



Water Education Foundation

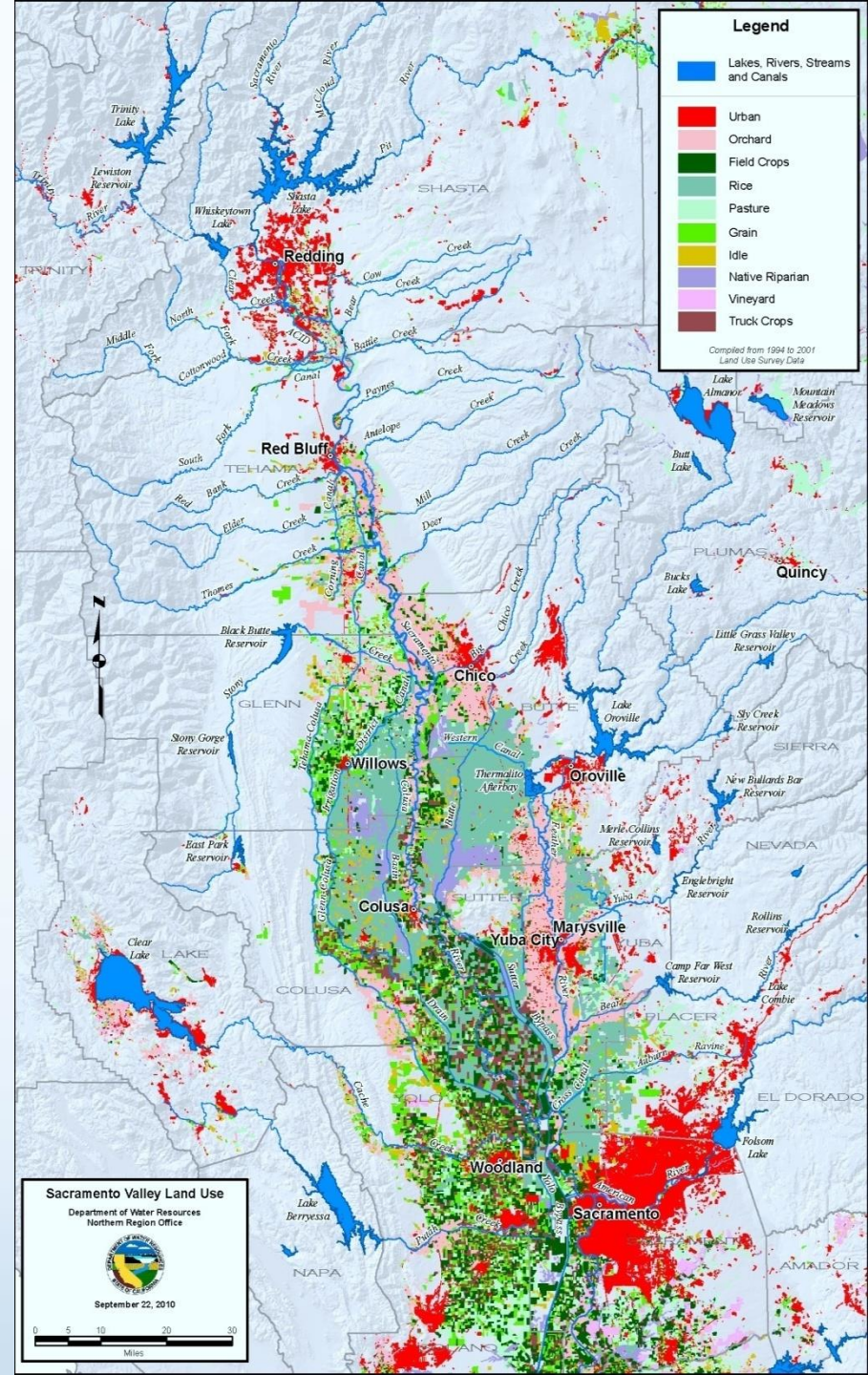
October 21, 2015

Sacramento Valley – A truly unique and exceptional place

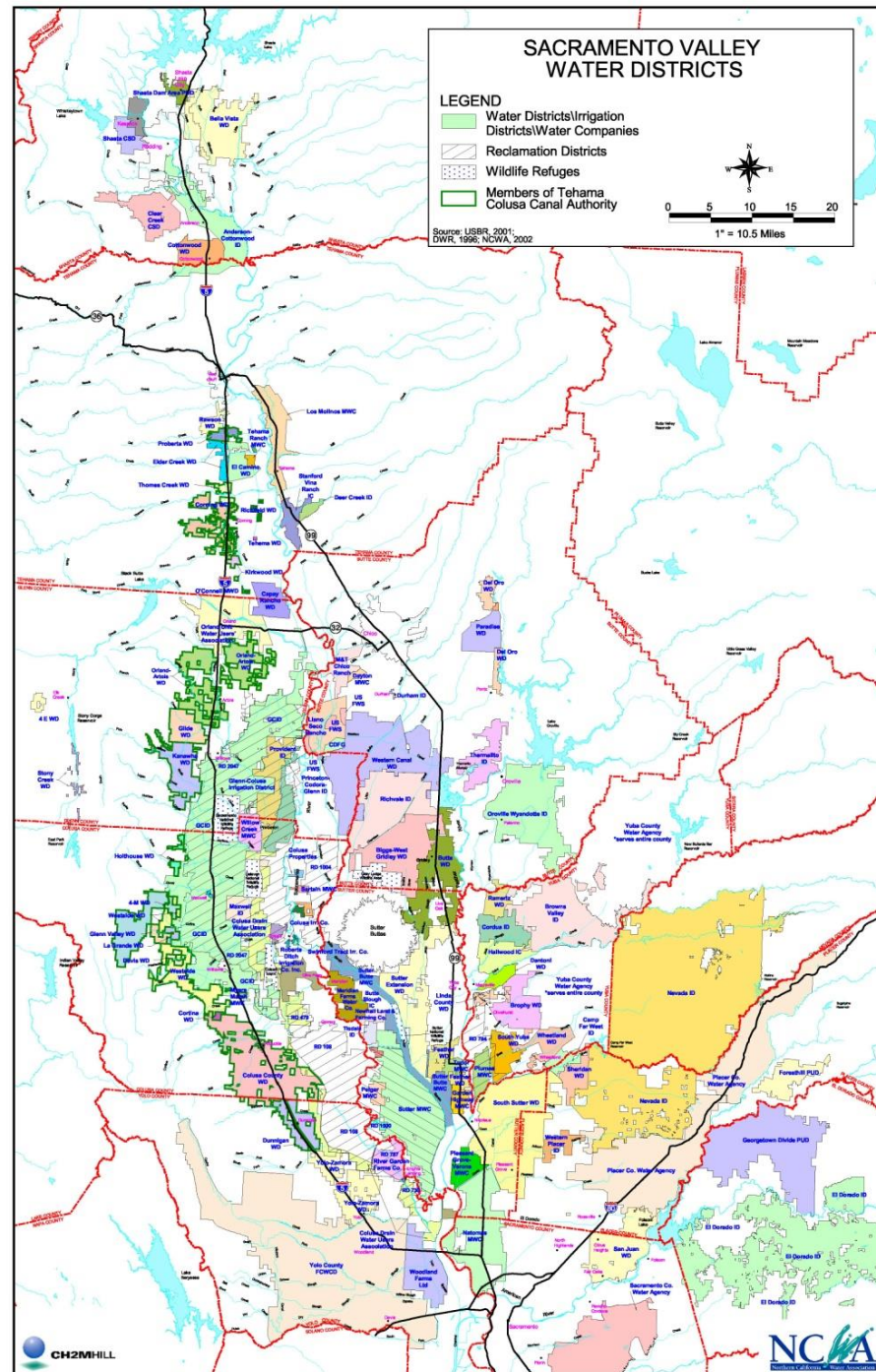


Sacramento Valley Hydrologic Region – Land Uses

- **Urban**
- **Agriculture**
 - **By crop type**
- **Wetlands**



Water Resources Management Entities



Sacramento Valley Sustainability Initiative

Provide a sustainable water supply for the unique mosaic of farm lands, wildlife refuges, managed wetlands and high quality rivers and streams that support waterfowl habitat and spawning grounds for numerous fish species and the cities and rural communities that make up this special region.



Sacramento Valley

Several million acres of **family farms** that provide the economic engine for the region through the production of rice, trees, and various row crops that serve as a working landscape and pastoral setting and provide valuable habitat for waterfowl along the Pacific Flyway.



Sacramento Valley



Habitat for 50% of the *threatened and endangered* species in California, including the winter-run and spring-run salmon, steelhead and many other fish species.

Sacramento Valley

Six National Wildlife Refuges, more than fifty state **Wildlife Areas** and other privately managed wetlands that support the annual migration of waterfowl, geese and shore birds in the Pacific Flyway. These seasonal and permanent wetlands provide 65% of the North American Waterfowl Management Plan objectives.



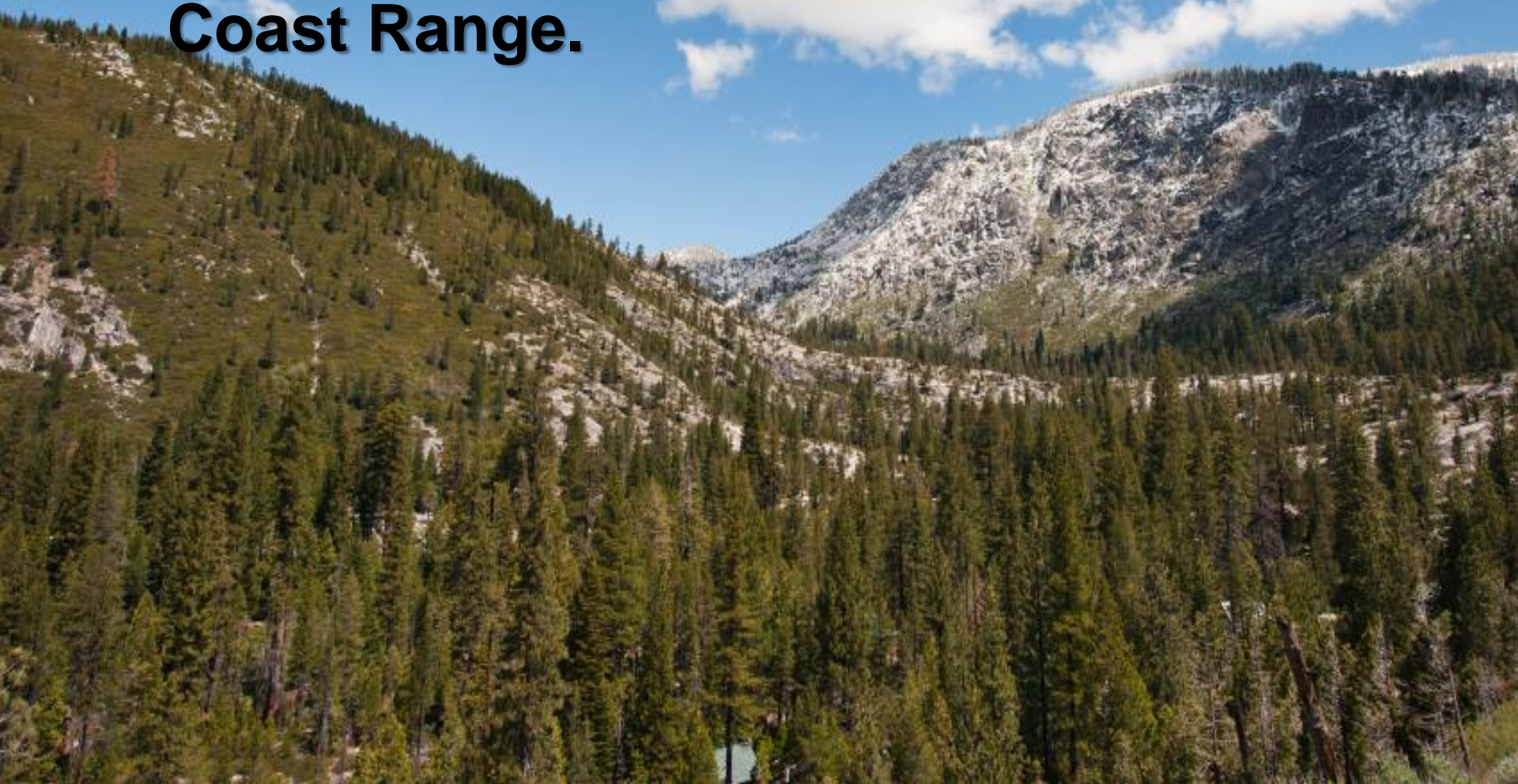
Sacramento Valley

The **small towns and rural communities** that form the backbone of the region, as well as the **State Capital** that serves as the center of government for the State of California.



Sacramento Valley

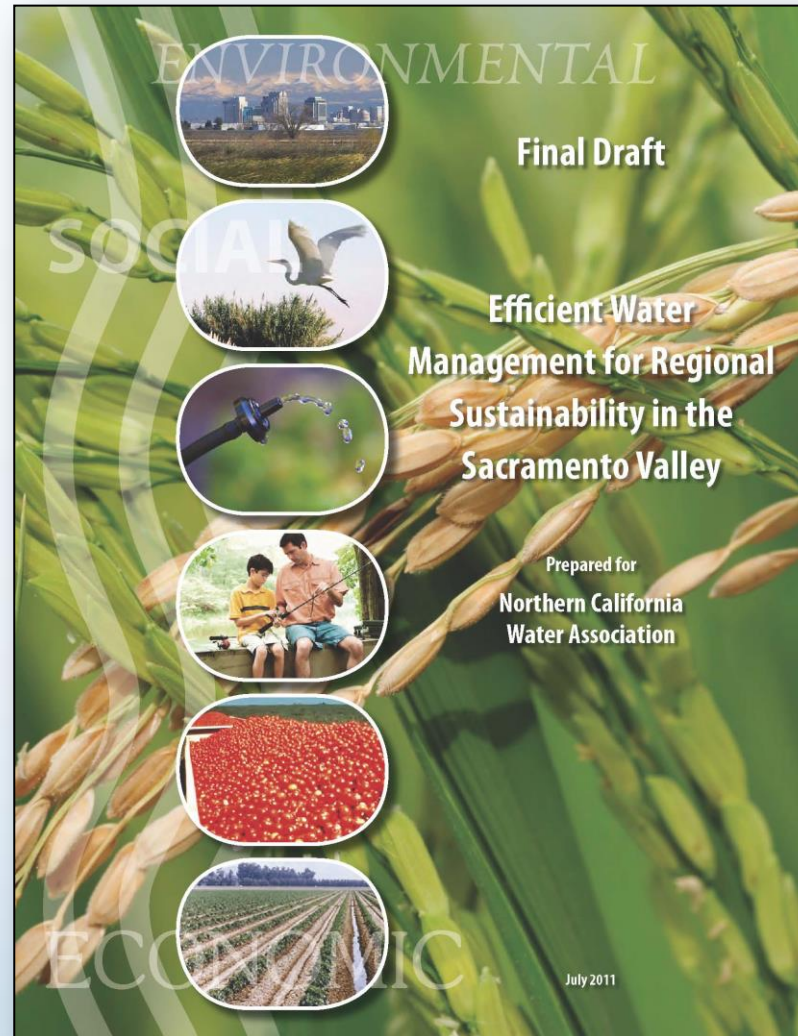
The forests, meadows and canyons in the **watersheds** of the Sierra Nevada and Coast Range.



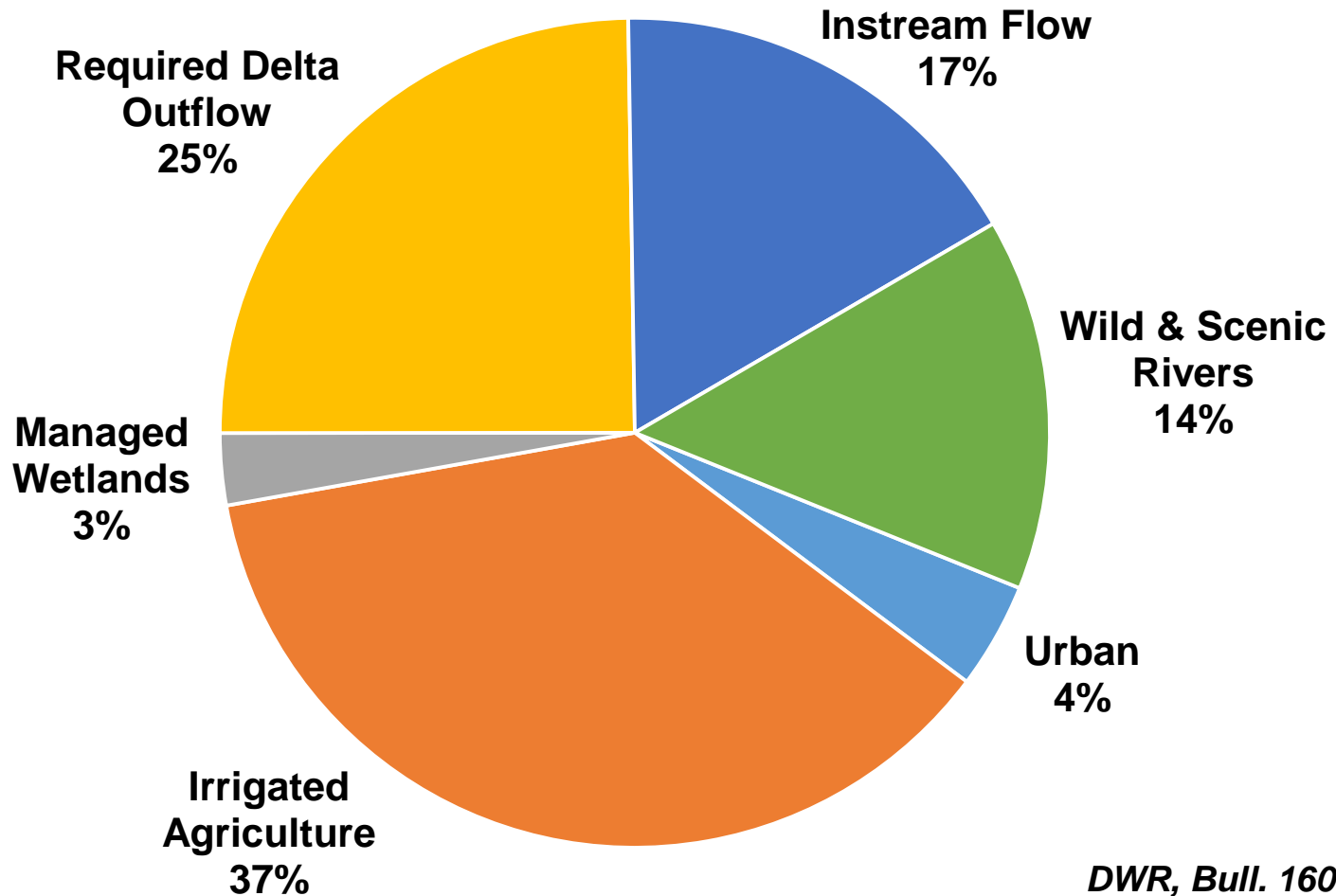
Cornerstone for Central Valley/ State Water Projects



The Context for Water Management in the Sacramento Valley

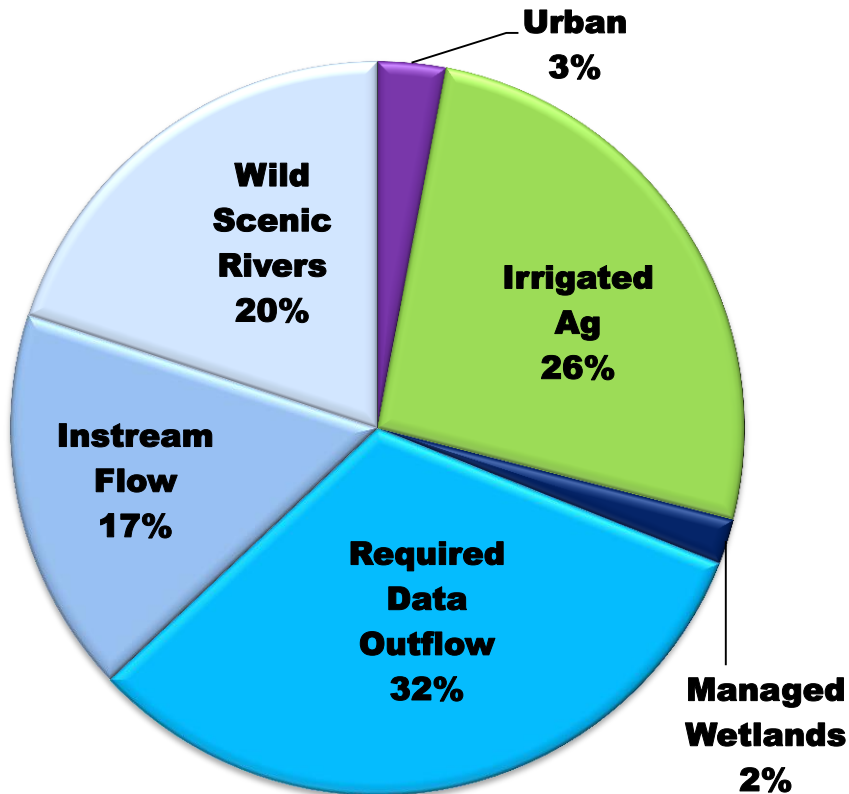


Sacramento River Hydrologic Region Water Use

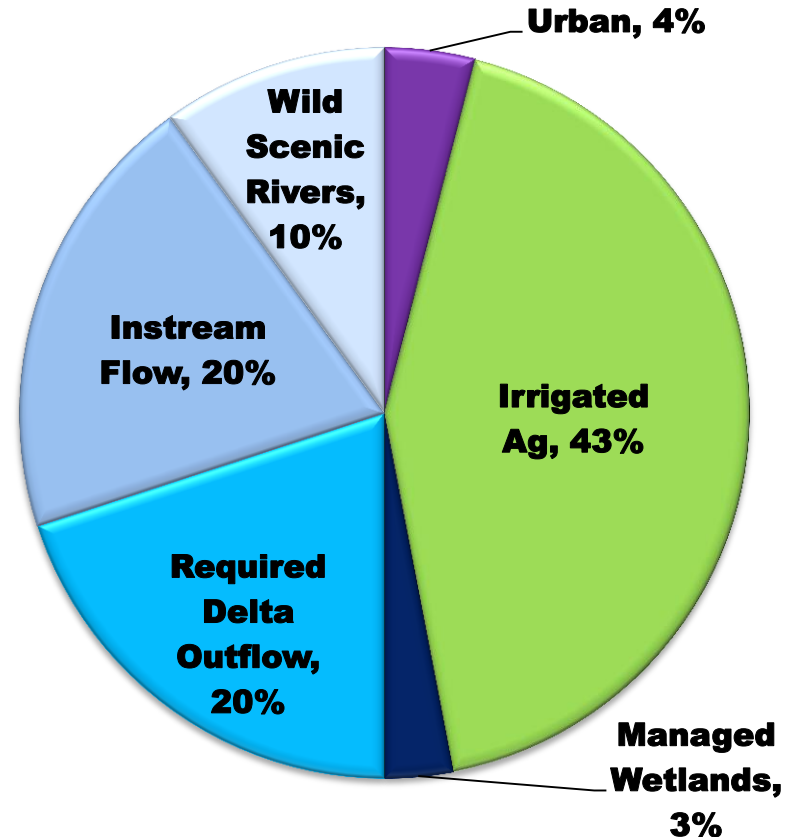


Sacramento Valley Applied Water Use in Wet and Dry Water Years

Water Year 2006 (Wet)



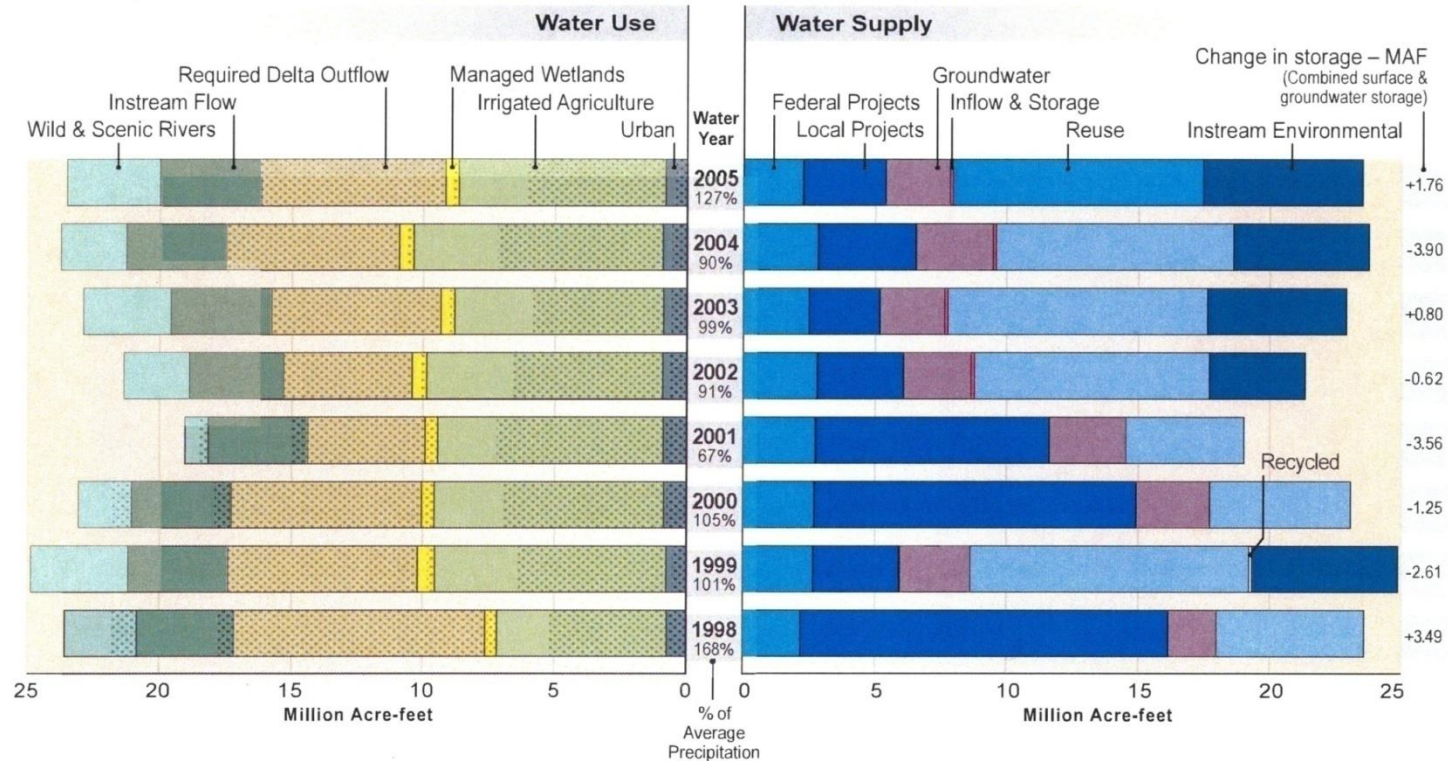
Water Year 2007 (Dry)



The charts above display applied water use in the Sacramento River Hydrologic Region for wet (2006) and dry (2007) water years. As you would expect, the increase in the percentage of applied water use for urban and irrigated agriculture is attributed to the ability of groundwater and storage to meet these applied water needs. In 2007, net groundwater extraction increased by 483,000 acre-feet and federal project releases increased by 199,000 acre-feet. Instream water supply decreased by 6,713,000 acre-feet from 2006 to 2007 (12,901,000 acre-feet in 2006 and 6,188,000 in 2007).

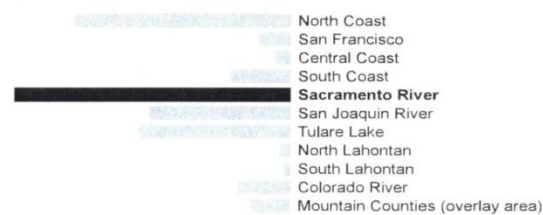
A Region in Balance?

Figure SR-2 Sacramento River Hydrologic Region water balance summary, 1998-2005



Stippling in bars indicates depleted (irrecoverable) water use (water consumed through evapotranspiration, flowing to salt sinks like saline aquifers, or otherwise not available as a source of supply)

Comparison of 2005 total water use

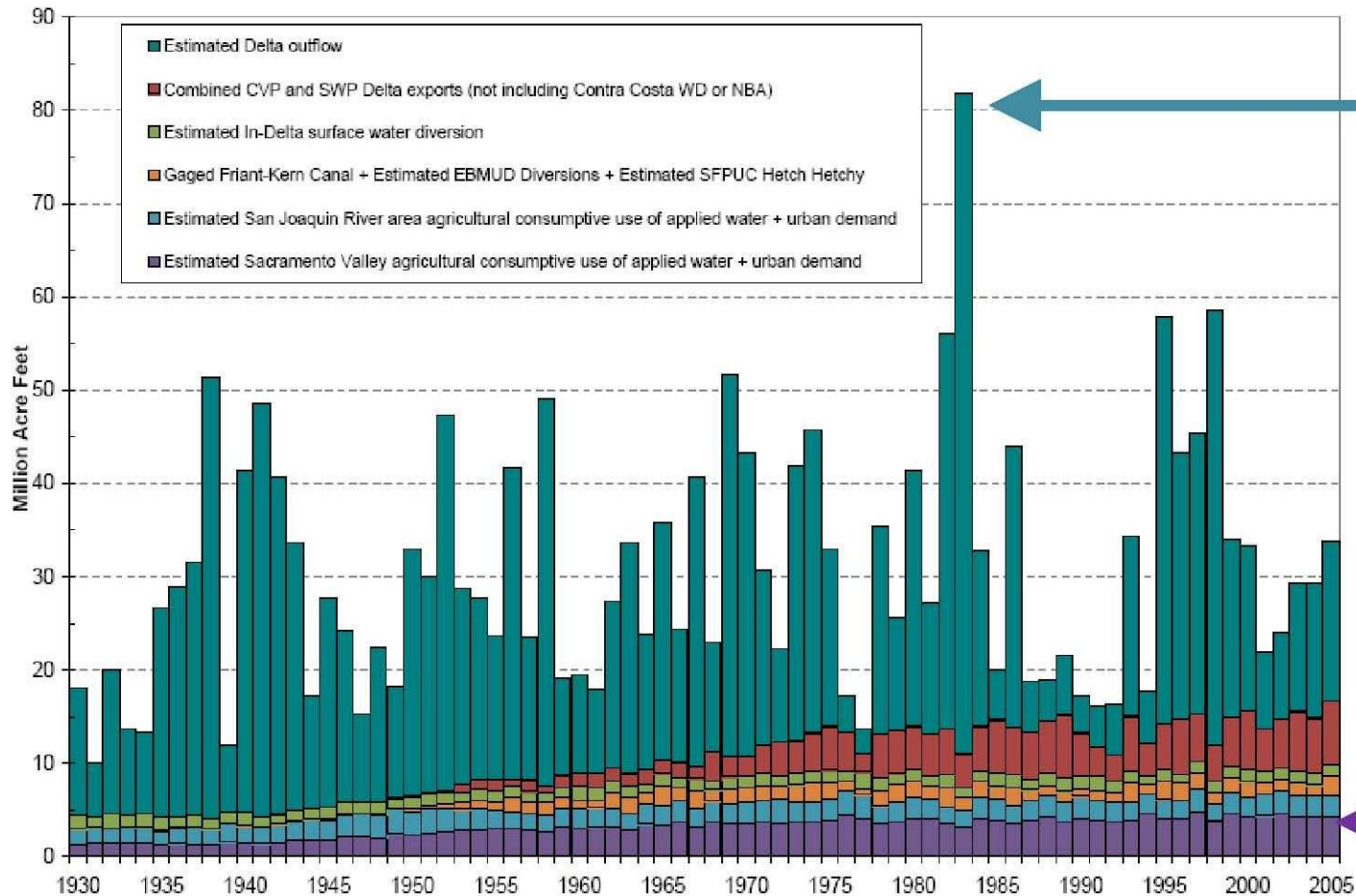


25 MAF

Stable Sacramento Basin Water Use

Delta Vision Blue Ribbon Task Force (2007):

Revised Figure 7b - "Historic Diversion from the Delta"



Hydrology is the biggest variable

Sacramento Basin use has been essentially constant since the mid-1970's

The Context for Water Resources Management Decisions

- Hydrology of the Sacramento Valley – a “flow through” system
- Goal is sustainability
- Better understand trade-offs among beneficial uses
- Only water lost is through consumption
- Timing opportunities - contribute to fish passage, habitat and water quality improvements

Restoring the Salmon Runs

Restoring the Salmon Runs - a Time for Action

Sacramento Valley water resources managers are partnering with federal and state agencies and conservation organizations to improve migratory corridors and habitat for salmon. The measures taken and the money spent – more than \$1 billion over the past two decades – have been helpful but there is still more work ahead to restore the salmon runs.

Fish screens More than 80 percent of the water diverted from the Sacramento River system for wildlife refuges, farms, cities and rural communities is pumped through state-of-the-art fish screens, while the fish stay safe, healthy and in the river.

Spawning gravel is reintroduced to rivers and streams to improve spawning habitat. Over 200,000 tons of gravel has been added to the Sacramento River since 1997.

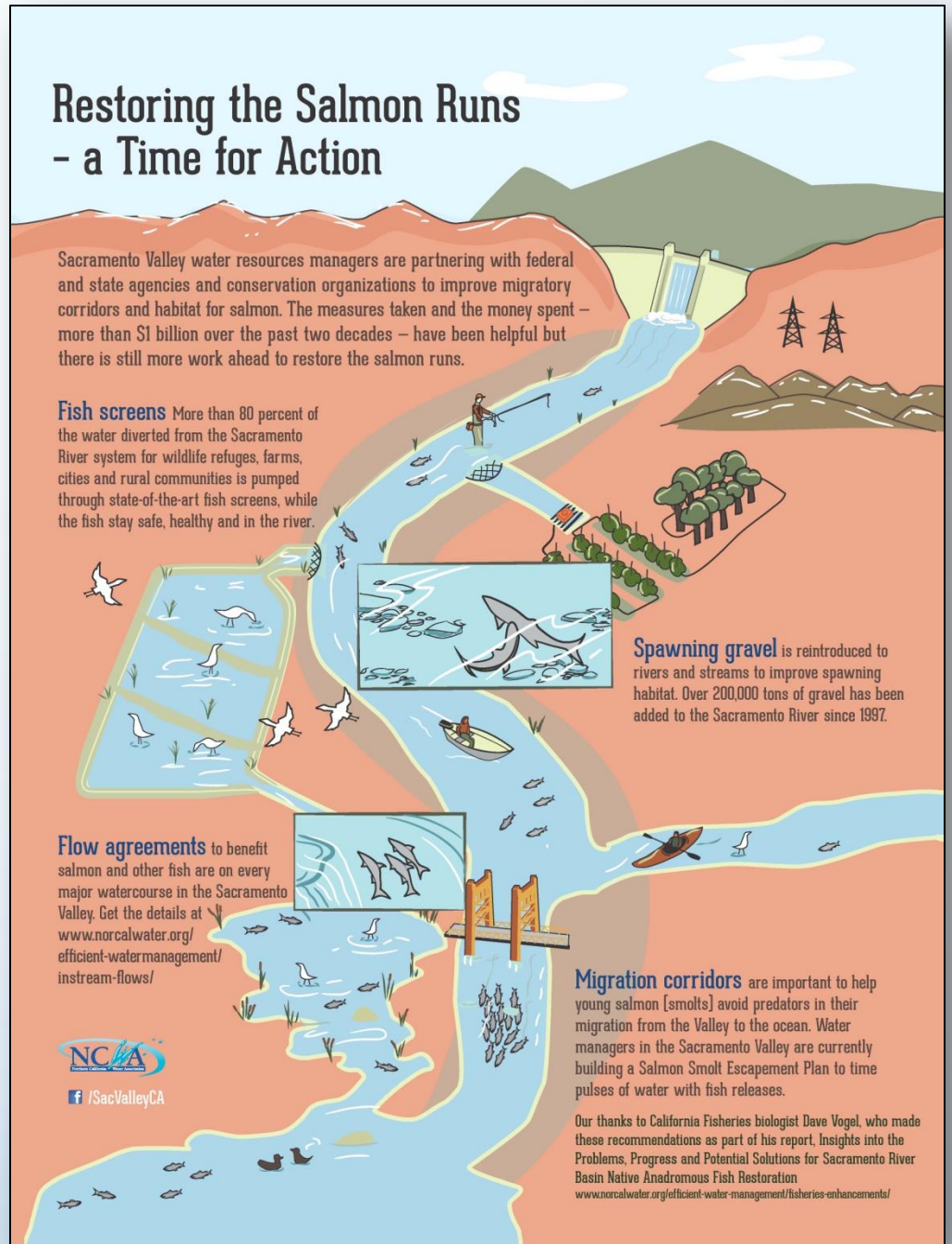
Flow agreements to benefit salmon and other fish are on every major watercourse in the Sacramento Valley. Get the details at www.norcalwater.org/efficient-water-management/instream-flows/

Migration corridors are important to help young salmon [smolts] avoid predators in their migration from the Valley to the ocean. Water managers in the Sacramento Valley are currently building a Salmon Smolt Escapement Plan to time pulses of water with fish releases.

Our thanks to California Fisheries biologist Dave Vogel, who made these recommendations as part of his report, *Insights into the Problems, Progress and Potential Solutions for Sacramento River Basin Native Anadromous Fish Restoration*
www.norcalwater.org/efficient-water-management/fisheries-enhancements/



f /SacValleyCA



Re-Managing the Flow

Re-managing the Flow

The major rivers and streams of the Sacramento Valley provide essential pathways for spawning salmon and steelhead. Flow agreements to benefit these fish are on every major watercourse in the Sacramento Valley.



For more details visit www.norcalwater.org/efficient-water-management/instream-flows/

3/26/94

OTHER OPINIONS



'I do too know something about water! I drink Perrier!'

© 3/94
DUGINSKI

Pacific Flyway Habitat

Pacific Flyway Habitat in the Sacramento Valley.

Considerable progress has been made to enhance habitat for migratory waterfowl, wintering shorebirds, raptors, riparian songbirds and other wetland dependent species in the Sacramento Valley.

During the winter, reliable water supplies in the Sacramento Valley flood harvested rice fields, provide habitat, irrigate managed wetlands and deliver water to refuges and wildlife areas.

Flooded rice fields, National Wildlife Refuges and State Wildlife Management Areas and intensively managed private wetlands help compensate for the 95% of Central Valley wetlands lost over the years.

National Wildlife Refuges and State Wildlife Areas in the Sacramento Valley provide nearly 27,000 acres of wetland habitats, while privately-managed wetlands provide another 43,000 acres.

Up to 350,000 acres of rice are flooded each winter to provide bird habitats. An additional 43,000 acres of Sacramento Valley wetlands rely on the water drained off rice fields for fall flooding.

The amazing array of bird habitat in the Sacramento Valley receives surface water directly from irrigation water suppliers or indirectly from the return flow of surface water.

Nearly seven million waterfowl and 300,000 shorebirds rely on the Sacramento Valley for food and habitat. Other species which benefit include raptors, riparian songbirds and additional wetland dependent species.

Active management of the Sacramento Valley's flow-through system ensures that the water needed for birds and their habitats will continue to be available.

Information compiled by
Northern California Water Association
www.nocalwater.org
California Rice Commission
www.cabrce.org



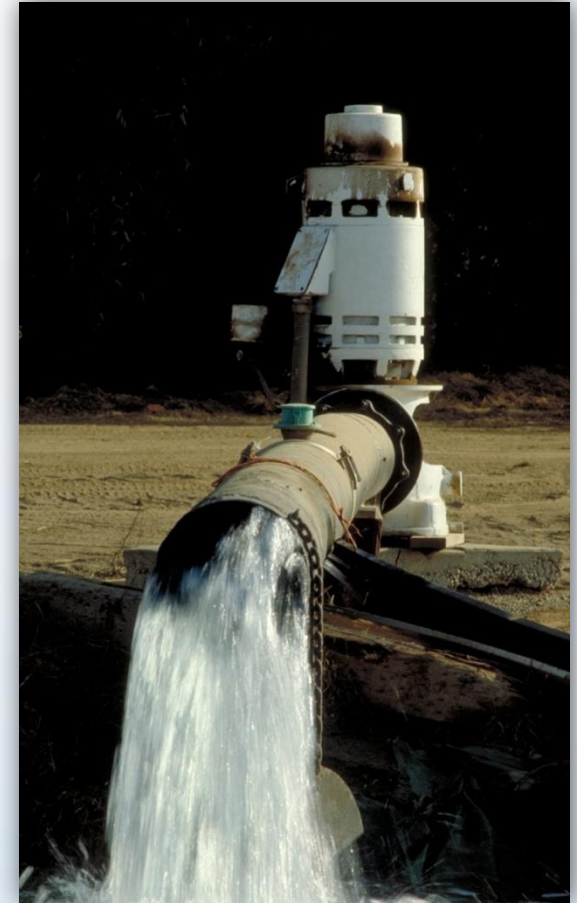
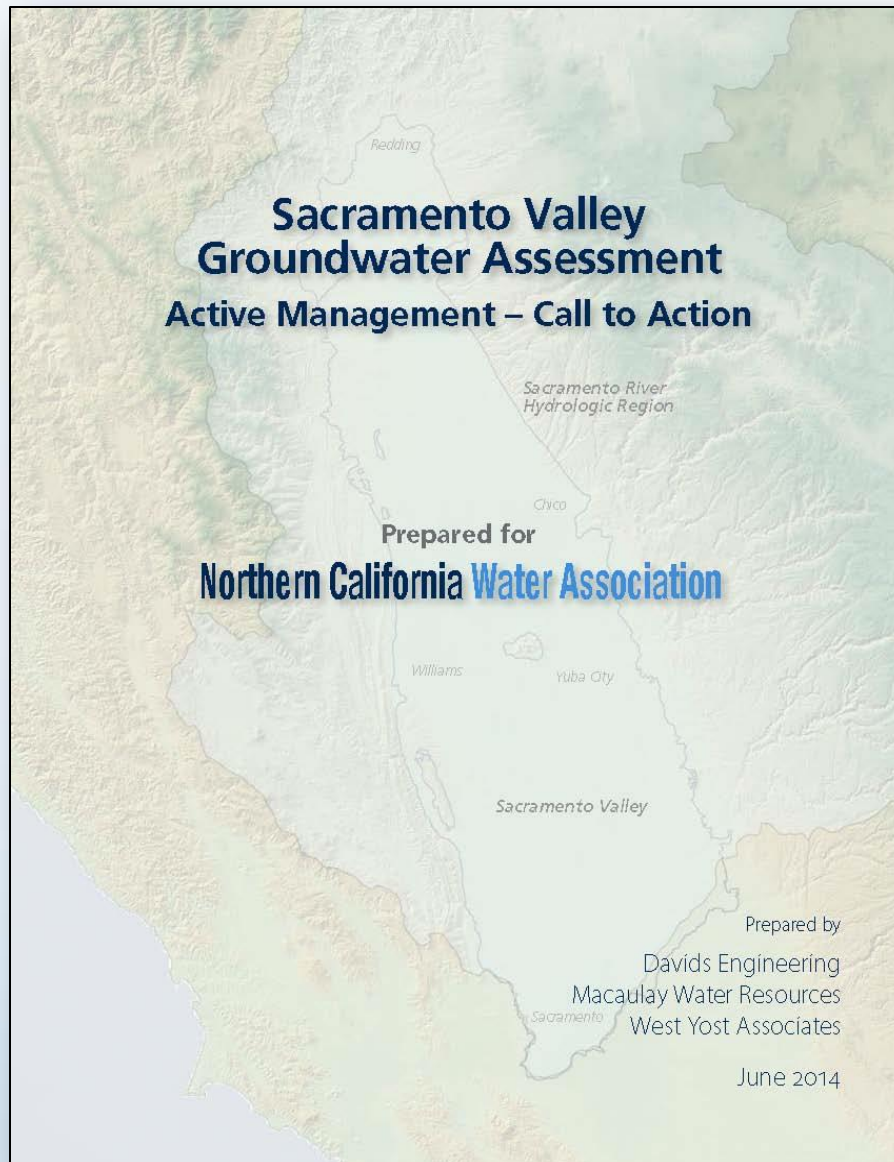
Improving Water Quality

A Regional Plan for Action

*The Sacramento Valley
Water Quality Coalition*



Active Groundwater Management

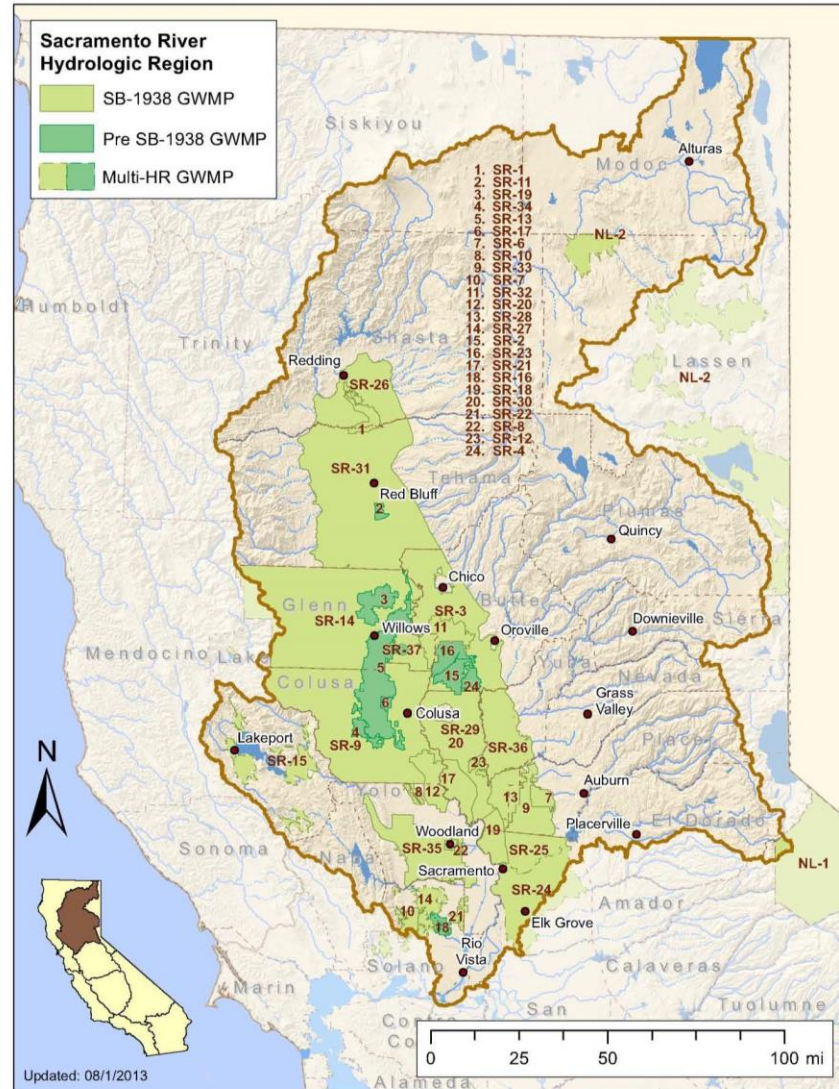


Local Groundwater Management

CA Department of Water Resources

Groundwater Management Plans

Sacramento River HR Plan



http://www.water.ca.gov/groundwater/groundwater_management/GWM_Plans_inCA.cfm

http://www.water.ca.gov/groundwater/docs/GWMP/HR_SacramentoRiver_GWMP.pdf

Sites Reservoir

Building the Sites Reservoir

WATER FOR OUR CITIES, FARMS AND WILDLIFE



California Water Security

Vote **YES**
on **Prop. 1**

Paid for by Sac Valley Water & Rice for Prop 1



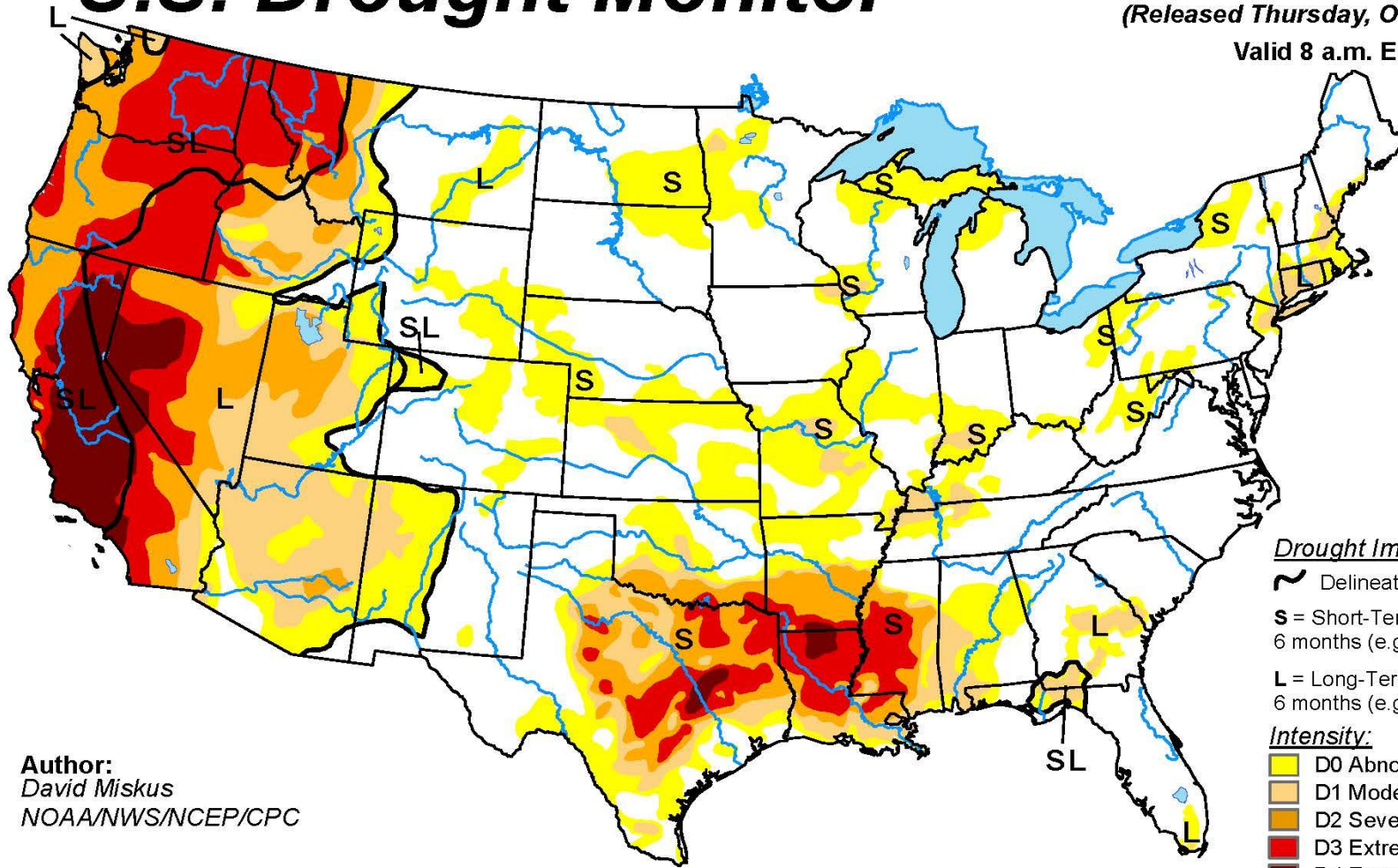
ENTERING

CALIFORNIA

**BRING
YOUR
OWN
WATER**


U.S. Drought Monitor

October 13, 2015
 (Released Thursday, Oct. 15, 2015)
 Valid 8 a.m. EDT








Author:
 David Miskus
 NOAA/NWS/NCEP/CPC

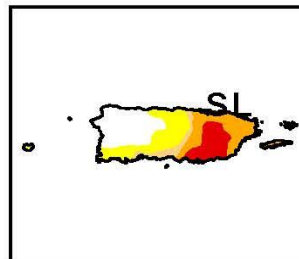
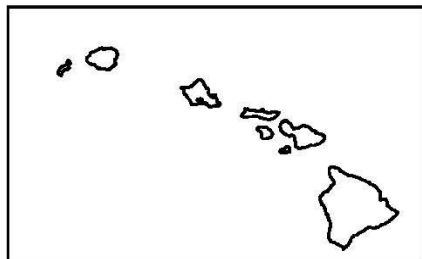
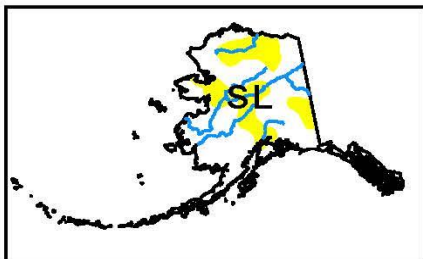
Drought Impact Types:

-  Delineates dominant impacts
- S** = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L** = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



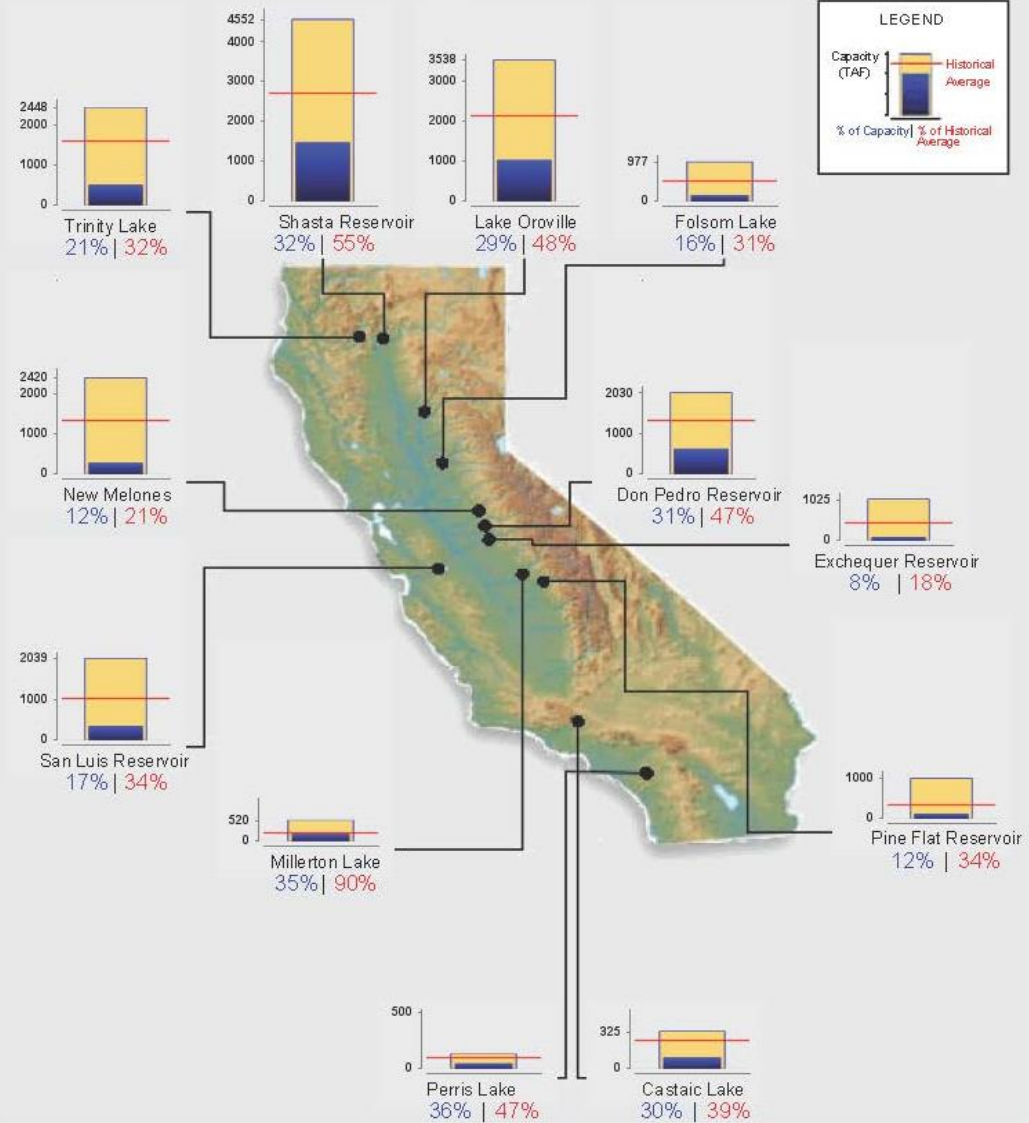
<http://droughtmonitor.unl.edu/>

Current Reservoir Conditions



Ending At Midnight - October 18, 2015

CURRENT RESERVOIR CONDITIONS



Planning for a Dry Year in the North State

Water suppliers throughout the North State have planned for dry years in California like 2015.



Water supplies in the Sacramento Valley have been reduced more than 25 percent in every part of the Sacramento Valley this year—with many areas and people having their surface supplies reduced 100 percent. The severity of the cuts depends upon the water rights or contract. These cutbacks will have a negative impact on all the water uses in the region, including cities and rural communities, farms, fish, birds and recreation.

With California enduring its fourth consecutive dry year, water resources managers have been working closely with state and federal agencies and conservation partners to stretch every available drop of water in creative ways to benefit multiple uses.

California's water right system works—in a dry year like 2015, water suppliers have planned for reductions and they are able to develop alternative water management plans in response to the lack of surface water.

Water rights and contracts are the foundation for water operations throughout California. The orderly implementation of the water rights system provides economic and environmental stability to address the current dry year challenges and prepare for future droughts.

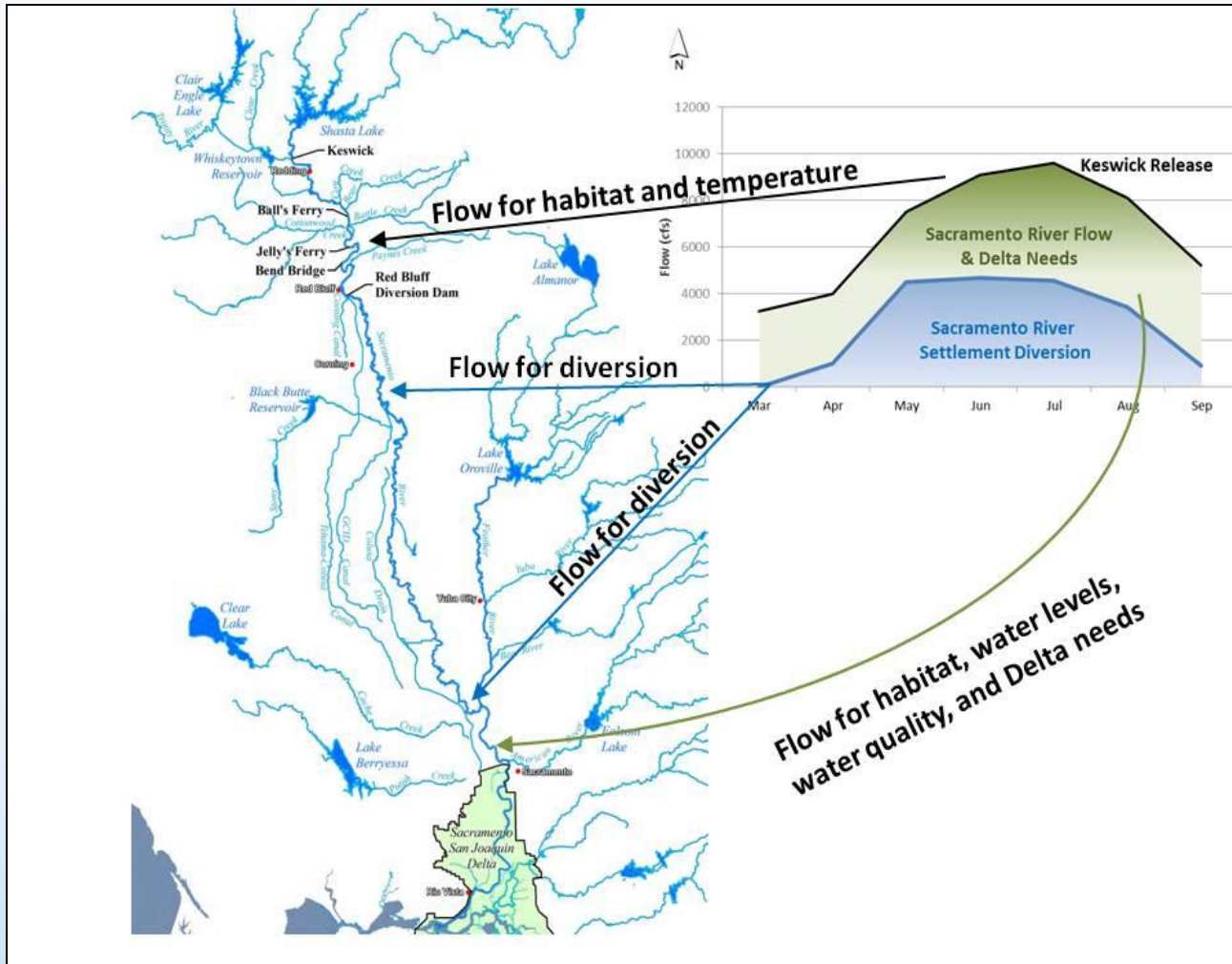
Water suppliers in the North State this year have also re-managed flows on every watercourse for the benefit of salmon (see back page).



For more details visit <http://www.norcalwater.org>

Surface Water Allocations

Water Serving Triple Duty in the Sacramento Valley



Sacramento Valley Sustainability Initiative

Provide a sustainable water supply for the unique mosaic of farm lands, wildlife refuges, managed wetlands and high quality rivers and streams that support waterfowl habitat and spawning grounds for numerous fish species and the cities and rural communities that make up this special region.



Aquafornia

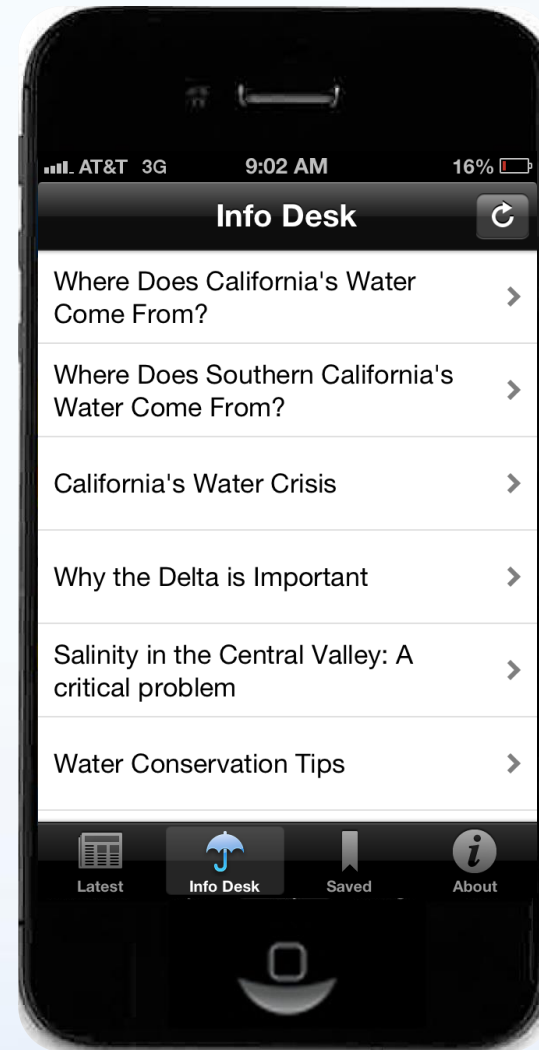


AQUAFORNIA

The California Water News Blog

www.aquafornia.co

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Voices from the Valley

www.norcalwater.org

Blogs from the Valley

NCWA Honors

At NCWA's 20th Annual Meeting Joe Scalmamani and George Basye were honored with the Innovative Water Management Water Award and the Will S. Green Award.

[Visit the Blogs »](#)

David Guy's Blog

This blog explores the intersection between water, food and the environment — with a focus on the increasing challenges facing California and our efforts to manage and preserve our natural resources for present and future generations.

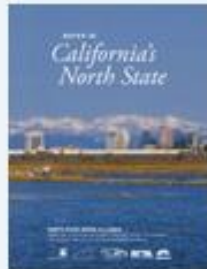
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Featured Items



Water Conservation & Efficiency in the Sac Valley: Active Water Resources Management in a Flow-Through System.

[DOWNLOAD »](#)



Water in California's North State
For more information please visit northstatewater.org

[DOWNLOAD »](#)



California Rice

AQUAFORNIA

The California Water News Blog

by the Water Education Foundation

Think about...

- **Special nature of the region**
- **Highly managed system**
- **Integrated nature of system**
- **Operation of CVP/SWP**
- **Are we in balance?**
- **Partnerships**
- **Creativity within
legal framework**
- **Passion for the region**

