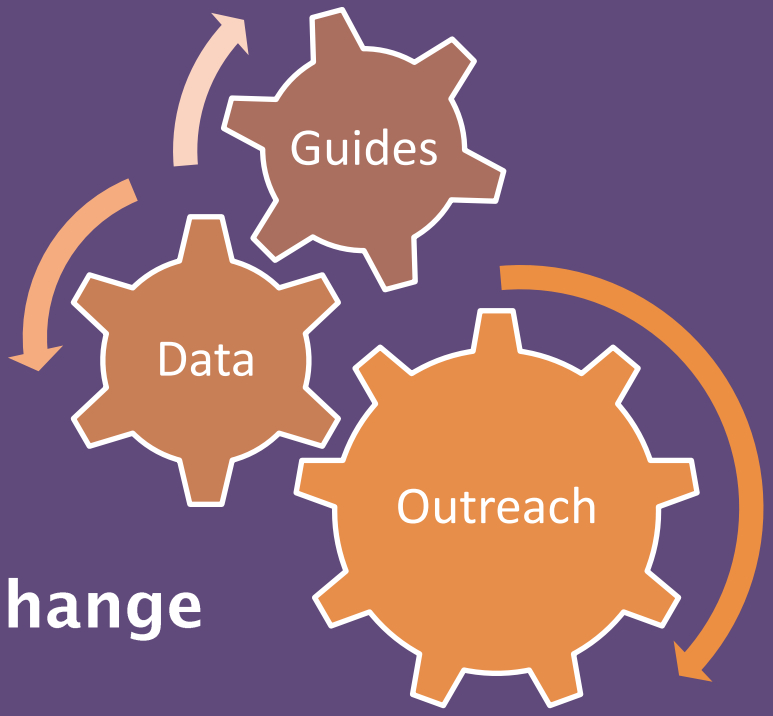
CLIMATE CHANGE RESOURCES

AT THE DEPARTMENT OF WATER RESOURCES

DWR Climate Program

Team of managers, scientists, engineers, administrators, and interns from headquarters and the regional offices

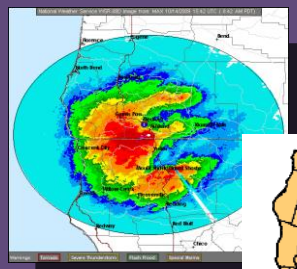
- Develop guidance on addressing CC & GHGs
- Provide outreach & technical assistance

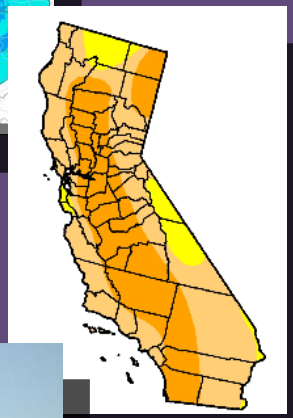


www.water.ca.gov/climatechange

In the Next 40 years….

- 0.9 – 3.6° F temp rise
- 25 – 40 % less snowpack
- More intense wet and dry periods
- Higher flood peaks
- Less summer runoff
- Sea Level rise: 4-16” (7-55” by end of century)
- Increased salinity in the Delta





Statewide Strategies for Adaptation

- Practice & promote integrated flood management
- Enhance & sustain ecosystems
- Expand water storage & conjunctive management of surface & groundwater resources
- Fix Delta water supply, quality, and ecosystem conditions

Climate Change in Update 2013

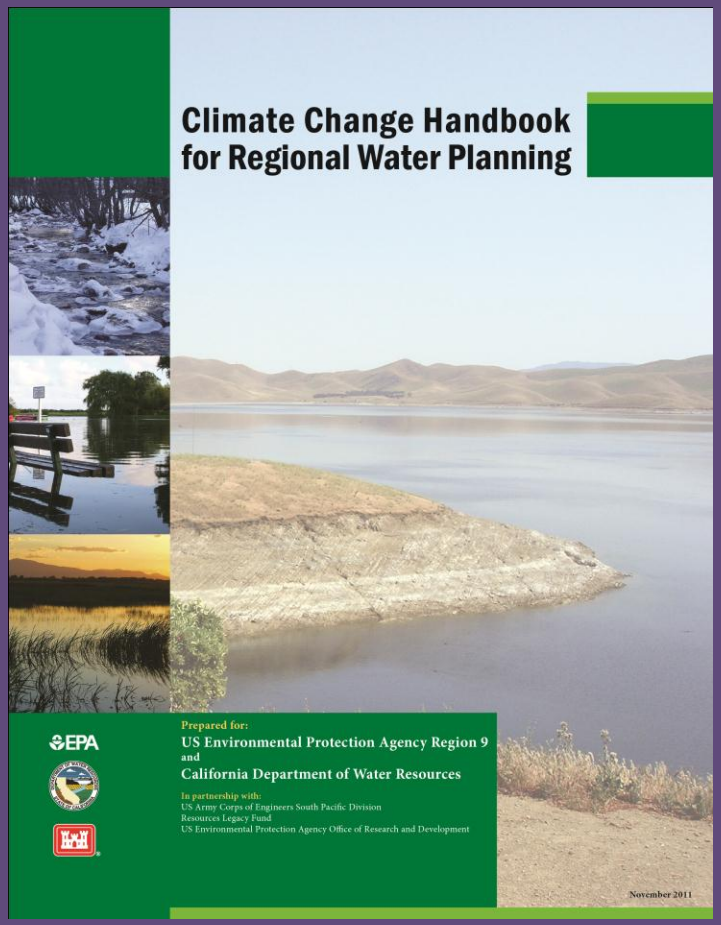
- **Regional Reports**
  - Regionally appropriate adaptation strategies
  - Scientifically sound approach to address CC
- **Future Climate Scenarios**
  - Climate Change Technical Advisory Group
- **Resource Management Strategies**
  - Climate Change Adaptation
  - Greenhouse Gas Mitigation
- **Statewide Strategies**
  - Highlights & key recommendations

Regional Strategies for Adaptation

- Aggressively increase water use efficiency

- Fully implement Integrated Regional Water Management (IRWM)

Climate Change Handbook for Water Planning



www.water.ca.gov/climatechange/CCHandbook.cfm

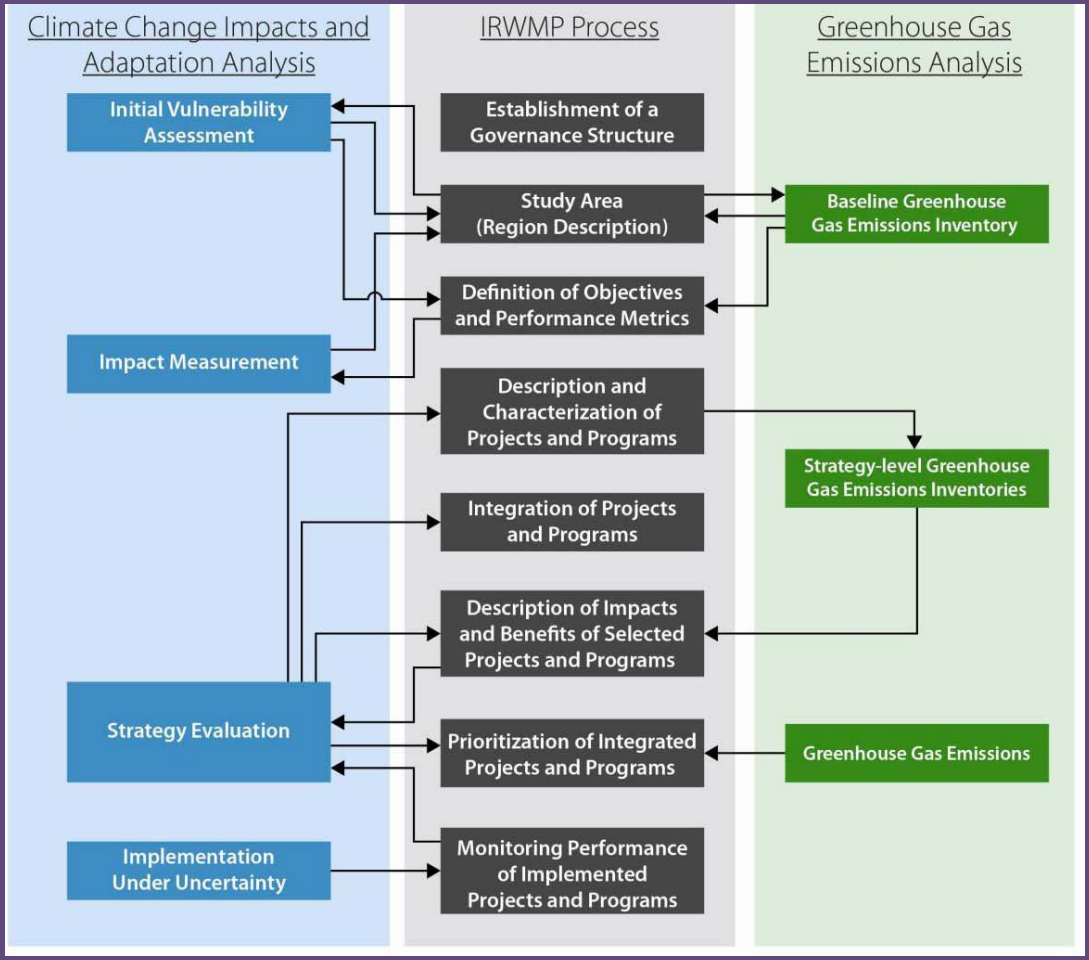
Handbook's Purpose

- Outline the general process for accounting for climate change in water planning
- Synthesize available literature in a way that is useful for regional water planning
- Support IRWM planning in California

What the Handbook is NOT

- A cookbook
- A one-size-fits-all methodology or approach
- An extension of or an addition to the IRWM Guidelines
- A requirement

Climate Change Analysis



Climate Change

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Climate change is having a profound impact on California water resources, as evidenced by changes in snowpack, sea level, and river flows . These changes are expected to continue in the future and more of our precipitation will likely fall as rain instead of snow. This potential change in weather patterns will exacerbate flood risks and add additional challenges for water supply reliability.

The Sierra snowpack provides as much as 65 percent of California's water supply by accumulating snow during our wet winters and releasing it slowly when we need it during our dry springs and summers. Warmer temperatures will cause what snow we do get to melt faster and earlier, making it more difficult to store and use. By 2050, scientists project a loss of at least 25 percent of the Sierra snowpack. This loss of snowpack means less water will be available for Californians to use.

Climate change is also expected to result in more variable weather patterns throughout California. More variability can lead to longer and more severe droughts. In addition, the sea level will continue to rise threatening the sustainability of the Sacramento-San Joaquin Delta, the heart of the California water supply system and the source of water for 25 million Californians and millions of acres of prime farmland.

The Department of Water Resources (DWR) is addressing these impacts through mitigation and adaptation measures to ensure that Californians have an adequate water supply, reliable flood control, and healthy ecosystems now and in the future. Below are some of DWR's climate change activities.

- DWR released summaries of its climate change achievements as a Poster and Brochure (2010)
- DWR adopted its own Sustainability Policy to promote a departmental change in the way DWR does business (2009), and established clear and measurable Goals for sustainability implementation (2010).
- DWR is a member of the California Climate Action Registry and has made the list as a Climate Action Leader for three straight years by reporting its GHG emissions and having the data verified through a third party audit. (2007, 2008, 2009)
- DWR adopted a Climate Change Adaptation Strategy (2008)
- DWR announced plans to use lower carbon fuel sources for State Water Project energy supplies instead of a coal fired power plant, currently being used (2007)

Other Climate Change Activities

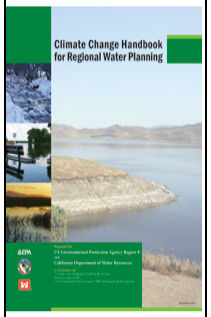
Adapting to the current and future effects of climate change is essential for DWR and California's water managers. DWR addresses climate change in its California Water Plan, which is updated every five years. The California Water Plan provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. DWR continues to improve and expand the analysis of climate change in the California Water Plan. The 2009 California Water Plan Update includes multiple scenarios of future climate conditions and stresses the inclusion of uncertainty, risk, and sustainability.

Climate Change Technical Advisory Group

- DWR Proposal for Climate Change Technical Advisory Group (October, 2011)
- DWR Invites Statements of Qualifications for Climate Change Technical Advisory Group (November, 2011)

Featured Link

Climate Change Handbook for Regional Water Management



The Climate Change Handbook for Regional Water Planning provides key decision considerations, resources, tools, and decision options that will guide resource managers and planners as they develop their own solutions for how to adapt their programs to a changing climate.

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