

Climate Change



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 mountain snowpack provides as much as a third 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 the end of this century, the Sierra snowpack is projected to experience a 48-65 percent loss from the historical April 1st average. 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.

- In 2016, DWR received the [Climate Leadership Award](#) for Organizational Leadership. The U.S. Environmental Protection Agency, the Center for Climate and Energy Solutions and The Climate Registry presented the award for exemplary corporate, organizational, and individual leadership in leadership in managing and reducing greenhouse gas emissions and integrating climate resilience into their operating strategies. [Press Release](#).
- In 2015, DWR received the [Climate Leadership Award](#) for Excellence in Greenhouse Gas Management: Goal Setting for its work on the DWR [Climate Action Plan](#). The award, given by the U.S. EPA, the Association of Climate Change Officers, The Climate Registry, and The Center for Climate and Energy Solutions, is the highest national award given for greenhouse gas management. DWR is the first public agency to be honored with the award.
- In 2014, DWR released up-to-date climate change information, including hydrologic impacts and projections at the statewide and regional levels, adaptation strategies, and energy intensity of water supplies in [California Water Plan Update 2013](#). (also see [California Climate Science and Data for Water Resources Management](#)).
- In 2013, DWR completed its ownership divestment of a coal-fired power plant in Nevada and ceased taking electricity from it. By replacing this electricity with electricity generated by high-efficiency gas-fired power plants and renewables, DWR reduced its GHG emissions by over 800,000 metric tons per year (equivalent to removing 170,000 cars from the road).
- In 2012, DWR adopted phase 1 of its Climate Action Plan, a Department-wide [Greenhouse Gas Emissions Reduction Plan](#)

Featured Link

[2016 Climate Leadership Award](#)



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Organizational Leadership Award Winner

DWR has received the [Climate Leadership Award](#) for Organizational Leadership, presented by the U.S. Environmental Protection Agency, in collaboration with the Center for Climate Energy Solutions and The Climate Registry for exemplary corporate, organizational, and individual leadership in reducing carbon pollution and addressing climate change. [Press Release](#)

- In 2011, DWR in cooperation with the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, and Resources Legacy Fund completed the [Climate Change Handbook for Regional Water Planning](#)
- In 2010, DWR adopted an [Environmental Stewardship Policy](#) which supports a Department-wide "Total Resource Management" approach to planning activities and projects. Clear and measurable [Goals](#) for sustainability implementation were also adopted in 2010 following the 2009 adoption of DWR's [Sustainability Policy](#) to promote a departmental change in the way DWR does business. ([Visit DWR's Sustainability Portal](#) and [Watch DWR's Sustainability Videos](#))
- Between 2007 and 2009, DWR was a member of the California Climate Action Registry and made the list as a Climate Action Leader by reporting its GHG emissions and having the data verified through a third party audit. In 2010, DWR transitioned to [The Climate Registry](#), a North America-wide climate registry, and continued to provide third party verified GHG emissions inventory data.
- DWR adopted a [Climate Change Adaptation Strategy](#) (2008)

[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 [2013 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](#)