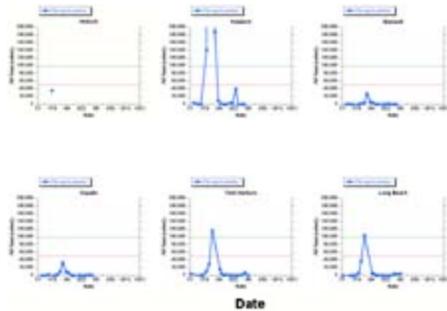


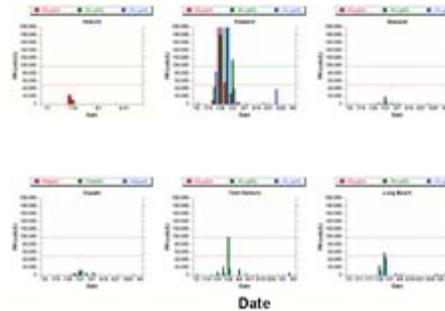
ORHAB Sample Sites



Pseudo-nitzschia Totals



Pseudo-nitzschia Species



Pseudo-nitzschia totals are subdivided into the following species groups identified by light microscopy - a/f/h (*P. australis/fraudulenta/heimii*), p/m (*P. pungens/multiseriata*), pd/d/c (*P. pseudodelicatissima/delicatissima/cuspidata*). Threshold levels of each group at which toxin testing is done are shown as a colored horizontal bar in the *Pseudo-nitzschia* species graph

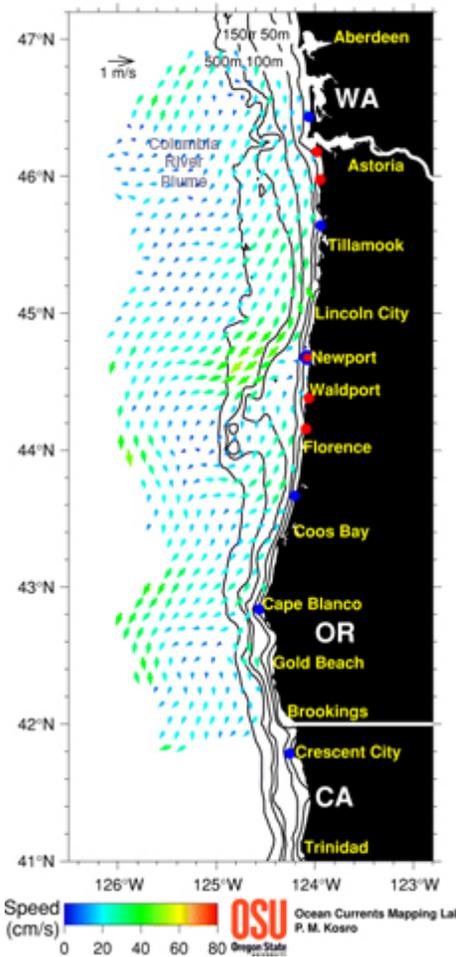
Summary – Few harmful algae were detected along the WA coast. The highest *Pseudo-nitzschia* cell counts were at Long Beach (5000 cells/L on 9/9/08); most sites report <1000 cells/L. *Alexandrium* was spotted at Long Beach (1000 cells/L on 9/4/08). ORHAB techs will perform no toxin testing at this time due to low HAB cell counts. PSP toxin was reported by WDOH along the WA coast. The highest level of 104µg/100g in CA mussels at Second Beach on 8/26/08 dropped to 44µg/100g on 9/2/08.

The last ~10 days have been characterized by fair weather and moderately strong, southward (upwelling-favorable) winds. Recent satellite imagery indicates a well developed JDF Eddy, evident as a distinct cold feature offshore of the Strait. During periods of persistent southward winds, the eddy is less retentive on its southern edge and plankton in the eddy may be advected southward onto the WA shelf. Modeled currents suggest a well-developed upwelling system with colder water nearshore. Consistent with strong southward flow, the Columbia River Plume is absent on the WA shelf. Surface currents would generally be moving phytoplankton offshore so that a HAB event from the JDF source region is unlikely while winds continue to blow from the north. Satellite Chl imagery from late Aug. shows phytoplankton biomass is confined to the eddy margins and along the inner shelf.

Forecast – Moderately strong (~20 kt), southward winds are expected to persist throughout the weekend. We expect upwelling to continue to fuel coastal productivity, with little potential for onshore transport. Risk level is low.

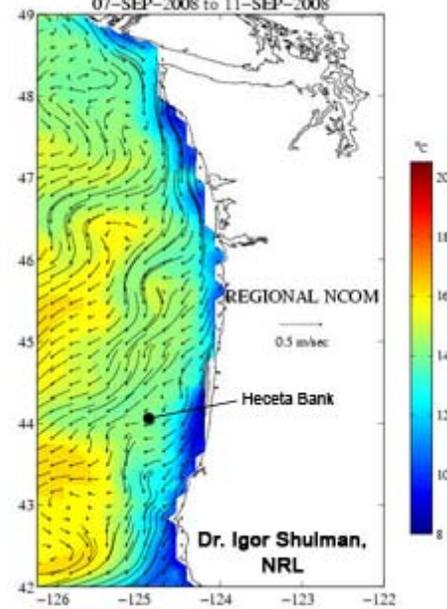
Surface Currents

2008/09/10

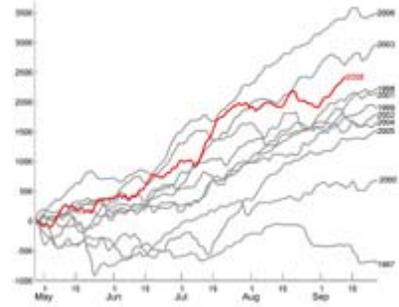


Modeled Surface Currents

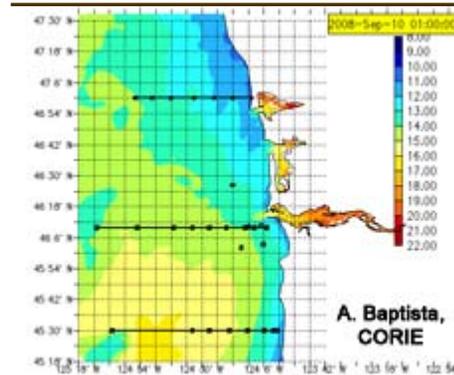
SST and Currents 07-SEP-2008 to 11-SEP-2008



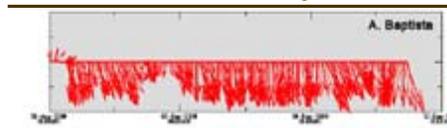
Cumulative Upwelling Index



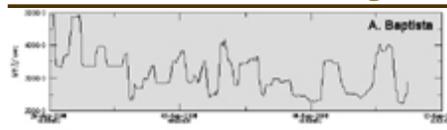
Columbia River Model Output



Winds - NDBC Buoy 46029



Columbia River Discharge



Weather Forecast - Ocean Shores

