

Sustainable Water Resources Roundtable

*Applications of Federal Research and Information to
Water Resources - Opportunities for Collaboration*

**National Council on Science & the
Environment**

Hyatt Regency Crystal City

January 22, 2018

John Wells and Robert Wilkinson,
SWRR Co-chairs, 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

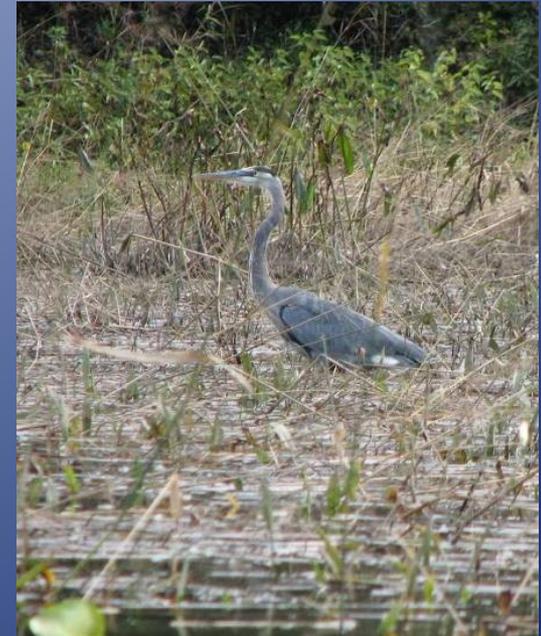
To promote sustainability of the nation's resources through ...

- 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.

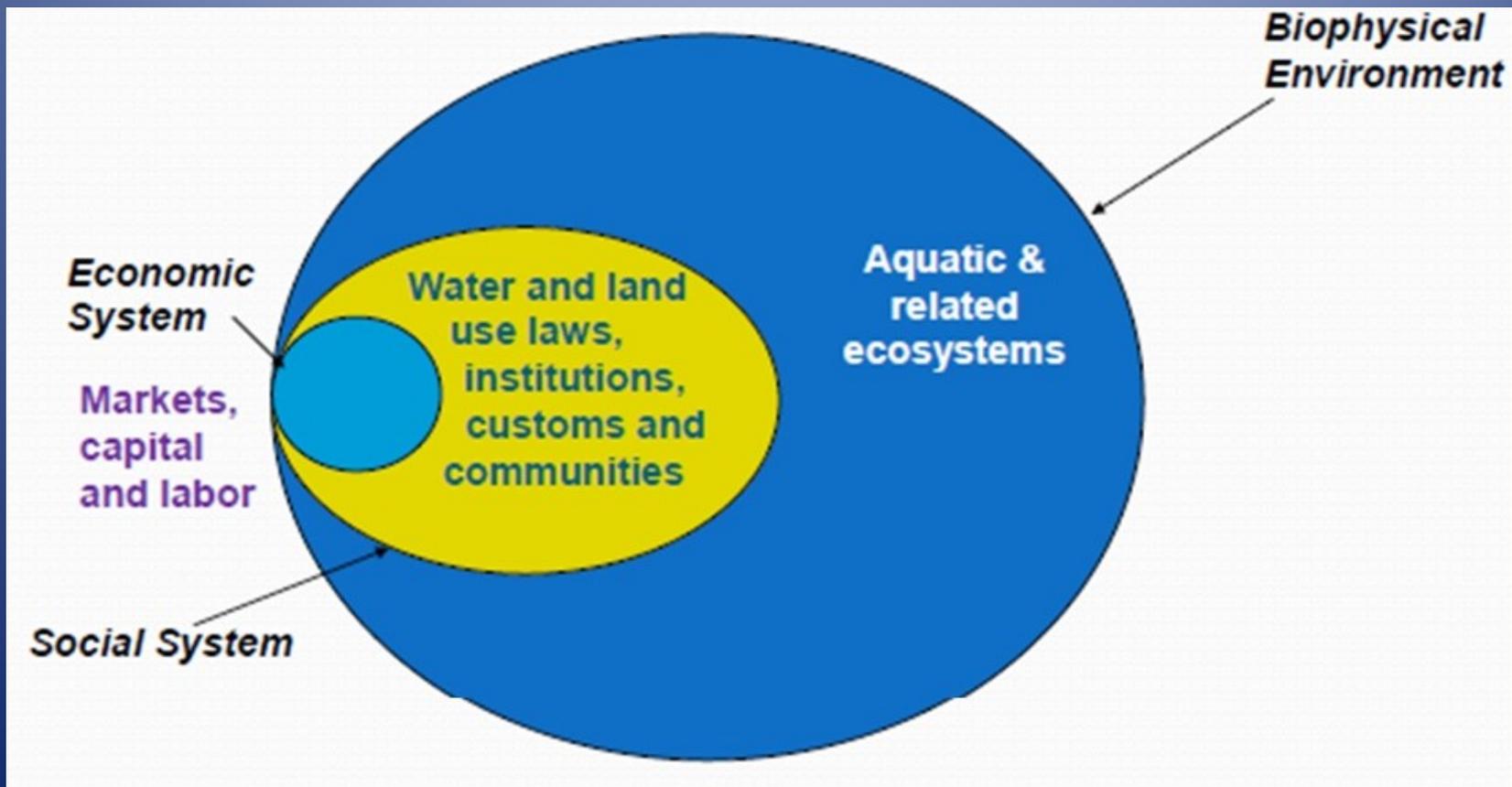


Collaboration and Outreach

- 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, agriculture, etc.

Quality of water in the environment

Flora and fauna
Ecosystem processes

Water quality sustainability

Degree to which water quality
satisfies human and ecosystem needs



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



Focus of Update 2018

Envisioning Cal Water Sustainability



Envisioning Statewide Sustainability: The Long View

- Californians have reduced risks from flooding, unreliable water supplies, groundwater depletion, and habitat and species declines.
- Water sustainability is commonly understood in terms of the four societal values.
- California's water management supports a increased public health and safety, healthy economy, ecosystem vitality, and enriching experiences.
- Water is appropriately integrated across all State and regional planning processes.
- Water policy, investment, and actions are increasingly proactive and based on the long view.

The Long View (continued)

- Water management is outcome-based, stably funded, and regionally appropriate, encompassing effective blend of planning and regulation.
- Regulations are tied to planning and long-term system management and regulatory discretion is broadened and exercised to accomplish intended outcomes.
- State government agency activities empower and support regional water management.
- State-regional interaction reflects each region's unique perspectives, needs, and priorities.
- Institutions plan, manage, and fund water resources at an effective scale (e.g., watershed/groundwater basin).

The Sustainability Outlook

- Establish a comprehensive and practical method for tracking and reporting on water management and policy
- Provide shared understanding and consistency across State government and California's diverse regions.



The Outlook's “Vital Statistics”

- For human health, *vital signs* are the physical conditions routinely monitored by medical professionals to assess a patient's general overall health: temperature, pulse, respiration rate, blood pressure, etc.
- For the Outlook, *vital statistics* refers to the key data based indicators we can use to assess the overall health of California's water and related resources for sustainability across the four Societal Values.

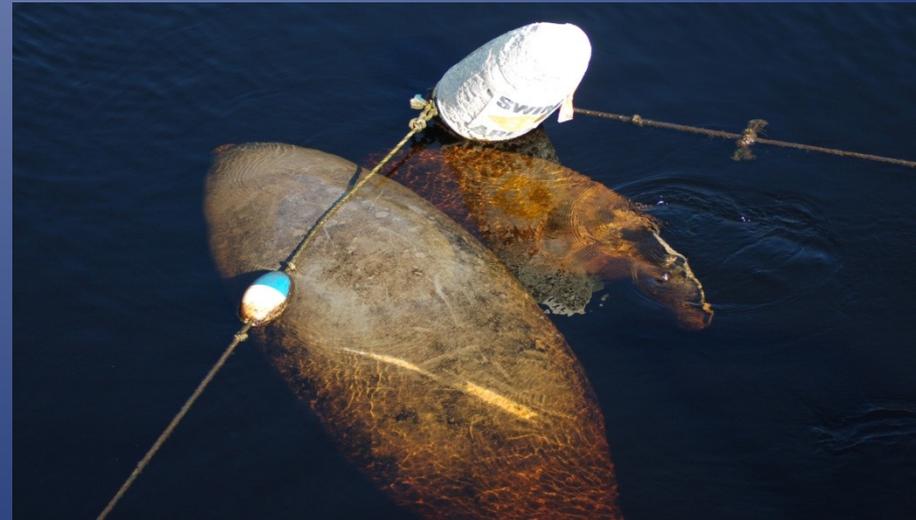
The Army

Water Security Observations

- Water management largely compliance-driven
- Less attention directed outward to sustainability of regionally shared water sources
- Long-term water projections currently not factored early into stationing decisions
- Chronic funding constraints means attention to Army-owned and Army-operated infrastructure tends to be reactive
- Long-term investment a challenge

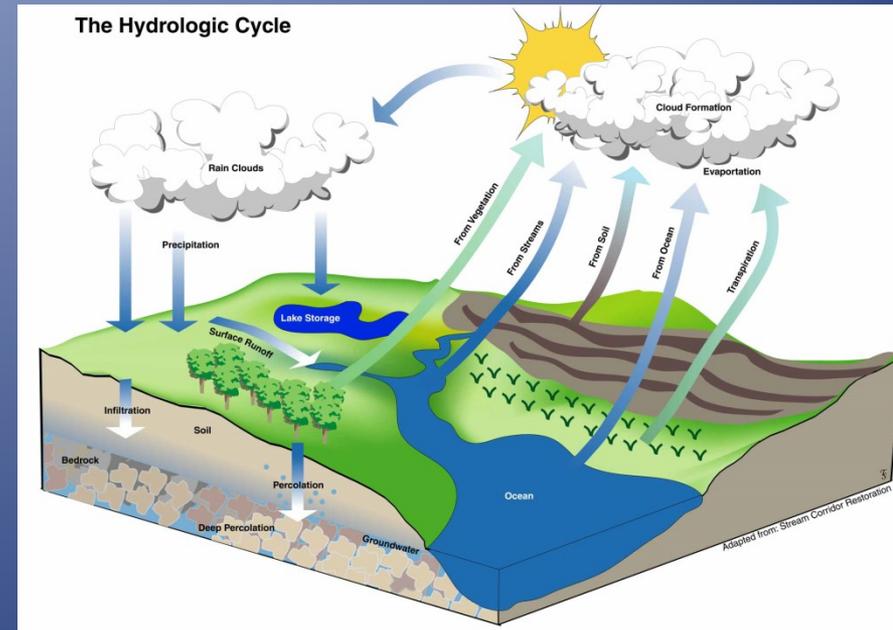
Army Strategy Elements

- Assist host nations with water resources sustainability
- Assess the vulnerability of water and wastewater infrastructure to natural mishaps
- Match water quality to water use
- Anticipate long-term water requirements
- Influence long-term water management outside the fence line



A Principle of Shared Responsibility

Because water does not respect political boundaries, its management requires shared consideration over time of the needs of people and ecosystems up- and downstream and throughout the hydrologic cycle



Next Steps for the SWRR

- Continue roundtable outreach
 - Build regional connections
 - Add new private, nonprofit & public sector partners
- Assist agencies in developing programs and in describing the need for programs to collect information and manage water sustainably



Contact Information

SWRR Co-Chairs

- Robert Wilkinson, Bren School of Environmental Science and Management, University of California, Santa Barbara, wilkinson@es.ucsb.edu
- John Wells, 651-686-8615, John R. Wells and Associates, jrwells2411@gmail.com

SWRR Director

- David Berry, 703-741-0791, davidberry@aol.com
- Sustainable Water Resources Roundtable
<http://acwi.gov/swrr>