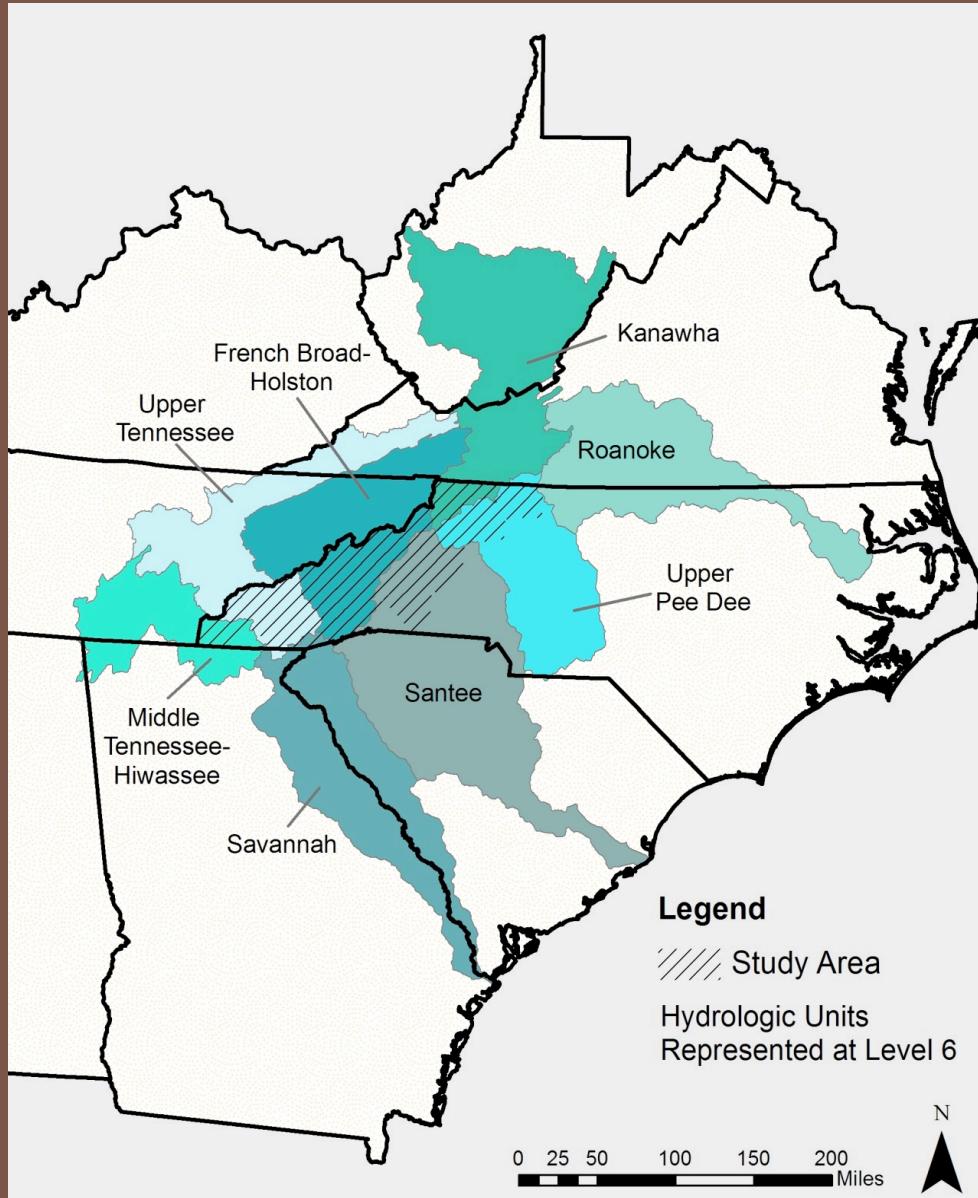


Growth, Water Resources, and Potential Planning Disconnects

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Appalachian State University
SEGSA 2012

Study Area



11 North Carolina counties

8 river basins

50+ in/yr rain

Population = 609,000

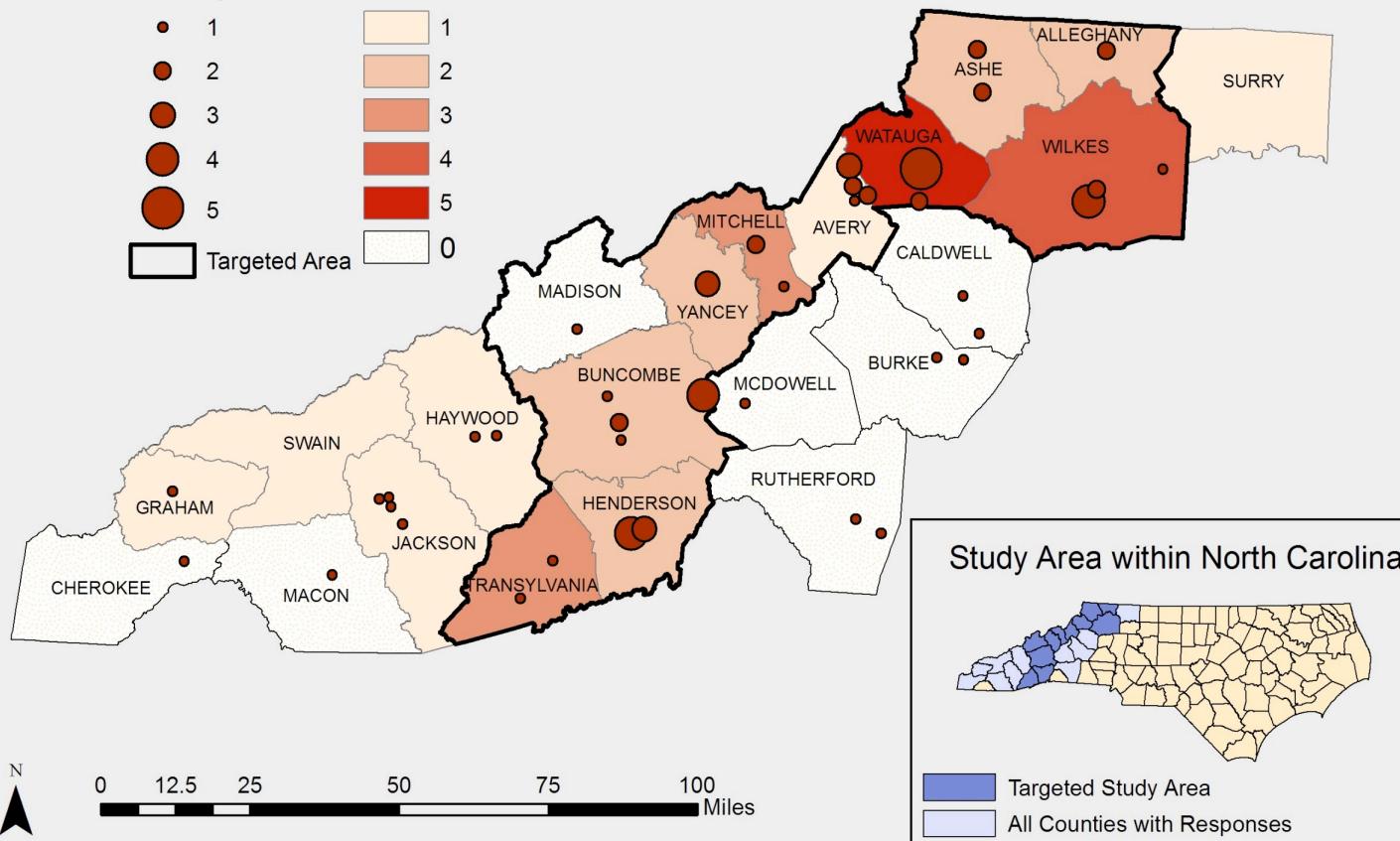
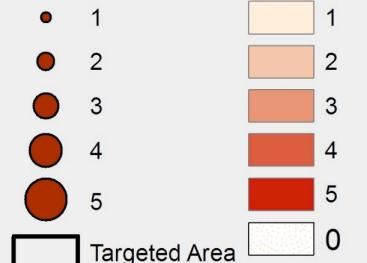
5 counties =
>12% growth 2000-2010

Economic drivers =
tourism, recreation

Methods

Number of Respondents Representing Each County or Municipality

Municipalities Counties



Survey sent to
292 planners,
elected officials,
managers,
utility personnel

Available online
79 days

85 responses
(29% resp. rate)

Follow-up
interviews

Results

Growth drives water management thought

Recession = less growth, reduced water concern

Growth = seek new water source

Water supply = permitted amount + infrastructure
NOT hydrologic conditions

Elected officials = primary decision-makers

Perception = data driven

Perceptions of Growth Potential

Rank from 1 to 7 (1 = most important; 7 = least important) the following in terms of their potential to be a source of growth in your community

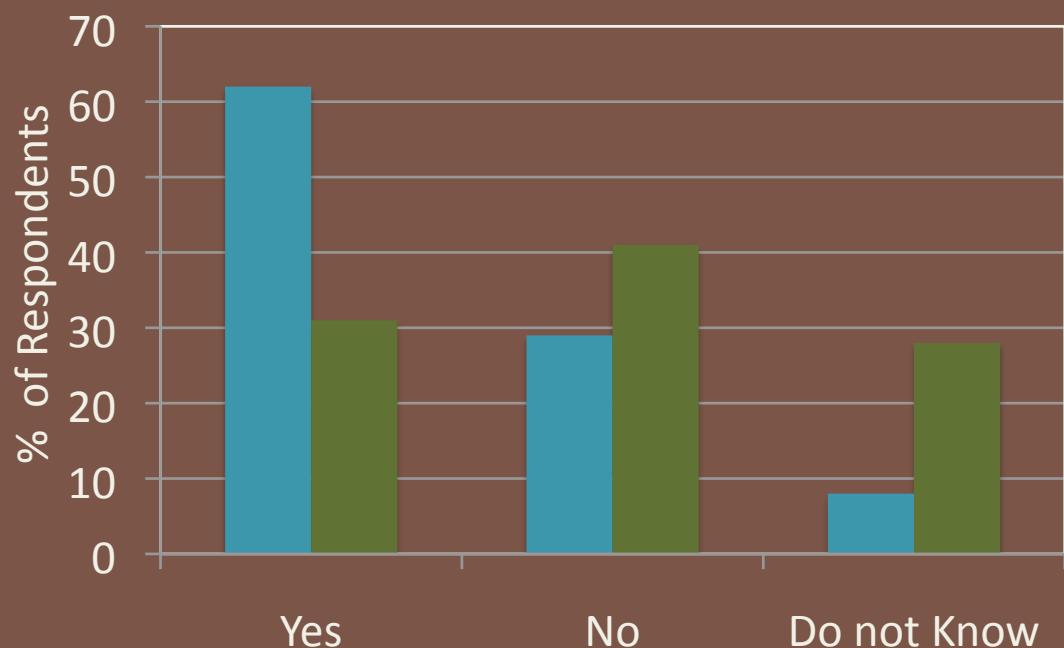
Growth Source	Mean
Permanent residences	2.61
Small retail business	3.1
Second homes	3.46
Recreation services (e.g. fishing guides, hotels)	4.1
Institutional (e.g. government, education)	4.2
Industry	4.24

31% “not at all concerned” about potential for population growth to reduce available water supply

Data Consulted/Collected

In the past 5 years has your jurisdiction consulted population growth or development forecast data? (n=85)

Has your jurisdiction initiated or participated in scientific studies seeking to better understand the physical characteristics (e.g. seasonal flow rate, recharge rate) of your water supply? (n=85)



Population/Development Sources

Of 53 “yes” responses:

US Census 29 (55%)

Internal 13 (25%)

State 9 (17%)

Other 2 (4%)

Scientific Supply Studies

Of 26 “yes” responses:

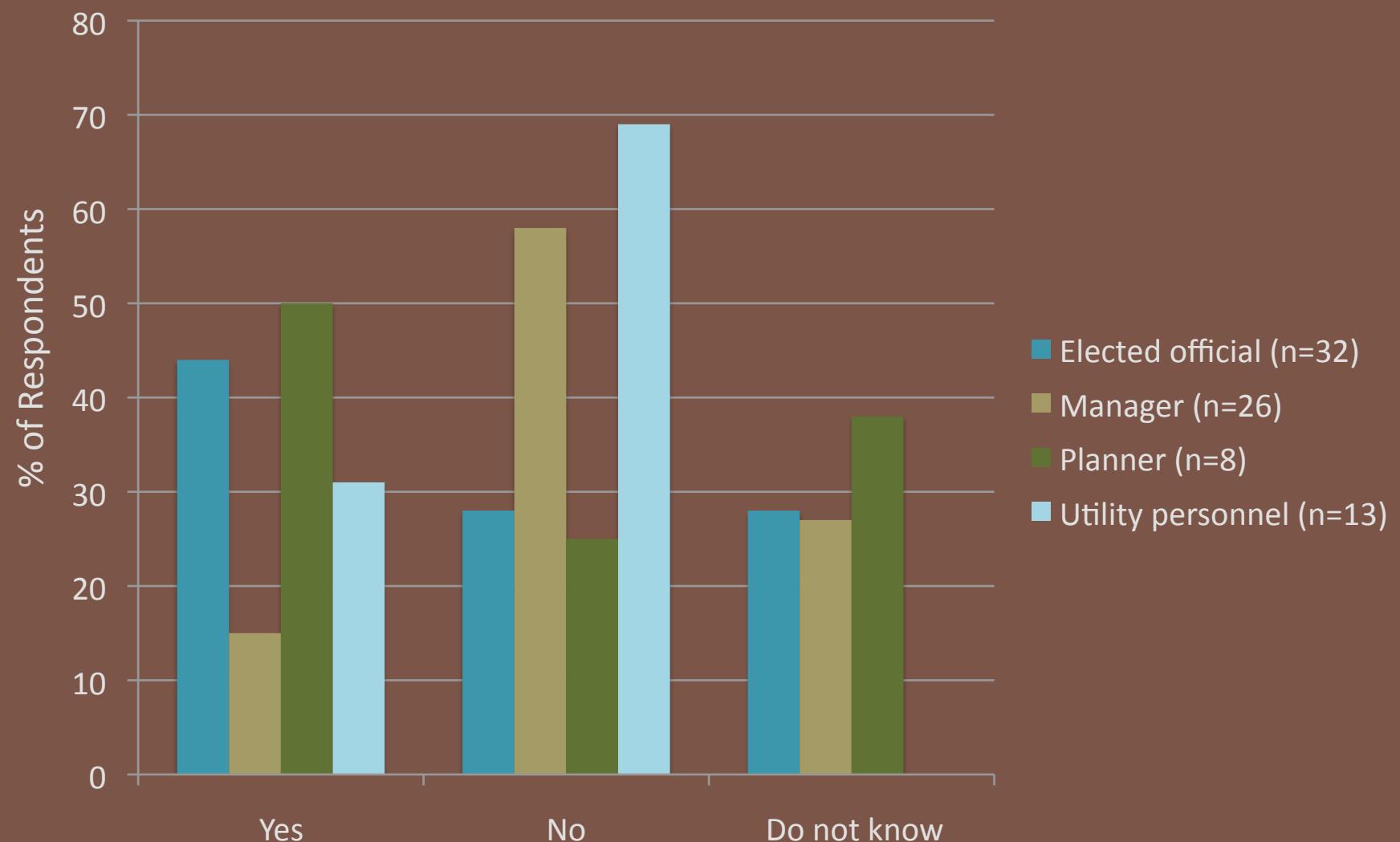
Relevant studies 12 (46%)

represents 7 communities

Other studies 6 (23%)

No response/
insufficient info 8 (31%)

Jurisdiction initiated/participated in scientific studies on physical characteristics of water supply (n=85; p=.002)



Data Used in Allocation Decisions

What is the primary data source used in your jurisdiction to make water allocation decisions?

Source	Responses
Locally collected data on water use	30 (43%)
Consultation with NCDENR	19 (27%)
Local regulations pertaining to water allocation	6 (9%)
No data needed – all requests granted	6 (9%)
USGS, other monitoring data	2 (3%)
<i>Scientific studies on water resources in the region</i>	0
Other	4 (6%)
Total	70*

*15 of the respondents do not allocate water

Influence on Allocation Decisions

Rank from 1 to 7 (1 = most important; 7 = least important)

the following in terms of their influence on your community's decision-making process for allocating water.

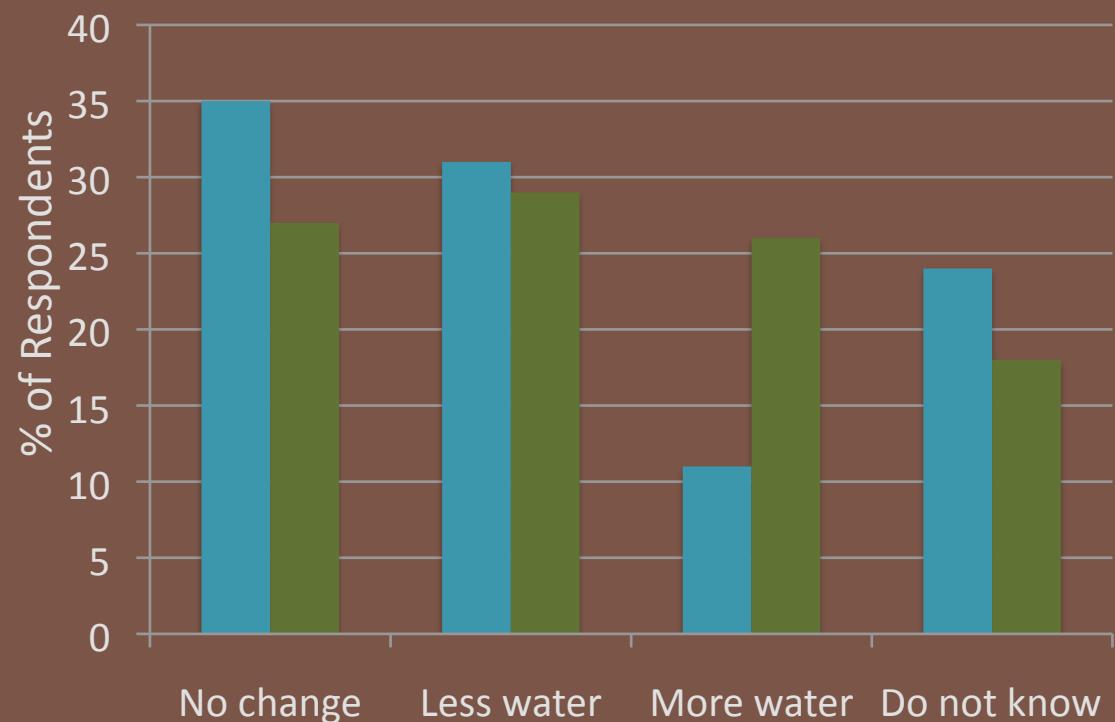
Influence	Mean	
Ability of infrastructure to support new use (n=70)	2.44	p=.002
Potential for economic benefits to the community (n=69)	3.04	
Potential for drought (n=75)	3.07	
Ability to sustain the supply for the long term (>50 years) (n=72)	3.44	
Compliance with state regulations (n=70)	3.44	
Environmental concerns (n=71)	3.52	

50% report their jurisdiction has a specific policy to guide allocation decisions

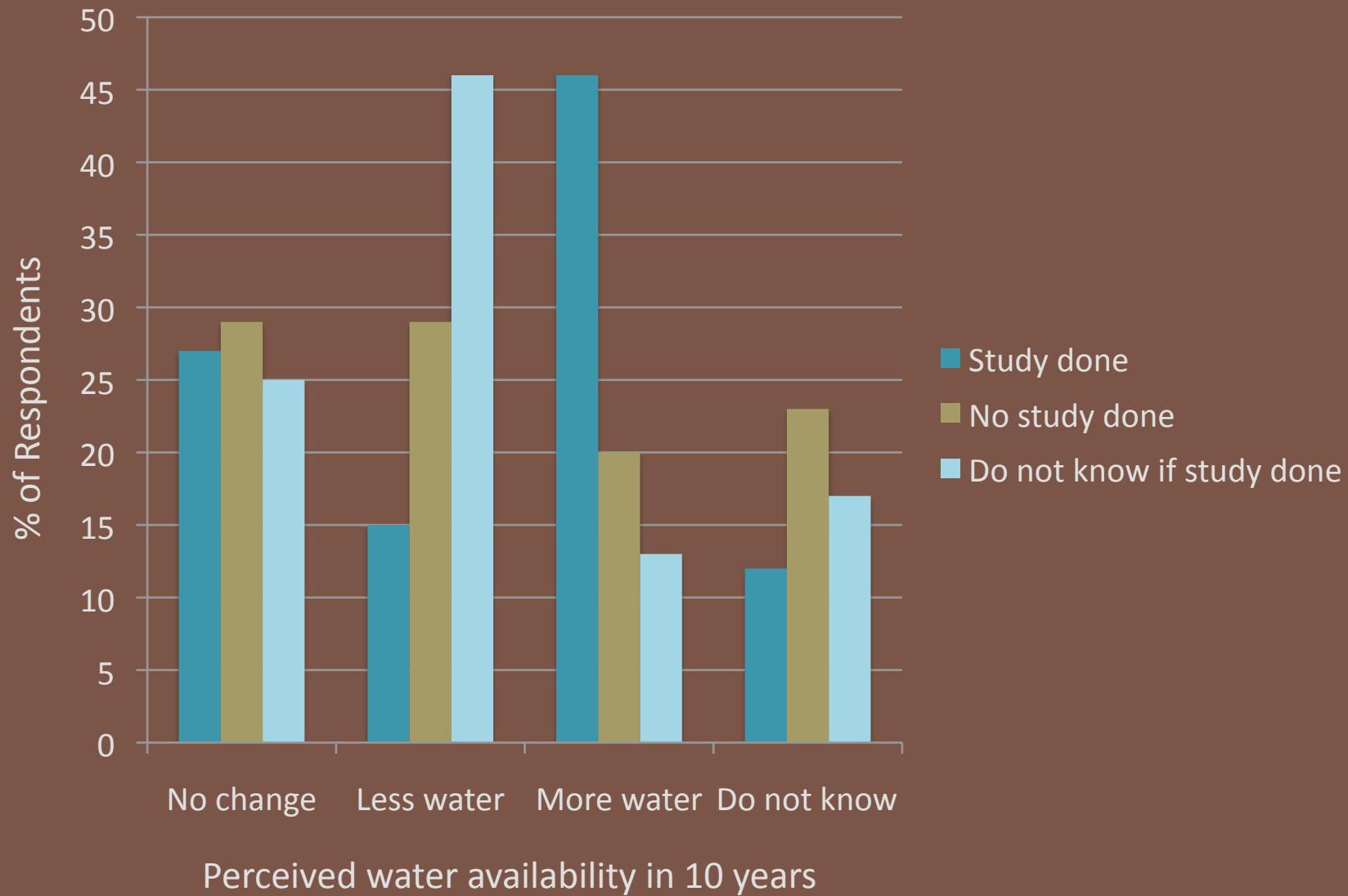
Perception of Available Supply

Has the amount of water available (e.g. well level, river level) to your jurisdiction changed in the past 10 years? (n=85)

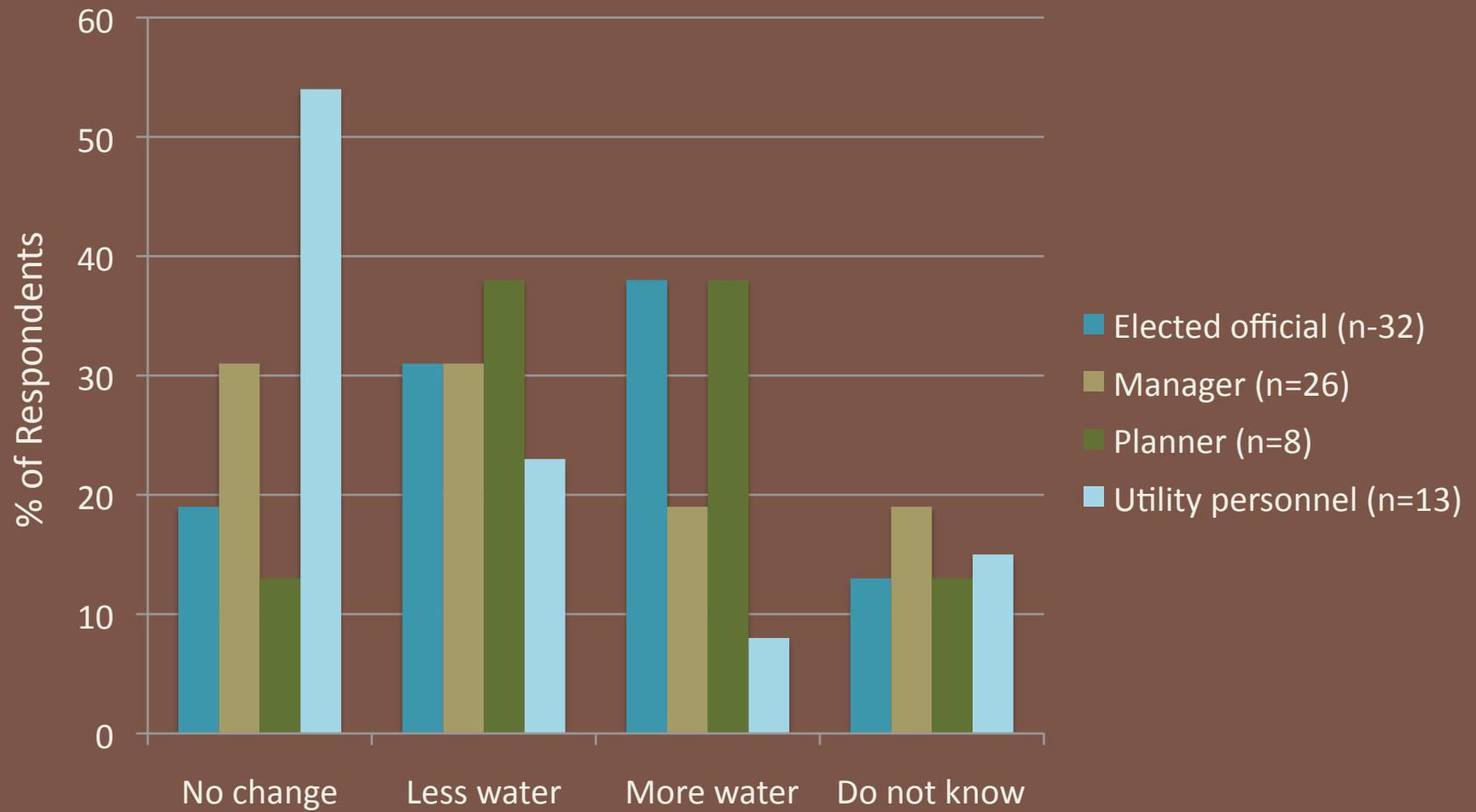
Do you anticipate that the amount of water available (e.g. well level, river level) to your jurisdiction will change in the next 10 years? (n=85)



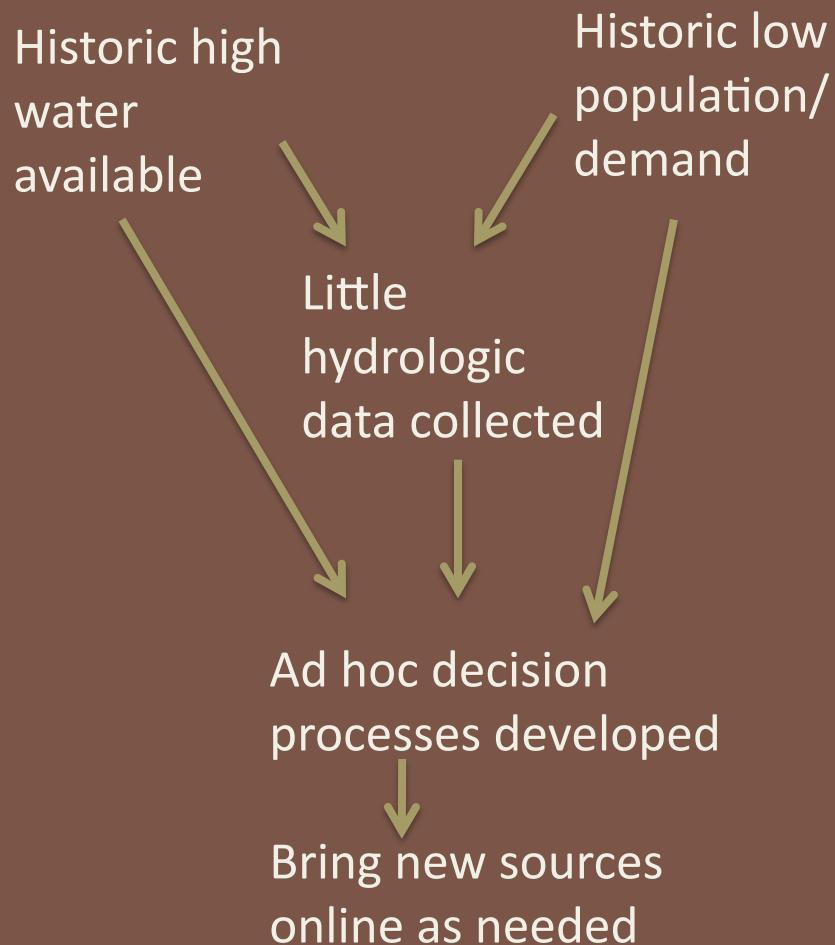
Water availability and initiating scientific study (n=85; p=.07)



Water availability in the next 10 years? (n=79; n.s.)



Conclusion



2012

- High water availability
- Demand growing
- Decisions tied to new sources
- Data tied to new sources
- Elected officials see “supply” in policy terms and perceive that they are data driven