

GROUP 2: CLIMATE GESTALT

Discussed current examples of flexibility in planning and operations

In the short term:

- Portland's summer supply program, decision made every other week informed by 90 day forecasts
- Discretionary power releases from reservoirs,

Agencies use rules, analysis, and heuristics. These evolve over time. Climate change information informs agencies by helping them to adjust operational rules, and understanding why they are changing the rules

In the long term:

- Currently avoiding large capital investments, favoring more flexible approaches such as conservation, water sharing agreements, etc.
- Pursuing plans robust over several scenarios, only one of which is focused on climate (e.g. many uncertainties)
- Lots of creativity in new means to add flexibility to prior appropriations
- Use triggers in long-term water contracts

General climate change information reinforces all these approaches, but details are not paramount

Not all agencies have done so well with adding flexibility. Colorado water courts can limit flexibility. Need more emphasis on the changing science. Decision makers tend to latch onto a fact or message and are surprised when this information changes.

GROUP 2: USING CLIMATE MODELS: BARRIERS AND PROSPECTS

Using information from climate models requires chain of model: climate, hydrology, and utilities' system models

Some implications of this chain of models:

- Not all agencies have sufficient hydrology models to use climate information
- Climate models have two important characteristics that make them different than hydrology models and often difficult for water agency technical people to understand:
 - ⇒ Climate models can't be calibrated as are hydrology models
 - ⇒ Climate models don't start with current year conditions
- Agencies need to make many technical decisions in connecting and using the chain of models, and want some assurance they did it correctly, did not make mistakes
- Extremes and thresholds can be important,
 - ⇒ But adding climate extremes to analysis can cause decision paralysis

⇒ Thresholds are very contextual to a particular agency system (e.g. have to run information through agency's models, etc.)

Future Needs

- More runs vs. higher resolutions
 - ⇒ In a few years (3?) we can have as the norm both 50 km with 5 to 10 ensembles run over about 50 years. So we can have both soon.
- Agencies planning projects now
 - ⇒ Can we understand the curve of learning, get a roadmap of what we may know when? That would help with project planning

FROM BOTH GROUPS

Comments on interactions

Need trained people who understand both water agencies and climate science → a strong need for funding interdisciplinary postdocs.

Importance of having good connections to climate community. Some RISA's are service organizations, establish strong pro-active relationships with water agencies (e.g. the RISA calls you with breaking news/problems before you realize you need to call them). Others don't.