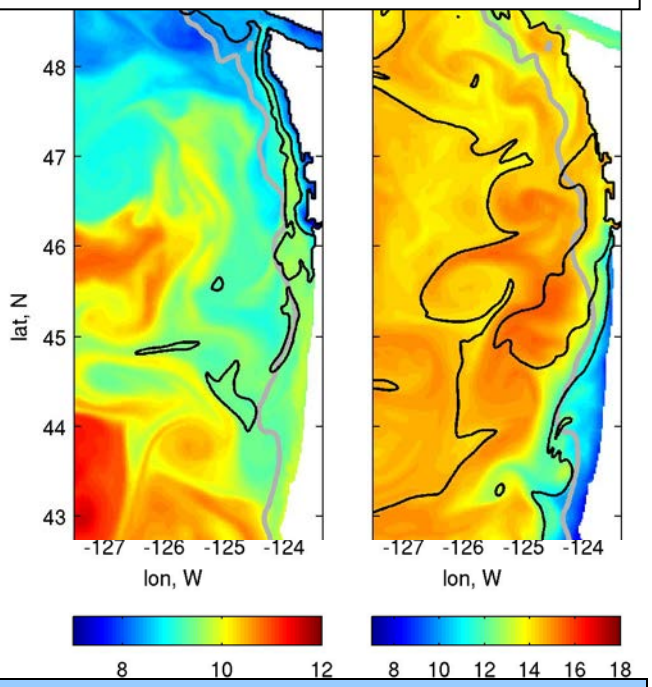
Sea Surface Temperature (SST) influenced by the Columbia River fresh water discharge

Improvements to the Oregon coastal ocean forecast model have included: (1) a larger domain - extending now to both the Oregon and Washington coasts, and (2) the Columbia River fresh water discharge. Tests have been run for 2009 to verify model accuracy against available satellite and in-situ data.

Model SST(color) and sea surface salinity (black contours 30 and 32.5 psu), (left) Jan 8, 2009, (right) June 27, 2009.

The Columbia Rive plume extends to the north in winter and south in summer. The river plume influences SST observed by satellites (relatively colder in winter; relatively warmer in summer). These effects are captured by the model.



Including the Columbia River discharge in the coastal ocean forecast model will make the model and GOES SST more comparable and will lead to improved accuracy of forecasts based on the model-data synthesis (data assimilation).

http://ingria.coas.oregonstate.edu/rtdav/

(Courtesy of Alexander Kurapov)

Sponsor: NOAA - CIOSS