

# Sustainable Water Resources Roundtable

*From Restoration to Resilience:  
Sustainable Water Resources from  
a Functioning Ecosystem*



**Tulane River Center**

**Thu, Oct 26 – Fri, Oct 27, 2017**

John Wells, SWRR Co-chair and  
David Berry, SWRR Facilitator

# *Sustainable Water Resources Roundtable*



A national collaboration of federal, state, local, corporate, non-profit and academic interests

A subgroup of the US Advisory Committee on Water Information

# Our Mission

To promote sustainability of the nation's  
resources

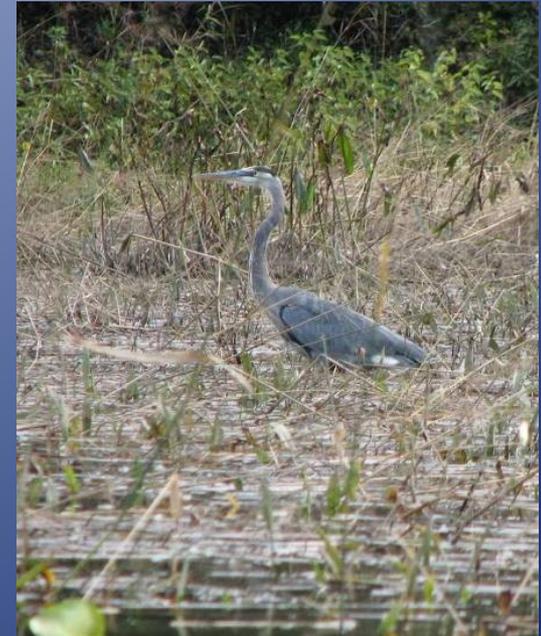
through ...

- Engagement of people & partner organizations
- Targeting of research
- Evaluation of information
- Development & use of indicators



# Our Vision

A future in which our nation's water resources support the integrity of economic, social and ecological systems and enhance the capacity of these systems to benefit people and nature.

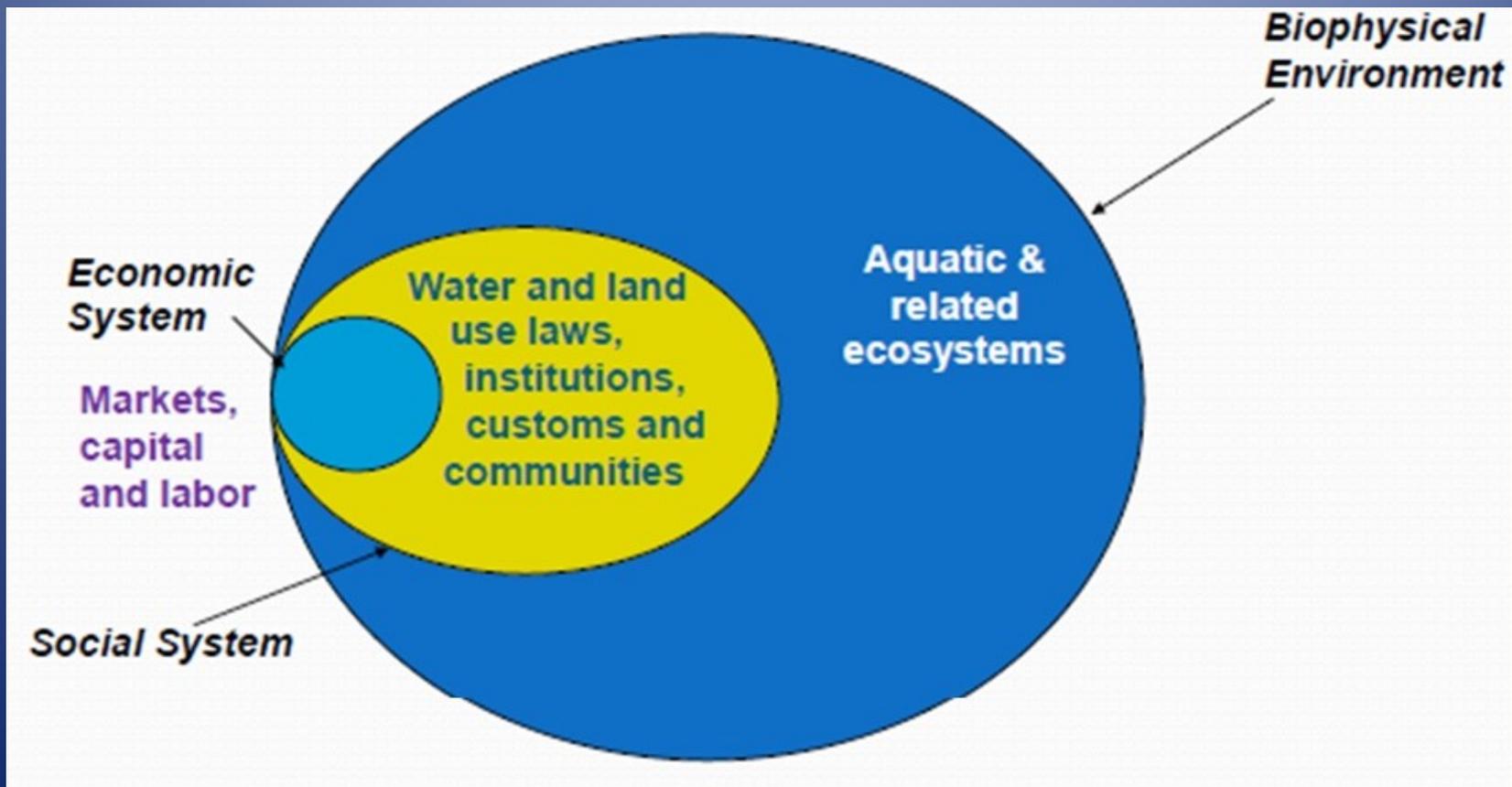


# Collaboration and Outreach

- Over 1,000 participants from federal, state, tribes and local governments; corporations; nonprofits and academia
- Meetings in California; Colorado; Florida; Maryland; Michigan; Minnesota; New Hampshire; Louisiana; Virginia; Washington, D.C.

Web site: <http://acwi.gov/swrr>

# Essential Relationships of Sustainability with Water Use



# Capital and System Capacities

**Capital is the capacity to produce value over time**

**Environmental, social and economic systems produce value through flows of services, experiences, or goods that meet human and ecosystem needs over time**

**We achieve sustainability by maintaining capital to meet needs**



# The SWRR Indicator Framework

- Water availability
- Water quality
- Human uses and health
- Environmental health
- Infrastructure and institutions

# Water Availability

## Renewable water

Upper limit of water availability

## Water in the environment

Water remaining after  
human uses

## Water use sustainability

Degree to which water use  
meets current needs while  
protecting ecosystems and  
the interests of future  
generations



# Water Quality

Quality of water for human uses

Drinking, recreation, industry, and agriculture etc

Quality of water in the environment

Flora and fauna and ecosystem  
processes

Water quality sustainability

Degree to which water quality  
satisfies human and ecosystem  
needs



# Human Uses and Health

Withdrawal and use of water

Amount of water withdrawn from the environment and the uses to which it is put

Human uses of water in the environment

Extent to which people use water for waste assimilation, transportation, and recreation



# Human Uses and Health

## Water dependent resource use

Extent to which people use resources like fish and shellfish that depend on water resources

## Human Health

Extent to which human health may be affected by the use of water and related resources



# Environmental Health

- **Indices of biological condition**
  - Health of ecosystems
- **Amounts and quality of living resources**
  - Productivity of ecosystems



# Infrastructure and Institutions

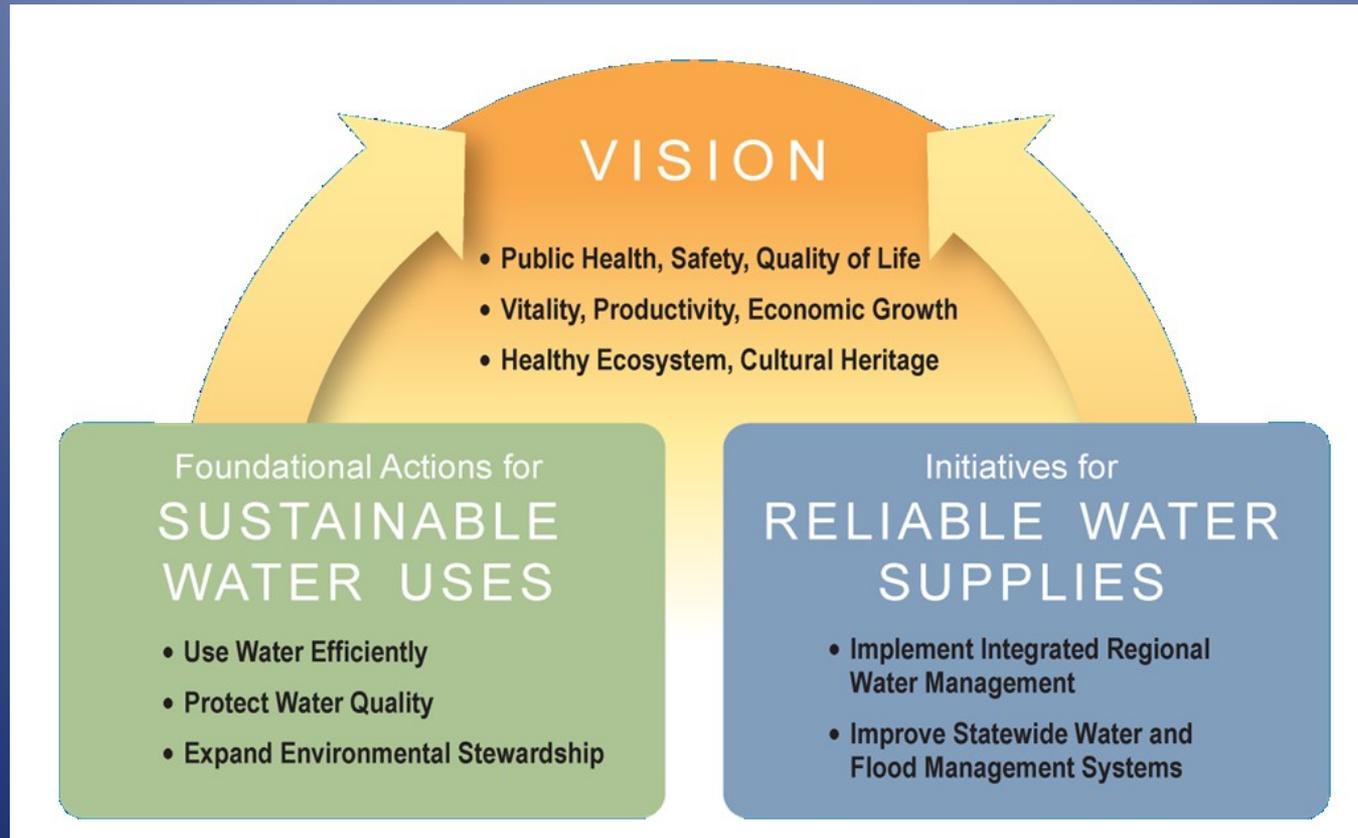
- Capacity and reliability of infrastructure
  - Capacity and reliability of infrastructure to meet human and ecosystem needs
- Efficacy of institutions
  - Efficacy of legal and institutional frameworks in managing water and related resources sustainably



An application of the Indicator Framework:

# California Water Plan

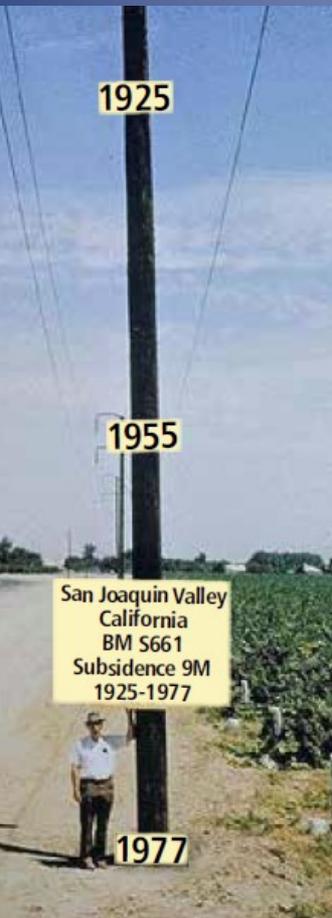
## Blueprint for Integrated Water Management & Sustainability



# The need for Focus on Sustainability: A System in Crisis

## Reduced Prosperity for Future Generations

- Greater Drought Impacts - Unreliable Water Supplies
- Increasing Flood Risk
- Groundwater Depletion and Subsidence
- Degraded Water Quality
- Declining Environmental Conditions
- Aging Infrastructure



*Low water level at Folsom Lake (January 2014)*

# *Contact Information*

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