

# ACHIEVING A SUSTAINABLE CALIFORNIA WATER FUTURE THROUGH INNOVATIONS IN SCIENCE AND TECHNOLOGY

## NEXT STEPS



# STORY LINE FROM OUR REPORT

- We can do more with less, but require a roadmap that all agree to follow
- We require high-quality information about the watershed and the withdrawal of water
- A multi-year sustainable plan possible but we need more re-use, efficiency and the capture of unused water (stormwater, flood flows, graywater, etc.)
- A systems approach is essential using science and technology to facilitate – the problem is complex!



# WHAT HAS HAPPENED SINCE REPORT WAS ISSUED?

- CCST CWF report issued 4/9/14, traction slow, but feedback positive
- Drought has taken center stage; the issue has become very political: lots of reports, op-eds, etc.
- How can CCST help?
  - Educate, identify needed research, develop policy needs, etc.
  - Steering Committee favors “be available.”



# NEXT STEPS

- Near-term recommendations (12 in Executive Summary) have been prioritized
  - Greatest need and highest impact
  - Help with drought
- What are the top five?
- For each, what are
  - Major barriers and impediments
  - What needs to be done to facilitate implementation



# MAJOR NEAR-TERM RECOMMENDATIONS (TO CCST AT 2/14 MEETING)

1. Develop and Implement an integrated water information management system
2. Expand the use of monitoring technology and management practices
3. Improve water use efficiency in all sectors and at all stages of the water cycle
  - A. Agricultural sector
  - B. Urban sector
  - C. Utilize “system thinking” across all sectors



# MAJOR NEAR-TERM RECOMMENDATIONS

## (cont'd)

4. Restore and protect watersheds including floodplains - focus on groundwater recharge
5. Develop new and expand the application of proven chemical, physical and biological water treatment technologies with a special focus on salinity management, nitrate control and recycling water
6. Integrate water, energy and land use planning and management



# MAJOR NEAR-TERM RECOMMENDATIONS

## (cont'd)

7. Continue to support and fund initiatives by various public-sector institutions
8. Expand the use of private-sector initiatives including public/private partnerships
9. Identify, evaluate adapt and implement best practices from around the U.S. and the world



# THE TOP FIVE

- 1. Need for an integrated water information management system including need to meter all water use.**
2. Improve efficiency in all sectors, especially agriculture and urban
3. Restore and protect watersheds with enhanced floodplains and the capture of stormwater runoff in both surface and subsurface locations
4. Expand use of desalination and nitrate reduction technologies for cleanup and graywater/recycling technologies for reuse
5. Expand use of private-sector initiatives and public/private partnerships





# FOR EACH TOP FIVE PRIORITY

- What are major impediments and barriers
  - Demonstrate WHY this is so important
  - Need a business case to demonstrate impact
  - Resistance of major shareholders
  - Lack of effective “forcing functions”



# FOR EACH OF TOP FIVE PRIORITIES

## (cont'd)

- What is needed to assure implementation?
  - Flesh out the detailed needs, demonstrate WHY this is important, and build the business case
  - Develop consensus among key players
  - Create policy mandates and incentives where needed
  - Integrate with other key initiatives (e.g. water bond measures, groundwater task force, Governor's CA Water Action Plan, etc.)
  - Assure funding and staff support



# NEED FOR AN INTEGRATED WATER INFORMATION MGMT SYSTEM INCL NEED TO METER ALL WATER USE

- WHAT ARE MAJOR IMPEDIMENTS AND BARRIERS?
- WHAT NEEDS TO BE DONE TO FACILITATE IMPLEMENTATION?



# IMPROVE EFFICIENCY IN ALL SECTORS, ESPECIALLY AG AND URBAN

- WHAT ARE MAJOR IMPEDIMENTS AND BARRIERS?
- WHAT NEEDS TO BE DONE TO FACILITATE IMPLEMENTATION?



# RESTORE AND PROTECT WATERSHEDS INCL THE CAPTURE OF STORMWATER AT SURFACE AND GROUNDWATER LOCATIONS

- WHAT ARE MAJOR IMPEDIMENTS AND BARRIERS?
- WHAT NEEDS TO BE DONE TO FACILITATE IMPLEMENTATION?



# EXPAND USE OF DESAL AND NITRATE REDUCTION TECHNOLOGY FOR CLEANUP AND GRAYWATER/RECYCLING FOR REUSE

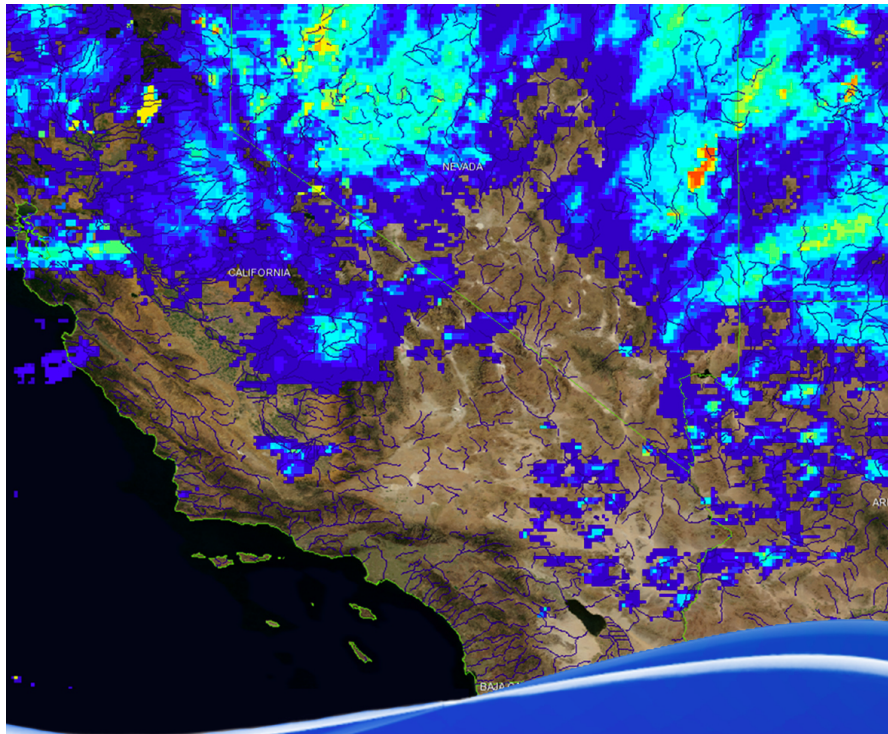
- WHAT ARE MAJOR IMPEDIMENTS AND BARRIERS?
- WHAT NEEDS TO BE DONE TO FACILITATE IMPLEMENTATION?



# EXPAND USE OF PRIVATE-SECTOR INITIATIVES AND PUBLIC/PRIVATE PARTNERSHIPS

- WHAT ARE MAJOR IMPEDIMENTS AND BARRIERS?
- WHAT NEEDS TO BE DONE TO FACILITATE IMPLEMENTATION?





# Achieving a Sustainable California Water Future through Innovations in Science and Technology

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