R&D Scoping and Framing Workshop
R&D Roadmap: Managing Western Water as Climate Changes
February 20 and 21, 2008

Responsibilities, Challenges, and Needs
Perspectives of Reclamation Environmental Compliance and Ecosystem Restoration Managers

Note: The information presented herein is intended solely to facilitate a working level dialogue between the federal scientific community, and Reclamation water and environmental resource managers, on climate change research needs in support of Western water management. As such, "*this information has not been formally disseminated by the Bureau of Reclamation and should not be construed to represent any agency determination or policy*".[1]

Generally describe your region's environmental compliance and ecosystem restoration responsibilities *(this is meant to be a high level summary of your world):*

One of the highest priorities for the Mid-Pacific Region is the ongoing Endangered Species Act compliance litigation and consultation effort underway for our Operations Criteria and Plan (OCAP) for the Central Valley Project. Insufficient consideration of the best available science on climate change was brought up in both ongoing court cases related to the OCAP. The region also completes environmental compliance requirements for long-term water service contracts, Warren Act contracts, water transfers, contract assignments, and O&M activities. Additionally the region is moving forward on planning studies and environmental compliance for the San Joaquin River Restoration Program (SJRRP) and several large storage projects ranging from dam raises to new reservoir construction.

Describe the decisions that your region makes associated with environmental compliance and restoration responsibilities that may be affected by climate change:

As part of our analysis of the effects of our operations on listed species through our OCAP consultation under ESA we have to forecast and model our long-term operational activities and the range of water inflow and delivery scenarios. Using the outputs from the operational model s we model temperature to determine effects to listed salmonids, and effects on listed species from our pumping from the San Francisco Bay-Delta (Bay-Delta). For the OCAP consultation we are working on right now Levi Brekke will be completing 5 sensitivity runs ranging from wetter to drier scenarios and increases in sea level and tidal amplitude.

From the restoration side we are in the process of determining what assumptions, tools, and models we are going to use for the SJRRP.

What are the primary scientific or non-scientific factors that typically govern these decisions?

Non-scientific: Legal requirements including state and Federal laws, court decisions, settlement agreements, water rights requirements, facility operational constraints, political implications, and partner agency constraints/requirements.

More scientific: Modeling results, biological impacts, ecological considerations, physical processes including geomorphology, hydrology, and climate.

Who are the primary stakeholders affected by these decisions and summarize their primary concerns?

1/ Stated in accordance with Information Quality Act (Public Law 106-554), Final Information Quality Bulletin for Peer Review (Office of Management and Budget, December 16, 2004).

Our water service contractors, power customers, Native Americans tribes, our partnering agencies and regulatory agencies, environmental interest groups, and the general public.

Primary interests include economic (farming, industry, cities, etc), public health and safety, environmental considerations, fisheries, pollution, politics, recreation, cultural resources.

In general, list the top three wishes that you would like for the scientific community to provide for you, in support of your region's environmental compliance and ecosystem restoration responsibilities that are related to understanding and utilizing climate change information.

1. Long range precipitation modeling/forecasting that could be used to forecast reservoir inflows, timing, temperatures, ranges for operational planning, effects analysis, and feasibility considerations for new projects

2. Methods to assess the effects of climate change on listed species and their habitats.

3. Mechanisms to assess the effects of climate change on ecological conditions in the Pacific Ocean and Bay-Delta.

Are there current or emerging *"project-specific applications"* in your region where answers to these three wishes may be beneficial to you in the near-term?

Bay-Delta Conservation Plan
Feasibility studies/environmental reports for projects in our region.

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