



Drought, Climate Planning and Coordination – Pacific NW Hydropower Perspective

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NIDIS and Climate Services Workshop
March 31–April 1, 2010
San Francisco, CA

Columbia Basin Hydropower System



Drought Coordination in NW & Improvements in Drought Forecasting

- Drought coordination for Columbia/Snake rivers occurs in NMFS Regional Forum-TMT
- Need earlier and improved runoff forecasts:
 - Use ENSO, PDO or other climate forecasts in developing early winter season runoff forecasts
 - Improve the accuracy of monthly in-season runoff forecasts by including climatic, GW & SM variables
- Possible data needs:
 - More coordination among federal & B.C. agencies on Snotel station enhancement work effort in CRB
 - Evaluate whether climatic variables are affecting wind production in NW and ocean shelf marine life, and if so, develop predictor tools

Regional Coordination of NW Climate Change Studies

- RMJOC working with U. of WA-Climate Impacts Group
- Using output from 9 global climate models under two future GHG scenarios
- Hydrology downscaled for NW basins; methods could be reviewed
- U.W. is providing data forecasts of future changes in temperature and streamflows
- RMJOC will use common data in regional hydro models
- Next step is to link GCM temp data & hydrology output from hydro models to a water temp model for Columbia
- Need coordination between RMJOC and NOAA's NWFSC and USFWS to evaluate temp effects on salmon and other listed species

Data and Operational Needs for Long-term Climate Effects

- Question is how and when to start changing hydrosystem planning & management in CRB?
- Some alternative water mgt. options to consider:
 - Need improved and earlier runoff forecasting tools
 - Evaluate shifting system flood control operations earlier into the late fall-early winter months
 - Evaluate earlier refill of, and selective withdrawal at, storage projects for temperature control operations
 - Allow deeper storage project drafts in summer months for both fish and power needs