

Winter 2022/23 Putting the “Flood” in Flood-MAR

April 2023



Back in Fall 2022....

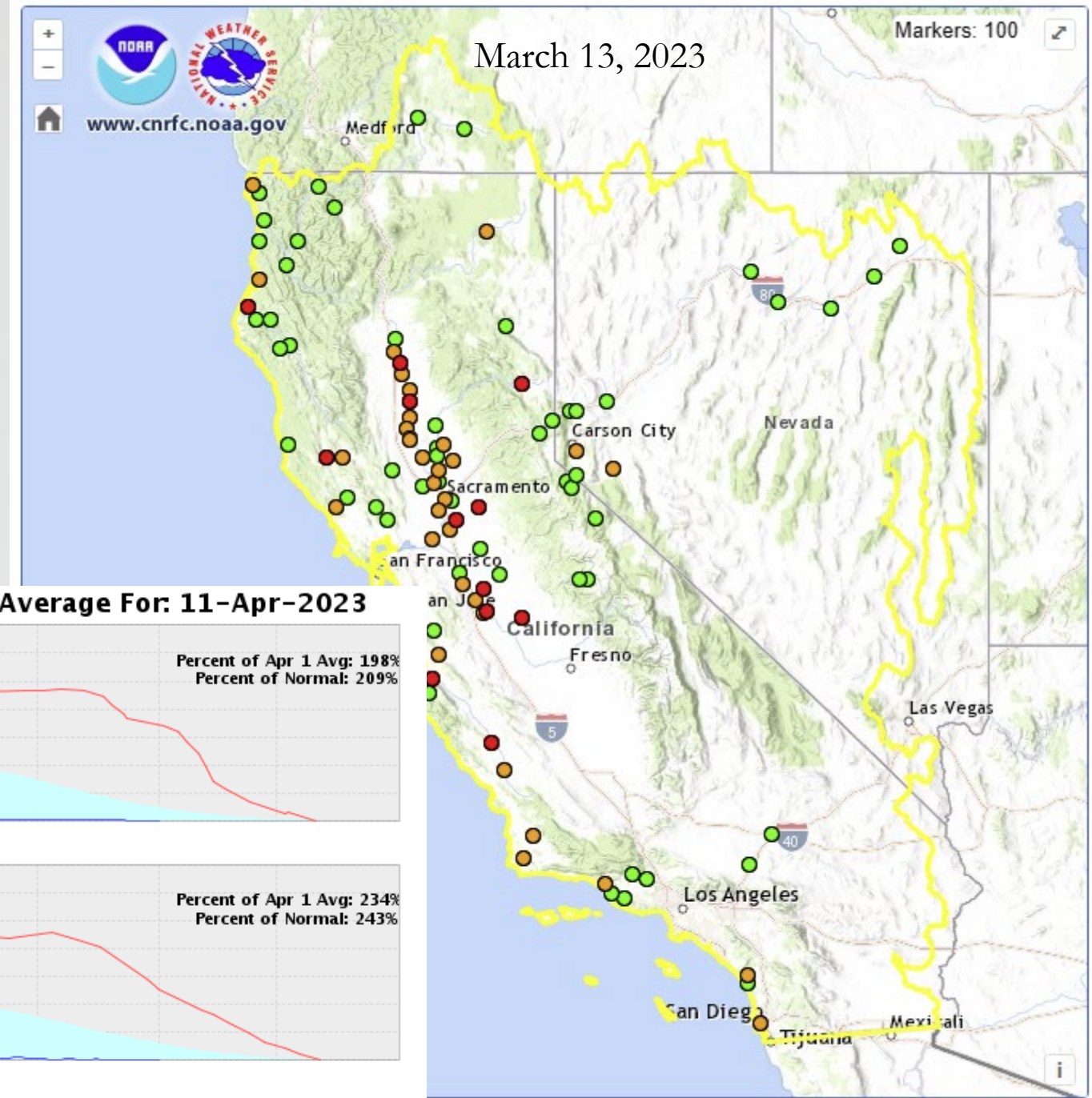


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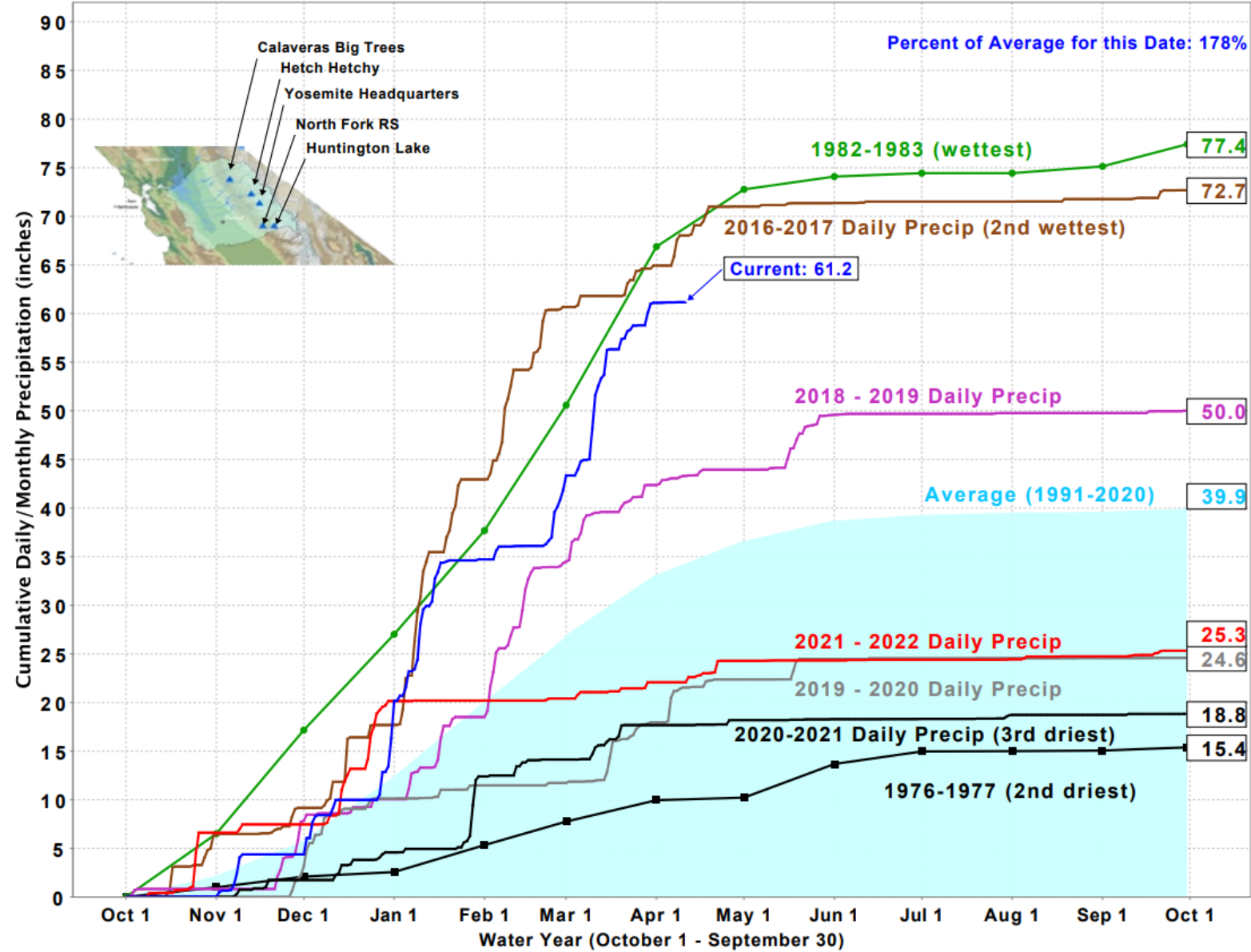
Winter 2022/2023



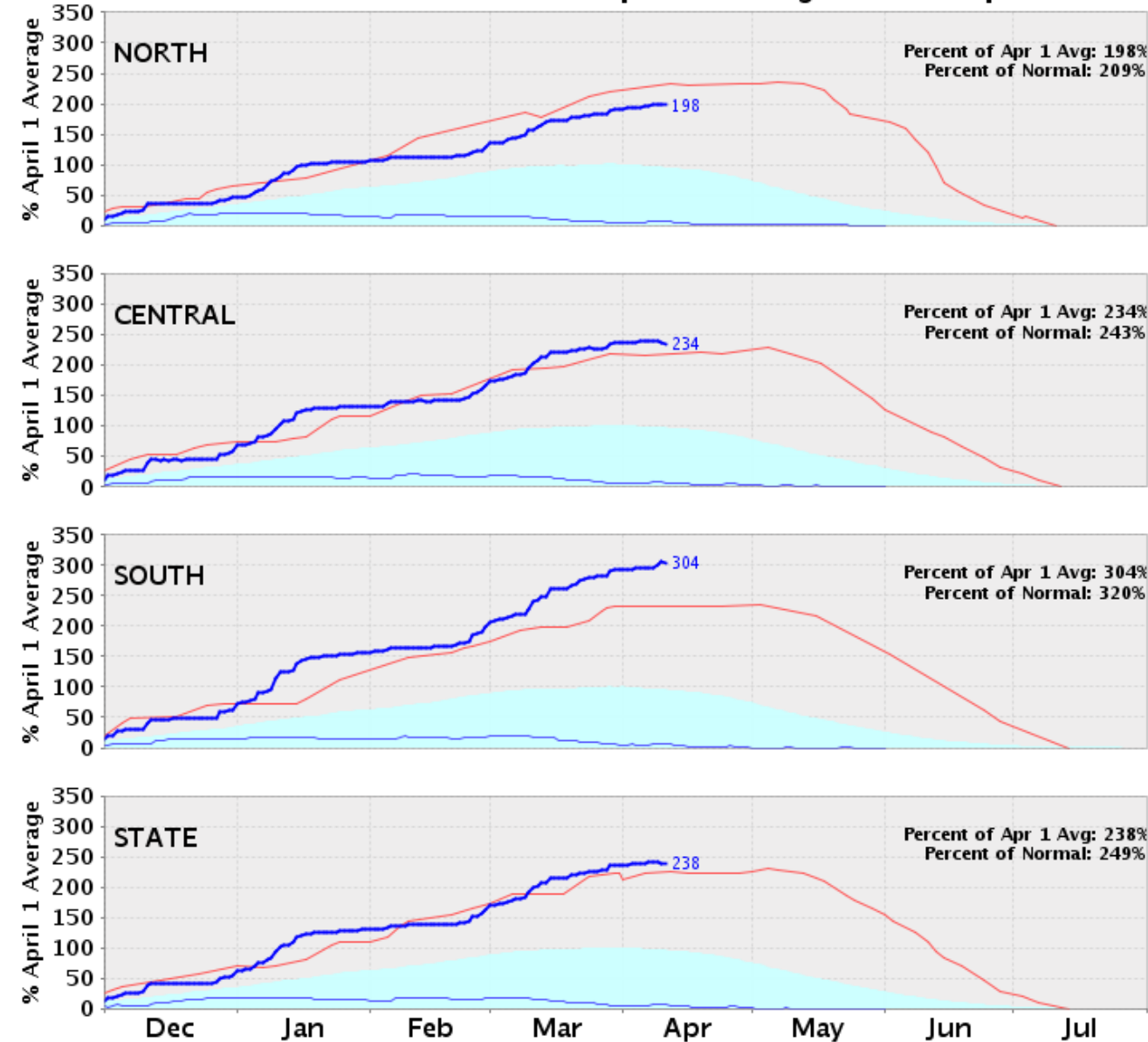
Winter 2022/2023



San Joaquin Precipitation: 5-Station Index, April 11, 2023



CA Snow Water Content - Percent of April 1 Average For: 11-Apr-2023



33 Above Monitor Stage
 12 Above Flood Stage
 0 Above Danger Stage



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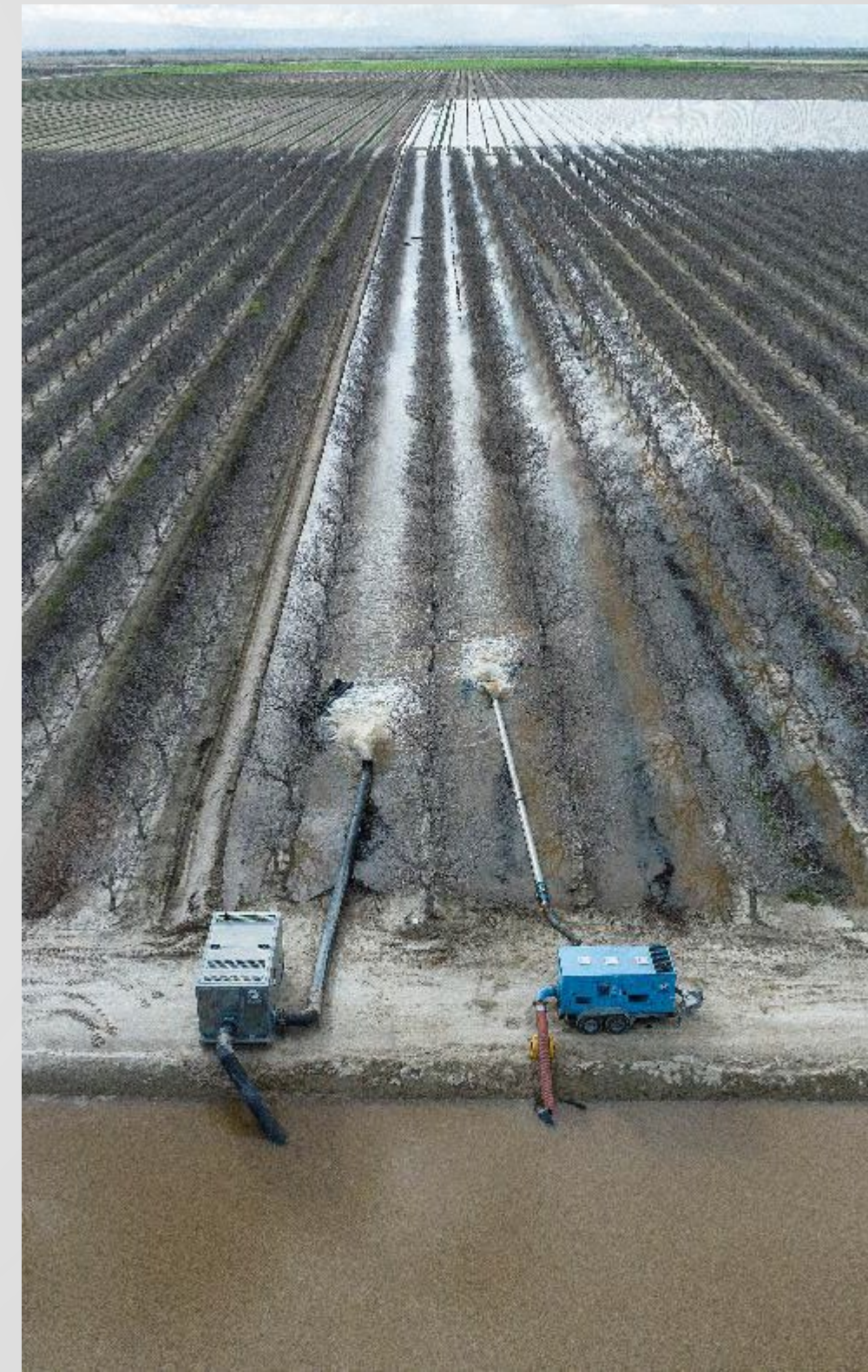
— Average
 — 1982-1983 (max)
 — 2014-2015 (min)
 — 2022-2023 (current)

Statewide Percent of average to date

249.0%

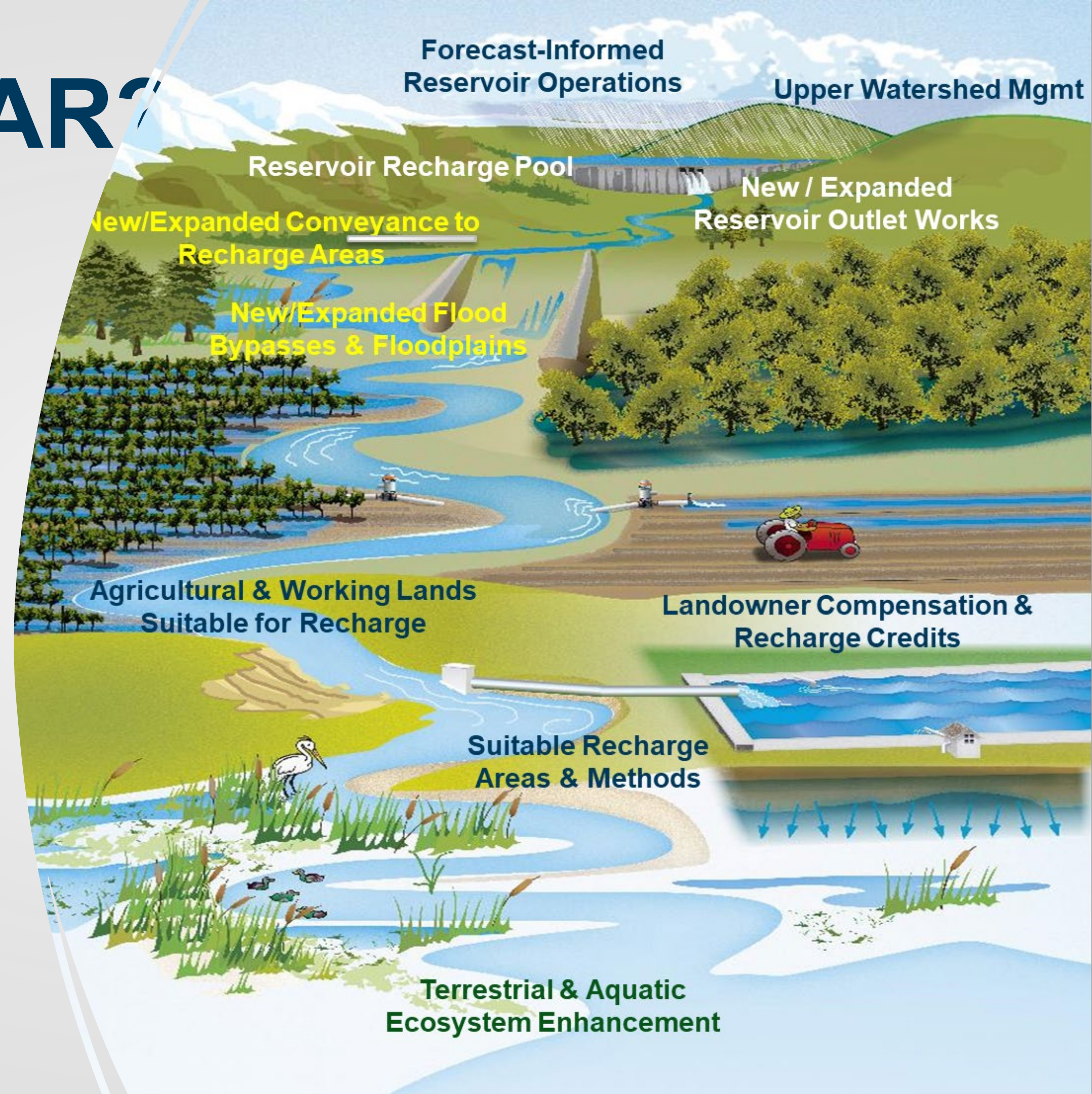
Importance of Coordinating Flood and Groundwater Management

- **Water supply reliability**
 - Groundwater storage and replenishment
- **Flood risk reduction**
 - Diverting water off the channel during high-flow events
 - Increasing flood control space in reservoirs and moving water to specific recharge areas
 - Slowing and reducing runoff
- **Ecosystem enhancement**
 - Floodplain restoration and expansion
 - Multiple benefit recharge basins
- **Working lands preservation**
 - Identifying lands compatible with seasonal inundation
 - Preserve areas with high recharge potential or targeted multiple benefit opportunities

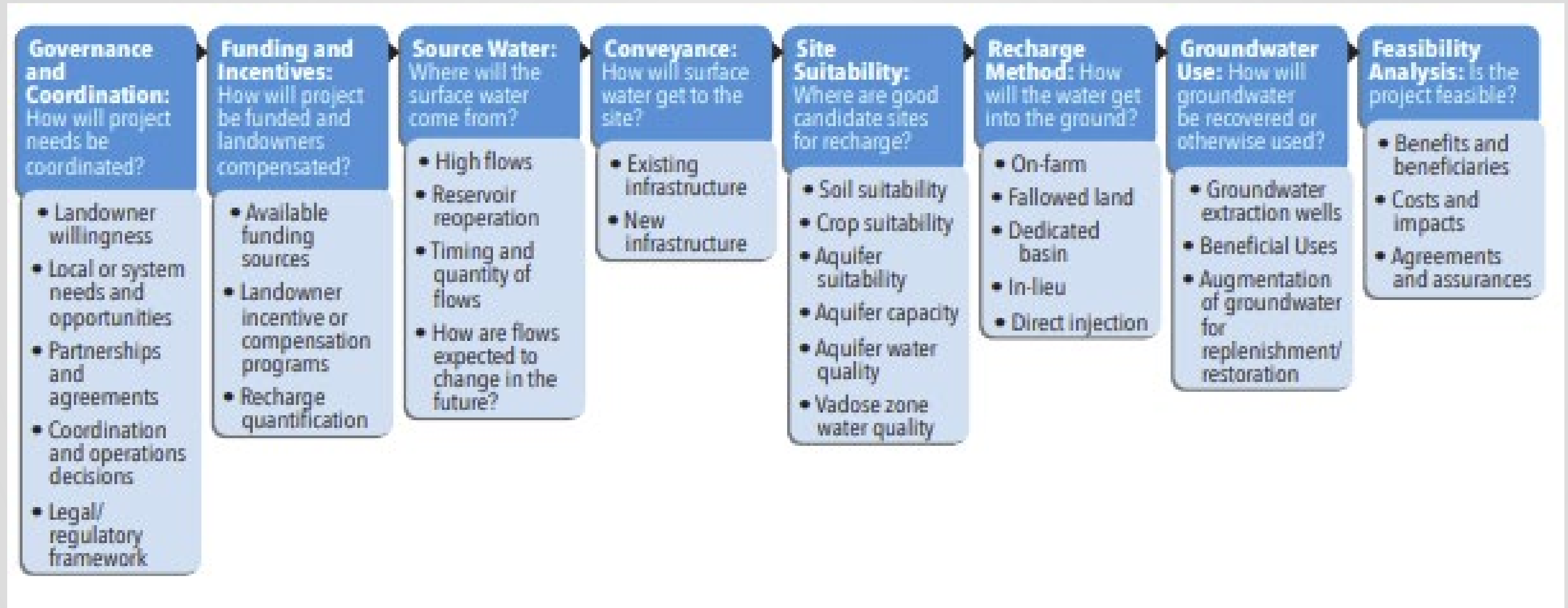


What is Flood-MAR?

“Flood-MAR” is an integrated and voluntary resource management strategy that uses flood water resulting from, or in anticipation of, rainfall or snow melt for managed aquifer recharge (MAR) on agricultural lands, working landscapes and managed natural lands, including but not limited to refuges, floodplains, and flood bypasses.



Considerations and Limitations of Flood-MAR



How Are High Flows Used for Recharge?

- Types of recharge
 - Natural or incidental recharge – precip/runoff, losing streams, floodplains, unlined canals
 - Managed or intentional recharge - diversions
- When do water rights come into play?

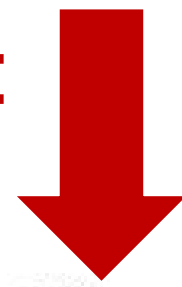


Types of Water Rights Permits

| Permit Type | Suggested Use | Average Processing Time | Subject to CEQA | Right expiration |
|------------------------|--|--------------------------------|------------------------------|-------------------------|
| Standard | Long-term projects with no urgent needs | Several years | Yes | Never |
| Standard - Streamlined | Long-term recharge projects using high flows | Several years – likely shorter | Yes | Never |
| Temporary – 180 days | Short-term or infrequent diversion | Months | Yes* *Exemptions under EO | 180 days after issuance |
| Temporary – 5 years | Short-term or infrequent diversion | Months to several years | Yes | 5 years after issuance |



2023 Flood-MAR Projects:
You are here.



Why are water rights so challenging to obtain?

Your water right was a lot easier to get when you were first in line. Back when people dressed like this...

Pre-1914



Streamlined and Simplified Pathways

- **Right now – use Governor’s Executive Order N-4-23**
 - Ability to divert floods flows to reduce a flood risk as requested by a local agency with flood response responsibilities from March 10 to June 1
 - Provides emergency regulatory relief (CEQA, LSA, temporary water rights)
 - Use existing and temporary facilities
 - Limits recharge areas to existing disturbed lands, while avoiding areas that may pose significant water quality risk



Streamlined and Simplified Pathways

- For future water rights:
 - Temporary permit options
 - For local agencies using high flows for recharge projects
 - Simplified water availability analyses
 - Method 1 – 90/20
 - Method 2 – Threat of flood conditions
 - Diversion window December through March
 - Simplified use and storage accounting connected to GSP
 - Umbrella permits are possible
 - Reduced filing and annual fees
 - CEQA exemption (Drought Executive Order)
 - State technical and regulatory assistance (Governor's Water Supply Strategy)



2023 Runoff and Recharge – Real time scale up of Flood-MAR

- Significant learning opportunity
- Successfully expediting temporary water right permits
- Increased cross coordination between flood and groundwater managers
 - Such as using runoff “now” and forecasted to inform recharge opportunities (storms and snowmelt)
- Targeted outreach to better understand how much recharge may be occurring under:
 - Executive Order N-4-23 Flood Diversions
 - Temporary Recharge Permits
 - Active Recharge Projects & Surface Water Diversions
 - Natural Recharge



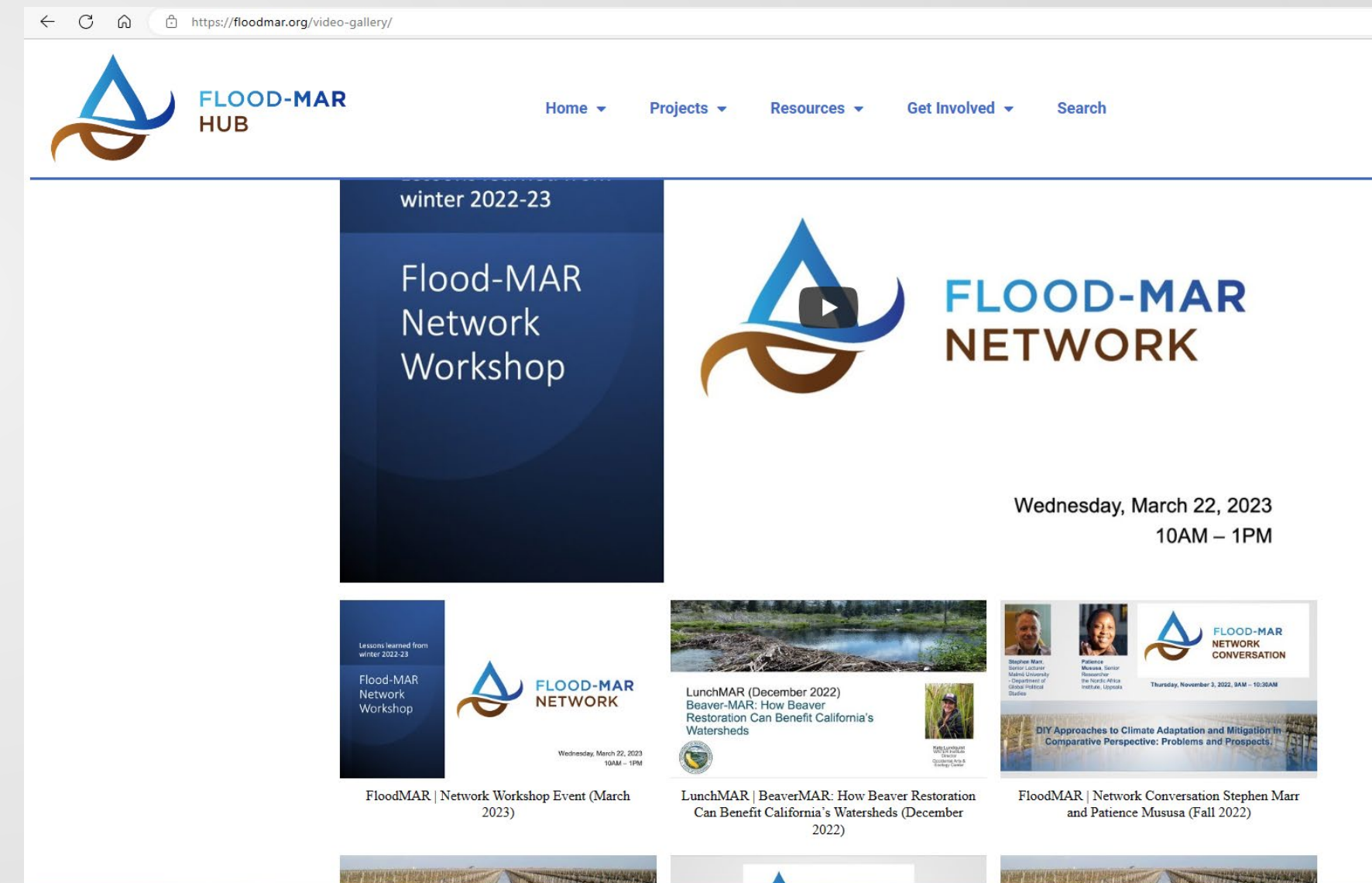
What is the DWR Flood-MAR Program doing?

- DWR Flood-MAR Studies and Project Formulation
 - San Joaquin Watershed Studies
 - Floodplain Restoration and Recharge Opportunities
 - Working with partners on on-farm demonstration sites
- DWR Technical Assistance and Regulatory Assistance
 - Supporting temporary water rights applications for projects that use high flows for recharge
 - Collection of observed flood thresholds and response actions
 - Recommendations for maximizing recharge during flood events
- Supporting the Flood-MAR Network and Flood-MAR Engagement



For More Information

- Jenny Marr, Flood-MAR Program – Jennifer.Marr@water.ca.gov
- [DWR Flood-MAR Program](#)
- [Flood-MAR Hub](#)
- [CA Data Exchange Center](#)
- [CA NV River Forecast Center](#)
- [DWR Statewide Groundwater Management](#)
- [SWRCB Water Rights Division](#)
- [CDFW Water Rights](#)
- [CDFW Lake and Streambed Alteration Program](#)
- [Executive Orders](#)



Questions

