

North Sacramento

Sacramento

Managing Sacramento's Water in an Uncertain Future: Barriers to Climate Change Adaptation

Chico

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Auburn Lake Trails

Auburn

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Science and Technology

Granite Bay

Folsom Lake

El Dorado Hills

Colom

How do Sacramento water managers see climate change?

Climate change is seen as a long-term issue.

Agencies have mixed views on its level of threat and relevancy to their operations.

Agencies think there is too much uncertainty on the magnitude and timing of climate impacts – thus, the need to adopt a conservative and steady approach.

	Level of concern	Frequency of response
Reduction of snowpack	High	High
Change in timing and seasonality of snowmelt	High	High
Drought	High	High
Reduction or change in precipitation	Medium	Medium
Change in timing and quality of flows	Medium	Medium
Wildfire	High	Low
Climate change	Medium	Low

Barriers to adaptation

Limited
knowledge

Funding

Limited
institutional
capacities

Political
barriers

Lack of
leadership

No legal
mandate

Information and research needs

Types of knowledge	Information needs
Climate change modeling and forecasts	Downscaled climate data
	Improved water modeling and forecasting
	Anticipated precipitation (amount and timing for a particular location)
	Aquifer recharge and recovery
	Policy change (e.g. salinity and water quality standards) under different climate scenarios
	Timing of climate change impacts
Understanding impacts	Cascading effects of climate change-induced wildfire on watershed health and the ability of soil to hold moisture
	Urban heat islands and impacts on water use
	Potential effects from an increase in evapotranspiration rate
Data collection	Information from weather stations and LiDAR
	More accurate data on stream flows and snowpack in the Sierras
	Soil moisture conditions in the watershed (historical and projected)
Adaptation	Different tools to plan and types of adaptation options available
Economic	Costs of adaptation compared to costs of catastrophes under a business-as-usual scenario
	Local economic impacts of climate change (e.g., industries move to water-abundant areas)