Water Year 2018 Summary



Center for Western Weather and Water Extremes SCRIPPS INSTITUTION OF OCEANOGRAPHY AT UC SAN DIEGO

55 Atmospheric Rivers made landfall over the U.S. West Coast during the 2018 water year

		EQSN
AR Strength	AR Count	50 N WY 2018
Weak	22	
Moderate	20	45°N – Center for Western Weather
Strong	11	and Water Extremes Oct. 17 Oct. 22 Dec. 30
Extreme	2	40°N -
Exceptional	0	Nov. 21
		Nov. 16 Nov 26
State/Region	AR Count	35°N – April 6 Nov. 8
Washington	48	Ralph/CW3E AR Strength Scale Weak: IVT=250–500 kg m ⁻¹ s ⁻¹
Oregon	54	30°N – Moderate: IVT=500–750 kg m ⁻¹ s ⁻¹ Strong: IVT=750–1000 kg m ⁻¹ s ⁻¹
NorCal	36	Extreme: IVT=1000–1250 kg m ⁻¹ s ⁻¹
SoCal	18	25°N Produced by C. Hecht and F. M. Ralph
		145°W 140°W 135°W 130°W 125°W 120°W 115°W 110°W



Water Year 2018 Compared to Water Year 2017

CW3E

Center for Western Weather and Water Extremes



Center for Western Weather and Water Extremes

SCRIPPS INSTITUTION OF OCEANOGRAPHY AT UC SAN DIEGO



- Water Year 2018 experienced a total of 55 landfalling ARs over the U.S. West Coast, 13 less than Water Year 2017
- Water Year 2018 also experienced 14 ARs that were associated with Strong or greater IVT magnitudes compared to 13 during WY 2017

Water Year 2018 Compared to Water Year 2017



	WY 2017	WY 2018
Total ARs over CA	33	15
Weak	10	15
Moderate	12	6
Strong	7	5
Extreme	4	0
Avg. Res Storage (% Norm.)	136%	98%



- Compared to WY `17, a larger majority WY `18 ARs were strongest over the Pacific Northwest
- CA experienced 5 ARs of strong or greater magnitude during WY `18 vs. 11 during WY `18
- At the end of WY `18, the avg. reservoir storage percentage of normal was 98% compared to 136% during WY `18



Water Year 2018 AR Impacts





Center for Western Weather and Water Extremes SCRIPPS INSTITUTION OF OCEANOGRAPHY AT UC SAN DIEGO

- A post-fire debris flow was triggered by the precipitation produced during a landfalling atmospheric river near Montecito, CA on 09 January 2018
- The debris flow occurred in and below the Thomas fire that began on 04 Dec. 2017
- The Debris flow resulted in the death of 21 people, the hospitalization of 150 people, the destruction of over 100 homes and the damage to an additional 300 homes.
- More information on the meteorological conditions that led to the debris flow can be found at the link below

