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State Survey of Climate Change Resiliency Efforts

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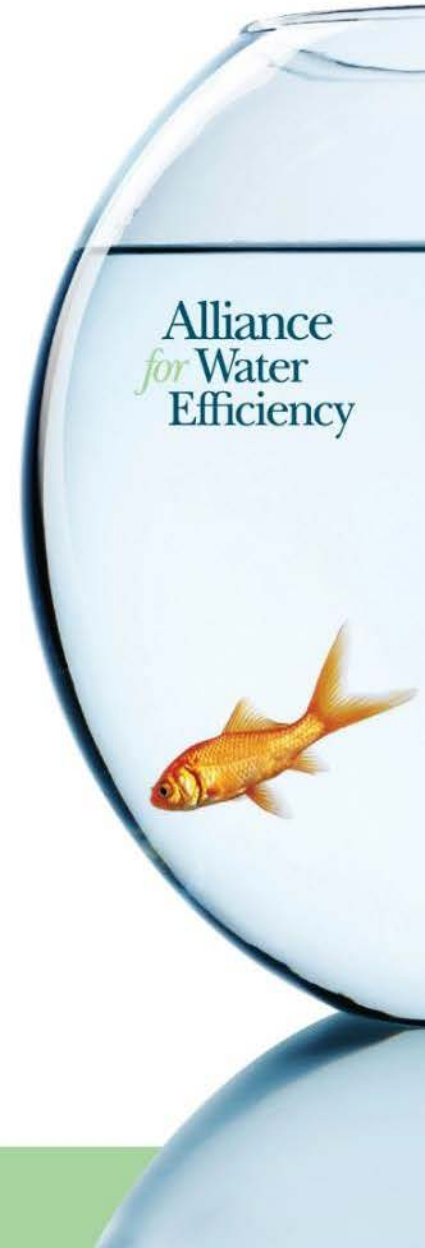
Alliance *for* Water Efficiency

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USE OF WATER



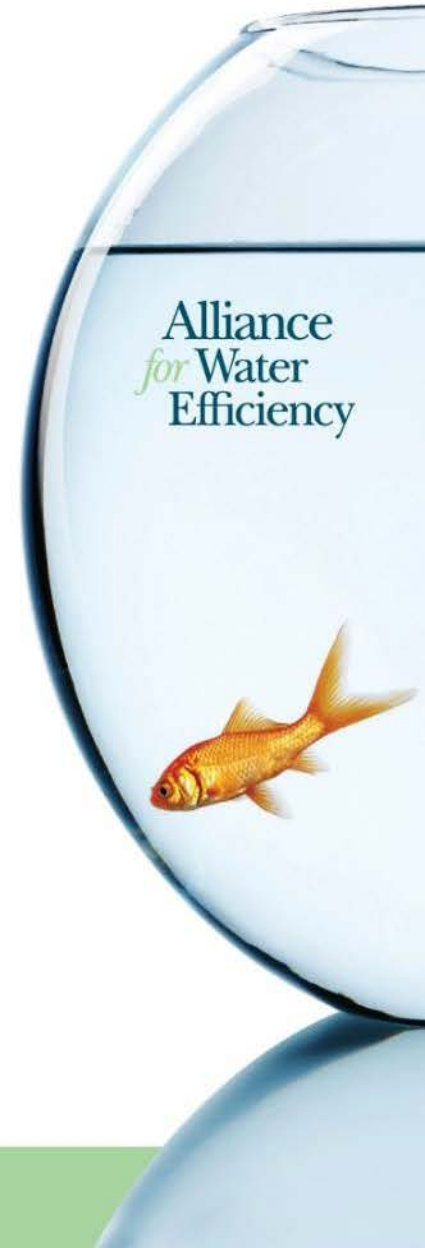
Project Overview

- 50 state survey
- Goal was to identify state-level climate change adaptation efforts related to water resource management
- The primary focus was on state adaptation/resiliency plans and any requirements connected to those plans



Presentation Overview

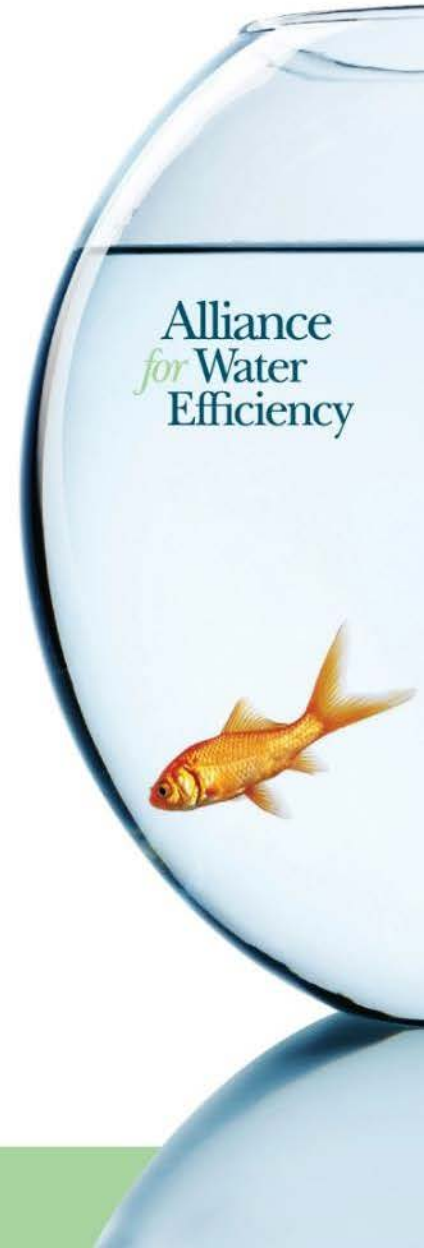
- Some Climate Change Basics
 - Terms
 - Example Impacts
- Summary of Report and Survey Findings
- Helpful Resources
- Discussion



Key Terms

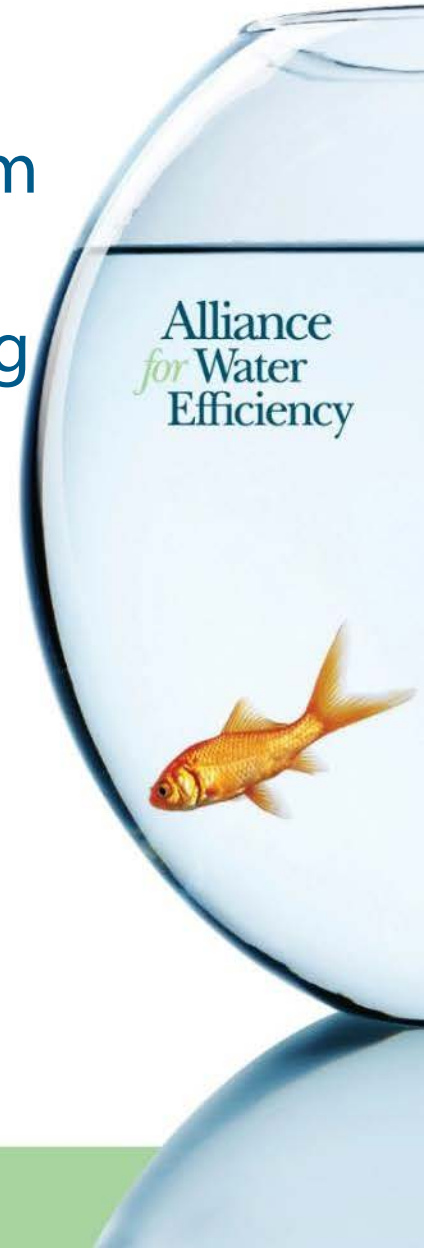
- Weather - Atmospheric condition at any given time or place
- Climate - long-term average of the weather in a given place
- Climate Change - any significant change in the measures of climate lasting for an extended period of time

"weather influences what clothes you wear on a given day, while the climate where you live influences the entire wardrobe you buy."



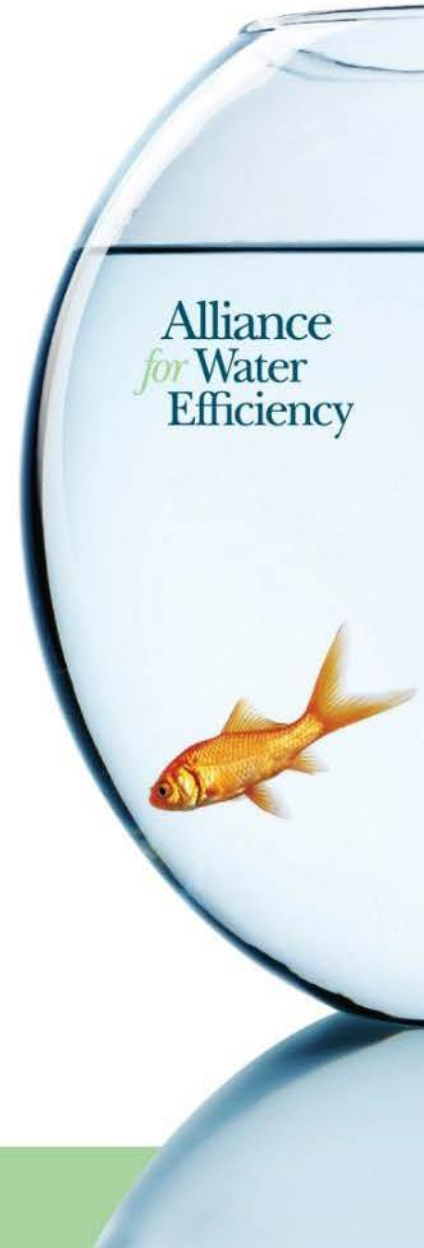
Key Terms

- Vulnerability - The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes
- Adaptation - Adjustment or preparation of natural or human systems to a new or changing environment which moderates harm or exploits beneficial opportunities



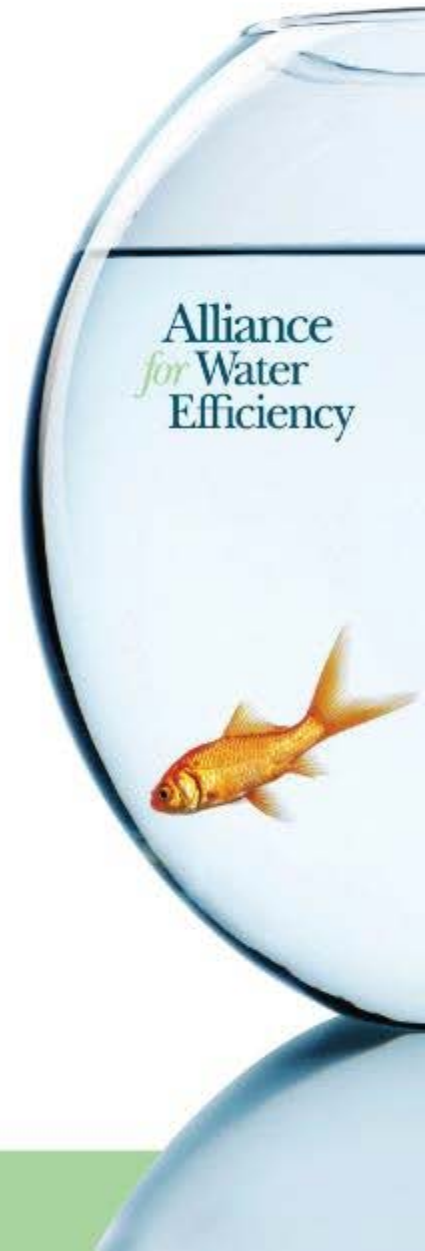
Key Terms

- Resiliency - A capability to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy, and the environment
- Mitigation - A human intervention to reduce the human impact on the climate system; it includes strategies to reduce greenhouse gas sources and emissions and enhancing greenhouse gas sinks



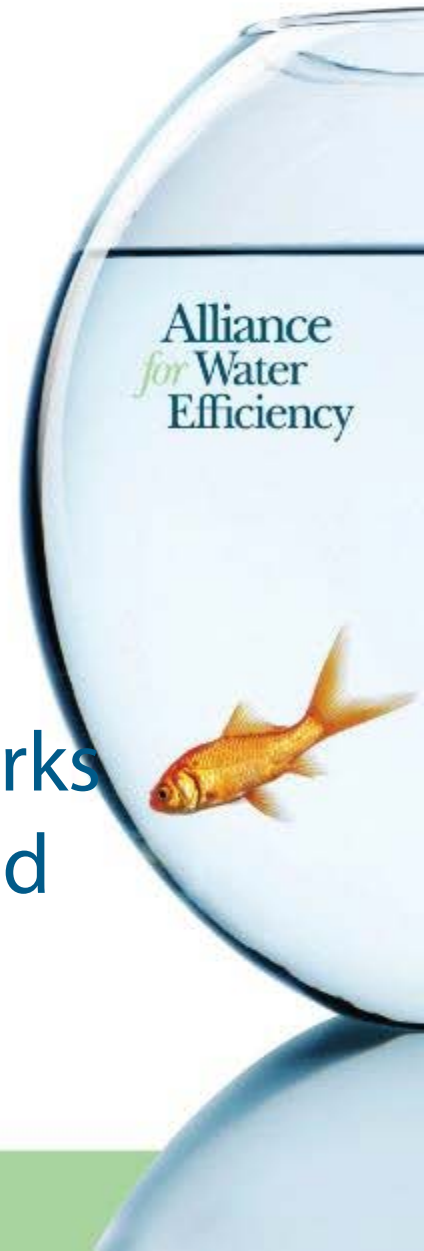
Example Climate Change Impacts

- More frequent heavy precipitation events
 - Increased turbidity
 - Inability of current system to filter and treat water
- Drier conditions
 - Reduced water supply
 - Inability to meet current and/or future demands



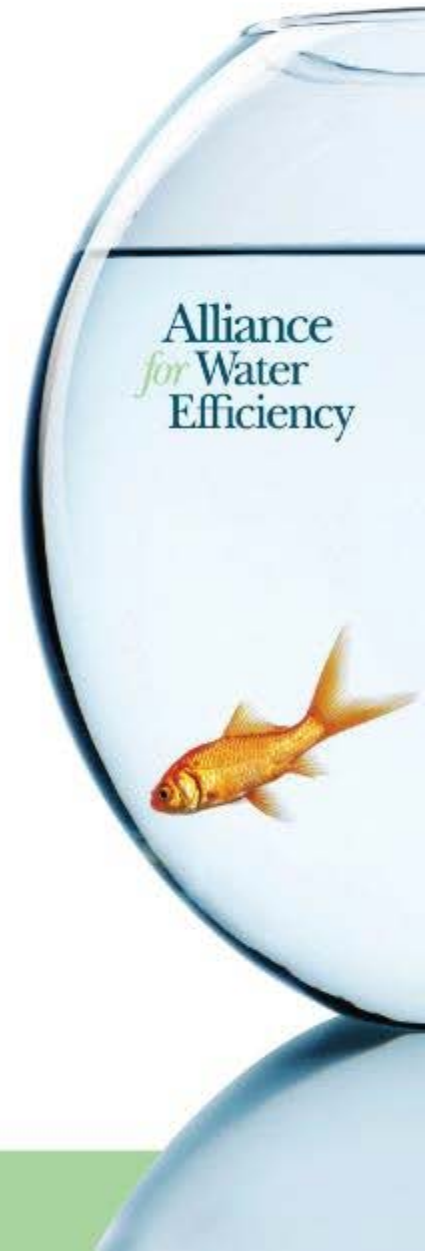
Survey Questions

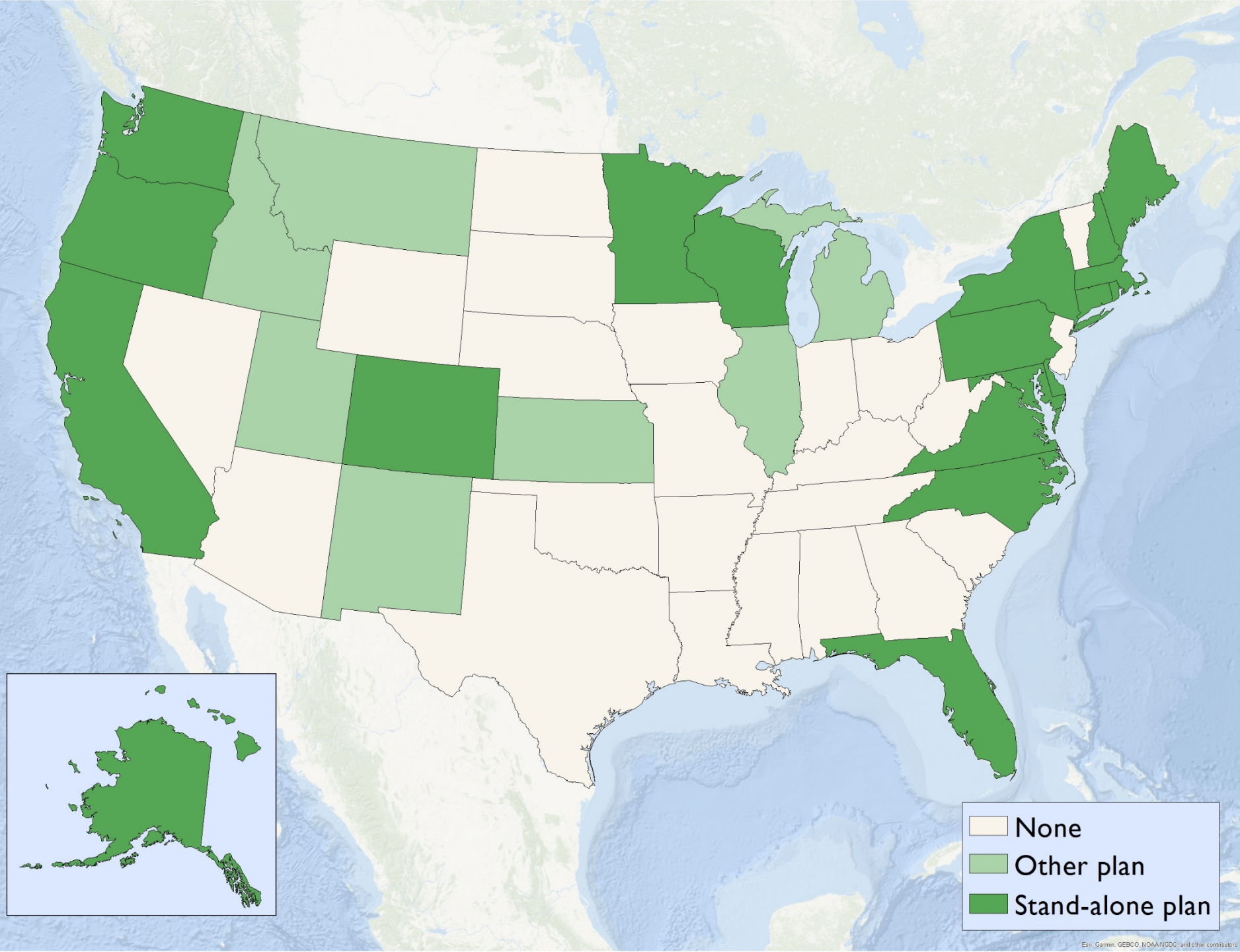
1. Does the state have a climate action, adaptation, or resiliency plan?
2. Does the state require any climate change-related actions of the water and/or wastewater industries?
3. Does the state have specific benchmarks to measures progress toward increased water resource resiliency?



Findings

- 20 states have a formal climate action, adaptation, or resiliency plan that features water resource management
- 7 states address climate change adaptation in documents such as drought plans and/or water supply plans
- 23 states got nothin'





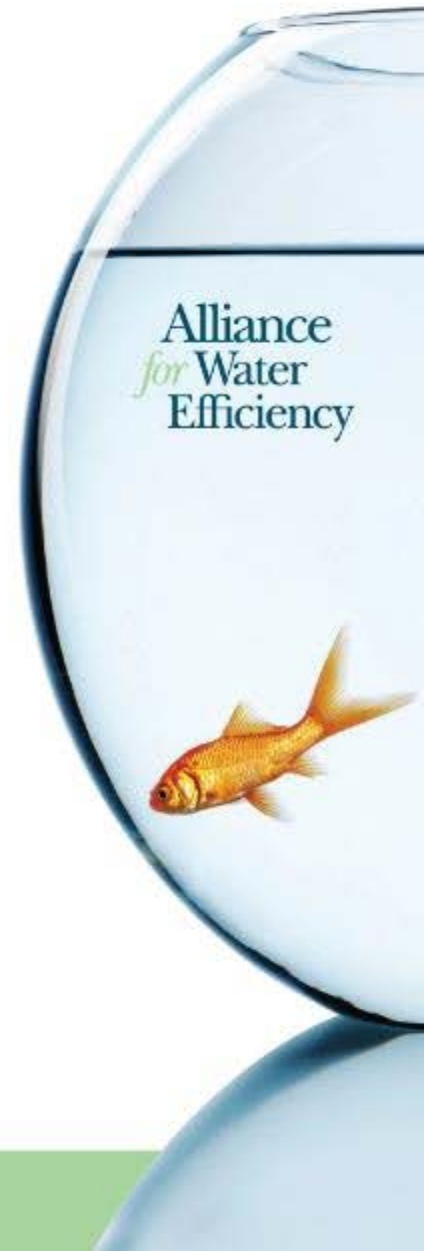
Findings Continued

- Requirements

No state has requirements for water or wastewater utilities tied to a climate plan

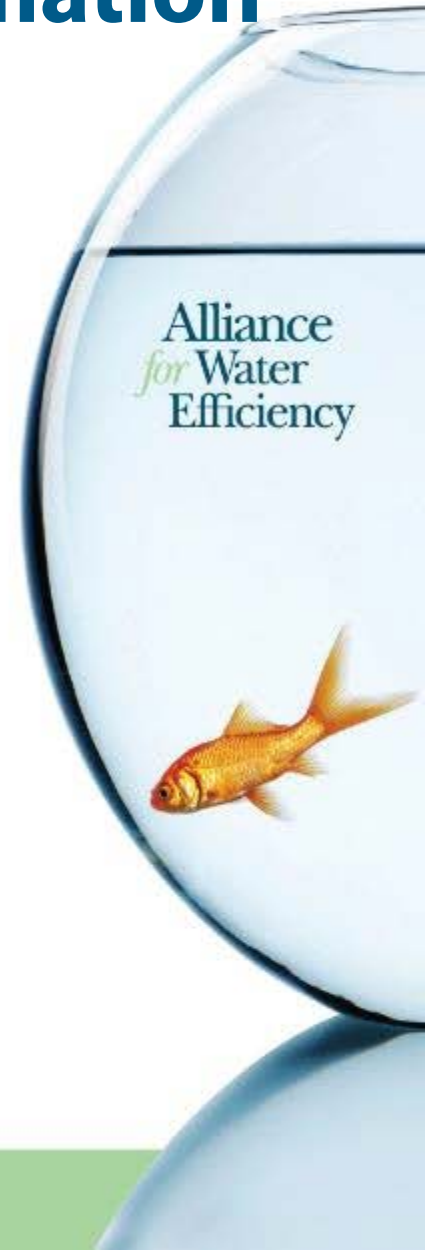
- Water Resource Resiliency Benchmarks

CA, HI, and OR track progress in some form but not specific to resiliency benchmarks.

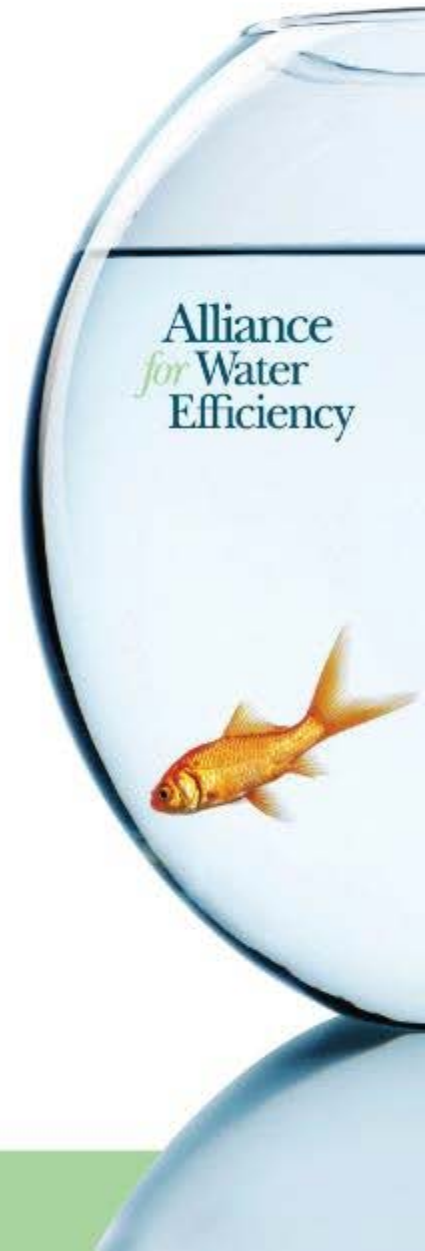


Appendix – Detailed State Information

- Climate Action, Adaptation, or Resiliency Plan(s)
- Law and Policy
- State Agencies and Other Groups
- Additional Resources and Information

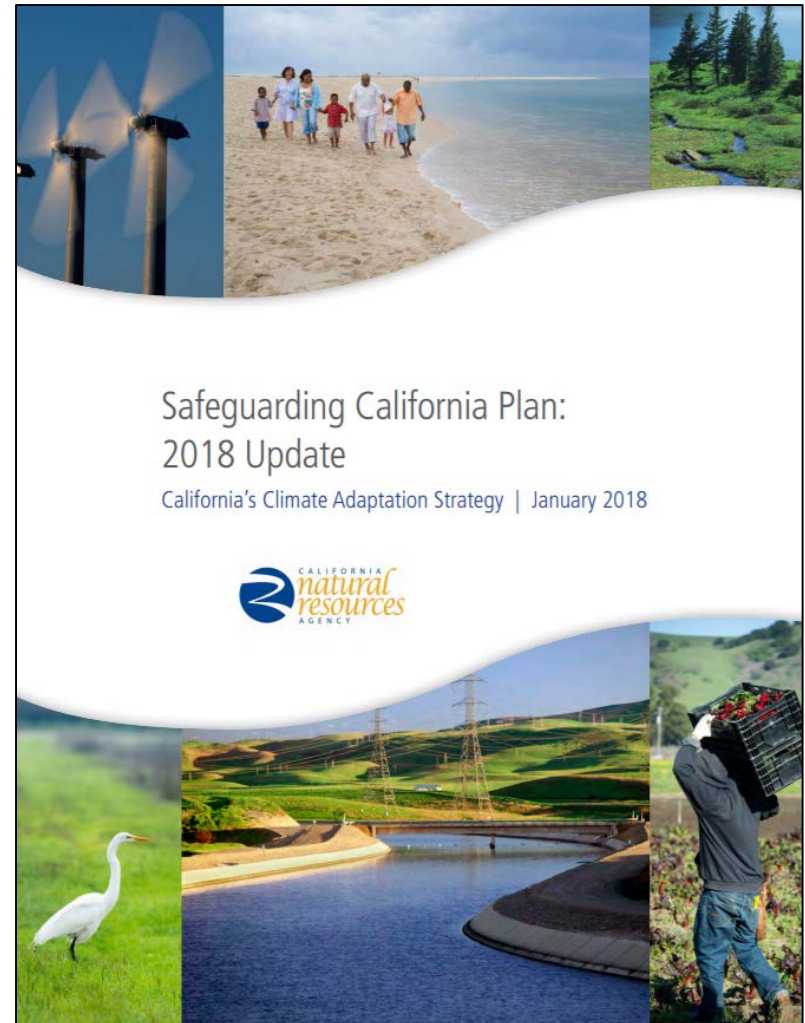


Let's Look at a Few Examples



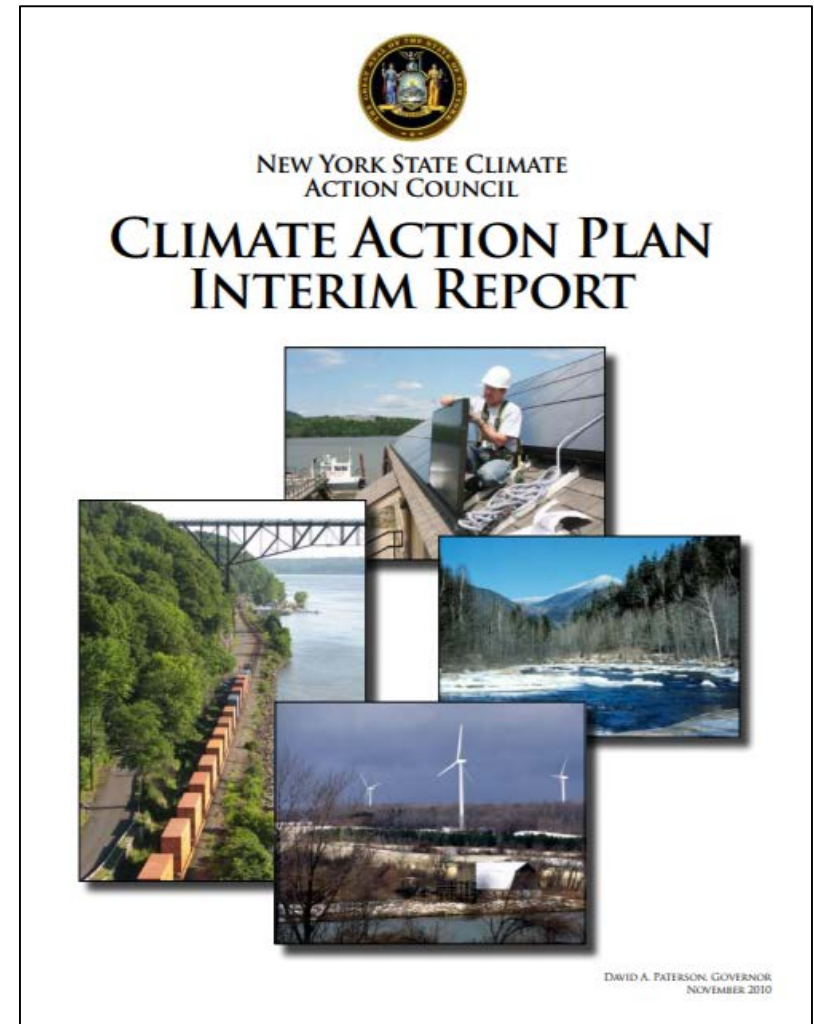
California

- Very robust plan
- Updated every 3 years
- Extensive section on water resources
- Tools, data, and resources via:
<http://cal-adapt.org/>
- And more!



New York

- Climate Action Plan Interim Report (2010)
- Climate Smart Communities Grant Program
- Community Risk and Resiliency Act



Florida

- Plan in 2008 under previous Governor
- Since 2011 no action on climate change resiliency at state level



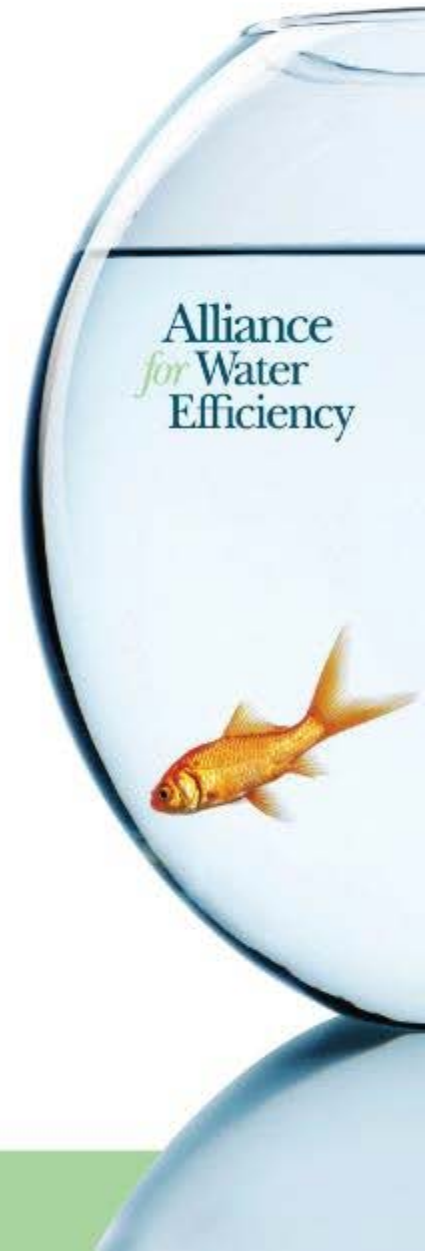
Florida's Energy & Climate Change Action Plan

October 15, 2008

Governor's Action Team on Energy & Climate Change

Business as Usual vs. Climate Resiliency Efforts

- Water conservation
- Drought planning



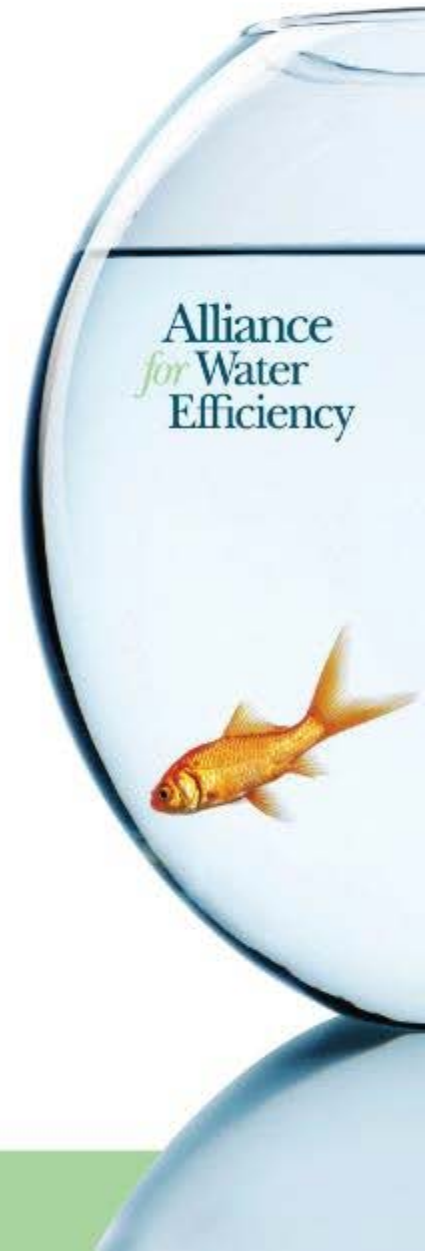
What States Could Do

- Provide funding
- Require or assist with vulnerability assessments
- Require or assist with climate change adaptation plans
- Support implementation of climate change adaptation strategies
- Provide technical assistance and training
- Provide data for planning



Publicly Available Resources

- Water Utility Climate Alliance
<https://www.wucaonline.org/>
- EPA Tools for Water Related Climate Change Adaptation
<https://www.epa.gov/arc-x>
- Georgetown Climate Center Adaptation Clearinghouse
<http://www.adaptationclearinghouse.org/>





Knowledge Portals: Climate Change

Advanced Treatment

Asset Management

Climate Change

Contaminants of Emerging
Concern

Disinfection By-Products

Distribution System
Management

Energy Management

Microbials

Source Water Protection and
Management

Utility Finance

Utility Management

Water Efficiency

Water Supply Diversification

Projects & Reports (36)

Webcasts (14)

Case Studies (5)

Web Tools (2)

While it is safe to say that the impacts of climate change on water resources will vary widely by region, it is also relatively certain that no area will be untouched by these impacts. Potential climate change impacts on water utilities have been widely reported in publications by the Water Research Foundation.

Executive Tool Kit



Topic Overview



Media Library



Fact Sheets

Impacts on Water
Utilities



Vulnerability
Assessment



Adaptation



Mitigation



Communication





State Survey of Climate Change Resiliency Efforts - 4730

Completion Year
2018

Research Value
\$45,000.00

Research Manager
Ms. Maureen Hodgins

Principal Investigator
Mary Ann Dickinson

Contractor
Alliance for Water Efficiency

Climate change affects many aspects of water resource management throughout the United States, through rising temperatures, drier conditions, snowpack loss, flood events, and rising sea levels. Sustainable water resource strategies, particularly water efficiency strategies, can strengthen resiliency to climate change by reducing greenhouse gas emissions, improving water quantity and quality, protecting watersheds, and improving flood management.

Through this project, a comprehensive review of laws, regulations, policies, and programs at the state level was conducted to catalog findings and identify trends. The researchers surveyed professionals in each U.S. state, including representatives from government and planning agencies, conservation-focused entities, and more, to augment this information. The findings shed light on current activities and provide real-life examples for states and regional entities hoping to improve their resiliency to climate change. Published in 2018.

Report Name

Report #

Available

Order Report

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Executive Summary



State Survey of Climate Change Resiliency Efforts

4730 9/26/2018



Questions?

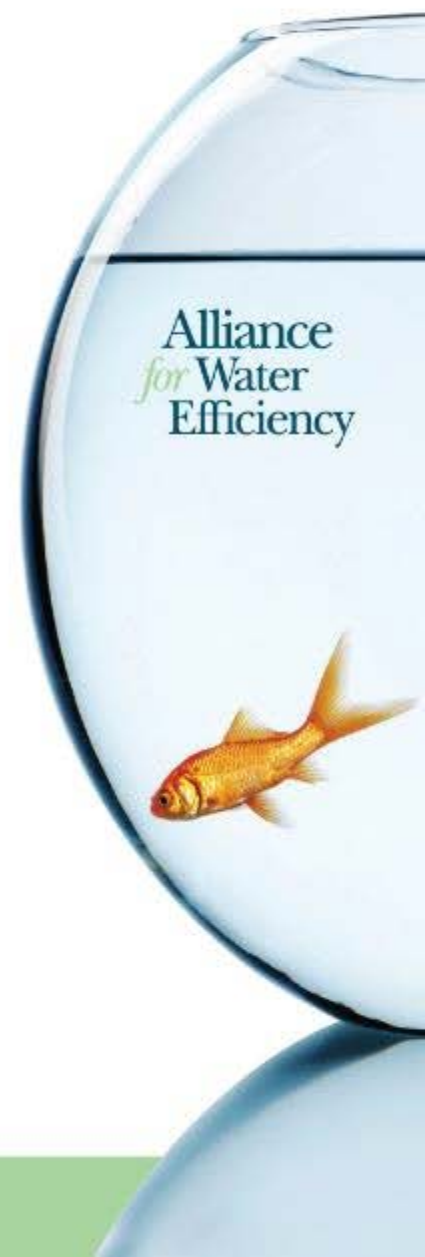
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