

# Water Plan Update 2018



## **Chapter 2**

# **Sustainability Outlook**

# Chapter 2 – Purpose



- This chapter is intended to promote shared understanding of resource limitations, management deficiencies, and shared intent in identifying policy priorities. It needs to make the case for the need for more consistent and comprehensive policy conversations across California's diverse regions and watersheds. It must also serve as the backdrop, rationale, and urgency behind *Recommended Actions to Support Long-term Sustainability* (Chapter 3).
- This chapter will:
  - Promote a framework for describing and evaluating water sustainability in a consistent and repeatable manner
  - Demonstrate application of method at a watershed scale
  - Identify current planning, policy, and physical conditions
  - Describe current and emerging key challenges to sustainability



# Long-Term Goal Of The Sustainability Outlook

Establish a comprehensive, practical method for tracking and reporting on water management trends that provides shared agreement and consistent terms to communicate across State government and California's diverse regions.

# Aligning the Sustainability Outlook

- Established definitions for sustainability in the context of the societal values.
- Created a framework for linking Values with Outcomes, Indicators and Metrics
- Developed a compilation of desired outcomes, indicators and metrics for those values using existing information, such as:

- 2013 Water Plan
- 2014/16 Water Action Plan
- Flood Future Report
- Central Valley Flood Protection Plan

- DAC Visioning Workshop
- State Companion Plans
- SGMA Strategic Plan
- IRWM Stakeholder Perspectives
- Continuing Interviews with Agencies' Staff

# Regional Application



- Regional application of the Outlook is the long-term goal
- Can provide more detailed information to local and regional decision makers
  - Severity
  - Geography

# Sustainability Outlook Uses



- Identify State policy-level priorities
- Focus energy and resources
- Align actions across State agencies
- Ensure that water managers are working toward common goals and outcomes
- Assess and adjust direction in response to a changing environment
- Communicate water management sustainability to water managers and the public

# Chapter 2 – Key Content



- Water Management in California Today
  - Resources and infrastructure
- Historical Funding
- Challenges and Drivers for Change
  - Fundamental Challenges
  - Specific Challenges
- Evaluating Sustainable Water Management
  - Assessing, tracking, and reporting improvements
- Pilot watershed scale assessment
  - Ongoing funding for State efforts has declined over time
- Next steps (Update 2023 and beyond)

# Key Trends from Historical Expenditures



- Local agencies fund a majority of water management actions (capital and ongoing)
- Local capital expenditures have increased over time due to local bond measures and leveraging of State grants
- State expenditures are driven by public perceptions and priorities
  - Bond measures in 2000's provided increased State funding; however, this funding has been expended and state funding has been declining over time
  - Ongoing funding for State efforts has declined over time
- Federal funding has remained low, but consistent over time

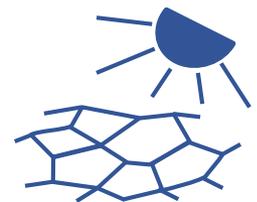
# Fundamental Challenges

**These are fundamental and overarching challenges that regions and communities cannot efficiently or cost-effectively address on their own, but on which the State can take action to provide broad public benefit.**

- **Initiatives and Governance**
  - The ability to sustainably manage water resources at a watershed scale is often impaired by the lack of coordination and alignment of water and land management efforts of local, regional, State, and Federal agencies and tribes, as well as inconsistency with the societal values.
- **Regulatory Framework**
  - Reconciliation of both environmental needs and human activities is problematic, does not take a systems-oriented approach, and is not directly tied to and informed by ongoing planning and implementation efforts.
- **Capacity for Data-Driven Decision-Making**
  - Water managers often do not have access to adequate technical information, tools, and facilitation services to support regional efforts toward sustainable, integrated water management.
- **Infrastructure**
  - Water- and flood-related infrastructure is often not operated, maintained, rehabilitated, and modernized to allow it to continue providing the intended outcomes in light of facility age, the effects of climate change, current management practices, and new data.
- **Funding**
  - Local, regional, State, and federal funding necessary for water resources management activities over time (both planning and implementation) is neither sufficient nor sustainable.

# Challenges, Drivers, and Disruptors

- Some communities lack access to clean, safe, and affordable water supplies
- Projected population growth will exacerbate stress on available water supplies
- Groundwater levels are declining at startling rates
- California will experience more extreme hydrologic events in the future



# Challenges, Drivers, and Disruptors (cont.)

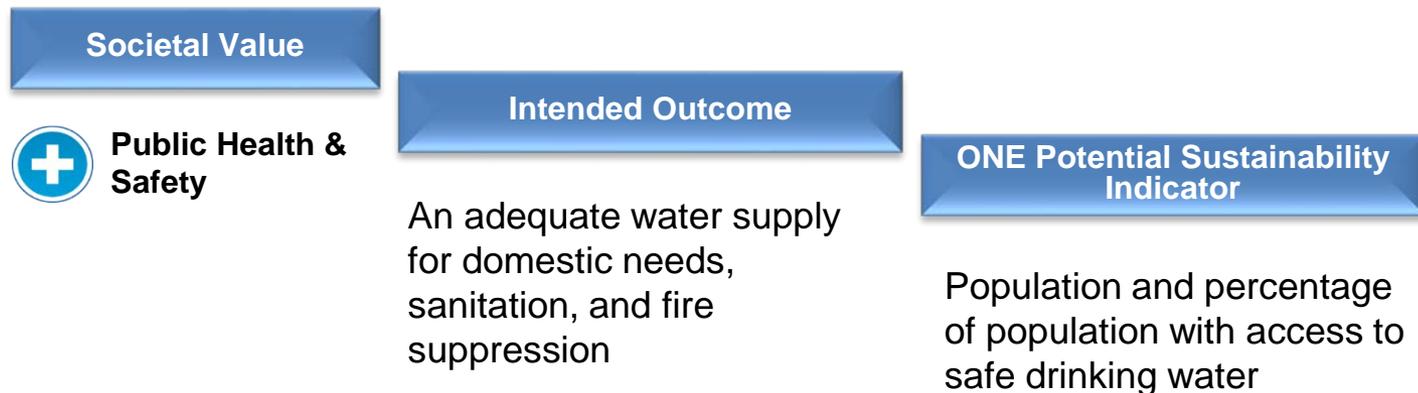
- Ecological conditions in the State continue to decline
- California's water infrastructure is aging and vulnerable to natural disasters and other hazards
- Flood management and ecosystem functions are underfunded
- Some regional economies are destabilizing
- California's regulatory and social environment continues to change



# Sustainability Outlook – Outcomes and Indicators

Outcomes and indicators are necessary for effective policy and performance tracking

## *Example:*



# Sustainability Outlook – Anticipated Development



## **For Update 2018**

- Establishing a Sustainability Outlook Methodology
- Proof of Concept at a Regional Level (Pilot study)

## **2018 – 2023**

- Revisions & Refinements to Methodology
- Deployment of Regional Outlooks
- Statewide Roll-up

# Sustainability Outlook – Work to be Done



- Continue aligning efforts, improve consistency, and improve visibility of related needs
- Move from general proof of concept to definitive analysis
- Address averaging effect of up-scaling
- Create easily comprehended graphics and illustration
- Improve data adequacy (time to acquire and data quality and quantity)

# Sustainability Outlook – Work to be Done (continued)

- Create centralized clearinghouse or consistent way to locate the data (regionally or statewide)
- Anticipate unintended consequences of management actions and plan for adaptive management
- Identify appropriate planning and measurement scales (regional, statewide, etc.) for the identified outcome and metrics