

# **Volunteer Stream Monitoring and Local Participation**

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**Christine Overdevest, Cailin Huyck Orr, and  
Kris Stepenuck  
University of Wisconsin**

# Project Goals

To learn if participation in a volunteer monitoring program leads to:

- facts-based learning
- increased networking, involvement and personal efficacy in local resource management issues

# Project Partners

- Integrative Graduate Education Research and Training program (IGERT)
  - ✓ A nationwide NSF funded interdisciplinary research initiative
  - ✓ Brings together students and faculty from diverse social and natural sciences
  - ✓ Goal is to understand human-environment interactions related to aquatic management



## The researchers

# Project Partners

- Water Action Volunteers program (WAV)
  - ✓ A statewide volunteer stream monitoring program
  - ✓ Established 1996
  - ✓ Co-sponsored by the University of Wisconsin-Extension and the Wisconsin Department of Natural Resources



The **researched**

# WAV program

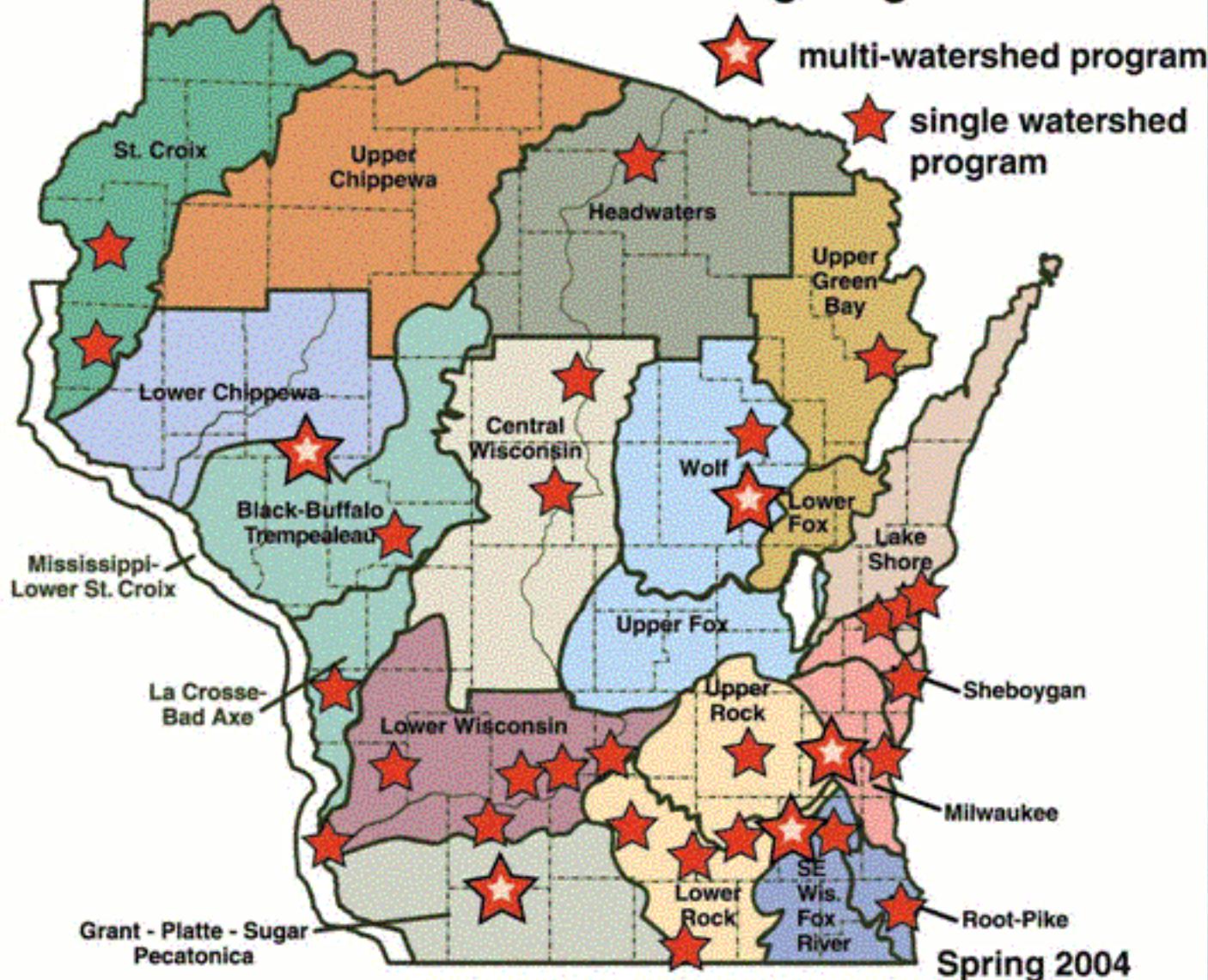
Primary goals are:

- to provide opportunity for WI citizens to monitor streams, and
- to support data sharing for educational/baseline purposes

Scope:

- 200 adults monitoring
- 135 streams and 250 stream sites
- 13 of 15 major basins in WI

## Locations of Local Volunteer Stream Monitoring Programs



## Premise of research

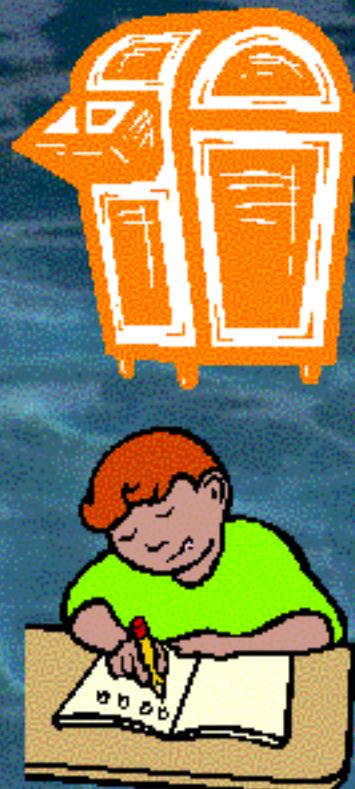
- Social capital: the strength, density and intensity of connection among social actors is thought to be associated with increased capacity for collective action
- A community with high social capital:
  - ✓ Community members know each other
  - ✓ Share common experiences
  - ✓ Build bonds
  - ✓ All of which may make coordinated action easier over time (fits well with environmental action)

## Questions we asked

- Is there a difference in learning about water resources among experienced and inexperienced monitors?
- Does local monitoring involvement lead monitors to have increased community networks related to natural resources?
- Does local monitoring involvement lead to increased community political participation?

# Methods

- In 2003, surveyed 155 experienced monitors and 105 new monitors
  - ✓ Distributed via mail to experienced monitors, and at trainings to new monitors
  - ✓ Experienced: 52% response rate
  - ✓ New: 55% response rate
  - ✓ Assumption: new and experienced self-selected to participate in same manner, so represented same population



# Methods

- Assessed:
  - ✓ Frequency, duration, and type of involvement with volunteer monitoring
  - ✓ Understanding of basic stream functions
  - ✓ Feeling of connectedness to others with interest in natural resources
  - ✓ Extent of participation in resource management-related political activities
  - ✓ Amount of participation in other civic activities
  - ✓ Socioeconomic information

## Results

- No significant differences between experienced and new volunteers demographically
- However, both experienced and new volunteers had more education and higher household incomes than the general US population

# Results

Demographic	Experienced volunteers	New volunteers	T-value	US Population
Age (years)	46	42	1.82	35
Male (%)	63	50	-1.53	49
Education (% college +)	<b>75</b>	<b>63</b>	1.34	<b>23</b>
Household income (\$1000s)	<b>50-75</b>	<b>50-75</b>	1.83	<b>42</b>
Average months in WAV	<b>20</b>	--		

## Results

- There was no difference in fact-based learning between new and experienced monitors
  - ✓ Mean number of correct answers to T/F questions not significantly different between groups ( $p=0.850$ )

## Results

- Experienced monitors felt more connected to others in their community who were also concerned about natural resources ( $p < .001$ )
  - ✓ Experienced monitors knew average of 9 others
  - ✓ Inexperienced monitors knew average of 3.74 others

## Results

- Experienced monitors were more likely to participate in political action events
  - ✓ Experienced: 5.09 political events per year
  - ✓ New: 3.86 political events per year
- Participation in political events increased with length of time in the program ( $p<0.001$ ,  $r^2=0.157$ )

# Results

- Types of political participation by experienced volunteers:
  - ✓ Engaged in personal reading or research on water issues (72%)
  - ✓ Talked with neighbors about water or other resource issues (72%)
  - ✓ Attended a public meeting to discuss water or other resource issues (63%)
  - ✓ Provided monitoring information to others (54%)

## Summary

- WAV “recruits” already factually educated volunteers (or we asked the wrong questions)
- Volunteer monitoring programs like WAV can help support denser community action networks
- Volunteer monitoring programs may have positive effects of developing local capacity in relatively short time periods

# Acknowledgements

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- Pete Nowak
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- Greg Clendenning

## For more information

- Overdevest, C., C. Huyck Orr, and K. Stepenuck. In press. *Volunteer stream monitoring and local participation in natural resource issues.* Human Ecology Review.
- Water Action Volunteers' website:  
[clean-water.uwex.edu/wav](http://clean-water.uwex.edu/wav)