Quick Look at the Strong AR Forecast to Impact British Columbia and the Pacific Northwest

Updated: 18 October 2024

A strong atmospheric river has made landfall over British Columbia and is forecast to move down the coast over the Pacific Northwest, bringing heavy rainfall and the potential for flooding to southwestern British Columbia and northwestern Washington.

Forecast Highlights:

- An atmospheric river (AR) made landfall over British Columbia alongside a strong surface cyclone today, Fri 18 Oct, and is forecast to move down the coast over the Pacific Northwest between Sat 19 Oct and Sun 20 Oct.
- A second pulse of stronger IVT at the back end of the system is forecast to move over WA and southwest British Columbia on Sun 20 Oct as a secondary low pressure system develops just off the coast, extending AR conditions and bringing additional heavy precipitation to Vancouver Island and the Olympic Peninsula.
- Both the NCEP Global Ensemble Forecast System (GEFS) and ECMWF Ensemble Prediction System (EPS) are forecasting a high likelihood of AR3-4 conditions for coastal points between Vancouver Island and northern Oregon.
- Both the GEFS and EPS have some members indicating the potential for AR5 conditions over southern Vancouver Island the Olympic Peninsula due to the max IVT of the second pulse exceeding 1000 kg/(ms).
- The National Weather Service (NWS) Weather Prediction Center (WPC) is forecasting >4 inches of precipitation over the Olympic Peninsula, Northern Cascades, Vancouver Island and southwest British Columbia coastline during the event. Portions of southern Vancouver Island are currently forecast to receive as much as 10 inches of precipitation.
- While river levels are expected to rise in WA as a result of heavy precipitation, the NWS Northwest River Forecast Center is not forecasting any stations to exceed action stage.
- However, the WPC has issued a marginal risk (level 1 of 4) for flooding in the Excessive Rainfall Outlook (ERO) over the Olympic Peninsula and the North Cascades for the 24-hour period ending 5 AM PT Sun 20 Oct.
- The British Columbia River Forecast Centre (BCRFC) has issued flood watches for the Central and Southern Coasts, the Lower Fraser and all of Vancouver Island through Sunday.
- The BCRFC CLEVER model shows three stations forecast to exceed the 100-year return threshold (1 in 100 year event) in the next five days, one in northern Vancouver Island on the San Josef River and two in southwest British Columbia on the Coquitlam and Alouette Rivers.
- One other station is forecast to see a 50-100 year return flow event and two are forecast to see a 20-50 year return flow event.

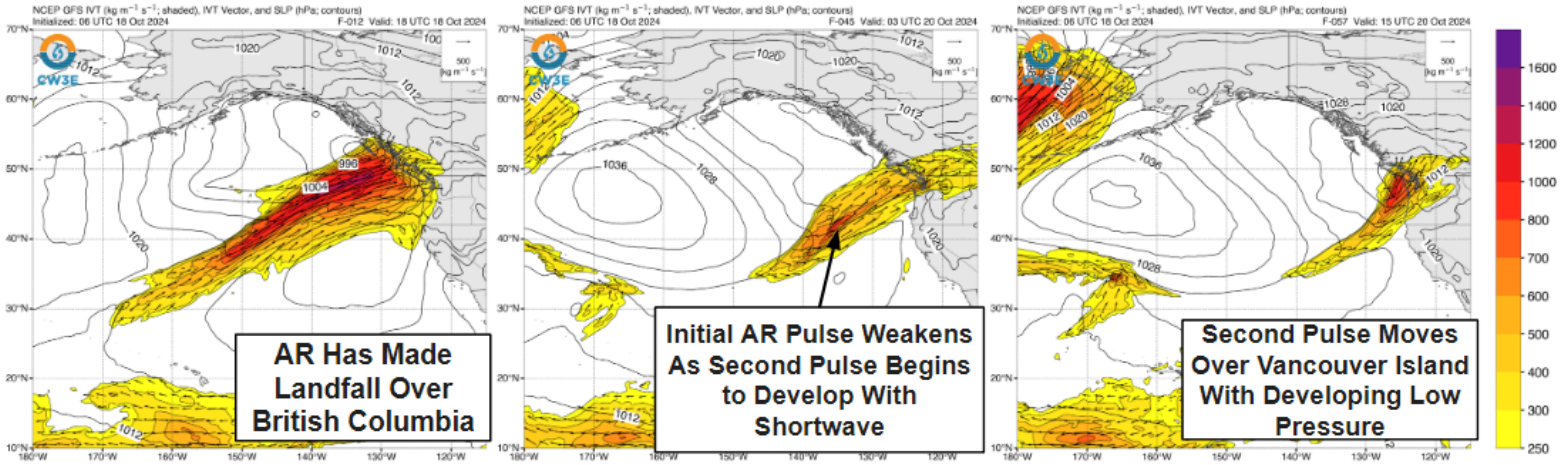
Stay alert to official NWS forecasts, watches, and warnings at weather.gov and follow guidance from local emergency management officials

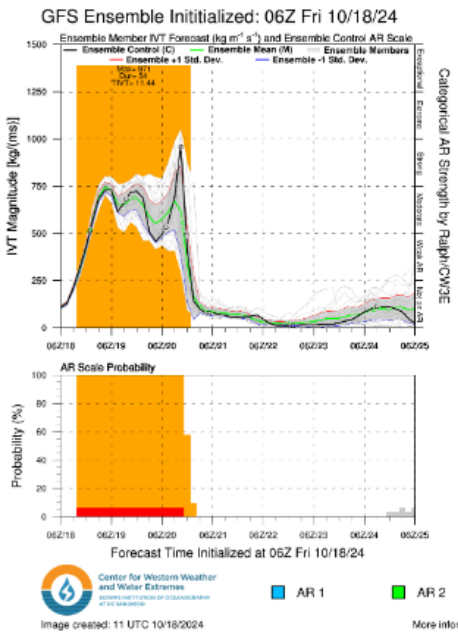
Stay tuned to the CW3E webpage for a full AR Update

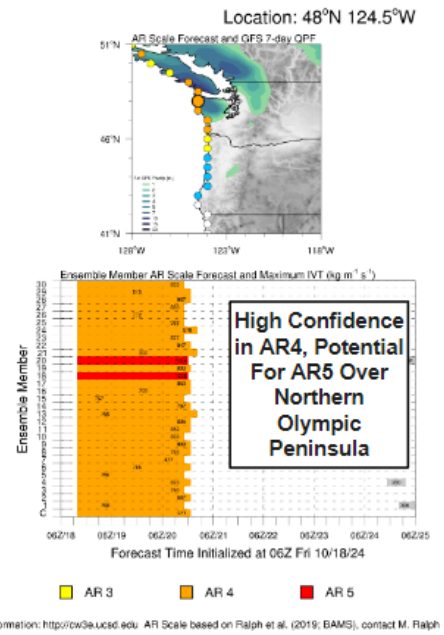
Valid: 11 AM PT Fri 18 Oct

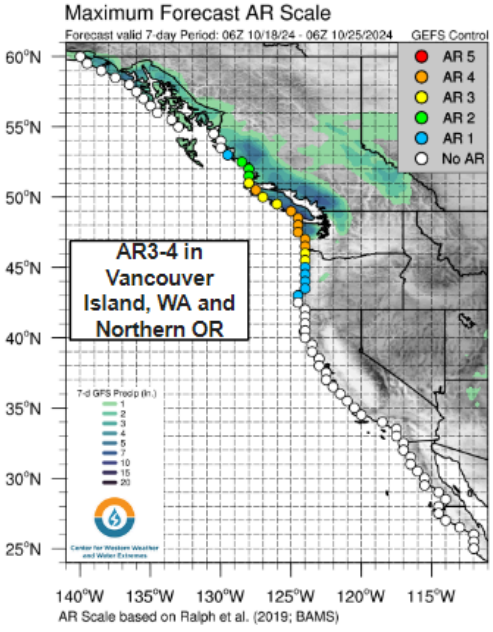
Valid: 8 PM PT Sat 19 Oct

Valid: 8 AM PT Sun 20 Oct









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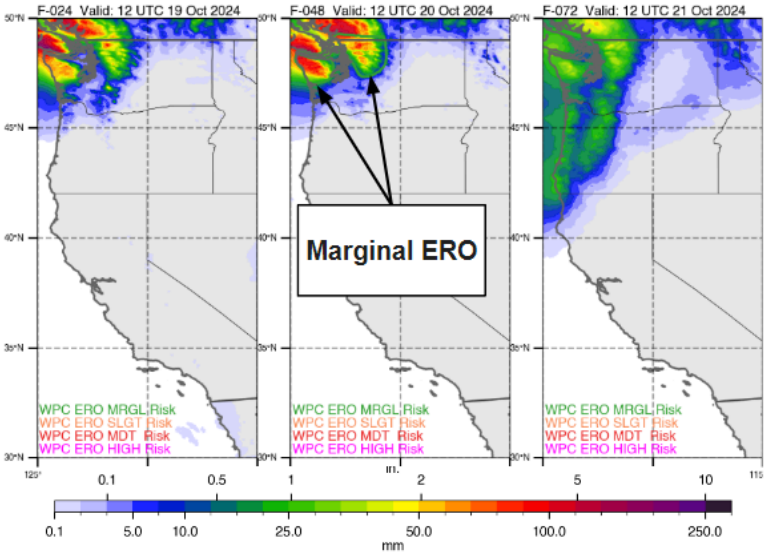
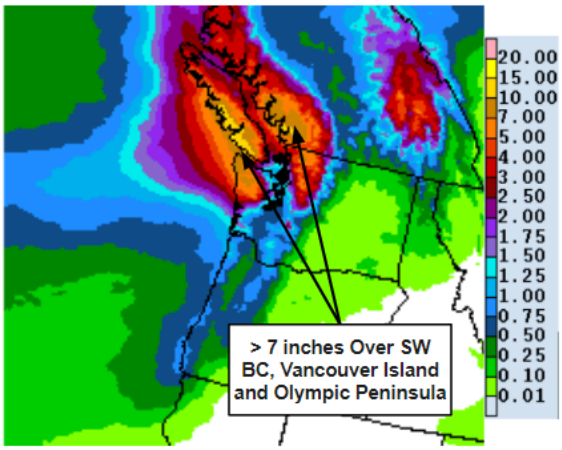
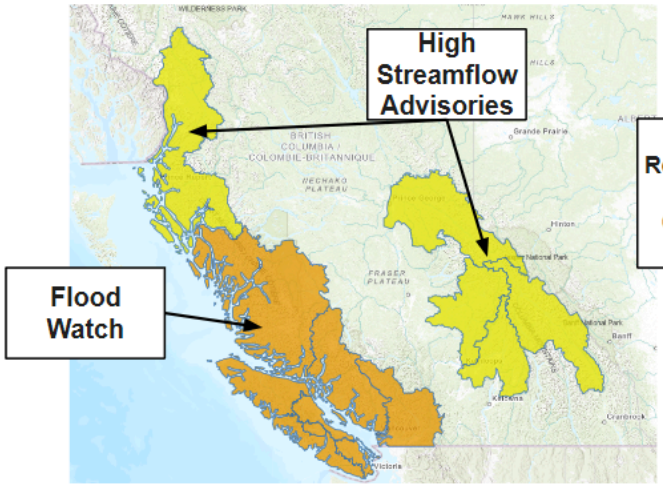
WPC Days 1-3 QPF: Periods Ending 5 AM PT 19-21 Oct



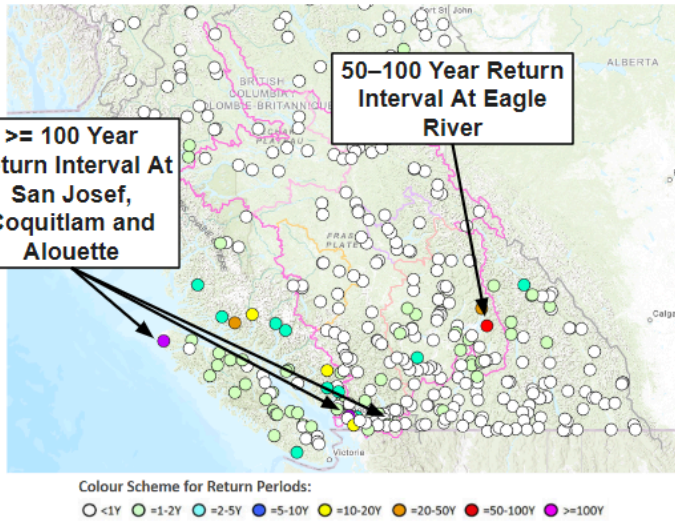
WPC 3-Day QPF: Period Ending 5 AM PT Sun 21 Oct



BCRFC Flood Warning and Advisories



BCRFC 10-Day CLEVER Model Forecast Discharge and Return Period



Additional Considerations:

- Visit https://www.weather.gov/nwrfc/ and https://bcrfc.env.gov.bc.ca/ for specific river and stream forecasts and https://www.weather.gov/ for point specific watches, warnings, and forecasts.

In-depth AR forecasts products can be found here:
http://cw3e.ucsd.edu/iwv-and-ivt-forecasts/

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