



Pacific Northwest Harmful Algal Blooms Bulletin

May 26, 2026 HAB risk =

HAB risk key:

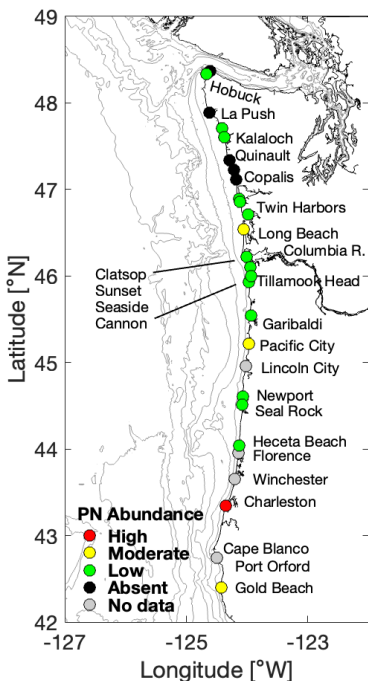
- = low
- = medium
- = high



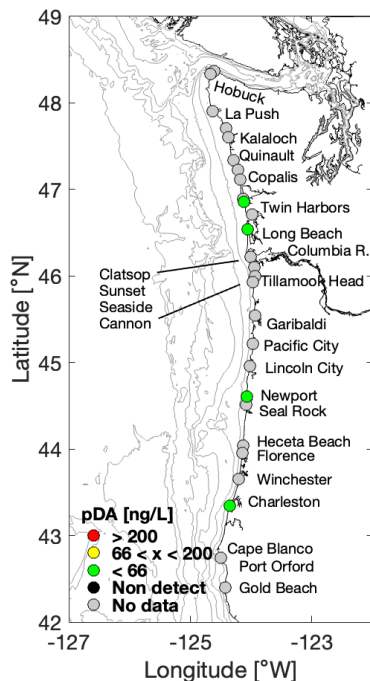
The statements, findings, conclusions, and recommendations do not necessarily reflect the views of NOAA or the Department of Commerce.

Beach Sampling

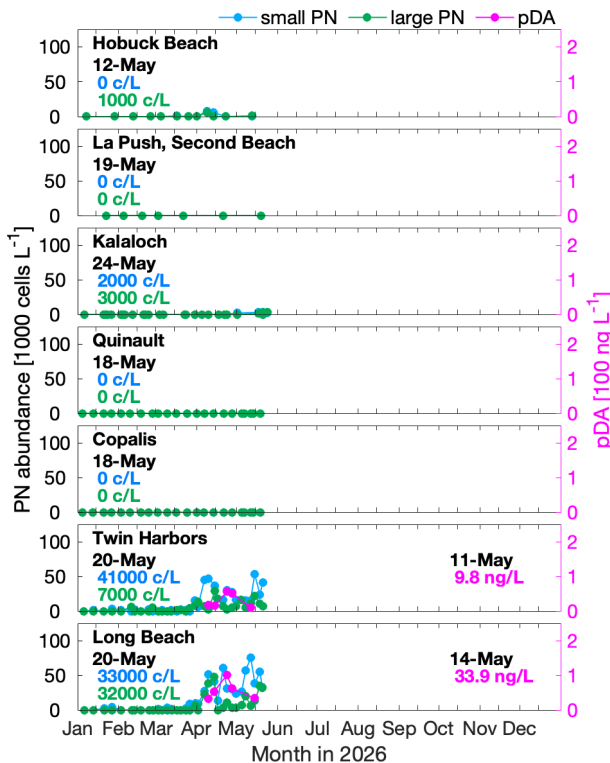
(*Pseudo-nitzschia*)



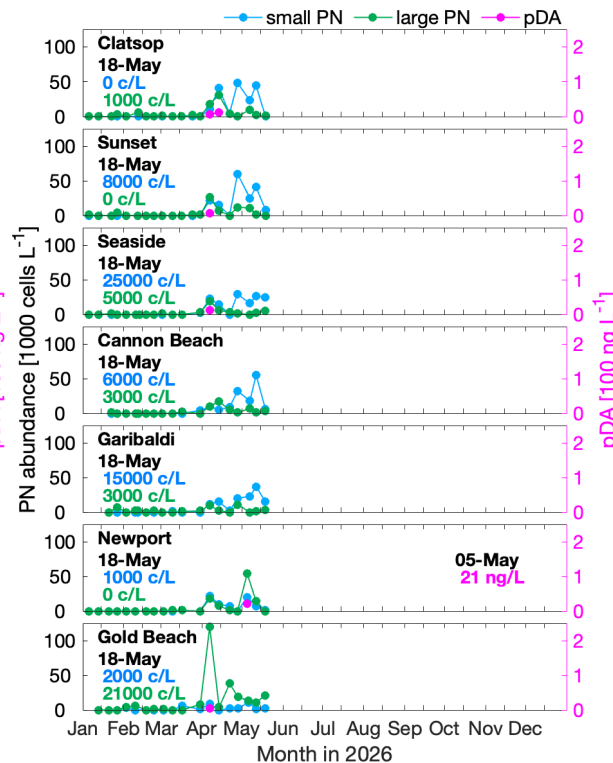
(particulate domoic acid)



WA *Pseudo-nitzschia* & Domoic Acid

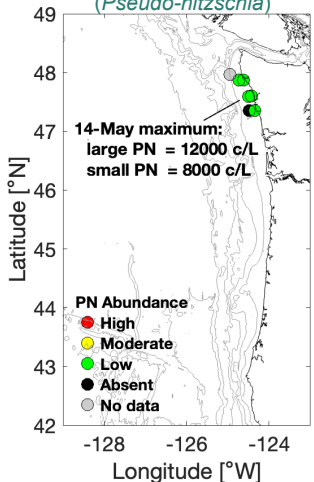


OR *Pseudo-nitzschia* & Domoic Acid

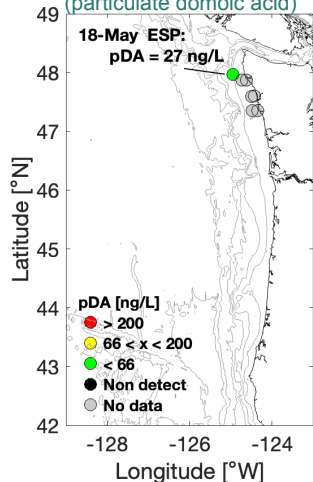


Offshore Sampling

(*Pseudo-nitzschia*)



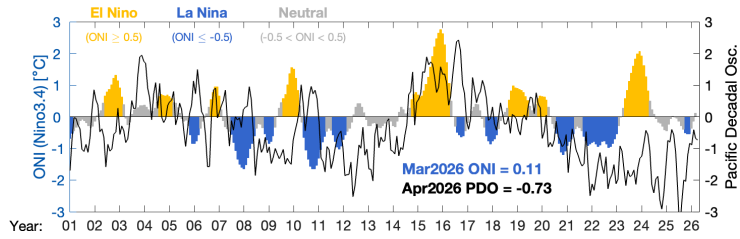
(particulate domoic acid)



Pseudo-nitzschia (PN) abundances are quantified for large and small cell morphologies using light microscopy. Threshold values: 50,000 cells/L for large PN; 1,000,000 cells/L for small PN; which trigger additional testing for seawater particulate domoic acid (pDA). Seawater pDA values >200 ng/L lead to toxin accumulation in shellfish such as razor clams. Sampling sites, colored by relative PN abundance (*high*: > threshold value for either cell morphology; *moderate*: > 1/3 threshold; *low*: < 1/3 threshold) and pDA, are shown in the upper left two panels. “No data” indicates that there were no data within the previous 15 days. Time series of PN abundance (cells per liter = c/L) and pDA at select beaches are shown in the upper right main two panels. Offshore samples (lower left) are collected and analyzed at ~2 week intervals during late summer/early fall. Additional samples are collected by a remotely operated Environmental Sample Processor (ESP) that is moored off La Push, WA, in late spring and late summer.

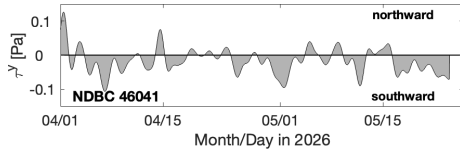
Decisions regarding shellfish harvest closures at individual beaches are made by the Washington Department of Health, the Oregon Department of Agriculture, and Coastal Treaty Tribes after measuring toxin levels in shellfish collected from each beach ([WA link](#); [OR link](#)), and not from the information presented here. However, the information presented here aids coastal managers in better understanding and predicting the onset, duration, and magnitude of toxin outbreaks as well as their impacts.

Pacific Ocean Indices



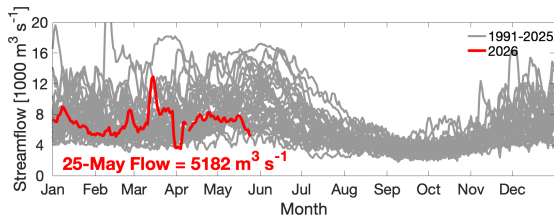
Research has shown that toxic HAB events off WA and OR tend to occur during or following periods of El Niño and/or positive phases of the PDO, when ocean temperatures are relatively warm.

North-south Wind Stress



Southward wind stress drives coastal upwelling that can lead to plankton blooms. Northward wind stress tends to push any existing offshore plankton and toxins towards beaches. In addition, summer/fall toxic blooms often occur in years with a moderate cumulative upwelling index (i.e. during years with fluctuating winds) rather than in years with sustained upwelling or downwelling winds.

Columbia River Discharge



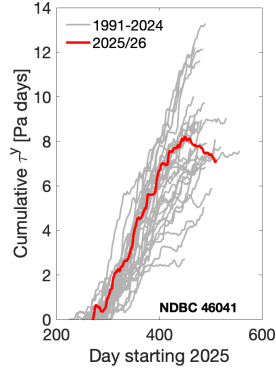
The Columbia River plume can help transport HABs and toxins from the south, northward along the WA coast. However, the plume can also serve as a protective barrier by preventing offshore toxins from reaching beaches.

Marine Weather Forecast

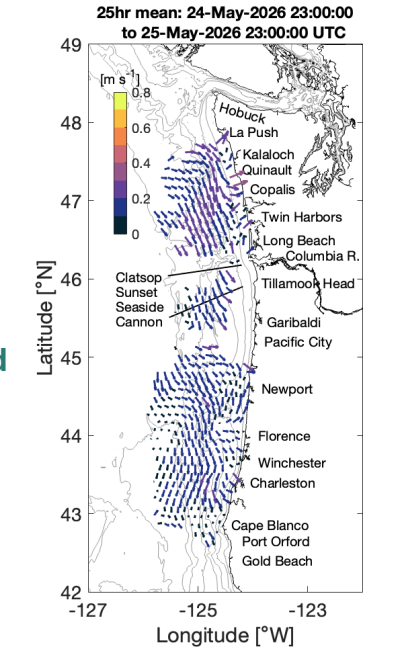


Fair weather can support plankton blooms whereas storms can concentrate any plankton and toxins on beaches.

Cumulative Wind Stress

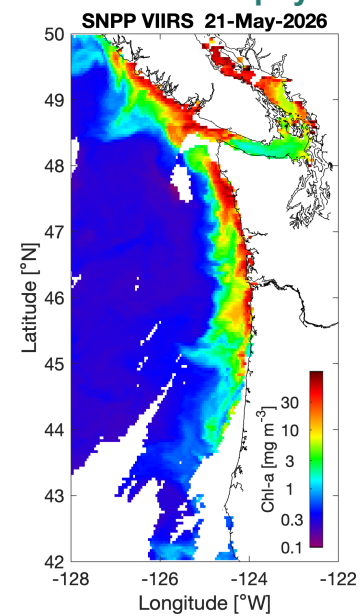


Ocean Surface Currents



Primary currents flow north and south in winter and summer, respectively, except within ~10 km of shore, where fluctuations follow changes in wind direction.

Satellite Chlorophyll-a

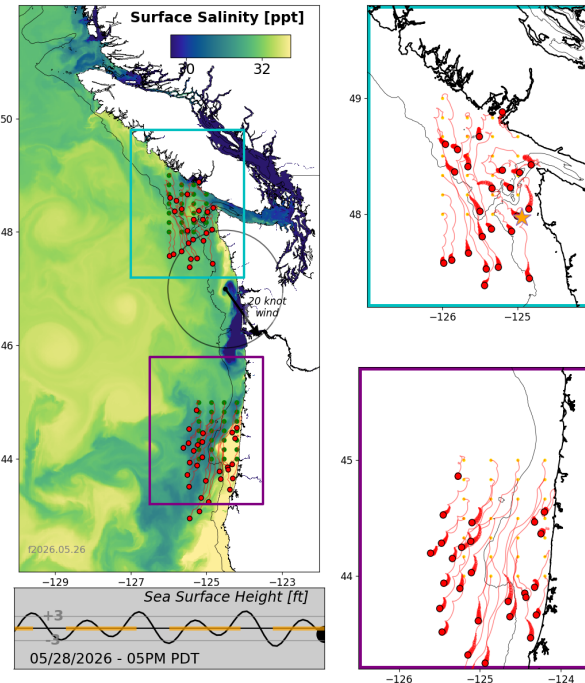


Clouds often obstruct satellite views, but the extent of phytoplankton blooms can at times be seen from space. Blooms do not necessarily reflect the presence of toxins.

Summary - Winds turned southward (upwelling-favorable) early last week, and remained so until a frontal system approached on Sunday, 24-May. In response, southward surface ocean currents strengthened and upwelling of deeper, colder water was initiated. Mid-shelf bottom temperature finally fell below 8 °C for the first time this season. Satellite imagery captured after the enhanced upwelling began, indicated higher concentrations of chlorophyll-a all along the coast. Both large and small size *Pseudo-nitzschia* (PN) were observed last week, but their abundance, so far, has varied at individual beaches. The highest recent concentrations were at Long Beach, WA (35,000 cells/L large PN; 55,000 cells/L small PN), and Charleston, OR (68,000 cells/L large PN; 2,000 cells/L small PN), on 18-May. Although PN have been sparse at northern WA beaches, offshore samples collected at OCNMS moorings on 13-14 May indicated that both large and small cell types are present offshore. Scientists aboard the NOAA Ship *Bell M. Shimada* also confirmed PN off northern CA and southern OR; concentrations were near testing thresholds at stations close to Heceta Beach, OR, within the last few days. Particulate domoic acid (pDA) was confirmed to be low at southern WA beaches prior to the enhanced upwelling (34 ng/L at Long Beach on 14-May). With the enhanced upwelling, low pDA concentrations were detected by the ESP mooring off northern WA (<27 ng/L on 18-May). A sample from Charleston, OR, also contained low pDA (~6 ng/L) on 18-May. Razor clam DA concentrations remain low throughout WA, with values of ~1 ppm at Copalis, Mocrocks, and Quinalt on 21-May. In OR, razor clams from Newport Agate Beach contained 12 ppm DA, while razor clams from Gold Beach had decreased to 23 ppm DA as of 22-May.

Forecast - ENSO neutral conditions are predicted to transition to El Niño by next month, and those conditions are expected to continue through winter. Substantial uncertainty still exists regarding the strength of the El Niño; at present, weak to very strong ranges are all possible. The PDO index remains negative. PN concentrations at beaches may increase this week following Monday's frontal system. Winds resumed a southward direction today and appear to remain so through the end of the week. Since continued upwelling conditions are anticipated and recent samples confirm low pDA concentrations, risk continues to appear low in the near-term.

LiveOcean Forecast Model



Model predicted sea surface salinity with particles released near the Juan de Fuca eddy and Heceta Bank and tracked three days into the future. Red dots indicate particle end points.