

Report as of 2006 for 2005OK45B: "Science, Development & Public Opinion: The Adjudication of Groundwater Policy for the Arbuckle-Simpson Aquifer "

Publications

- Articles in Refereed Scientific Journals:
 - Caniglia, Beth Schaefer; Kris Smith, and Mark Vermillion. 2005, "The Making of a Moratorium: Cultural Context & the Battle over the Arbuckle-Simpson Aquifer," presented at the American Sociological Association. Scheduled for submission to "Rural Sociology" August 2006.
 - Caniglia, Beth Schaefer; Rodney Clayton. 2005, "The Institutional Context of Policy Science: Lessons from the Arbuckle-Simpson Aquifer," presented at the annual meeting of the Geological Society of America. Scheduled for submission to "Environmental Management" December 2006.

Report Follows

Title: Science, Development & Public Opinion: The Adjudication of Groundwater Policy for the Arbuckle-Simpson Aquifer

Start Date: 03/01/06

End Date: 2/28/07

Congressional District: 3rd

Focus Categories: GW, LIP, EDU

Descriptors: Arbuckle-Simpson Aquifer, Oklahoma Water Resources Board, Science, Stakeholders, Environmental Sociology

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Problem and Research Objectives:

Purpose

- To collect benchmark public opinion data from relevant representatives of citizen groups, public agencies and legislators toward: development trajectories of the Arbuckle-Simpson aquifer, the present moratorium on permits for extra-county use of Arbuckle-Simpson groundwater resources (Senate Bill 288); and the Arbuckle-Simpson Aquifer Hydrogeology Study being conducted by the Oklahoma Water Resources Board
- To systematically assess over time the impact of the Arbuckle-Simpson Aquifer Hydrogeology Study on public opinion in the above mentioned areas
- To assess the ultimate impact of the Arbuckle-Simpson Aquifer Hydrogeology Study on groundwater law in the State of Oklahoma

Project Description

In May 2004, the Oklahoma State Legislature passed Senate Bill 288, which places a moratorium on the issuance of temporary permits that would result in the usage of water from a “sensitive sole source” aquifer outside of its home county, until a scientific study is conducted by the Oklahoma Water Resources Board (OWRB). The purpose of the OWRB study is to approve “a maximum annual yield that will ensure that any permit for the removal of water from a sensitive sole source groundwater basin or subbasin will not reduce the natural flow of water from springs or streams emanating from said basin or subbasin” (ENR. S. B. NO. 288). Senate Bill 288 may add a new provision to Oklahoma’s water law, and that possibility has motivated unprecedented activist engagement targeted at OWRB. Literally thousands of public comment letters have

poured into OWRB offices. One lawsuit, which was filed just hours after passage of the Bill, resulted in a ruling that the Bill is constitutional, and the appeal filed with the Oklahoma Supreme Court reiterated the original ruling. Therefore, the adjudication of cross-county water transfer permits hinges upon science.

Following the impact of this hydrological study is of intellectual import. Environmental policy is frequently based upon natural science. While natural science is often billed as the central determinant in environmental policy decision-making, sociologists argue that the impact of policy science studies varies based on several factors including: the extent to which findings and predictions are certain, the extent to which the scientific processes and findings are clearly communicated to various publics, and the extent to which relevant authorities possess political capacity and will to enact the recommendations of scientists. To date, we have been unable to find extant systematic studies within the sociology of science, technology and environment that empirically measure the impact of policy science from its inception to its policy conclusions. The current study is designed to fill this gap. By systematically examining the impact of information related to the OWRB study on public opinion and legislative decisions, our research will provide an empirically informed model of the role of science in the formation of environmental policy in the Arbuckle-Simpson case.

Methodology:

This longitudinal study follows the impact of a scientific study being conducted by the Oklahoma Water Resources Board until its completion. Phase I of the project, which was funded by a previous OWRRRI grant, assembled baseline public opinion data from newspaper articles, public comment letters and in-depth semi-structured interviews (see 2006 report for more details). The current grant funded Phase II of the project, which consisted of two data collection strategies. First, we continued to update the newspaper and newsletter archive related to the Arbuckle-Simpson aquifer, expanding its coverage to include a census of articles May 2001 – August 2006. Second, we conducted in-depth interviews in order to compare benchmark public opinion to current views toward the study and development of the aquifer.

A total of fifteen (15) in-depth interviews were conducted with members of most target publics (or stakeholder groups) indicated in the OWRB public participation plan (see attached questionnaire). The interviews followed an open-ended format, where respondents were encouraged through probes and follow-up questions to elaborate answers to a set of ten questions. Twelve of the interviews were conducted face-to-face, while the remaining three were telephone interviews that ranged between fifteen minutes and one hour. We were able to interview many participants from the benchmark study and added new respondents who fit appropriate profiles. The interviews were transcribed by the social science research bureau at Oklahoma State University, and the transcripts were uploaded into a qualitative software package for systematic analysis.

These data will be triangulated with the benchmark data collected in 2005 to make comparisons between public opinion toward the Arbuckle-Simpson aquifer prior to the release of significant scientific findings from the Oklahoma Water Resources Board and opinions after examination of study findings. While full analyses of the data have not been conducted, some cursory findings can be inferred.

Principal Findings and Significance:

The principal findings from this phase of the research are two-fold. First, very little change in opinion is expressed by these respondents. Even though we conducted fewer interviews than we hoped, we heard repeatedly the same themes, giving us confidence in the inferences drawn from these data. The second very important finding suggests that the trends observed may not be transferable to similar conflicts in large metropolitan areas. I will discuss each of these in turn.

One of the central questions of this longitudinal research is: will public opinion toward the study and development of the aquifer change as a function of study findings reported by the Oklahoma Water Resources Board. Interviews conducted during Phase I indicated that our respondents were scientifically literate. Most claim to have read earlier studies of the Arbuckle-Simpson aquifer, and most stated that they intended to keep up with the current OWRB study. In order to answer our question regarding change over time, it was necessary to determine first whether our respondents were up-to-date on the OWRB study findings. Every respondent claimed to regularly consult the OWRB study website, and they all claimed that this website and OWRB personnel were their primary sources of information regarding study findings. Therefore, I would conclude that most target publics are staying informed regarding the OWRB study as findings are released.

The second requirement was to determine whether our respondents had changed their views toward the study and/or development of the aquifer as a result of the study findings. With only one exception, none of our respondents have revised their views. Instead, they are largely satisfied that the study appears to support their original views. This finding should not be overstated, however, because most respondents also admitted to being in a holding pattern while waiting for the final recommendations to be put forth by OWRB. Most felt that a new round of controversy will be centered around those final recommendations.

Comments from the most recent round of interviews suggest very important considerations regarding the rural, smaller town communities who are engaged in the fight over Arbuckle-Simpson aquifer water. Two interviews with landowners who hope to sell their permitted groundwater for profit highlight difficult personal circumstances they have encountered. One landowner, for example, stated:

“...I would like if there’s a new water law, I’d like to see it handled through the Oklahoma Water Resource Board. I do not want to see this resolved in [the] legislature because you know, the big cities are going to fight for my water, ok, but the local people here are all going to hate me, you understand? And I don’t want to live in an area where people don’t like me.”

When asked what he planned to do now that the lawsuit was over, the second landowner stated:

“I received eleven thousand, literally eleven thousand protests to me trying to sell my water and when eleven thousand of your neighbors send you a letter and tell you that you’re doing the wrong thing, you know, it just, it wears on you. You know, we’ve been called in the papers and everywhere, we’ve been called greedy. We’ve been called scrooge. We’ve been called thieves,

all kinds of things of which none of those are true, but even though you know in your heart that that's not right it still hurts and you hate to be called that.”

These comments and others highlight the very personal nature of small town disputes. As a result, the next theoretical turn in my study will focus on rural sociology and small group interactions as lenses from which to infer the extent to which this study can be generalized to metropolitan resource disputes. The next stage of data collection will commence with the release of the OWRB recommendations to the legislature, which is currently scheduled for late spring 2008.

Student Support: A summary of the number of students, their degree level and discipline supported by the project in the following table:

Student Status	Number	Disciplines
Undergraduate		
M.S.		
Ph.D.	1	Sociology
Post Doc		
Total	1	

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Phase II Interview Main Questions¹

Introduction:

¹ Additional questions may emanate from respondents' answers.

Read Consent form:

Consent to tape record:

1. Can you give me a general idea of how you keep abreast of the OWRB hydrology study of the Arbuckle-Simpson Aquifer?

2. Can you list for me all of the sources you are aware of that provide information on the OWRB hydrology study of the Arbuckle-Simpson Aquifer (prompts are fine – e.g. newspapers, web sites, newsletters, etc.)?

3. Of those you listed, which do you find the most useful in your own research related to the study?

4. In your opinion, what have been the most useful pieces of information to come out of the study so far?

5. What, if any, have been your frustrations with the study?

6. In general, do you feel the OWRB study will be helpful in determining how best to manage the aquifer resources?
7. Have any of the study findings affected your views regarding how the Arbuckle-Simpson Aquifer resources should be managed or allocated? Please be as specific as possible regarding your original views and how those have changed as a result of the study findings. (If no change, “In that case, can you please share with me your general views regarding the development, management and allocation of the Arbuckle-Simpson Aquifer)?)

8. In general, do you feel you have access to sufficient information regarding the Arbuckle-Simpson Aquifer study?

9. Are there additional pieces of information that would benefit you? Please be specific.

10. Are there other comments you would like to share with us regarding the aquifer, the OWRB study or the current moratorium on cross-county transfer of the aquifer resources?

*Thank you for your participation in our study!
Have a nice day.*