance on sustainable building, about floodplain issues, and ways to connect to farm and conservation programs would serve these individuals and communities well. Deeper and more active and intense outreach will help farmers and others to work through their financial and personal issues.

Using local organizations and entities is essential in communicating to lowans. State agencies with information relevant to any aspect of recovery and rebuilding should develop relationships and systems to deliver information as immediate as possible through the local level. As lowans move forward in the next few months it will be even more important, as this disaster shifts from the attention of the general public, while many families will remain very affected and feeling alone.

#### *Address Issues of Water Management, Soil Erosion, Conservation and Floodplain Management.*

A great deal of discussion, debate, planning, and research has been done to address the issues of water management, soil erosion, conservation practices and policies and floodplain management. These are difficult issues that require a level of consensus among those of differing opinions and a great deal of



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political will at the local, state, and national level. It may be an incremental process, but the 2008 disaster gives something of a lesson in what might be necessary to avert the same kind of damages in the future.

A myriad of research papers, studies, and reports have been done. As noted in a recently announced planning document regarding the careful balance between the economics and the environment, “The people who depend on this magnificent waterway that meanders through the most productive land in the United States, are also the people who power the economic engine of mid-America. It is of little use to engineer solutions or develop grand plans if we can not improve the quality of life and sustain the environment upon which quality depends.”

This body of work, if brought together with the appropriate agencies and key leaders, could form the basis for necessary change. There are programs and technologies that could serve as models for that change. We know that there are policy and regulatory processes moving forward. For example, the Water Resources Coordinating Council, the Iowa Watershed Task Force, and other initiatives have already begun to focus on issues of Iowa’s watersheds.

The flow of water, Iowa’s drainage system, and urban run-off must be addressed in a comprehensive way. Coupled with a combination of conservation practices, resources, and incentives, the state could move forward in the near future to help alleviate, to an extent, future flooding disasters.

Local, state, and federal agencies need to address soil erosion and damage to soil and water conservation practices with landowners and operators in all 99 counties. While the estimated damage occurring to soil conservation practices total \$48 million, these are only estimates. After harvest this fall, there will be additional damages that were not visible or reported initially after flooding. It is expected that \$8 million will be needed for the technical assistance in the repair of conservation practices. After harvest, landowners and operators will want to repair these conservation practices, so they will be up to expected standards before the spring of 2009.

Also of a great concern to the Task Force were those rural families who lost their homes and are waiting for buyouts by the federal government. It is expected that it will be months before buyouts are offered and completed. To provide some kind of bridging financial assistance in the meantime, if it does not cancel out the federal assistance, should be seriously considered by the state. Homes and communities who are faced with buyouts and rebuilding should have access to technical assistance and support for sustainable building.

### *Improve Air and Water Quality Surveillance and Information.*

Without question, the aftermath of the 2008 floods affected Iowa’s air and water quality. While air quality testing cautioned workers who were conducting demolition and cleaning and moving debris, there were not



significant air quality issues, but flood waters and tornadoes affected a number of community water systems and wastewater systems.

Wastewater, floating propane and diesel tanks, dead animals, and a collection of debris only a major flood can collect passed through parts of the state. No doubt, the quality of water was affected and public health is a serious issue for many in the affected areas. Farmers and livestock producers can also be affected by water with high levels of nitrates, metals, and compounds. Community health departments and local elected officials need to be kept apprised of these issues.

Finally, there is another immediate priority, but to turn around an immediate response is very difficult. It is important to take note that Iowa's agricultural infrastructure needs repair. There was significant damage to soil, grain storage facilities, roads and bridges, and the rail system. It is expected that this will put additional stress on farmers and rural communities. The state's attention to damaged roads that were more severely affected should be a priority.

## Recommendations and Strategies

These issues are the foundation of Iowa's economic well-being and its quality of life. Not addressing the immediate priorities and tenaciously moving forward on other priority elements would diminish Iowa's goal of building a safer, stronger, and smarter Iowa. In Task Force work in the last month, through presentations of information by agencies and experts, and with the research and data provided by other organizations, it became clear that greater attention and action be given if Iowa is to preserve its agricultural structure and improve the environment.

These recommendations brought forward to the Rebuild Iowa Advisory Commission address the three priority issues identified by the Task Force. As called for in the Executive Order, the Task Force gathered information on damage and losses as a result of the 2008 disasters. It considered the distinct categories within these broader issue areas and identified gaps that command attention. It is also important to note that this report brings together a volume of material that will be critical to further discussions and decisions on these issues in the near future.

These recommendations are presented for consideration as immediate attention. Each recommendation contains a brief explanation and rationale, as well as proposing strategies that may be effective to move forward. These are in no priority order.

1. Initiate and/or strengthen a local system to provide comprehensive case management to those who need it. Connecting all available information to those who need it is critical for individuals, families, farmers, and all affected by the 2008 disaster.
  - Immediate priority. Navigating the morass of information and programs is complicated and confusing to Iowans who especially need support and assistance now. At the same time, there are transitions in rebuilding homes and communities and the creation of new programs to address agriculture, conservation, and the environment. Disaster programs for buyouts, individual assistance, and infrastructure require close attention to rules and details. There must be clear and concise information communicated through local entities.
  - Strategies:
    - State agencies need to link with local partner agencies and organizations to provide critical information that is immediate and transparent to the public.
    - Create localized "one-stop-shop" centers in severely affected cities and towns.
    - Develop state-to-local communications from the Rebuild Iowa Office directly to communities and technical assistance providers in the most affected communities and/or regions.



2. The state should take the lead to address issues of water management, soil erosion, conservation, and floodplain management. Leaders should work with federal agencies, communities, state and federal commissions, and Iowa's greater community to make the necessary changes in policy and practice to mitigate flooding. While implementing these changes will be incremental, immediate planning at the state and local level needs to proceed.
  - Immediate priority. Use existing and create new model initiatives that demonstrate a commitment to addressing these issues. The 2008 disasters, unfortunately, demonstrate the technology and practices that are required over time.
  - Strategies:
    - Address repairs to conservation practices immediately after the 2008 harvest. Provide technical assistance and make available the necessary resources from the state and federal government.
    - Pursue opportunities now to create a cover crop program, as well as other soil and water conservation practices, such as pastures and other conservation plantings, in the state. This is especially significant for fallow crop acres that were impacted by the floods and standing water.
    - Iowa, through the collaboration of state agencies that include the Department of Natural Resources, the Department of Agriculture and Land Stewardship, and the Division of Homeland Security and Emergency Management, should expedite the creation of floodplain and conservation mapping, such as Light and Detection and Ranging (LiDAR).
    - Assemble expert team of ecologists, soil conservationists, floodplain managers, and agriculture experts, as well those who were affected by the floods, to outline a ten year plan.

Improving air and water quality surveillance and information is especially critical in the aftermath of the 2008 disaster and will continue to be required as Iowa recovers and rebuilds. Water and wastewater systems were inundated this past summer and there remains a need to expand testing of water and sediment.

- Immediate priorities. State agencies, either directly or through the Rebuild Iowa Office, will ensure that Iowans will know the status of water and air quality in the affected areas.
- Strategies:
  - Temporarily expand capacity in the Department of Natural Resources to increase and geographically expand water and sediment testing in the areas affected by the flooding of 2008.



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- Working with the University of Iowa Hygienic Laboratory, evaluate and expedite environmental testing results information to the public and provide technical assistance to the public about the implications of the results and what they mean.
- Create close relationships with local public health agencies and a local network of local agencies and organizations to share information on air and water quality issues.

There is another priority, but addressing it immediately is very difficult. Iowa's agricultural infrastructure needs repair and help in providing technical assistance and financing is important, certainly before the 2009 harvest. There was significant damage to soil, Iowa's grain storage facilities, roads and bridges, and the rail system. Finally, also of a great concern to Task Force members were families who lost their homes and are waiting for buyouts. To provide some kind of bridging financial assistance should be seriously considered, in addition to including access to technical assistance and support for sustainable building.

The Agriculture and Environment Task Force brought together Resource Group Members and subject matter experts to present an array of information. Additional information was encouraged and all of the information provided is a part of the body of work of the Task Force. A group of three Task Force Members and six Resource Group members provided an Alternative Report titled "Rebuilding a Safer, Stronger, and Better Iowa." It is included as a part of the Supporting Data and Information section of the report.



## Supporting Data and Information

- Iowa State University Community Impacts of Disasters
- USDA Presentation to Task Force
- USDA Farm Bill Overview
- USDA Crop Reporting and Emergency Use of CRP
- USDA ECP Program
- USDA Loan Programs
- USDA Crop and Livestock Report
- Iowa State University Soil Quality Presentation
- Iowa Department of Agriculture and Land Stewardship Estimated Crop Losses
- Iowa Department of Agriculture and Land Stewardship Conservation Estimates
- Iowa Department of Agriculture and Land Stewardship Conservation Practices
- Iowa Department of Agriculture and Land Stewardship Presentation to RIAC
- Iowa Department of Natural Resources Flood Recovery
- Iowa Department of Natural Resources Estimates
- Iowa Department of Natural Resources Impacts to Landfills
- Iowa Department of Natural Resources Water and Sediment Monitoring
- Iowa Department of Natural Resources Air Quality Concerns
- Iowa Department of Natural Resources Container Recovery Summary
- Iowa State University Brief on Integrated Crop Management
- Report from Task Force and Resource Group Members, “Rebuilding a Stronger, Safer and Better Iowa”
- Iowa Natural Heritage Foundation Op-Ed

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- Comments from Resource Group Members
- Iowa Department of Agriculture and Land Stewardship Final Swine Numbers
- Land Improvement Contractors Association Presentation
- Flood Editorial from *Environmental Science & Technology*
- News Release from the Mississippi River Commission
- Rebuild Iowa Agriculture and Environment Task Force July 30 Meeting Notes
- Rebuild Iowa Agriculture and Environment Task Force August 13 Meeting Notes

*It should be noted that it was suggested to include the 2000 Iowa Watershed Task Force Report as supplemental information. Due to time constraints, the report was not able to be located for inclusion but should be considered additional information.*





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