Getting Climate Smart

A Water Preparedness Guide for State Action

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The Earth's Best Defense

Why do states need to prepare?

- Record Extreme Weather Events
  - 2011 & 2012

Photo credit: Pamela Andrade

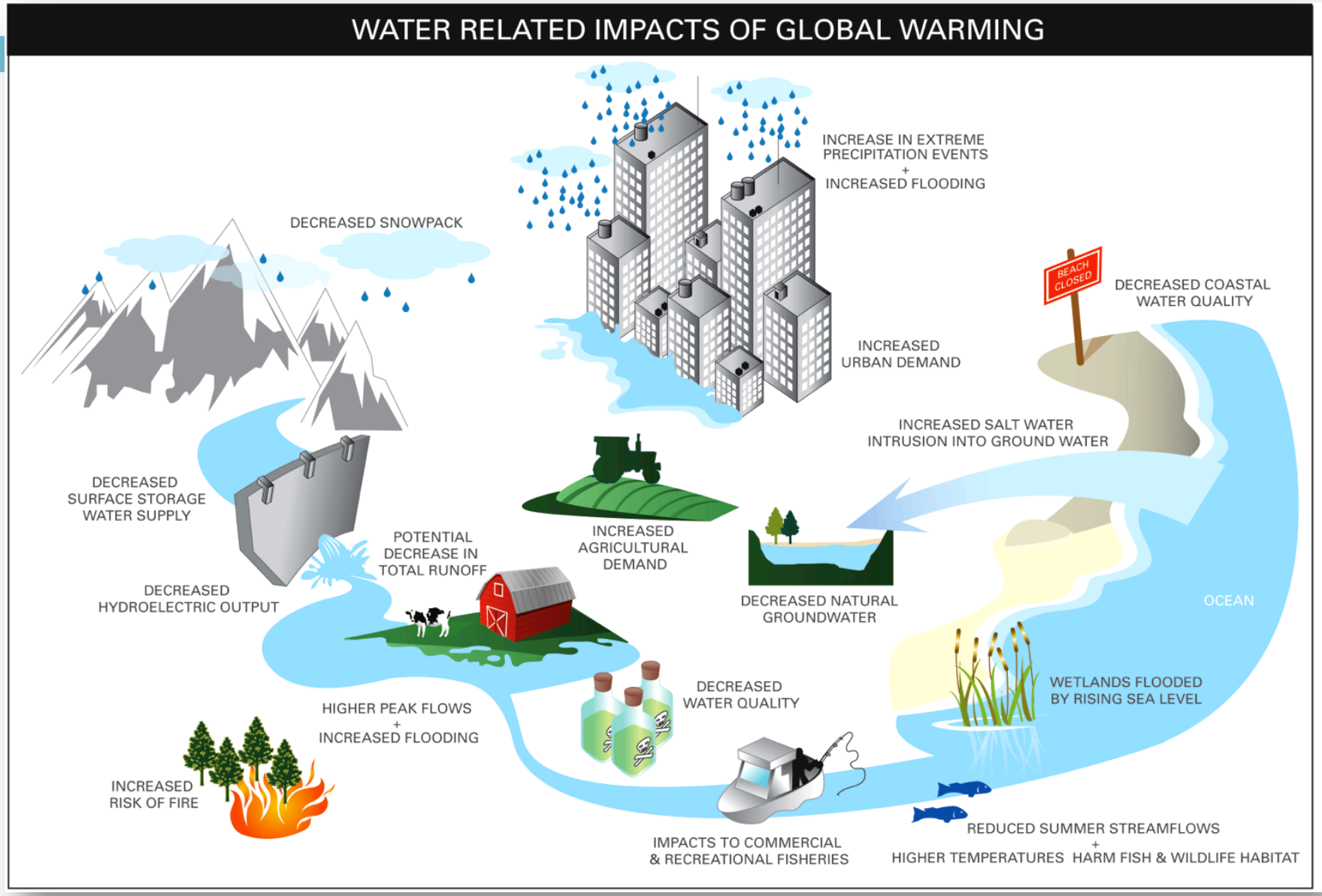
Photo credit: Jane Lago

Why do states need to prepare?

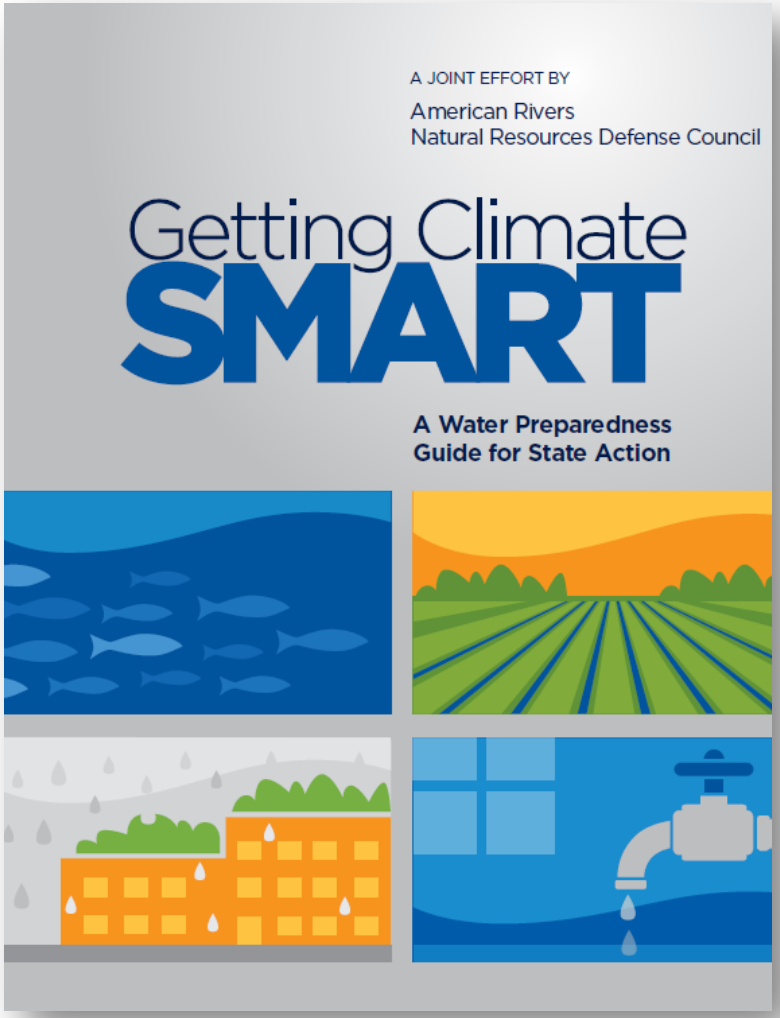
- Observed Climate Change Impacts
  - Increasing air & water temperatures
  - Changes in precipitation patterns & intensity
  - Changes in drought incidence
  - Widespread melting of snow & ice
  - Changes in soil moisture & runoff
  - Rising sea levels

Photo credit: Michael Sauers

What are the implications?

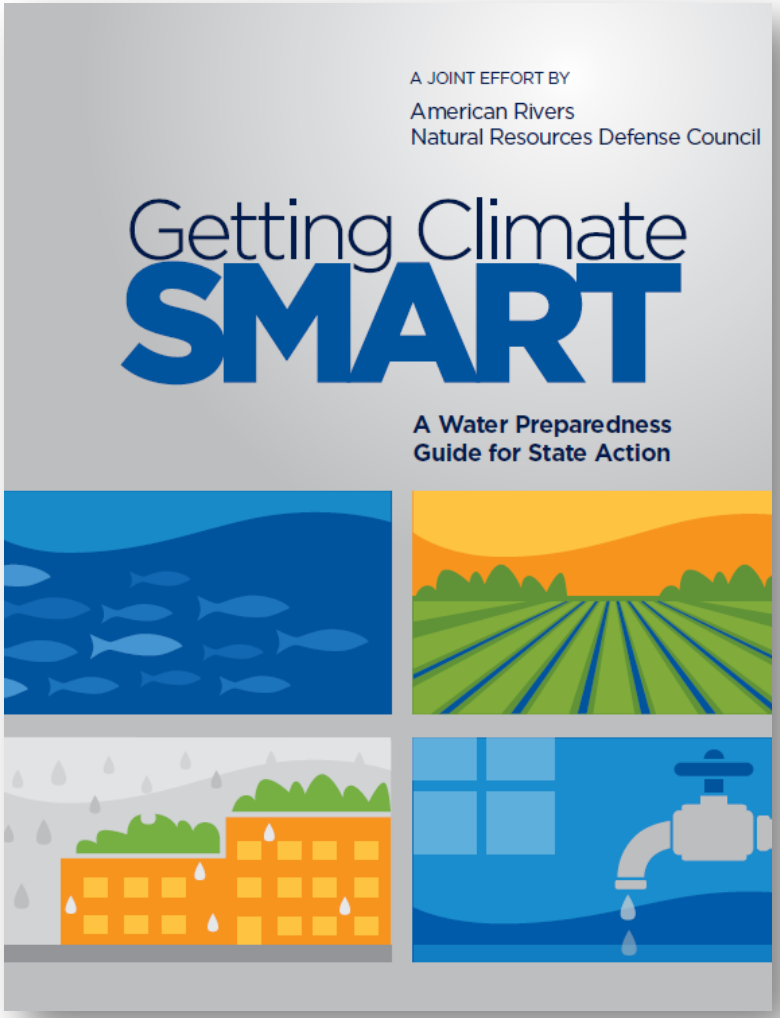


How can states prepare?



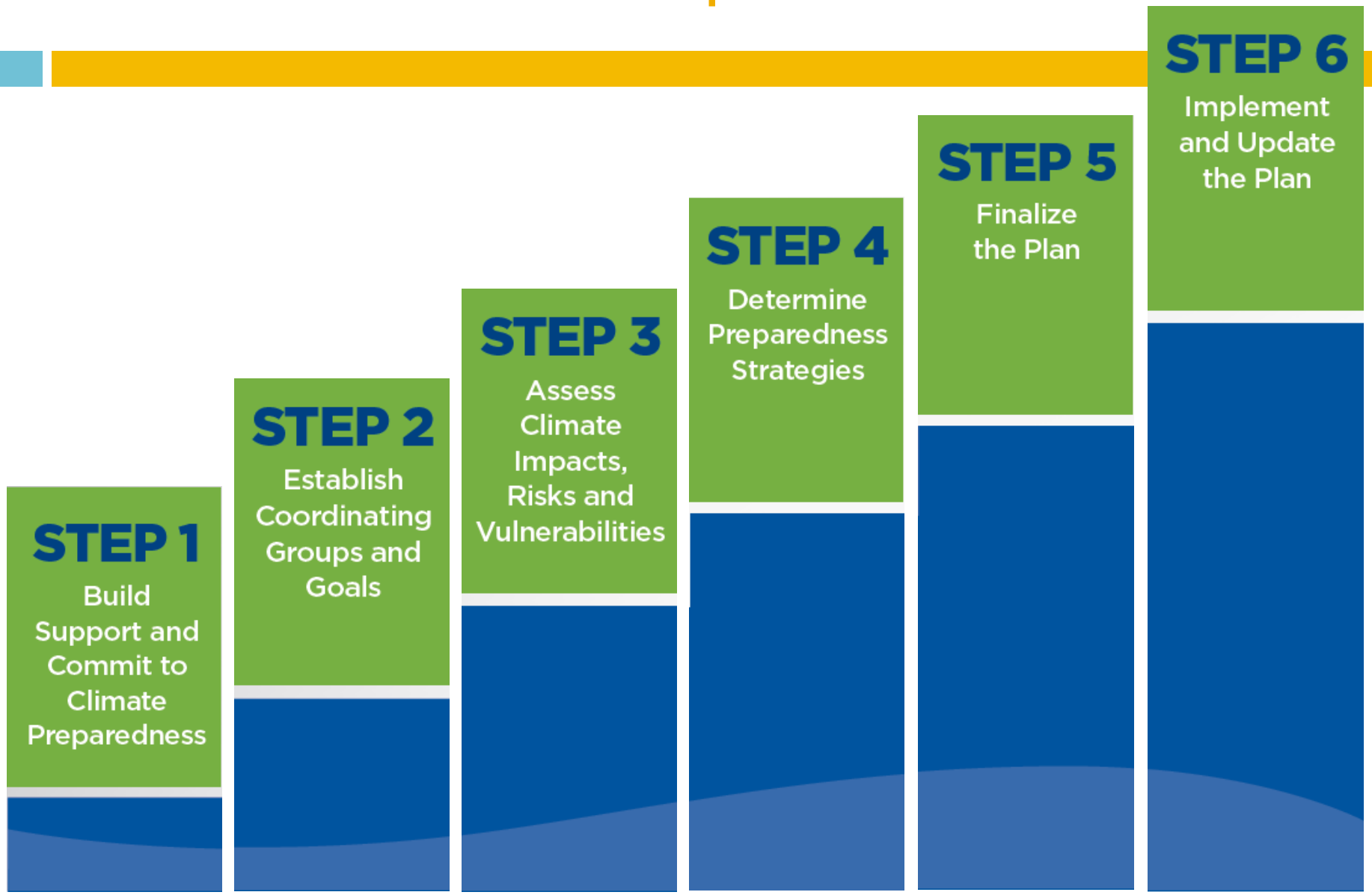
- First of a kind guide for preparing for water threats from climate change
- Six-step planning and implementation process
- Strategy Toolbox of over 600 strategies
- Top 10 No-Regret Strategies

How was the guide developed?



- More than one year process
- Interviewed state officials
- Review of wide range of resources
- Consultation with in-house subject matter experts

What are the six steps?



Planning Tracks

BASIC

- Not likely to require additional funding, staff resources, regulatory/legislative changes
- Focus on no-regret/low-regret approaches

MODERATE

- More in-depth climate change impacts/vulnerability assessment
- More resource-intensive preparedness strategies

ROBUST

- Planning likely requires additional funding, technical resources, greater stakeholder engagement
- Creation of new institutions, system-wide retrofits, regulatory/legal changes

Step 1: Building Support and Committing to Climate Preparedness

- Importance of formal commitment to support development of strong plan and sustain climate action

- Education and outreach may first be necessary
  - Governor's Office
  - Legislators
  - State agency officials
  - Public

- Options
  - Staff-led directives, request by governor or agency executive, executive order
  - Legislative act

Photo credit: NRC

Step 2: Establishing Coordinating Groups

- Climate Preparedness Team
  - Responsible for developing and coordinating state's climate preparedness plan
  - State agency participation
    - Energy, environmental protection, fisheries and wildlife, natural resources, public health, tourism, transportation, water resources, emergency management, public utilities
  - External stakeholders
    - Local and regional government, federal government, research institutions, community organizations, impacted sectors, NGOs

Step 2: Establishing Coordinating Groups

BASIC

- Climate Preparedness Team

MODERATE

- Climate Preparedness Team
- Sector work groups
  - Communities & Infrastructure
  - Commerce, Tourism, & Recreation
  - Public Health & Safety
  - Natural Resources

ROBUST

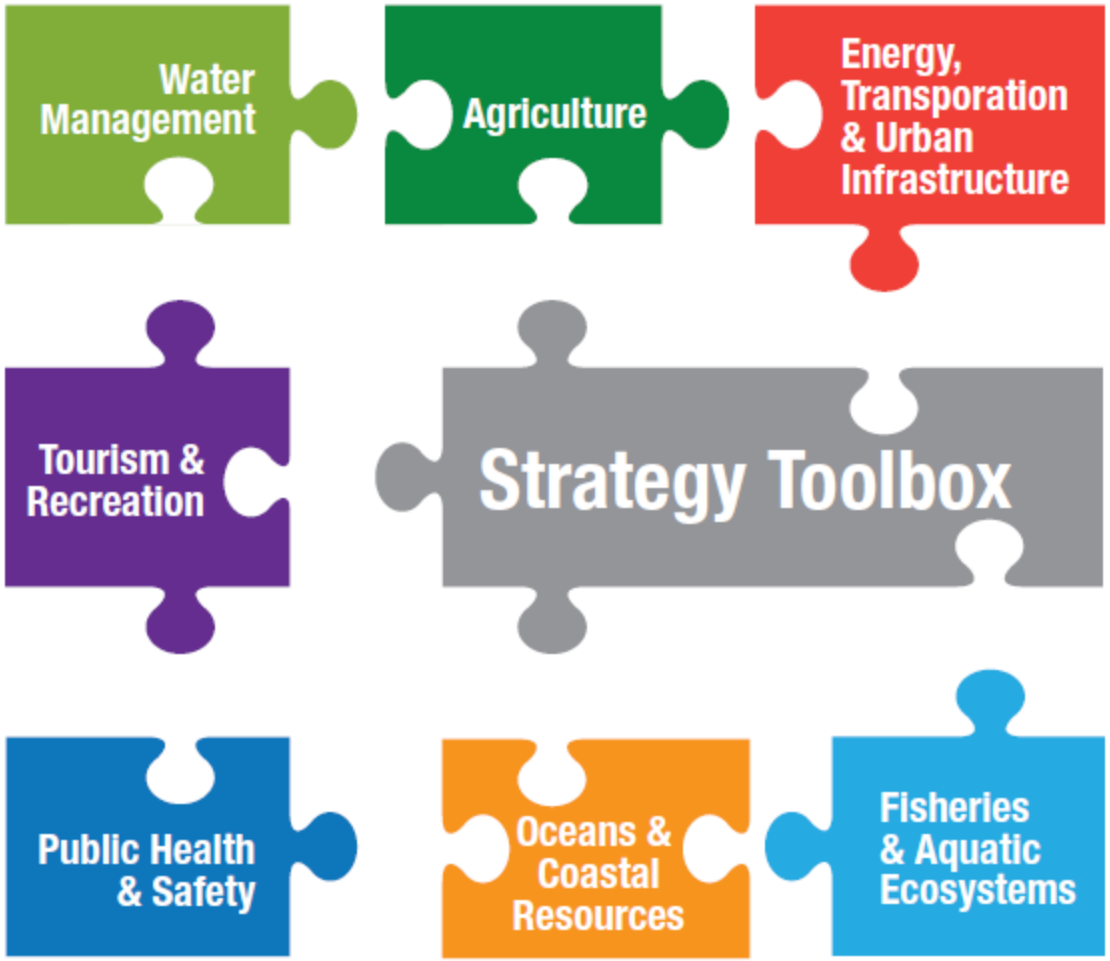
- Climate Preparedness Team
- Sector work groups
  - Agriculture
  - Energy, Transportation, & Urban Infrastructure
  - Fisheries & Aquatic Ecosystems
  - Oceans & Coastal Resources
  - Public Health & Safety
  - Tourism & Recreation
  - Water Management

Step 3: Assessing Climate Impacts, Risks, & Vulnerabilities

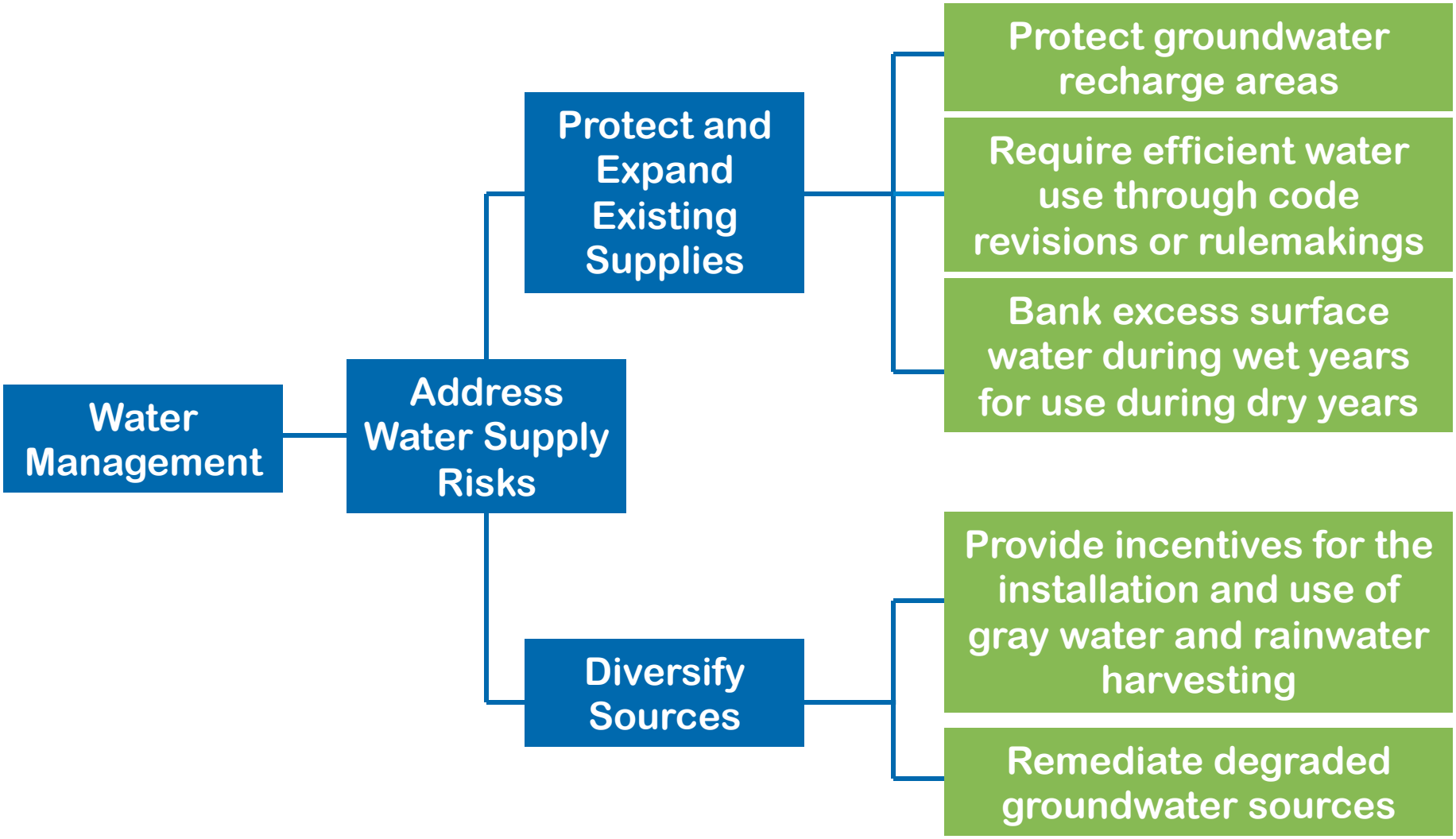
- Determine climate impacts & risks
  - Temperature, precipitation, sea level rise projections
  - Existing resources from USGCRP Nat'l Climate Assessment, EPA Climate Ready Water Utilities, IPCC, NOAA RISA, DOI CSCs, universities
  - Fund new research w/ universities, technical consultants
- Assess sector vulnerability
  - Spatial and temporal scale is important
- Prioritize vulnerable systems & areas

Step 4: Determining Preparedness Strategies

- 600+ strategies in toolbox



Step 4: Determining Preparedness Strategies



Top 10 No-Regret Strategies

- Reduce carbon pollution
- Use green infrastructure to manage stormwater & dry-weather runoff
- Improve urban water conservation & efficiency
- Improve commercial water conservation & efficiency
- Increase agricultural water efficiency & manage water quality impacts
- Increase reclaimed wastewater use
- Increase water efficiency in energy production
- Preserve & restore wildlife habitat
- Improve land-use planning to reduce building in vulnerable area
- Ensure effective emergency response & hazard mitigation planning

Step 5: Finalizing the Plan

Photo credit: Office of MD Governor

- Compile climate change risks and preparedness strategies
- Release for public comment
- Address meaningful comments and release final plan

Step 6: Implementing & Updating the Plan

- Implementation Mechanisms
  - Agency practices, building codes, financial incentives, permitting processes, public outreach/education, etc.
- Track progress
  - Goal
    - Tasks, lead agency/subunit, funding source, completion date, current status
- Regular plan updates
  - Improvements in climate models
  - Effectiveness of strategies

Additional Resources

- State planning examples
- Implementation case studies
- Appendices
  - Examples of executive orders, state legislation
  - Potential planning and implementation funding sources
  - Links to additional planning resources

Photo credit: Aaron Volkening

Questions?

- Download the guide at
  - www.AmericanRivers.org/ClimateSmart
  - www.nrdc.org/water/climatesmart

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