

The Future of Water in the Cape Fear River Basin

*Internet Survey of Government
Officials and Stakeholder Groups*

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Cape Fear River Assembly

CFRA History and Structure

- CFRA is a nonprofit organization representing stakeholders from a variety of interests who care about protecting the Cape Fear River.
- CFRA was founded in 1973 by a group of committed individuals to raise awareness of the value of the Cape Fear River.
- CFRA remains the only organization focused on the entire Cape Fear River Basin from the headwaters to the coast.
- CFRA's diverse membership and board of directors include local governments, conservation groups, universities, water utilities, agriculture and industry; as well as individuals.

CFRA Activities and Approach

- CFRA holds an annual meeting each May and has worked on projects related to water quality monitoring, land use planning, survey research, climate change and other issues.
- CFRA recently held three regional forums to build consensus and gather information
- CFRA draws attention to impacts on the river of: growth, development, industry and agriculture.
- CFRA seeks ways to promote the Cape Fear River as a vital regional resource that provides foundation for our economy and quality of life.

PROJECT DESIGN AND RESPONDENT CHARACTERISTICS

Project Goal and Approach

- The goal of this study was to gather insights about a broad range of water issues from an intentionally selected group of governmental officials and key stakeholder groups from the entire Cape Fear River basin.
- These opinion leaders and government officials are expected to have different perceptions, knowledge levels and demographic profiles from the broader population.
- Based on this survey and regional forums we will develop educational materials and social marketing strategies that emphasize the value of water and other common themes.

Project Study Area

- The Cape Fear River Basin is the largest river basin in North Carolina, covering over 9,100 square miles in central and eastern North Carolina (about 17% of the total land area of the state.)
- The Cape Fear River Basin contains one-third of the state's population, and all or part of 25 counties.
- The headwaters (Haw River and Deep River) start in the northern Piedmont region near Greensboro.
- The Haw River flows through Jordan Lake and then combines with the Deep River to form the Cape Fear River.



“Based on the list of counties below, in which of the following sub-basins do you currently live and/or work in?”

Cape Fear River Sub-Basin	Percent	Number
Upper Cape Fear River sub-basin (Alamance, Caswell, Chatham, Durham, Guilford, Orange, Randolph, Rockingham, and Wake Counties)	42%	83
Middle Cape Fear River sub-basin (Cumberland, Harnett, Hoke, Johnston, Lee, Moore, Sampson, and Wayne Counties)	30%	60
Lower Cape Fear River sub-basin (Bladen, Brunswick, Columbus, Duplin, New Hanover, Onslow, Pender, and Robeson Counties)	29%	59

Just over 200 of the approximately 400 possible respondents identified completed the survey.

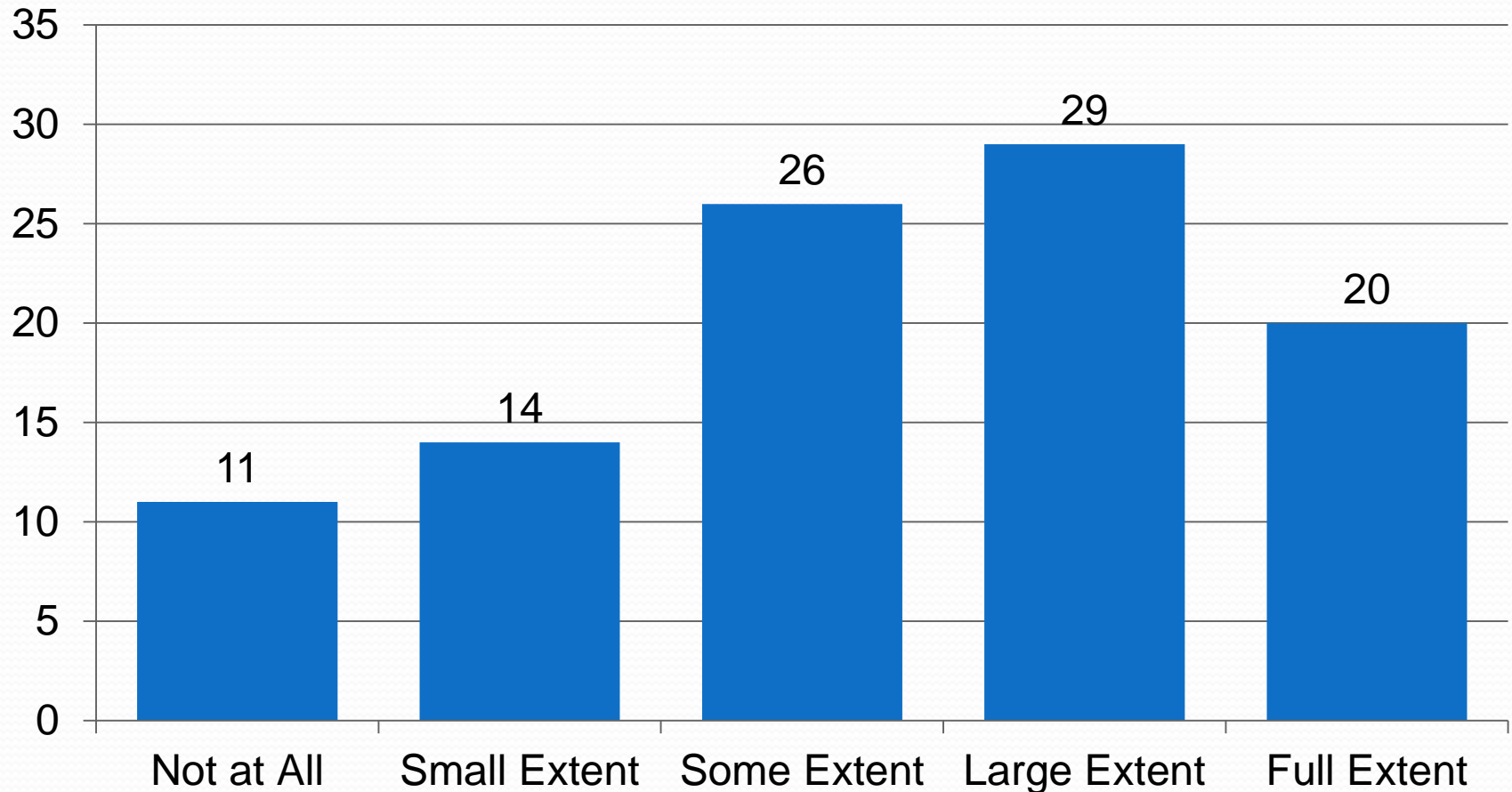
Sample Design and Framework

- **County Government Agencies Selected from each of 25 counties.** Six were invited from departments, such as: NC Cooperative Extension Service, Soil and Water Conservation District, Public Works, Planning, Economic Development, Utilities, and/or Parks and Recreation **(n=150)**
- **Five City Government Agencies Selected from Ten largest cities in watershed (*Raleigh, Greensboro, Durham, Fayetteville, Cary, Wilmington, High Point, Chapel Hill, Burlington, and Apex*):** Five were invited from departments such as: Storm water, Planning, Economic Development, Sustainability, Recreation, and/or Public Works **(n=50)**
- **Water Staff from State (e.g., DEQ, Soil and Water, Wildlife Resources) and Federal Agencies(USGS, Fish and Wildlife, Defense) (n=60)**
- **Members of Three Sub-basin Monitoring Coalitions:** Lower **(n=21)**, Middle **(n=15)**, and Upper **(n=26)**
- **Environmental and Conservation Groups** with Locations in the Cape Fear River basin **(n=40)**
- **Economic Development and Chambers of Commerce (n=20)**
- **Other Sources:** Members of the Jordan Lake Partnership and Cape Fear River Partnership **(n=50)**

“Which of the following best describes the type of organization you work for?”

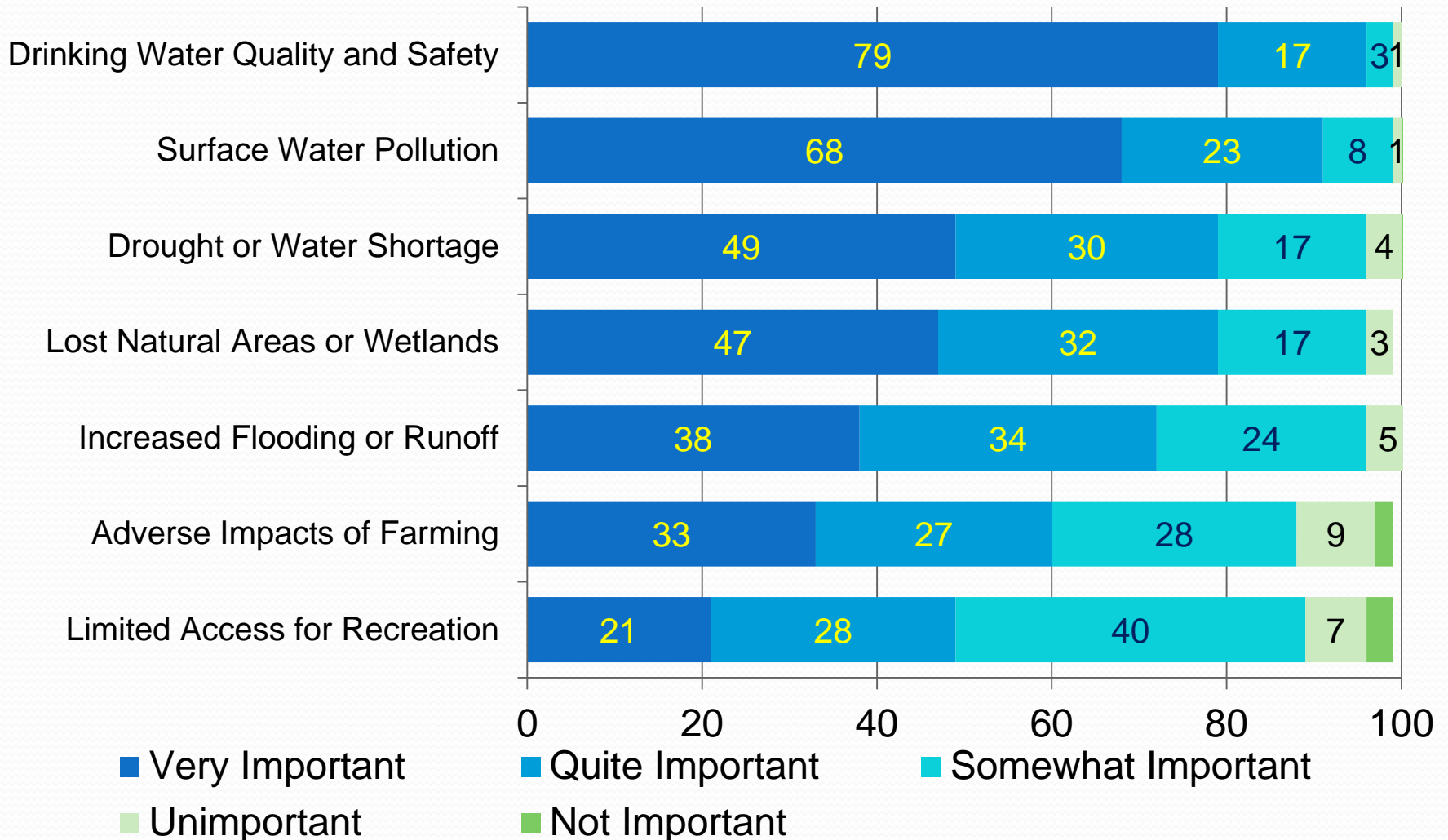
Type of Work Organization	Percent
Municipal or County Government	48%
State or Federal Government	15%
Environmental or Conservation Group	10%
Business or Industry	9%
Educational Institution	6%
Economic Development Organization	5%
Water or Wastewater Utility	3%
Other Organization	3%

“To what extent does your work directly or indirectly involve water planning or management?”

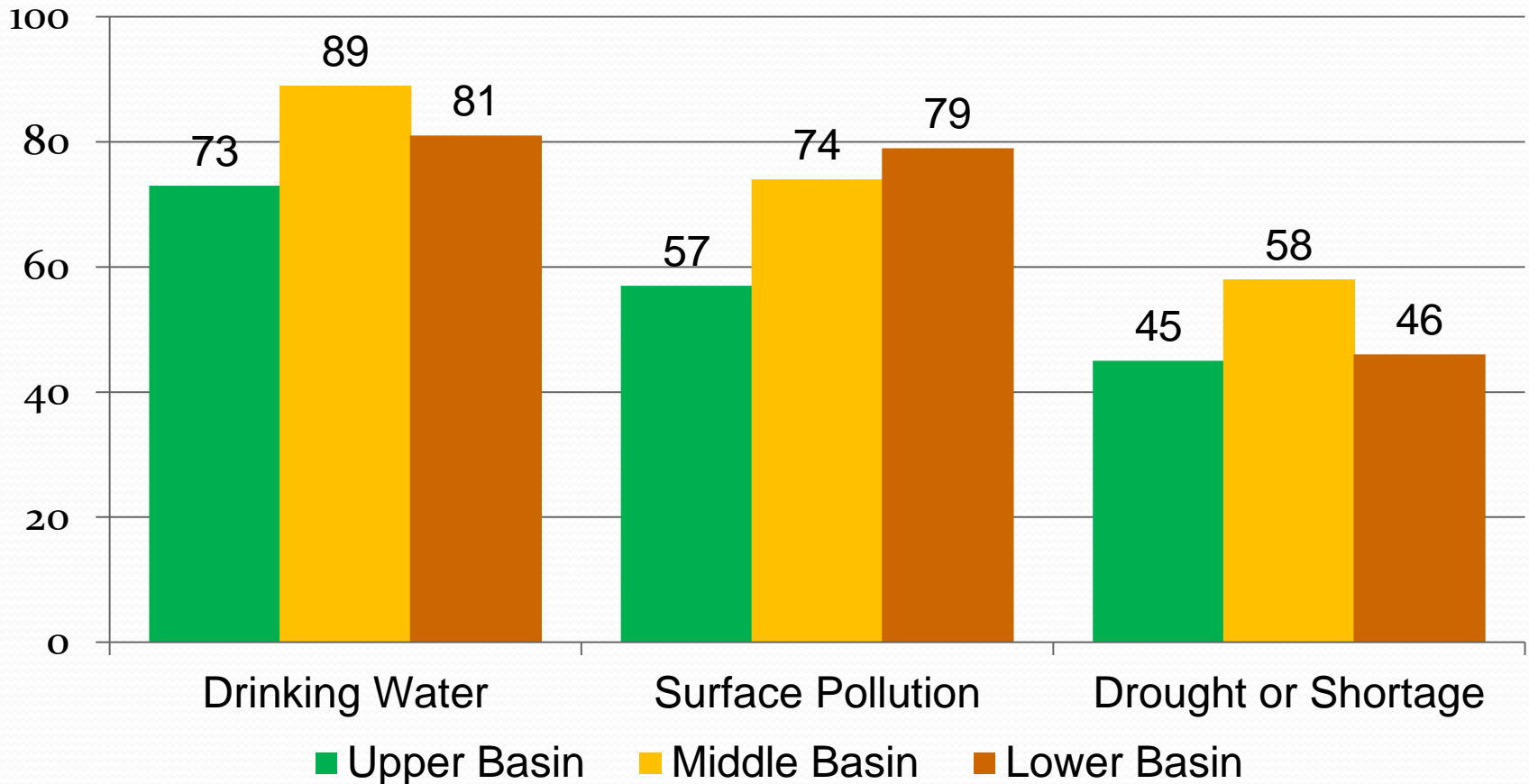


PERCEPTIONS OF WATER RELATED ISSUES

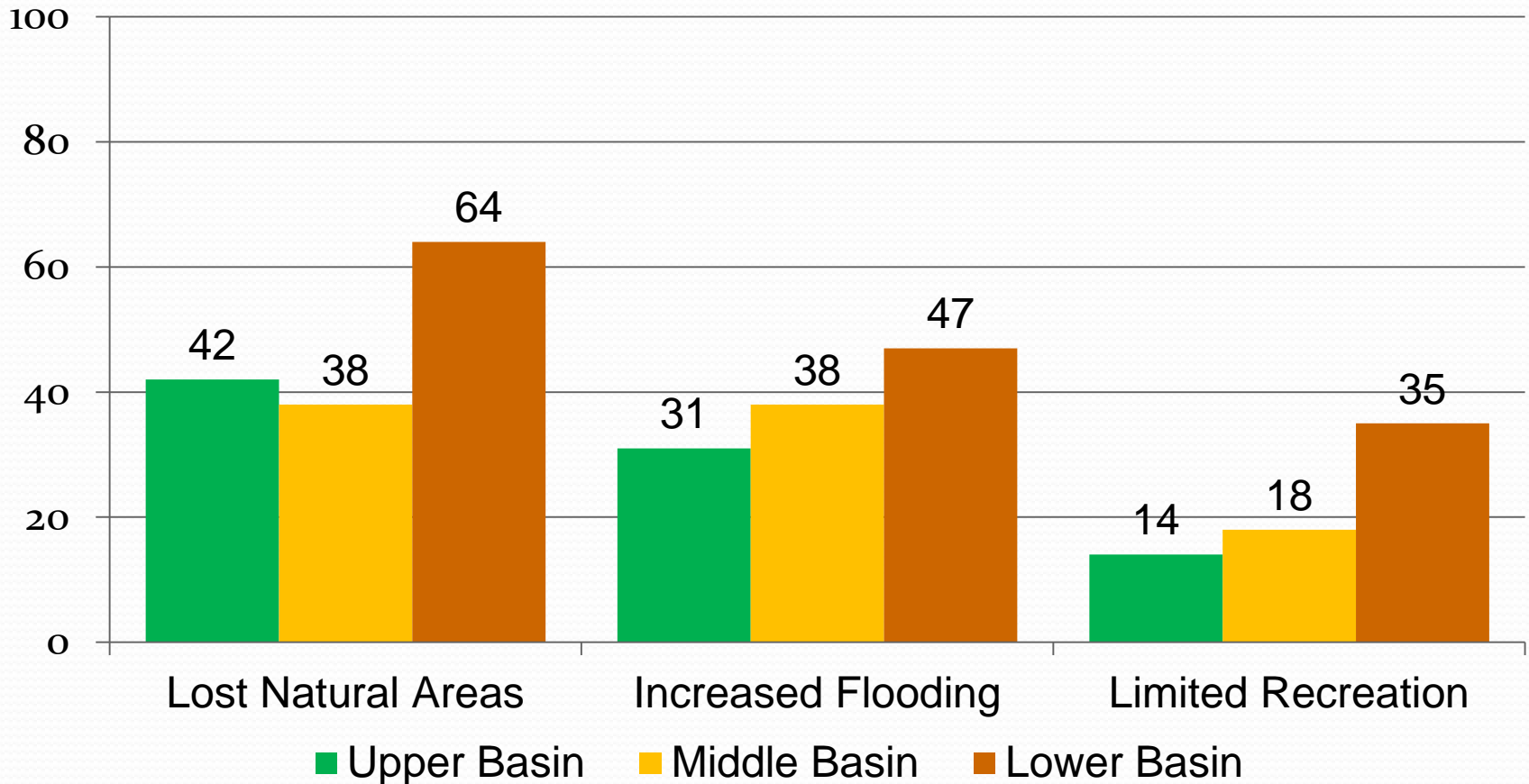
“How important would you rate each of the following water-related issues to the people and communities in your area?”



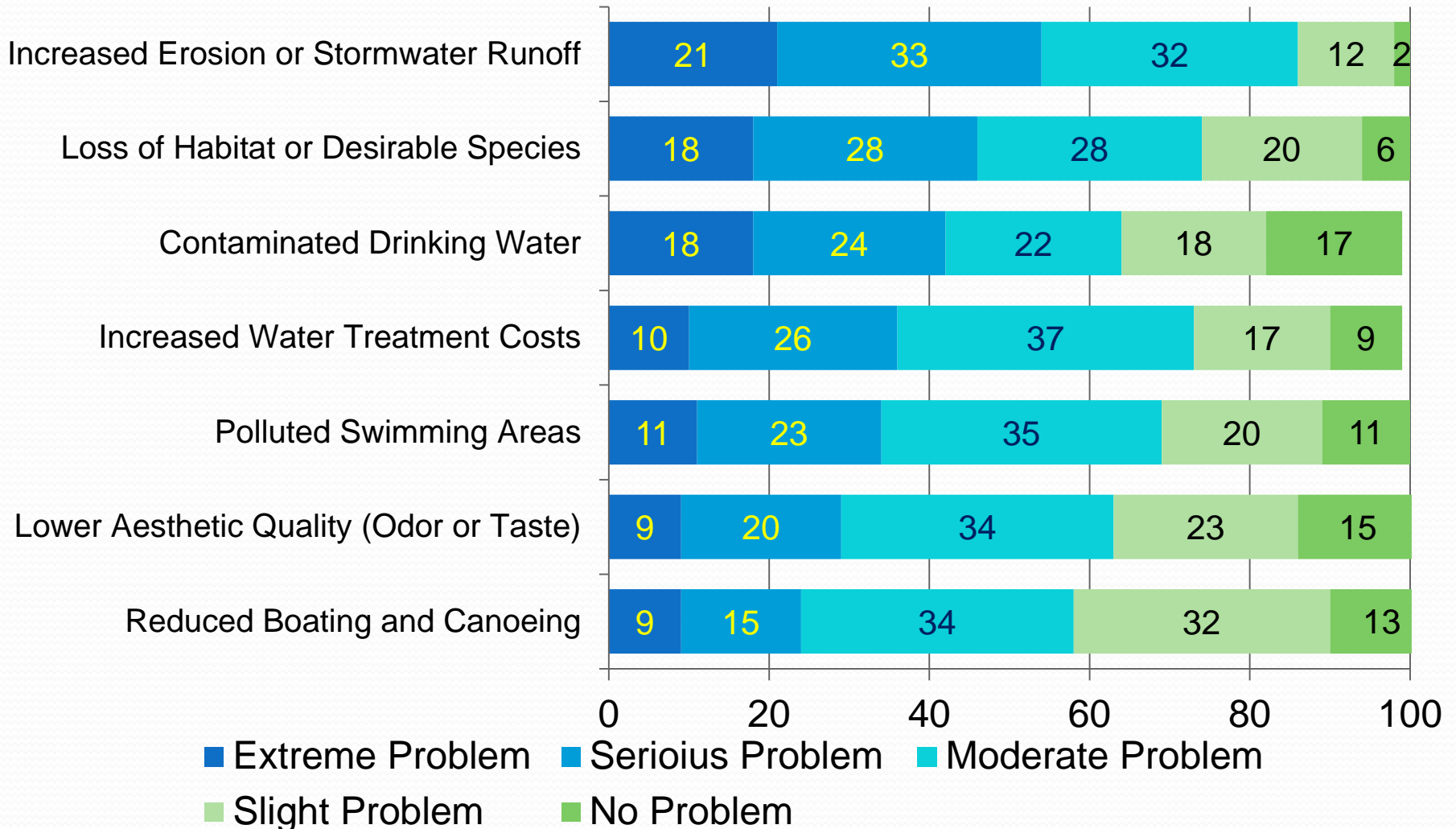
Sub-basin Comparison of “*Very Important*” Water-Related Issues



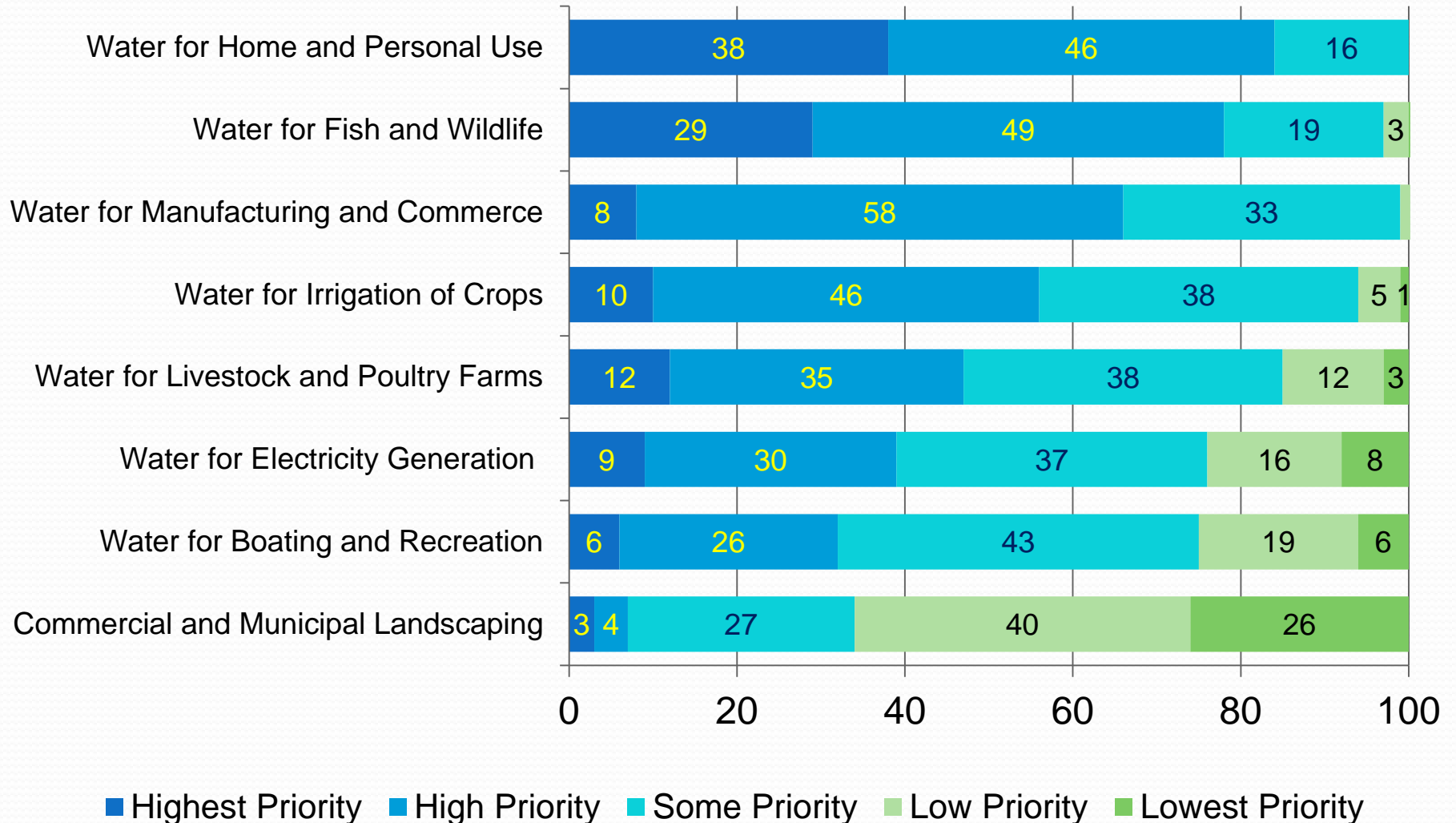
Sub-basin Comparison of “Very Important” Water-Related Issues



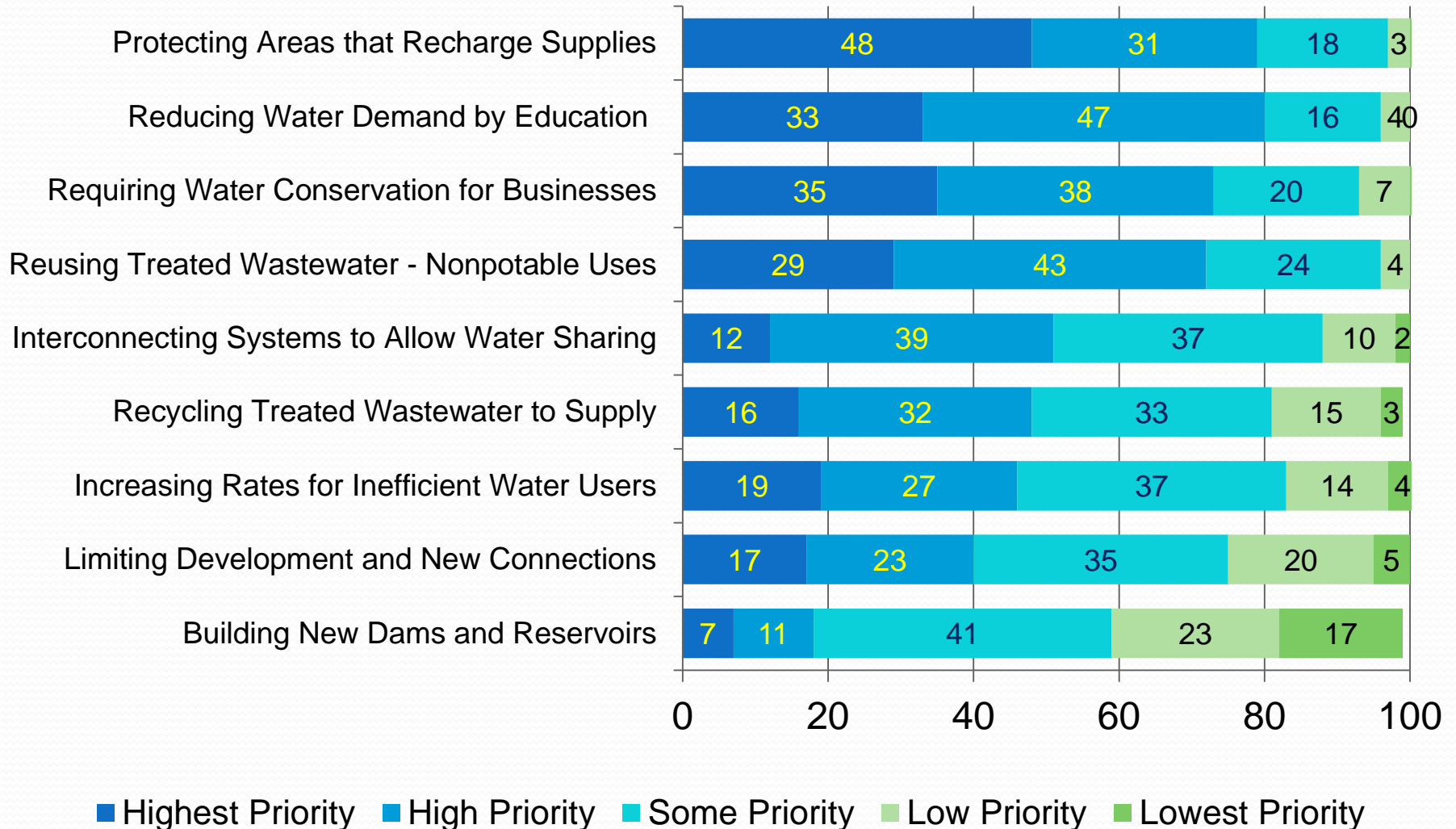
“How serious of a problem are each of the following water pollution impacts to people and communities in your area?”



“As future water supplies become tighter or we experience another serious drought, how much priority should be given to each of the following uses of water in your area?”

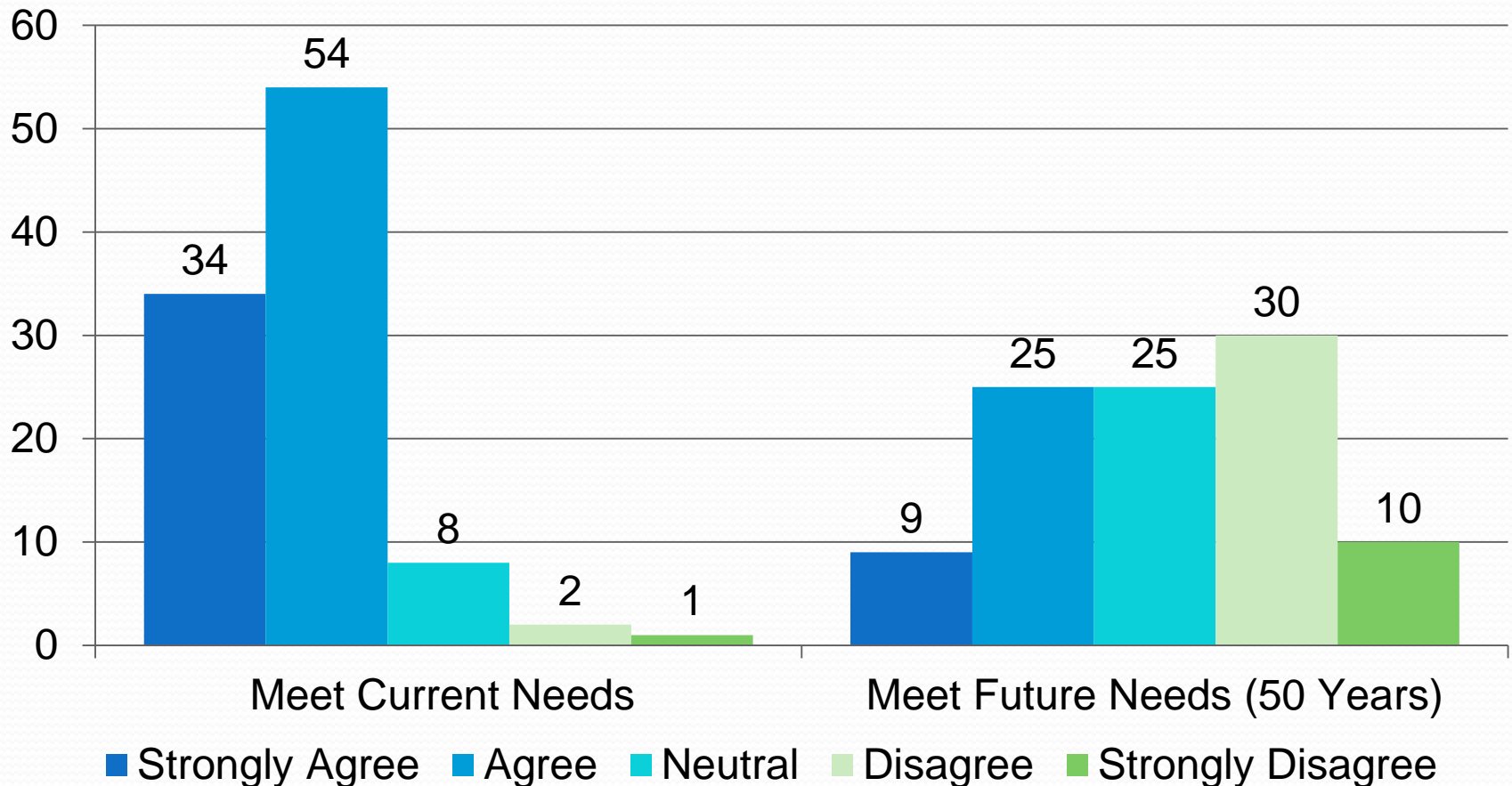


“How much priority should be given to each of the following approaches for providing future water supplies?”

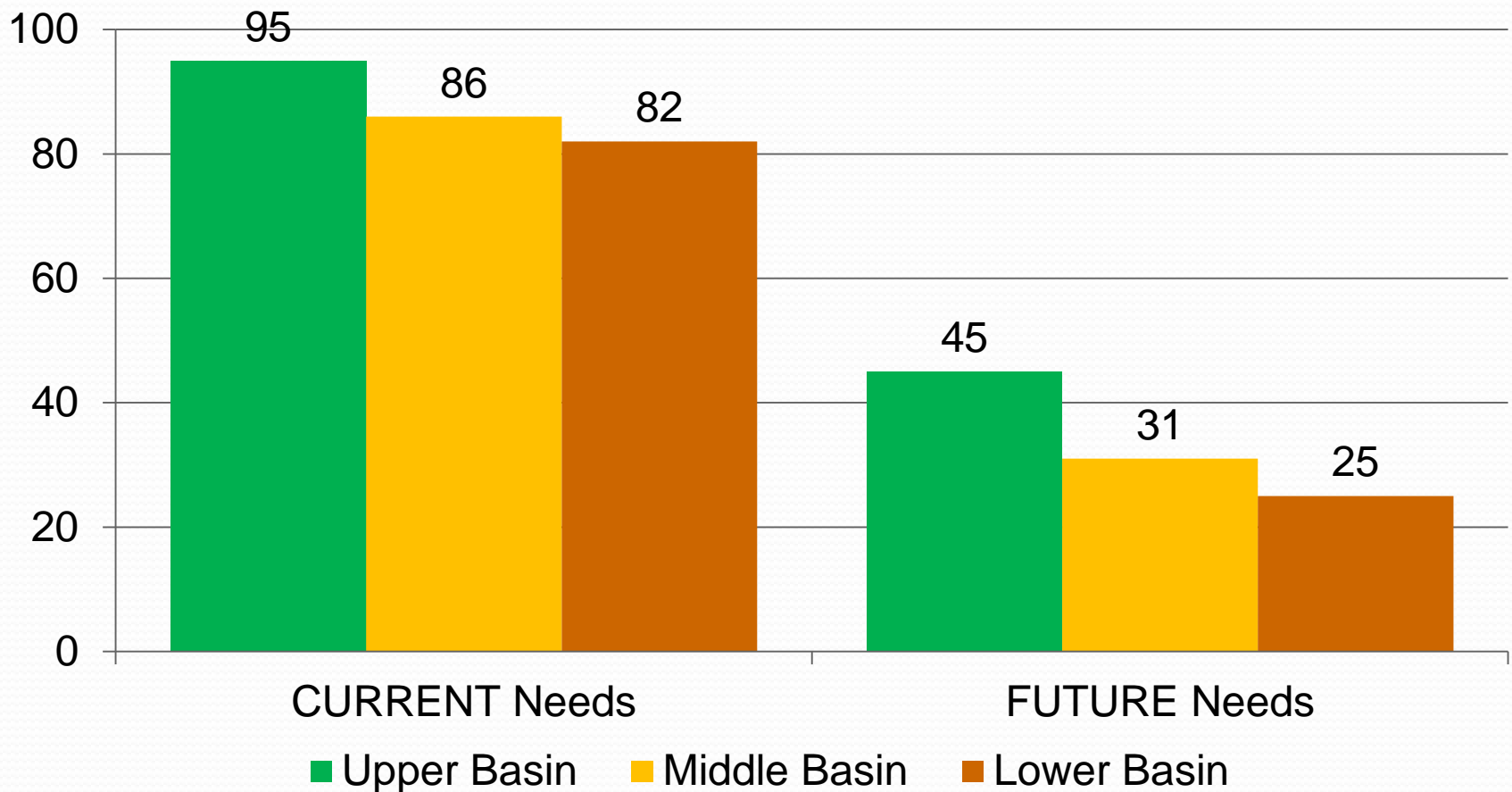


PERCEPTIONS OF PUBLIC POLICIES AND THE FUTURE

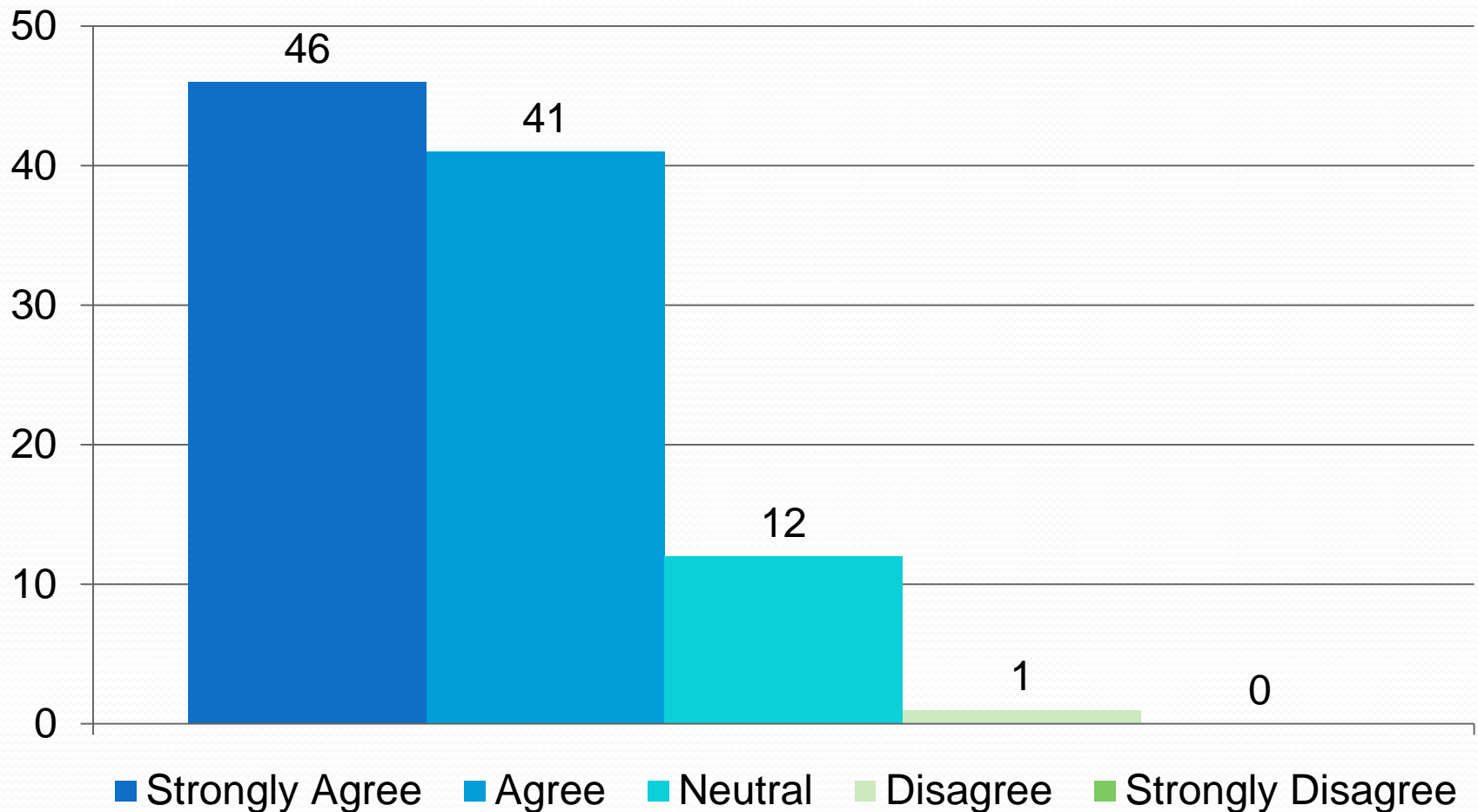
“There is enough water in our area to:



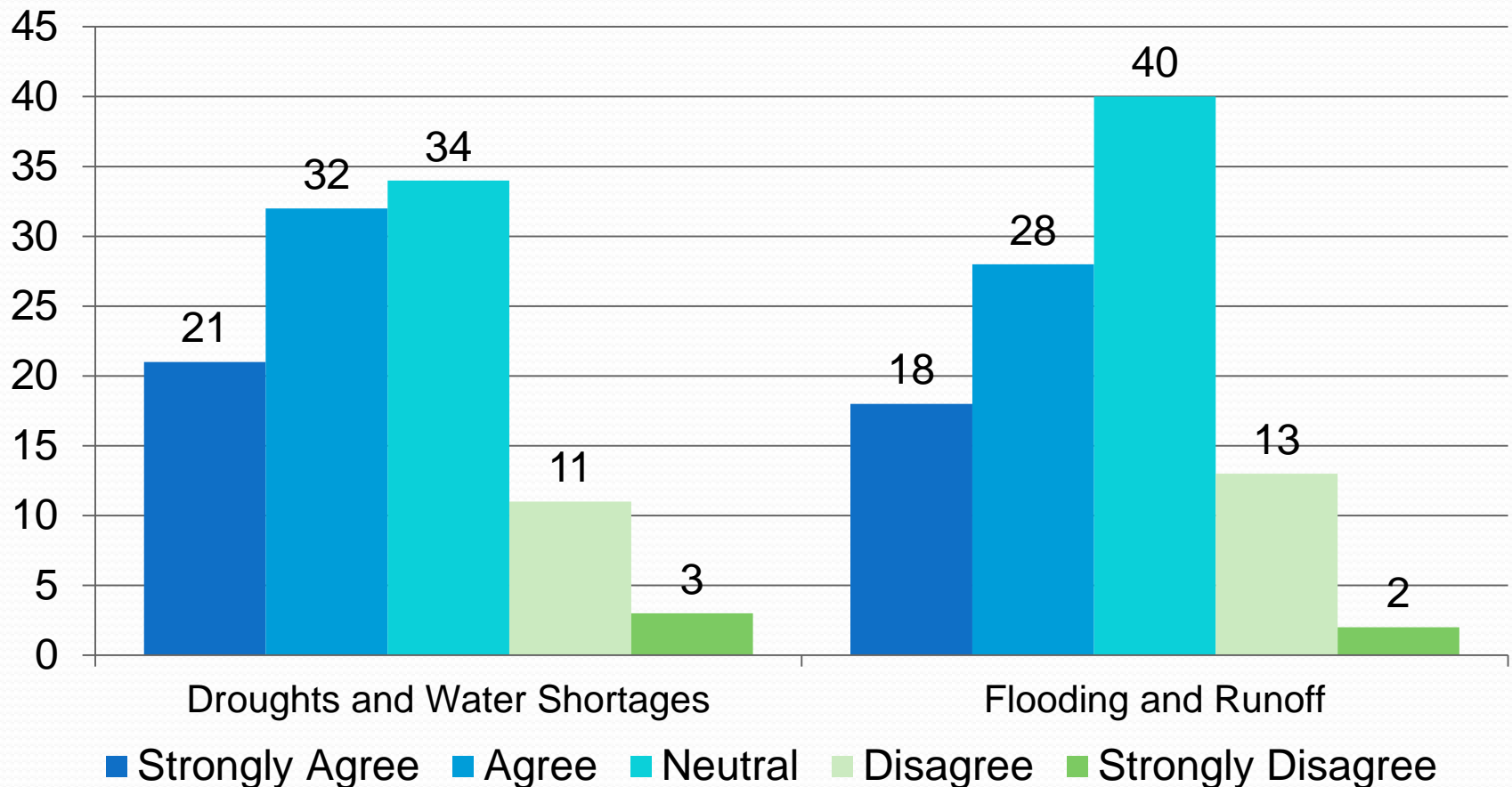
Sub-basin Comparison of “Agreement” That There is Enough Water to Meet



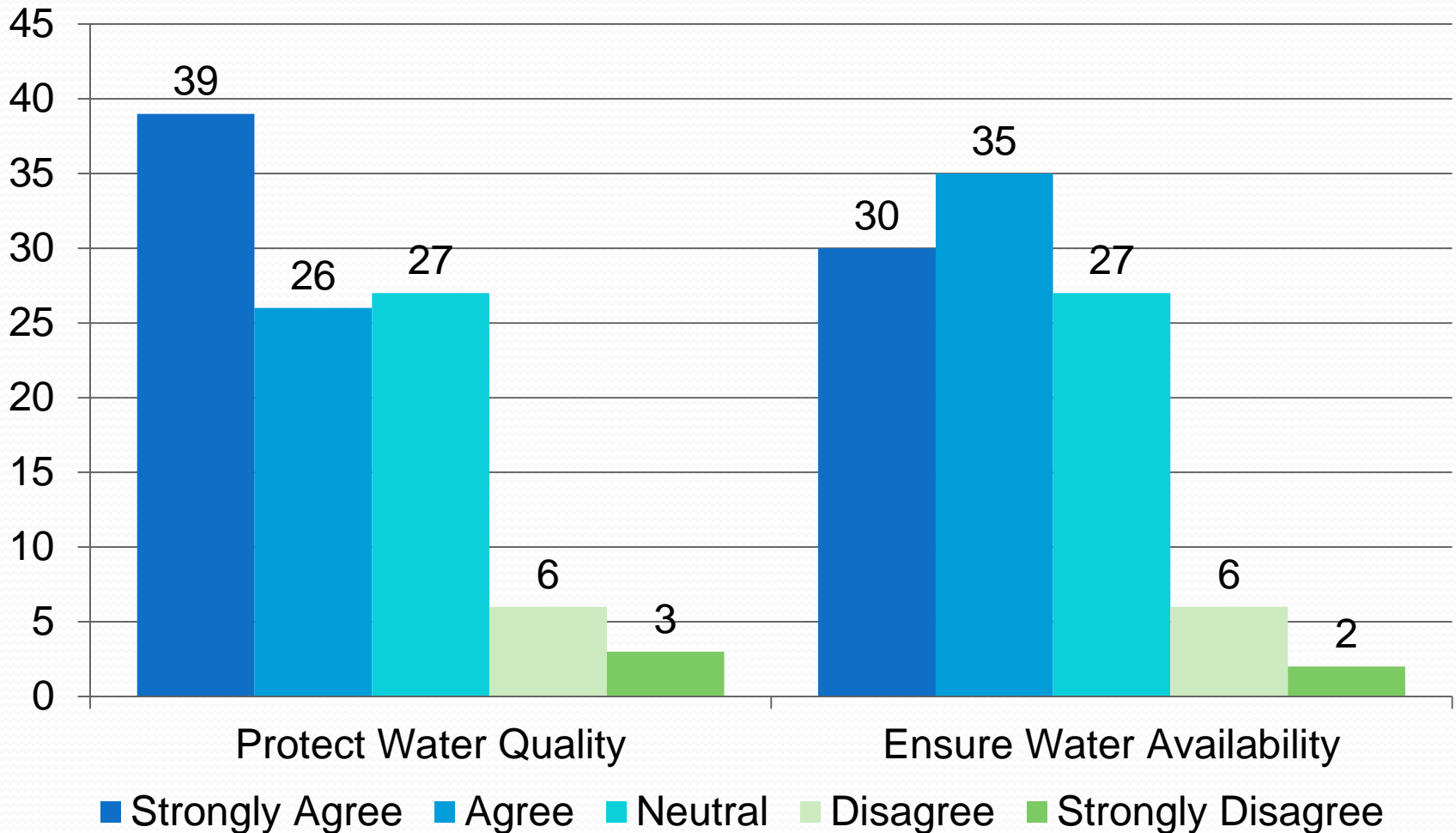
“Conflicts over water supply and availability will increase significantly over the next few decades.”



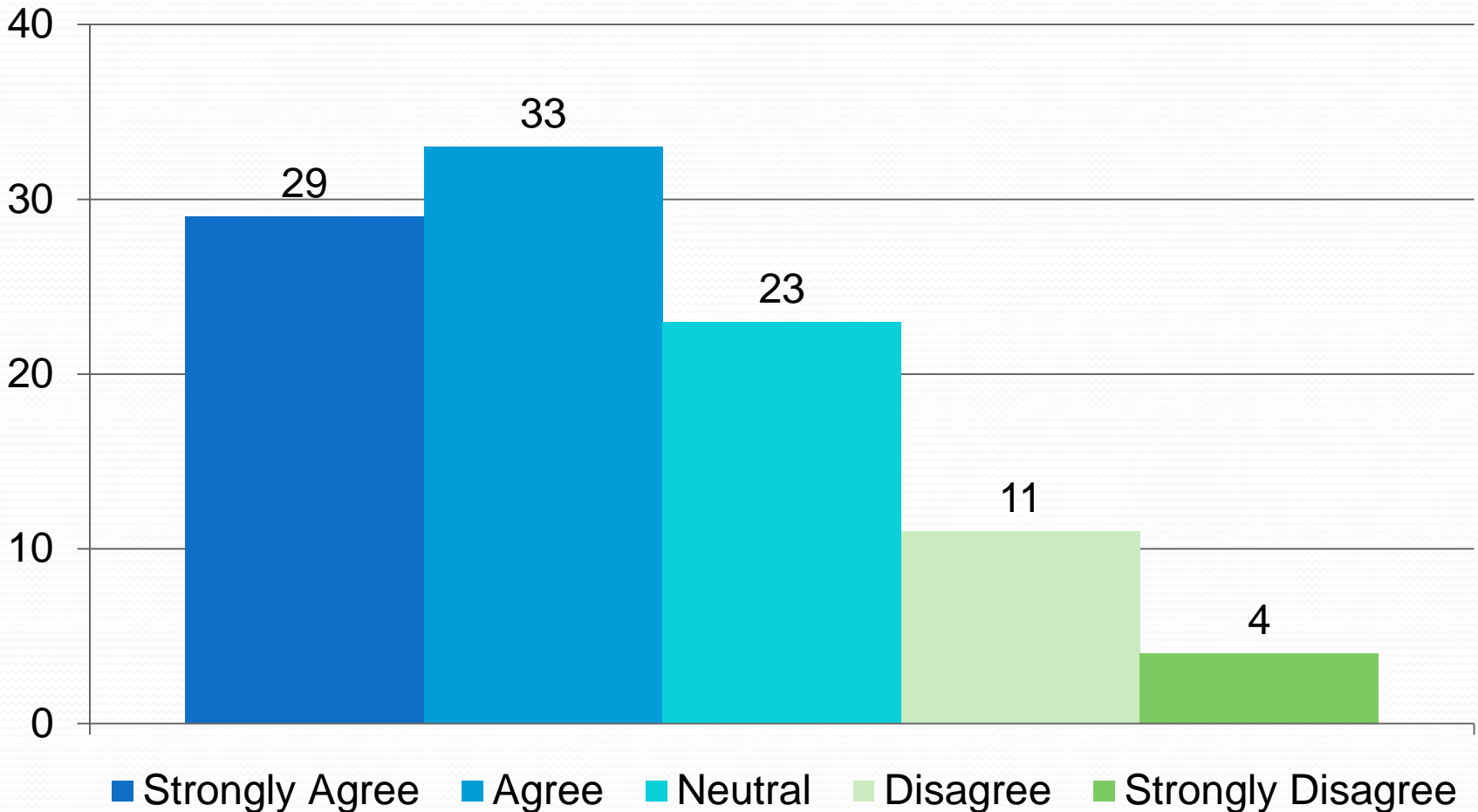
“Climate change over the next few decades will make _____ significantly worse in our area.”



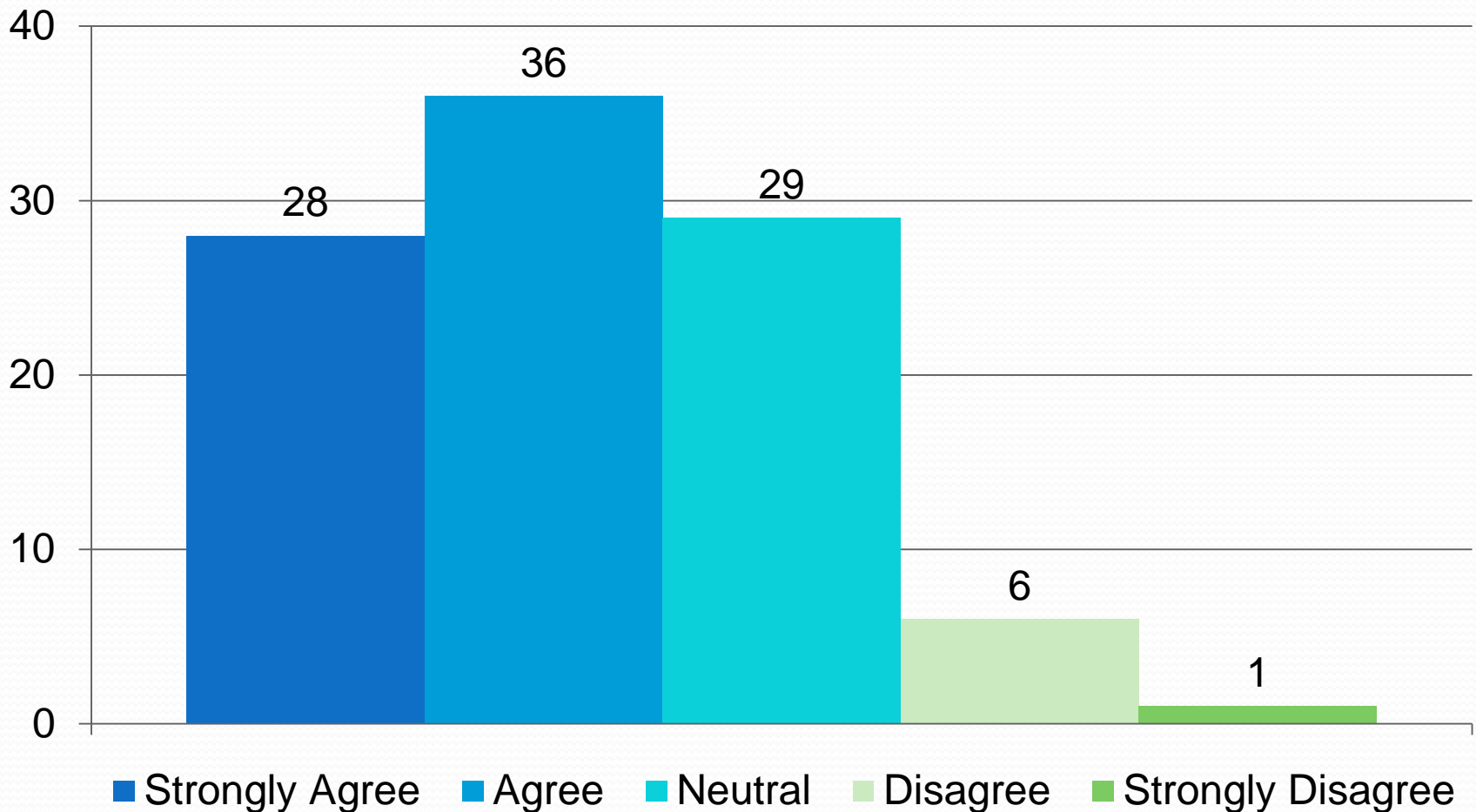
“Government agencies should be doing more to _____ in our area .”



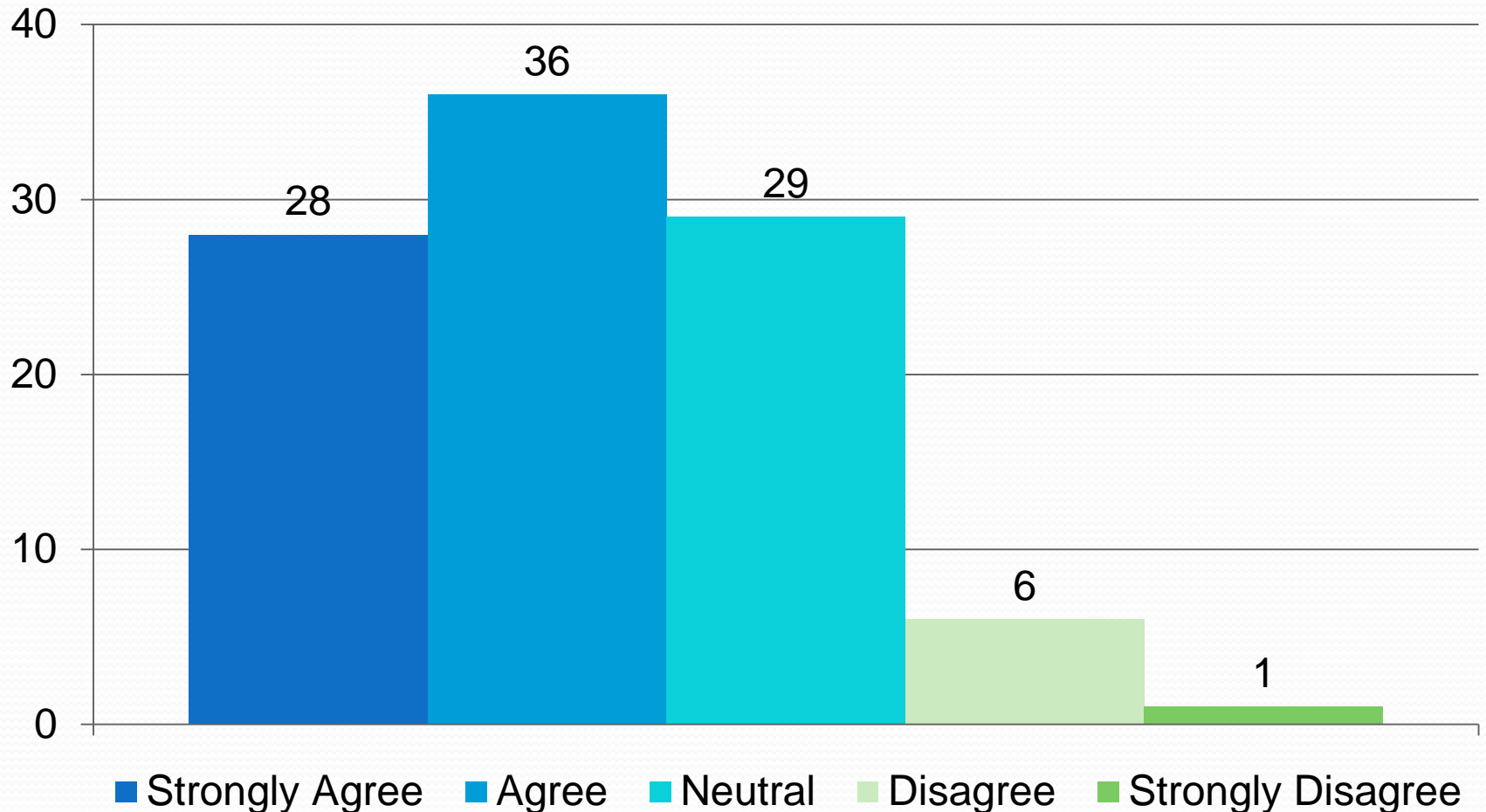
“Enforcement of existing regulations is not adequate to protect water quality.”



“Protection of our water supplies should be given priority, even at the risk of reducing economic growth.”



“The NC General Assembly has been making our state water laws weaker over past few years.”

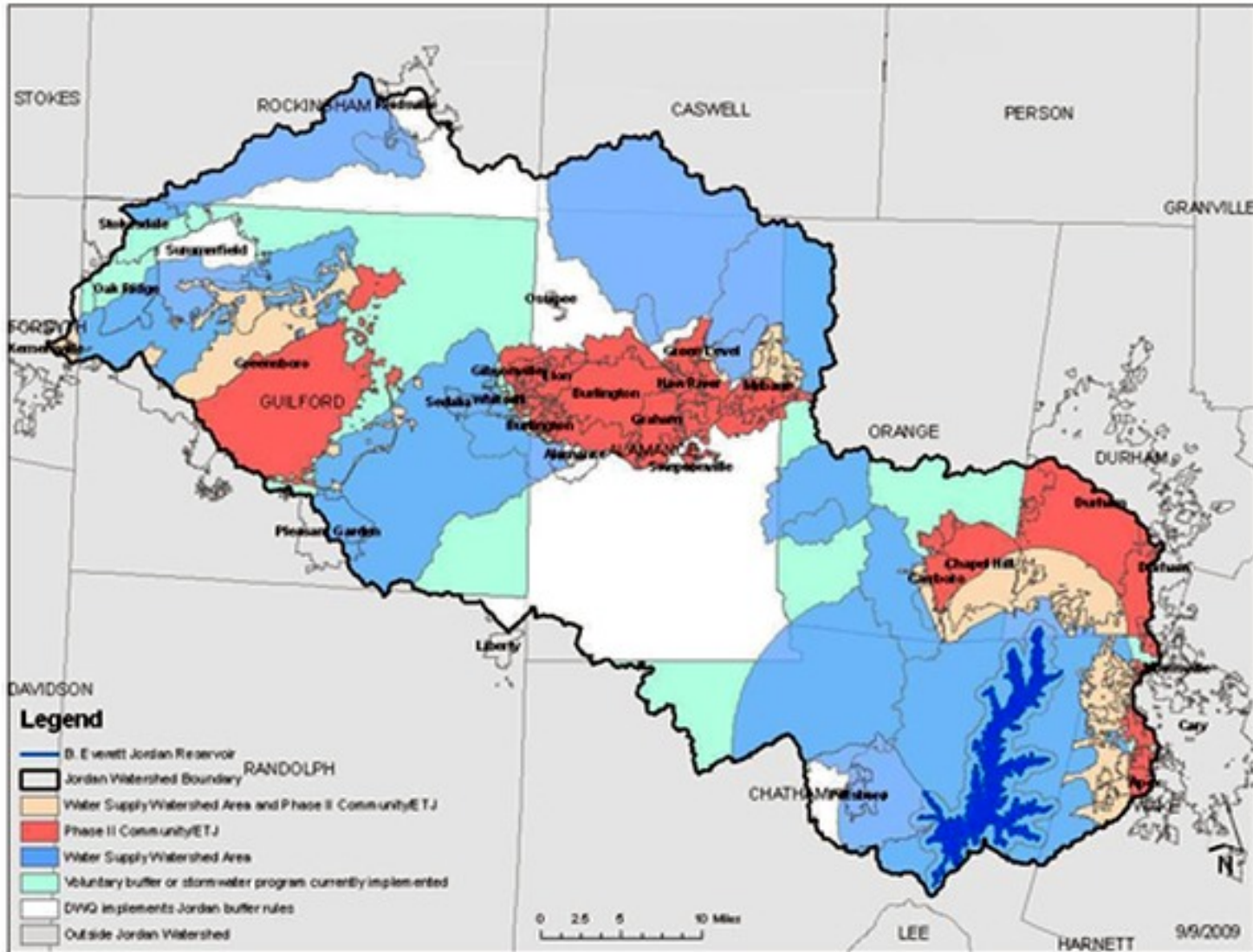


PERCEPTIONS OF THE JORDAN LAKE RULES

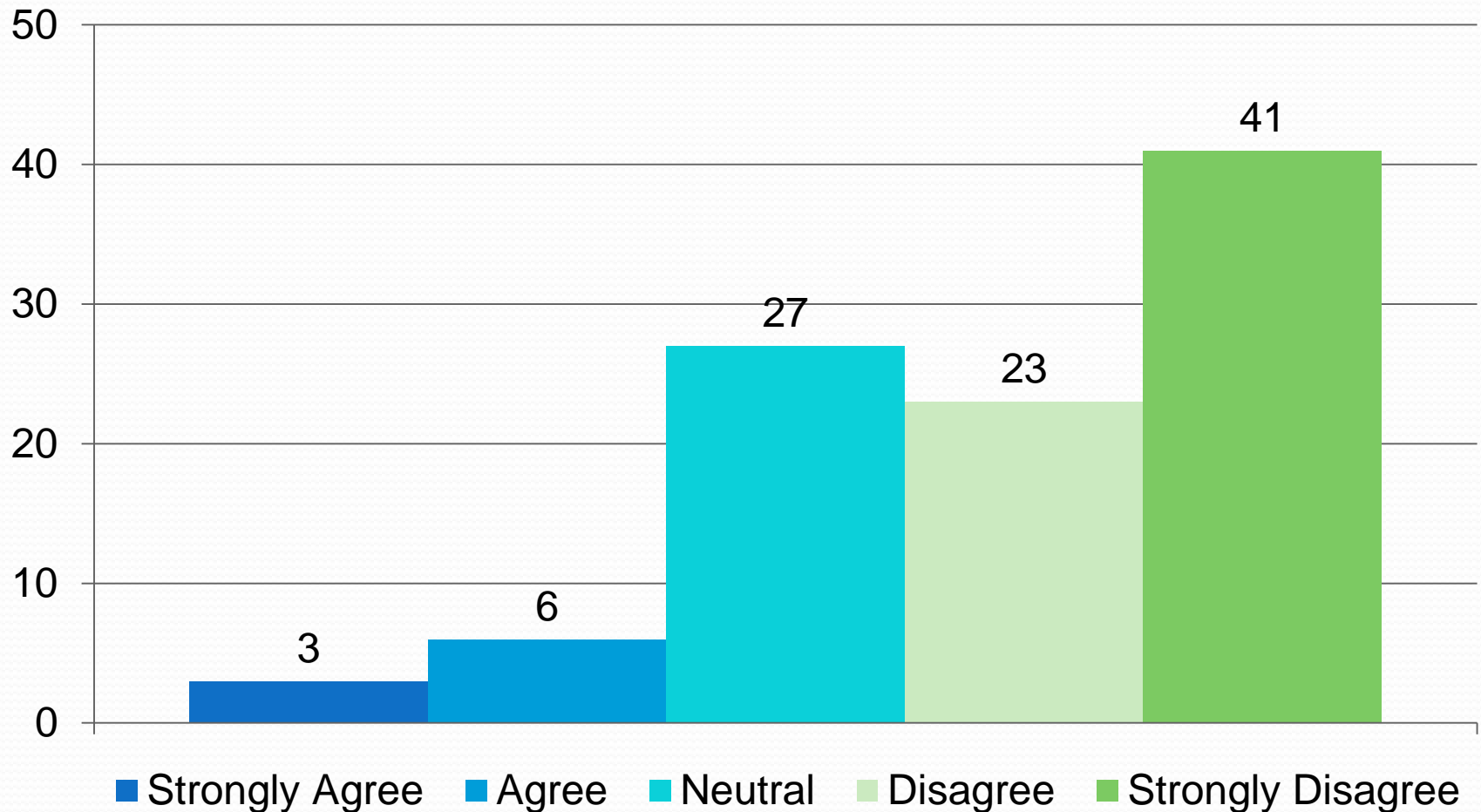
Description of Jordan Lake

- Jordan Lake was impounded in 1983 by damming the Haw River just upstream of its confluence with the Deep River. An eight-county watershed drains into Jordan Lake.
- Jordan Lake is now the primary source of drinking water for nearly 300,000 people in Cary, Morrisville, and Apex, as well as parts of Chatham and Durham counties. More than 1 million people use the lake for swimming, boating and fishing each year.
- Since it was created in 1983, Jordan Lake has been recognized as being “nutrient sensitive” which increases algal blooms.
- In response, the “Jordan Lake Rules” were adopted by the General Assembly in 2009.
- The Jordan Lake Rules are a nutrient management strategy designed to restore water quality in the lake by reducing the amount of pollution entering upstream from an array of sources.

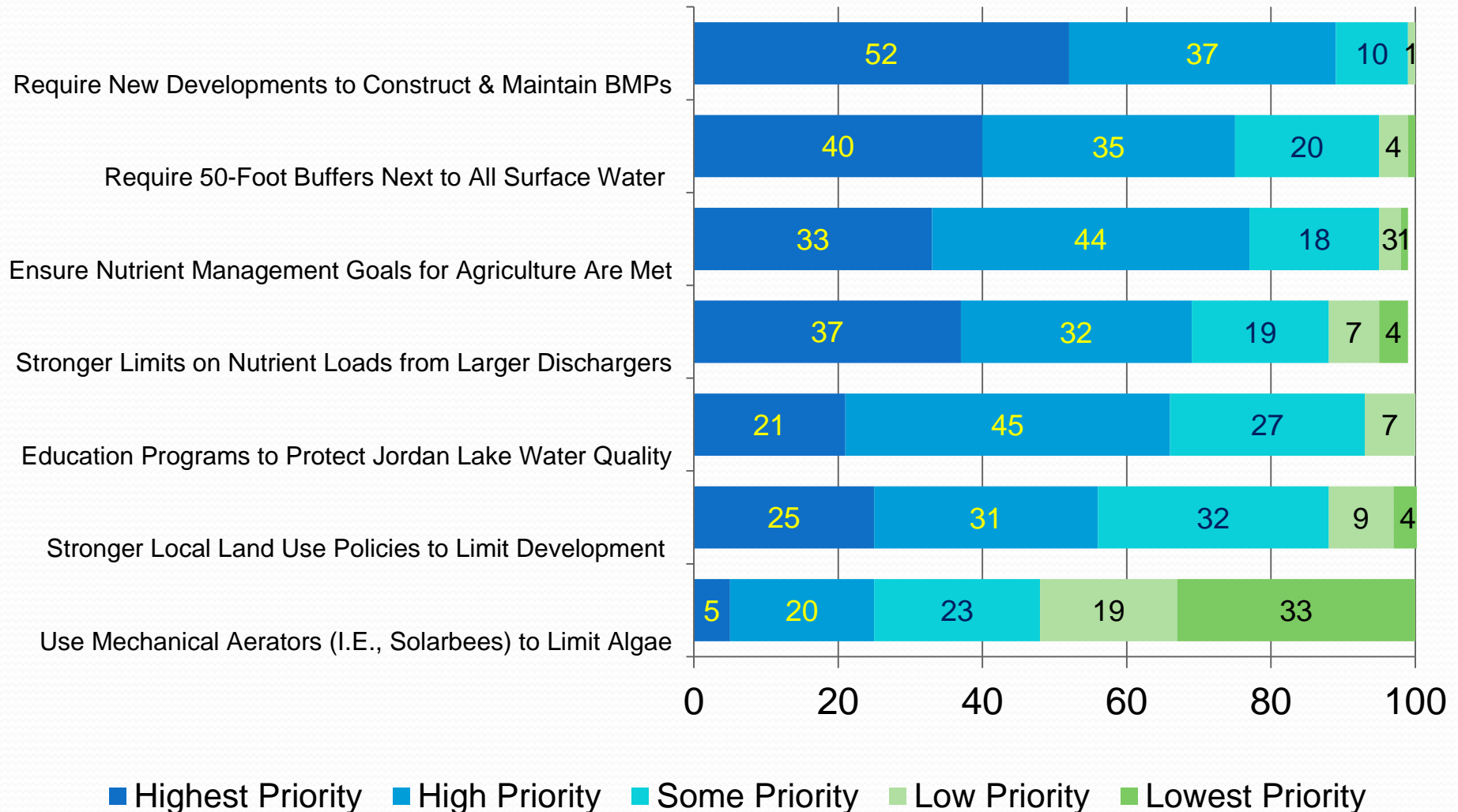
Map of Jordan Lake Watershed



“The NC General Assembly delayed implementation of the Jordan Lake rules three times – most recently in 2013. How much do you agree or disagree with this delay in implementation?”



“How much of a priority should be given to each of the following in order to restore water quality in Jordan Lake?”



DISCUSSION AND NEXT STEPS

Sub-Basin Analysis

- Working to identify common ground among regions and point out significant differences.
- Respondents from upper sub-basin were generally:
 - *Less concerned over pollution impacts and causes*
 - *Less supportive of stronger government intervention*
 - *More agreement about adequacy of water supply*
- There are few significant differences in terms of
 - *How much different uses of water are valued.*
 - *What should be done to increase water supplies*
- Further analysis of results should help identify significant differences in responses based on type of employer and water-related job responsibilities.

Next Steps

- Present results to help with interpretation and implications for education and related work.
- Apply input through regional forums held last September. (See <http://cfra-nn.org>.)
- Seek opportunities to refine the programs and niche of the Cape Fear River Assembly.
- Find improved ways to educate people and promoter coordination and cooperations
- Survey theme is to restore public confidence in the safety of municipal water supplies.
- Created new website:
<http://Enjoytapwater.com>

CFRA Goals and Strategies

- CFRA's goal is to educate and inform people about the important values provided by the Cape Fear River, for water supply, recreation, fisheries and manufacturing.
- CFRA aims to connect key stakeholders to one another and provide opportunities for discussing and shaping the future of the Cape Fear River.
- CFRA engages in collaborative partnerships with communities and allied organizations. We seek common ground to build consensus about solutions to problems.

More Information

We would appreciate any comments about the implications and interpretations of the survey.

We also hope you will review results of the regional forums. Copies of posters, video, and public involvement efforts can be found at website:

Website: <http://cfra-nc.org>

E-Mail: cfraexec@gmail.com