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A NATIONAL NON-PROFIT ASSOCIATION REPRESENTING
PUBLIC INFRASTRUCTURE FINANCING AGENCIES

The Iowa Experience Addressing Nonpoint Source Pollution

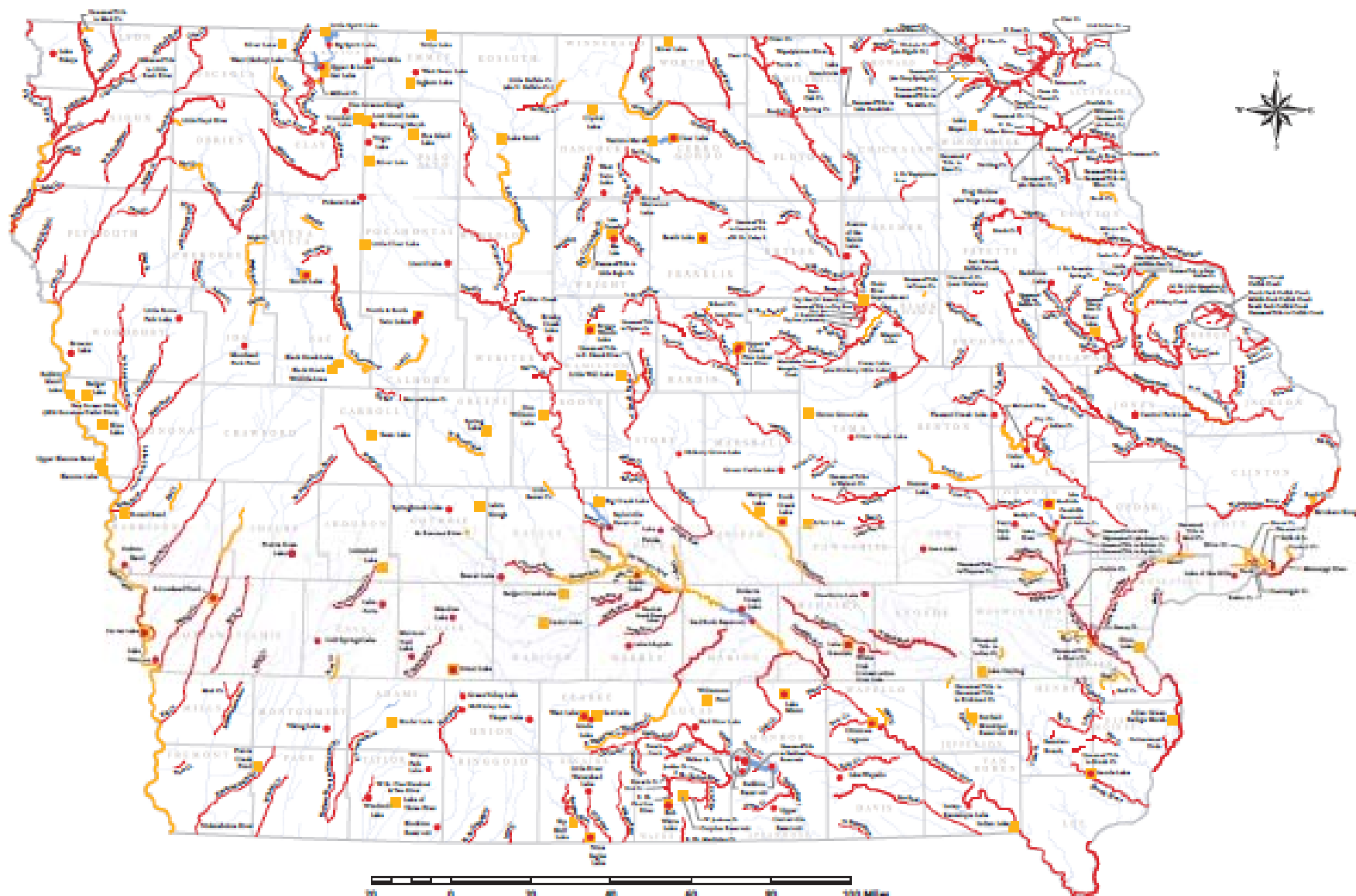


Lori Beary, Iowa Finance Authority
Patti Cale-Finnegan, Iowa Department of Natural Resources

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Draft List of Iowa's Impaired Waterbodies (2012)



Impaired Lakes (143 Lakes/238 Impairments)

- Category 5 Impairment - TMDL Needed (89 Lakes/160 Impairments)
- Category 4 Impairment - TMDL Not Needed (71 Lakes/78 Impairments)

Impaired Stream Segments (477 Segments/595 Impairments)

- Category 5 Impairment - TMDL Needed (392 Segments/ 500 Impairments)
- Category 4 Impairment - TMDL Not Needed (93 Segments/95 Impairments)

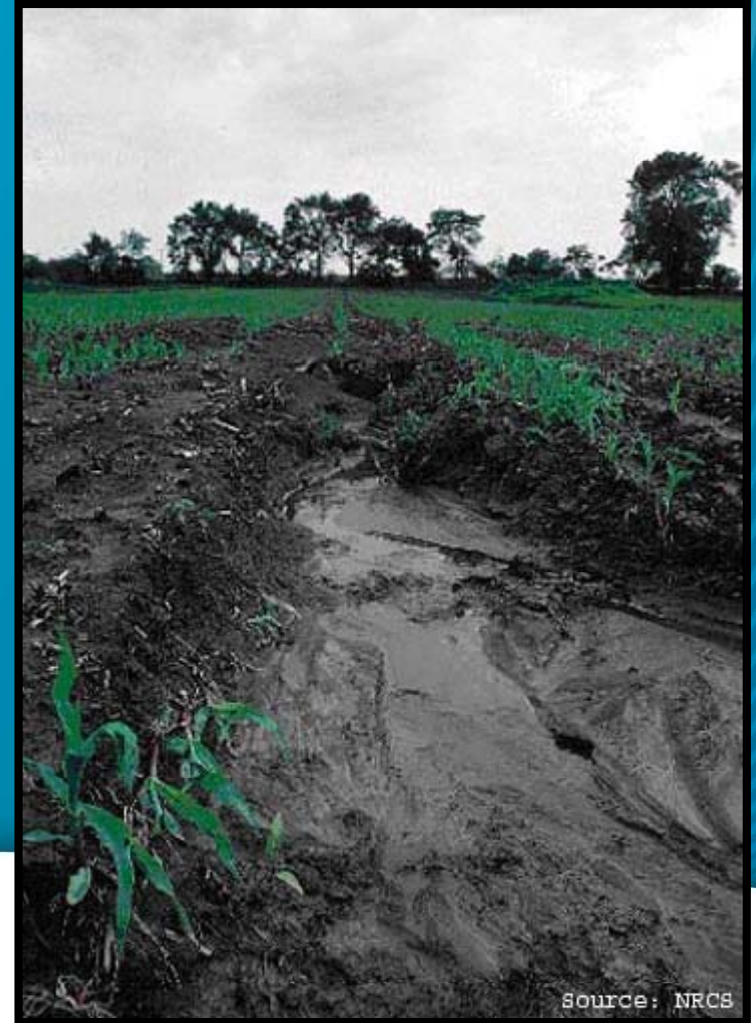


Nonpoint source (NPS) pollution comes from many diffuse sources. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, and ground waters.



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SEDIMENT



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NUTRIENTS



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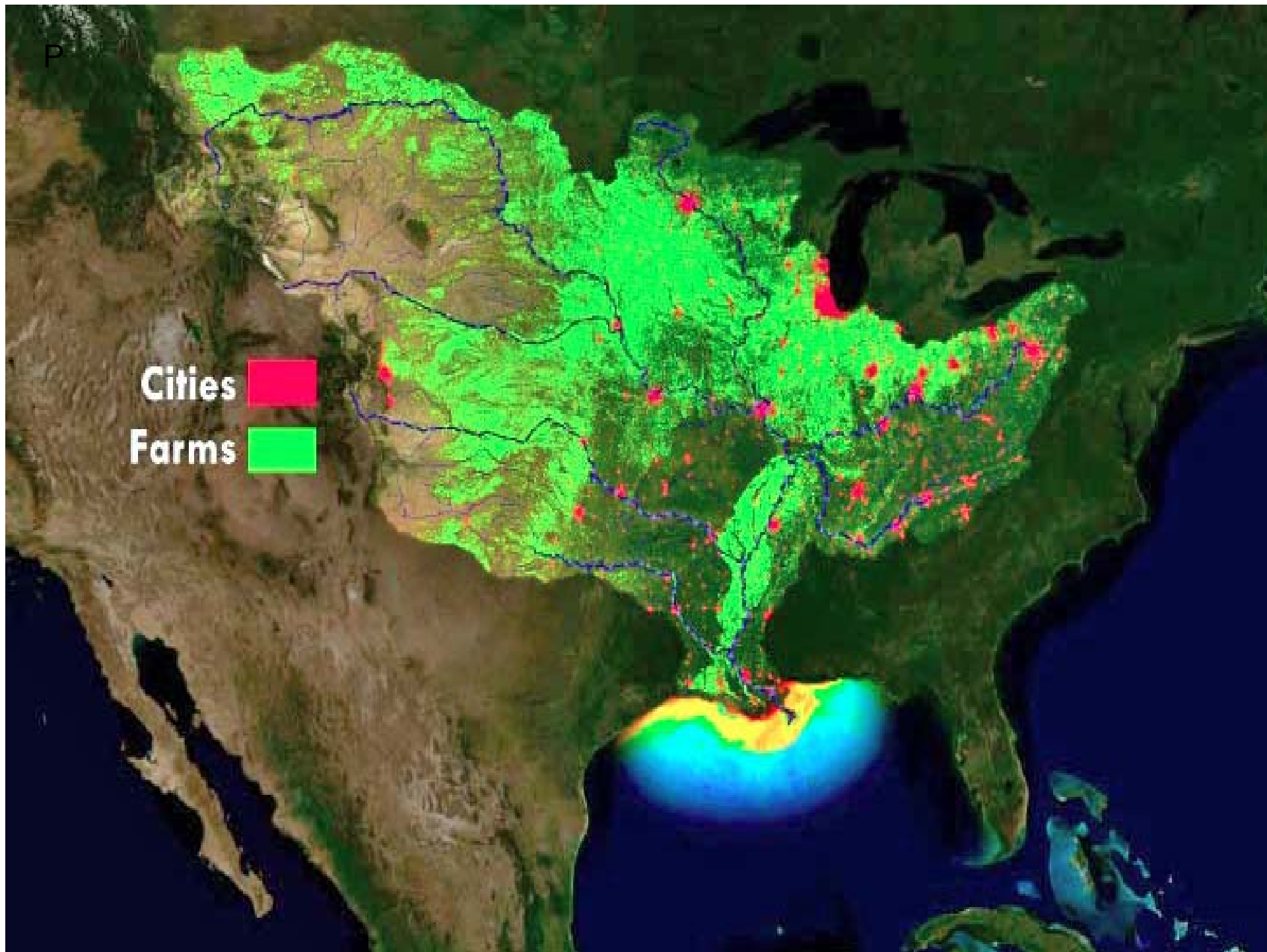
Des Moines Register, May 10, 2013

Record nitrate levels in Raccoon, Des Moines rivers threaten metro-area tap water

Des Moines Water Works turned on the world's largest nitrate-removal facility Friday morning for the first time since 2007 after levels of health-threatening nitrates hit records in both the Des Moines and Raccoon rivers, two of the main drinking-water sources.



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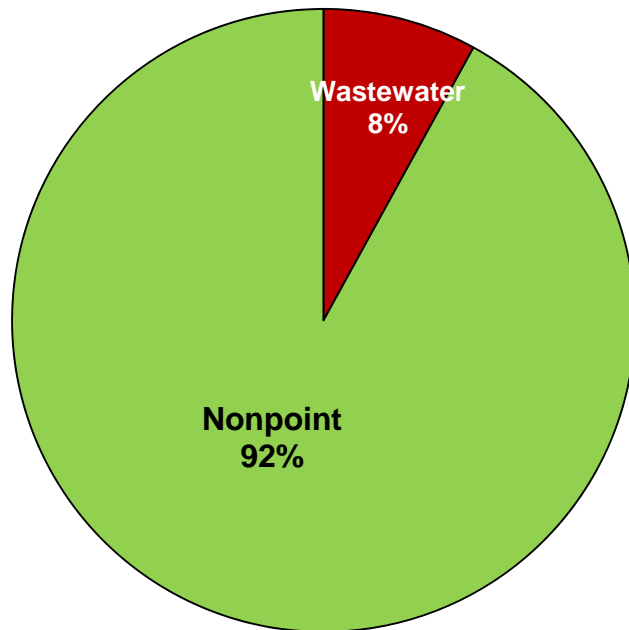
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Mississippi River/Gulf of Mexico Watershed Nutrient Task Force

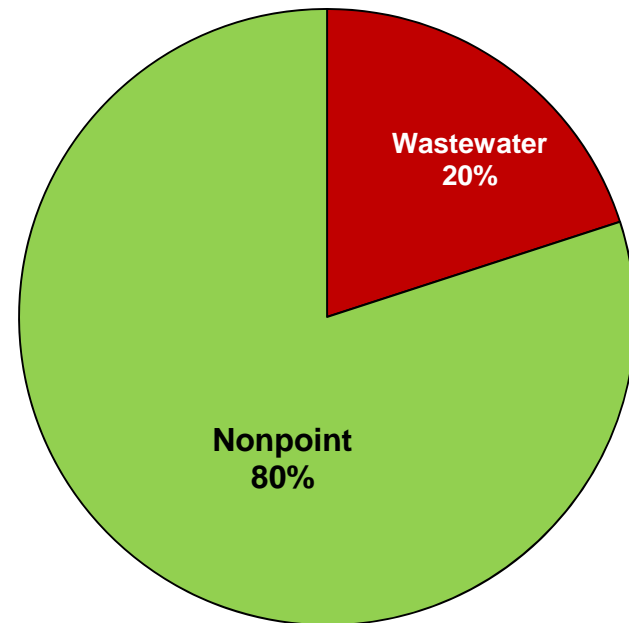
- Reduce nitrogen and phosphorus delivery to the Gulf by 45%

Iowa Nutrient Reduction Strategy

Sources of Nitrogen Entering Iowa Waters



Sources of Phosphorus Entering Iowa Waters



BACTERIA





What is wrong with Big Creek Lake?

Big Creek Lake is impaired for pathogen indicator bacteria counts that exceed the Water Quality Standards (WQS) criteria. This problem impairs recreational use of the lake.

What is causing the problem?

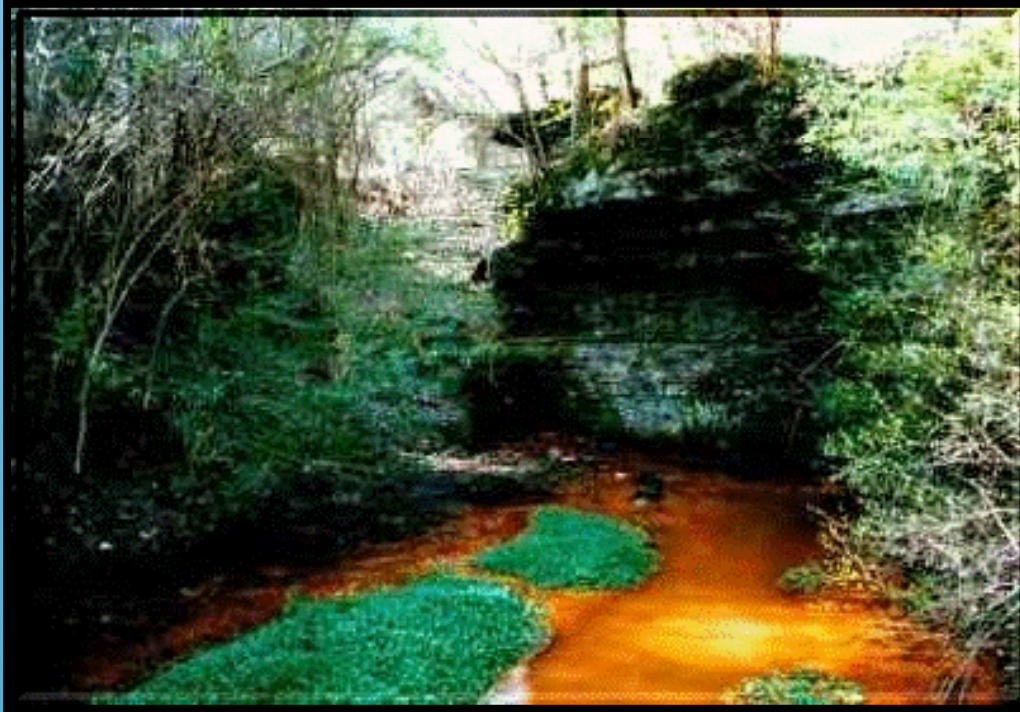
Big Creek Lake is impaired for bacteria at the lake's swimming beach. The bacteria problem, measured by *E. coli* concentration, is caused by wildlife, livestock manure, and poorly functioning septic systems.

What can be done to improve Big Creek Lake?

To improve Big Creek Lake water quality, bacteria loads to the lake must be reduced. A combination of the following management practices can be implemented to achieve these reductions:

- management of geese population and removal of feces from the beach and lawn areas adjacent to the lake,
- restricting cattle from streams,
- adoption of manure application strategies that reduce loss in runoff, and
- inspection, repair, and maintenance of septic systems.

TOXICS

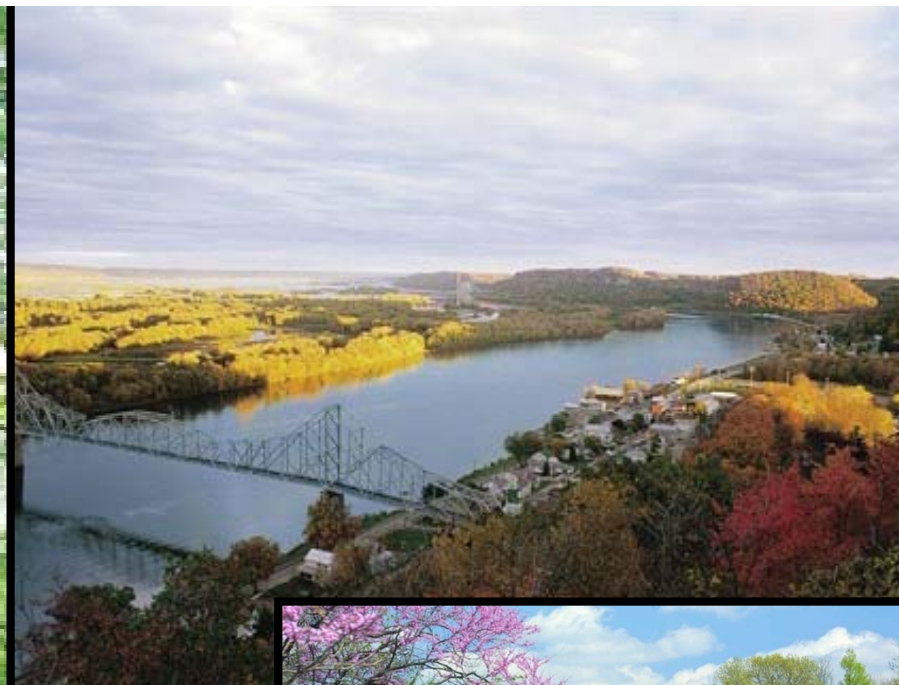
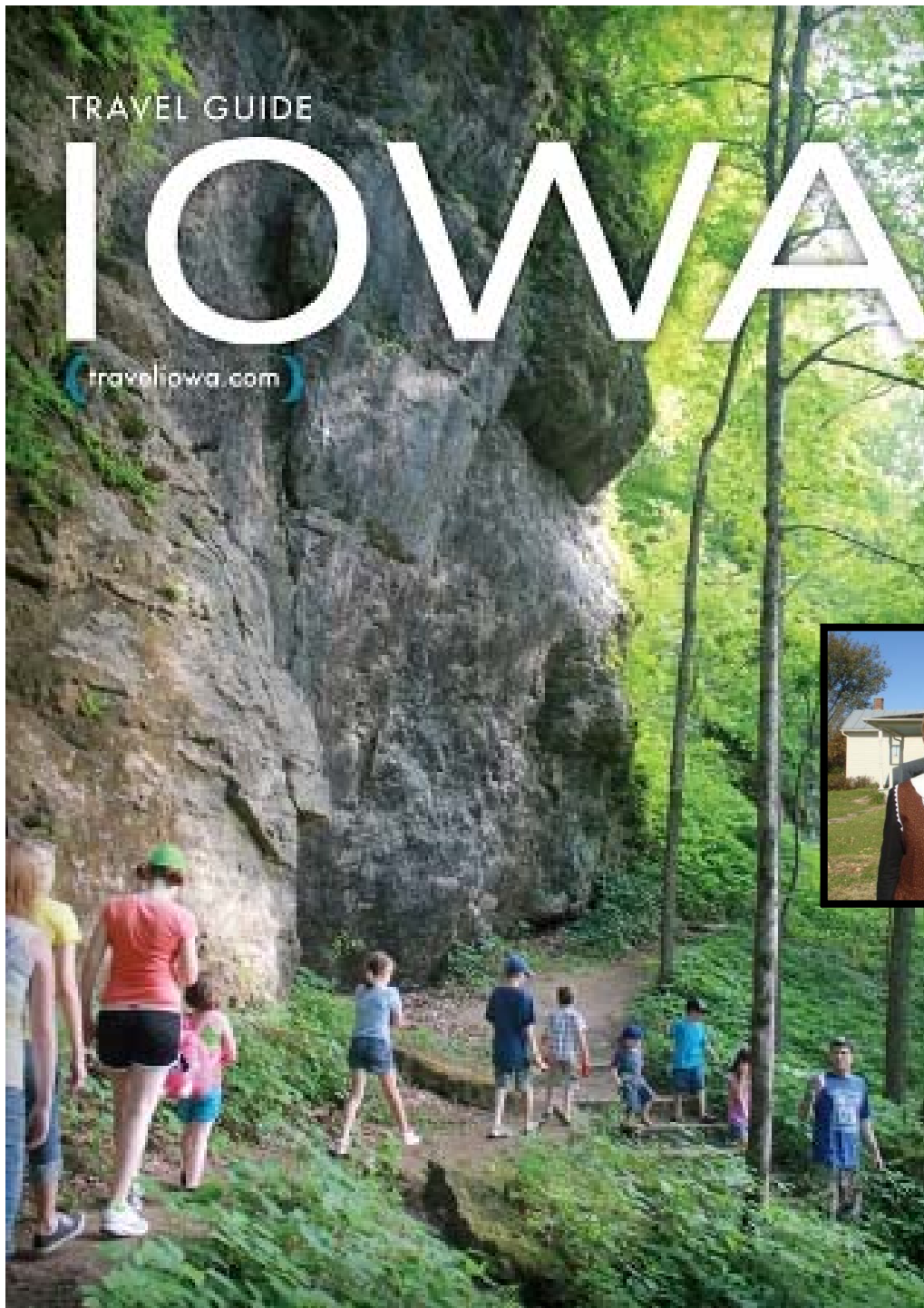


- Oil
- Heavy Metals
- Salt
- Pesticides
- Herbicides

TRAVEL GUIDE

IOWA

traveliowa.com



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1989 - 2002

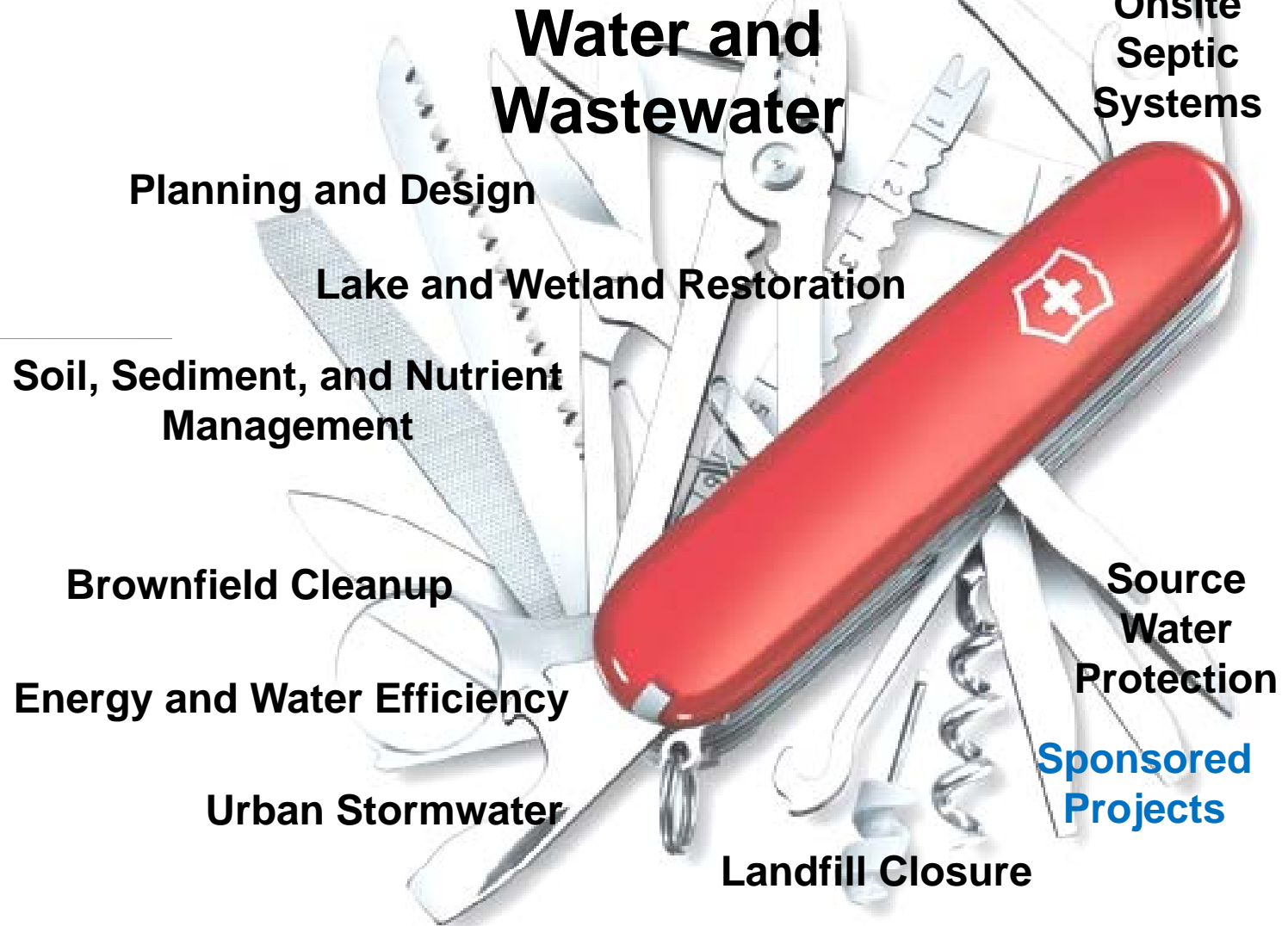
**LOW-INTEREST
LOANS FOR**

**Water and
wastewater
infrastructure
only**



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2003 - Present



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SRF for Nonpoint

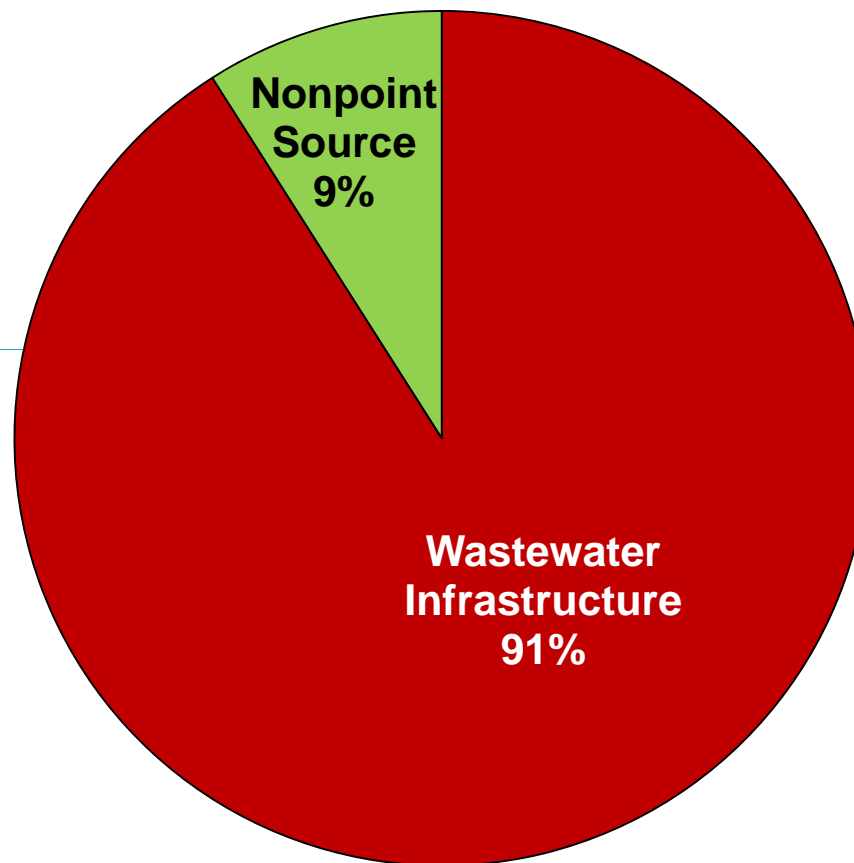


\$148 million since 2003



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Cumulative CWSRF Loans, 1989 - 2012



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- **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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- Iowa Department of Agriculture and Land Stewardship
- Soil and Water Conservation Districts
 - Local Water Protection Program
 - Livestock Water Quality Facilities Program
 - Stormwater Best Management Practices Program



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State Revolving Fund Organizational Structure -- Iowa

Terry Branstad, Iowa Governor

Chuck Gipp,
Dep't of Natural
Resources Director

Bruce Trautman
Deputy Director

Cynthia Axne
Administrative Services
Division Administrator

William Ehm
Environmental Services
Division Administrator

Jennifer Nelson, Chief
Budget and Grants

Shelli Grapp, Chief
Water Quality Bureau

Shirley Christoffersen,
Grant Manager

Patti Cale-Finnegan,
DNR SRF
Coordinator/Team
Leader, General
Nonpoint Source
Program

Adam Schnieders,
Supv., NPDES

Dan Olson
On-Site Wastewater
Program

David Jamison, Iowa
Finance
Authority Director

Lori Beary,
IFA SRF Coordinator

Tracy Scebold,
SRF Finance Officer

Jane Larson, Linked
Deposit
Administrator

Alyson Fleming,
Program
Specialist

Bill Northey, Iowa
Secretary
of Agriculture

Department of
Agriculture and
Land Stewardship

Tony Toigo, Local
Water
Protection, Livestock
Water Quality Facilities
Wayne Petersen, Storm
Water Quality

Anne Pham, Supv.
Water Supply
Operations

Jean Krewson,
Lee Wagner,
Tiffany Wilson
Environmental
Review/Sponsored
Projects

Jeanne Johnson
Administrative
Assistant

Dennis Alt, Supv.
Water Supply
Engineering

Jennifer Bunton,
DWSRF Team
Leader
Michael Anderson,
Bob Campbell,
Daryl Enfield,
Mark Moeller,
AJ Montefusco,
Skipp Slattenow,
Sara Smith,
Taroon Veerab
DWSRF Project
Managers

Satya Chennupati,
Supv. Wastewater
Engineering

Jim Oppelt, CWSRF
Team Leader
Tim Bauer, Larry
Bryant, Jeremy
Enano,
Din Gupta,
Marty Jacobs,
Terry Kirschenman,
Laura Knispel,
Suresh Kumar,
Emy Liu,
Mark Valmore
CWSRF Project
Managers

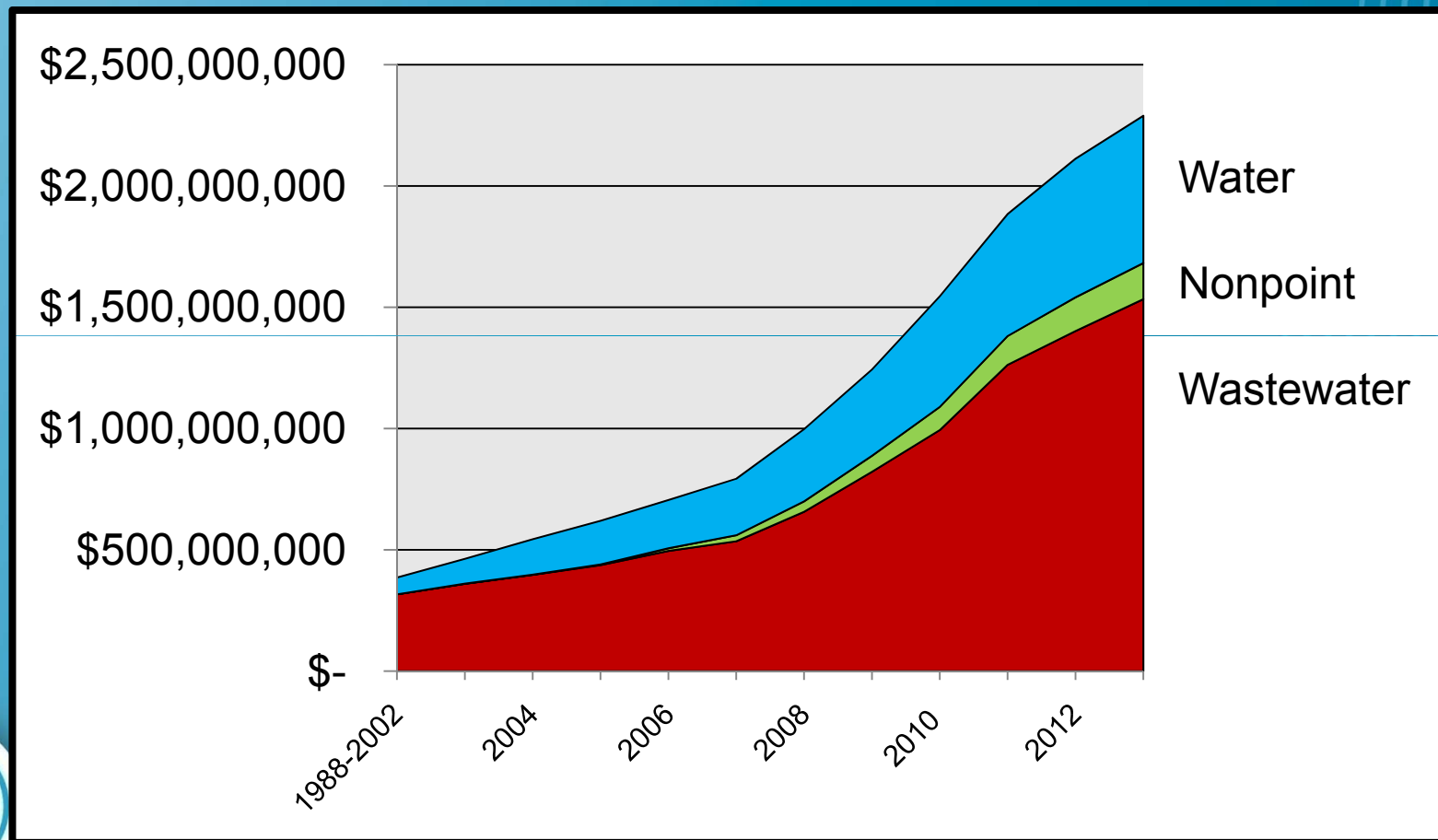
SRF financial
functions

Clean Water SRF

Drinking Water SRF

Clean Water and
Drinking Water SRF

SRF Growth

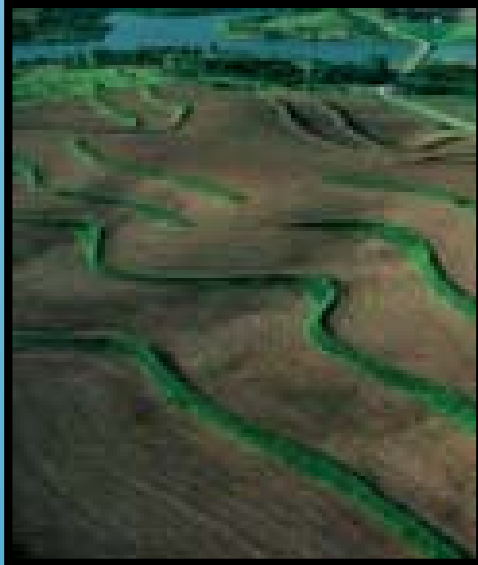


Nonpoint Source



- Loans
- Linked Deposits
- Loan Participations
- Green Projects /
Loan Forgiveness
- Sponsored Projects

Nonpoint Source Linked Deposits



- Project approval by environmental agency
- Financing approval by participating lender – currently have 400 across the state
- SRF deposits funds at 0%, bank cannot charge more than 3% interest
- Can be used with cost-share, EQIP, other grants
- \$62 million currently out in linked deposits



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- **Ag Best Practices**
 - Soil erosion
 - Manure management
 - Non-CAFO size livestock operations
 - IDALS administers through contract with DNR
 - Apply through Soil and Water Conservation Districts



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- LWPP participants had smaller operations but invested more in conservation than farmers that used cost-share only
 - LWQ participants spent an average of \$80,000 or 50% more than livestock producers that used EQIP only
 - “Overall the study results indicate that the loan programs are leading to significant benefits for Iowa’s lands and waters. The loans appear to be complementing traditional conservation programs and helping landowners to get more practices on the landscape more quickly than they would have otherwise.”



*Program Evaluation of the State Revolving
Fund Loan Programs for Agricultural
Best Practices: Executive Summary*

*J. Gordon Arbuckle, Jr.
Mary Swalla Holmes*



This project was supported, in part, by the Iowa Department of Natural Resources.
However, any opinions, findings, conclusions or recommendations expressed herein
are those of the author(s) and do not necessarily reflect the views of IDNR.

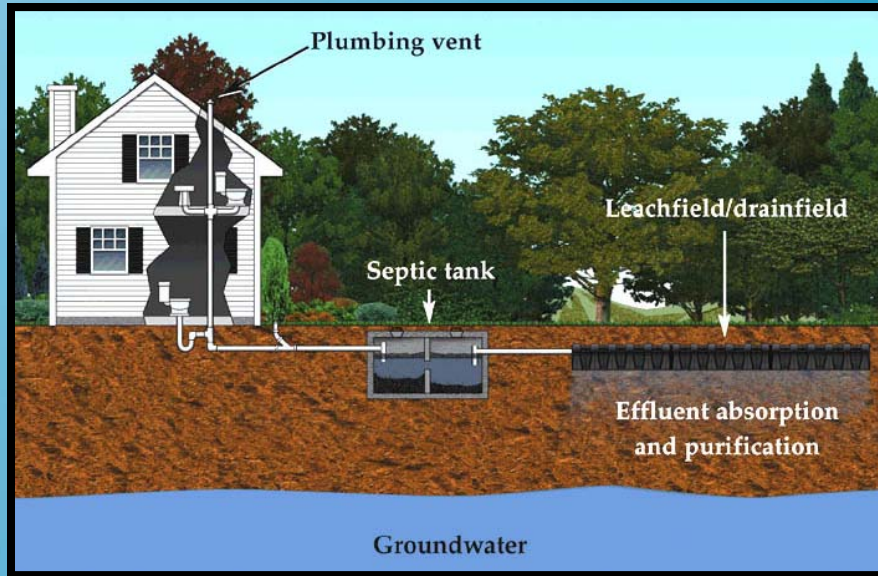
IOWA STATE UNIVERSITY
University Extension



Sociology Technical Report 1030-ES
June 2009

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- **On-Site Wastewater Systems**

- Helps rural homeowners replace inadequate septic systems
- Contact county sanitarian
- All 99 counties participate



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- **Land Quality**
 - Brownfield cleanup
 - Landfill closure
 - Apply to DNR
 - Review by DNR Contaminated Sites staff or Solid Waste engineers



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- **Green Infrastructure – Public**

- Water quality benefit in lowering volume and treating stormwater
- Use Iowa Stormwater Management Manual standards
- P.E. certification
- Review by SWCDs and IDALS Urban Conservationists
- Borrow through IFA –interest rate 1.75%



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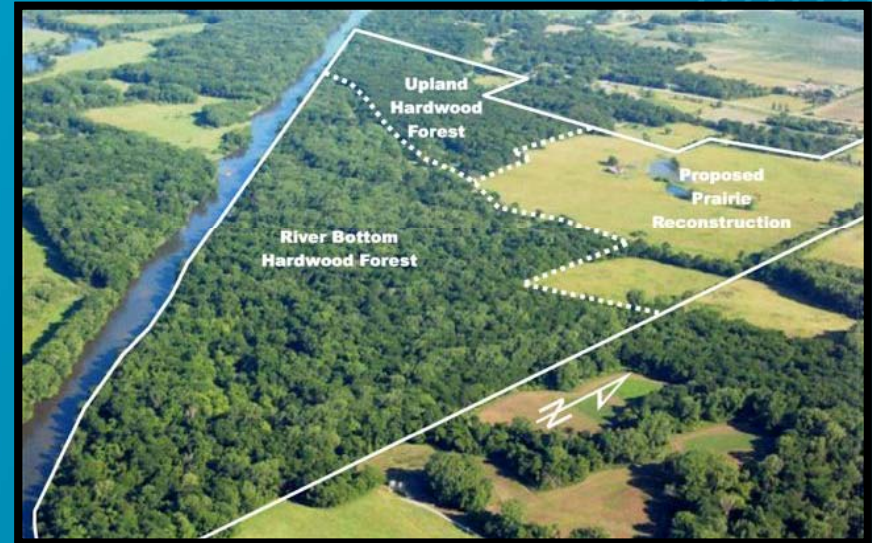
- **Green Infrastructure – Private**

- Apply to local participating lender for financing approval
- Terms up to 20 years
- Linked deposit - Interest rate capped at 3%
- Can fund 100% of project costs or be used with other funds



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- **Land Preservation / Wetland Restoration**
 - Partnerships between Iowa Natural Heritage Foundation, DNR, County Conservation Boards, etc.
 - INHF acquires priority land parcels for water quality protection
 - INHF gets loan from local bank and SRF funds are used to buy a 100% participation in the loan at 0%
 - INHF holds properties for 3-5 years while government agency assembles funding
 - Land turned over to public ownership





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Natural Heritage
Foundation

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EMMET COUNTY: WETLAND COMPLEX DOUBLES AT EAGLE LAKE

This article was released in August 2010

A new expansion to the Eagle Lake Wetland more than doubles the size of the original complex, multiplying benefits for local residents, wildlife and water quality.

The addition is located about four miles north of Estherville in Emmet County. The new property will offer an expansive surrounding habitat of 250 acres to Eagle Lake's original 100 acres. The new area includes a quarter mile of shoreline along Eagle Lake, which will provide improved access to the area and allow greater control of the lake's drainage.

The property was enrolled in the federal Wetland Reserve Program to be maintained for the next two years. The restoration of the area will begin this fall. The restoration efforts enhance wildlife habitat and beaver species should be able to utilize the restored wetland area as

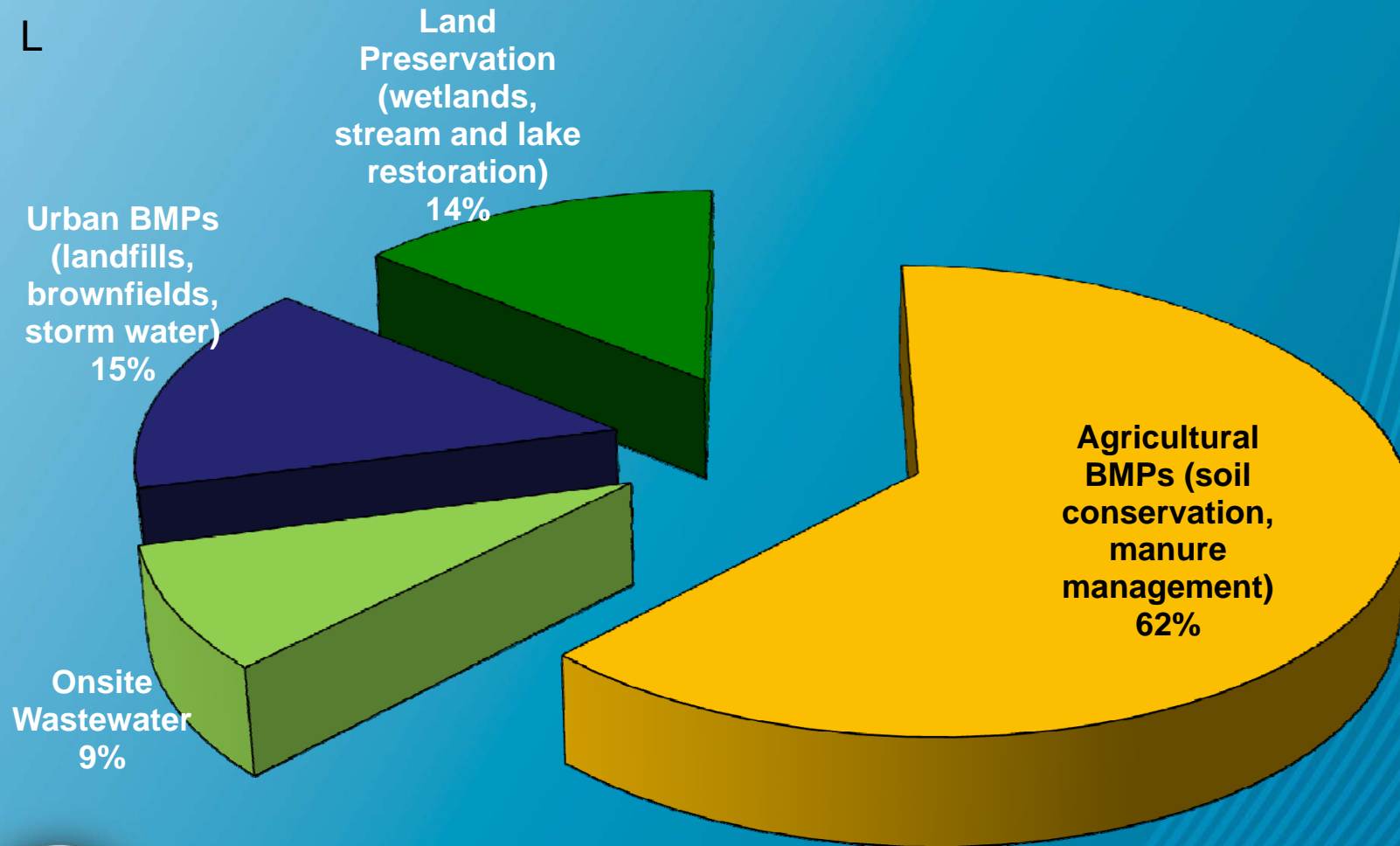


Eagle Lake, Emmet County
Prairie Pothole Joint Venture

www.iowasrf.com



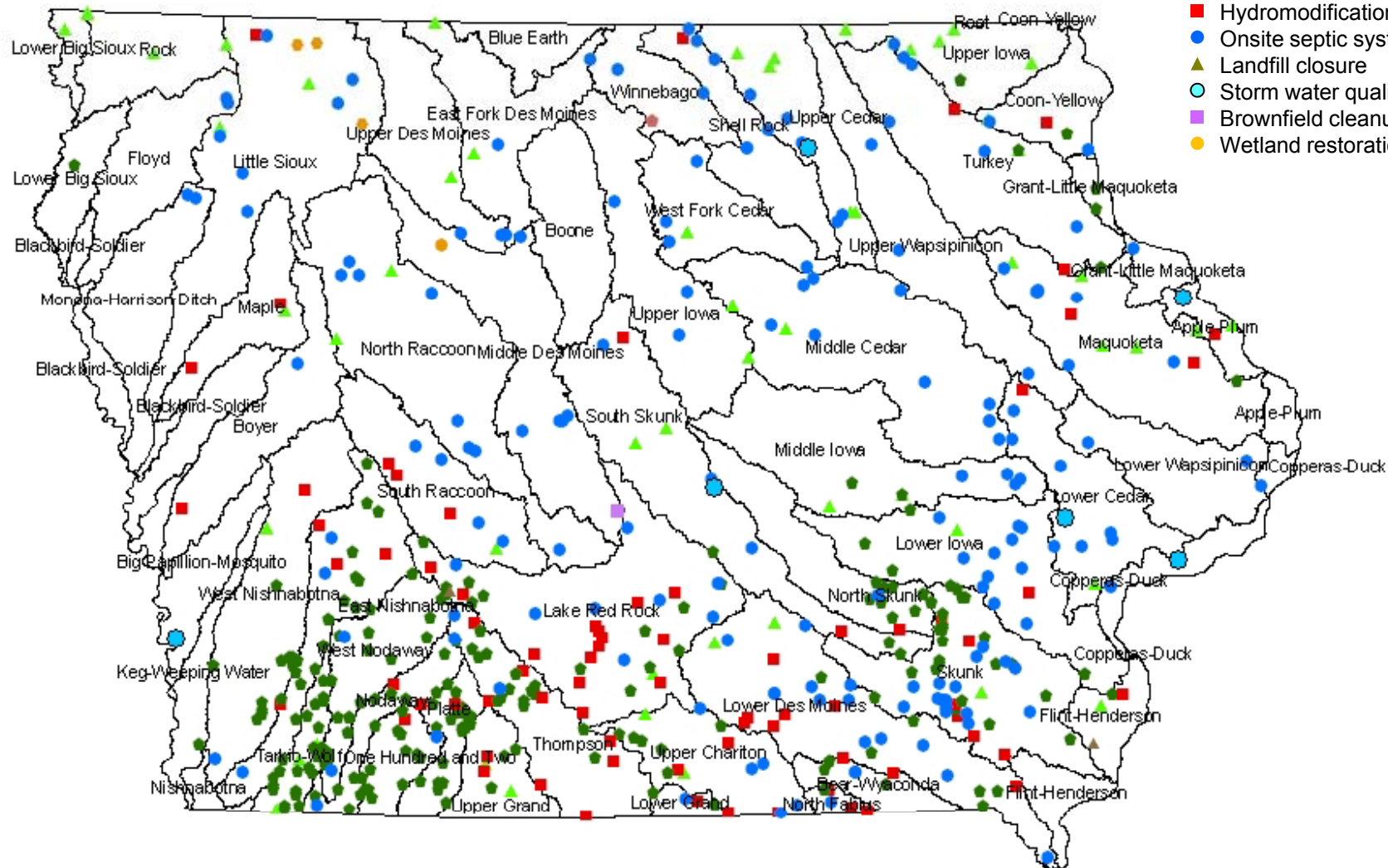
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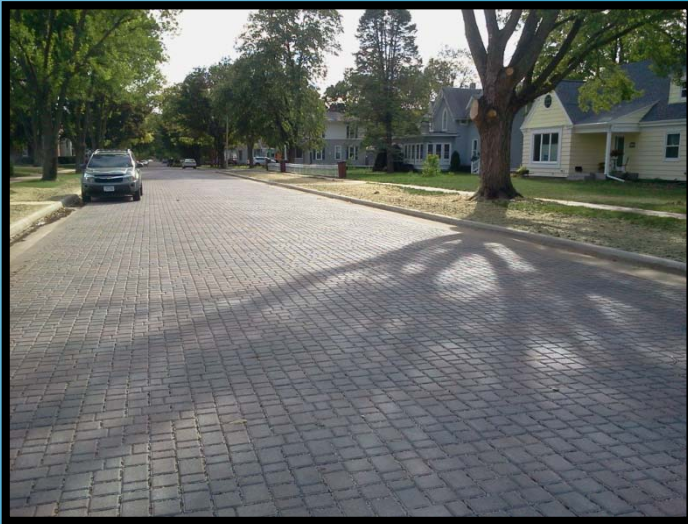
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Approximately 550 nonpoint source loans per fiscal year

- ◆ Soil erosion control
- ▲ Manure management
- Hydromodification
- Onsite septic system
- ▲ Landfill closure
- Storm water quality
- Brownfield cleanup
- Wetland restoration



Green Projects / Loan Forgiveness



- Started with ARRA – funded 3 GI projects
 1. Baxter, \$1.3 million
 2. Charles City, \$3.2 million
 3. Council Bluffs, \$945,000
 - Each received 20% loan forgiveness



- **2010 - 2012 Cap Grants**
 - Solicited for GI projects
 - 30% loan forgiveness
 - Required GPR amount = \$11.4 million
 - Project total = \$17.9 million

1. Dubuque stream daylighting
2. Charles City pervious paving, Phase 2
3. Coralville low impact development
4. Spirit Lake bioretention

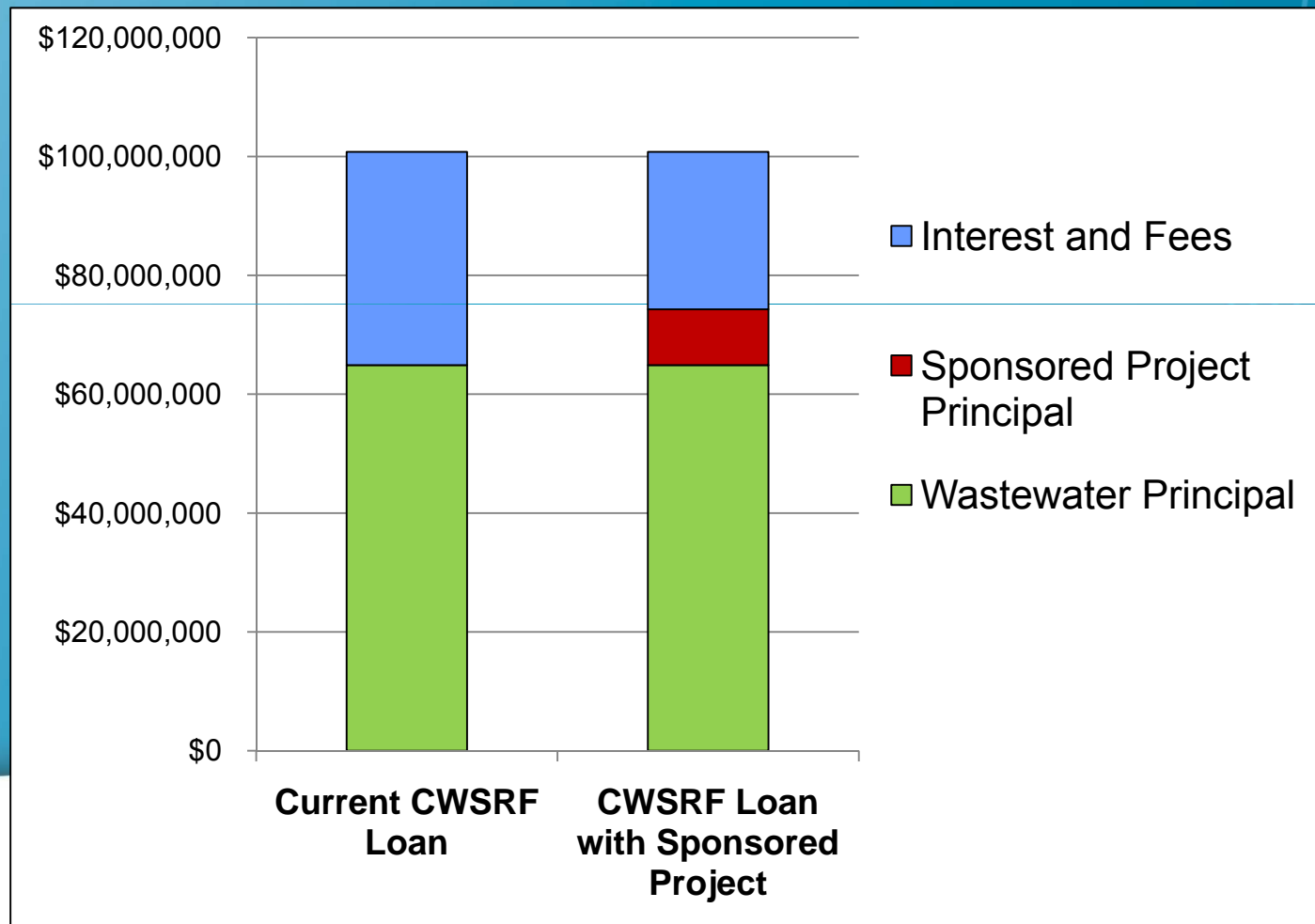


Sponsored Projects



- Inspiration from Ohio
- Needed legislative change to Iowa's municipal finance law
- Pilot project with the City of Dubuque
 - Allowed City to borrow additional \$9.4 million on \$64 million CWSRF loan to install pervious pavers in 73 alleys
 - Reduced interest rate

Dubuque Pilot Project



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Application Process 2013

- All applicants required to attend an application workshop
- 83 wastewater utilities were represented
- Not all eligible to apply due to wastewater loan status (principal repayment schedule)
- Set aside \$15 million in foregone interest
- Competitive process – must have watershed approach and good plan



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Application Deadline July 19

http://www.iowasrf.com/about_srf/water-resource-restoration-sponsored-projects/



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Water Resource Restoration Sponsored Projects

How to Apply

The application packet is now available for Water Resource Restoration Sponsored Projects. Application deadline is July 19, 2013, 4:00 p.m.

[Application \(Word\)](#)

[Application \(PDF\)](#)

Who Can Apply

Only wastewater utilities that attended or were represented at one of the required application workshops will be eligible to apply. The list of potential applicants includes all attendees, with the current status of their wastewater loan. For utilities with existing loans, those attendees whose principal repayments begin June 2013 or who have already begun repayment are not eligible.

[List of Potential Applicants](#) (updated 5/6/2013)

Legislation Passed to Allow Parking Lots

[Senate File 388](#) was approved by the Iowa General Assembly with zero "no" votes and signed by the Governor on April 24, 2013. Since the effective date of this legislation is July 1, 2013, best management practices involving parking lots may be included in sponsored project applications submitted by July 19, 2013.

More Information

For more information

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