CALIFORNIA WATER PLAN UPDATE 2009
SCENARIO ANALYSIS TECHNICAL APPROACH
SWAN MEETING
JUNE 19, 2008

FLOOD MANAGEMENT

Description

Regional meteorological patterns impact the timing and magnitude of runoff from the Sierra Nevada. Reservoir operating rules will determine how well flood conditions can be managed.

Representation in WEAP system

- Catchment objects translate monthly precipitation and temperature projections to ET, runoff, groundwater percolation (see Climate Change topic for more detail)
- Characteristics of reservoir and conveyance objects determine the timing and magnitude of flood releases and any conveyance capacity exceedance (suggestive of flooding)
    - Flood control diagram determines available storage capacity and releases
    - Flood triggers in WEAP determine the distribution of flood flows between rivers and bypasses.
- Monthly timescale precludes an analysis of individual storm events
- Flooding only evaluated for Planning Area analysis

Sources of data

- US Army Corps of Engineers flood control diagrams for major river reservoirs in Sacramento and San Joaquin River hydrologic regions

Outstanding issues

- Limitations due to focus on larger reservoirs where monthly rules are sufficient to describe the flood control operations
- Alternatives to adjusting flood storage rules to accommodate shifting patterns in annual hydrograph
- Alternatives to modifying bypass flows by adjusting flow requirements (on river and bypass) and capacity constraints on bypass