

# Sustainable Water Resources Roundtable

*At The Freshwater Society*

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# *Sustainable Water Resources Roundtable*



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

A committee of the USGS  
Advisory Committee on Water  
Information

# Our Mission

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

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

# Our Vision

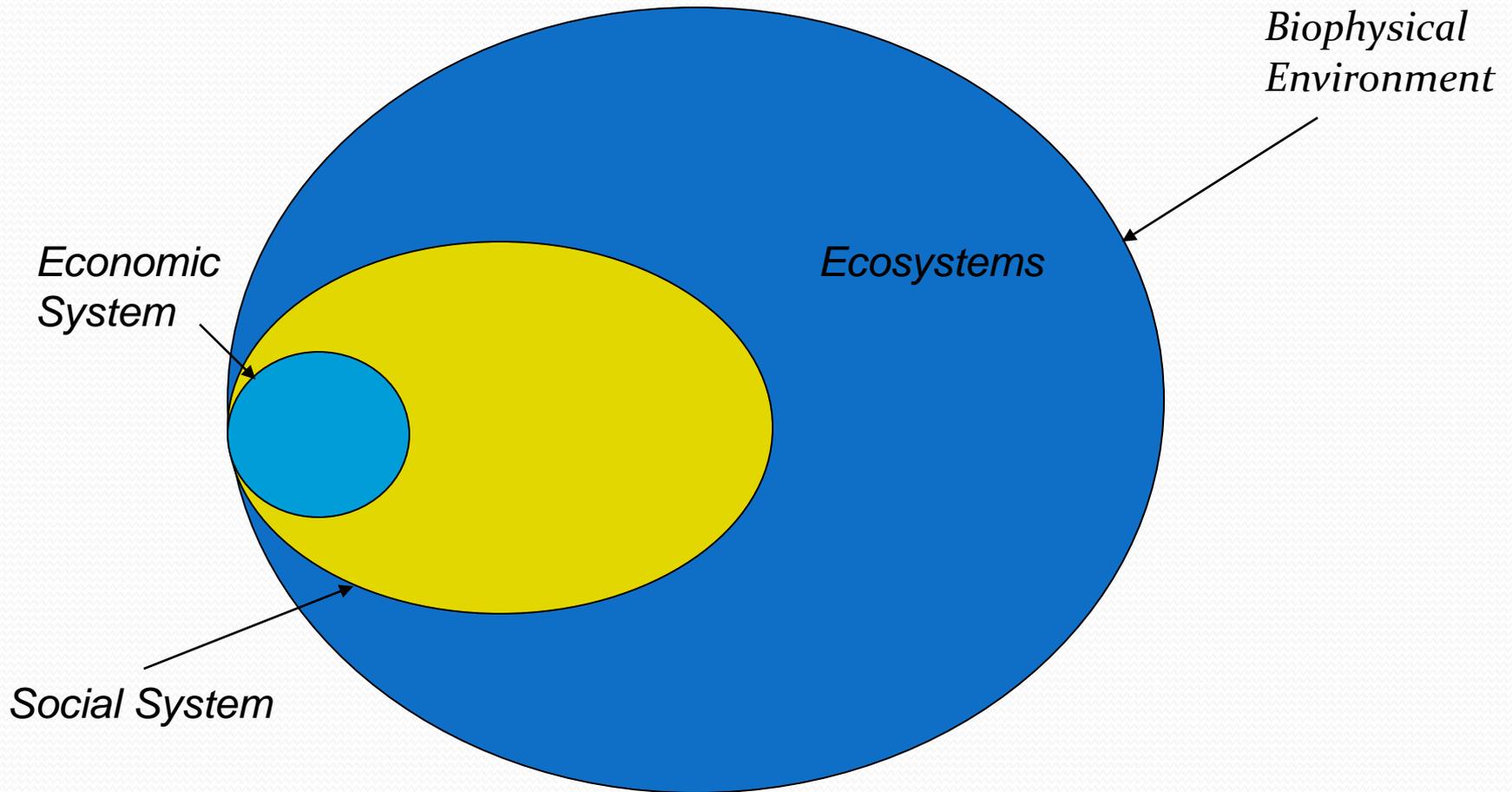
A future in which our nation's water resources support the integrity of economic, social and ecological systems and enhance the capacity of these systems to benefit people and nature



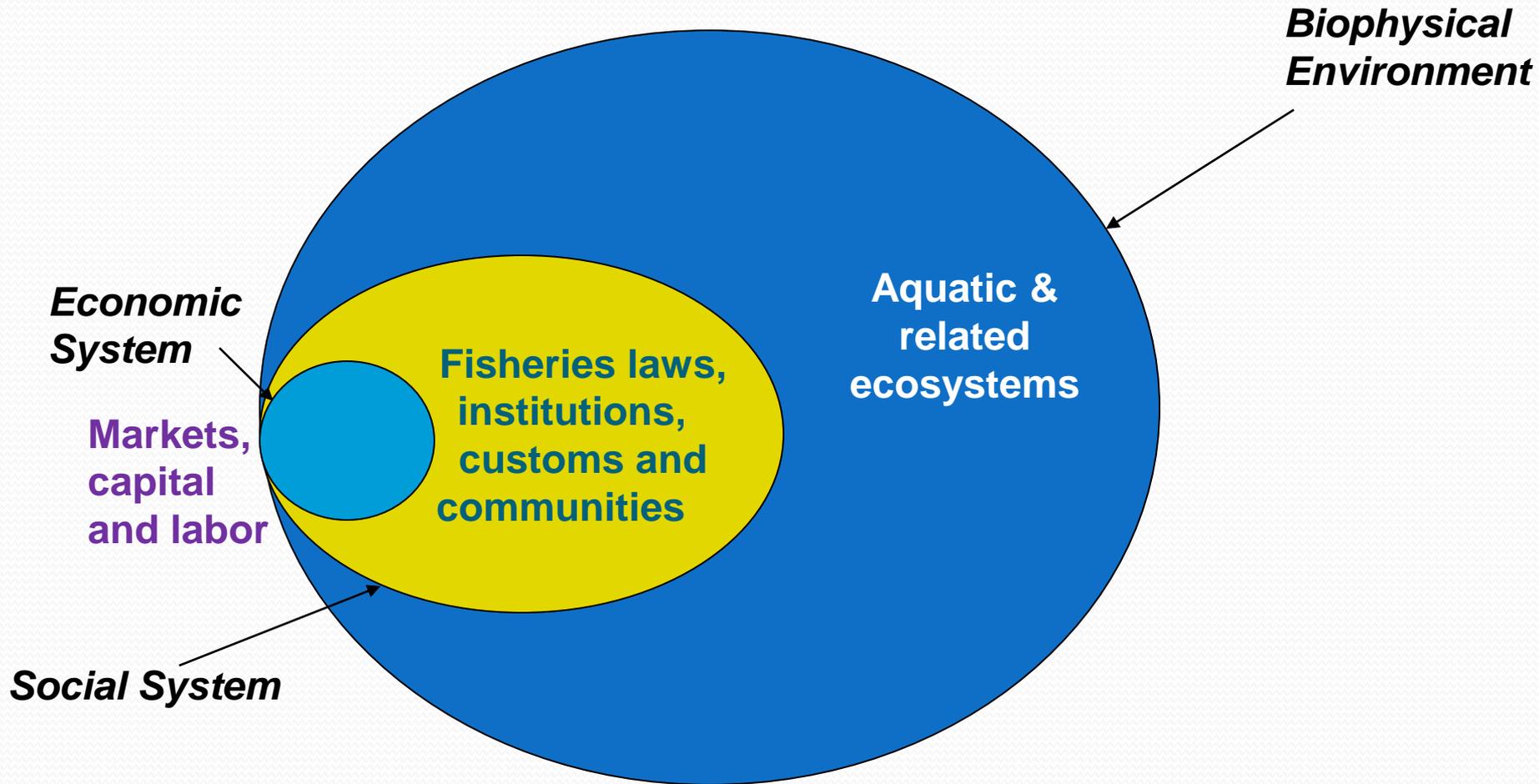
# Outreach

- More than 500 participants from federal, state and local governments; corporations; nonprofits and academia
- Meetings in California; Colorado; Maryland; Michigan; Minnesota; Virginia; Washington, D.C.
- Publications and conference presentations
- Water Wiki at <http://waterwiki.wik.is/>
- 2005 Preliminary Report  
[http://acwi.gov/swrr/Rpt\\_Pubs/prelim\\_rpt/index.html](http://acwi.gov/swrr/Rpt_Pubs/prelim_rpt/index.html)
- 2010 SWRR Report  
[http://acwi.gov/swrr/Rpt\\_Pubs/SWRRReportMarch2010.pdf](http://acwi.gov/swrr/Rpt_Pubs/SWRRReportMarch2010.pdf)

# Essential Relationships of Sustainability



# Fisheries Relationships

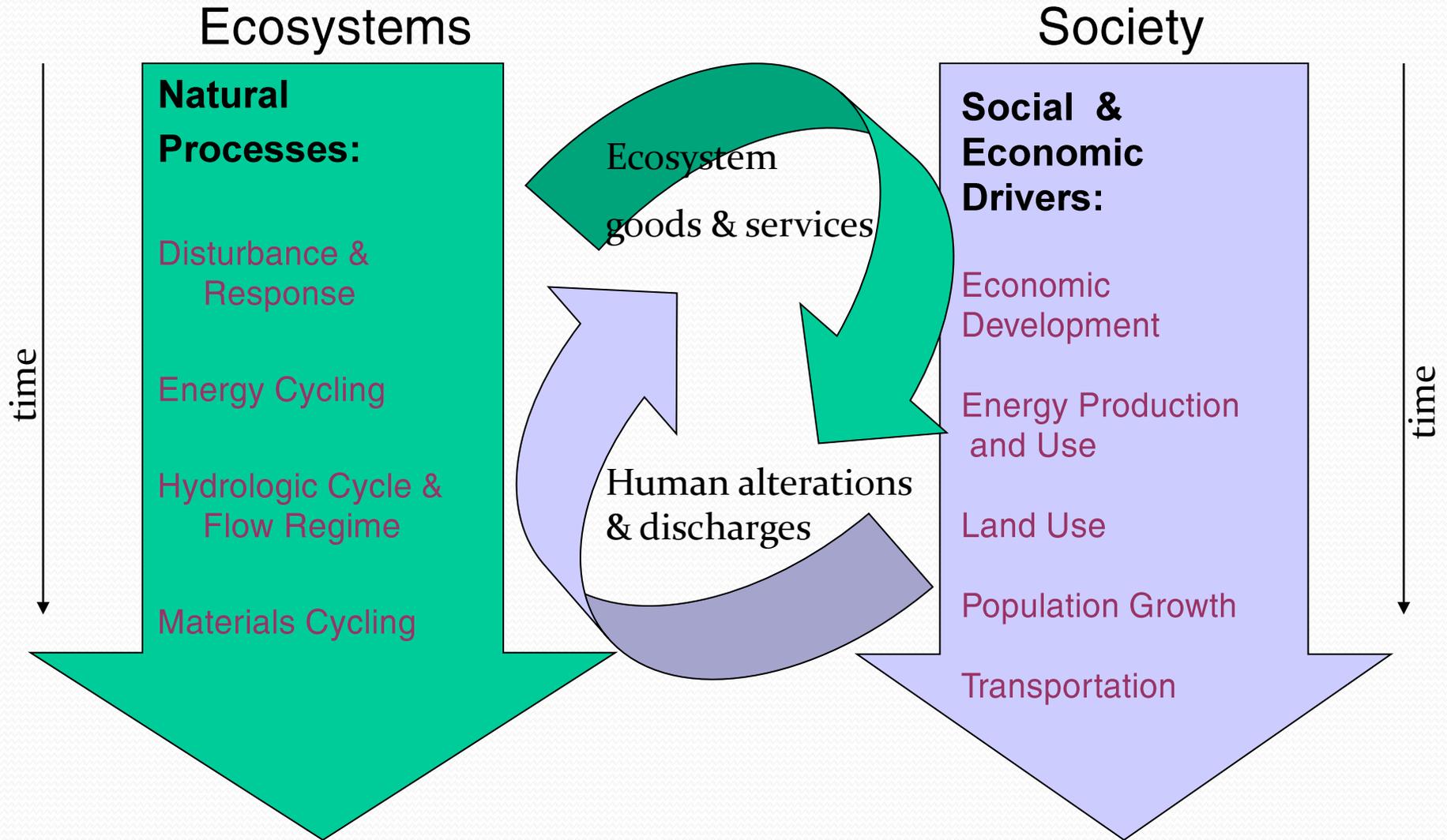


# Capital and System Capacities

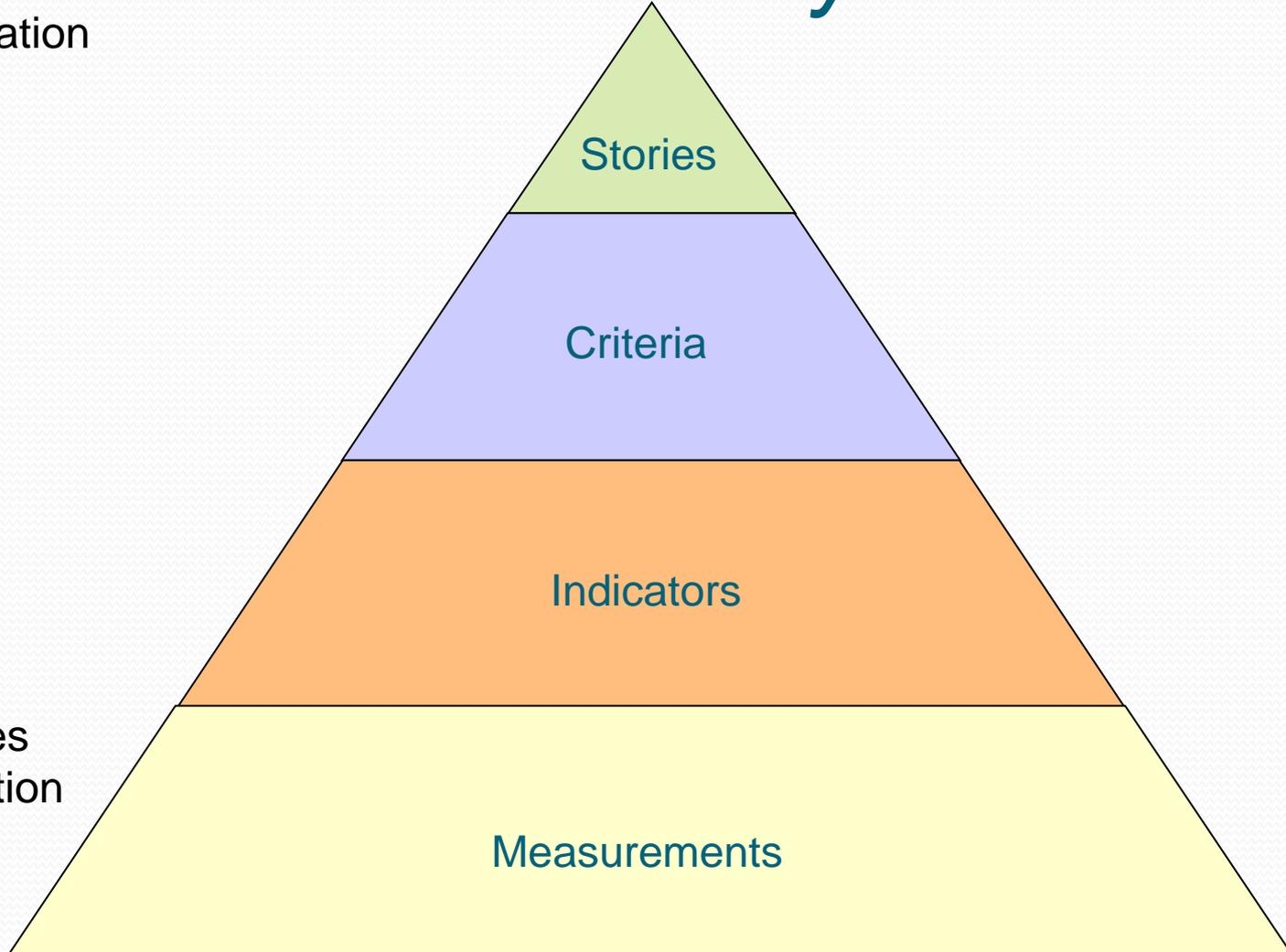
- **Capital is the capacity to produce value over time**
- **Environmental, social and economic systems produce value through flows of services, experiences, or goods that meet human and ecosystem needs over time**
- **We achieve sustainability by maintaining capital to meet needs**



# Ecosystem Processes & Societal Drivers



# *Information Pyramid*



Fewer Pieces  
Of Information



Stories

Criteria

Indicators

Measurements

More Pieces  
Of Information

# Indicators

**Measures that present trends information relevant to water sustainability in a readily understandable way**



# Factors

- **Condition & capacity of ecological, social and economic systems**
- **A focus on what's most relevant to sustainability**
- **Appropriate time horizons and scale**
- **Information integrity**
- **Understandability**

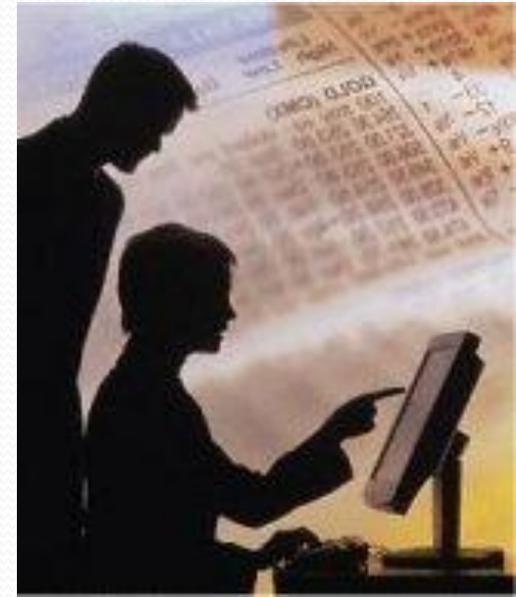


# The SWRR Indicator Framework

Indicators represent a way to measure  
progress

# 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 related 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 resources for waste assimilation, transportation and recreation



# Human Uses and Health

- **Water-dependant 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



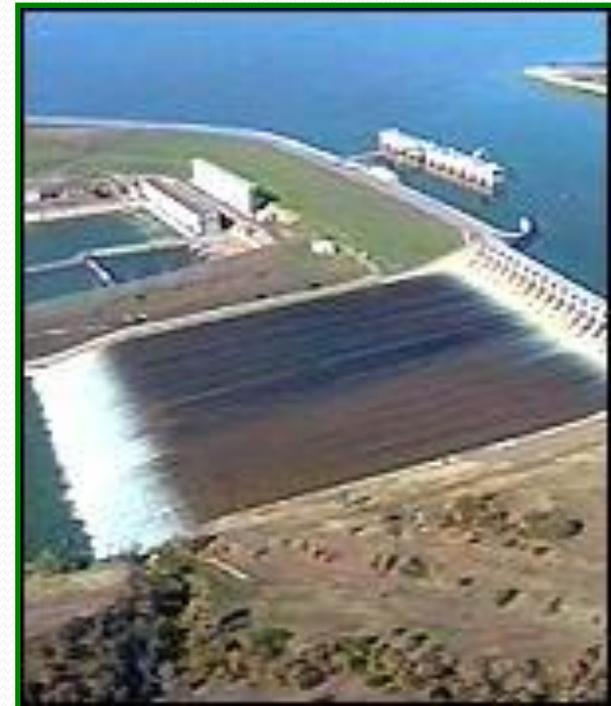
# Environmental Health

- **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



# Next Steps for the SWRR

- Continuing roundtable outreach
  - Building regional connections
  - Adding new private, nonprofit & public sector partners
- Refining the roundtable's sample indicators
  - Addressing sustainability and scale
  - Linking to national and regional indicator sets
- Collaborating with the National Water Census and other indicator initiatives across the nation
- Assisting agencies in describing the need for programs to collect indicator information



# Contact Information

## SWRR Co-Chairs

- Rick Swanson, US Forest Service, [rswanson@fs.fed.us](mailto:rswanson@fs.fed.us)
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## SWRR Manager and Facilitator

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