

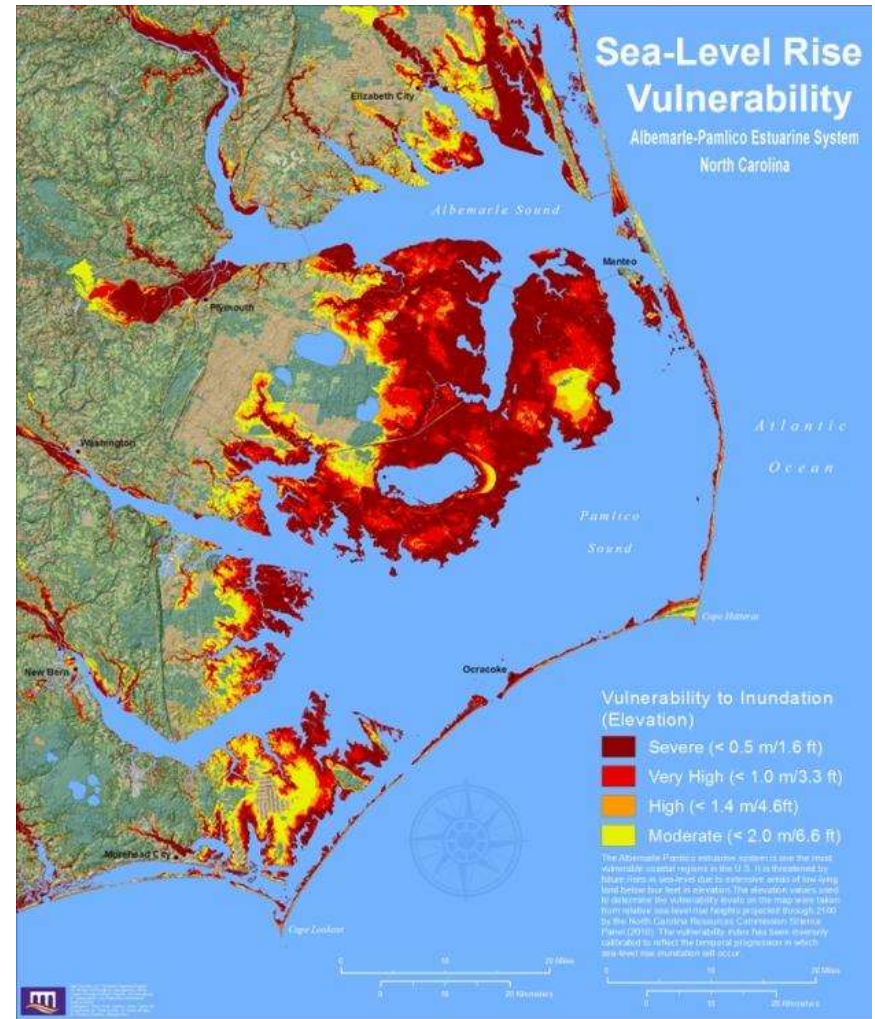
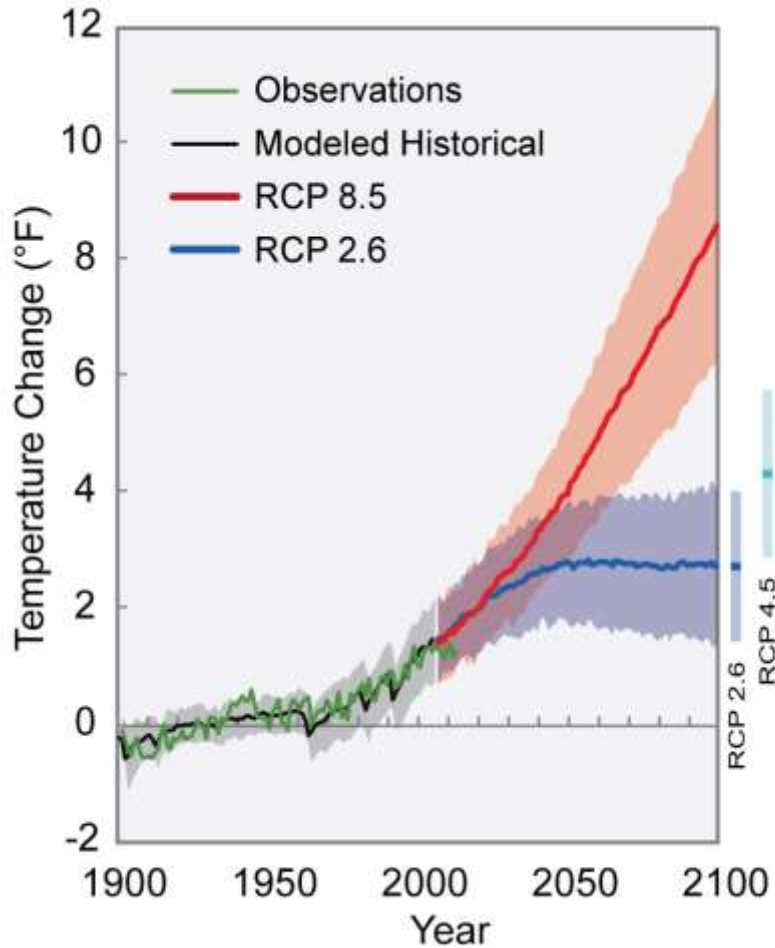


# Planning for an Unknowable Future

September 13, 2016

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# What Uncertainty?

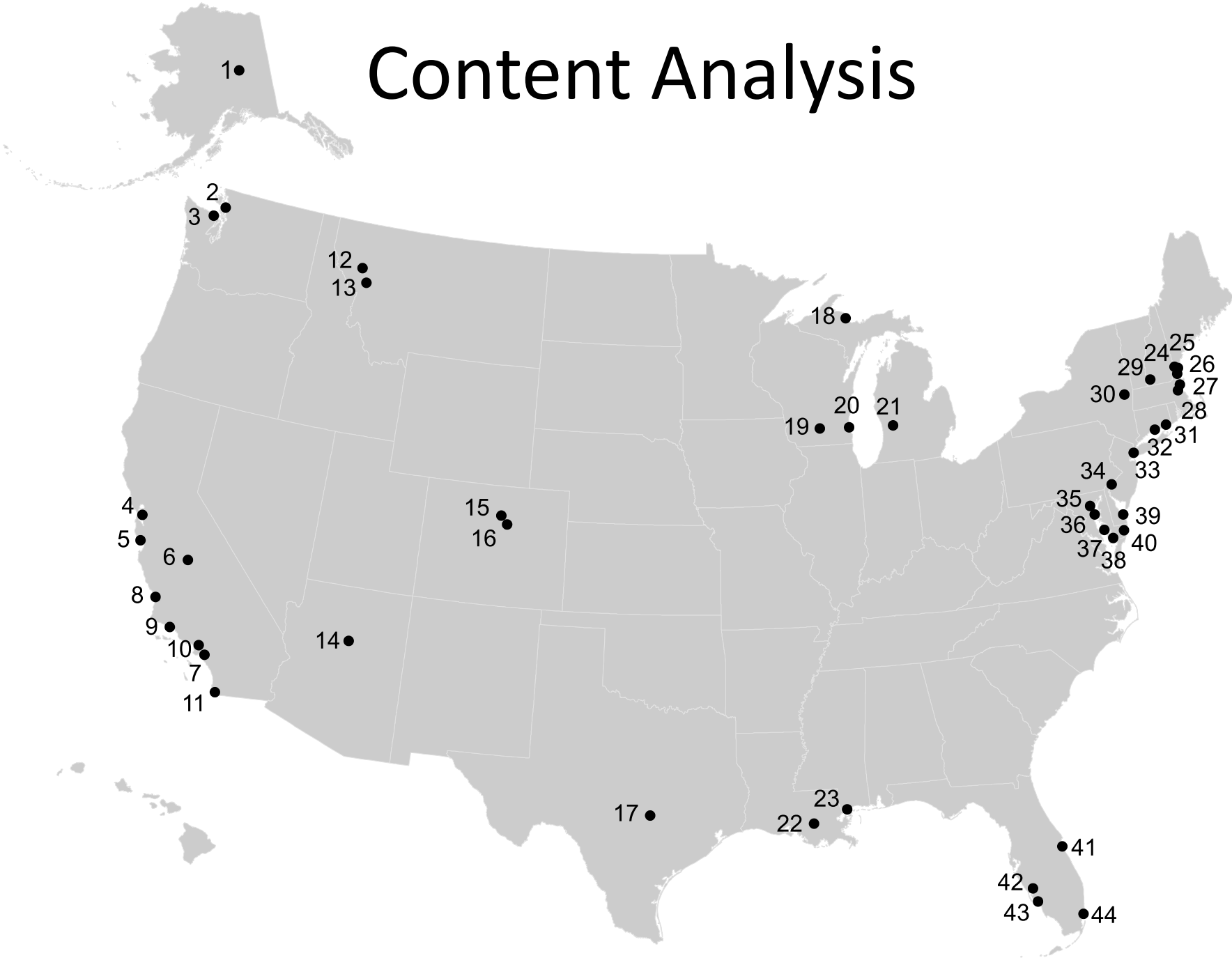


# Approaches to Managing Uncertainty

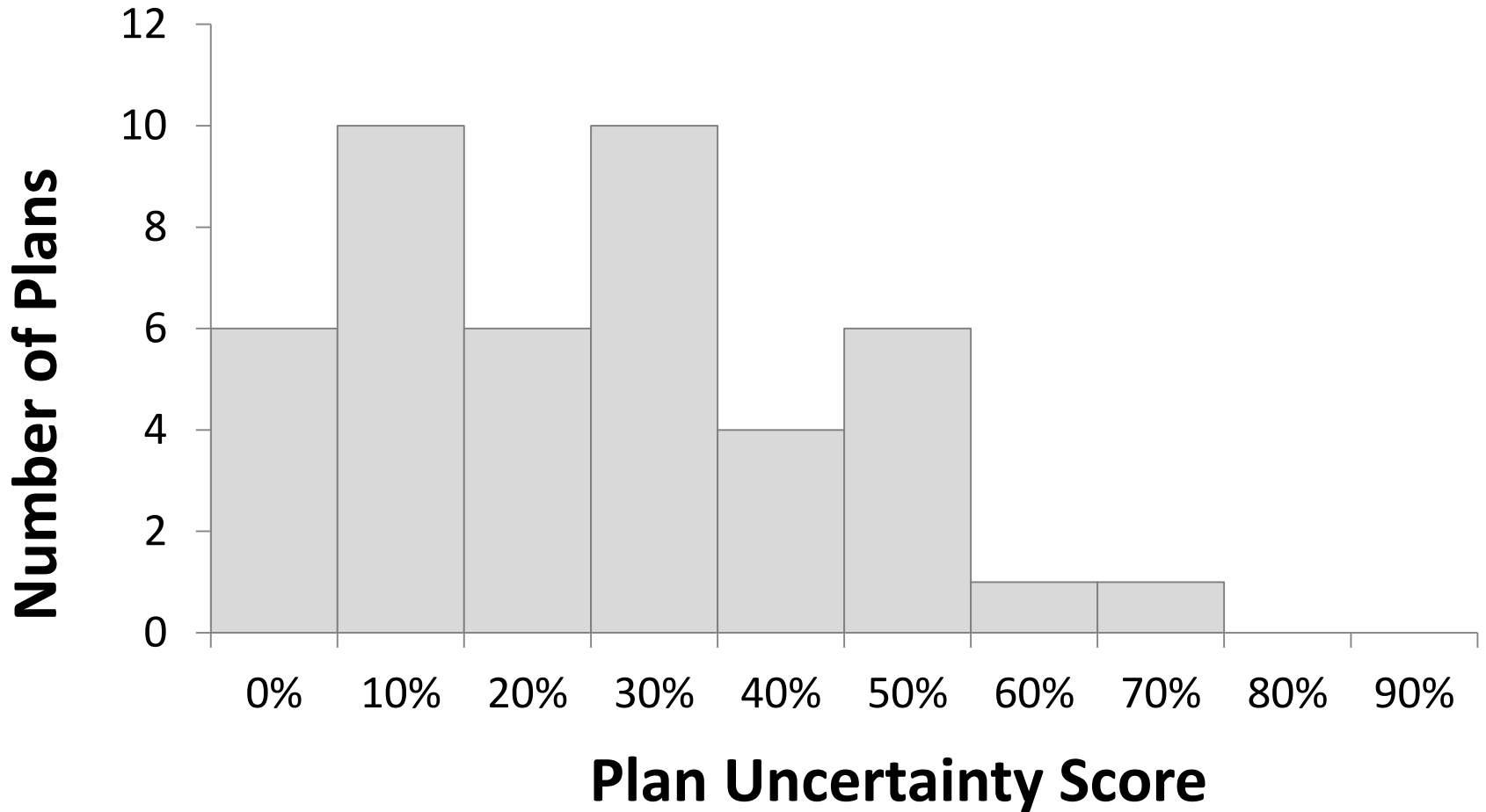
- Scenarios
- Robust and no-regret strategies (robust decision making)
- Flexible strategies (real options analysis; dynamic adaptive policy pathways)
- Adaptive management



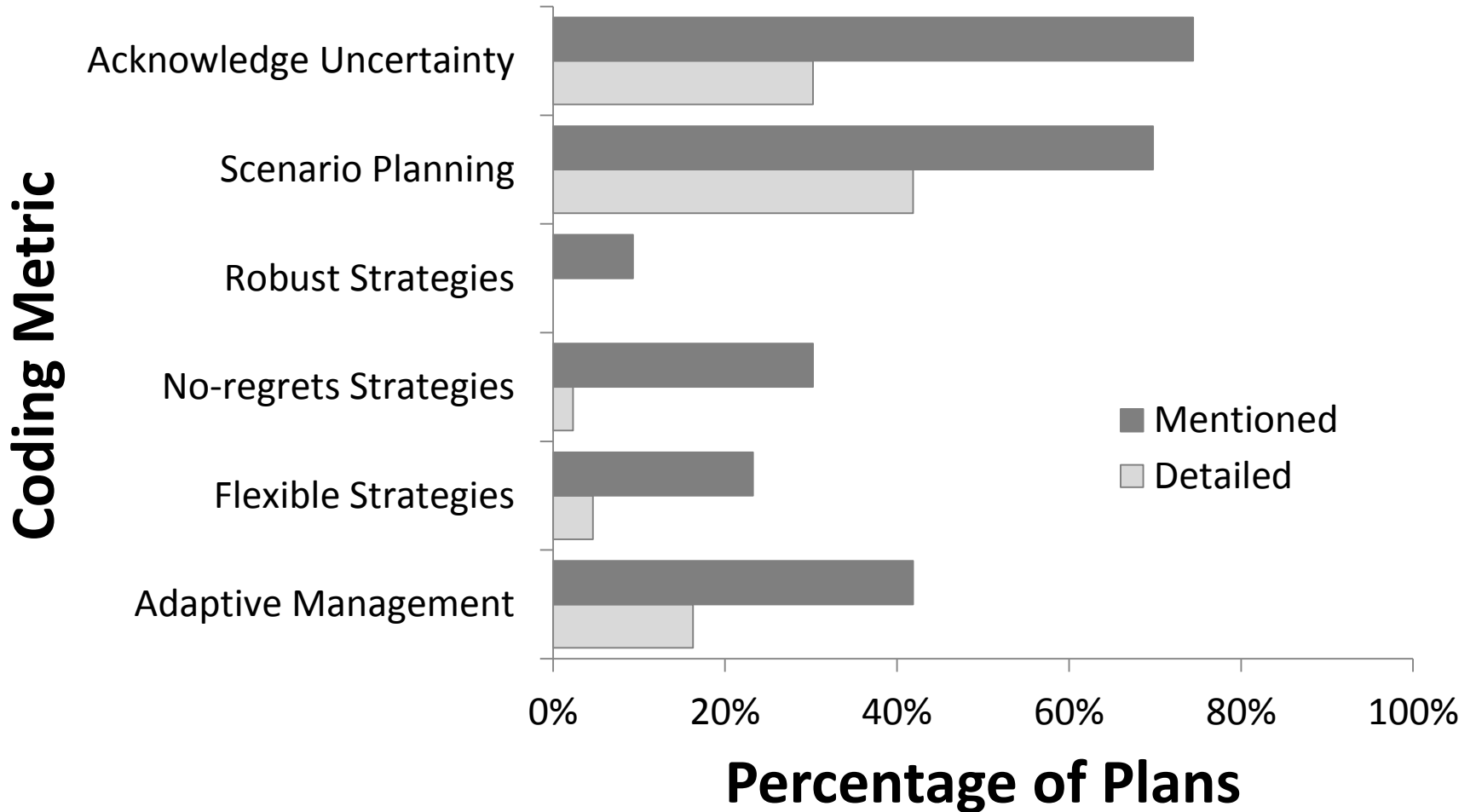
# Content Analysis



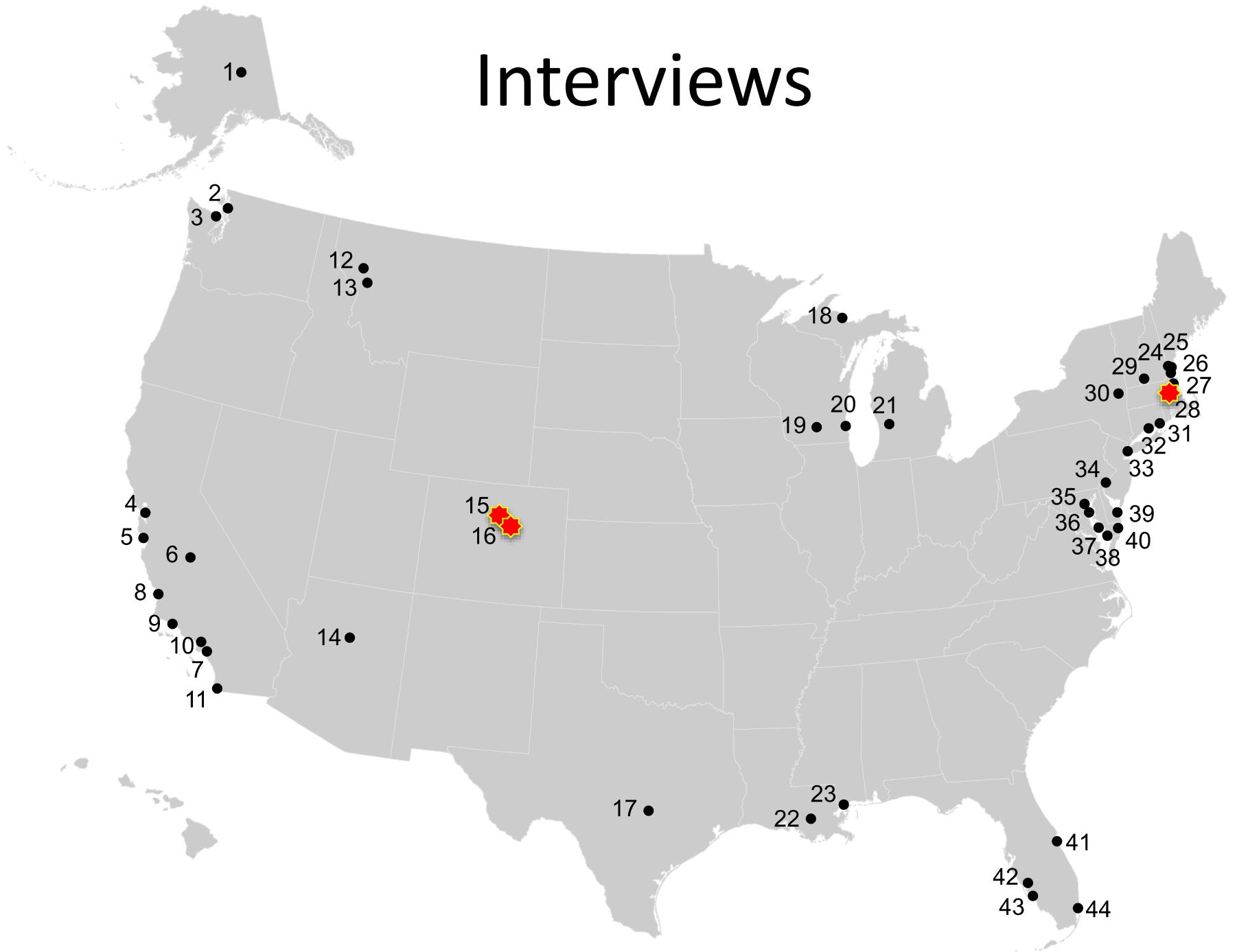
# Low uncertainty scores



# Gap between research and practice



# Interviews



# Challenges to Managing Uncertainty

- Assumptions in planning

*“Until you are really grasping what uncertainty means [...]and that we don’t really know what the future is going to look like [...] I don’t think new tools are really helpful because you don’t understand why you need them.” – Denver*

- Political and institutional barriers

*“Uncertainty is always, always the question that comes up.” - Boulder*



# Opportunities

- Focus on sensitivity

*“Start off with what matters to you [...] Rather than trying to use the climate science to dictate what you should be concerned about, because in reality its only vulnerabilities that matter” - Boulder*

- No regret strategies
- Competing definition of flexible and robust
- Iterative processes

# Implications

- A persistent gap between research on planning under deep uncertainty and practice
- ‘Context-first’ approach necessitates a change in how information-providers interact with practitioners
- Need to strengthen plan components that contribute to an iterative process

*“I think we probably  
are going to be better  
prepared recognizing  
that we don’t know  
what is happening.”*

– Denver

