



# Mail Surveys as Tools for Assessing Local Officials' Water Management, Education and Technical Assistance Needs

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## Presentation Goals

- Background to the 2006 research effort
  - 1991 Local Officials Needs Assessment Survey
  - PA Water Resources Planning Act (Act 220 of 2002)
- Describe our approach to using mail surveys as one tool for evaluating outreach programs
- Evaluation design and comparison
- Present preliminary findings
- Strengths and weaknesses of evaluation
- Conclusions & lessons learned



## **Describe Our Approach to Using Mail Surveys as One Tool for Evaluating Outreach Programs**

- State-wide mail survey of local gov't officials by C. Abdalla & K. Saacke Blunk (2006-2007)
- Outreach program for local gov't officials in Capital Region lead by multi-county county educators T. McCarty, and G. Hurd (2004-present)



## State-wide Mail Survey of Local Gov't Officials (2006)

- Follow-up to PSU groundwater survey in 1991
  - 2006 survey funded by Center for Rural PA
- Who? Local officials (townships, boroughs, etc. outside of two major urban areas)
- What? Attitudes, priorities, actions regarding a range of water quality & quantity issues
- How? Dillman's Total Design Method
- Response rate: 52 percent (1303 usable forms)



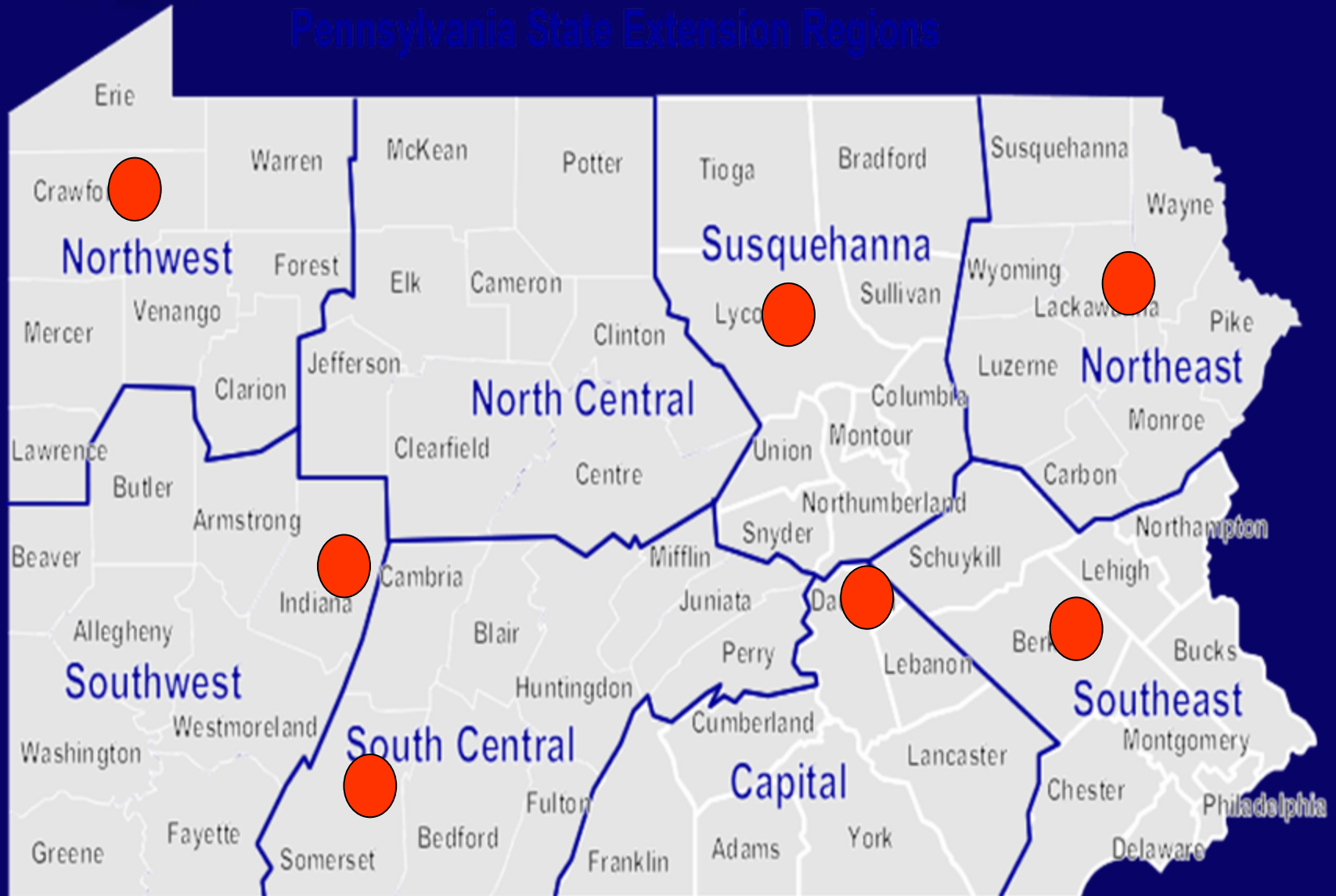
## Outreach Program for Local Gov't Officials in the Capital Region

- **Where: Capital Extension Region (nine counties in south-central PA, near Harrisburg and Lancaster cities)**
- Quarterly “Water Concepts for Township Officials” Newsletter since Sept. 2004
  - Keep officials apprised of Act 220 process
  - Provide useful articles for use in municipalities’ newsletters
- Key Messages in Outreach Program



# PA Extension Regions

Pennsylvania State Extension Regions





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## Act 220 – Water Resources Planning Act Timeline

- 2003 - 2005 – Formation and meetings of State-wide and Regional Committees
- Spring 2007 – Began statewide screening using “water budget tool” for identification of critical water planning areas
- Aug. 2007 – Statewide maps that show “stressed” areas to provide regions with guidance for critical water areas identification
- Fall 2007 – Regions will announce their top regional priorities
- Feb. 2008 – Release of “water atlas”
- 2008 – Expect State Water Plan
- 2008 – Statewide and regional themes and goals to detailed recommendations and work plans





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## Key Messages in Outreach Program

- Importance of municipal officials' participation in a regional water planning committee
- Value of:
  - Construction standards for wells
  - Infiltration strategies to reduce storm water runoff
  - Maintenance of septic systems
  - Water conservation



# Evaluation Design and Comparison

- Experimental Design\*
  - With vs. Without approach
    - Comparing “treated” townships (in nine counties that received newsletter) with “untreated” townships (in other 56 counties that did not receive newsletter) over time
    - Controls some, but not all, threats to the experiment’s validity

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\*To be precise, a quasi-experimental design



## **Preliminary Evaluation Findings: Selected Questions**

- Knowledge about PA's Water Resources Planning Act (Act 220 of 2002)
- Development of educational materials
- Expected municipal water management activity in the future (2010)
- Need for data about local water resources

# Preliminary Findings: Knowledge about Act 220

**At the current time,  
 how much do you  
 know about Act 220  
 and its requirements?**

**(Level of significance,  
 Chi square = <0.005)**

	Capital Region (N=190)	Rest of State (N=1093)
1. A lot	7.4 %	2.8 %
2. Some	17.4 %	12.8 %
3. Little	27.9 %	27.9 %
4. Nothing	47.4 %	56.5 %
	100.0 %*	100.0 %

\*Total does not add up to 100% due to rounding

# Preliminary Findings: Development of Educational Materials

**Has your municipality sponsored or developed any educational or citizen participation activities concerning the issue of water quality or quantity?**

(Level of significance,  
 Chi square = <0.0001)

	Capital Region (N=193)	Rest of State (N=1092)
Yes*	40.4 %	24.8 %
No	59.6 %	75.2 %

\*The most common methods were brochures and news articles.



# Preliminary Findings:

## Expected municipal water mgmt activity in 2010

**Compared to what is being done now, what level of activity do you expect from local government on water management in 2010?**

**(Level of significance, Chi square = <0.01/0.005)**

	Capital Region (N=194)	Rest of State (N=1097)
1. Less activity	0.5 %	1.5 %
2. Same Activity	38.1 %	41.2 %
3. More activity	44.3 %	32.1 %
4. Don't know	17.0 %	25.3 %
	100.0 %	100.0 %



# Preliminary Findings: Need for Local Water Data

**What assistance  
would help your  
municipality  
address local  
water problems?**

(Level of significance,  
Chi sq test <0.05)  
(For other assistance,  
the difference was not  
statistically significant.)

	Capital Region (N=198)	Rest of State (N=1121)
Education	54.0 %	52.4 %
Technical assistance	41.4 %	40.3 %
<b>Data on local water</b>	<b>42.4 %</b>	<b>34.2 %</b>
Funding	64.7 %	67.9 %
Legal assistance	8.6 %	9.0 %
Clearer designation of authority	16.2 %	16.6 %





# Strengths and Weaknesses of Evaluation

## Strengths

- Experimental design
- Statistical analysis yielded some quantitative observations about differences between areas where the program existed and those without it
- Possible justification (public value) for future programming and/or funding?



# Strengths and Weaknesses of Evaluation

## Weaknesses

- Timing and coordination of efforts
- Experimental design
  - Need for additional controls
  - Was the outreach program responsible for differences?
- Need for multi-variable analysis
- Other?



## Conclusions & Lessons Learned

- Mail surveys – while relatively expensive – can offer outreach program evaluation in addition to needs assessment, applied research, policy, etc. opportunities
- Program Evaluation has many challenges.
- Consider your purpose(s)
  - Public value? Support and/or funding?
- Benefits of linking research, needs assessment and extension/outreach program evaluation.
  - Do it sooner rather than later!



# For more information:

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