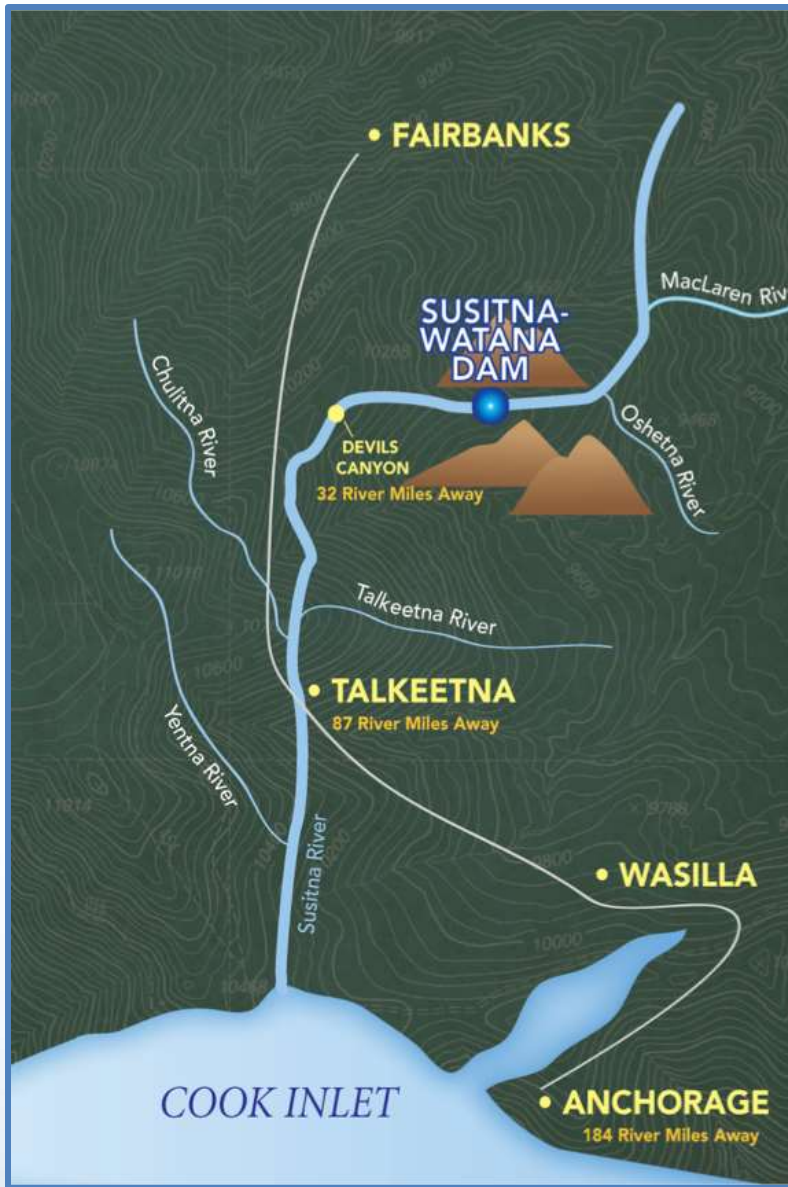


Technical WorkGroup Meeting

Physical Sciences
September 25, 2013

Prepared by MWH



4.5 Geology & Soils

- *Studies being finalized or completed:*
 - *Preliminary Reservoir Slope Stability Assessment, included consultation (Geomorph)*
 - *Regional Geologic Analysis, update of terrain unit mapping*
 - *Exploration and Testing Program 2014-15, draft being finalized*
 - *Geologic and engineering analysis: Left abutment stability analysis*
 - *Lineament Analysis and Preliminary Reservoir Triggered Seismicity (see 16.6 Study Plan)*
- *Studies underway:*
 - *Mineral Resource Assessment; identify prospects/claims, field assessment and sampling*
 - *Regional geology characterization; field reconnaissance*
 - *Geologic and engineering analysis: dam foundation rock contours being updated from LiDAR and prepare foundation excavation plan for input to FEM analysis*
- *Variances to Final Study Plan*
 - *Dam site area field investigations postponed to 2014*
- *ISR preparation, planning next year to work on dam site area, infrastructure (e.g., camp, airstrip corridors); field activities March-Oct*



16.5 Probable Maximum Flood

- *Studies being finalized or completed:*
 - *Selection of historic storms for analysis to develop PMP*
 - *Storm Precipitation Analysis System modeling of historic storms*
 - *PMF runoff model selection and initial setup*
 - *Selection of floods for runoff model calibration and verification*
 - *Snowpack determination for PMF and historic flood calibration*
- *Studies underway:*
 - *Meteorological data for historic flood calibration*
 - *All-season PMP development*
 - *Develop seasonality component to adjust the all-season PMP to other months*
 - *Runoff model calibration and verification for historic floods*
 - *Probable Maximum Flood combined events criteria*
- *Variances from Final Study Plan*
 - *Draft PMF Study to be completed in USR*
- *ISR preparation, planning next year to outline steps to complete seasonal PMP, PMF inflow hydrograph, and reservoir PMF routing*

16.6 Site-Specific Seismic Hazard Study

- *Studies being finalized or completed:*
 - *Lineament Analysis Study*
 - *Preliminary Reservoir Triggered Seismicity Study*
 - *Microseismic network: Added three additional seismograph stations; total = 7*
- *Studies underway:*
 - *Crustal seismic source study; included consultation with ADNR-DGGS*
 - *Develop quaternary geology and seismotectonic model for the Project area*
 - *Data gathering included shear wave velocity measurements at seismograph stations*
 - *Sensitivity study on specific updates to elements of the preliminary PSHA*
 - *Seismic monitoring data – continuous record being collected and analyzed*
- *Variances from Final Study Plan*
 - *Crustal seismic source study – dam site area field activity postponed to 2014 due to access*
- *ISR preparation, planning next year to outline steps to complete crustal seismic source assessment, lineament/fault evaluation, and prepare PSHA*

