

Flood Mitigation

A presentation from our state agency partners sharing the latest on hazard mitigation for flood hazards.

INTRODUCTIONS

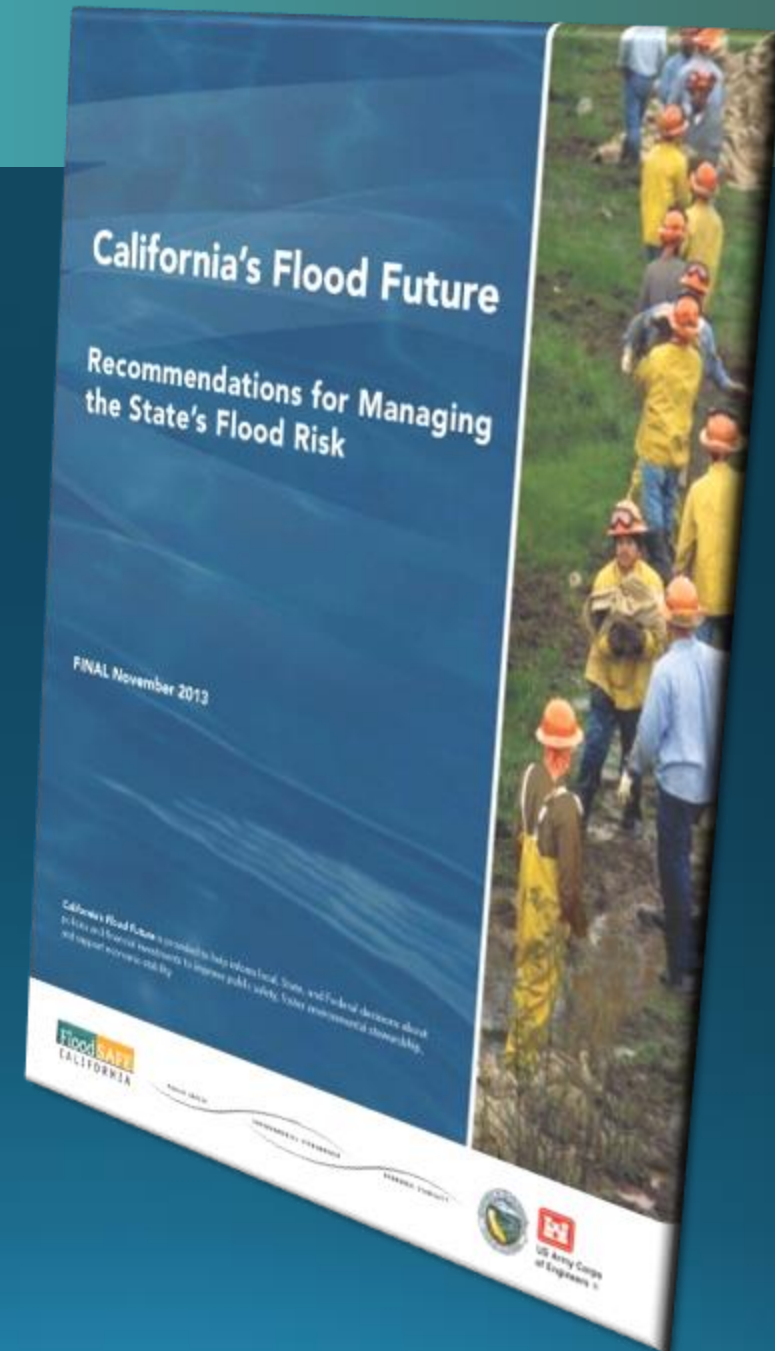
- Mike Mierzwa, DWR
- Deborah Halberstadt, DOI

Mike Mierzwa, California Department of Water Resources
Deborah Halberstadt, California Department of Insurance

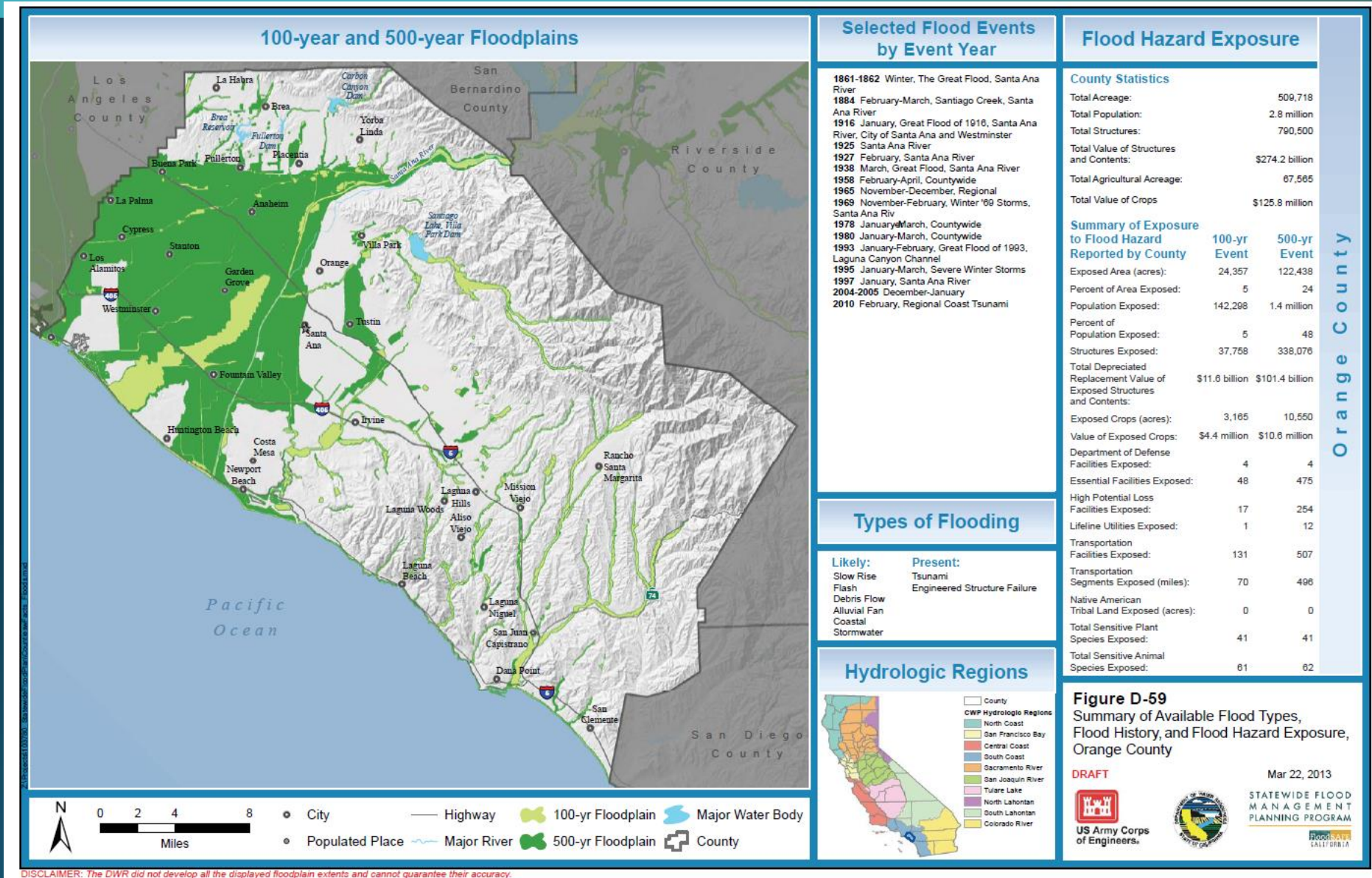
Strengthening Flood Resilience

California's Flood Future

1. Statewide Focus – estimated exposure and level of investment needed to address current flood risk
2. Created map books to show flood risk exposure for every county
3. Catalogued history of flooding for reference by local and regional planning agencies and land use officials
4. Articulated 7 high level / policy recommendations
5. Established key flood management vocabulary / terminology



Map Book Example



Flood Hazards in California



Extreme Flood Events Often Linked to Large-Scale Weather Systems

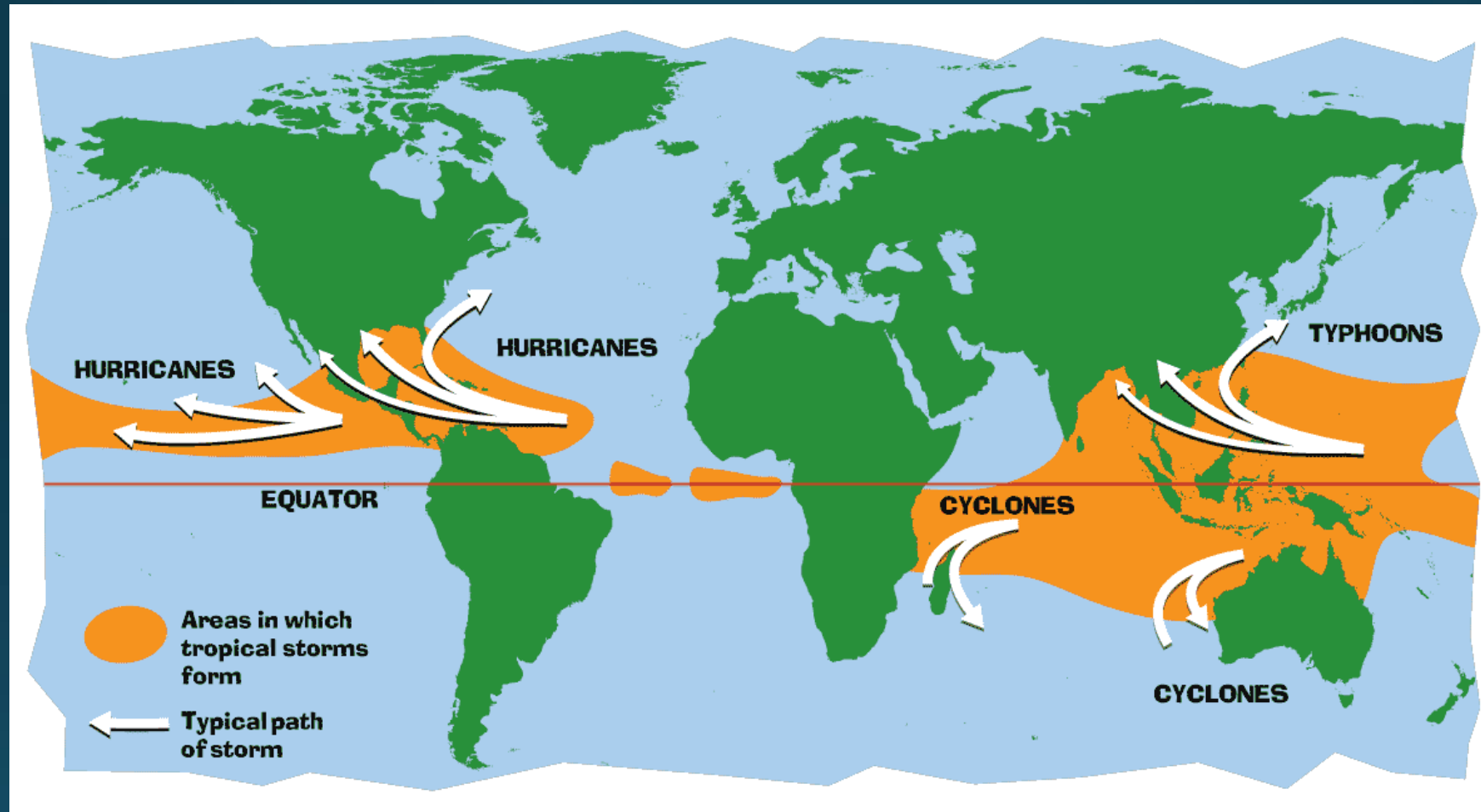
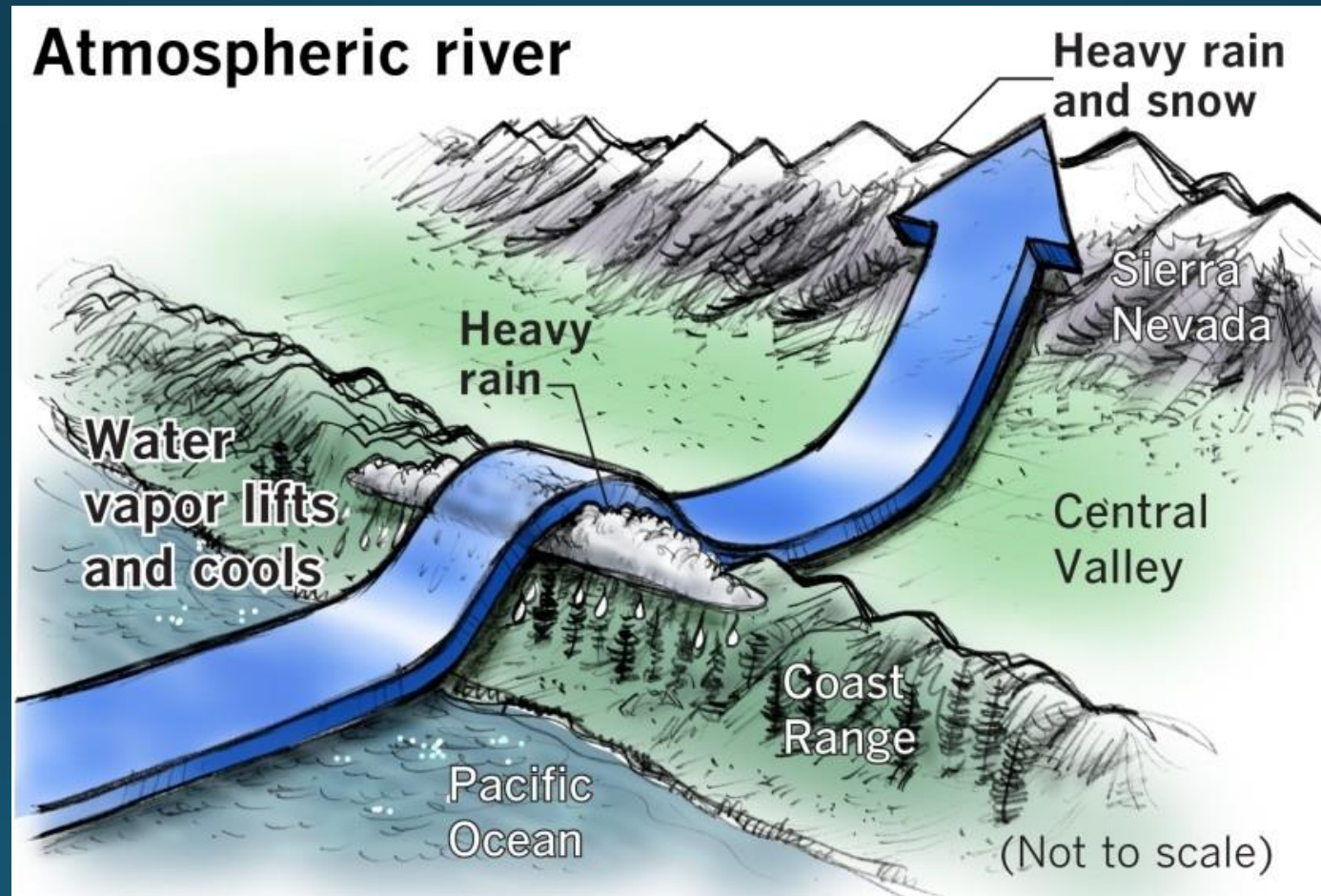
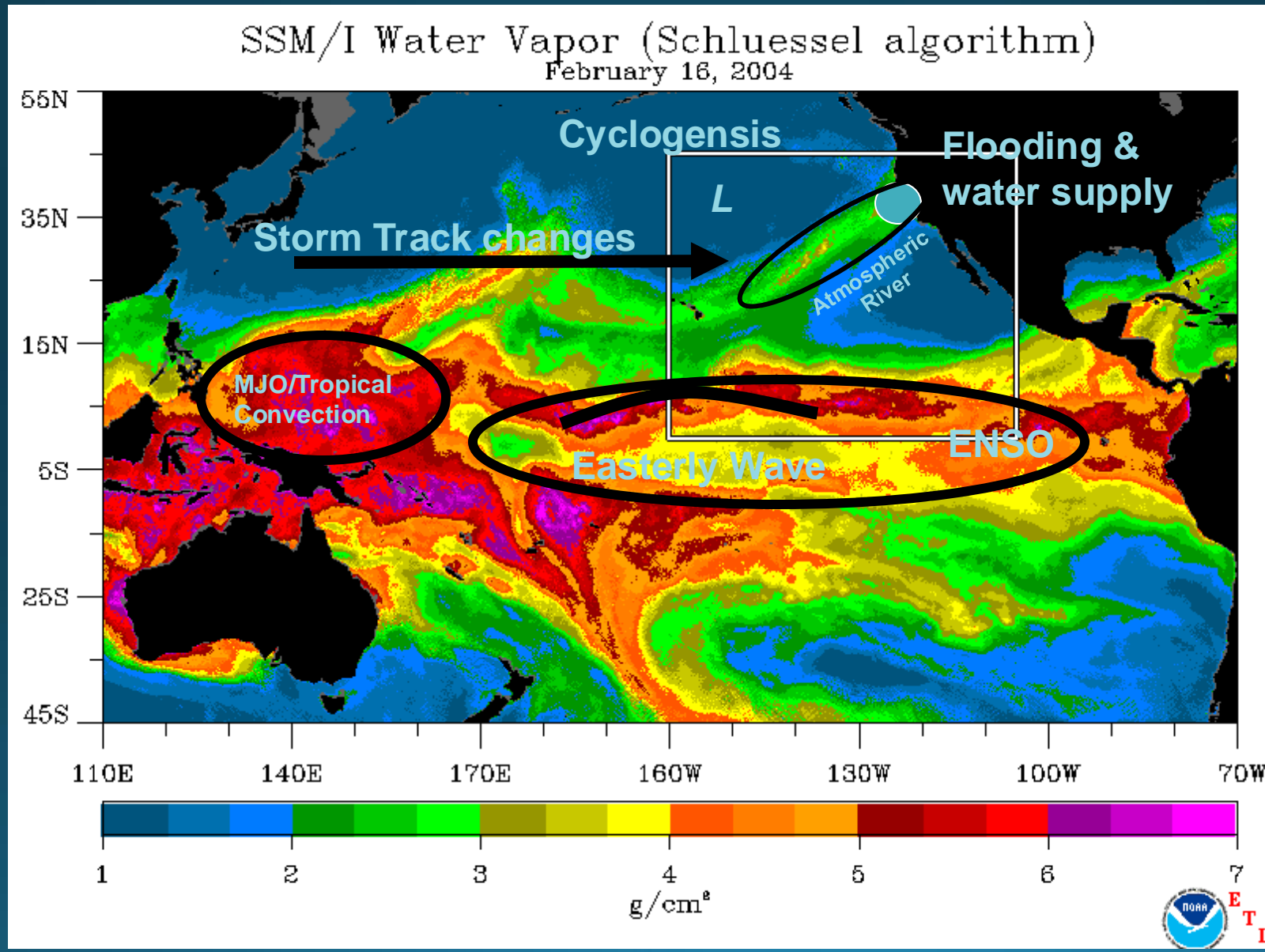


Image: NASA's Global Precipitation Measurement Education Website (Sept. 2018)

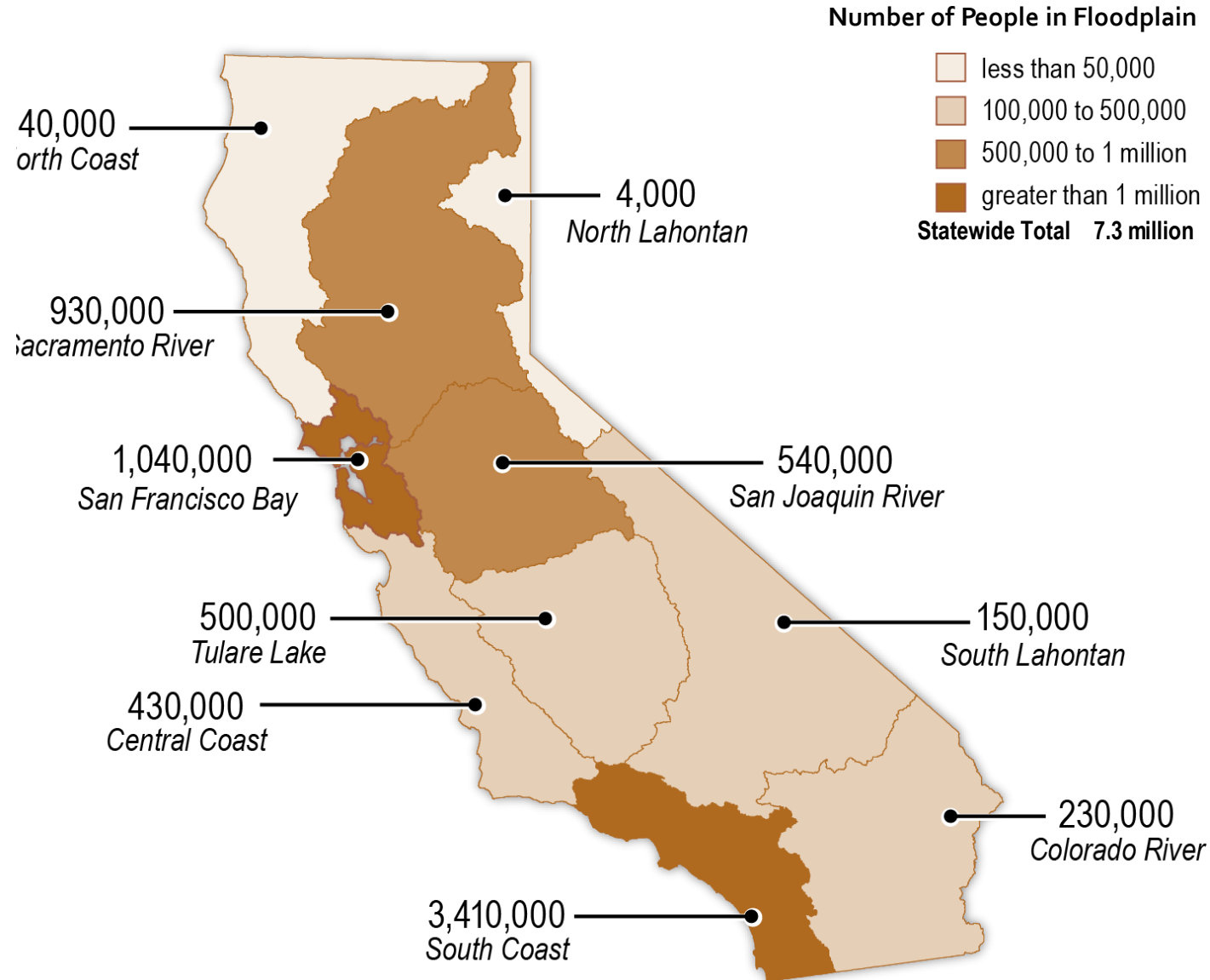
Instead of Hurricanes, California Experiences Atmospheric Rivers



What Is An Atmospheric River



Potential Life Loss Risk



Potential Structural Risk

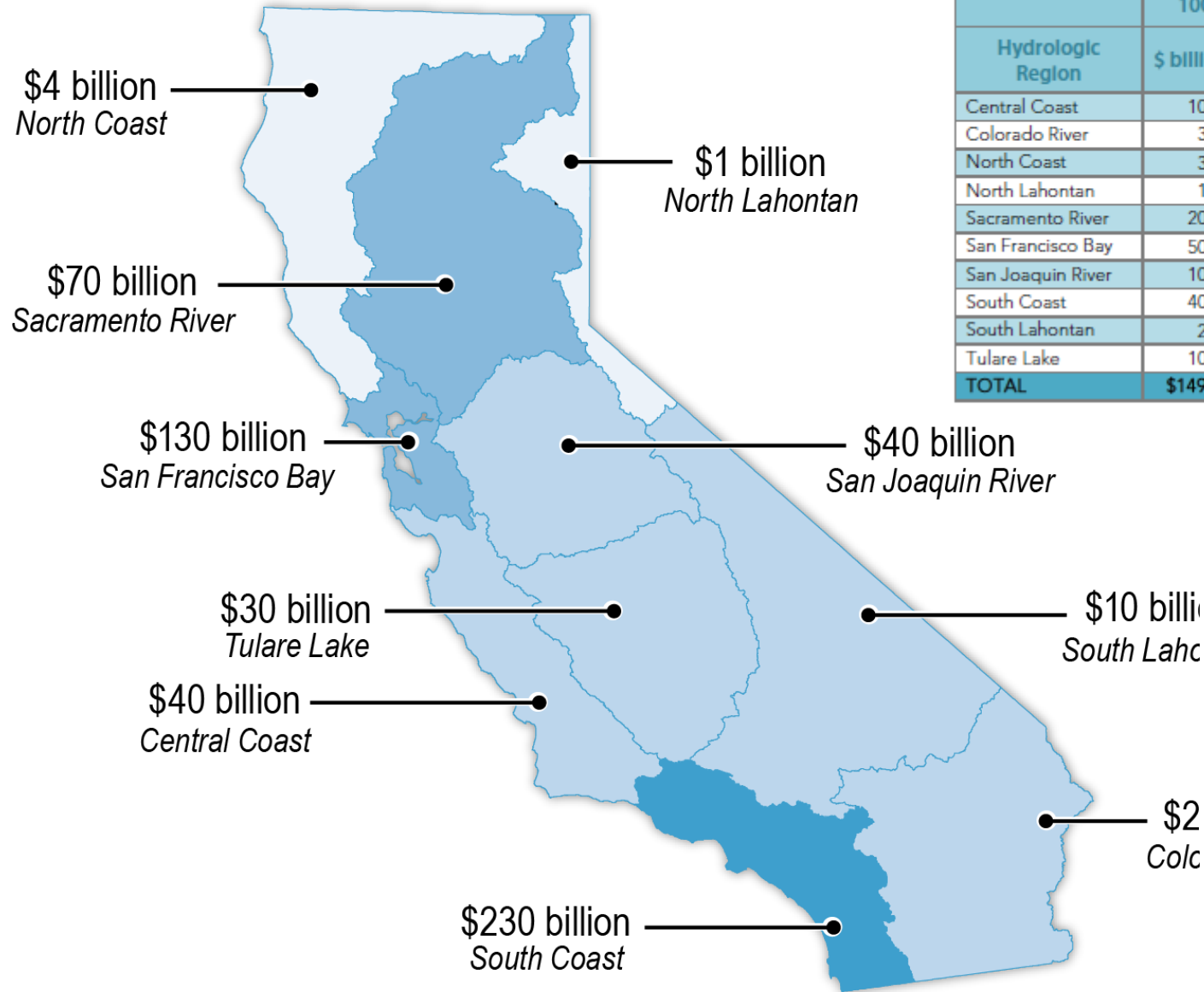
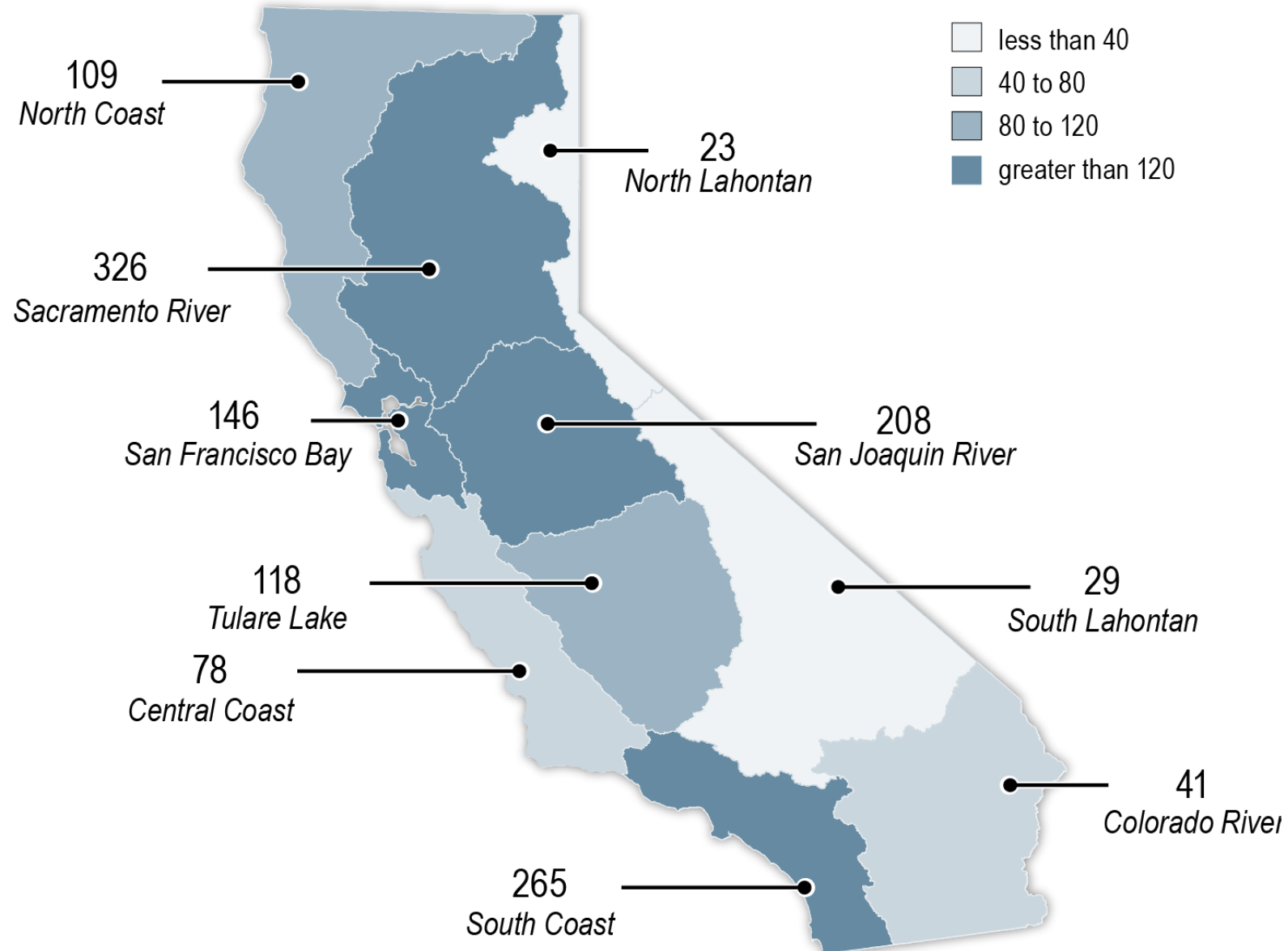


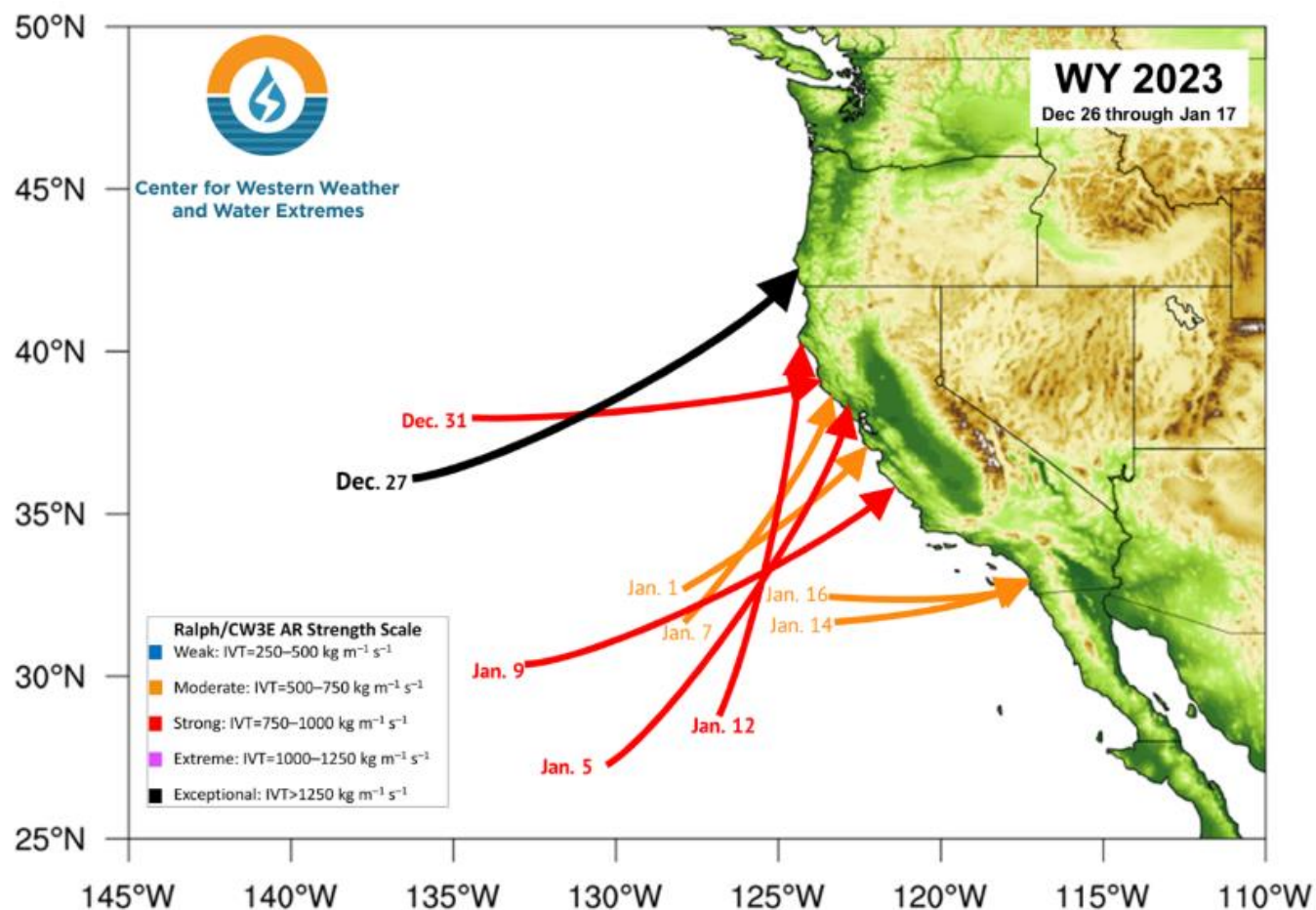
Table 3-2. Value of Structures and their Contents Exposed to Flooding by Hydrologic Region

Hydrologic Region	100-year Floodplains		500-year Floodplains	
	\$ billion	Percentage Exposed*	\$ billion	Percentage Exposed*
Central Coast	10	12	40	48
Colorado River	3	9	20	61
North Coast	3	8	4	10
North Lahontan	1	11	1	11
Sacramento River	20	13	70	45
San Francisco Bay	50	13	130	34
San Joaquin River	10	10	40	40
South Coast	40	5	230	27
South Lahontan	2	5	10	27
Tulare Lake	10	12	30	37
TOTAL	\$149	N/A	\$575	N/A

Agencies w/ Flood Management Responsibilities



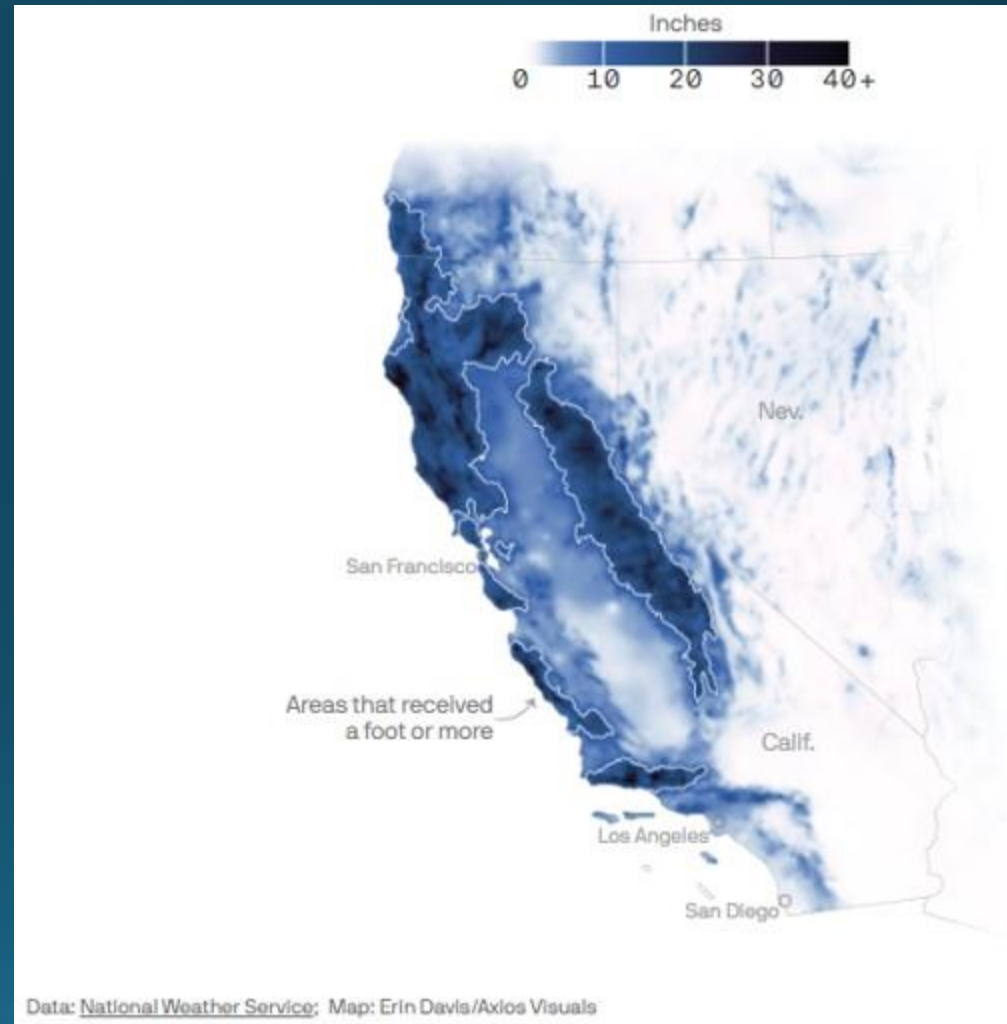
Jan. 2023 AR Landfalls in California



- 9 Atmospheric Rivers in 3 weeks
 - 1 Exceptional
 - 4 Strong
 - 4 Moderate
- Only 3 strong ARs in WY2020 & WY2021 combined - there can be years without large-scale flood events
- Although we can forecast the landfall locations, California is too large to effectively build our way out of flood risk

Flooding in California

- Every county in the State has flooded.
- The most damaging floods generally result from atmospheric rivers.
- These floods are very expensive.
- Most losses are uninsured.



Insurance Boosts Resilience





Isleton Flood Insurance Pilot Project

A parametric, community-driven microinsurance project to protect Isleton residents from flood losses

Isleton's History with Flood Informs its Future



The Delta Geologic Hazard Abatement District



[About](#) [Contact](#)



- State agency formed by local community
- Provide prevention, rapid response, and funding to address hazardous geologic conditions
- Protect communities from landslides, earth movement, erosion, etc.
- The Delta Region GHAD is the first of its kind to protect against the peril of flood

Resilience Insurance: An Innovative Solution

- Small, flexible payout
- Available immediately after a flood event
- Can help with non-structural losses



Thank you!

Deborah Halberstadt

Deborah.Halberstadt@insurance.ca.gov