

How do Great Lakes Cities Compare?

Patterns of climate resilience in regional water policy

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Environmental Studies



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Introduction

- Results from a national study of local government climate policies
- Focus on jurisdictions in the Great Lakes watershed
- Examines who in the water sector is engaged in climate planning, scope of effort, sources of information and learning, and barriers

Resilience

“the capacity of a system to *absorb disturbance and reorganize* while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks”

Source: Walker, B., Holling, C. S., Carpenter, S. R., Kinzig, A. (2004). "Resilience, adaptability and transformability in social–ecological systems". *Ecology and Society* **9** (2): 5.

The importance of local

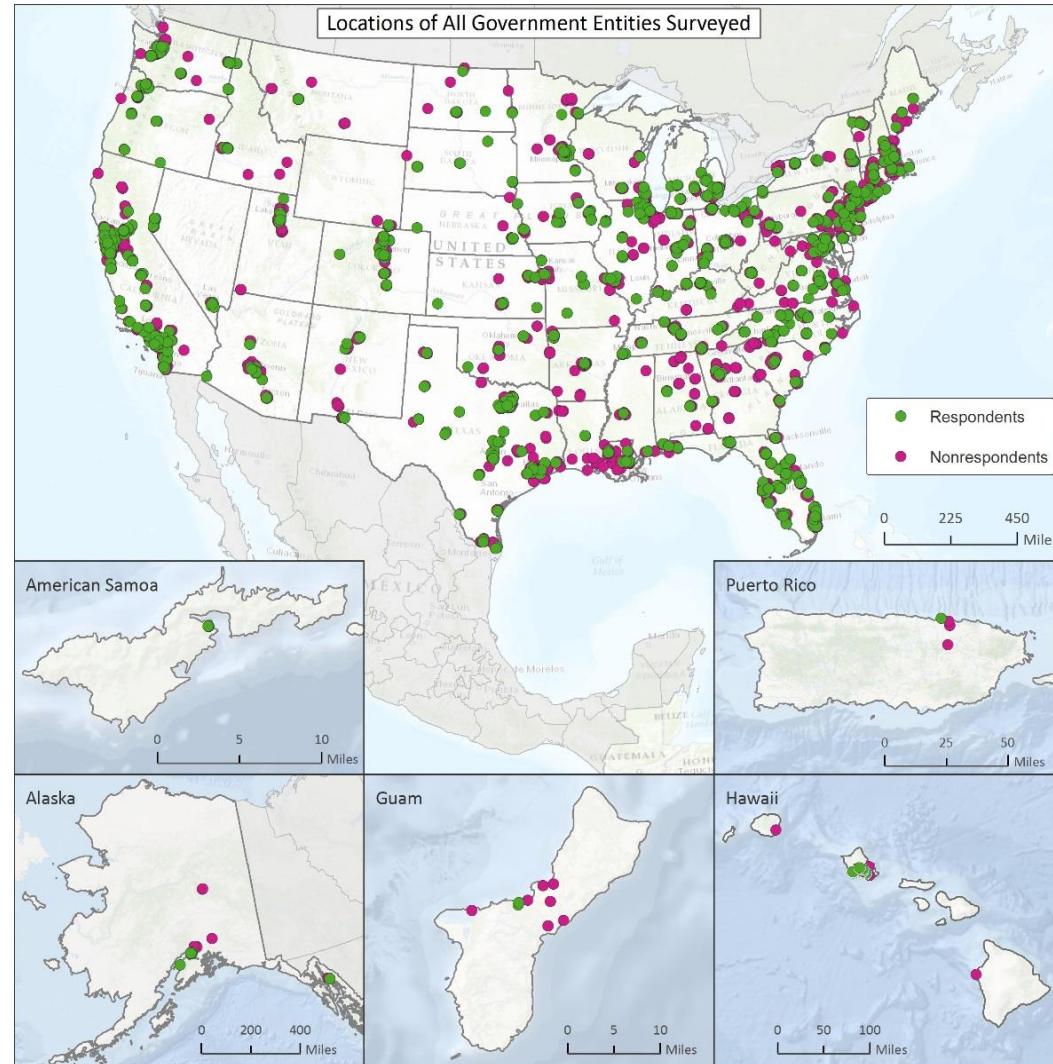
- Local jurisdictions are leading in climate policy
- Nature of climate impacts and effective responses are highly localized
- Compare climate planning and policy activities in the water sector among local jurisdictions within the Great Lakes watershed



LOCAL CLIMATE POLICY PROJECT

- National-level NSF-funded study to understand local climate policies
- Organizations identified as playing an important role in local climate policy were surveyed
- Assessed how organizations viewed the policy challenges that climate change poses to their activities

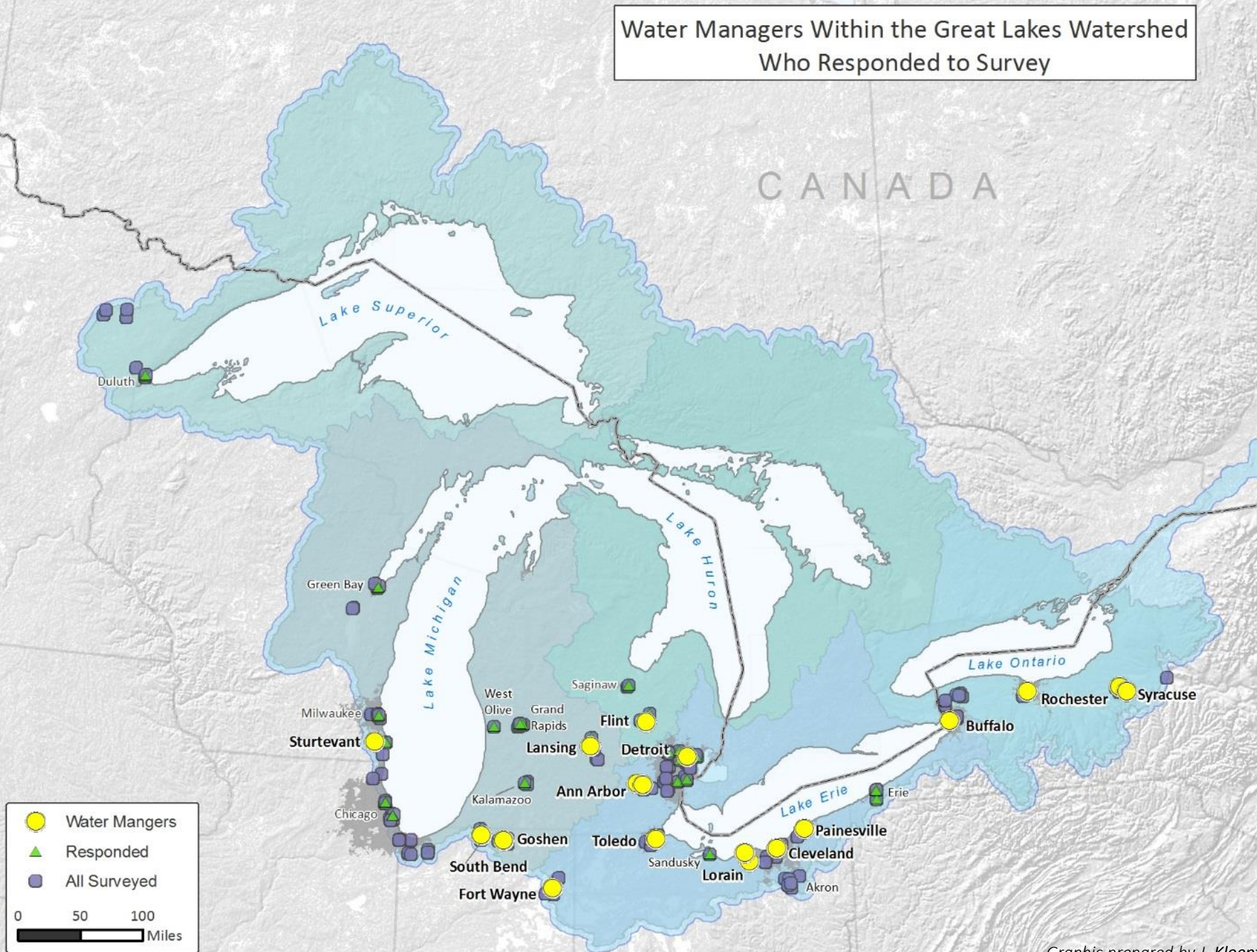
Local Governments and Climate Policy



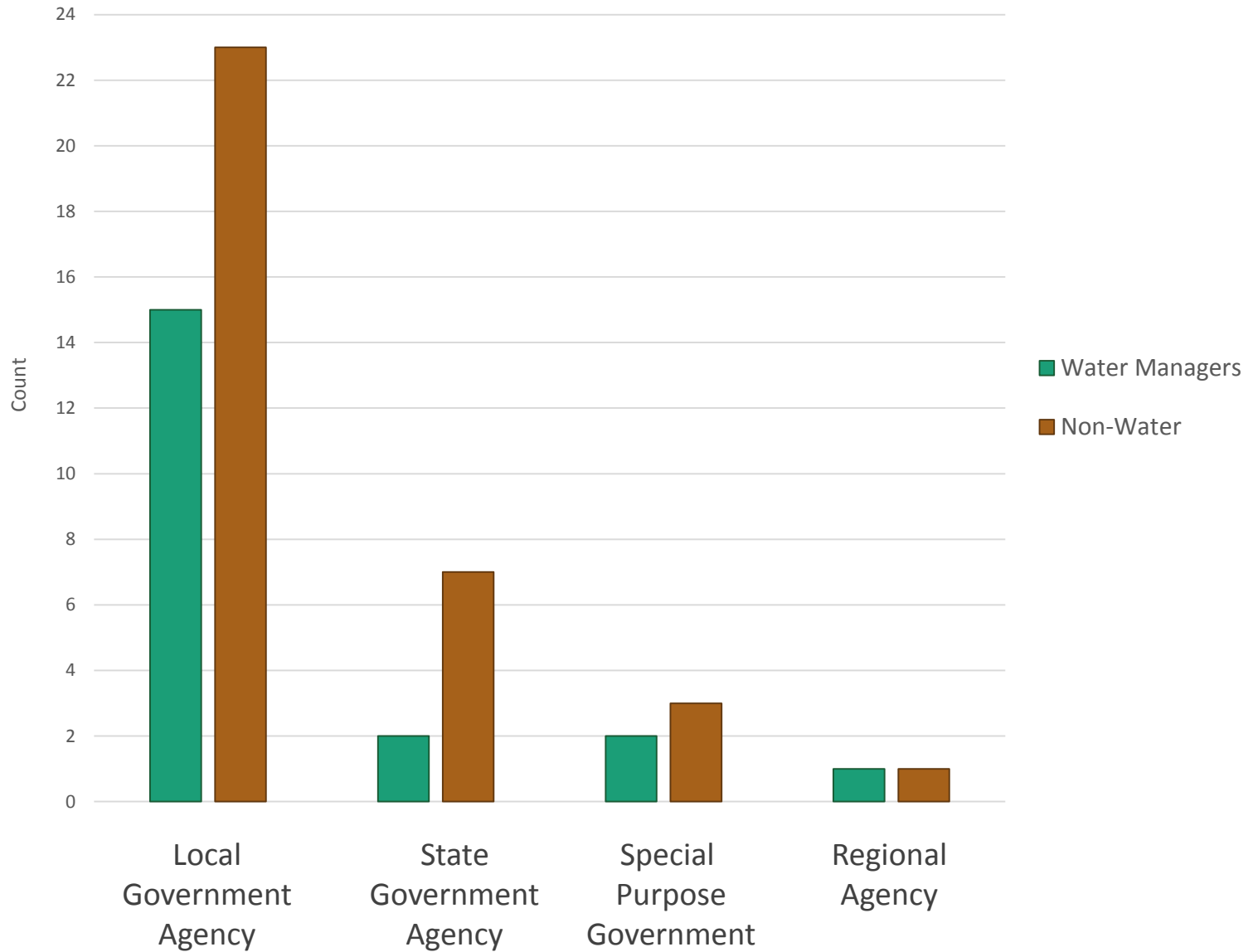
Survey Methods

- Research focuses interaction with water across sectors
 - Current activities
 - Sources of information and organizational learning
 - Barriers and gaps
- Subset of survey focusing on Great Lakes watershed
 - Surveyed: n= 704
 - Respondents: n= 80
 - Water managers: n= 20

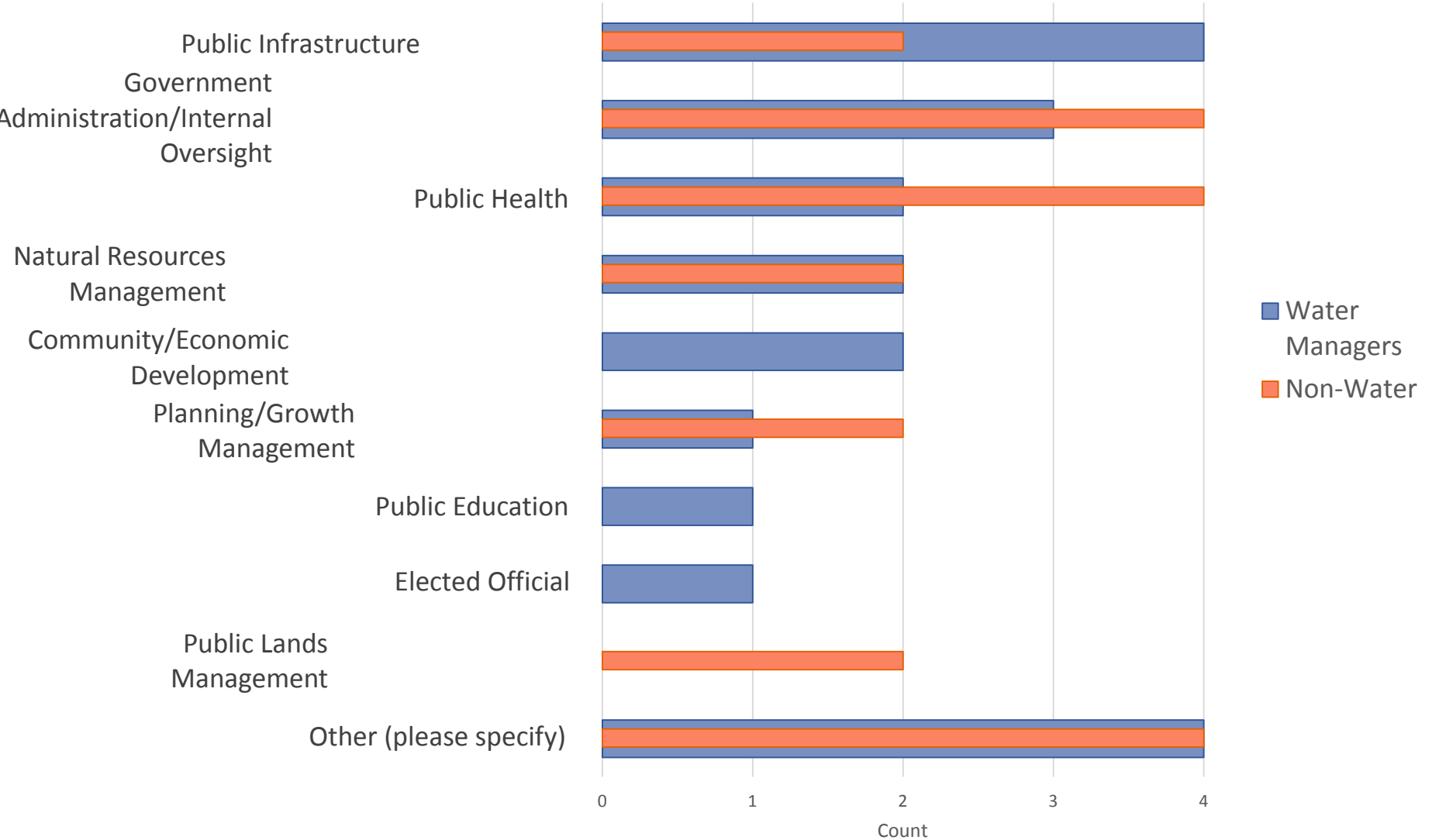
Water Managers Within the Great Lakes Watershed Who Responded to Survey



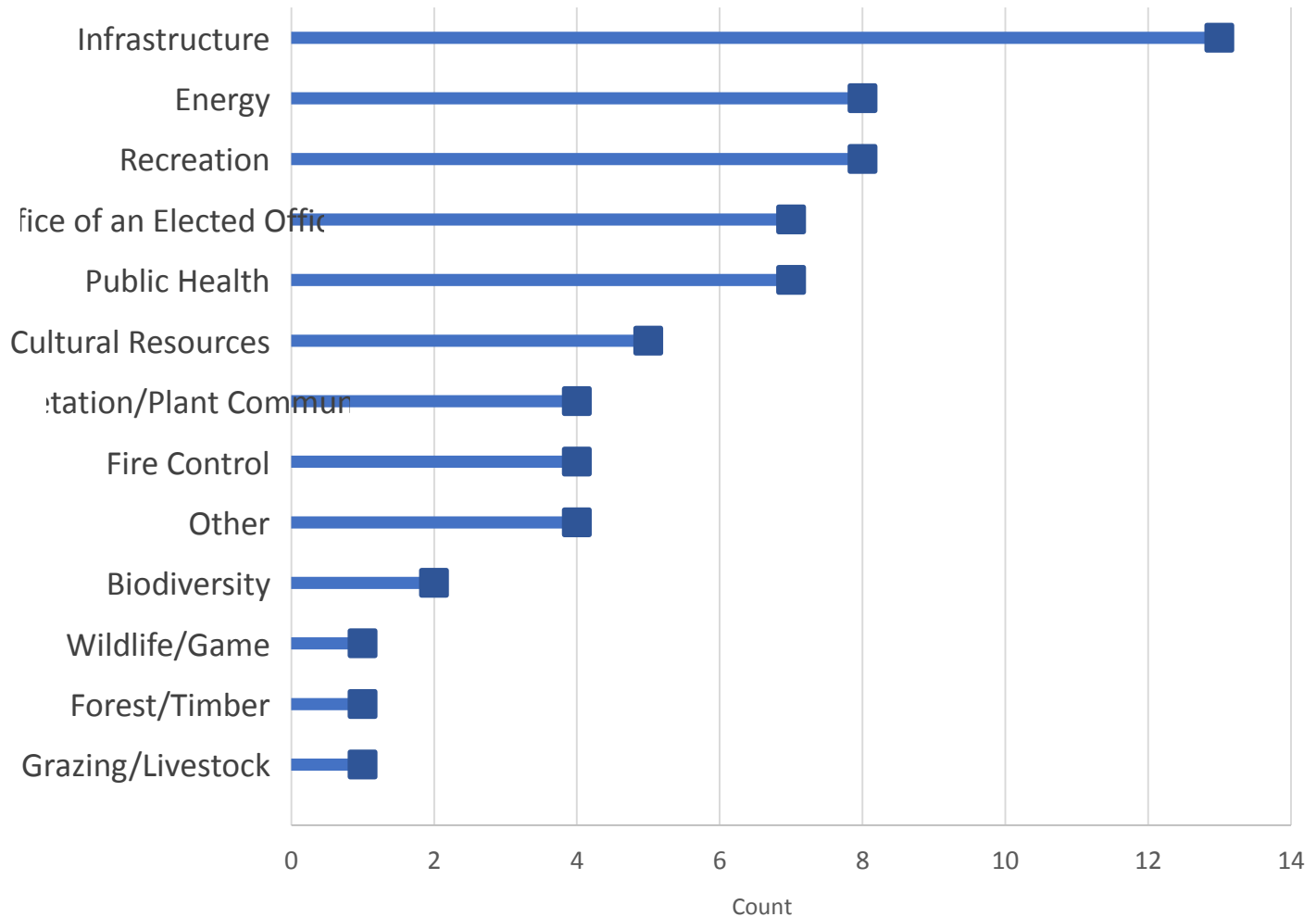
Type of organization



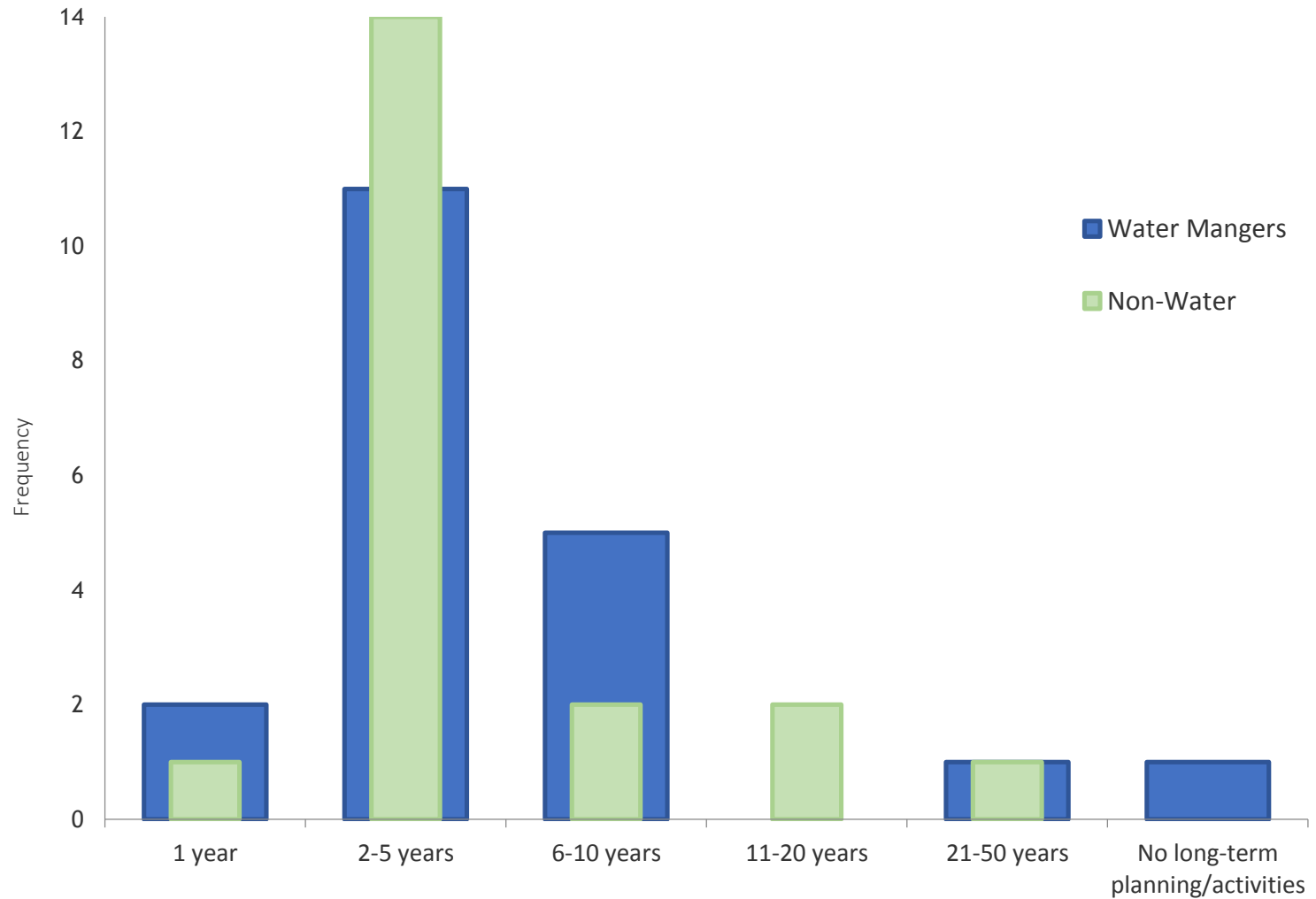
Primary organizational role



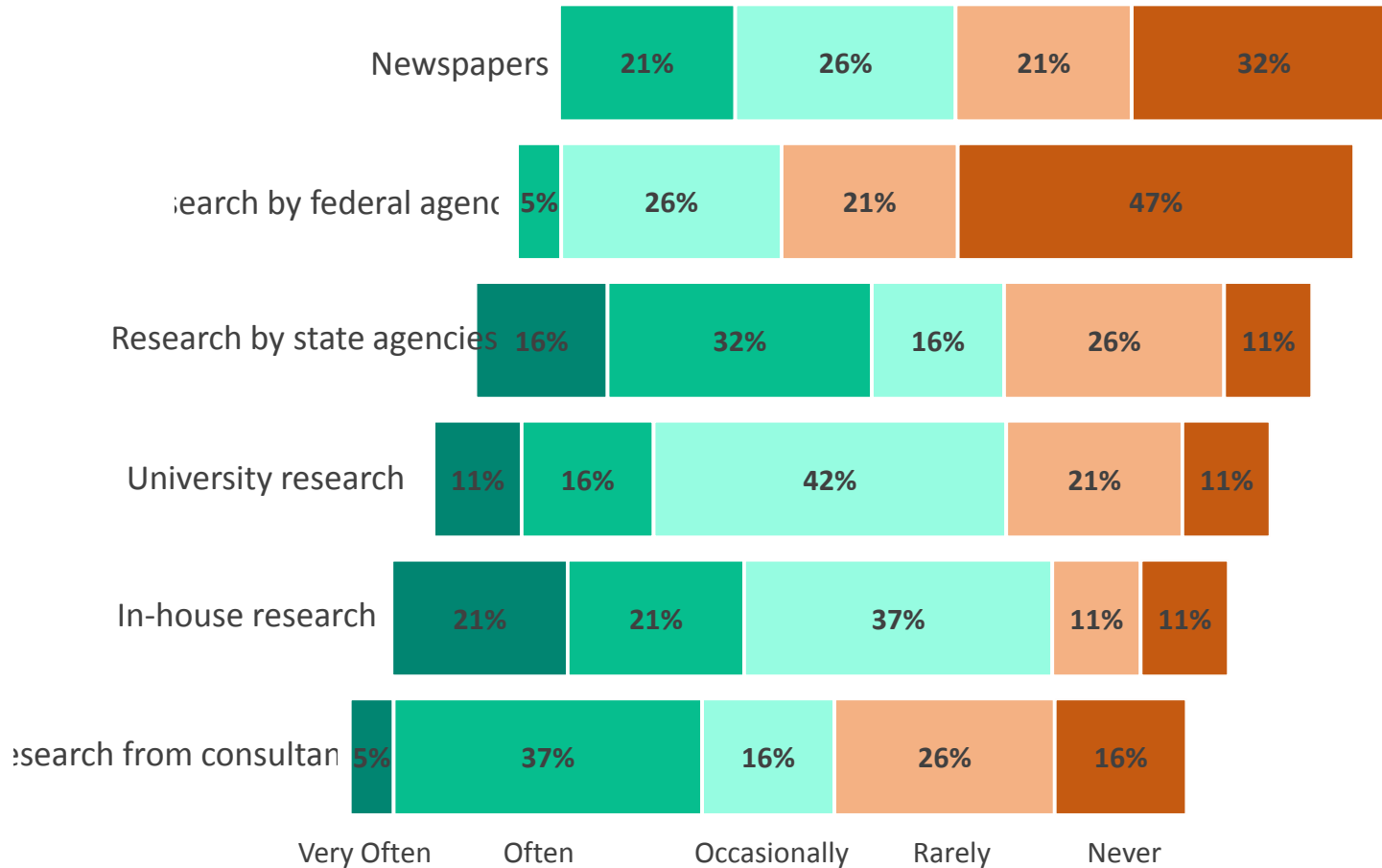
What other issues are water managers associated?



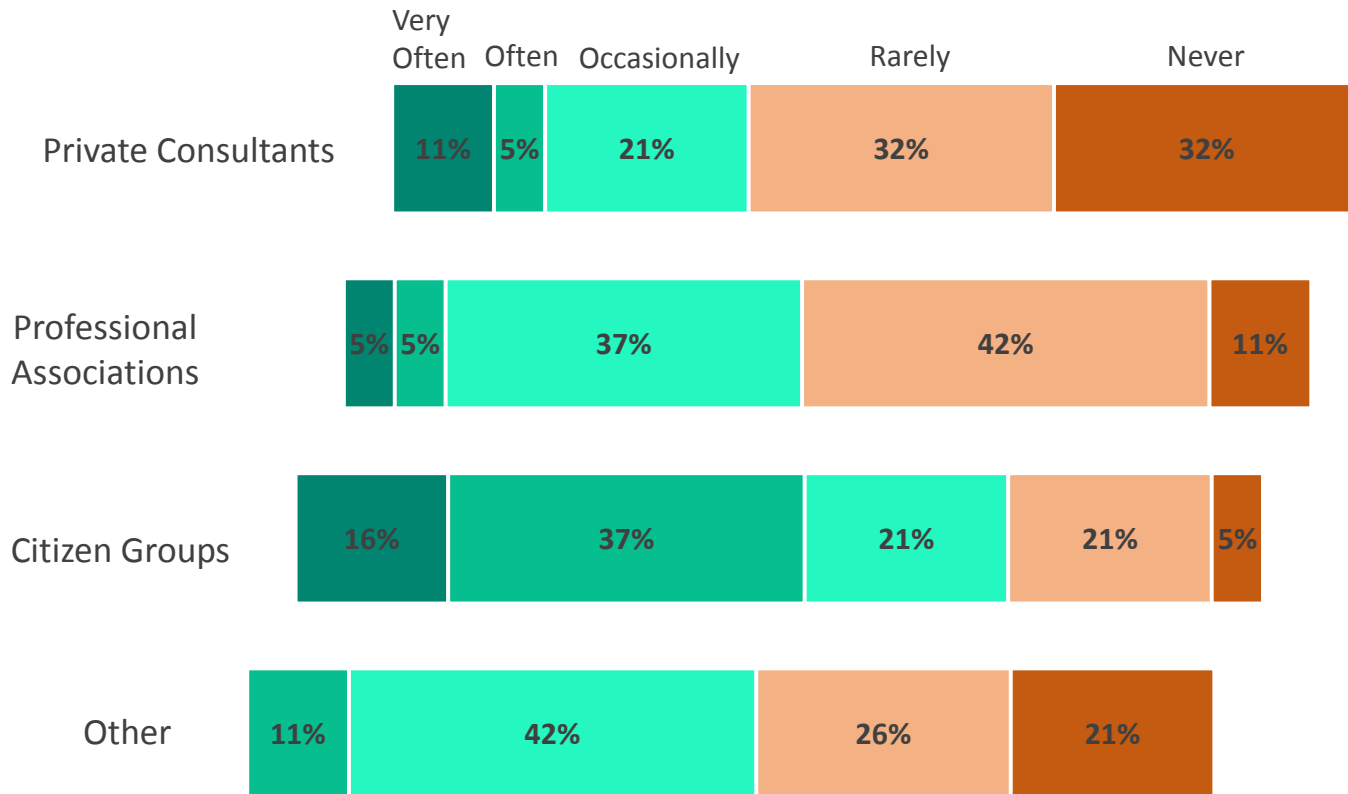
Planning time frame for your organization



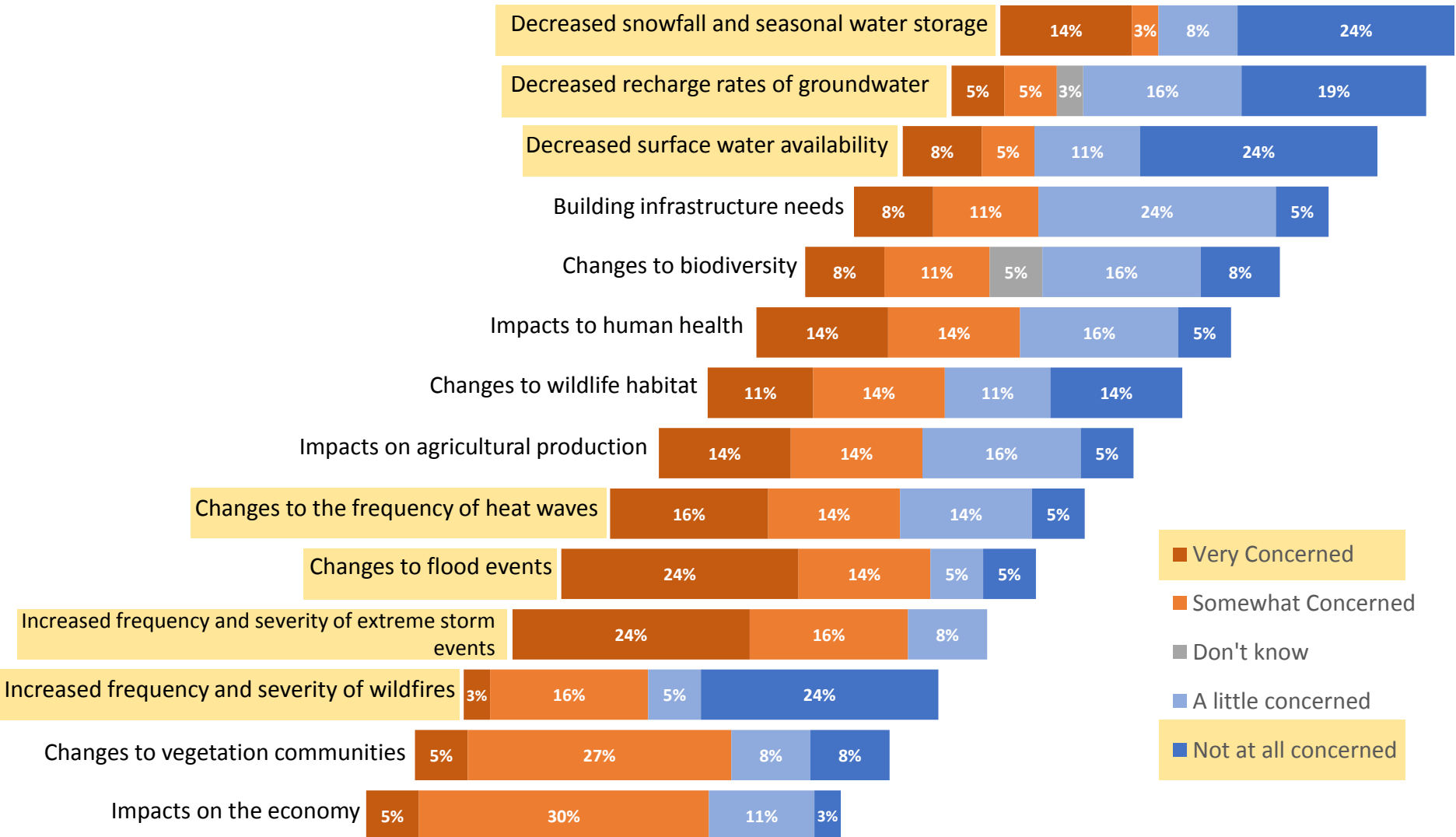
Source of information on impacts of climate change



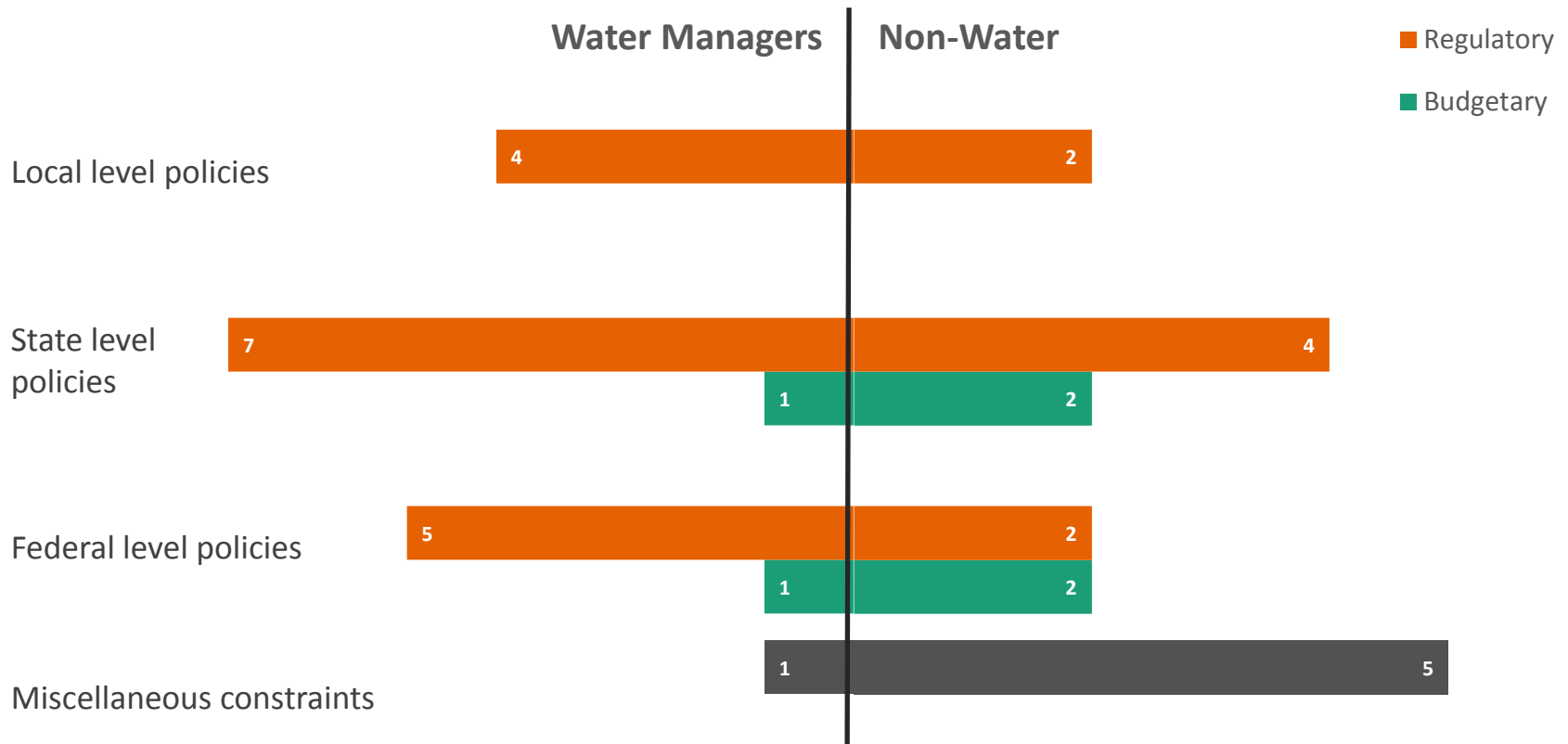
From who do you learning about climate policy?



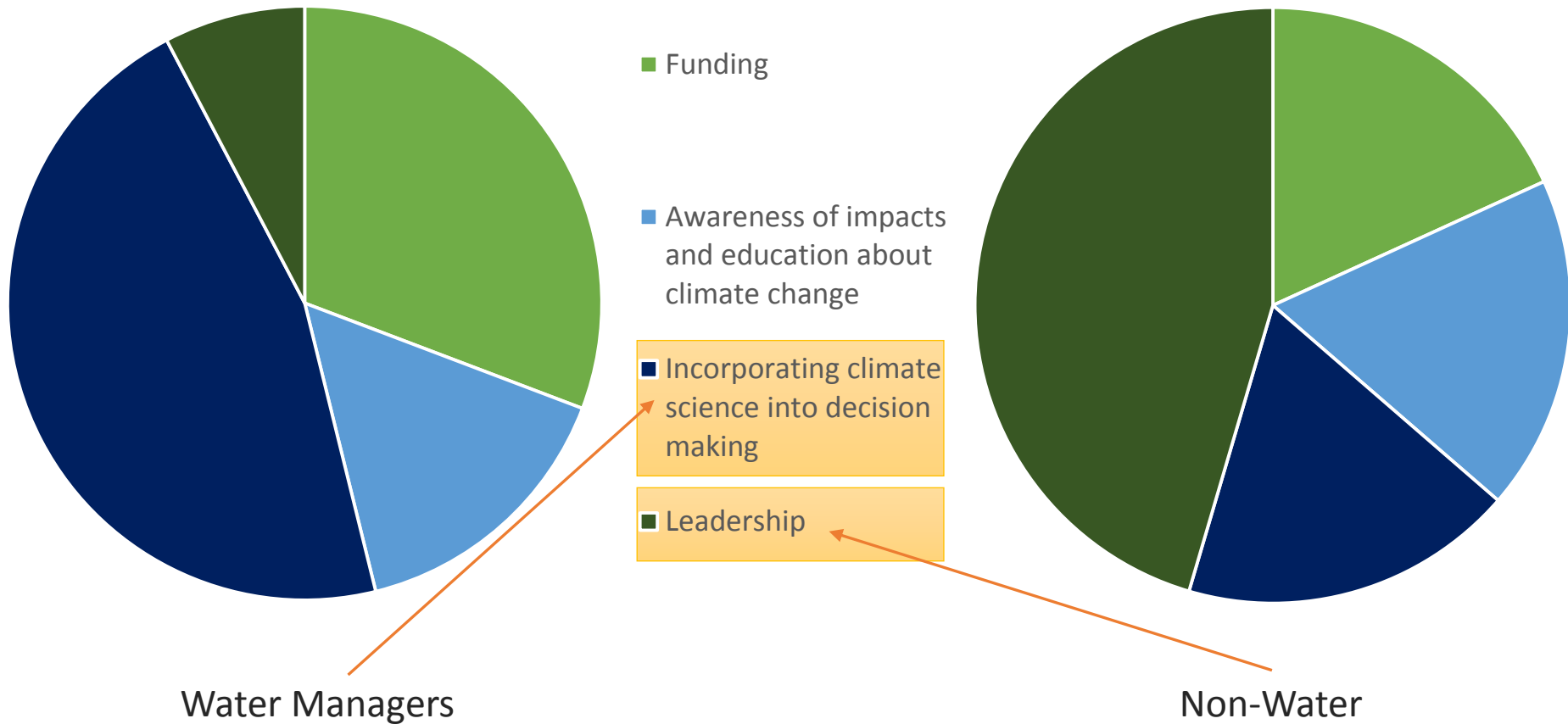
Level of concern about potential climate impacts



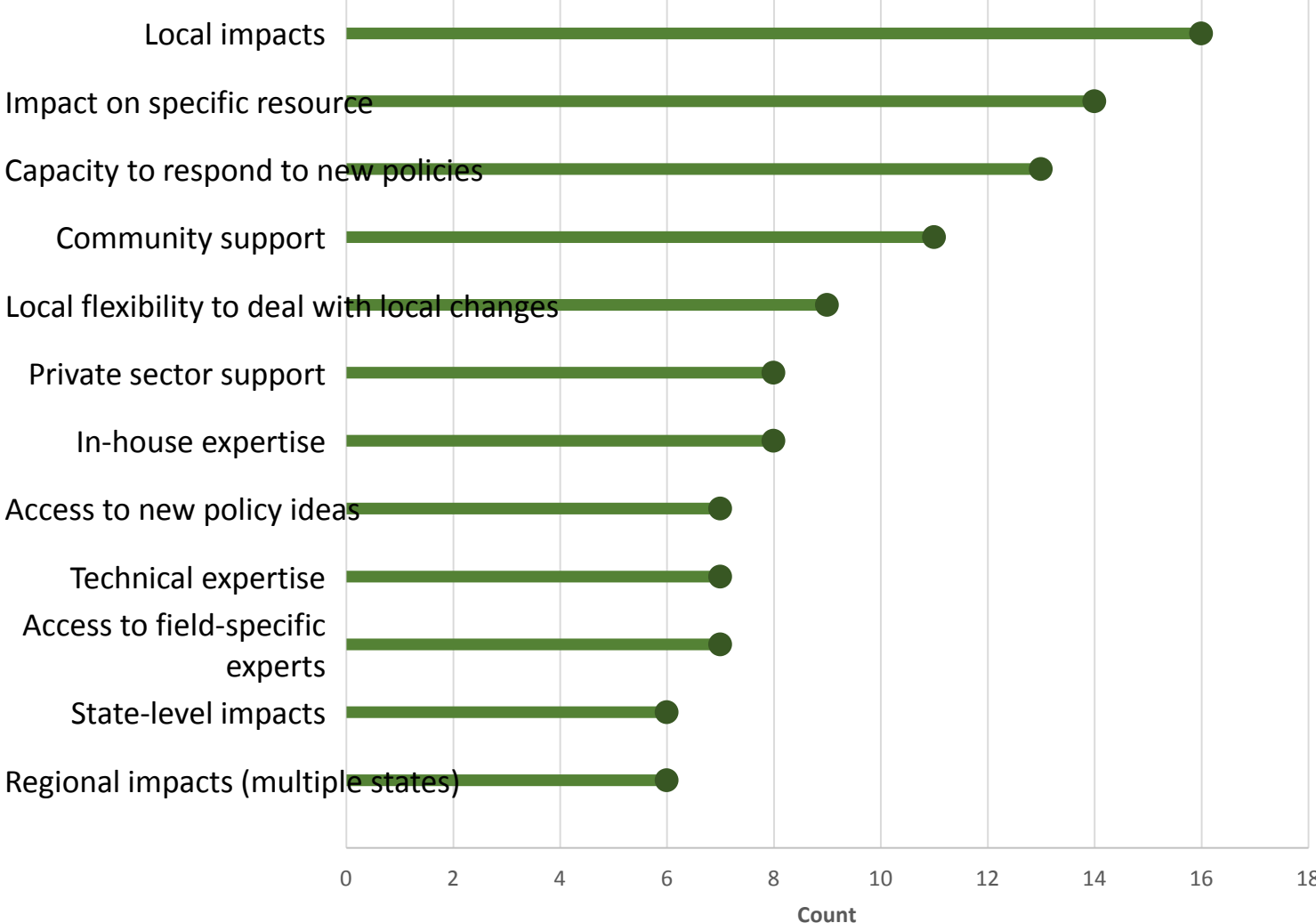
Source of policies that constrain your ability to act locally



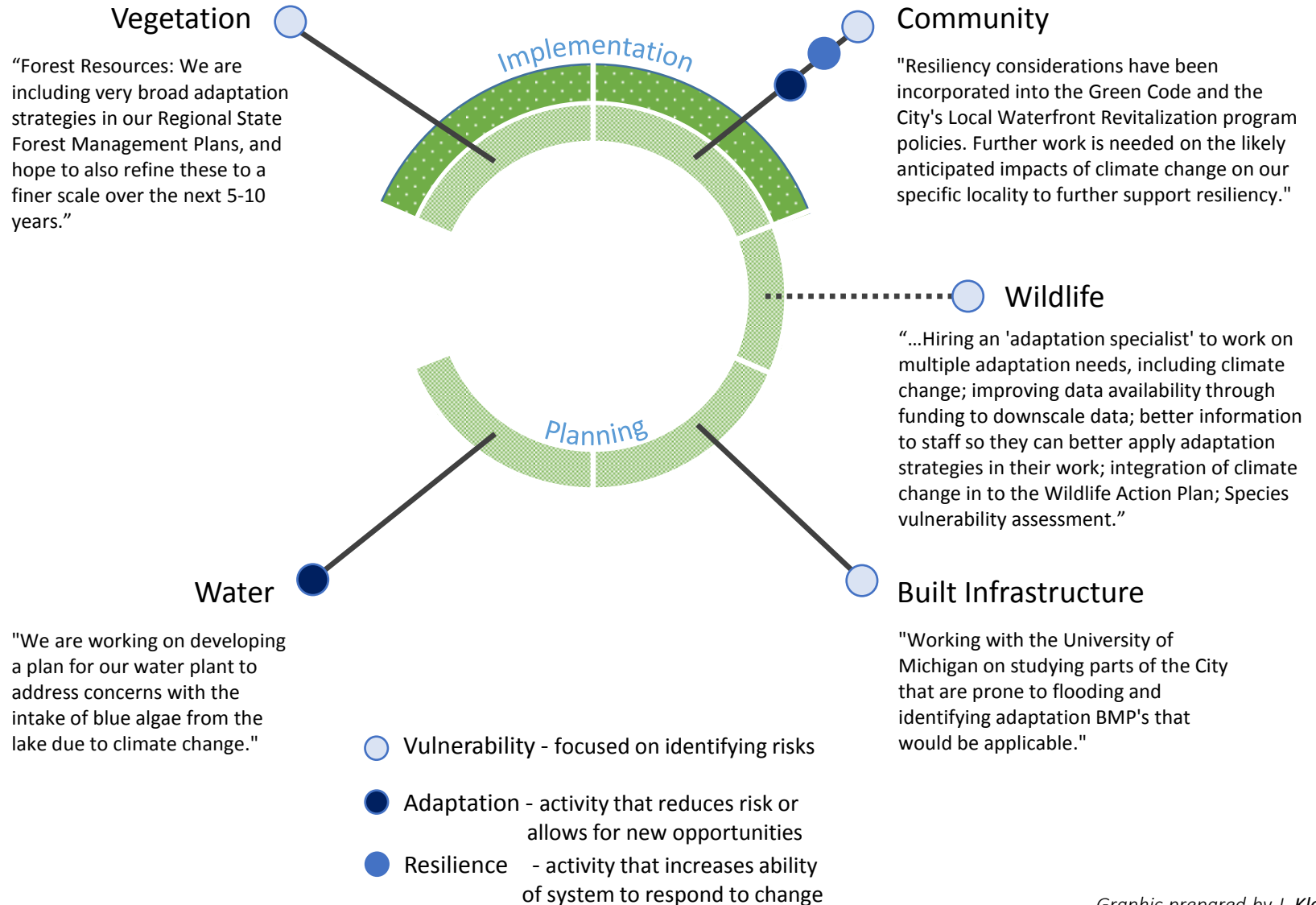
One thing that would improve climate change decisions in your organization



What do water managers need to better manage climate impacts



Climate policy activities among water managers



Conclusions

- Provides information on how climate science might better serve the needs of the water sector (localization and downscaling)
- Climate challenges reflects the human intensive landscape and urban characteristics of the water sector
- Citizen organizations provide source of organizational learning on climate policies
- Water sector needs include localization of climate science, link to management issues, and capacity building in responsiveness to new policies

Questions?

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LOCAL CLIMATE POLICY PROJECT



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