

Plan to extend water quality module in DSM2 to facilitate mercury simulation in the Delta

**DSM2 User Group
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DSM2 Constituents (current)

- Water temperature (affects all reaction rates)
- Dissolved oxygen
- Nitrite-N
- Nitrate-N
- Ammonia-N
- Organic-N
- CBOD
- Dissolved phosphorus
- Organic-P
- Algae
- Salinity

New and Modified Processes

- Alkalinity
- pH
- Total inorganic carbon

Processes that affect alkalinity:

- Nitrification
- Hydrolysis of organic nitrogen & organic phosphorus
- Etc.

- Alkalinity: Measure of capacity of water to neutralize acids
- pH: Measure of how acidic or basic a solution is.
- TIC: algae respiration (+), photosynthesis (-); CO₂ reaeration; CBOD (+), etc.

Tentative/Extra Slide

Potential Data Sources

- Water Data Library (WDL)
- San Joaquin River Dissolved Oxygen TMDL studies
- California Environmental Data Exchange Network (CEDEN)
- Investigation on further data sources ongoing