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 understanding 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.