



# CEM DAILY BRIEFING

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REQUEST INCIDENT REPORTING:  
Call: 240-800-7160 for support.

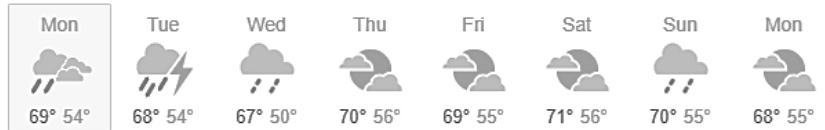
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## RAIN | WINDY CONDITIONS | 60-70'S

WESTERN WASHINGTON				
AIR QUALITY	FIRE WEATHER	FLOODING	WIND GUSTS	EXCESSIVE HEAT
GOOD	LOW	NONE	25-35	60-70's

**SUMMARY:** East entrance U.S. waters Strait of Juan de Fuca-Northern inland waters including the San Juan Islands-Admiralty Inlet a Gale Watch remains in effect from late tonight through tuesday afternoon with **winds possibly rising to 25 to 35 kt** after midnight tonight into Tuesday morning. **Thunderstorms are possible. Monitor weather conditions. When thunder roars, go indoors!**



**WEATHER:** Scattered showers for Monday across Western Washington, with isolated thunderstorms possible in the afternoon. Cold front on Tuesday looks to bring rain and locally windy conditions. Highs for the next couple of days in the low to mid 60s.

**WEATHER SYSTEM:** Southern WA-Northern OR: Isolated thunderstorms Monday, Tuesday more rain. Gusty south winds expected Tuesday, both along the coast and inland. **Gusts along the coast may approach 50 mph along the beaches and headlands**, making this the first significantly windy cold front of the season.

### The science behind atmospheric rivers

An atmospheric river (AR) is a flowing column of condensed water vapor in the atmosphere responsible for producing significant levels of rain and snow, especially in the Western United States. When ARs move inland and sweep over the mountains, the water vapor rises and cools to create heavy precipitation. Though many ARs are weak systems that simply provide beneficial rain or snow, some of the larger, more powerful ARs can create extreme rainfall and floods capable of disrupting travel, inducing mudslides and causing catastrophic damage to life and property. Visit [www.research.noaa.gov](http://www.research.noaa.gov) to learn more.

A strong AR transports an amount of water vapor roughly equivalent to 7.5-15 times the average flow of water at the mouth of the Mississippi River.

ARs are a primary feature in the entire global water cycle and are tied closely to both water supply and flood risks, particularly in the Western U.S.

On average, about 30-50% of annual precipitation on the West Coast occurs in just a few AR events and contributes to the water supply — and flooding risk.

ARs move with the weather and are present somewhere on Earth at any given time.

ARs are approximately 250-375 miles wide on average.

Scientists' improved understanding of ARs has come from roughly a decade of scientific studies that use observations from satellites, radar and aircraft as well as the latest numerical weather models. More studies are underway, including a 2015 scientific mission that added data from instruments aboard a NOAA ship.

