

US EPA ARCHIVE DOCUMENT

Water Quality and Public Policy

**Local Residents Can.....
and Do Make a Difference**

Grassroots and Resident-led Watershed Organizations

Two Success Stories:

Rathbun Land and Water Alliance

Lake Rathbun Watershed in Southern Iowa

Squaw Creek Watershed Council

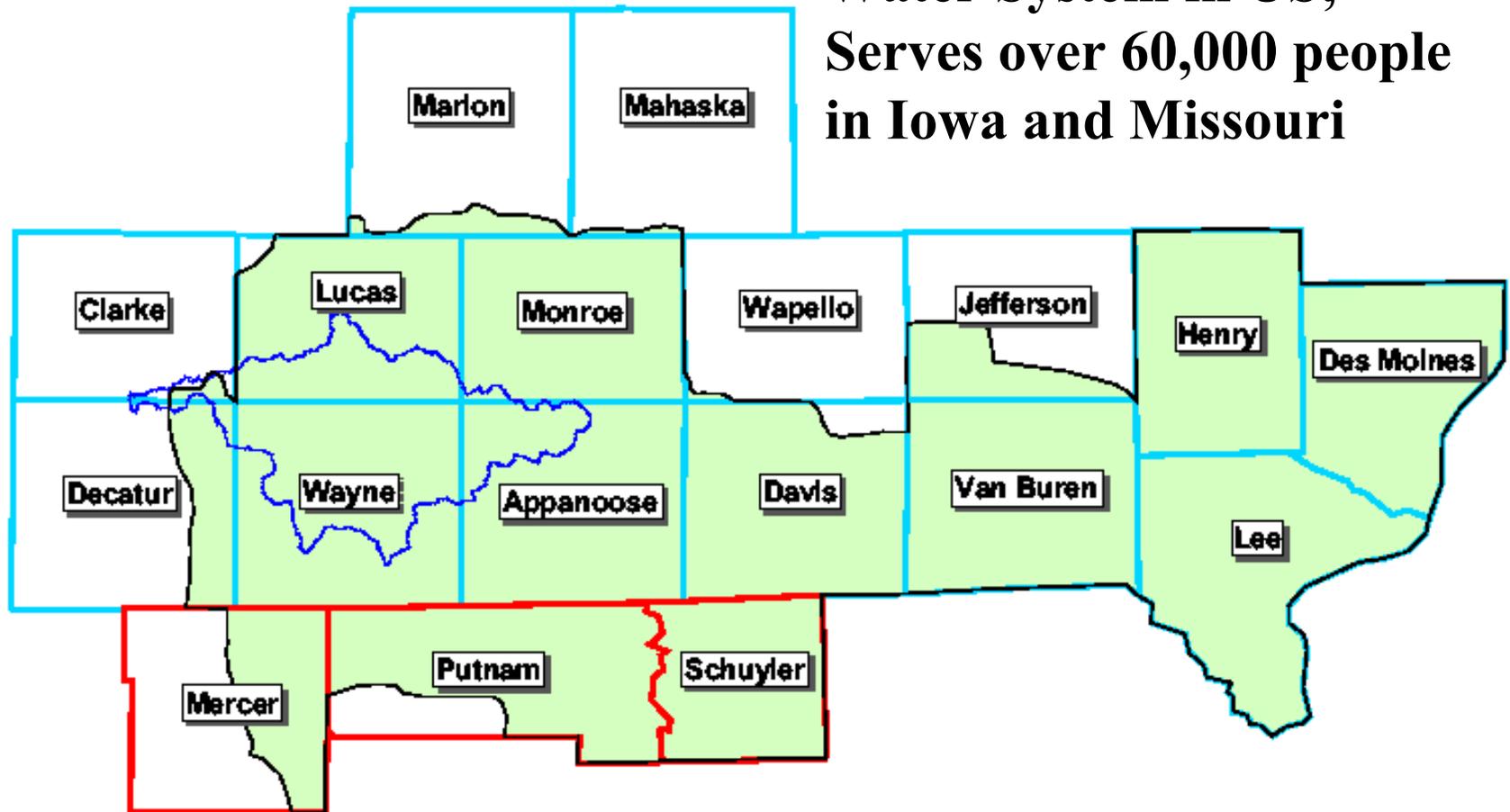
Squaw Creek Watershed in Central Iowa



Lake Rathbun: 11,000 acres of water; 375,000 acre watershed;
most valuable water resource in Southern Iowa.

Rathbun Regional Water Association

One of the Largest Rural Water Systems in US;
Serves over 60,000 people
in Iowa and Missouri



LEGEND

- Rathbun Lake Watershed Boundary
- Missouri Counties
- Iowa Counties
- Rural Area Served by Rathbun Regional Water Association



REGIONAL LOCATION

Rathbun Land and Water Alliance

- Lake and RRWA represent \$300M+ Federal Investment
- Size of Watershed Deterred Single Agency Programs
- Watershed Residents also Water Users
- Locally-lead Coalition Formed in 1997
- Jump Start with DOE Funding for Energy Crop Environmental Impacts.
- Significant Investment in GIS by the RC&D and RRWA

RATHBUN LAKE WATERSHED
14 Digit Hydrologic Units
South Central Iowa

CLARKE
 LUCAS
 MONROE
 DECATUR
 APPANOOSE
 WAYNE



LEGEND

- County Boundary
- USGS Water Quality Monitoring Points
- USACE Water Quality Monitoring Points
- Streams
- 11 Digit Hydrologic Unit Boundary
- 14 Digit Hydrologic Unit (W/Acres)

WATERSHED NOTES

Rathbun Lake Watershed = 354,062 Acres
 11 Digit Hydrologic Units
 Number = 4
 Average Size = 88,515 Acres
 Min - Max = 8,705 - 151,811 Acres
 14 Digit Hydrologic Units
 Number = 61
 Average Size = 5,804 Acres
 Min - Max = 2,580 - 16,430 Acres



Source: Golden Hills Resource Conservation and Development
 Chariton Valley Resource Conservation & Development
 USGS National Resource Conservation Service
 Iowa Department of Natural Resources NRCS
 United States Geological Survey
 United States Army Corps of Engineers



GIS is Key to Watershed Assessment.

- Professional Monitoring Program Established
- Information and Education Program Initiated
- Major Wetland Construction Projects
- State Coordinator provided and EPA 319 Projects in Sub-watersheds
- County Bridge replacement with detention structures to Stop Sediment and Nutrients
- Creation of Regional Authority by Iowa Legislature
- Annual State Appropriations of \$150,000+ to be Used Locally to Leverage Other Funds



Rathbun

Land and Water Alliance

Alliance Partners

Rathbun Regional Water Assoc.

Private Landowners

USDA - NRCS

Iowa DNR

US Geological Survey

U.S. Army Corps of Engineers

City of Corydon

**Lucas, Wayne, Monroe, Appanoose, Decatur & Clarke Counties
and SWCDs**

Chariton Valley RC&D

Iowa Farm Bureau

Iowa State University

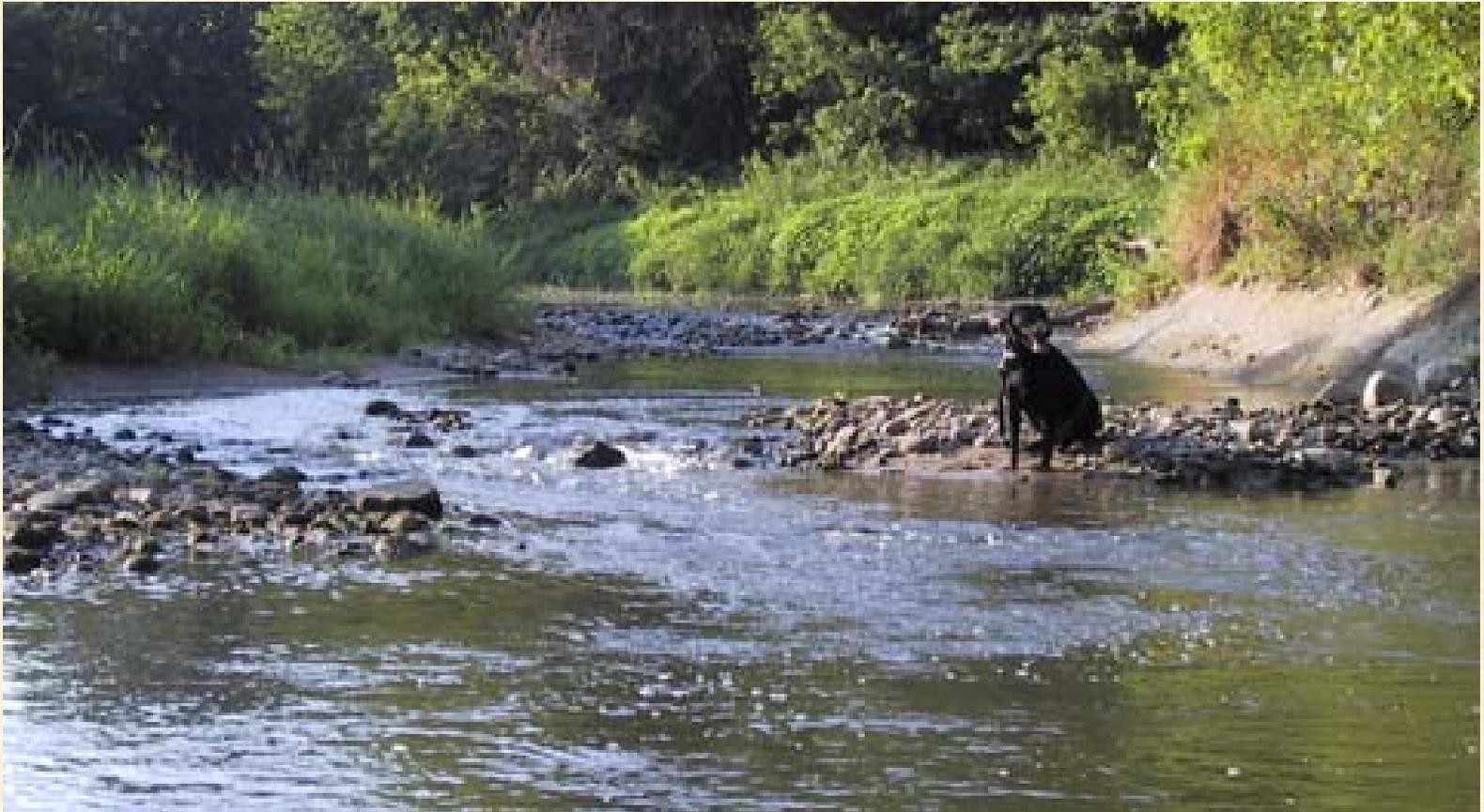
IDALS DSC

U.S. EPA

Rolling Hills FS

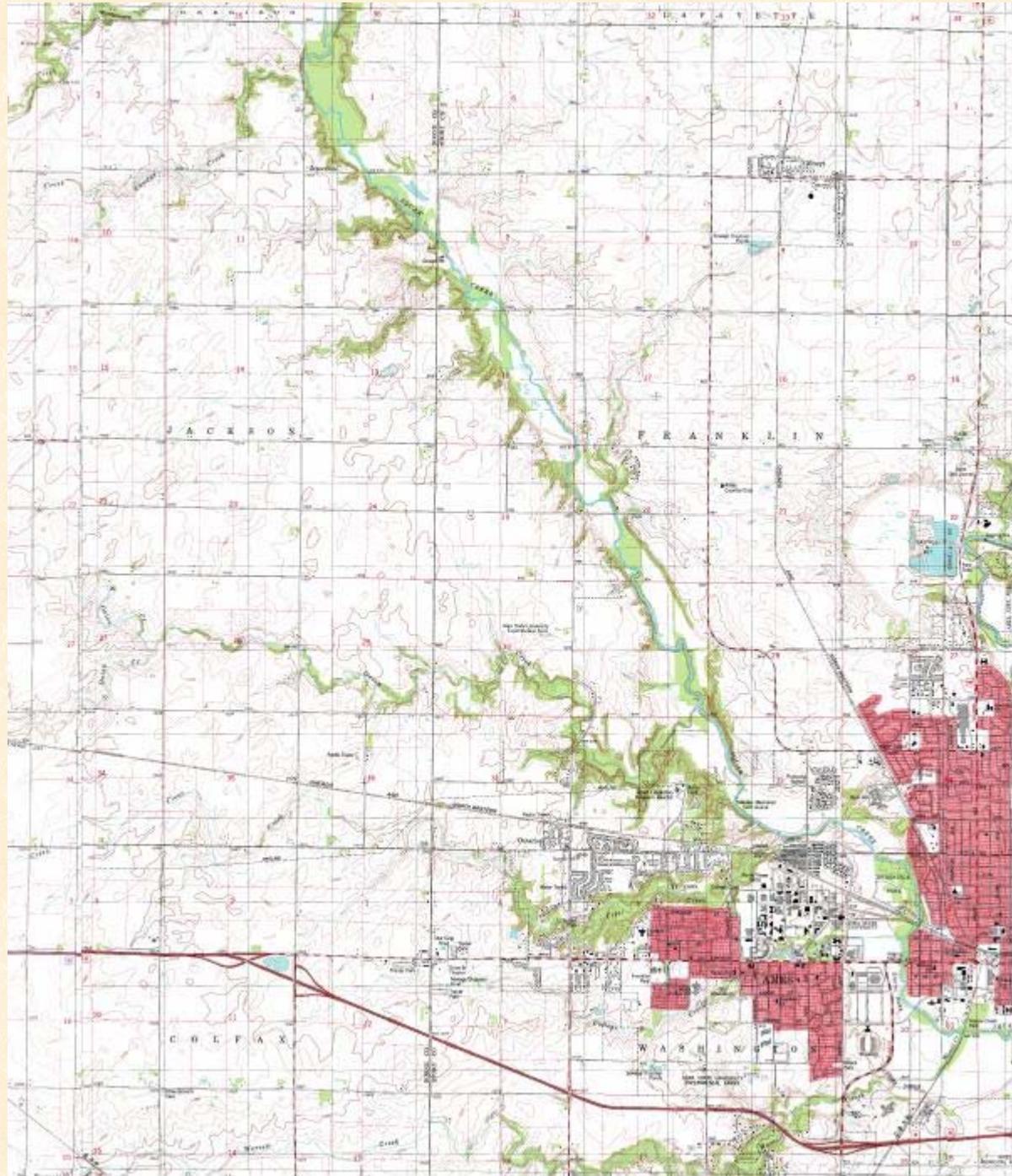
Area Schools

Squaw Creek Watershed



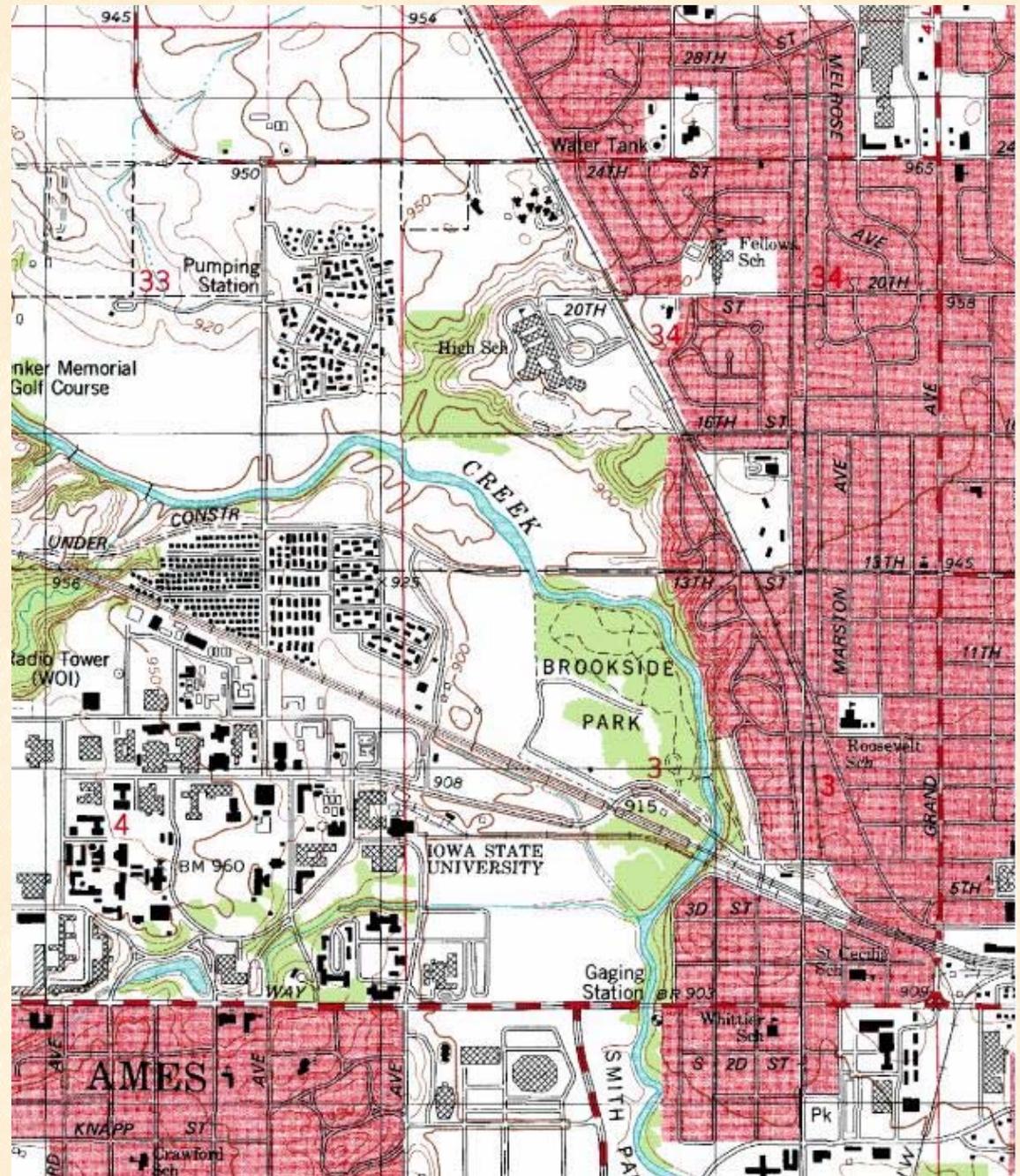
Watershed Overview

- **150,000+ Acres**
- **Row Crop and Urban Land Use**
- **Significantly Altered Watershed Hydrology by Tile**
- **Lack of Rural Interest in Stream Quality**



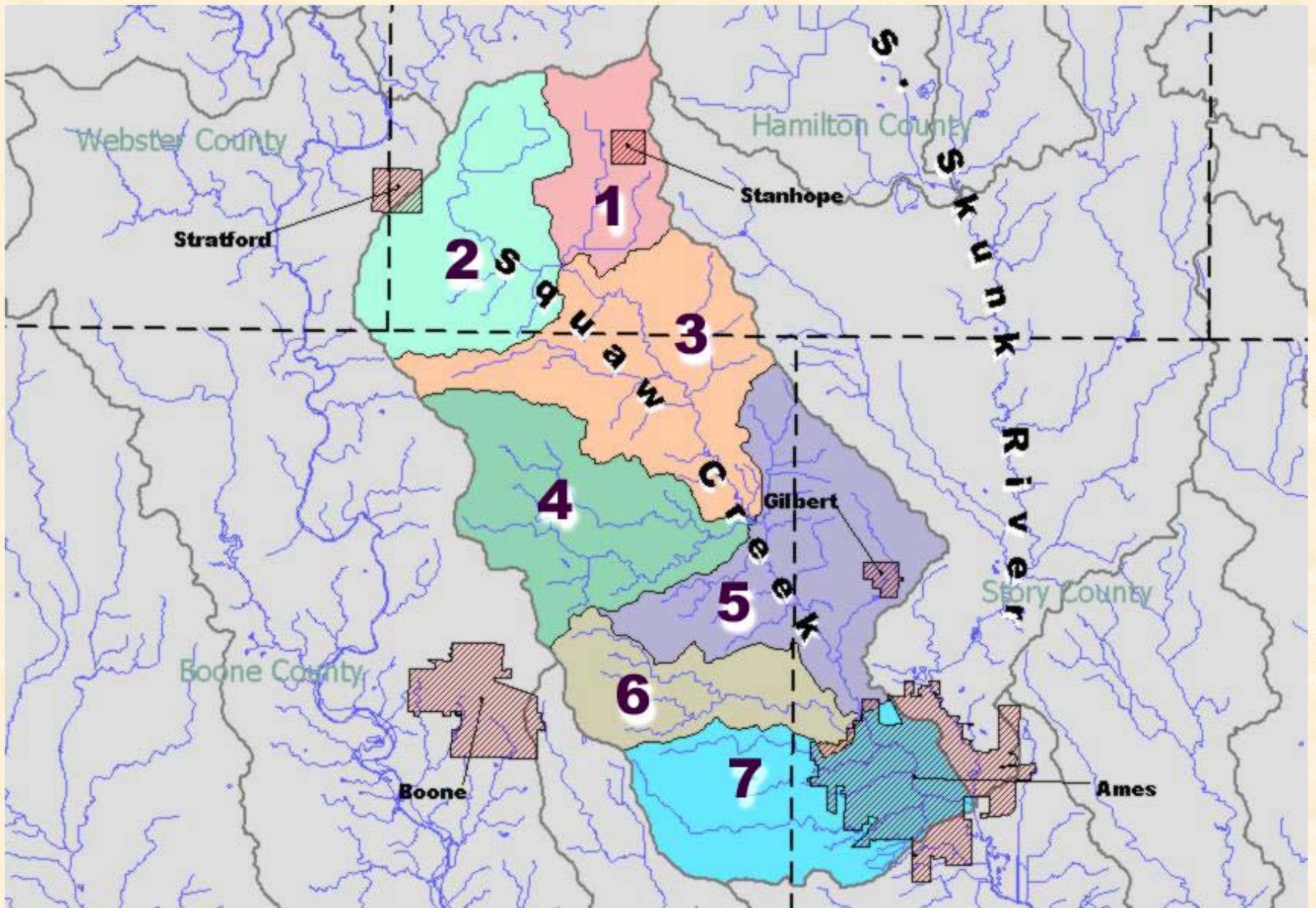
Urban Issues

- **Flooding**
- **Development**
- **Iowa State as a Partner and a Contributor**



Squaw Creek Watershed Council Formation, Development and Activities

- **Local Concerns and Individual Leadership Leads to March 2001 Conference at ISU**
- **Informal Council Forms and Meets Through 2001**
- **Identifies Mission, Objectives and Plans Actions**
- **More Formal Structure Emerges in 2002 - Incorporation Pending**



Mission

The council's mission is to provide leadership in protecting and improving the environmental health of the Squaw Creek Watershed through cooperative involvement of urban and rural residents by raising public awareness and promoting educational programs and targeted actions.

Objectives

Restore a more natural hydrology to Squaw Creek to reduce flooding increase base flow.

Reduce the level of nutrients and other contaminants in the water.

Activities and Accomplishments

- **Council Created Brochure**
- **Clean up days in Ames on Squaw Creek**
- **Recruitment and Coordination of IOWATER Monitors**
- **NRCS Assistance for GIS based Watershed Assessment & Plan**
- **Web-based Integration of GIS data and Monitoring Data**
- **Leopold Center Grant to Assess Resident Attitudes**
- **Pending EPA Proposal for additional I&E activities**
- **Partial Funding Through EPA 319 for RC&D I&E Position**
- **Rural Outreach - What can we offer? Increased Funding, Involve in Planning, Advocate Equity in Regulations.**

Similar Project Development

- Emerging Concerns - Impact populations of ~60,000
- Larger Watersheds - Not typically Resident-led
- Organizational Developments
- Strategic Plan Developments
- GIS and Water Quality Monitoring
- Water-user/Land-user Opinion Surveys
- Information and Education Outreach
- Leveraging of Programs and Partnerships
- Close Facilitation and Support Through the RC&D and Others

Variations in Project Drivers and Leadership

- Drinking Water Supply versus Urban Stream
- Rathbun Landowners are Water Users
- Squaw Creek - Stream Flow and Aesthetics
- Rathbun - Rural Leadership and Local governments.
- Squaw Creek Urban Residents Provide Initial Leadership to Approach and Involve Local Governments

Organize

- Informal Council
- Not for Profit Corporation
- Iowa Ch. 28E Organization
- Legislated Authority

Objectify and Educate

- What's Wrong and What Can we Do?
- Use of GIS, Monitoring
- Lay Explanation of Problems and Solutions
- Ecology, Economics and Externalities

Partnerships and Actions

- Hands on Activities
- Identify Others with Mutual Interests and Advantages
- Contact and Engage State and Federal Agencies
- Watershed Plan That Merges Technical w/Political
- Grants, Programs and Leveraging

Credibility and Political Capital

- Based on the First Few Steps
- Advocacy versus Adversarial
- Balanced Rural-Urban Approach

Changes and Impacts

- Inevitable Results of the Previous Actions

Conclusions and Editorial Observations

- Many citizens interested in water quality do not understand the technical and political structures, expectations, “rules” and turf already in place. These realities can deter both initial & long term participation.
- Coordination and objective support of emerging local watershed groups can result in better leadership and structure, realistic expectations and more effective projects.
- Local residents can and do provide the needed focus and balance to bring political support, voluntary cooperation, technical solutions and ultimately better watershed Management and water quality.