Sacramento Valley
A truly unique and exceptional place
Sacramento Valley
What do you think about?
The Sacramento Valley

A 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.
Drought
Sacramento Valley Water Year Type Index (40-30-30)
1906 - 2019*
Based on Observed Unimpaired Runoff

*2019 Index based on May 1, 2019 Bulletin 120 Forecast
Sacramento Valley Land Uses

- **Urban**
- **Agriculture**
- **Wetlands**
Water Resources Management Entities
Cornerstone for Central Valley/State Water Projects
Sacramento Valley
Applied Water Use

- 14% Wild & Scenic Rivers
- 3% Managed Wetlands
- 19% Instream Flow
- 60% Aquatic Environment
- 24% Required Delta Outflow
- 36% Irrigated Agriculture
- 4% Urban
Sacramento Valley Water Supplies

Use met by other water sources: 6,265 TAF 70% of total

Use met by Groundwater: 2,743 TAF 30% of total

Planning Area:
- Shasta–Pit 3%
- Upper Northwest Valley <1%
- Lower Northwest Valley 10%
- Northeast Valley 8%
- Southwest 2%
- Colusa Basin 19%
- Butte–Sutter–Yuba 21%
- Southeast 2%
- Central Basin West 19%
- Sacramento Delta 1%
- Central Basin East 14%

source: DWR Bulletin 160-13, SR55
Active Groundwater Management

FACT SHEET: The State of Sacramento Valley Groundwater

NCWA
Northern California Water Association

RCRC

July 1, 2017
Sacramento Valley Hallmark
Managing Water for Multiple Benefits
Sacramento Valley

Two 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

Four runs of \textit{salmon}, including the endangered winter-run, spring-run, and steelhead.
Sacramento Valley Salmon Recovery

There has been a concerted effort to implement the following types of programs and projects to improve salmon recovery in the Sacramento River Basin:

- flow arrangements;
- habitat enhancements;
- fish passage improvements;
- fish-food production projects; and
- studies to advance the science that informs management decisions.
Butte Creek is one of only four Sacramento River tributaries with remaining populations of the endangered spring-run Chinook salmon. Resource agencies and conservation groups value Butte Creek as a keystone in preserving and recovering spring-run salmon, which in some years had dwindled to less than a 100 returning adults from 1970 to the early 1990s. Today, as a result of the Butte Creek Fish Passage Improvement projects, in tandem with a valuable food supply and safe rearing habitat in the Sutter Bypass wetlands, more than 10,000 spring-run salmon return on average to Butte Creek. These projects all provide multiple beneficial uses, serving water for fish, farms, birds and various other species.

Sutter Bypass
The project improvements combined with fish food production and safe rearing habitat for juvenile fish in the lower reach of the creek flowing through the wetlands created by the Sutter Bypass, have provided functional flows and an excellent environment for spring-run salmon and other species to thrive.

Partnerships
Cooperation among the agricultural, urban and environmental communities—with funding partnerships—were essential to the success of the projects. The key stakeholders and participants included:

- Local water suppliers and farmers (see map), owner and funding partner;
- California Urban Water Agencies, funding partner;
- U.S. Department of Interior (USFWS and USBR), funding partner;
- California Department of Fish and Game

Butte Creek projects initiated.
Central Valley Salmon Habitat Partnership
Seven 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;
Wetland Areas and Rice Fields in the Sacramento Valley of California

- Sacramento River NWR
- Sacramento NWR
- Delevan NWR
- Colusa NWR
- Upper Butte Basin WA
- Gray Lodge WA
- Butte Sink NWR
- Sutter NWR
- Yolo Bypass WA
- Stone Lakes NWR
- Cosumnes River Preserve

Legend:
- National Wildlife Refuges
- State Wildlife Areas
- Private Wetland Areas
- Rice Agriculture
- 0 10 20 30 Miles

Ducks Unlimited
Pacific Flyway Partners
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 River Conservation Area

Established 1986 (SB1086)

A management plan to protect, restore and enhance the fisheries and riparian habitat along the Sacramento River from Keswick Dam down river to Verona. This effort is cooperative in nature and works to ensure that habitat restoration and management addresses not only the dynamics of riparian ecosystems, but also the realities of local agricultural and recreational issues associated with land use changes occurring along the river.
Sacramento Valley Headwaters

The forests, meadows and canyons in the **watersheds** of the Sierra Nevada and Coast Range.
Join me in reimagining our water system...
Safe Drinking Water

“Now let’s talk honestly about clean drinking water. Just this morning more than a million Californians woke up without clean water to bathe in, let alone drink....Solving this crisis, it will require sustained funding, but more importantly than anything else, it will demand political will from each and every one of us.”

(Governor ‘s State of State, February 2019)
Natural Infrastructure

The Sacramento Valley is fertile ground for developing a new path forward for holistic water management that incorporates best available science and practical know-how of farm and refuge managers to reactivate the floodplain.
Sites Reservoir is unique in many ways, carefully balancing the needs of both people and the environment.
The reimagined water system integrates environmental water management into the water rights and water management system.
Flexibility - Water Transfers
The Old Paradigm

3/26/94

SAVE THE FISH!

SAVE THE FARMS AND TOWNS, TOO!

'I do too know something about water! I drink Perrier!'
The Reimagined Water System

spring

summer

winter

fall
Voluntary Agreements
a better solution
Voluntary agreements
Introducing a better solution for native fish.

Water, Land & Sunlight: A Bountiful Life

The combination of water, land and sunlight has proven throughout time to be the equation for proper life support and healthy population numbers for all species. California’s valley floor is a perfect testament to what is possible when all three work in harmony.

Our fish populations are in trouble

Fish populations (Chinook salmon, Delta Smelt) in California are on the decline and falling to historic lows.

Efforts to reverse the troubling trend by dedicating more water within the river channels has proven futile in many cases - leaving state and federal water managers to seek a variety of solutions.

One proposal involves flushing more water (1-million-acre-feet or the size of Folsom Lake) down the river channels into the Delta, but there is a better way. This alternative approach provides a new, innovative pathway for scientists, conservationists, farmers and water districts to work together.

Trending downward

Today’s dwindling numbers

Same water. Better results.

Voluntary agreements ensure farm fields with current water allocations are used to benefit people, birds and fish year round.

The New Way Forward

A global model

The Sacramento River Basin is participating in a new collaboration featuring science-based programs balancing human and wildlife needs while setting the course for 15 years of collaboration and commitment by local, regional, state and federal agencies. This is possible only through voluntary agreements, and offers a variety of benefits:

- Positively impacts entire lifecycle of native fish from spawning grounds to San Francisco Bay
- Safe, bountiful habitat for waterfowl and shorebirds
- Produces billions of water bugs to feed endangered fish
- Adds water to key points along the entire river system
- Recharges groundwater supplies
- Improves timely flow and temperature schedules to benefit fish and wildlife
- Enhances reservoir storage for critical times

A proven approach

Successes in the Sacramento Valley

A few decades ago, only a few hundred fish returned to Butte Creek to spawn each year. Today, that number has jumped to more than 10,000. The reason? Butte Creek water has been combined with land and sun to provide a safe and bountiful place for fish to thrive.

By flooding farm fields and historic wetlands with just a few inches of water, a safe haven for wild birds was created. Today, hundreds of thousands of waterfowl return to Northern California as part of the Pacific Flyway, the environmental success story of our generation.
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.
Voices from the Valley

norcalwater.org

sacramentovalley.org

Managing Water For Multiple Beneficial Uses

Food
Salmon
Communities
Birds

Water and the Sacramento Valley

There's no other place in the world like the Sacramento Valley. Here, family farms, small towns and the environment are in balance. Wise use of resources will help maintain this one-of-a-kind region for generations to come.
Stories You Haven’t Seen
Sacramento Valley Salmon Recovery Program

The Sacramento Valley Salmon Recovery Program (Recovery Program) is a comprehensive effort to address all salmon life-cycle stages that occur in fresh water by implementing projects and flows that serve multiple benefits throughout the region. The links to videos below help visualize the various projects that have been completed in the Sacramento Valley to advance salmon recovery in the region.

More than 140 projects have been completed in the Sacramento Valley to benefit salmon since 2000. The Recovery Program continues to build on these efforts by targeting specific river reaches in the Sacramento River Basin to ensure that projects provide maximum benefit to the different life-cycle stages.

Butte Creek

Work in the 1990s to improve habitat for spring-run Chinook salmon on Butte Creek provides a good model for salmon recovery in the Sacramento Valley. The comprehensive effort on Butte Creek joined upstream functional flows for spawning and holding habitat with barrier removal in the middle river that improved connectivity with the Sutter Bypass floodplain in the lower river, which provided food and ideal rearing habitat for out-migrating juvenile fish.

Upper River

In the upper reaches of the Sacramento River and its tributaries, returning adult salmon “hold” while they wait to spawn. Once spawning occurs, egg incubation begins followed by fry and juvenile fish rearing. Projects implemented to benefit fish in the upper river include adding spawning gravel, beds and riffs, developing side channels, refugia projects and other safe habitat for fry and juvenile fish. Water resource managers carefully manage the associated flows and cold water to maximize the habitat value of the projects.

> Salmon Spawning Gravel Project
> Saving the Salmon: Shelter Project
> Salmon Shelters: Root Wads
> Market Street Side Channel Project Overview
> Market Street Side Channel Partnerships
> Market Street Side Channel Construction
> American River Salmonid Habitat Restoration Project Construction
> American River Salmonid Habitat Restoration at Sacramento Bar
Aquafornia

www.aquafornia.com
Think about…

- Highly managed water system
- Importance of CVP/SWP in region
- Multi-benefit water management
- Reactivating the floodplain
- Innovative and modern flow strategies
- A region in balance
- Amazing partnerships
- Integration of human and natural dynamics
- Passion for the region