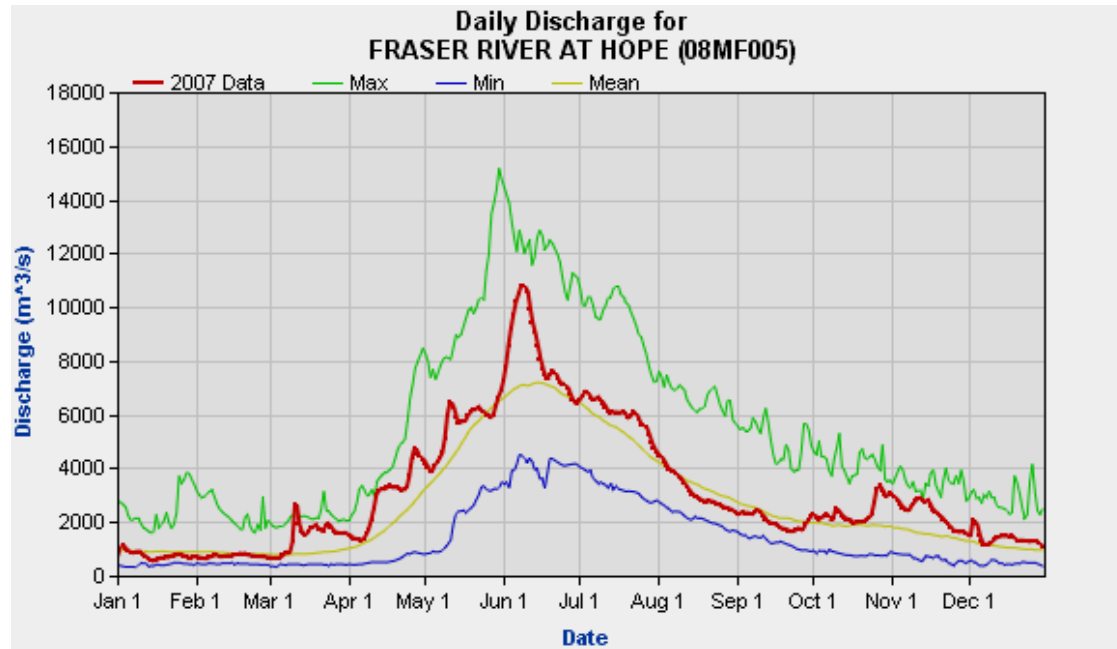


The following data were accessed on 8 May 2012, late afternoon.

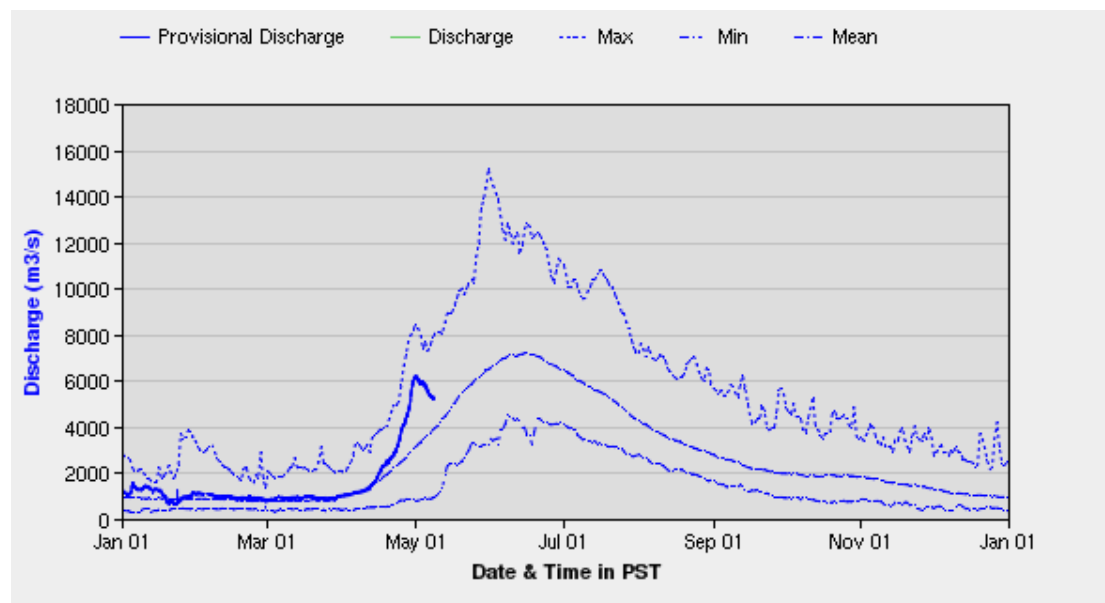
Fraser River Discharge at Hope B.C.

(North Puget Sound and Strait of Juan de Fuca Forcing Factor for *Heterosigma* blooms)

For comparison, 2007 shown above that had both unusually large and early discharge from April through mid-June and coincided with very poor returning Fraser River sockeye runs and *Heterosigma* blooms in Strait of Georgia and North Puget Sound. 2012 YTD shown below.



Synopsis: Flow are much higher than the long term mean at this point, exceeding even 2007.



8 May 2012 HAB Existing Conditions and Outlook Summary

NOAA NODC Marine Water Temperatures <http://www.nodc.noaa.gov/dsdt/cwtg/npac.html>

Synopsis: Neah Bay to Seattle water temperatures very near normal compared to historical data at this point in 2012.

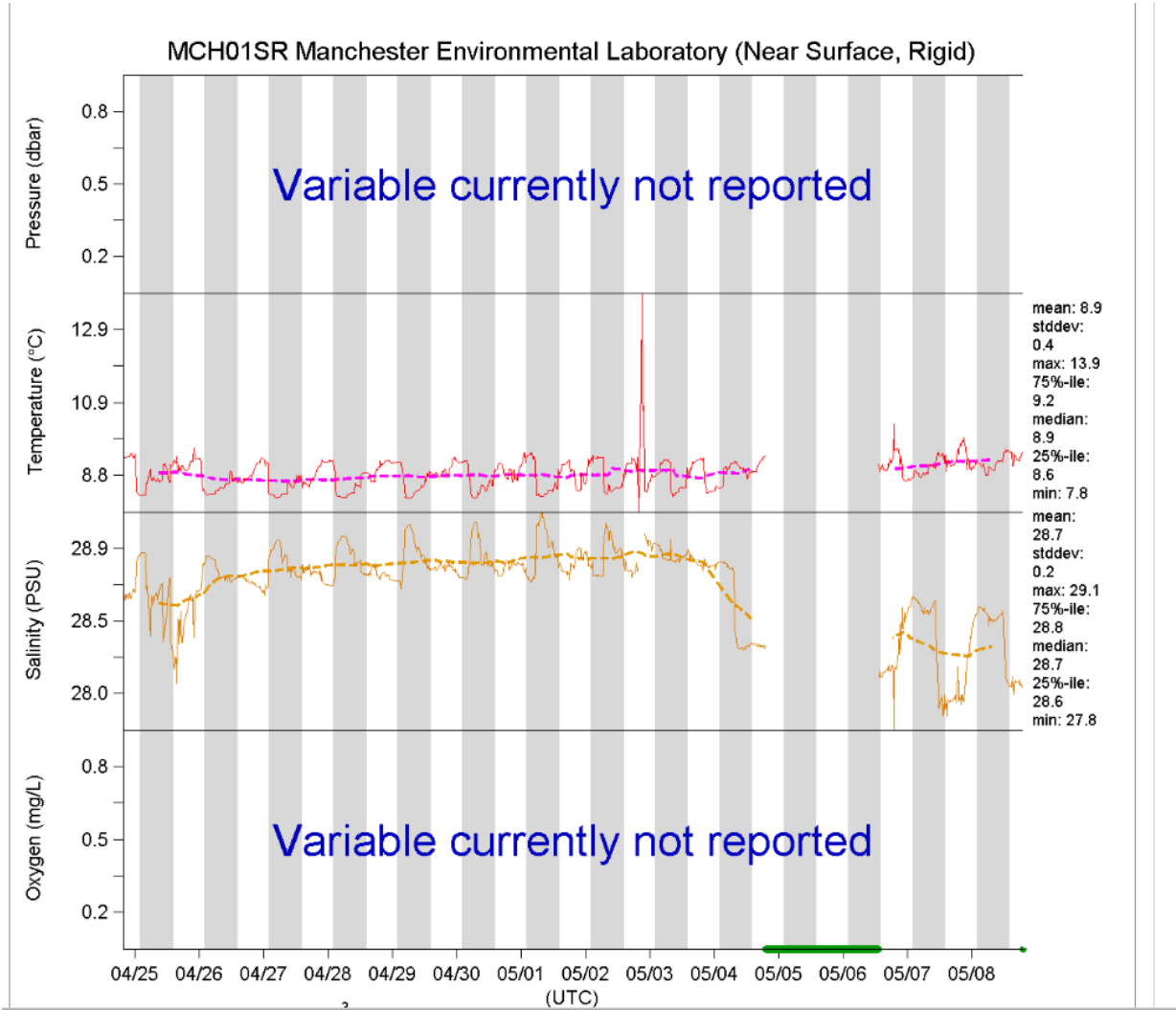
Location	Recent Temperatures (Observation Date and Time)	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY 1-15	MAY 16-31	JUN 1-15	JUN 16-30	JUL 1-15	JUL 16-31
Port Orford OR	45.9 (05/08/2012 20:48 UTC)	50	50	50	50	50	50	51	51	51	51	51
Charleston OR	52.2 (05/08/2012 20:48 UTC)	50	50	51	51	52	52	53	54	55	55	55
Newport OR	50.5 (05/08/2012 20:48 UTC)	49	50	50	50	50	51	53	55	55	55	55
Seaside OR	N/A	49	49	50	51	51	53	55	57	58	58	58
Columbia River Lightship OR	N/A	47	48	49	50	51	52	54	55	56	57	57
Astoria OR	57.4 (05/08/2012 20:48 UTC)	42	42	46	48	52	56	58	60	62	64	67
Umatilla Lightship WA	N/A	48	47	47	48	49	50	51	53	54	54	55
Longview WA	52.5 (05/08/2012 20:54 UTC)											
Neah Bay WA	50.7 (05/08/2012 20:48 UTC)	45	46	47	48	49	50	51	52	53	53	53
Port Townsend WA	49.3 (05/08/2012 20:48 UTC)	44	44	46	47	48	49	50	51	52	53	54
Seattle WA	50.2 (05/08/2012 20:48 UTC)	47	46	46	48	49	50	51	53	54	55	56
Tacoma WA	47.7 (05/08/2012 20:48 UTC)											
Cherry Point WA	49.1 (05/08/2012 20:48 UTC)											
Friday Harbor WA	48.4 (05/08/2012 20:48 UTC)											

To convert temperature units, enter a number in either box below, then click the other box.

Temperature Conversion: Degrees Fahrenheit (°F) = Degrees Celsius (°C)

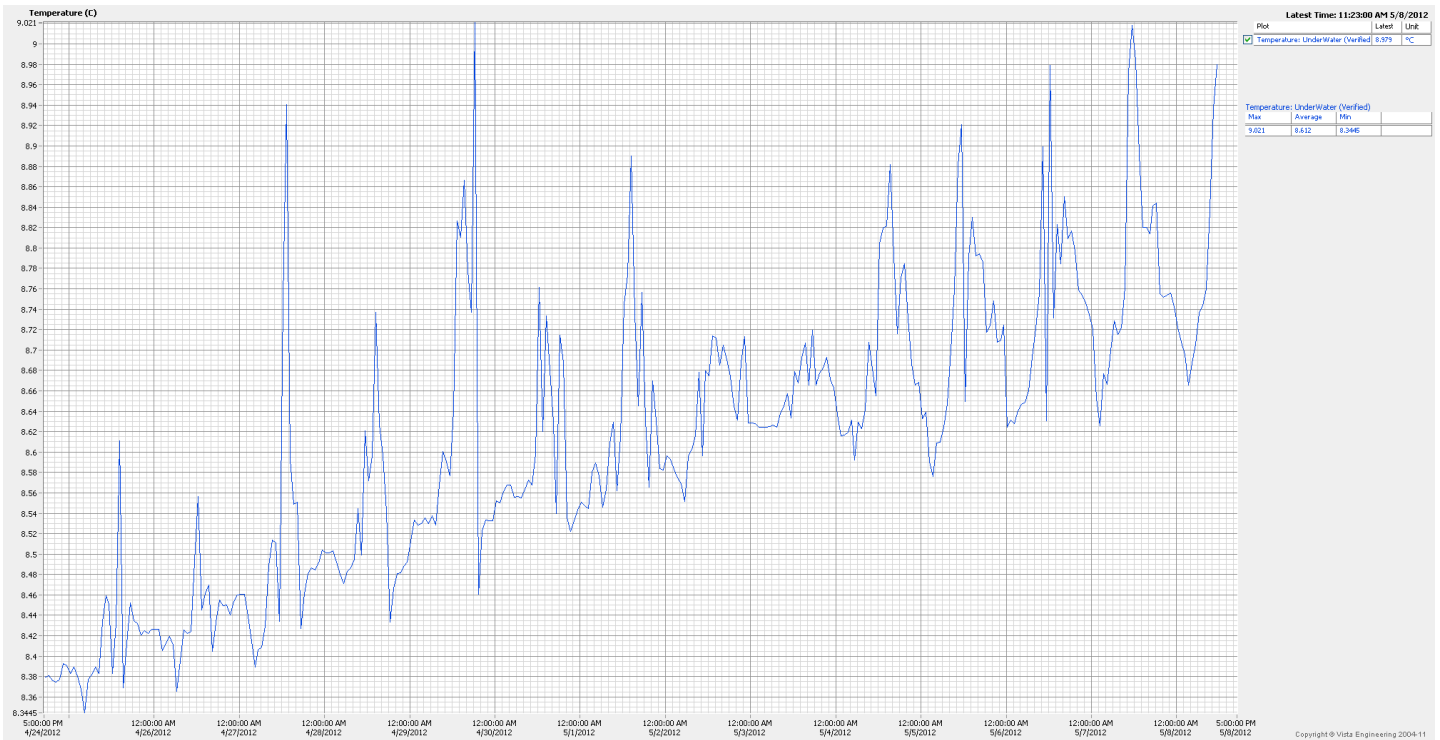
Washington Department of Ecology: Central Puget Sound at EPA dock, near bottom conditions (Water temperature as driver of algal cyst germination)

Synopsis: Seasonally cool, no trend obvious.



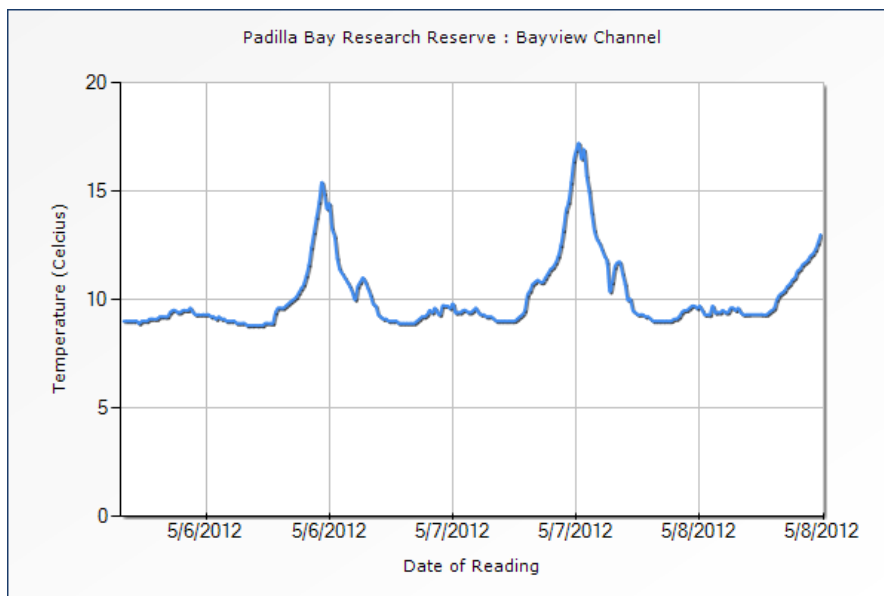
8 May 2012 HAB Existing Conditions and Outlook Summary

Friday Harbor Laboratory Ambient Water Temperature 2 week pattern



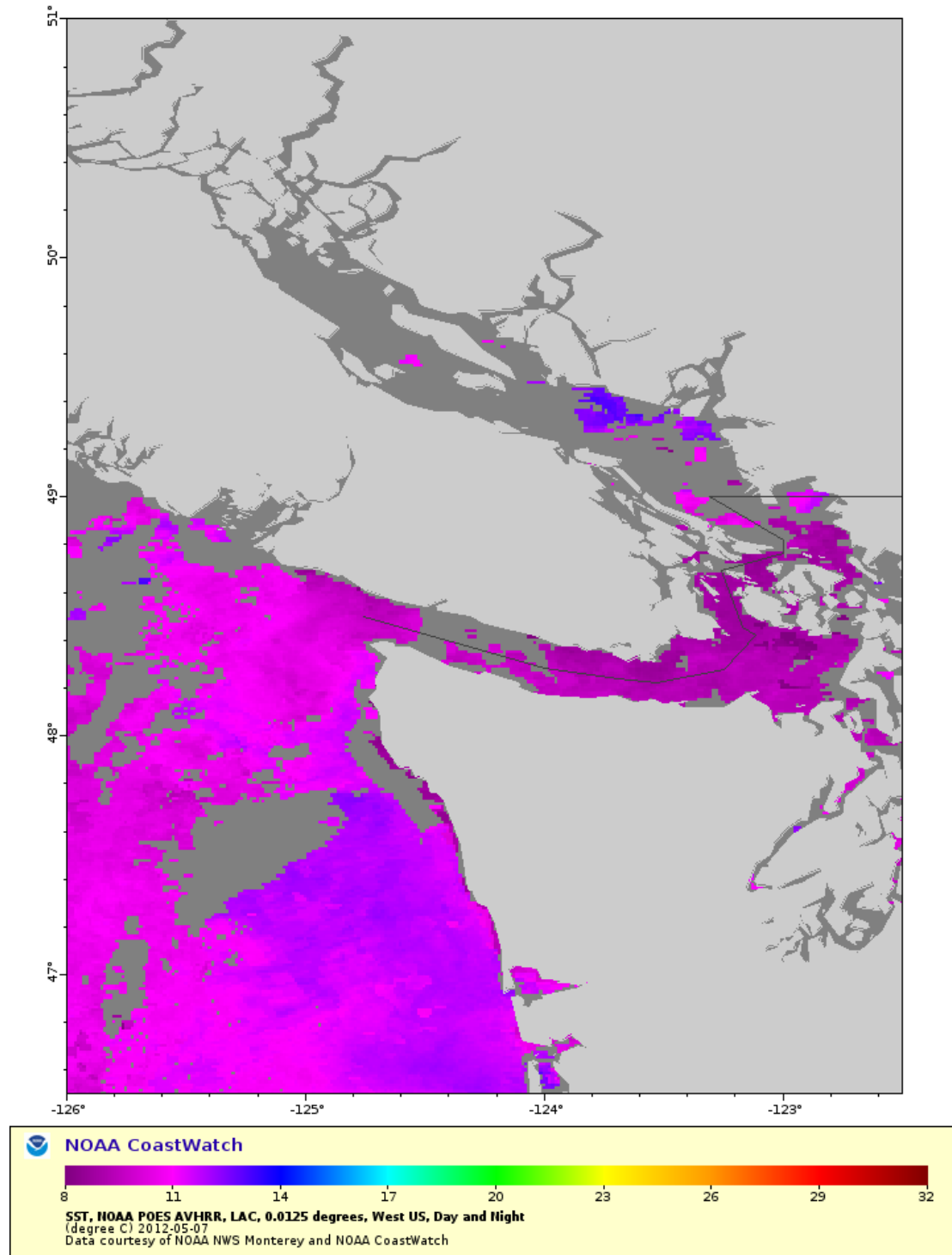
Padilla Bay: Bayview Channel (Sonde is about 0.6 m from the bottom, in waters fluctuating from 1.5 m to 5 m above the instrument and strongly affected by the extensive shallow waters in the area).

Synopsis: Maximum values exceeding 17°C, sufficient for some algal species cyst germination but cooling significantly during flood tides.



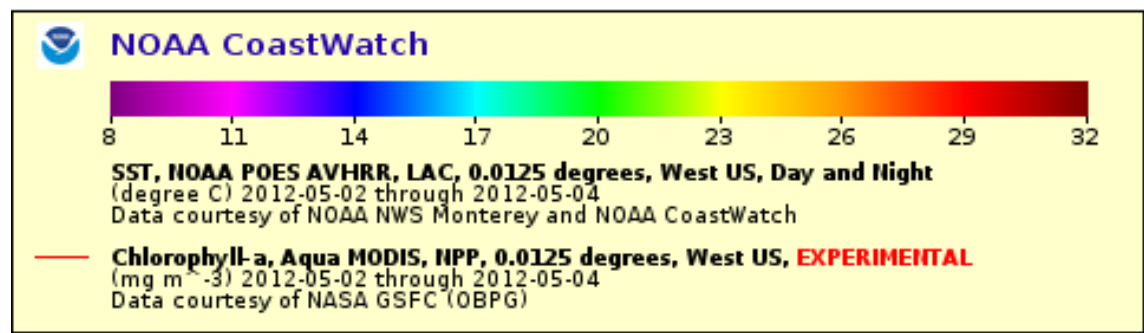
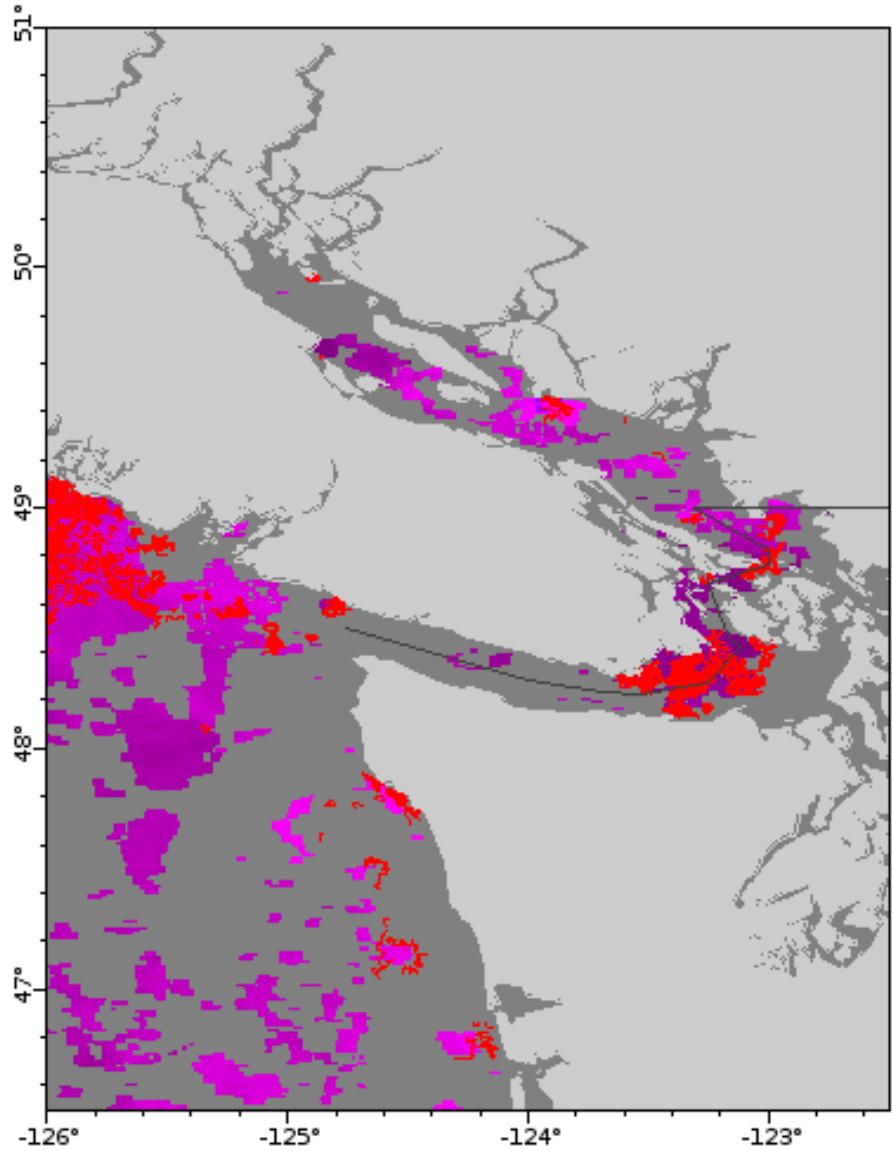
NOAA Coast Watch Sea Surface Temperature (May 7th)

Synopsis: Relatively cool water surface water persists throughout North Puget Sound with normally warmer water between Texada Island and Howe Sound near Vancouver, B.C.



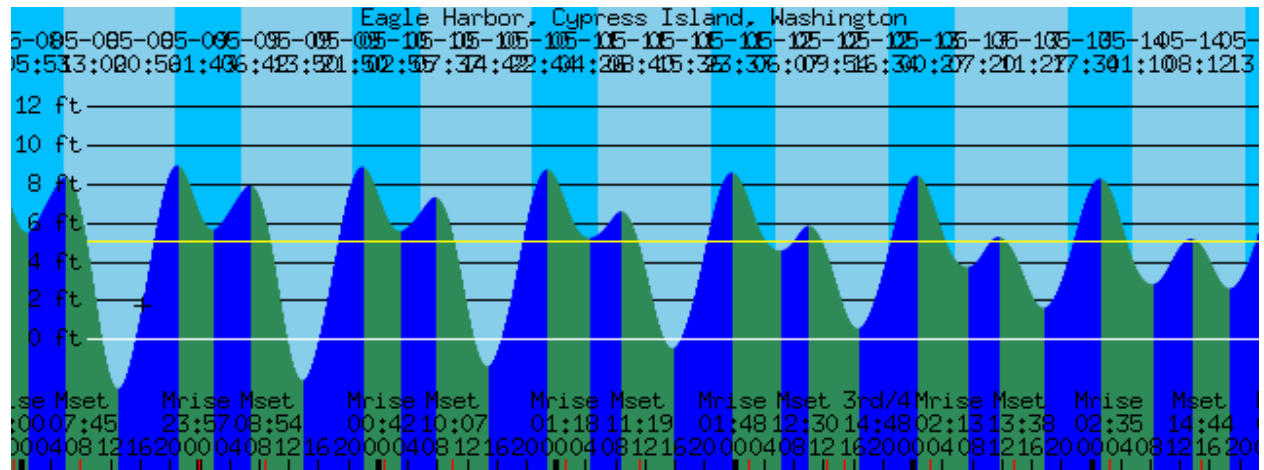
NOAA Coast Watch Chlorophyll a MODIS experimental (May 7th)

Synopsis: Hard to believe, very high levels throughout the region in this 3 day composite reading. With Fraser River flows so high, some of this could be due to turbulence.

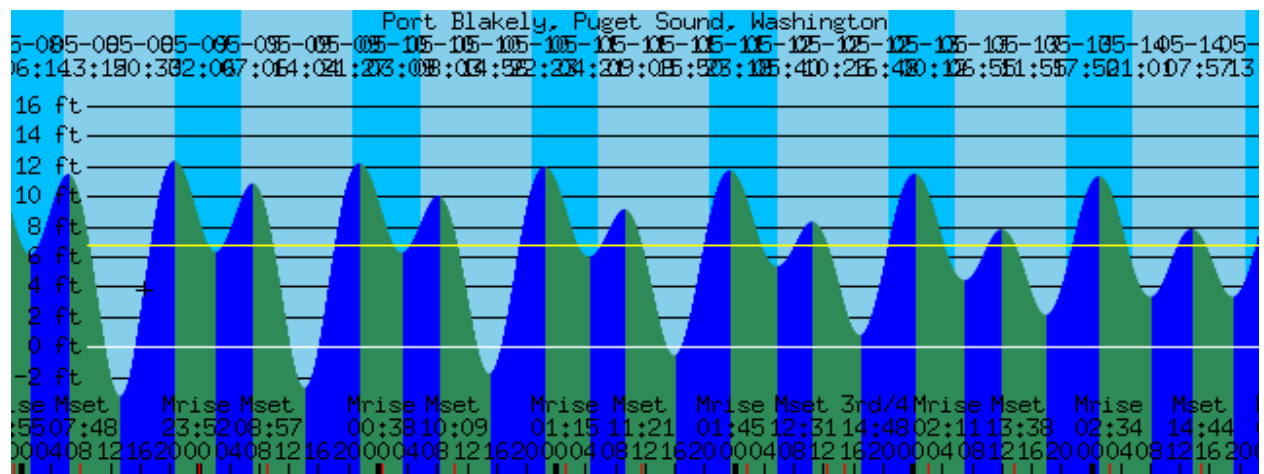


North Puget Sound Tides: Eagle Harbor, Cypress Island, WA 8 May 2012 - 15 May 2012

Synopsis: High tidal amplitude variation, diminishing into next week and then reversing trend thereafter. Lower amplitude = higher risk of microflagellate and dinoflagellate blooms in general but of course dependent on other factors such as clement weather and water temperature.



Central Puget Sound Tides: Port Blakely, WA 8 May 2012 - 15 May 2012

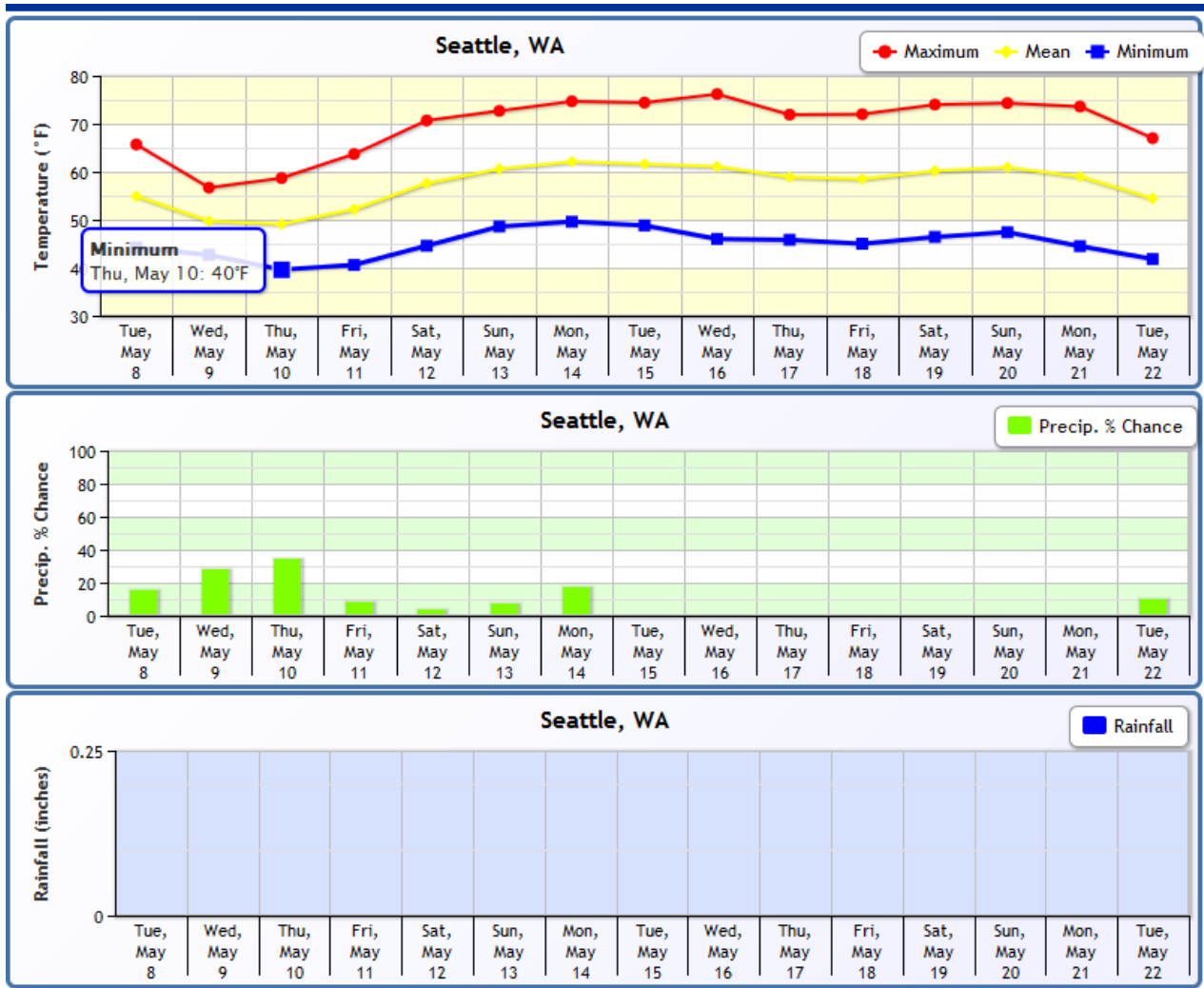


Seattle NWS Forecast

Forecast at a Glance								
Late Afternoon	Tonight	Wednesday	Wednesday Night	Thursday	Thursday Night	Friday	Friday Night	Saturday
30% Chance Showers	30% Chance Showers	Partly Sunny	Mostly Cloudy	Mostly Sunny	Mostly Clear	Sunny	Mostly Clear	Sunny
Hi 63 °F	Lo 45 °F	Hi 55 °F	Lo 43 °F	Hi 57 °F	Lo 44 °F	Hi 64 °F	Lo 46 °F	Hi 72 °F

8 May 2012 HAB Existing Conditions and Outlook Summary

Long Range Forecast, 15 days Seattle (warm and dry, but not hot)



HAB Existing Conditions and Outlook Summary:

- **Fraser River Flow:** Very high compared to historical rates at this time of year
- **Water Temperatures:** Approx. average in main basins, warming in backwaters
- **Tidal Cycle Stage:** Spring tides now but trending towards neap tides next week
- **Recent Satellite Chlorophyll images:** Very high concentrations but possibly in error
- **Weather outlook:** Warming next week and staying warm

Composite outlook: moderately low risk of microflagellate or dinoflagellate blooms becoming noticeable early next week and from ~ May 14th to 16th

Next scheduled update will be May 18th or sooner if conditions warrant.