

# Practice-based Survey Results Water Quality Issues in Iowa

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ANR Lunch and Learn

# Iowa Waters

## **A limited but valuable resource**

less than one percent of the state's land area is covered with water

71,665 miles of streams and rivers

more than 161,000 acres of lakes, ponds and wetlands

Iowans use water for drinking, recreation and industries

## **Problems**

April 10, 2007

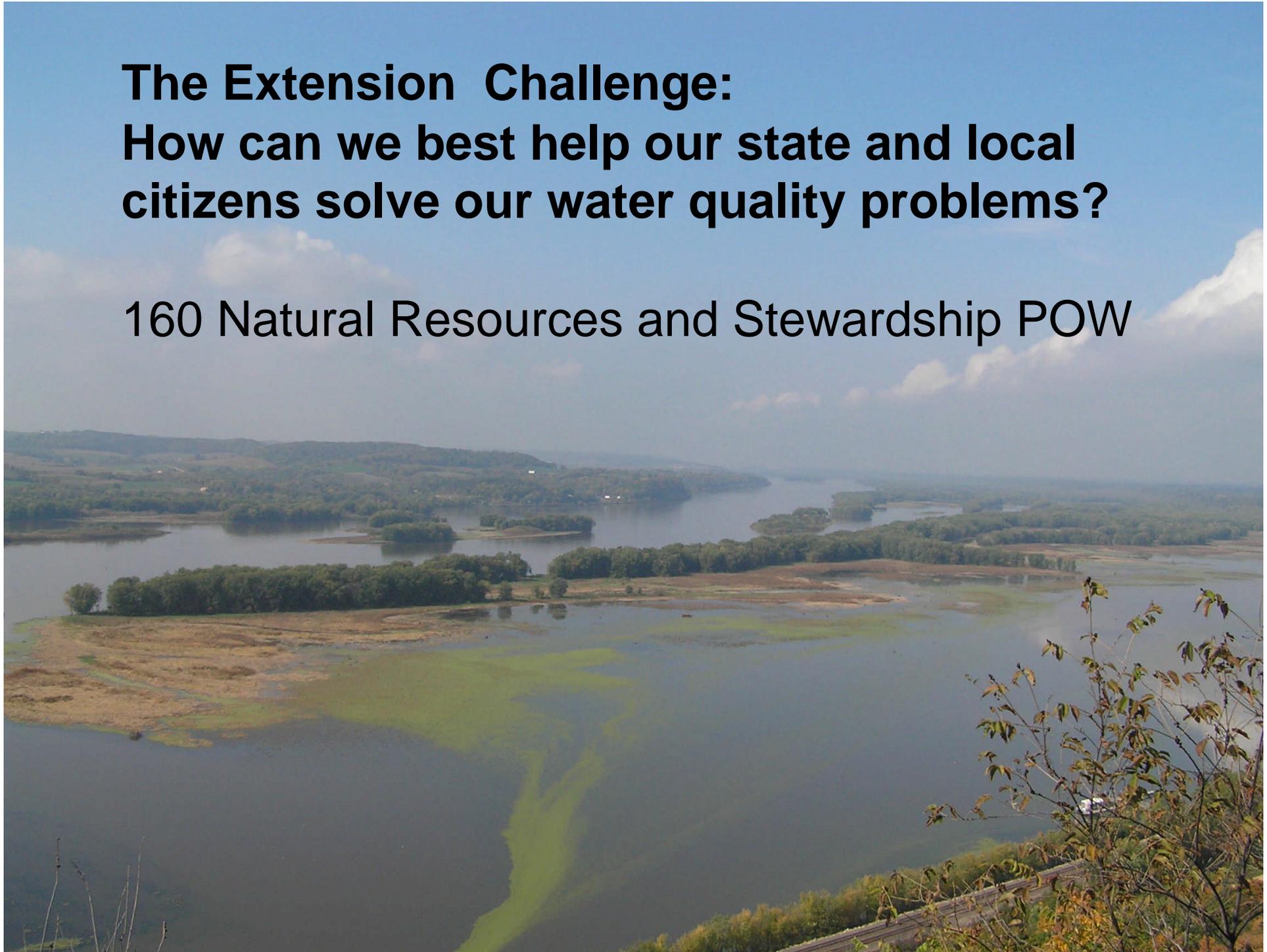
Testing against a list containing 104 separate contaminants the State Hygienic Laboratory found that virtually all [97 percent] of the marshlands sampled contained measurable levels of herbicides, pesticides, or other chemical contaminants.

Iowa's 2004 Section 303(d) list proposed **209 impaired water bodies** to EPA



**The Extension Challenge:  
How can we best help our state and local  
citizens solve our water quality problems?**

160 Natural Resources and Stewardship POW



# Performance Goals for Extension Water Quality Programming

1. Address water quality through programming targeted to producers, citizens, public health officials, and regulators
2. Increase understanding of water quality issues and problems associated with poor stewardship practices



3. Change the attitudes and practices of how Iowans use and protect natural resources



## **Extension Water Quality Impact/Outcome Indicators**

**161 Adopt and implement conservation practices**

**162 Nitrate reduction from subsurface drainage**

**163 Water quality**

**164 Use of nutrient management indices & tools**

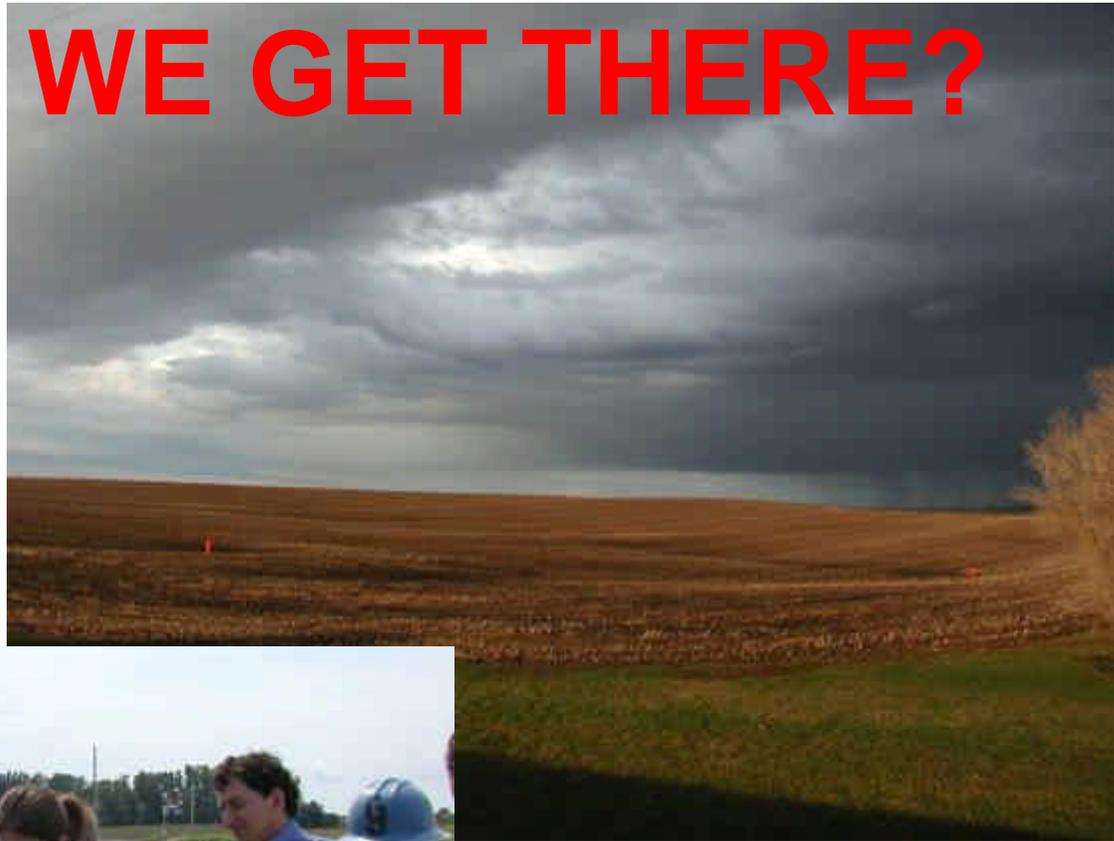
**166 Woodland, wildlife, fisheries,  
and community**

**resource conservation**

**168 Water quantity**



# HOW DO WE GET THERE?





The goal of the Heartland Regional Water Coordination Initiative is to build institutional partnerships and increase the capacity of citizens, landowners, agencies, and community leaders to better address water quality concerns

[www.heartlandwq.iastate.edu](http://www.heartlandwq.iastate.edu)



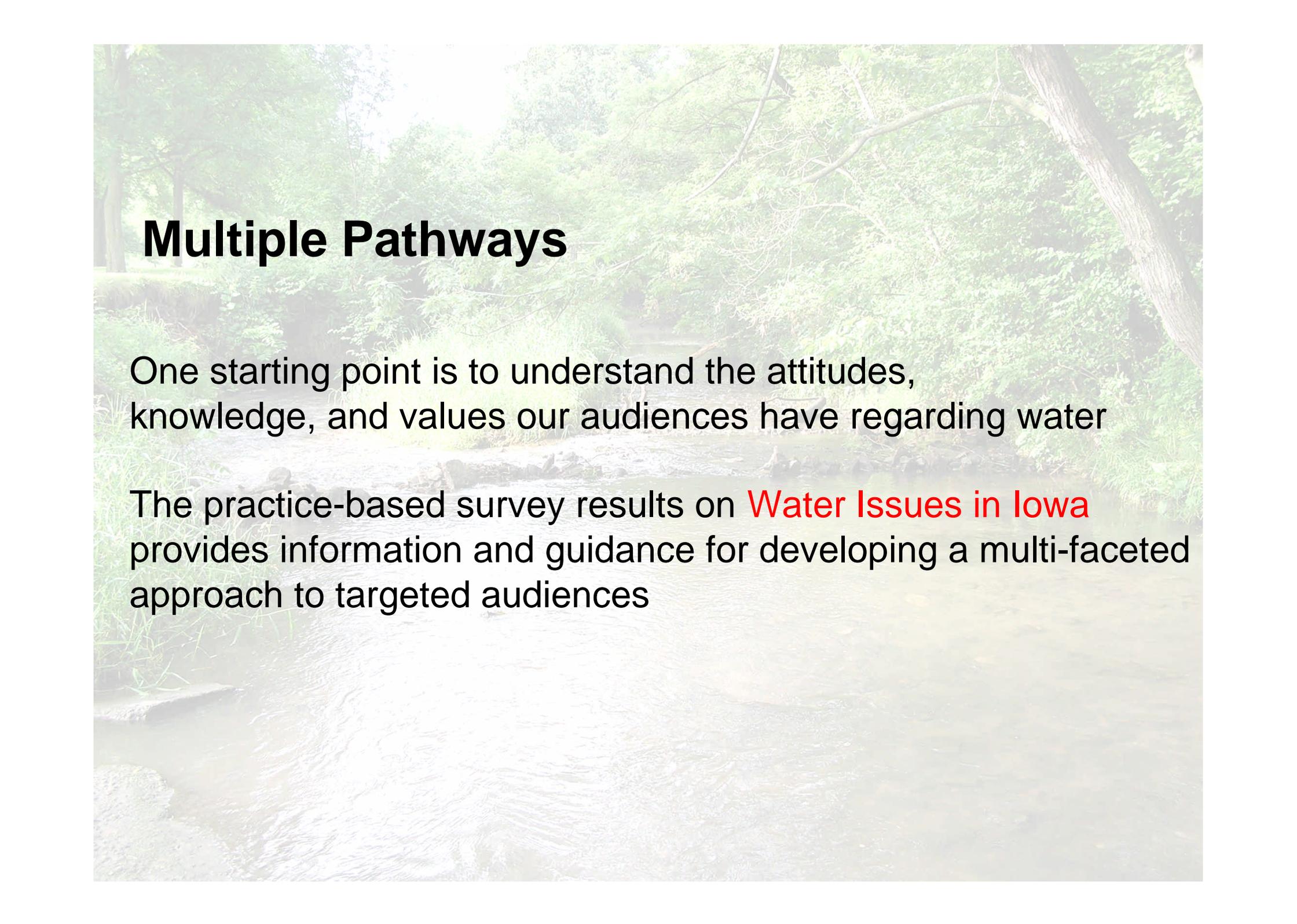
**SP 290**

**Available Extension on-line store  
Color currently available  
Black and white available soon**

**<https://www.extension.iastate.edu/store/ListItems.aspx?Keyword=water%20issues>**

**Single hard color copy/CD  
email Lois before April 20  
lwmorton@iastate.edu**

**Water Issues in Iowa:  
A Survey of Public Perceptions and Attitude About Water**



## Multiple Pathways

One starting point is to understand the attitudes, knowledge, and values our audiences have regarding water

The practice-based survey results on **Water Issues in Iowa** provides information and guidance for developing a multi-faceted approach to targeted audiences

## Survey as a cloudy mirror

**Not just a survey  
but a tool for sharing with our audiences,  
a starting place for public dialogue  
and a motivation to act**

For Extension to provide “support” to farmers, landowners, and other citizens of our watersheds we must help them interrupt daily routine activities and recognize there is a problem... then they will be ready to discuss and act

To do this **we must know them and what they think, we must understand the mental maps they have and how they make sense of the world around them**



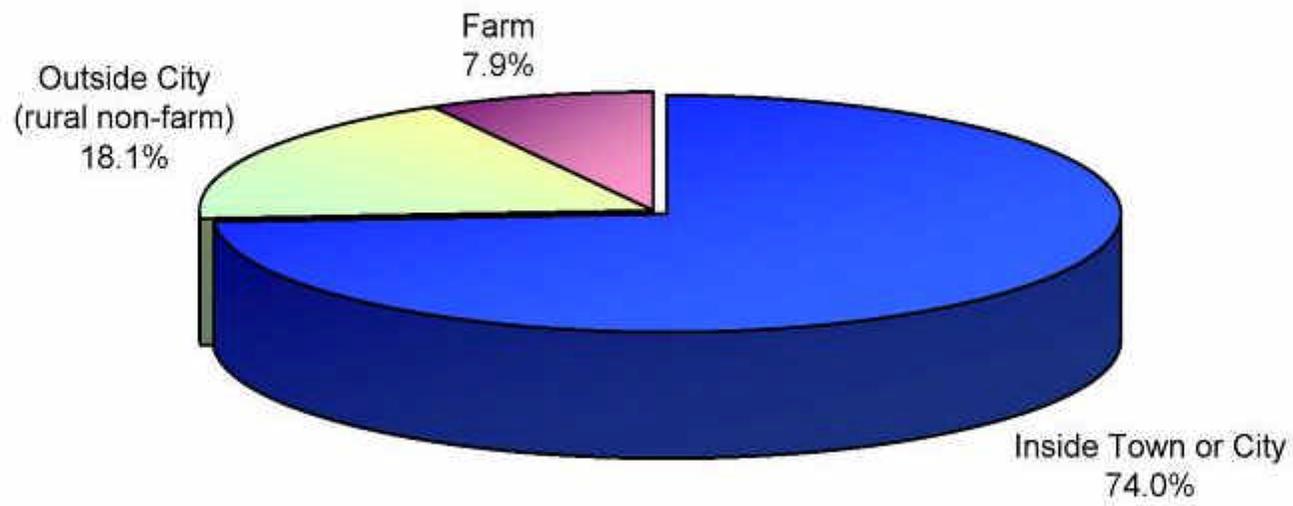
Water Issues in Iowa:  
A Survey of Public Perceptions and Attitudes about Water

Random sample

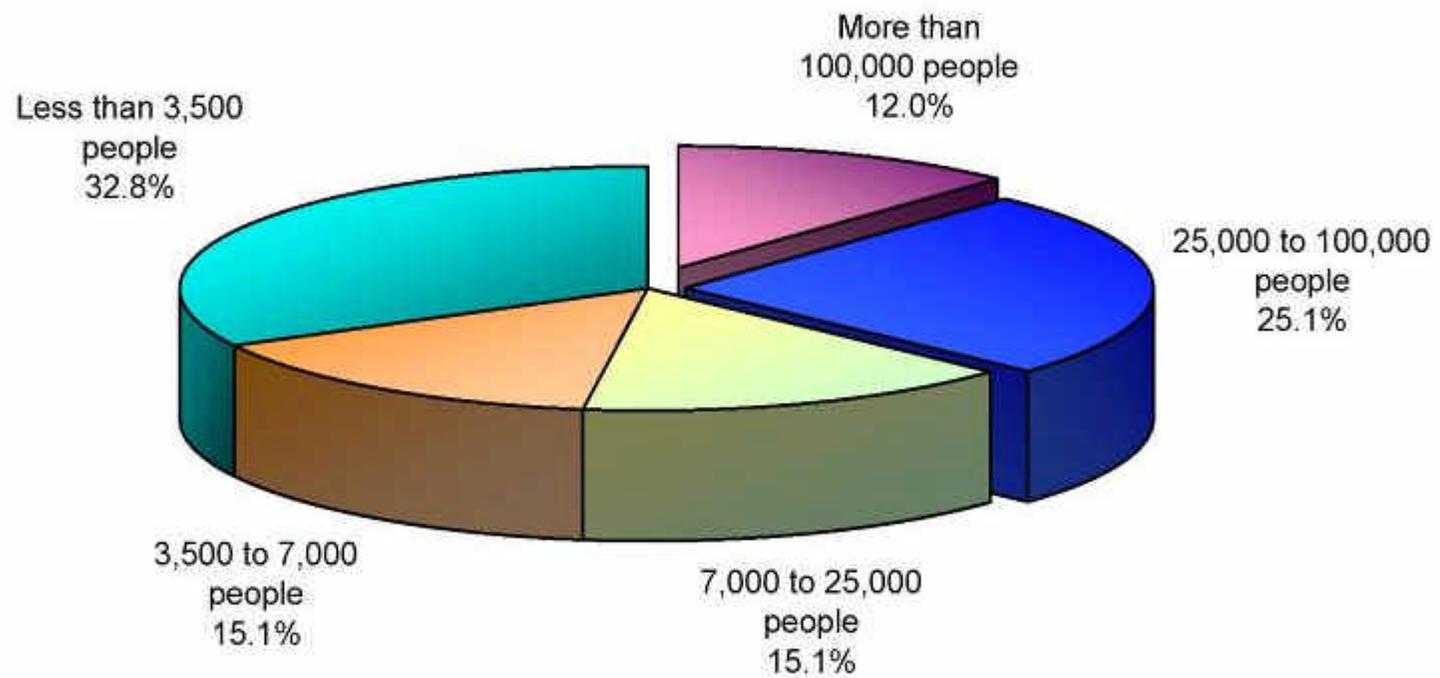
N=272      60.4% response rate

70% male      30% female

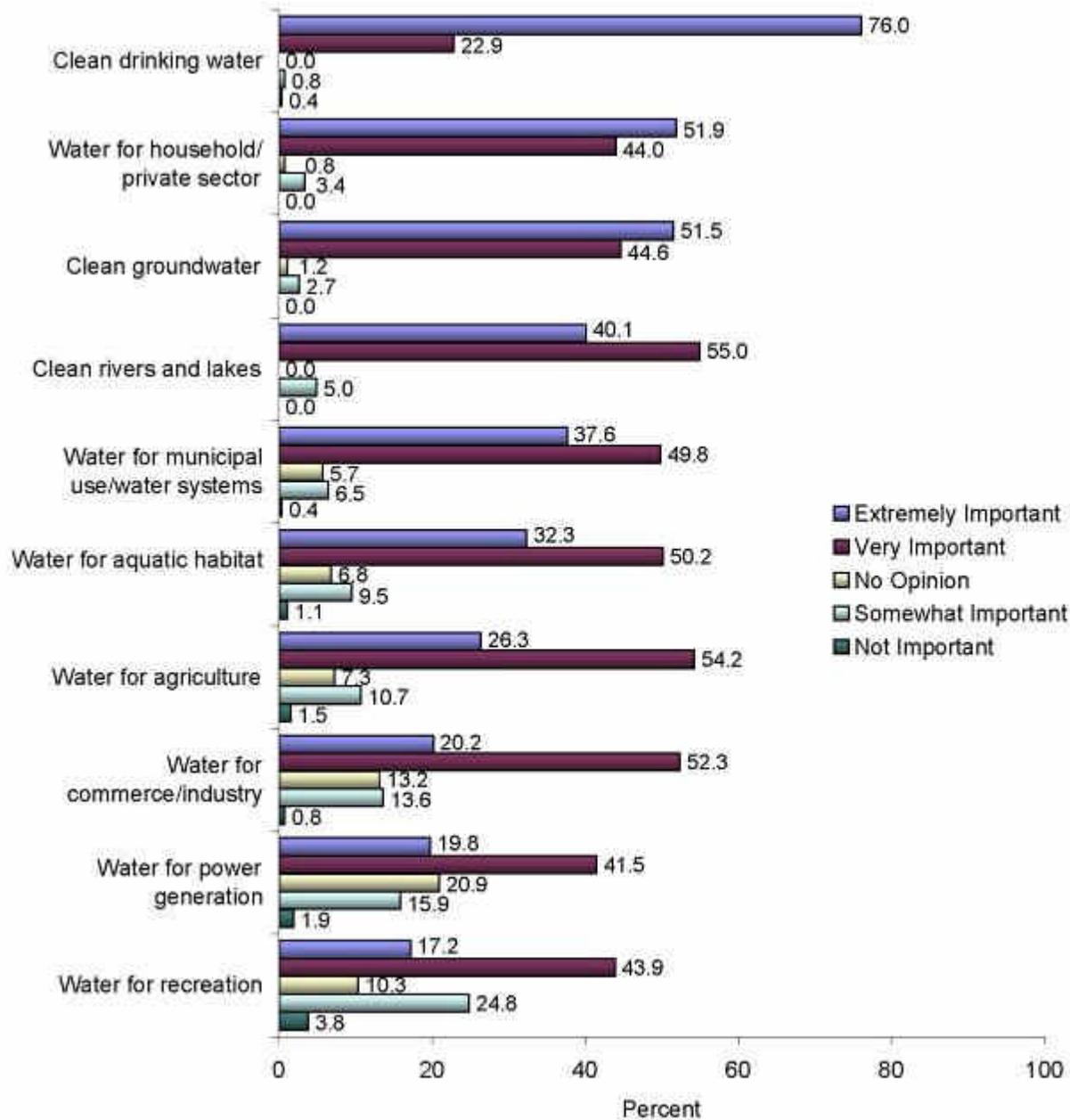
Spring 2006



**Figure 4. Where Do You Live?**



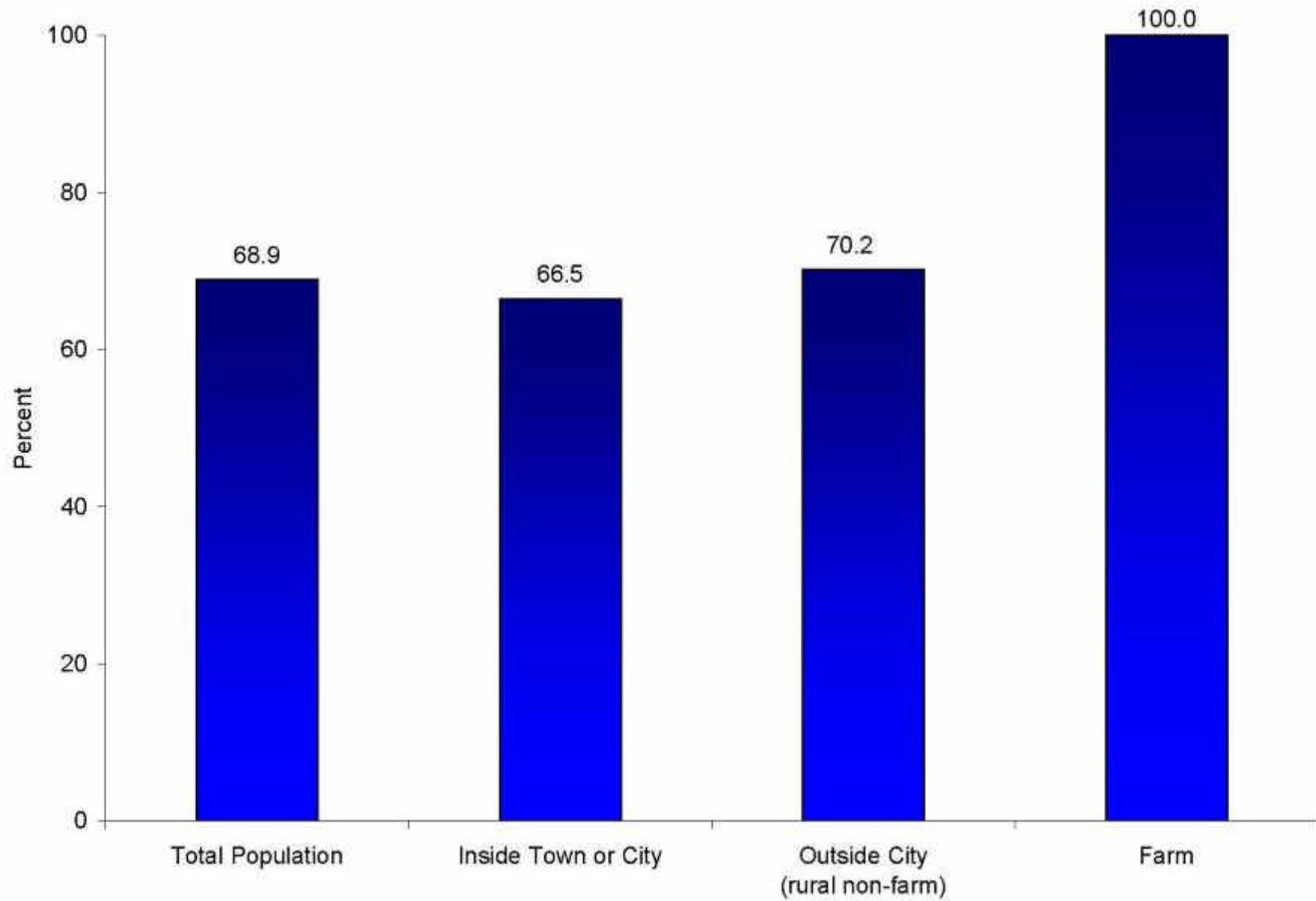
**Figure 5. Community Size**



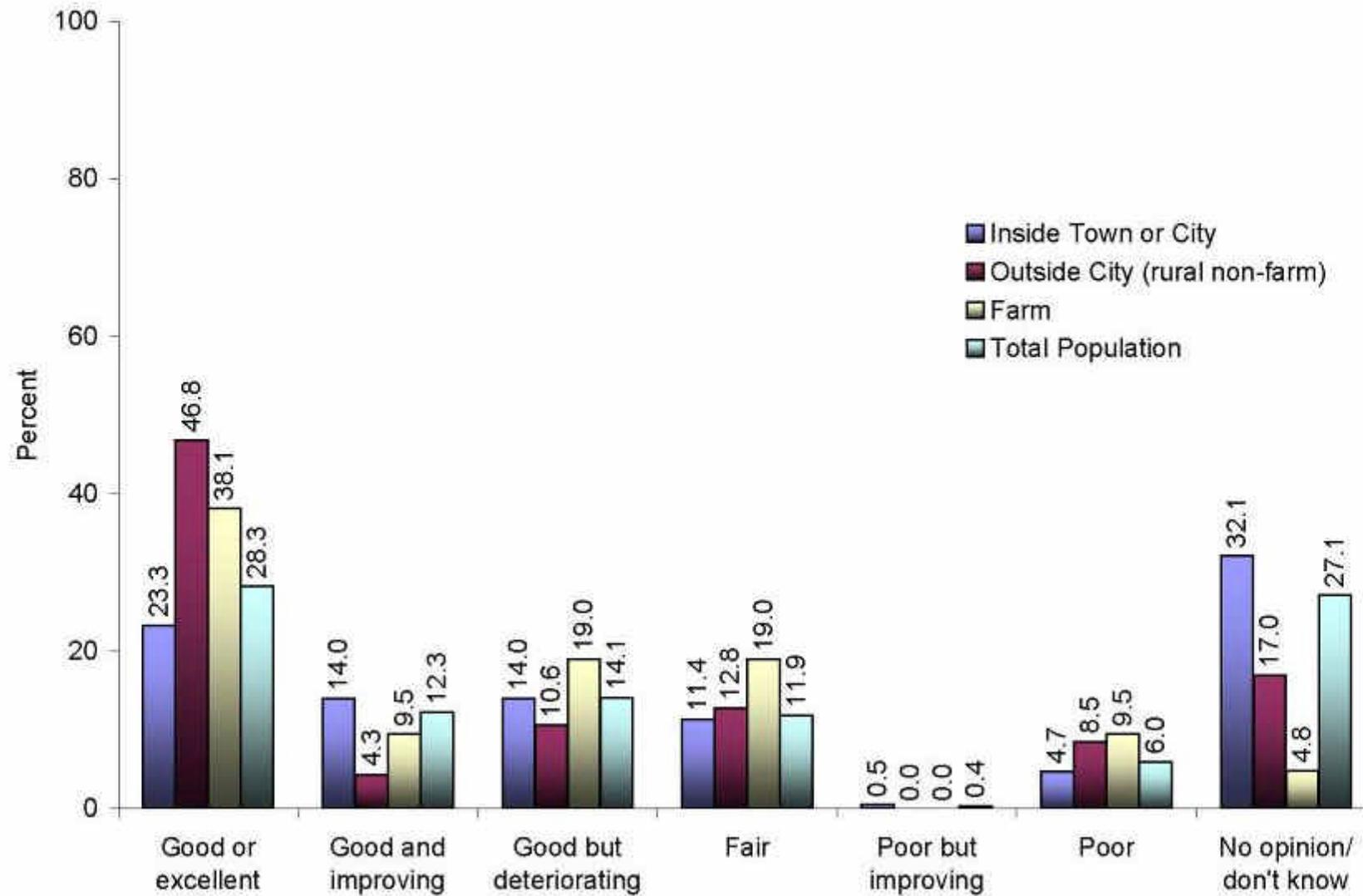
**Figure 7. Importance of Water Issues**

Farmers think about water quality problems and solutions much differently than urban and rural non-farm residents

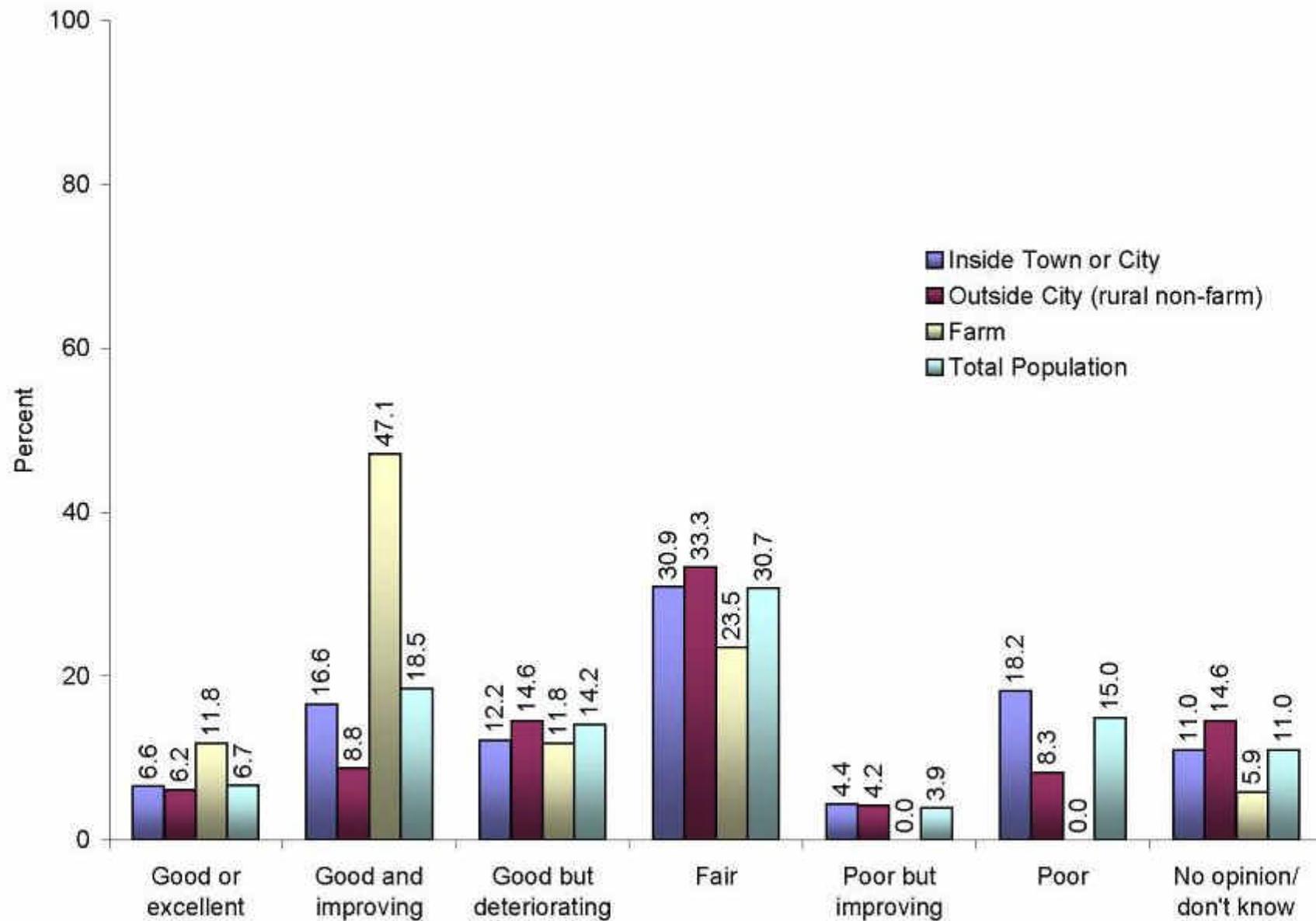




**Figure 11. Do You Know What a Watershed Is?**



**Figure 12. What is the Quality of Groundwater in Your Area?**



**Figure 13. What is the Quality of Surface Waters Where You Live?**

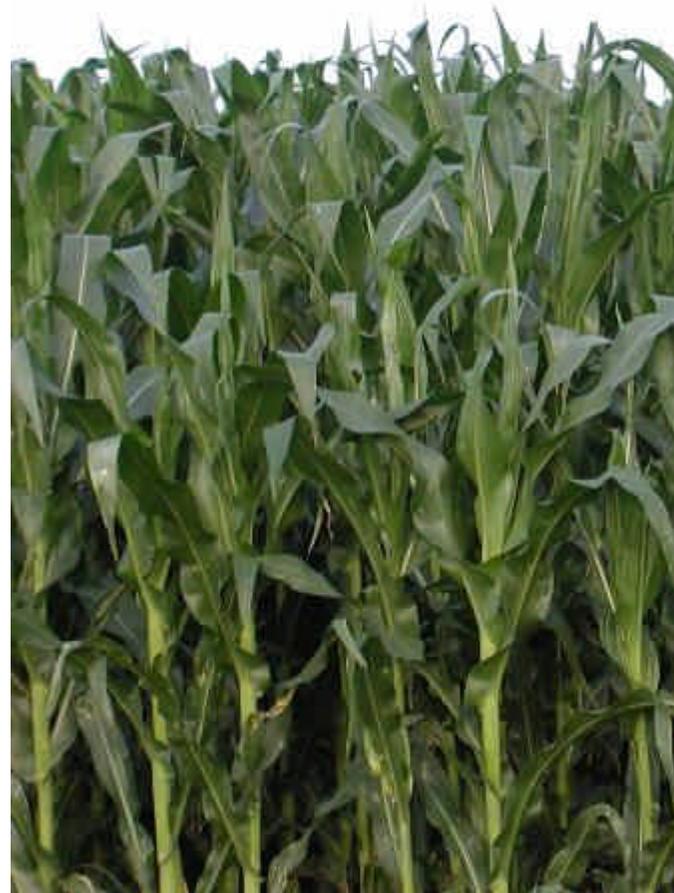
Farmers are more confident about the quality of their **surface waters** (11.8% good/excellent; 47.1% good and improving) than city and rural non-farm residents (6.6% and 6.2% good/excellent; 16.6% and 8.8% good and improving).



Urban (32.1 %) and rural non-farm (17.0%) compared with farm (4.8 %) respondents reported they didn't know what the quality of the **groundwater** was in their area

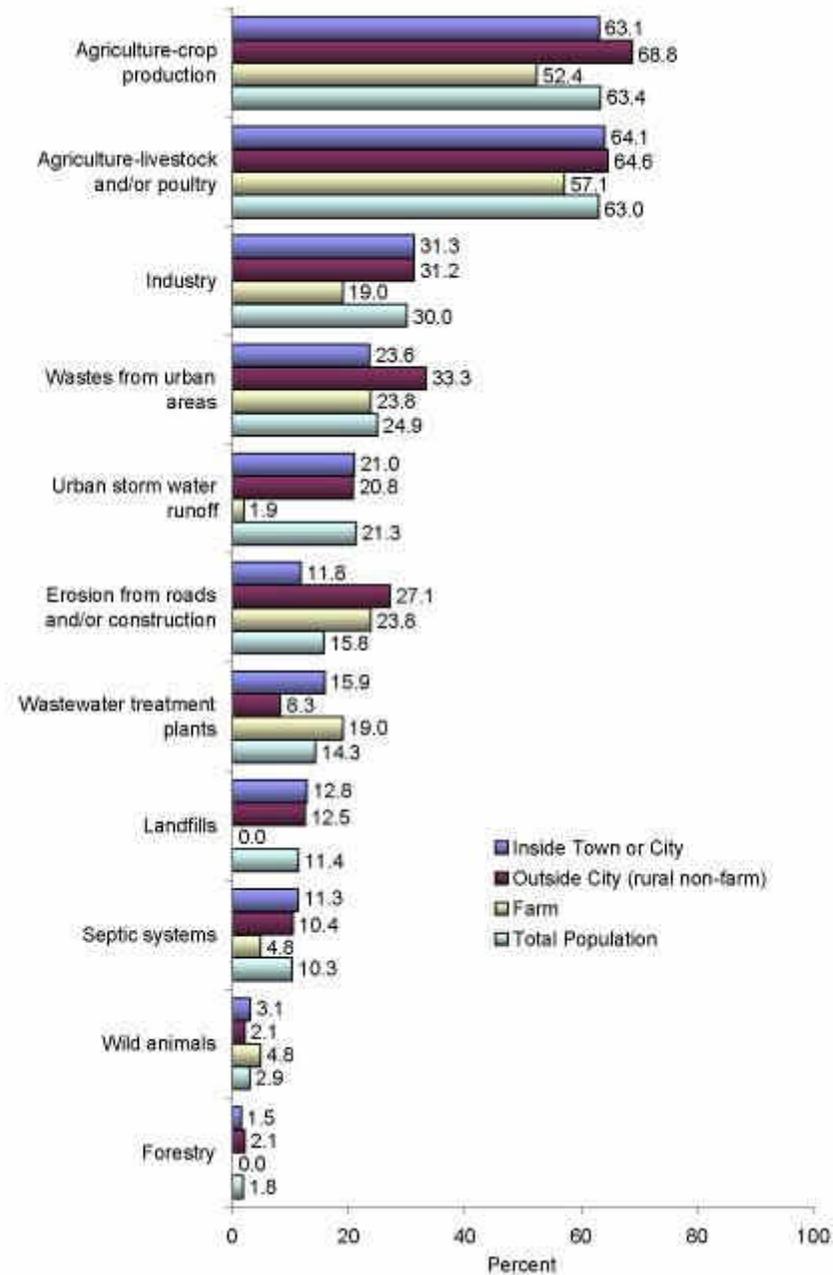


**#1**

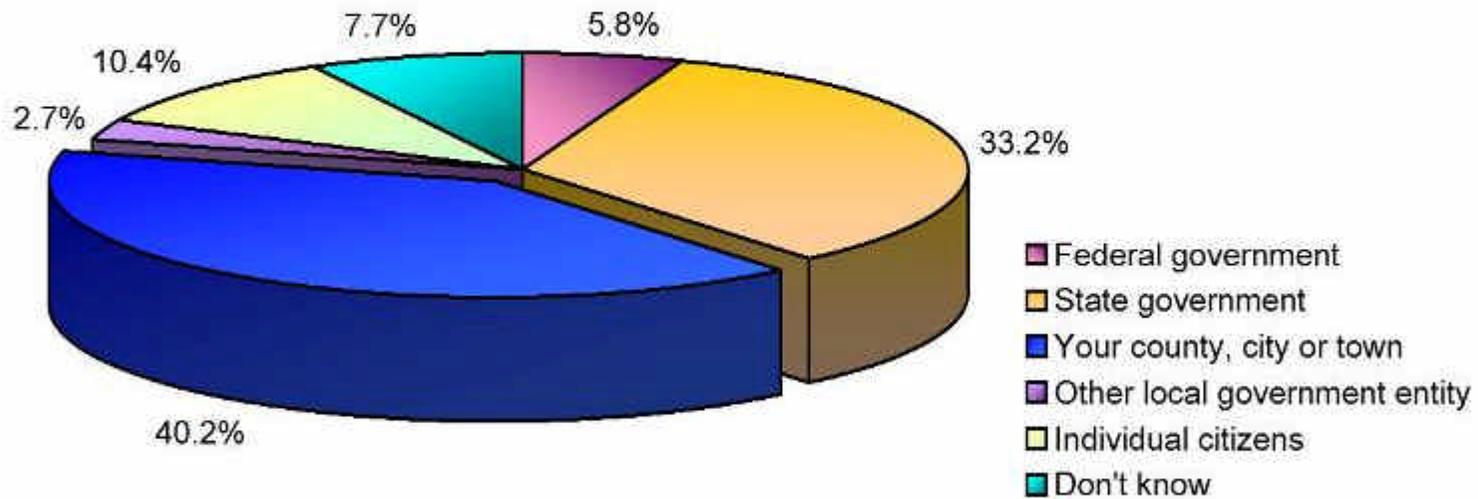


**#2**

Most responsible for  
existing pollution problems  
in Iowa



**Figure 15. Which are Most Responsible for Existing Pollution Problems in Rivers and Lakes in Your State? (check up to three answers)**



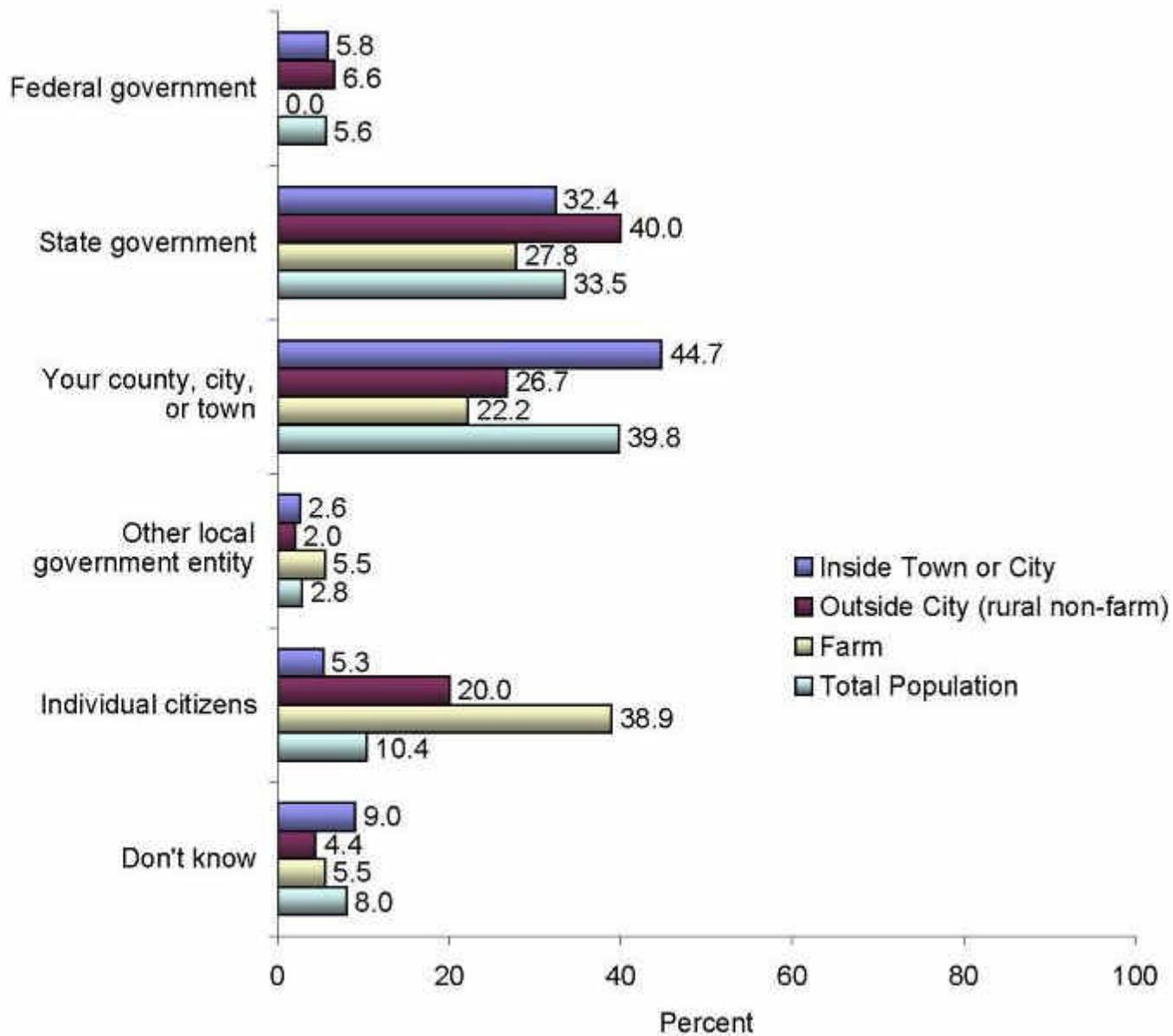
**Figure 18. Who Should Be Most Responsible for Protecting Local Water Quality?**

# Who should be responsible for protecting local water quality?

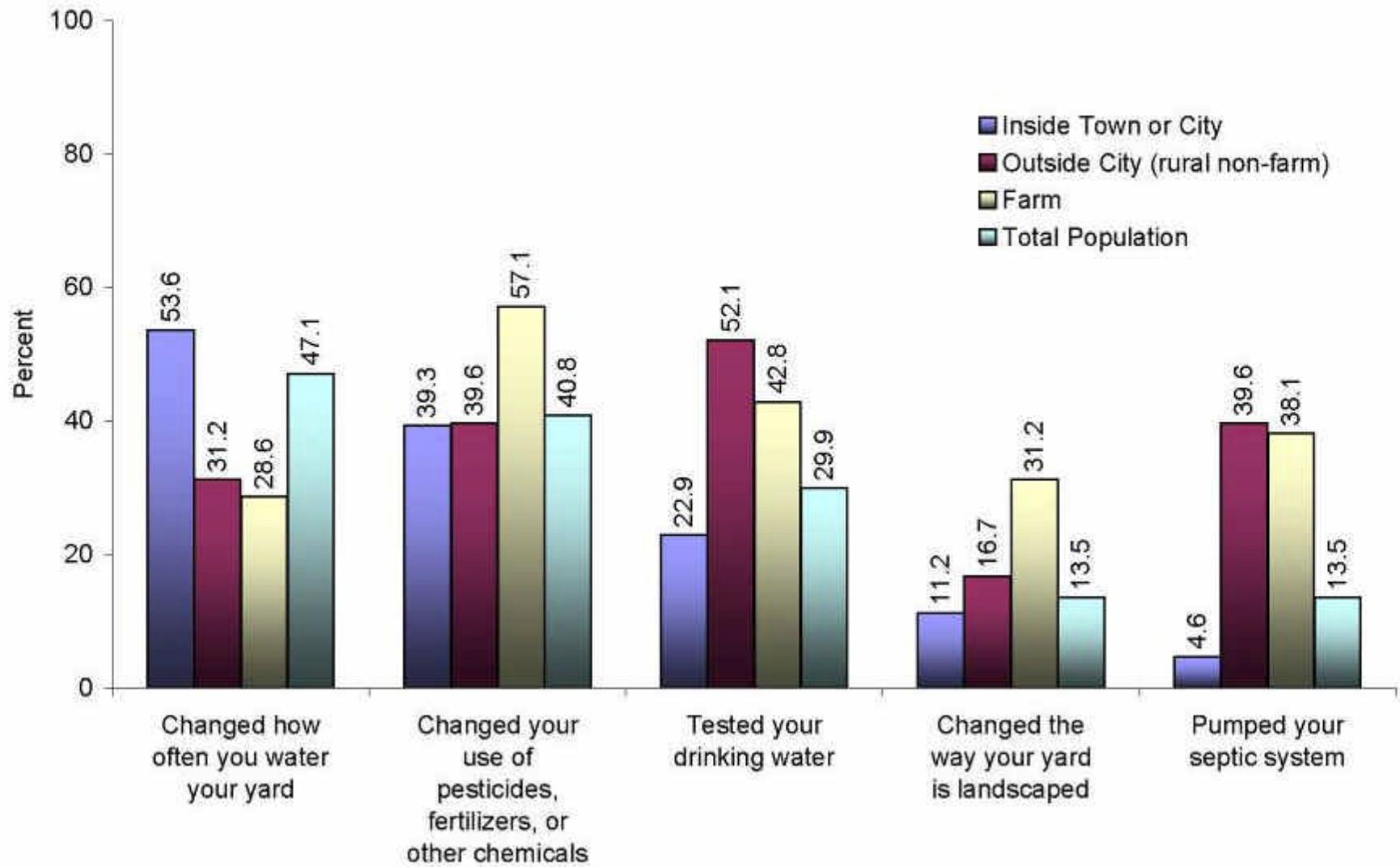
Almost 39% of farmers say protection of water is the individual citizen's responsibility compared to 5.3% of city/town residents and 20% rural non-farm

Most don't know if federal, state, local, or citizens are fulfilling their responsibility to protect local waters

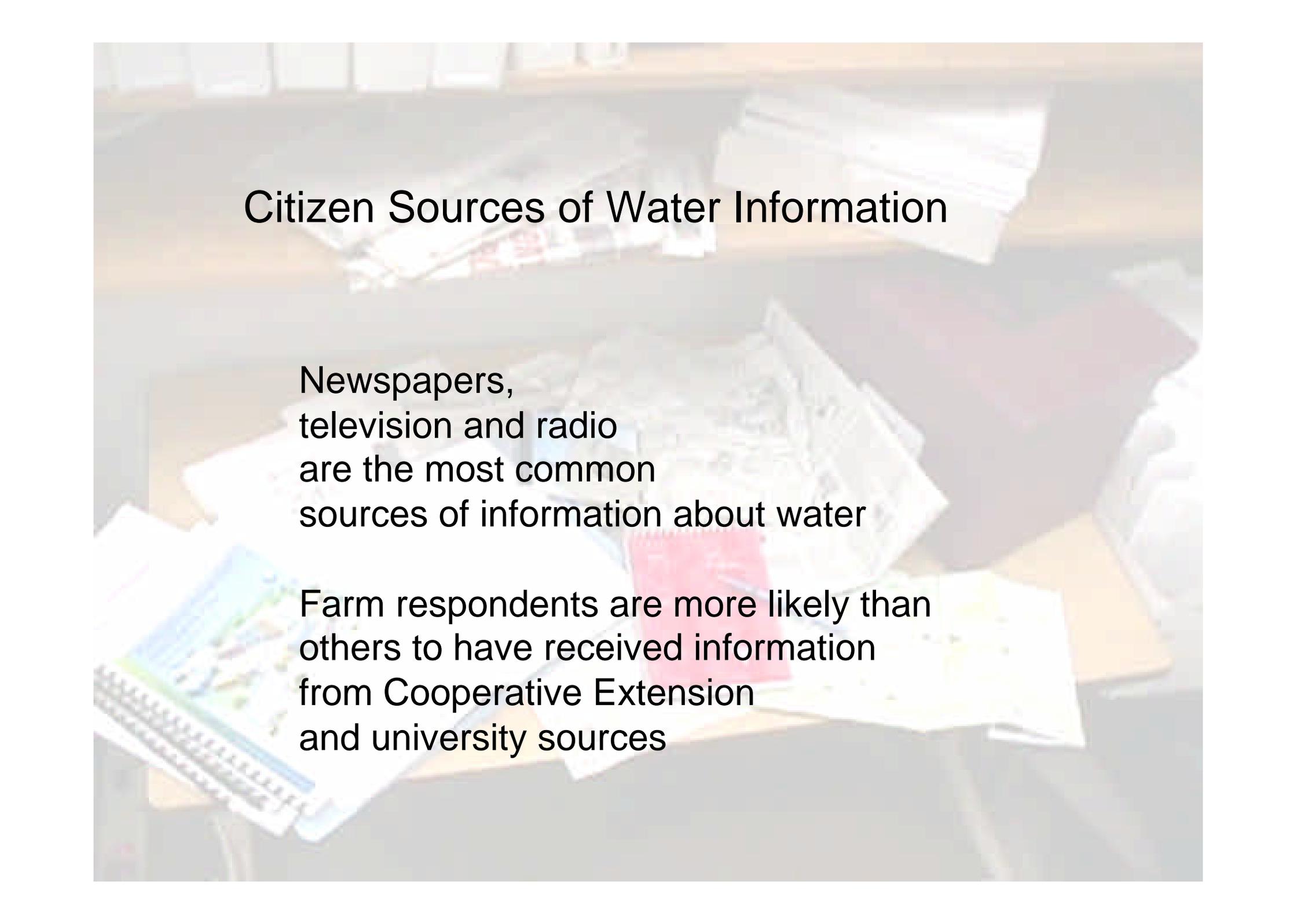




**Figure 19. Who Should Be Most Responsible for Protecting Local Water Quality? (by residence)**



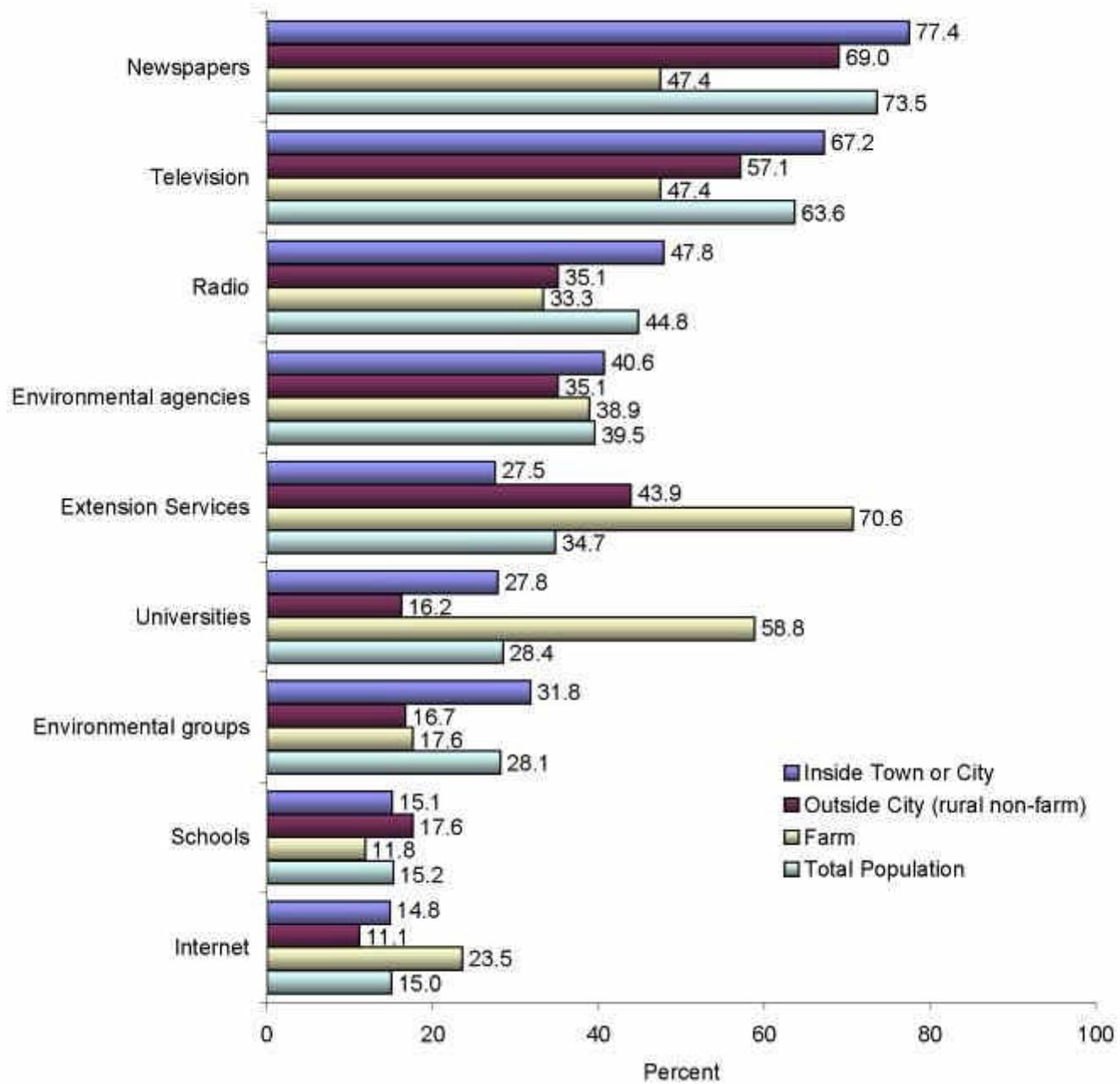
**Figure 23. Efforts to Conserve Water or Preserve Water Quality?**

A photograph of a desk with a keyboard, several papers, and a notebook. The image is faded and serves as a background for the text.

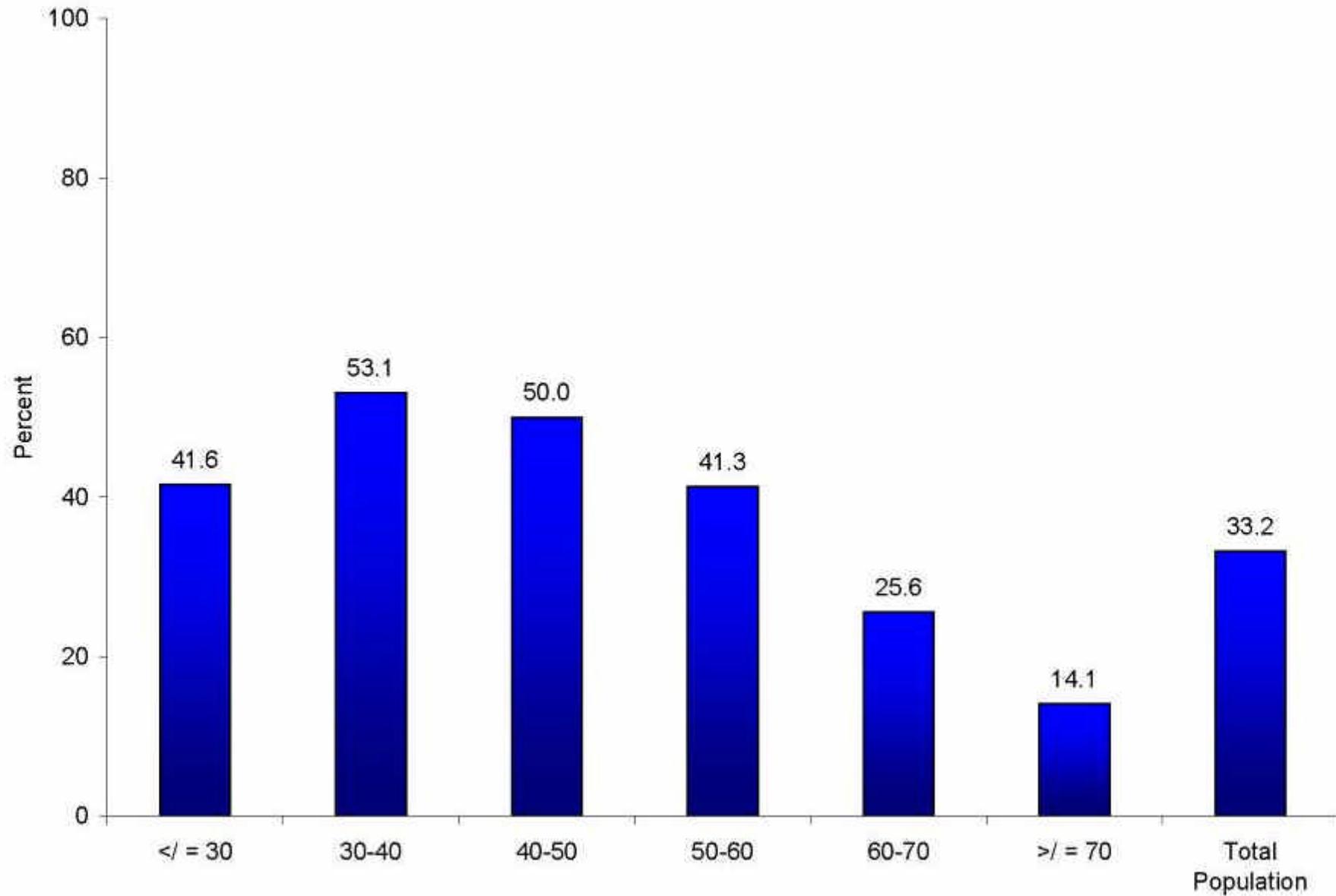
## Citizen Sources of Water Information

Newspapers,  
television and radio  
are the most common  
sources of information about water

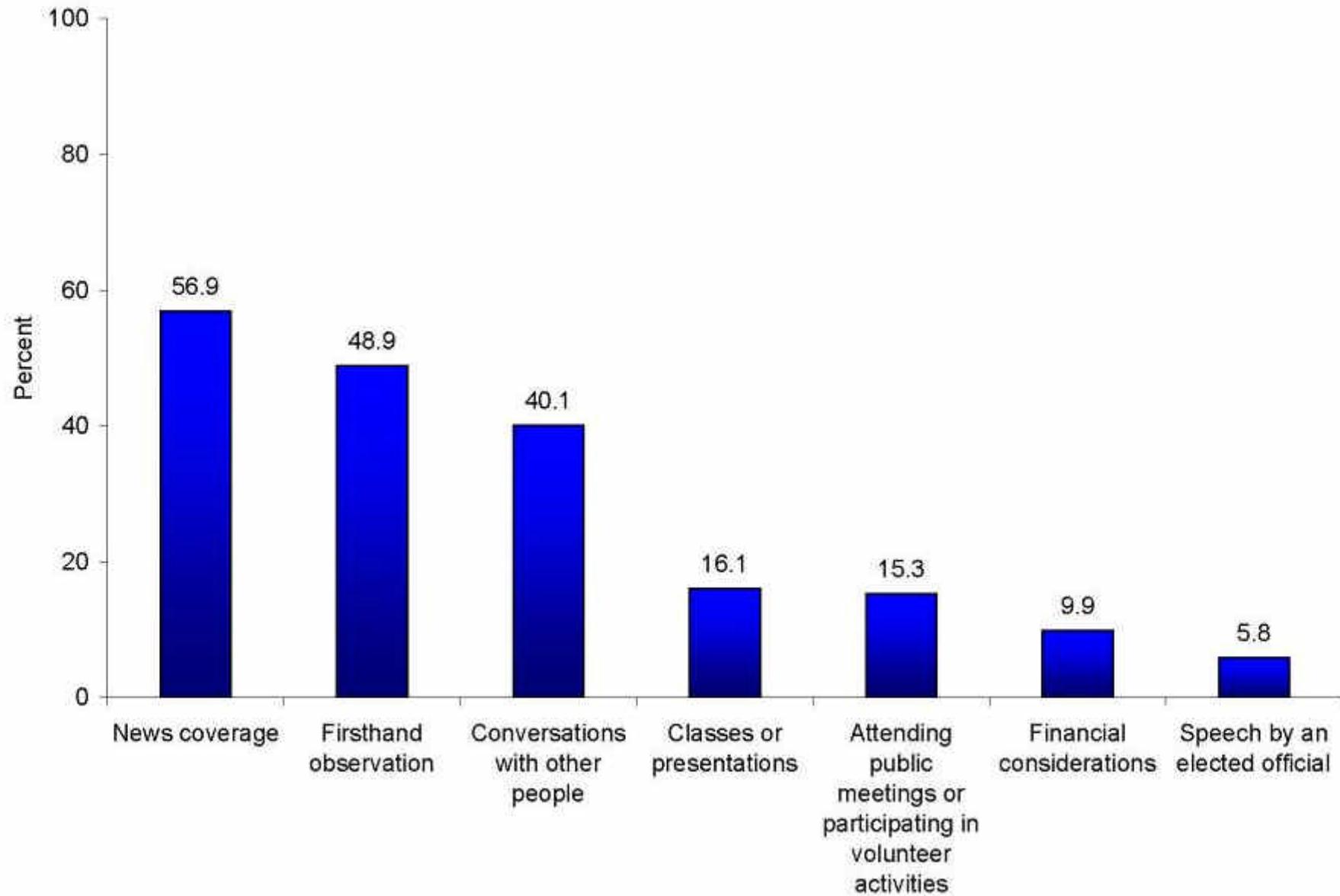
Farm respondents are more likely than  
others to have received information  
from Cooperative Extension  
and university sources



**Figure 25. Source of Water Quality Information**



**Figure 26. Would You Visit a Web Site for Information and Tips on Water Quality Issues? (by age)**



**Figure 22. What Resulted in Changes-of-Mind on Environmental Issues? (Check all that apply.)**



## **Learning Opportunities**

Farmers tended to read fact sheets and bulletins and be interested in active learning opportunities such as watch a video, attend demonstrations and fairs or festivals

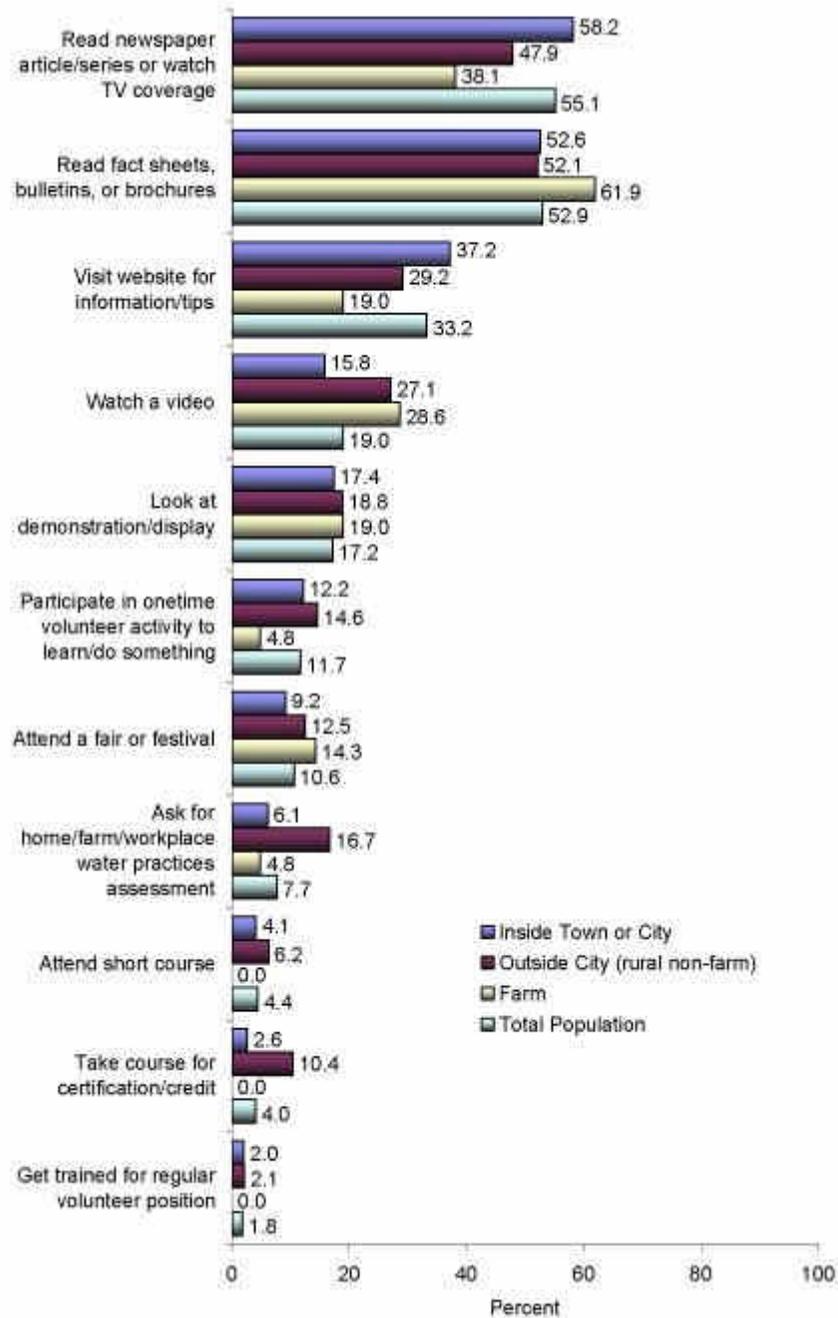


Figure 28. Learning Opportunities Likely to be Taken Advantage of by Respondents

Success for decision support intervention in agriculture has been elusive...

We must give a new respect for natural decision processes and of **facilitative** rather than normative intervention in farmers' management of natural resources

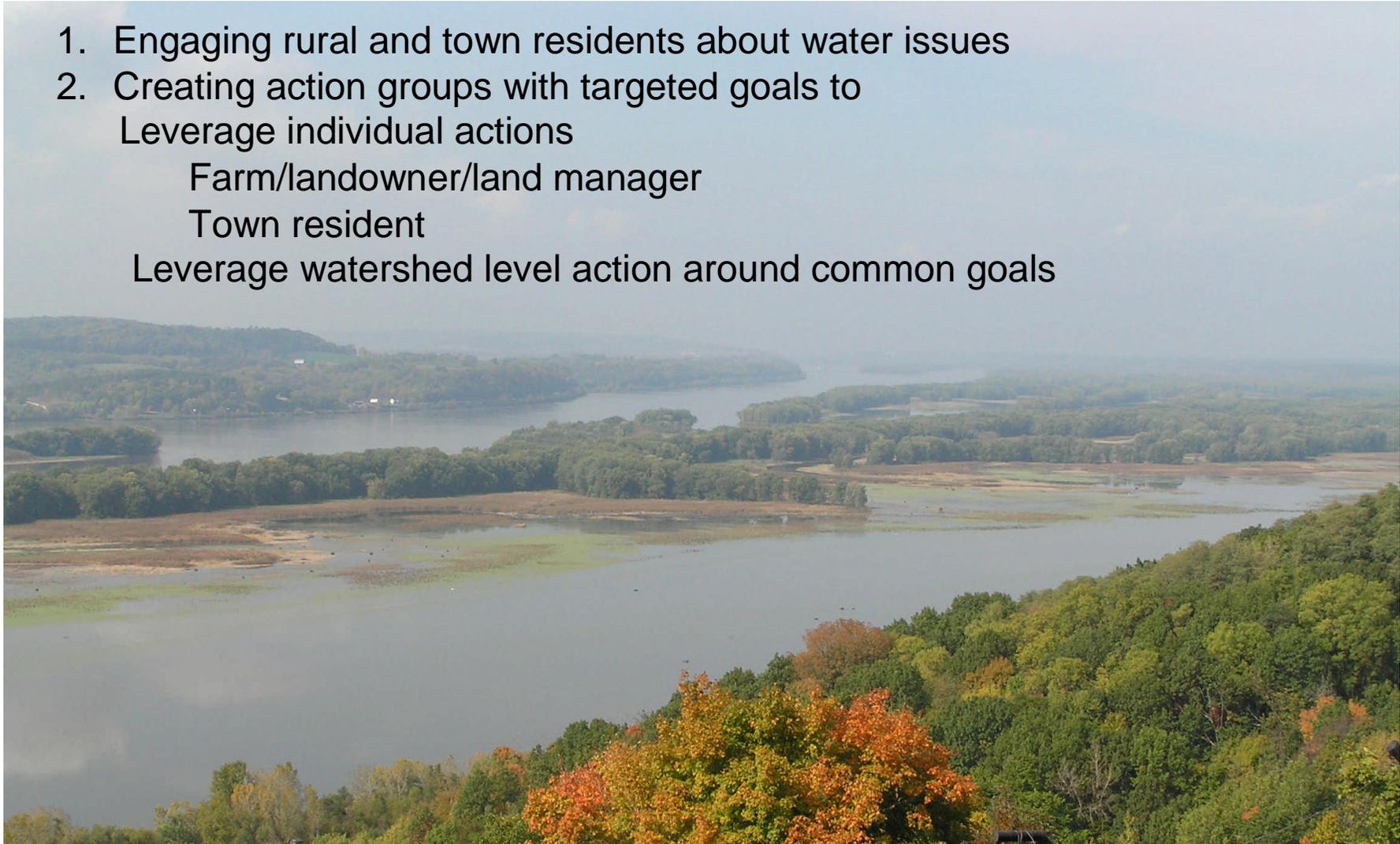
(McCown 2005)



## How do we facilitate better decisions about water and land use?

The results of this survey are one tool you can use in

1. Engaging rural and town residents about water issues
2. Creating action groups with targeted goals to
  - Leverage individual actions
    - Farm/landowner/land manager
    - Town resident
  - Leverage watershed level action around common goals



# Resources

<https://www.extension.iastate.edu/store/ListItems.aspx?Keyword=water%20issues>

<http://www.soc.iastate.edu/extension/publications.html>

Water Issues in Iowa: A Survey of Perceptions and Attitudes about Water  
SP 290

Renewing Local Watersheds: Community Leaders' Guide  
To Building Watershed Communities EDC278 Revised 2006  
Available on CD

Performance-based Environmental Management: The Hewitt Creek Model  
PM2013  
Resident-led Watershed Management PM1869

