A landfalling AR will bring heavy rainfall and mountain snowfall to the Pacific Northwest

- Some areas along the Washington and Oregon coast may experience AR conditions for more than 48 hours
- Prolonged inland penetration of AR conditions is likely over the Intermountain West
- At least 2–7 inches of precipitation are expected over portions of western Washington and northwestern Oregon during the next 3 days, with at least 12” of snowfall in the North Cascades and portions of the Intermountain West
- River flooding is possible once again downstream of the Washington Cascades
- Landfalling AR activity beyond Day 4 (8 Feb) is unlikely as surface high pressure builds over the Northeast Pacific Ocean
**AR Outlook: 4 Feb 2020**

For California DWR’s AR Program

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**Flooding Possible Again**

*Wednesday February 5th– Friday February 7th, 2020*

**Location:**
- Rivers, streams, and urban areas in Western Washington

**Details:**
- Periods of heavy rain this week, especially **Tuesday night through early Friday**, will likely produce flooding on many rivers, streams, and urban areas
- Some rivers may reach flood stage as early as Wednesday afternoon.

**Prepare:**
- If you live near area rivers and waterways, keep an eye on water levels and forecasts

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Source: NOAA/NWS WFO Seattle, WA, [https://www.weather.gov/sew/](https://www.weather.gov/sew/)
AR landfall tool shows high confidence (> 90%) in a prolonged period (at least 48 hours) of AR conditions over western Washington and northwestern Oregon beginning around 0000 UTC 5 Feb (late afternoon today).

There is still some uncertainty regarding how long AR conditions will persist after 0000 UTC 7 Feb.

GEFS IVT probability maps also show high confidence in the inland penetration of AR conditions over the Intermountain West by 0000 UTC 6 Feb.
**AR Outlook: 4 Feb 2020**

**GEFS IVT Forecast Plumes**

- **GEFS Ensemble Mean: AR3**
- **GEFS Control: AR3**

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- **0000 UTC 4 Feb GEFS control run and ensemble mean are predicting > 60 hours of weak-to-moderate AR conditions [AR3 based on the Ralph et al. (2019) AR Scale] near Grays Harbor (47°N, 124°W)**
- **There is generally good agreement among individual GEFS members, with 20/21 members predicting AR3 conditions at this location**
- **As mentioned earlier, there is some uncertainty in the duration of AR conditions beyond 0000 UTC 7 Feb**
An anticyclonically curved AR on the poleward side of surface high pressure is forecast to make landfall along the Washington and Oregon coast just before 0000 UTC 5 Feb.

After the initial pulse of IVT makes landfall on 5 Feb, the AR is expected to gradually weaken and become very narrow.

Decreasing AR width introduces some uncertainty regarding the location and duration of AR conditions beyond 1200 UTC 6 Feb.

By 0000 UTC 8 Feb, the AR has dissipated, and surface high pressure begins to strengthen once again over the Northeast Pacific Ocean.
• At least 2–7 inches of precipitation are forecast over the northern Oregon Coast Ranges, the Olympic Peninsula, and the Cascades during the next 3 days, with locally higher amounts over the Washington Cascades.

• Lighter precipitation (1–3 inches) is forecast over the Rocky Mountains and elevated portions of the interior Pacific Northwest, with higher amounts possible in northeastern Oregon and North Central Idaho.

• At least 12” of snowfall is likely (> 70% probability) across the North Cascades, the Salmon River Mountains and Bitterroots in North Central Idaho, and the Madison Range in southern Montana.

Source: NOAA/NWS WPC, [https://www.wpc.ncep.noaa.gov/](https://www.wpc.ncep.noaa.gov/)

For California DWR’s AR Program
Given the saturated soil conditions and previous rainfall over the past 4 weeks, river flooding is expected at lower elevations west of the Washington Cascades.

The Northwest River Forecast Center (NWRFC) is currently forecasting the Snoqualmie River (at Carnation, WA) to reach major flood stage late on 6 Feb and remain above flood stage for nearly 48 hours.

The Snoqualmie River exceeded flood stage at the same location as recently as 2 Feb.