Summary

Environmental Protection Commission

Tuesday, June 21, 2011
DNR Air Quality Building
7900 Hickman Road
Windsor Heights, IA
10:00 AM

9:00 AM – Commissioner Training Session (attendance optional)
10:00 AM – Meeting begins
10:30 AM – Public Participation[1]

	Agenda topics	
1	Approval of Agenda	
2	Approval of Minutes	
3	Director's Remarks	
4	Clean Water and Drinking Water State Revolving Loan Fund – FY 2012 Intended Use Plans	Carried
5	Contract – State Hygienic Laboratory at The University of Iowa – Wetland Monitoring Laboratory Services	Carried
6	Solid Waste Alternatives Program – Contract Recommendations	Carried
7	Contract - Regional Collection Center Establishment Grant for Palo Alto County Solid Waste Agency	Carried
8	Contract – City of Seymour – Derelict Building Deconstruction Pilot Project	Carried
9	Contract with the University of Northern Iowa, Iowa Waste Reduction Center – Iowa Waste Exchange Program technical assistance, database management and training	Carried
10	Contract with the State Hygienic Laboratory at The University of Iowa for Laboratory Services for Contaminated Sites Program	Carried
11	Contract with The State Hygienic Laboratory at The University of Iowa for Laboratory Services and Corrective Action Specialist for Underground Storage Tank Program	Carried
12	Contract Amendment with University of Iowa for Dam Safety Inspectors	Carried
13	Contract with University of Iowa (Iowa Flood Center) for Bridge Mounted Stream/River Sensors	Carried
14	Contract Amendments – Utility Management Organization Grants for Wastewater Services to Small and Unsewered Communities	Carried
15	Contract with IDALS-DSC for Nonpoint Source Program Basin Coordinator Staffing Assistance	Carried
16	Contract with IDALS-DSC for Nonpoint Source Program Administrative Staffing Assistance	Carried
17	Contract with University of Northern Iowa for Small Business Assistance Program: Iowa Air Emissions Assistance Program (IAEAP)	Carried
18	Amendment to Contract ESDCIiams110002: Execution of the State of Iowa Air Pollution Control Implementation Plan: Polk County	Carried
19	Amendment to Contract ESDCIiams110001: Execution of the State of Iowa Air Pollution Control Implementation Plan: Linn County	Carried

20	Contract with University of Iowa for 2012 SHL Services in Support of the DNR Air Quality Bureau	Carried
21	Notice of Termination; Amendments to Chapters 60, 63, 64 and 65, Animal Feeding Operations and related NPDES Rule Chapters	Carried
22	Contract Amendment – ISU– Historic Aerial Photography Project	Carried
23	Denial of Petition for Rulemaking by Kids vs Global Warming	Carried
24	Monthly Reports	Information
25	General Discussion • July 13th Commissioner Training Session	
26	Items for Next Month's Meeting • July 12th – Windsor Heights • August 16th - Windsor Heights	

For details on the EPC meeting schedule, visit www.iowadnr.com/epc/index.html.

[1] Comments during the public participation period regarding proposed rules or notices of intended action are not included in the official comments for that rule package unless they are submitted as required in the Notice of Intended Action.

Agricultural transportation carbon emissions

Grays Lake

E. Coli and harmful algal blooms

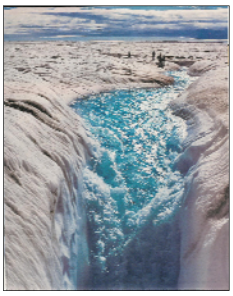
Frogs as Indicators of Water Quality

Leopard Frog in Iowa lowlands

The iMATTER Campaign

Petition for Rule-Making

Global Warming is Already Occurring

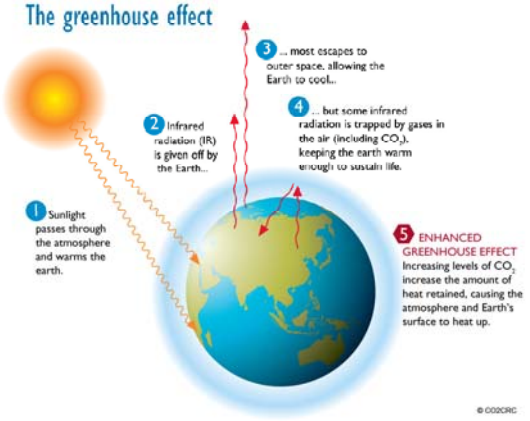


- In 2009 the EPA stated that "*climate change is upon us* as a result of greenhouse gas emissions, that *climate changes are already occurring that harm our health and welfare, and that the effects will only worsen over time in the absence of regulatory action.*"
- The IPCC has observed that "[w]arming of the climate system is unequivocal."

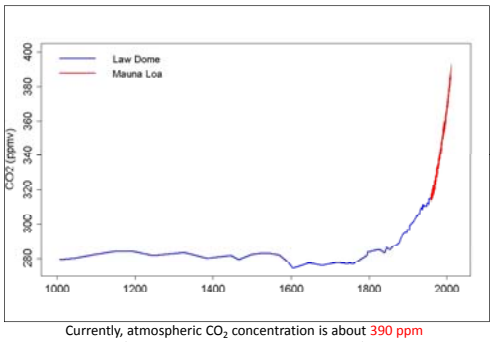
70 Million Tons of Carbon Every Day

Scientists Agree

The greenhouse effect



Atmospheric CO_2

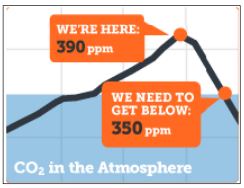


Currently, atmospheric CO_2 concentration is about 390 ppm
(as compared to 280 ppm pre-industrial)

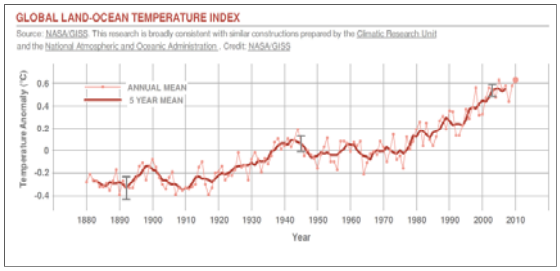
Atmospheric Equilibrium = less than 350 Parts Per Million Carbon Dioxide (PPM)

REMEMBER THIS:

1.0 degree C = less than 350 ppm

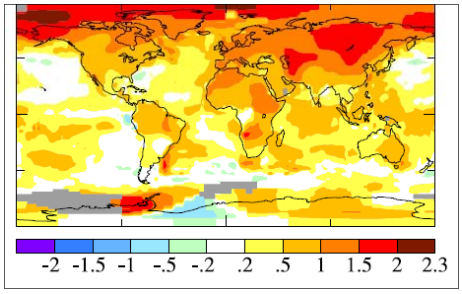


Global Temperature on the Rise



Global temperatures have increased by 1.4° F (0.8° C) in the past 150 years
2010 was tied for the hottest year on record

Average Global Surface Temperature for 2001-2007 Relative to 1951-1980

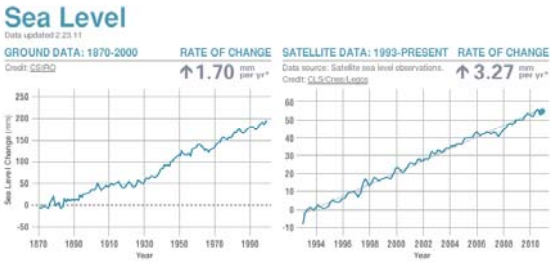


- Source: Hansen

Carbon lingers 100-1000+ years in the Atmosphere

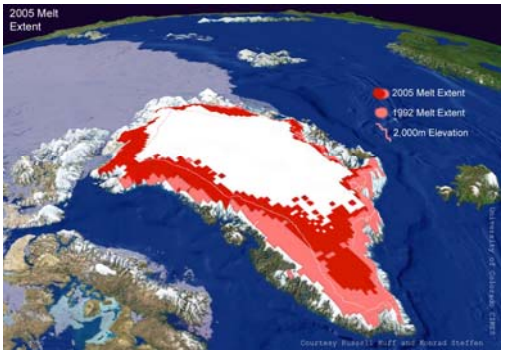
Heating in the pipeline

Global Impacts: Rising Sea Level



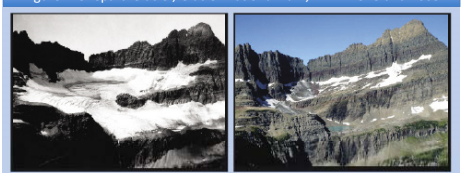
Sea levels have risen 6.7 inches in the past 100 years (the rate of sea level change has *doubled* in the past decade)
Conservative estimates predict Sea level rise this century to be between 1.5-6.5 feet (0.5-2 meters)

Greenland Ice Sheet in Retreat



Mountain Glaciers in Retreat

Figure 2. Shepard Glacier, Glacier National Park, MT in 1913 and 2005



Right:
Portage Glacier, Alaska in 1914 and 2004

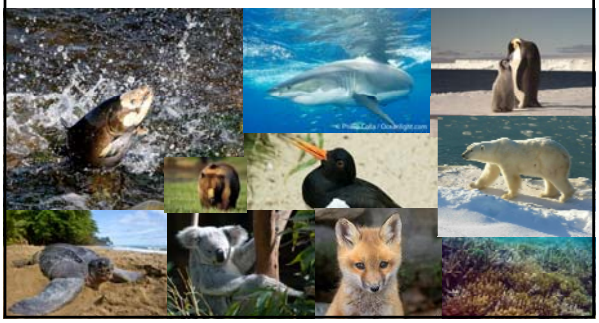
Critical tipping point: Permafrost melt will cause massive methane release and run-away Global heating

The oceans are acidifying – killing coral reefs and shellfish

Forests Under Attack

The Sixth Planetary Extinction

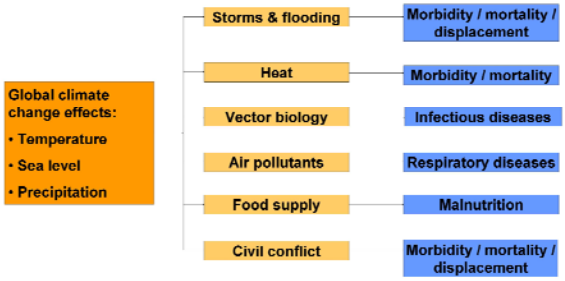
Up to 30% of plant and animal species are threatened with extinction if temperatures rise 2.7 – 3.6° F (1.5 – 2° C) – UN IPCC Fourth Assessment, 2007



Water Shortages

A third of the world's population will face water shortages with a temperature rise of 2.7 – 3.6° F (1.5 – 2° C) – UN IPCC Fourth Assessment, 2007

Potential Impacts of Global Climate Change on Human Health



Food Security

Increase in frequency/severity of storms

Storm Severity:
Rural farmland flooding near Hamburg, Iowa
June 11th, 2011

Photo Credit: Nati Harnik, Des Moines Register

Droughts are also expected to increase in frequency and severity throughout the Midwest

Photo cr: Reese Halter

Photo cr: The Register

We Deserve Better.

We are standing up to protect our right to a healthy and livable planet.

You have a moral responsibility to protect Earth for future generations. We all need to start living as if the future matters.

Prescription for climate stability

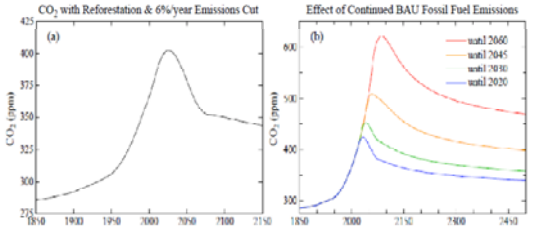
- Humans have caused a planetary imbalance of one-half watt (Earth is absorbing more energy than it emits back to space)
  - To increase Earth's heat radiation by one-half watt we need to reduce CO_2 levels to 350 ppm from current level of 390 ppm (James Hansen, 2011)

Prescription for climate stability

- The good news is that CO_2 levels will drop if we stop or greatly reduce CO_2 emissions
- Reforestation and improved agriculture practices can play a role in lowering CO_2 levels
- We need to act *immediately* to avoid causing irreparable harm to future generations

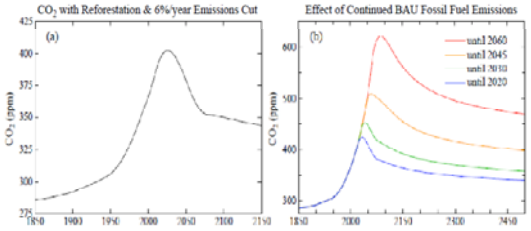
Prescription for climate stability

To reduce CO_2 concentrations to 350 ppm, emissions must peak in 2012 and then decline by 6% a year (Dr. James Hansen, 2011)



Prescription for climate stability

Experts say that we can eliminate fossil fuels in 30-50 years with technologies that are already available or will be in the foreseeable future



Ways to reach a fossil fuel-free energy system

- Set a cap on fossil fuel use that decreases fossil fuel emissions
- Implement a slowly rising carbon tax and use the money to invest in zero-CO_2 emissions
- Impose stricter efficiency standards for building and motor vehicles
- Ban new coal-fired power plants
- More money for research and development in alternative sources of clean energy
- Energy Conservation

CO_2 Reduction is Economically Feasible

- Eliminating fossil fuel subsidies would save billions annually
- Reducing CO_2 emissions will save billions of dollars and 1000s of lives by reducing health care costs and reducing the incidences of costly and deadly extreme weather events
- Clean energy will create new jobs

The U.S. is responsible for 30% of the world's carbon emissions. Every county, every state, every city, every person must reduce its carbon output.

"Avoiding dangerous climate change … is practically and economically achievable."
– Jeffrey Sachs

The Public Trust Doctrine: A Public Property Right

Government has a firm fiduciary obligation to protect natural assets for citizens and for future generations

The Atmosphere is Part of the Trust

1. **The atmosphere is a trust asset, one of the most important given that it is vital for life on Earth**
2. **Sovereign nations and states are co-tenant trustees**
3. **Our youth and all citizens are beneficiaries and have a right to a healthy planet**
4. **The government has a fiduciary obligation to protect this trust according to the best available science**
5. **The Government must prevent harm**

The eyes of the future are looking back at us and they are praying for us to see beyond our own time.
-Terry Tempest Williams

The time to act is now. We are counting on you.

STATE REVOLVING FUND

FY 2012 Intended Use Plans

Patti Cale-Finnegan, Iowa Department of Natural Resources
Lori Beary, Iowa Finance Authority

Background

The SRF is Iowa's primary source of financing for drinking water and wastewater infrastructure, storm water quality, and nonpoint source protection

Background

SRF programs authorized by Clean Water Act and Safe Drinking Water Act and administered by U.S. Environmental Protection Agency

Background

Background

Program frameworks and eligibility set by federal law, but each state can set its own priorities for use of funds

Background

- Iowa Code
  - 455B.291-299 (DNR)
  - 16.131-133A (IFA)
- Iowa Administrative Code
  - 567 Chapters 40 and 44 – DWSRF (adopted by EPC)
  - 567 Chapters 90-93 – CWSRF (adopted by EPC)
  - 265 Chapter 16 – SRF (adopted by Iowa Finance Authority Board)
- "The program shall be a joint and cooperative undertaking of the department and the authority."

Background

- Iowa Department of Natural Resources
  - Program planning and prioritization
  - Project planning and permitting
  - Environmental review
  - Federal compliance
- Iowa Finance Authority
  - Financial management
  - Bond issues
  - Loan processing
  - Loan disbursements

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1989 - 2002

LOW-INTEREST LOANS FOR

Water and wastewater infrastructure only

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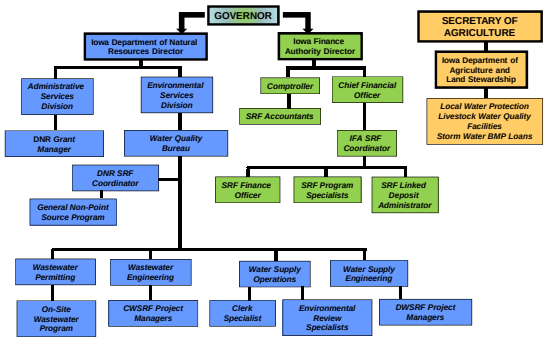
2003 - Present

Water and Wastewater

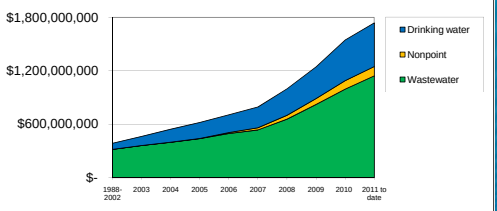
- Onsite Septic Systems
- Planning and Design
- Lake and Wetland Restoration
- Soil, Sediment, and Nutrient Management
- Brownfield Cleanup
- Energy and Water Efficiency
- Urban Stormwater
- Source Water Protection
- Landfill Closure

State Revolving Fund Organizational Structure -- Iowa



Growth of SRF

More than $1.7 Billion Committed



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Intended Use Plans

- EPA requirement
- Outlines funding available and proposed uses
- Sets goals and objectives and lays out program plans
- Sets program policies such as interest rates and terms, disadvantaged community criteria

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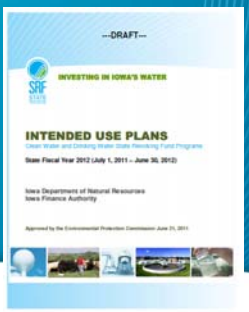
Intended Use Plans

- Annual IUPs in June
- Quarterly updates in September, December, March
  - Add projects and update priority lists
  - Keeps projects in the pipeline year-round
  - Flexibility to respond to program changes



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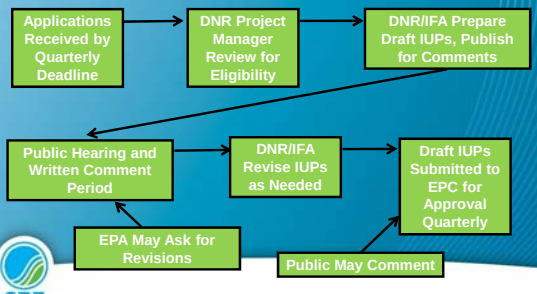
Intended Use Plans - Process



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Drinking Water SRF

- Loans for:
  - Improvements to public water supply systems
  - Consolidations and connections
  - Source water protection
- DWSRF set-asides fund technical assistance, capacity development, state drinking water program, SWP

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Clean Water SRF

- Loans for:
  - Publicly owned wastewater treatment facilities
  - Sewer system rehabilitation
  - New systems for unsewered communities
  - Stormwater management for water quality
  - Nonpoint source pollution control

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Types of Loans

- Planning & design
- Construction
- Source water protection
- Watershed protection

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Planning & Design

- 0% financing for up to 3 years
- Can be rolled into SRF loans or paid off with other permanent financing
- Get projects ready for applications to CDBG, Rural Development, or other funding

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Construction

- Cities and counties
- Community water supplies
- 3% interest rate

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Construction

- No reserve requirement
- Extended financing terms – up to 30 yrs
  - All CWSRF
  - DWSRF disadvantaged communities
- Assistance with environmental review

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Construction

- Environmental review specialist assists with ER process
- SRF pays for preliminary archeology

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Source Water Protection

- 0% interest rate
- Up to 20 year term
- For purchase of land or easements, or to fund SWP practices
- Based on approved SWP plan

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Nonpoint Source Loans

- Low-cost financing for nonpoint source projects
- Project approval by environmental agency
- Financing approval by participating lender
- Interest rate max 3%
- Can be used with cost-share, EQIP, other grants

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Nonpoint Source Loans

- Local Water Protection
  - Addresses soil erosion and sediment control on ag land
  - IDALS administers
  - Apply through Soil and Water Conservation Districts

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Nonpoint Source Loans

- Livestock Water Quality Facilities
  - Manure management for non-CAFO operations
  - IDALS administers
  - Apply through local Soil and Water Conservation Districts

Nonpoint Source Loans

- On-Site Wastewater Systems
  - Helps rural homeowners replace inadequate septic systems
  - Contact county sanitarian in participating counties

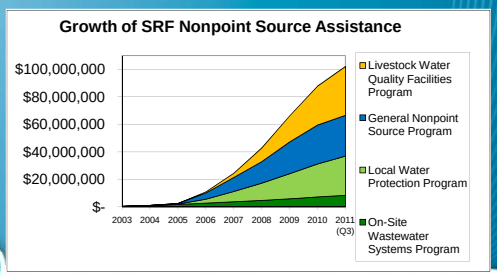
Nonpoint Source Loans

- Stormwater Best Management Practices
  - Restore natural hydrology, treat and manage stormwater runoff
  - Apply through SWCDs

Nonpoint Source Loans

- General Nonpoint Source Projects
  - Watershed groups for land acquisition
  - Communities for brownfield and landfill cleanups
  - Other
  - Apply to DNR

SRF Nonpoint Projects



Special Requirements

- Changes from base SRF programs started with ARRA in 2009
- Green projects, loan forgiveness, Davis-Bacon carried over through FFY 2010 appropriations
- Continued once again through FFY 2011 appropriations
- Challenge to allocate funds from several pots of money with different requirements

Green Projects

- Energy efficiency, water efficiency, green storm water infrastructure, environmentally innovative
  - Goal is to go above and beyond traditional or regulated approaches to gain more environmental sustainability
- Eligibility determined through EPA guidance

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Green Projects

- Equivalent of at least 20% of capitalization grant amounts must be used for green projects
- FFY 2010 cap grant projects
  - CWSRF $21 million for green infrastructure
  - DWSRF $5 million for water/energy efficiency

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Loan Forgiveness

- FFY 2010 amounts allocated last year
- FFY 2011 CWSRF: $1.8 - $6 million
- FFY 2011 DWSRF: $4.8 million
- Will allocate to disadvantaged communities and green projects

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FY 2012 Highlights

- CWSRF
  - $572 million requested for wastewater infrastructure
  - $29.5 million set aside for nonpoint source control projects
- DWSRF
  - $186 million requested for drinking water systems

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FY 2012 Highlights

- Anticipated Disbursements:
  - CWSRF: $419 million
  - DWSRF: $137 million
- Through leveraging and revolving nature of fund, SRF is currently able to fund all eligible projects

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How the SRF Helps

- "The SRF allowed the City of Stacyville to make the necessary improvements to our infrastructure when it was needed. "

Harlan Bisbee
City Clerk, Stacyville

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How the SRF Helps

- **"The SRF provided the lowest rates available for the City of Shenandoah to finance improvements to the Waste Water Treatment Facility. "**

Marcia McKay, City Clerk/Treasurer Shenandoah

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How the SRF Helps

- **"The City of Ankeny really appreciated being able to use SRF funding for our brownfield cleanup project, as well as the guidance provided by the DNR and IFA staff."**

Jolee Belzung
Director of Municipal Utilities, Ankeny

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How the SRF Helps

- **"The low-interest loan made a huge difference in my livestock water quality project. The people I worked with were helpful and the paperwork was simple. "**

Justin Rozeboom
Sioux County

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How the SRF Helps

- **"We could see more erosion in our creek with every storm. We learned about the SRF and are very happy with the process and with everyone involved. The improvements have worked wonderfully and we no longer have erosion. "**

Shelly Moore
Blue Grass

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For more information

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Iowa Department of Natural Resources
515-725-0498
Patti.cale-finnegan@dnr.iowa.gov

Lori Beary
Iowa Finance Authority
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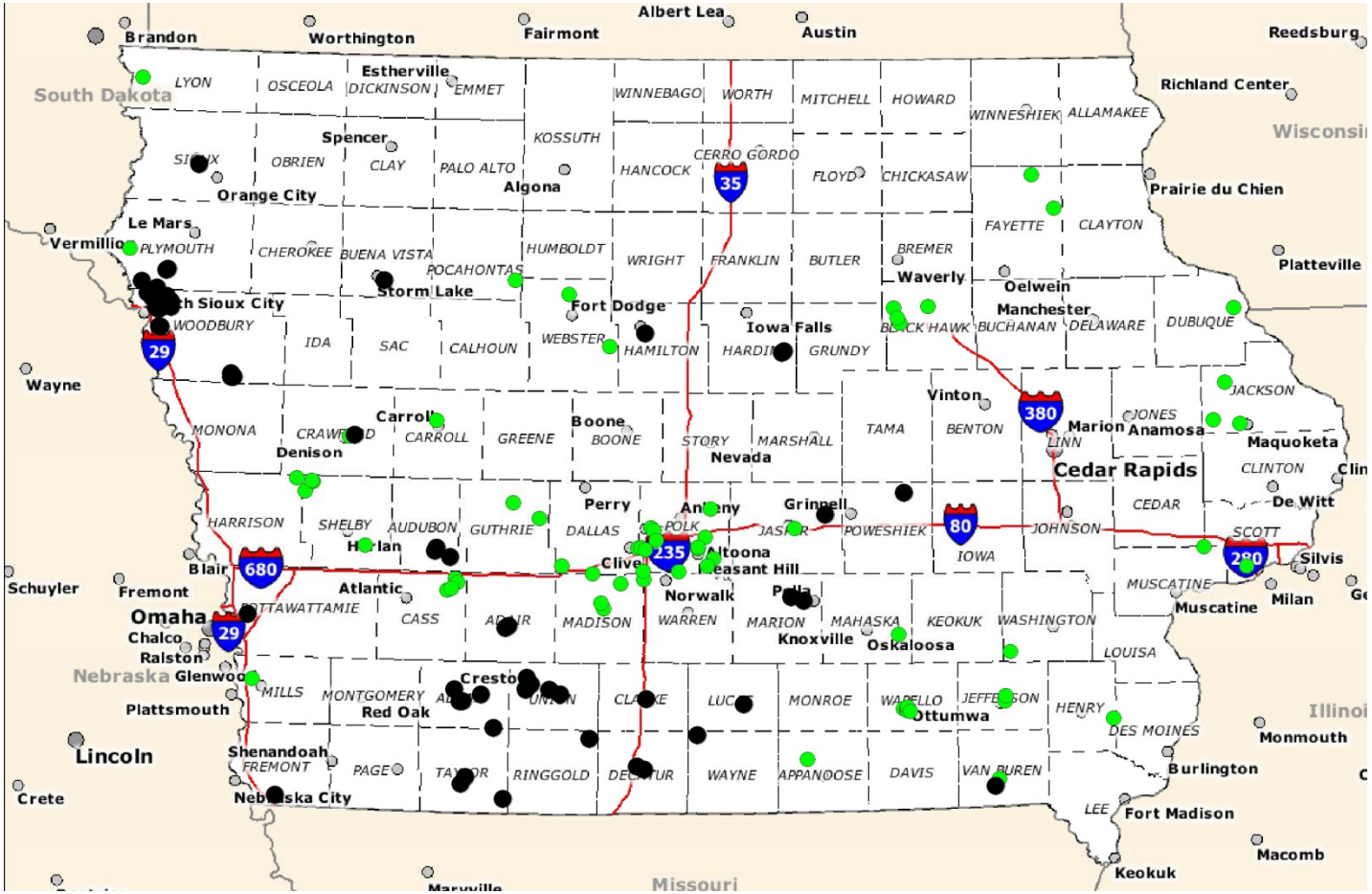
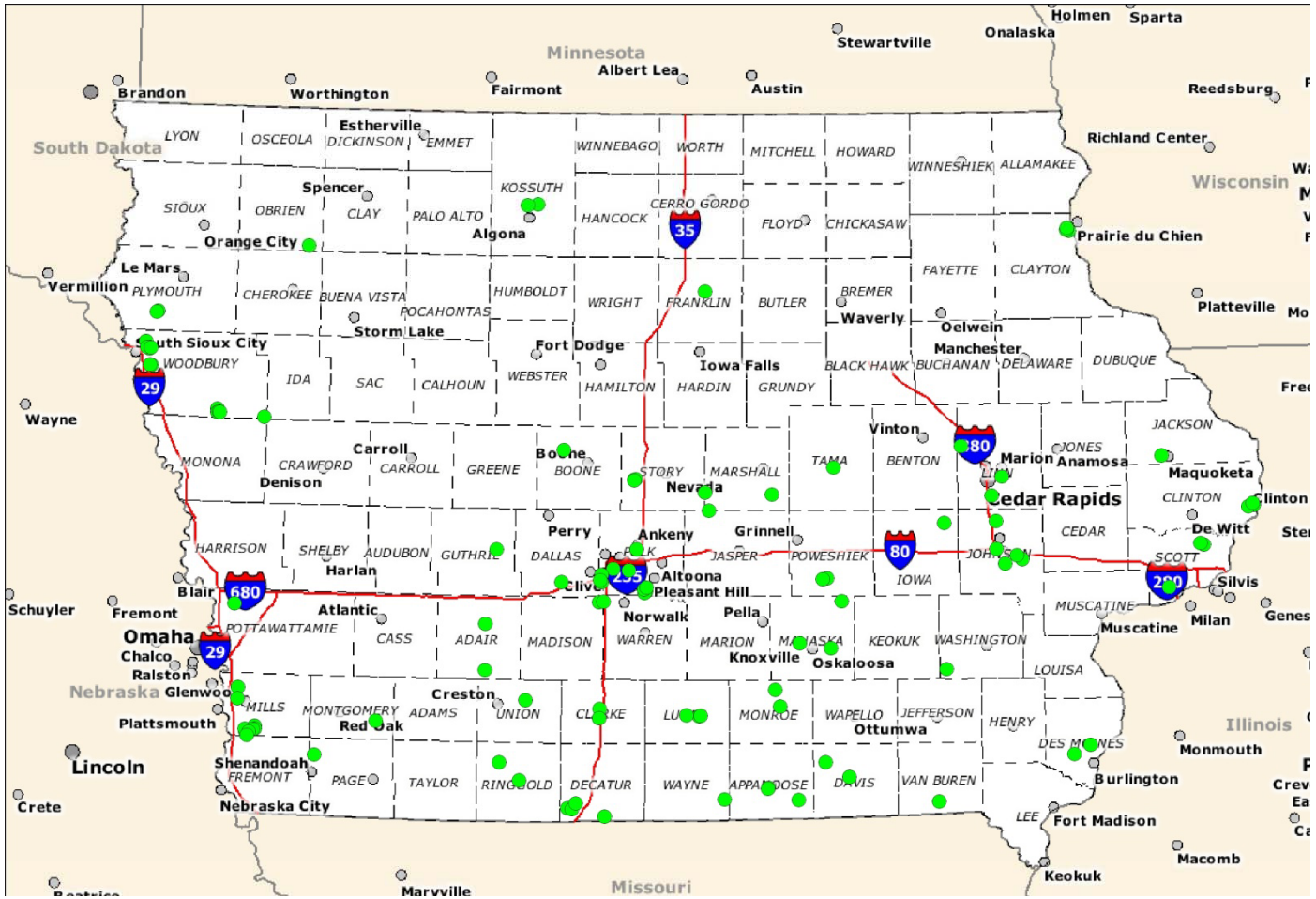
Calendar Year 2011 Dam Inspections (126)

Black = Inspection complete (55)

Green = Inspection scheduled (71)



Calendar Year 2012 Dam Inspections (103)



Dam Owner Open Houses: Summer Schedule

Contact Jon Garton at 515-281-6940 or Jonathan.Garton@dnr.iowa.gov

- *Marion* - June 21, ISU Extension Office, 3279 Seventh Ave. , Suite 140
- *Fairfield* - June 30, Fairfield Public Library, 104 West Adams Ave.
- *West Des Moines* - July 12, West Des Moines Public Library, 4000 Mills Civic Parkway
- *Lovilia* - July 19, Lake Miami Meeting Facility, 1270 635th St.
- *Mount Ayr* - July 25, Mount Ayr Rural Electric Coop, 1502 West South St.
- *Atlantic* - August 2, Rock Island Depot, 102 Chestnut St.
- *Onawa* - August 9, Onawa Public Library, 707 Iowa Ave.

Stream Gages

What does a stream gage do?

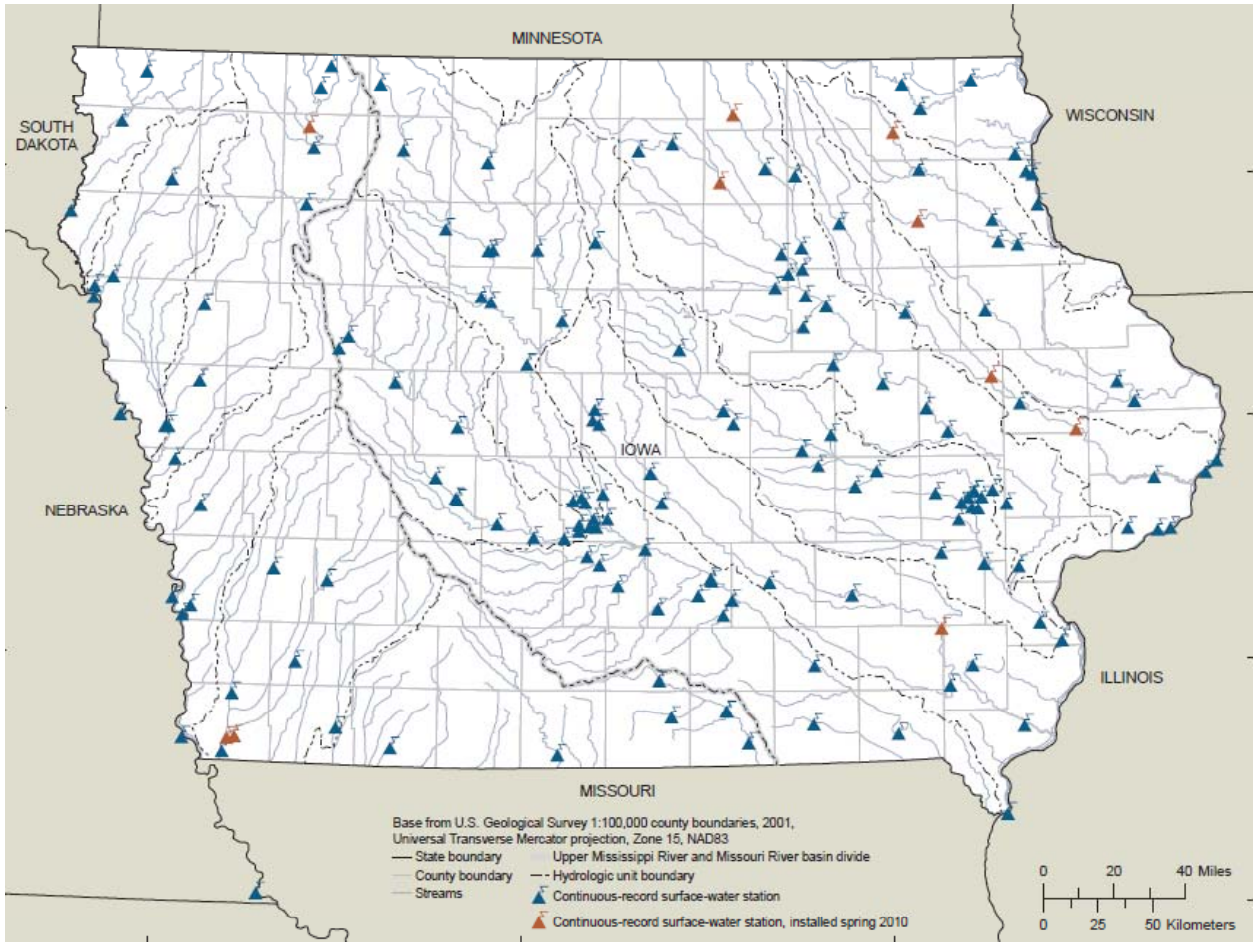
- Used to measure water level and flow
- Data sets describe average conditions, long-term variations and trends in flow

Why do we need this information?

- Flood Plain Determinations
- Flood Frequency Analysis
- Flood Plain Mapping
- Flood Forecasting & Warnings

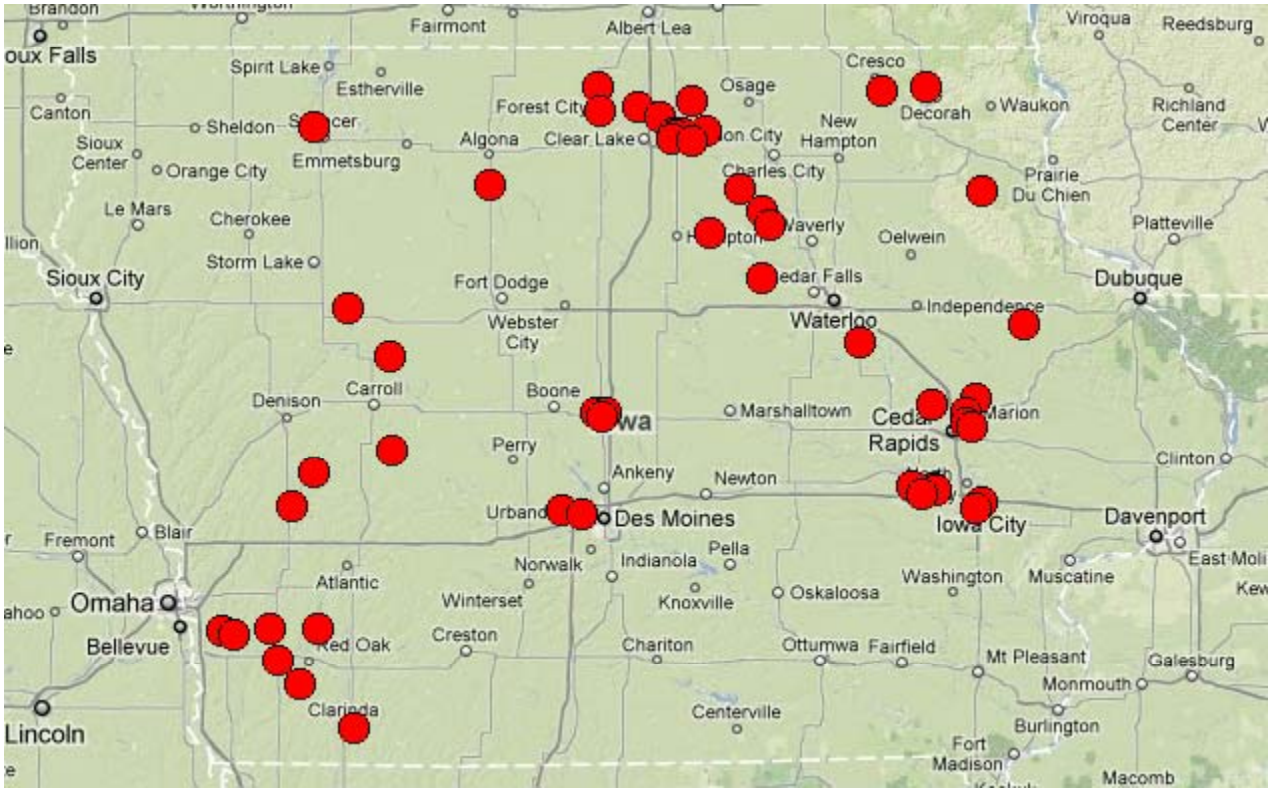
171 USGS Stream Gages in Iowa

Maintaining 10 new stream gages that were added in 2009

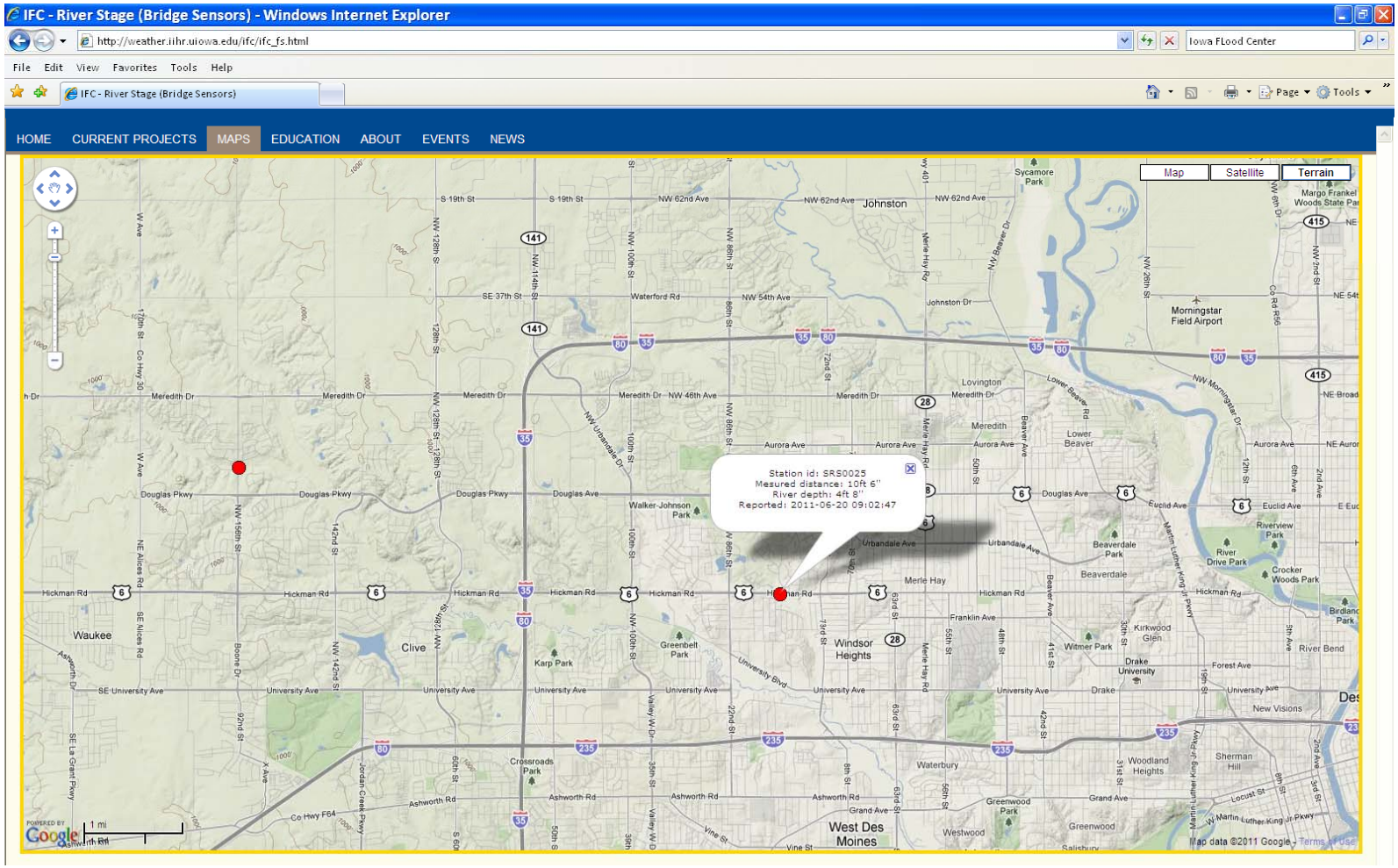


River Stage Sensors Project

- Working with **Iowa Flood Center**
- 50 Stream Stage Sensors Deployed
- Real time data used by local emergency managers for flood warning



Iowa Flood Center:
http://weather.iihr.uiowa.edu/ifc/ifc_fs.html



River Stage Sensors Installed Summer 2010

River Name	Bridge Road Name	Nearest Town	Nearest Intersection
Beaver Creek	Sinclair Avenue/County RD T47/	Parkersburg	N of HWY 57
Brushy Creek	330th St/ HWY 141	Dedham	W of Robin Avenue
Chelsea Creek	19th St. SW/ HWY 106	Mason City	W of S Pierce Avenue
Clear Creek	190th St	Homestead	E of HWY 151/U Avenue
Clear Creek	Chambers Ave. NW	Oxford	S of lower Oxford RD NW/ County W38
Unnamed/Clear Creek Tributary	210th St./County F35	Homestead	W of Y Ave
Dry Creek	Covington RD/ HWY 94	Palo	NW of 1st Street
East Fork Des Moines River	130th St/County RD B63	Algona	W of HWY 169
East Nodoway River	HWY2	Clarinda	E of Upton Ave
East Nishnabotna River	270th St./ County RD H54	Coburg	E of County M41/ Evergreen Ave.
East Nishnabotna River	110th St./HWY48	Elliot	E of Kirkwood Ave./County RD M55
Hargrave Creek	Franklin Ave/County C33	Dumont	N of HWY3/210th St.
Indian Creek	Mt. Vernon RD SE	Cedar Rapids	E of Rosedale RD
Indian Creek	Cottage Grove Ave SE	Cedar Rapids	E of 345th St. SE
Indian Creek	Marion Blvd./HWY151/HWY922	Marion	NE of Blairs Ferry RD
Indian Creek	County Home Road	Marion	W fo HWY 13
Indian Creek	Morton Ave.; Jamison RD; County H34	Emerson	E of HWY 59
Keg Creek	Barrus RD/County RD H12/County L45	Mineola	E of 250th St.
Lake Creek	365th St./HWY165	Lake City	E of Garber Ave./County N33
Little Sioux River	320th St./HWY18	Spencer	E of 200th Ave./ County M44
Little Walnut Creek	NW 156th Street	Clive	N of Douglas Parkway
Maquoketa River	Quarter RD	Delhi	SW of Pioneer RD and E of HWY 38
North Raccoon River	230th St.	Sac City	W of Rolf Ave./ County M65
North Walnut Creek	Hickman RD/ HWY6	Urbandale	W of Colby Woods Drive
Rhine Creek	Augusta Ave./HWY109/ County W38	Oxford	N of Center St.

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Ralston Creek	Governor St./HWY1	Iowa City	N of Iowa Ave.
Shell Rock River	180th St./County C33	Clarksville	E of Ridge Ave.
Shell Rock River	Packard Ave./CountyT47	Clarksville	N of 150th St./Raven RD/County C23
Shell Rock River	290th St.	Marble Rock	W of Jersey Ave./Green RD
Shell Rock River	277th St.	Nora Springs	E of Yarrow Ave.
Shell Rock River	HWY9	Plymouth	W of Thrush Ave./S56
Silver Creek	Dobney Ave.	Silver City	W of County L55
Squaw Creek	South Duff Ave.	Ames	N of S 16th St.
Squaw Creek	Stange RD	Ames	N or 13th St.
South Skunk River	E 13th St.	Ames	W of Stagecoach RD
Turkey River	Cable Ave.	Elgin	N of Chariot RD/County C1X
Turkey River	345th St./ County Line RD	Cresco	N or 135th St.
Upper Iowa River	Bluffton RD/ County W20	Decorah	N of Pole Line RD/County A34
Wolfe Creek	W Main St.	LaPorte City	NW of Locust St.
Willow Creek	1st. Street SW	Mason City	E of S Monroe Ave.
Willow Creek	N Pierce Ave.	Mason City	S of 8th St. NW
Winnebago River	Thrush Ave./County S56	Mason City	N of HWY18/HWY 27
Winnebago River	S Illinois Ave	Mason City	N of 4th St. SE/HWY18/HWY122
Winnebago River	Killdeer Ave.	Mason City	S of 330th St./ County B15
Winnebago River	Eagle Ave./S 1st. St.	Fertile	S of 350th St./HWY9
Winnebago River	330th St/ County B14	Forest City	W of Sage Ave/ County R70
Winnebago River	400th St/ County A38	Leland	E of 170th Ave./Hwy69/HWY9
West Nishnabotna River	Brothers Ave./ County H12	Henderson	W of 395th St.
West Nishnabotna River	Chatburn Ave./HWY44/1000St.	Harlan	W of Maple RD
West Nishnabotna River	Cora St./County F24	Irwin	E of Timber RD

DERELICT BUILDINGS:

What makes a building derelict?

- Abandoned
- Recalcitrant or No Viable Property Owner
- "Nuisance"
- Dilapidated/neglected
  - Exterior/Interior Walls
  - Roof
  - Windows, Doors, Etc.

Problems with Derelict Buildings

- Impairs Development
- Blight on Community
- Harbor for Vectors
- Fire Hazard
- Attracts Illegal Dumping
- Public Safety – falling debris, unstable interior, etc.
- Environmental Hazards
  - Asbestos
  - Lead-based Paint
  - Toxic Materials

ASBESTOS CONCERNS

- If building has collapsed or is unsafe to enter all of the structure must be handled as ACM (asbestos containing material)
- Increases cost of disposal
- Eliminates cost saving reuse and recycling options

Case Study – Seymour, IA

- Roof has collapsed exposing interior to the elements
- Portion of 3rd floor exterior wall has given way
- All 3 floors have fallen into the basement

Seymour

Seymour

- Cannot enter the structure
- Can't do asbestos inspection and abatement
- Must be treated as 100% ACM
- Cost for demolition & disposal $215,000 - $300,000

Seymour

- Deconstruction
  - Selective Dismantling
- Remove brick & mortar to extent possible
- Wash to eliminate any asbestos
- Reuse or use as clean backfill
- Total project cost $140,000

Conclusion

- Important to identify potential derelict buildings in your community early
- Identify and exercise legal means to address derelict properties
- Prior to obtaining ownership gain access for
  - Asbestos inspection
  - Asbestos abatement
- Renovation is an option
- If not, deconstruction option provides recycling & reuse opportunities resulting in substantial transportation and disposal savings