

## Recommendations to Local Agencies for Future Projects

For local agencies interested in pursuing similar projects, a key lesson learned, and recommendation emerged from the 2023 Emergency Effort and FDRE initiative: early planning is crucial.

- Early coordination with vendors can help avoid increased costs during an emergency as well as establish a spot in a “first-come, first-serve” market.
- Protective screen design can take several weeks and is very site-specific.
- Local agencies should be prepared to comply with CEQA requirements ahead of the anticipated project start date to be ready to work with DWR when funding becomes available.
- Similarly, where applications for permits can be anticipated, early coordination with respective State agencies (California State Water Resources Control Board, California Department of Fish and Wildlife) can help with initiation, preparation, and can expedite assistance.
- Express interest and need for future assistance. Future FDRE funding will likely be prioritized by expressed interest and shovel-ready projects.



Groundwater recharge into a newly constructed recharge basin on the previously clear lands under the 2023 Emergency Effort at Consolidated Irrigation District.

## Resources and More Information

Additional resources and information can be obtained from the following sources:

- [Groundwater Recharge and Related Activities](#)
- [Flood Emergencies and DWR Response in 2023](#)
- [DWR Sustainable Groundwater Management Office](#)

Local agencies involved in the 2023 Emergency Effort and 2024 FDRE Initiative include:

Arvin-Edison WD	<a href="http://www.aewsd.org">www.aewsd.org</a>
Colusa County WD	<a href="http://www.colusacwd.org">www.colusacwd.org</a>
Consolidated WD	<a href="http://www.cidwater.com">www.cidwater.com</a>
Dunnigan WD	<a href="http://www.rd108.org/dunnigan-water-district">www.rd108.org/dunnigan-water-district</a>
Fresno ID	<a href="http://www.fresnoirrigation.com">www.fresnoirrigation.com</a>
James ID	<a href="http://www.jamesid.org">www.jamesid.org</a>
Kaweah Delta WCD	<a href="http://www.kdwd.com">www.kdwd.com</a>
Kings County WD	<a href="http://www.kingscwg.org">www.kingscwg.org</a>
Merced ID	<a href="http://www.mercedid.org">www.mercedid.org</a>
McMullin Area GSA	<a href="http://www.mcmullinarea.org">www.mcmullinarea.org</a>
North San Joaquin WCD	<a href="http://www.nsjwcd.com">www.nsjwcd.com</a>
Shafter Wasco ID	<a href="http://www.swid.org">www.swid.org</a>
Tulare ID	<a href="http://www.tulareid.org">www.tulareid.org</a>
United WCD	<a href="http://www.unitedwater.org">www.unitedwater.org</a>
City of Visalia	<a href="http://www.visalia.city">www.visalia.city</a>
Westlands WD	<a href="http://www.ca.gov">www.ca.gov</a>

Interested in participating in the FDRE Initiative in the future? Fill out the interest form.



# FLOOD DIVERSION AND RECHARGE ENHANCEMENT INITIATIVE

## Background

In early 2023, California experienced historic precipitation that caused flooding across the State.

In response to the Tulare Lake flood emergency, the California Department of Water Resources (DWR) secured limited, one-time funding and launched the Temporary Flood Diversion Equipment and Recharge Enhancement emergency effort in April 2023 (2023 Emergency Effort). This effort established emergency contracts with local agencies to assist local flood diversion efforts for flood risk reduction and recharge benefits by providing funds for temporary pump rentals and clearing agricultural lands (“Rip & Chip”) to receive future flood flows.



Flood diversions into a Fresno Metropolitan Flood Control District Basin for groundwater recharge using a temporary pump rented under the 2023 Emergency Effort.

Building on the success of the 2023 Emergency Effort, DWR secured additional funding and launched the Flood Diversion and Recharge Enhancement (FDRE) Initiative in December 2023. With increased funding DWR has been able to support more local agencies, expand the types of actions covered, and provide assistance over multiple winter seasons. FDRE emergency contracts were executed in June 2024 and will provide flood diversion and recharge benefits at least through June 2026. Project activities include temporary pump rentals and purchases, protective screen design and purchase, land clearing, temporary flood basin development, and temporary conveyance improvements.



Land cleared for a temporary groundwater recharge basin at Consolidated Irrigation District during the 2023 Emergency Effort.

## Goal of the Flood Diversion and Recharge Enhancement Initiative

Both the 2023 Emergency Effort and the FDRE Initiative aim to reduce flood risk and enhance groundwater recharge by supporting local activities that increase the volume of flood flows diverted from local waterways to recharge areas and expand local capacity to divert and receive future flood flows.

By doing this, DWR and local agencies are taking proactive steps to mitigate impacts of future storm events and drought by replenishing local aquifers through groundwater recharge.



Flood water diversions at James Irrigation District using a temporary pump rented under the 2023 Emergency Effort.

## Initiative Successes

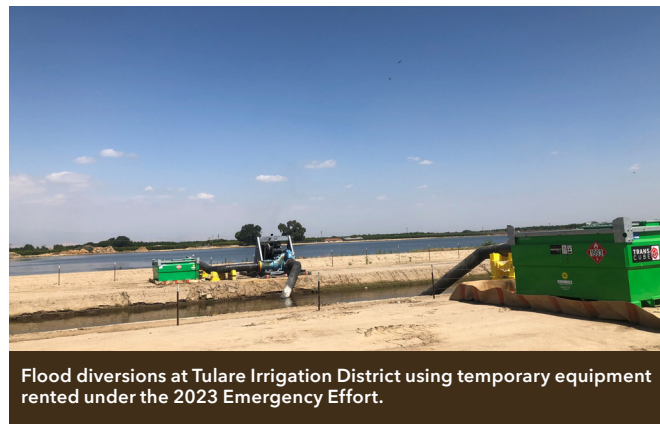
Seven local agencies executed contracts with DWR in the 2023 Emergency Effort, and completed activities include deployment of 30 rented temporary pumps and 1 siphon, resulting in over 11,000 acre-feet of water diverted for recharge between April and early July 2023.

A total of 291 acres of agricultural land were cleared in 2023, and with an additional 80 acres of land clearing to be completed in August 2024, these lands will be available to receive future flood waters and expand local flood response capacity.

Today, fourteen local agencies have executed contracts under the 2024 FDRE Initiative, and several projects are already underway. More details are on the next page.



Flood diversions and on-farm groundwater recharge at Terranova Ranch using temporary pumps during the 2023 Emergency Effort.



Flood diversions at Tulare Irrigation District using temporary equipment rented under the 2023 Emergency Effort.

## What's Next?

Participating local agencies in the FDRE Initiative are currently implementing projects to prepare for flood diversion and recharge in upcoming winters. All available funding for this initiative has been exhausted; however, DWR is gathering interest and need from local agencies for this assistance for future funding opportunities. Local agencies are encouraged to inform their local elected officials of the importance of these projects to help ensure continued support.

Proactive projects and collaborative efforts like these between the state and local agencies, help to (1) reduce flood risk to local communities by increasing local response capacity; (2) prepare for hotter, drier years and increasing water supply uncertainty, and (3) support sustainable groundwater management in accordance with the Sustainable Groundwater Management Act of 2014.



"This new emergency funding from the DWR is being used to fund the operation of a temporary pump that's installed at a Fresno Metropolitan Flood Control District Basin"

"This allows us to do additional groundwater recharge that would otherwise not be possible"

- Adam Claes, Fresno Irrigation District Manager

"This is an old 120-acre site we bought, had pistachios over here, vines right there, almonds to the west, and it was all ripped out through the rip and chip program, put some berms around it, put water in the underground, and we did it in less than a year"

"We have been adding ponds over the years in a slow build it as you can afford it process. But then... State comes along and makes grant money available to help pay for some of this cost allowing us to expedite recharge to benefit over 5,000 growers and ten disadvantaged cities and unincorporated communities that depend on groundwater."

- Phil Desatoff, Consolidated Irrigation District Manager

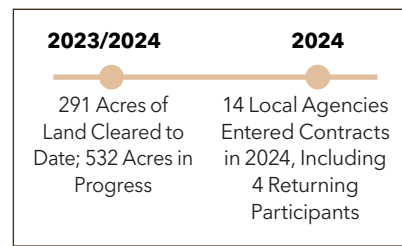
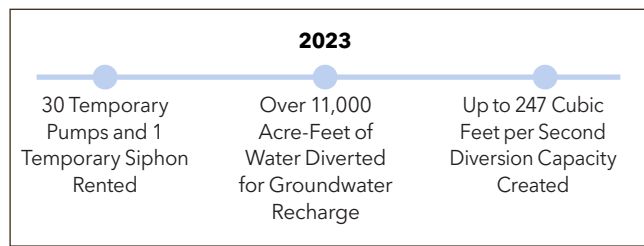
"Working with the DWR, James Irrigation District has been utilizing the pumping program to rent a pump to be able to put some water into a basin that unless we had access to this pump we wouldn't be able to do"

"We're able to put more water into the underground, recharge the aquifer, and prevent flooding"

- Manny Amorelli, James Irrigation District Manager

"At Terranova Ranch, the help from DWR on multiple pump rentals made it possible for us to not only help prevent flooding downstream, preventing rural communities from damage, but also enabled us to recharge just under 19,000-acre feet of water during the 2023 flooding. Thank you DWR"

- Don Cameron, Vice President and General Manager of Terranova Ranch, Inc.



### 2023 EMERGENCY EFFORT PROJECTS

Local Agency Or District Name	Project Type	Total Units Completed	Map Legend
Consolidated ID	✓	120 acres, 80 acres in progress	1
Fresno ID	✓	1 pump, 1 siphon	2
James ID	✓	1 pump	3
Kaweah Delta WCD	✓	3 pumps, 91 acres	4
Kings County WD	✓	5 pumps	5
McMullin Area GSA	✓	16 pumps, 80 acres	6
Tulare ID	✓	4 pumps	7

### FDRE INITIATIVE PROJECTS, 2024 TO 2026

Local Agency Or District Name	Project Type	Map Legend
Arvin-Edison WSD	✓	8
Colusa County WD	✓	9
Consolidated ID	✓	1
Dunnigan WD	✓	10
Fresno ID	✓	2
Friant Water Authority	✓	11
Kaweah Delta WCD	✓	4
Merced ID	✓	12
North San Joaquin WCD	✓	13
Shafter-Wasco ID	✓	14
Tulare ID	✓	7
United WCD	✓	15
City of Visalia	✓	16
Westlands WD	✓	17

#### Tables key

**2023 Emergency Effort** = Temporary Flood Diversion Equipment and Recharge emergency effort

**FDRE Initiative** = Flood Diversion and Recharge Enhancement Initiative

**GSA** = Groundwater Sustainability Agency

**ID** = Irrigation District

**WCD** = Water Conservation District

**WD** = Water District

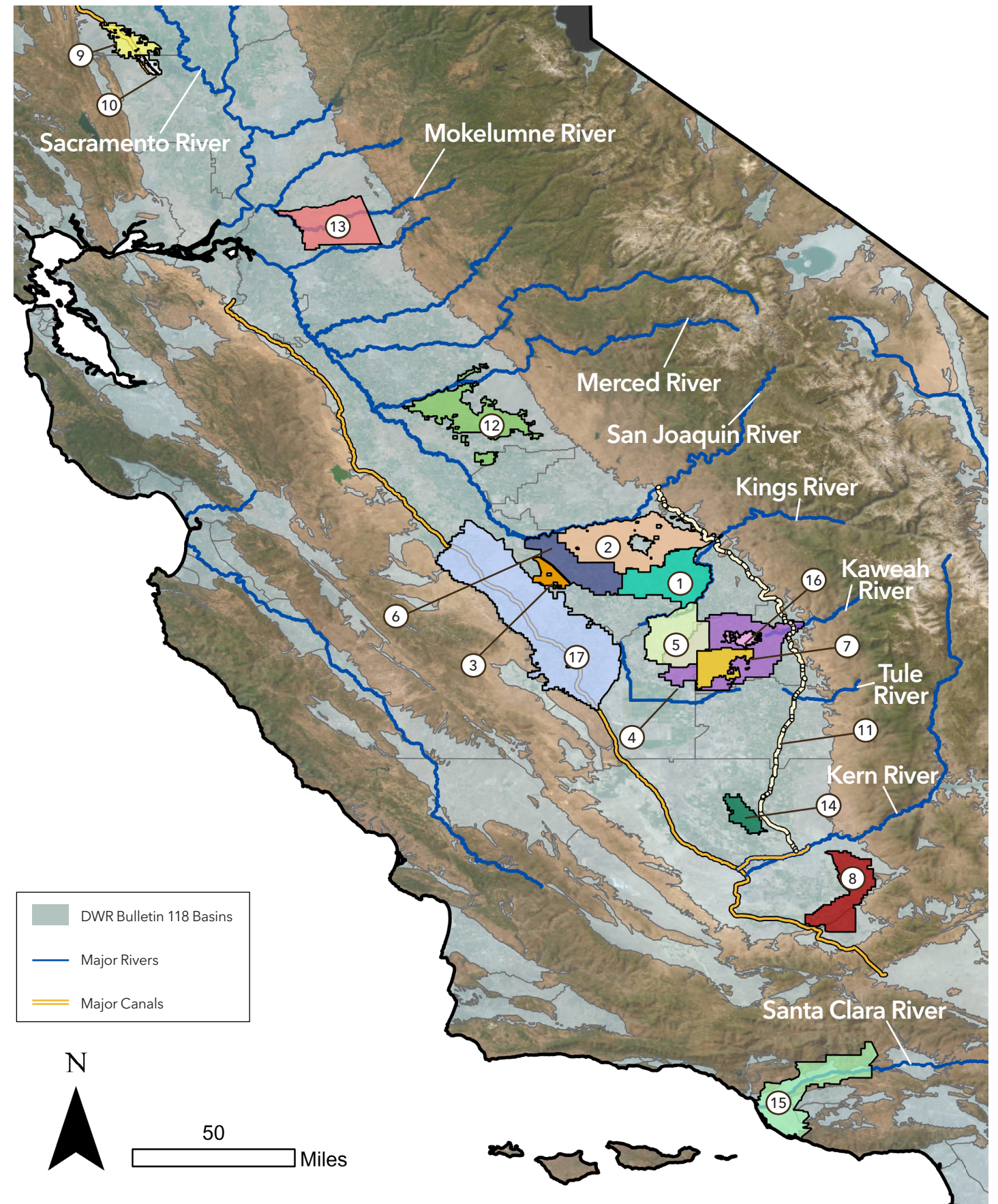
**WSD** = Water Storage District

Temporary Flood Diversion Equipment (Pumps, Protective Screens, etc.)

Land Clearing

Temporary Flood Basins

Temporary Conveyance Enhancements



For additional information and inquiries please contact: [recharge@water.ca.gov](mailto:recharge@water.ca.gov)