DWR CCTAG Meeting

August 23, 2013

9:00	Welcome - *Elissa Lynn, DWR Climate Change Program*
9:00- 9:15	**California Climate Science Updates** California Adaptation Strategy – *John Andrew, DWR* NRC SLR workshop and Ocean Protection Council – *Elissa Lynn and Jamie Anderson, DWR* Southwest Climate Assessment – *Mahesh Gautam, DWR* Flood Update – *Mike Anderson, DWR*
9:15 – 10:30	**Expert Technical Review** Revisit the Rain/Snow Research Paper CA Water Today Climate Change/SLR for California Water Plan *Elissa Lynn, DWR, Aaron Cuthbertson, DWR, Kelly Redmond, CCTAG Member, Mike Anderson, DWR and CCTAG Member*
10:30 – 10:45	**Break**
10:45 – 11:30	**Local Water Mgmt Perspective** - *Sarah Young, CCTAG member* Presentation and Q&A
11:30 – 12:00	**CCTAG Member Updates**
12:00 – 1:15	**Lunch**
1:15 – 2:45	**Climate Scenarios Subgroup and Discussion** Road Map/ Scenarios - *Andrew Schwarz, DWR* GCMs for West Coast & CA - *David Rupp (with Phil Mote?), Oregon Cl Chg Research Institute* Group Discussion
2:45 – 3:00	**Break**
3:00 – 3:45	**CA Water Plan Scenarios Vulnerability Analysis – Climate focus** (CCTAG advised in 2012) *Rich Juricich, DWR (with Evan Bloom, RAND Corp.?)* Q&A
3:45 – 4:00	Meeting wrap, Set Next Meeting, Public Comment: *Elissa Lynn, DWR*

Scenario Selection for Water Management in California

California Department of Water Resources – Climate Change Technical Advisory Group (Revised Draft 8-23-13)

Objective: *Select a manageable suite of climate change scenarios for water management purposes in California.*

Step 1. Filter latest suite of GCMs* for those that do not produce reasonable regional climatologies and distributions of regional anomalies for temperature and precipitation along the West Coast/California.

This will probably be done using the methodology proposed by Rupp et al. (OCCRI) currently in draft. Needs to be reviewed by CCTAG/DWR.

Culled GCMs (not used/discarded)

Remaining GCMs

Step 2. Further refine suite of GCMs by culling those that exhibit poor performance for Temperature, Precipitation, and Humidity for California. (No downscaling)

A) Develop comparison methodology
B) Establish criteria and criteria weighting for measuring performance of each GCM
C) Perform GCM Comparisons

Culled GCMs (not used/discarded)

Parallel Processes

Initiate study to evaluate GCM performance using a decision support tool to compare observed historical and simulated historical periods for use in future scenario evaluation activities

Initiate separate/parallel process for devising scenarios and analysis methodologies for flood protection activities

Step 3. Compile a suite of preferred GCMs for Water Management Analysis

Step 4. Evaluate downscaling methodologies and formulate recommendations (Process/methodology for doing this as yet to be determined.)

Step 5. Develop recommendations for compressing or reducing the number of individual GCM runs for specific applications

Eg. Step 3 suite of GCMs includes 15 GCMs. However agency X doesn't have the resources to run 15 GCMs x 3 emissions scenarios. For their purpose, evaluating the likely range of potential futures and median impact are most useful. How can they compress the 15x3 runs down to 3-5 or even 1?

* Coupled Model Intercomparison Project Phase 5 (CMIP5)

David Rupp and Phil Mote

Oregon Climate Change Research Institute

David Rupp

- Research Associate
- Education
  - Ph.D. Water Resources Engineering
    Oregon State University
  - M.S. Forestry
    Northern Arizona University
  - B.S. Atmospheric Sciences
    University of Arizona
- Research Interests
  - Climate variability and change and its impacts on water resources and hazards
  - Hydrology of swelling/shrinking soils
  - Streamflow recession analysis for catchment/aquifer characterization
  - Rainfall scaling and stochastic simulation
- Contact:
  drupp@coas.oregonstate.edu

Phil Mote

- Director OCCRI, professor
  Earth, Oceanic, and Atmospheric Sciences
  co-leader Climate Impacts Research Consortium and Northwest Climate Science Center
- Education
  - Ph.D. Atmospheric Science
    University of Washington
  - B.A. Physics, Harvard
- Research Interests
  - scenario development
  - regional climate change
  - regional climate modeling with a super-ensemble generated by volunteers' personal computers
  - adaptation to climate change
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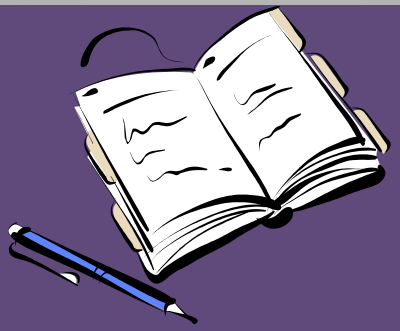
http://occri.net/

Scenarios Subgroup regular meeting time

Next Full CCTAG – Week of December 2 – 6



THANK YOU!