School of Oceanography University of Washington

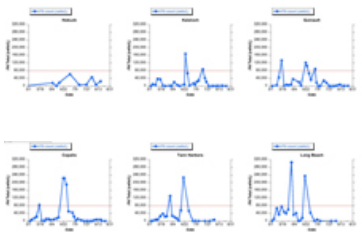
Pacific Northwest Harmful Algal Blooms Bulletin

August 26, 2010

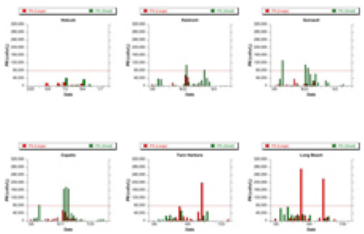
ORHAB PARTNERSHIP

ORHAB Sample Sites

Pseudo-nitzschia Totals

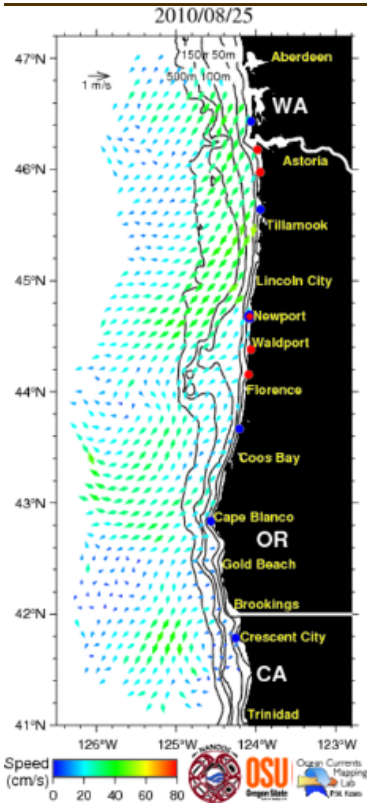


Pseudo-nitzschia Species

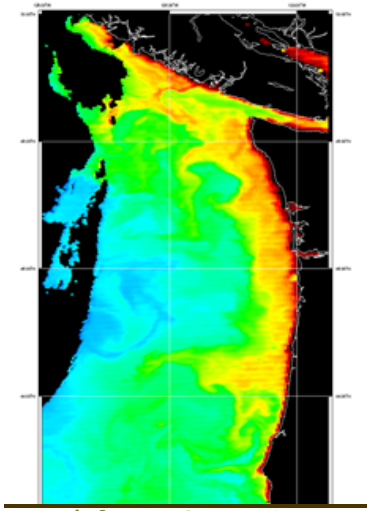


Pseudo-nitzschia (PN) totals are identified by light microscopy and grouped by *PN* Large and *PN* Small. The 50k cells/L threshold level for large *PN* that triggers toxin testing is indicated by a red line across the *PN* plots. (The trigger for toxin testing for small *PN* is 1 million cells/L)

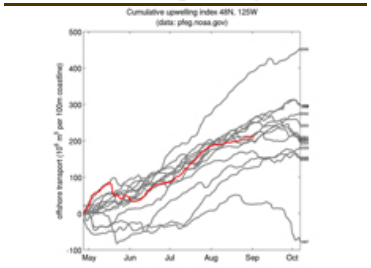
Surface Currents



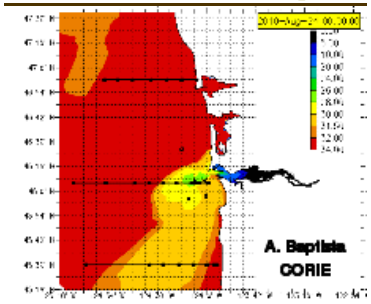
Chlorophyll-*a*



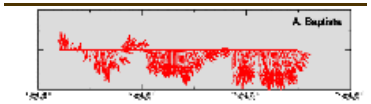
Cumulative Upwelling Index



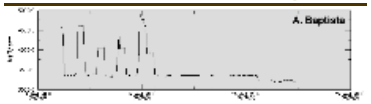
Columbia River Model Output



Winds - NDBC Buoy 46029



Columbia River Discharge



Weather Forecast - Ocean Shores

Thu	Fri	Sat	Sun
58 | 49	58 | 45	59 | 45	54 | 48

Summary – *Pseudo-nitzschia* spp. have only been detected at very low levels in the most recent cell counts. Highest levels were found at Hobuck Beach at 24,000 cells/L on 8/17. DA levels in razor clam tissue remains barely detectable at all sample sites along the WA coast according to the WDOH. *Alexandrium catenella* has been detected at Copalis (1000 cells/L) on 8/19. Paralytic shellfish toxins in shellfish tissue have dropped considerably at most sites along the WA coast to non-detectable, yet remain above the closure limit of 80µg/100g in CA mussels at Neah Bay on 8/9 at 110 µg/100g. PSP toxins were also detected in CA mussels at Makah Bay to 41µg/100g on 8/10. *Dinophysis* spp. have been abundant on the central coast. The highest cell counts were 52,000 cells/L at MocRocks on 8/24. *Dinophysis* spp. have also been abundant at Copalis beach at 47,000 cells/L, Kalaloch at 30,000 cells/L and Quinault Beach at 11,000 cells/L on 8/24. *Akashiwo sanguinea* has been detected at Kalaloch on 8/24; Copalis beach and MocRocks on 8/12 at 2000 cells/L. *Attheya armatus* has been the dominant species in the surf zone phytoplankton assemblage along the outer WA coast.

Winds have been primarily upwelling favorable in August, shown by the increasing cumulative upwelling index. NDBC buoy 46029 data show upwelling favorable winds (from north) interrupted by periods of weak winds, but not strong downwelling events. Mapped surface currents and the modeled Columbia River plume are both directed southward and offshore. Satellite images show high chlorophyll-a levels along the coast and outer rim of the Juan de Fuca eddy.

Forecast – A brief period of light downwelling favorable winds (from southwest) is forecast for Friday 8/27. It is not expected that these winds will bring phytoplankton populations from offshore to the Washington coast on Friday. Upwelling favorable winds and offshore transport are expected to resume over the weekend. Further in the future, downwelling favorable winds are forecast for Monday, 8/30 and Tuesday 8/31. There is moderate risk that offshore phytoplankton populations will be transported to the coast early next week.