



NCWA

Northern California Water Association



California Rice Commission January 20, 2022



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Northern California Water Association

**Cultivate a shared vision
in the Sacramento Valley
for a vibrant way of life**

2022 – Priority Water Issues for the Sacramento Valley



- 💧 Preparing for 2022
- 💧 Instream vs. Landscape Flows
- 💧 Prioritize Storage
 - Existing Storage
 - Groundwater Recharge
 - Sites Reservoir
- 💧 Ridgetop to River Mouth Water Management



2022 Scenario Planning for the Sacramento Valley

- 💧 Sessions on October 29, November 12, December 13, 2021
- 💧 Federal and State Agencies Participated
- 💧 Focus on Collaboration and Actionable Timelines



Scenario Planning – Our Objective

Identify early actions, cooperative approaches, and creative partnerships that can help us protect shared values that will mitigate the economic, social and environmental impacts from another dry year (2022).



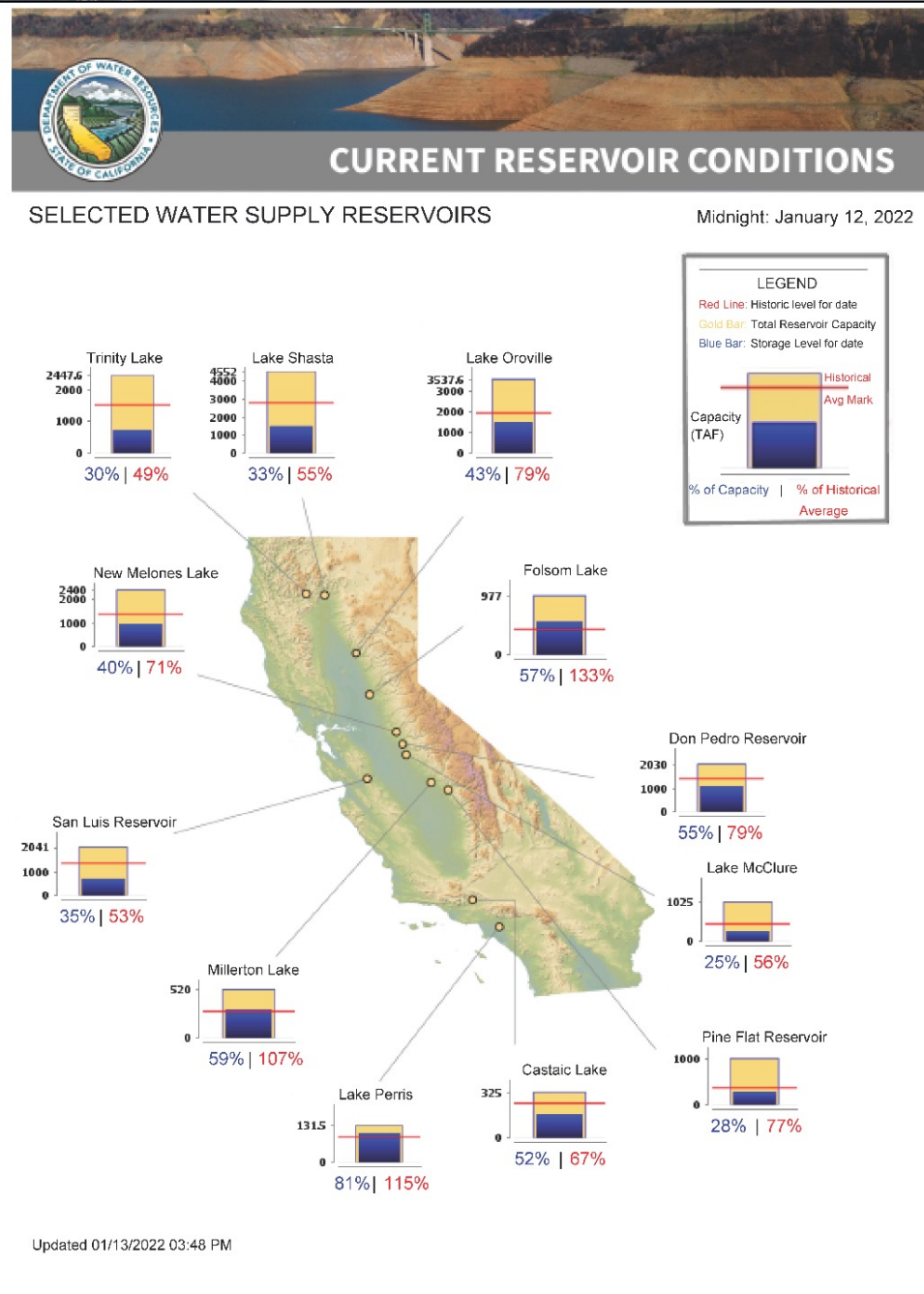
Scenario Planning – Our Intention

- 💧 Build relationships and engender trust and confidence
- 💧 Build on collaborative, creative and deliberative planning during 2021/22
- 💧 Create a better path than litigation
- 💧 Develop a shared understanding
- 💧 Develop timelines for decision-making across agencies

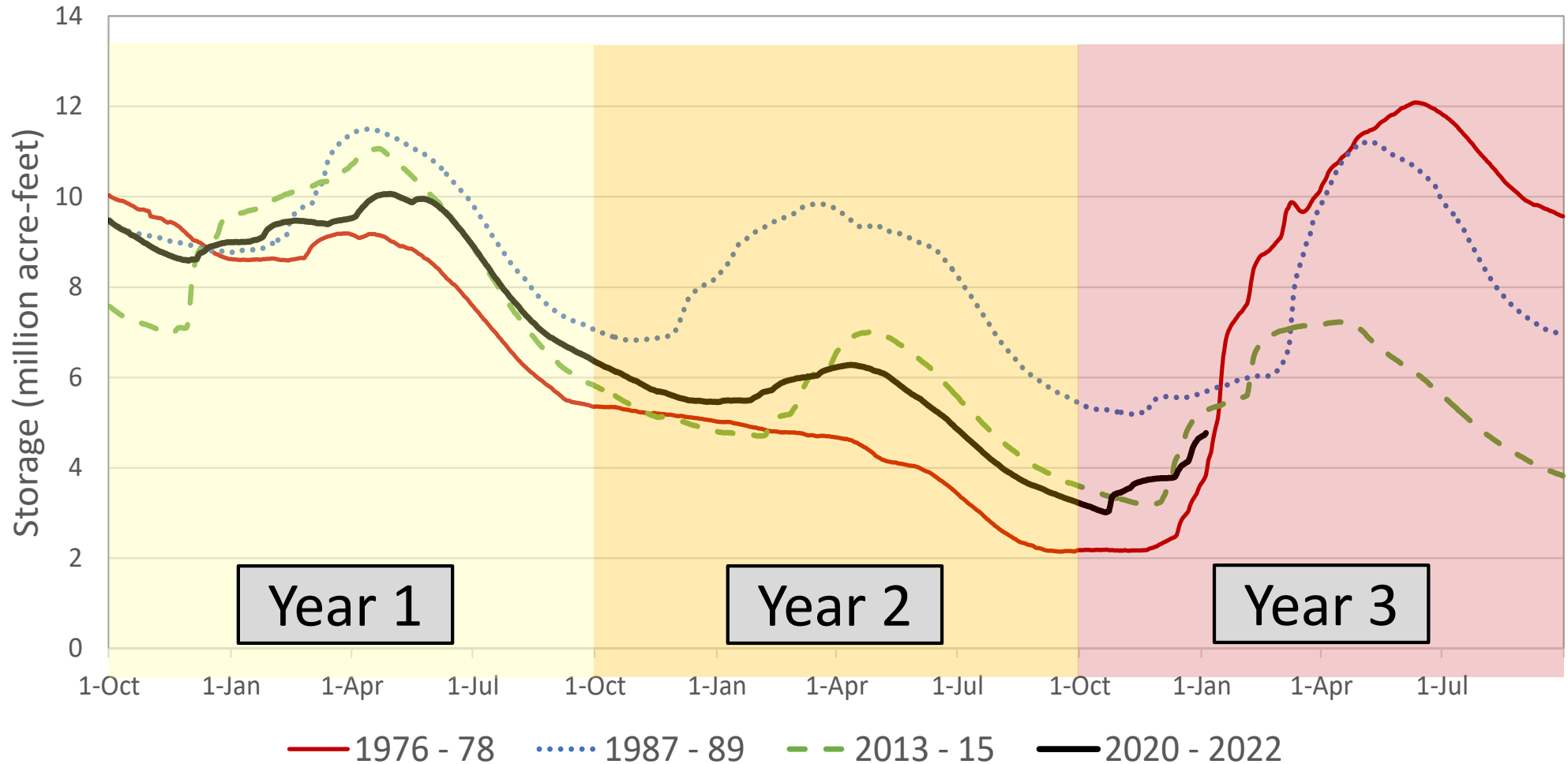
A Path Forward for 2022



Major Reservoir Storage

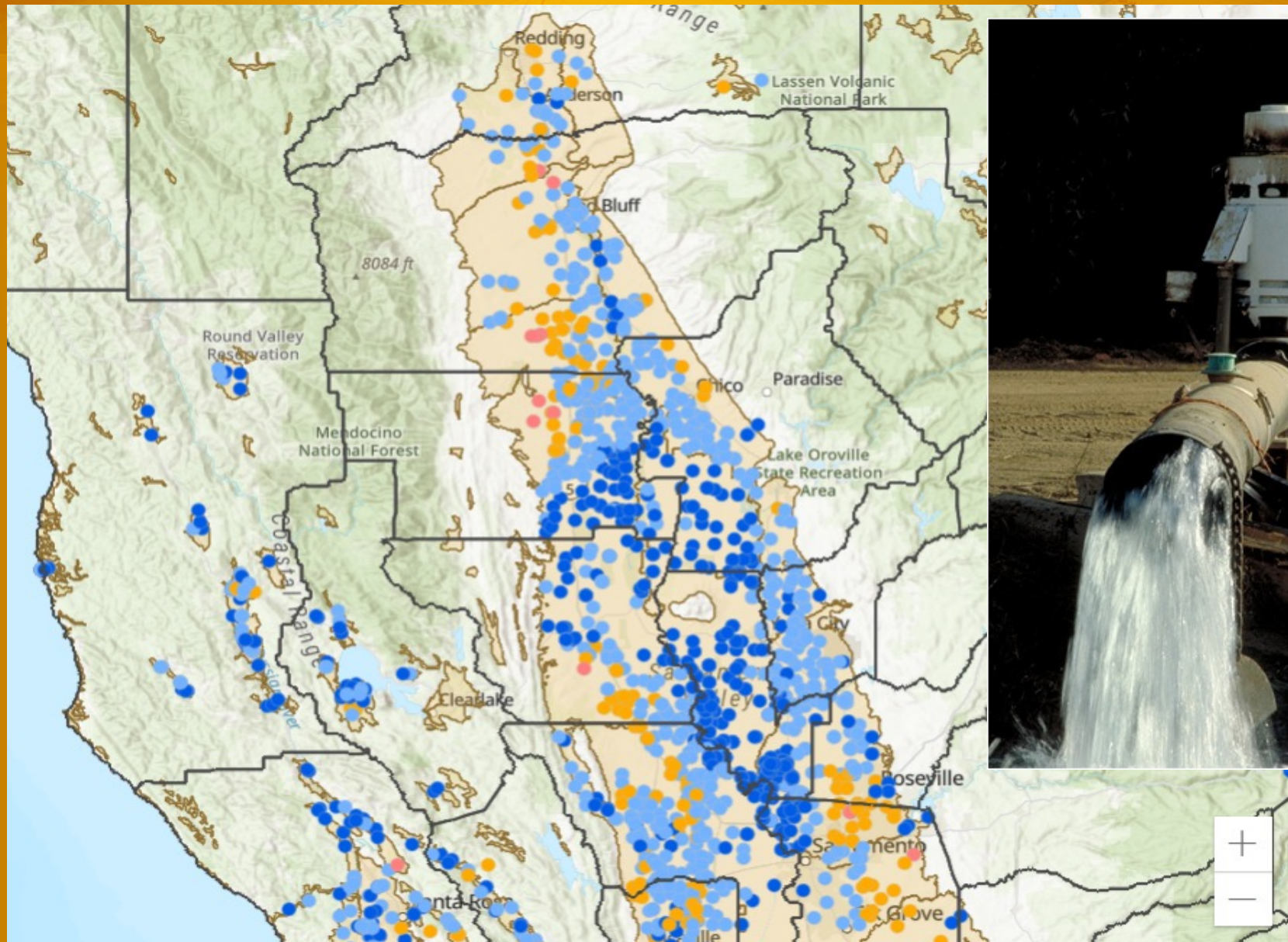


Sacramento River Basin Conditions



*Shasta, Oroville, Folsom, Trinity, New Bullards Bar, Indian Valley, Clear Lake, and Camp Far West.

Groundwater Levels



Spring Diversions on the Sacramento River



**Why Spring Diversions on the Sacramento River
are Important to Serve Multiple Benefits**

2022 Water Year Update and Outlook

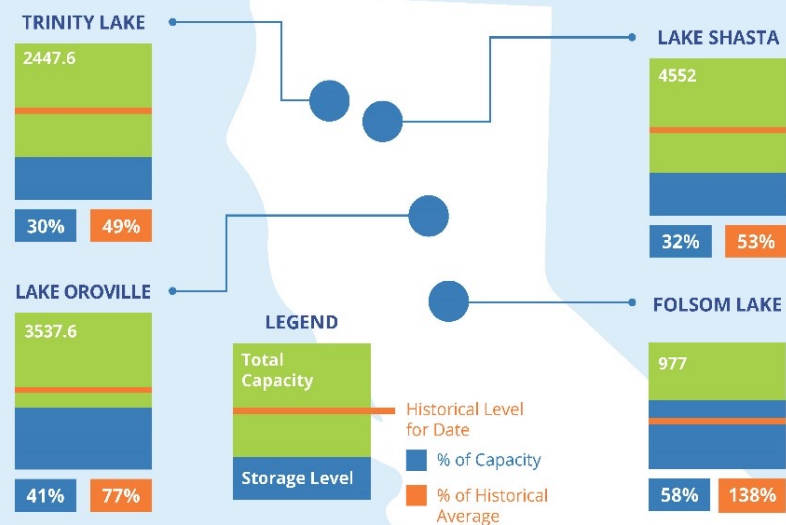
SACRAMENTO RIVER BASIN

2022 Water Year Update and Outlook

SACRAMENTO RIVER BASIN

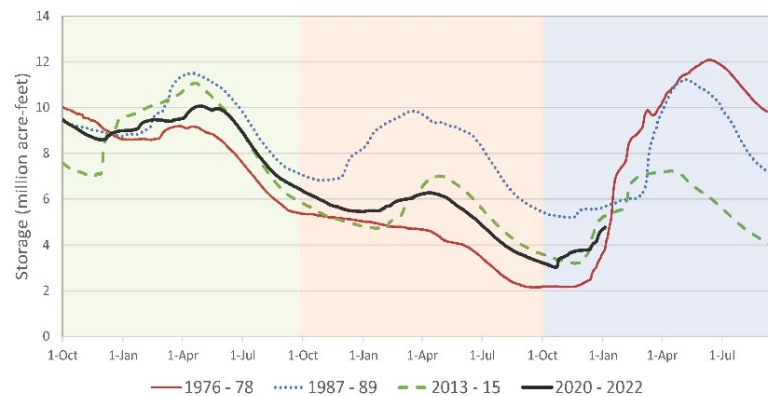
Updated January 10, 2022

Current Surface Water Supplies



For daily water supply information, see [CDEC](#).

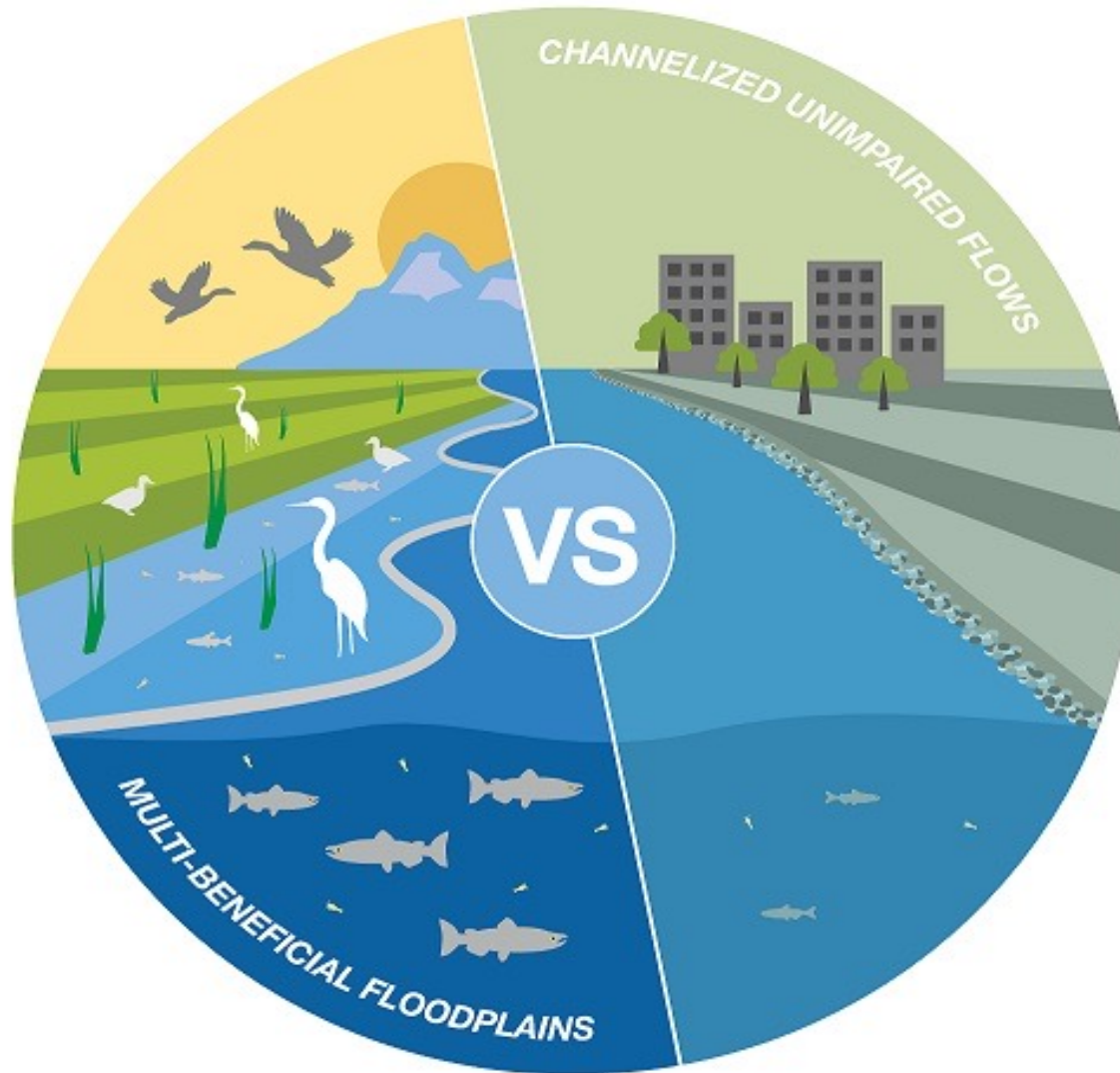
Sacramento River Basin Conditions in Context



*Shasta, Oroville, Folsom, Trinity, New Bullards Bar, Indian Valley, Clear Lake, and Camp Far West.

MBK
ENGINEERS

California at a Crossroads



For the past 50 years.....

OPTION 1

Continue Unimpaired Flows in the Bare River Channels

For 50 years various regulatory proposals have required significant flows into these bare channels with agencies making adjustments based on total volume or based on a percent of unimpaired flow. This method has led to both a decline in fish populations and water supply reliability.



The New Way Forward

OPTION 2

Tap Into the Historic Floodplains

Scientists point to the floodplain as the place where fish and wildlife can reap the most benefit while living within the highly managed California water system.



What Have We Learned About Fish and Wildlife?



Waterfowl and the Pacific Flyway

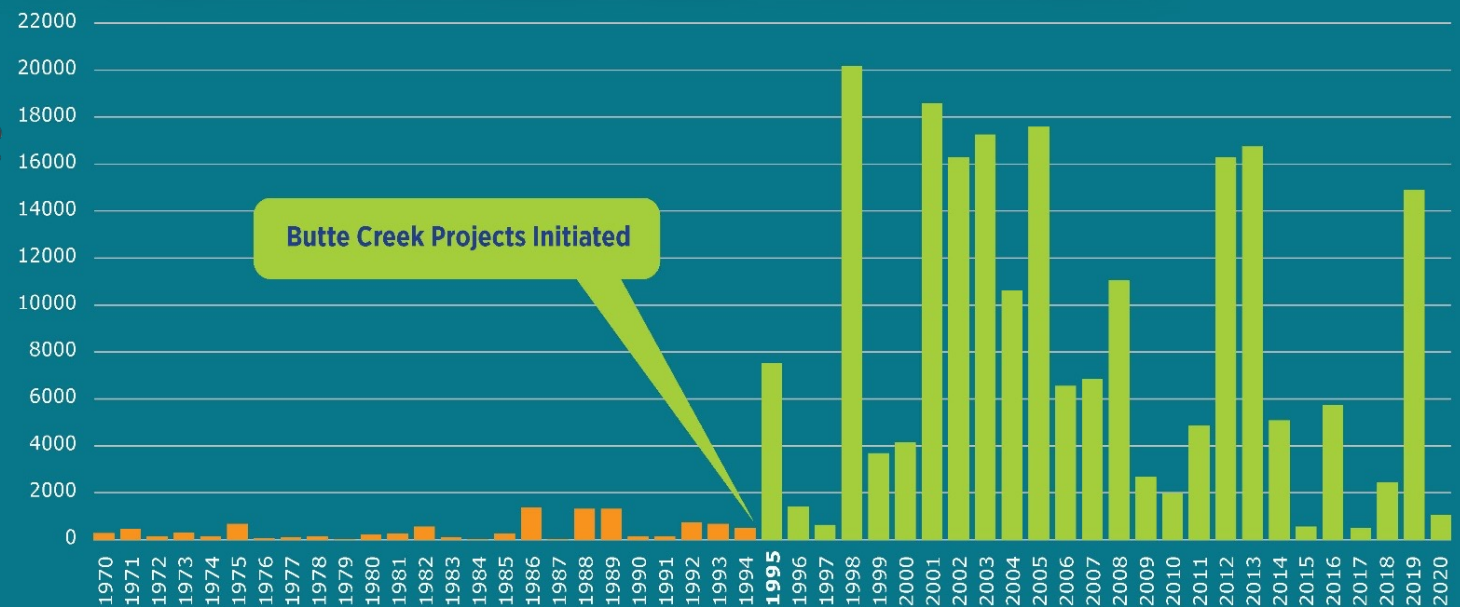


BUTTE CREEK SALMON RECOVERY

A Lesson in Functional Flows



BUTTE CREEK SPRING-RUN CHINOOK SALMON POPULATION ESTIMATES



Source: CDFW



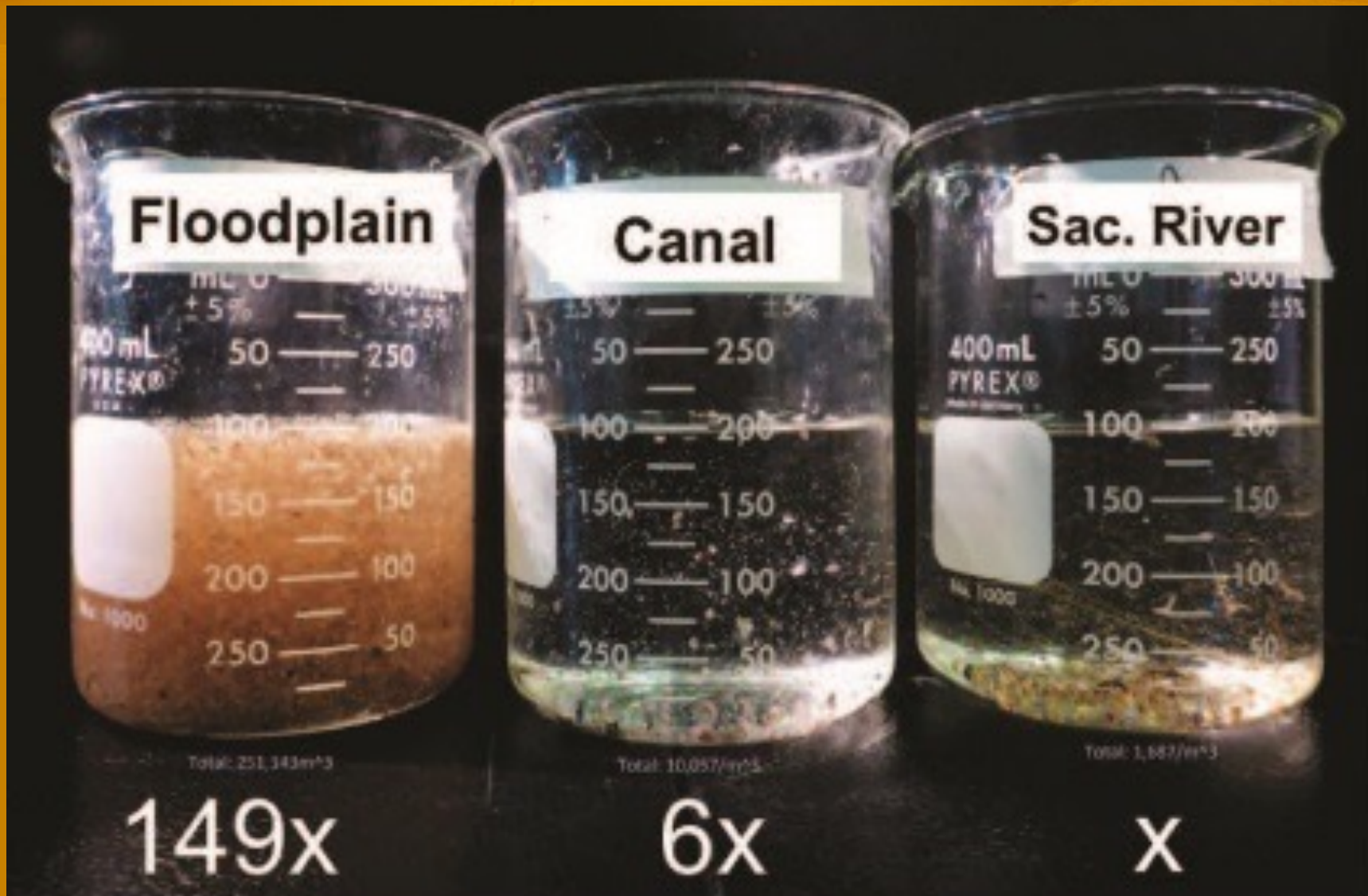
**Western Canal
Water District**

GORRILL RANCH
— DURHAM, CA —
Est. 1918



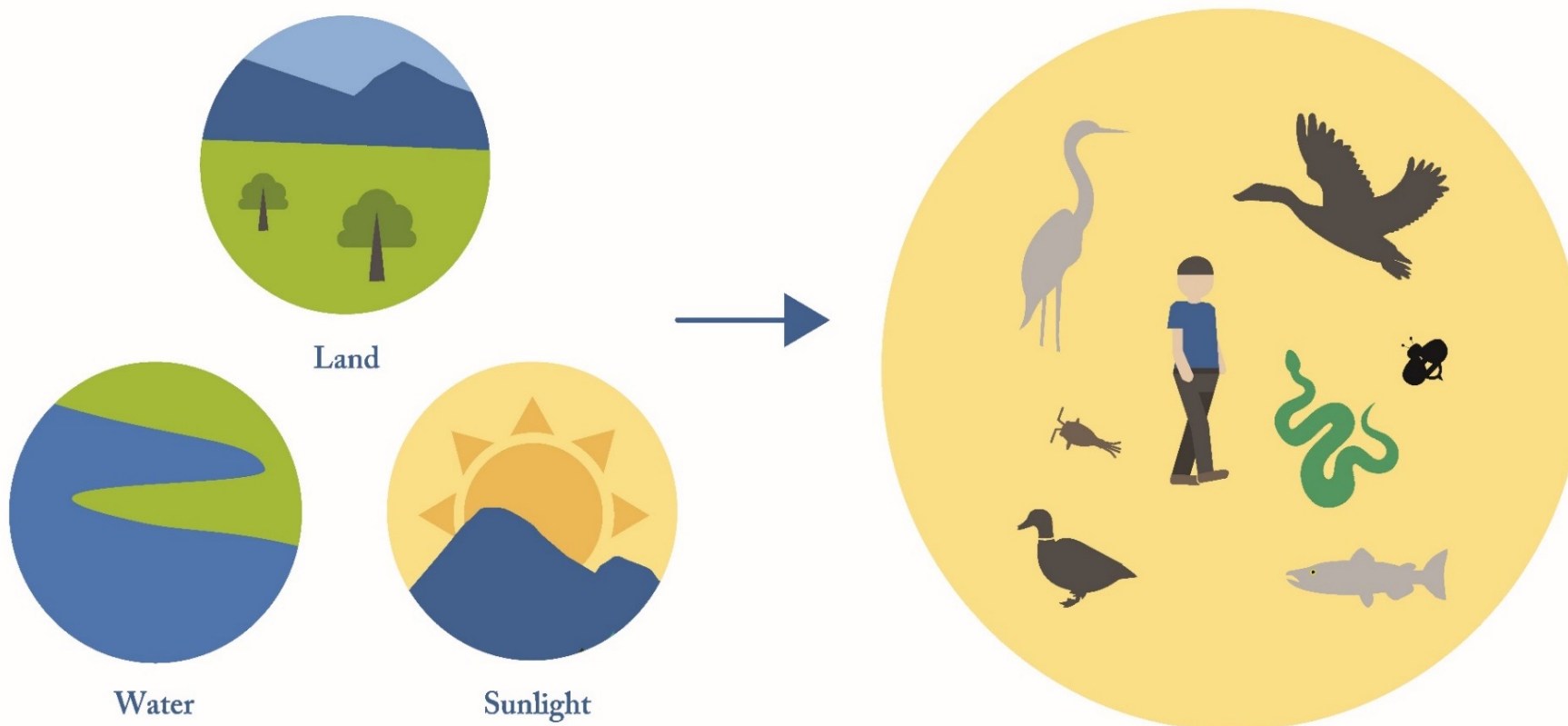
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Food is on the Floodplain



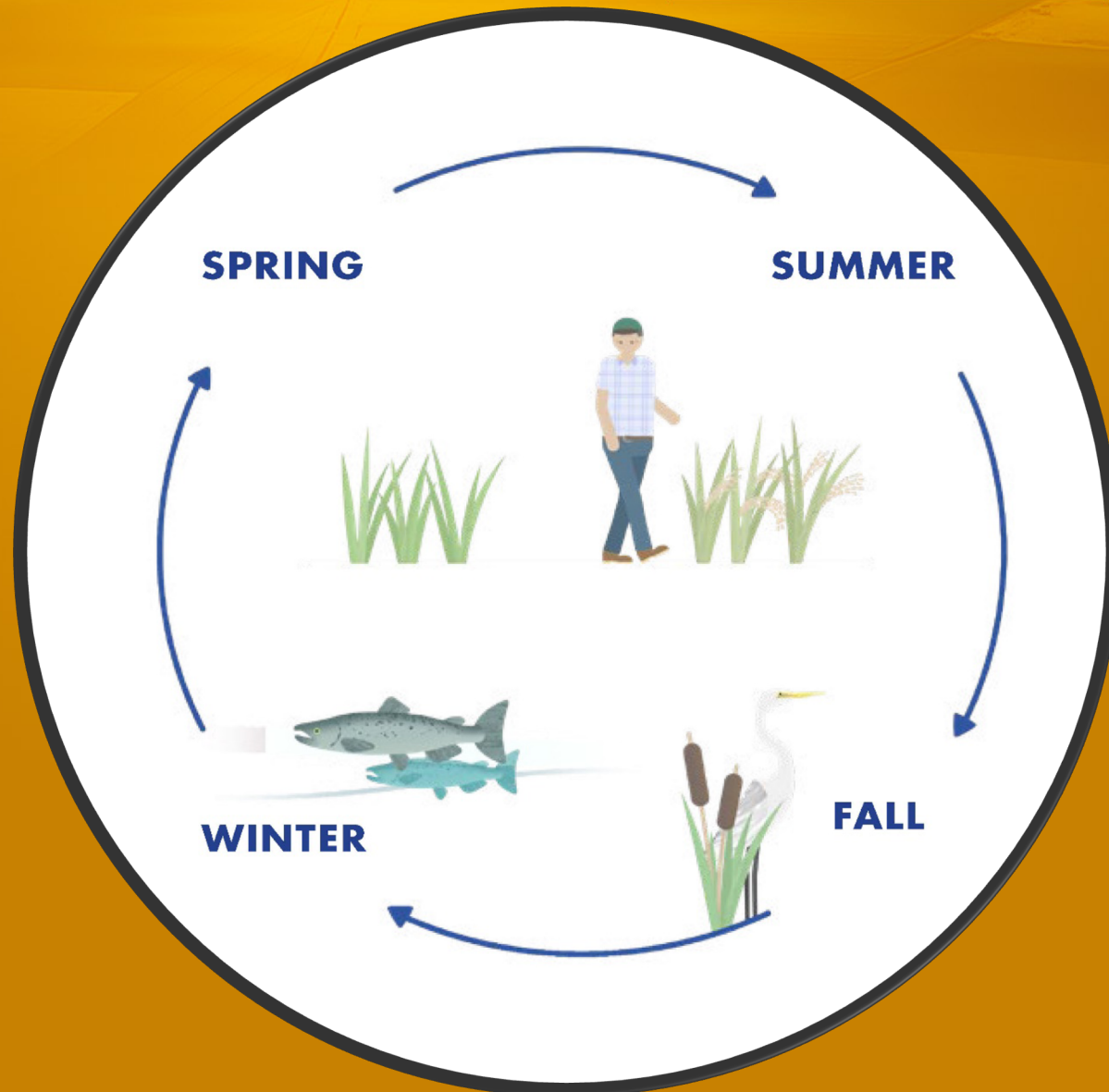
Three Ingredients to a Bountiful Life

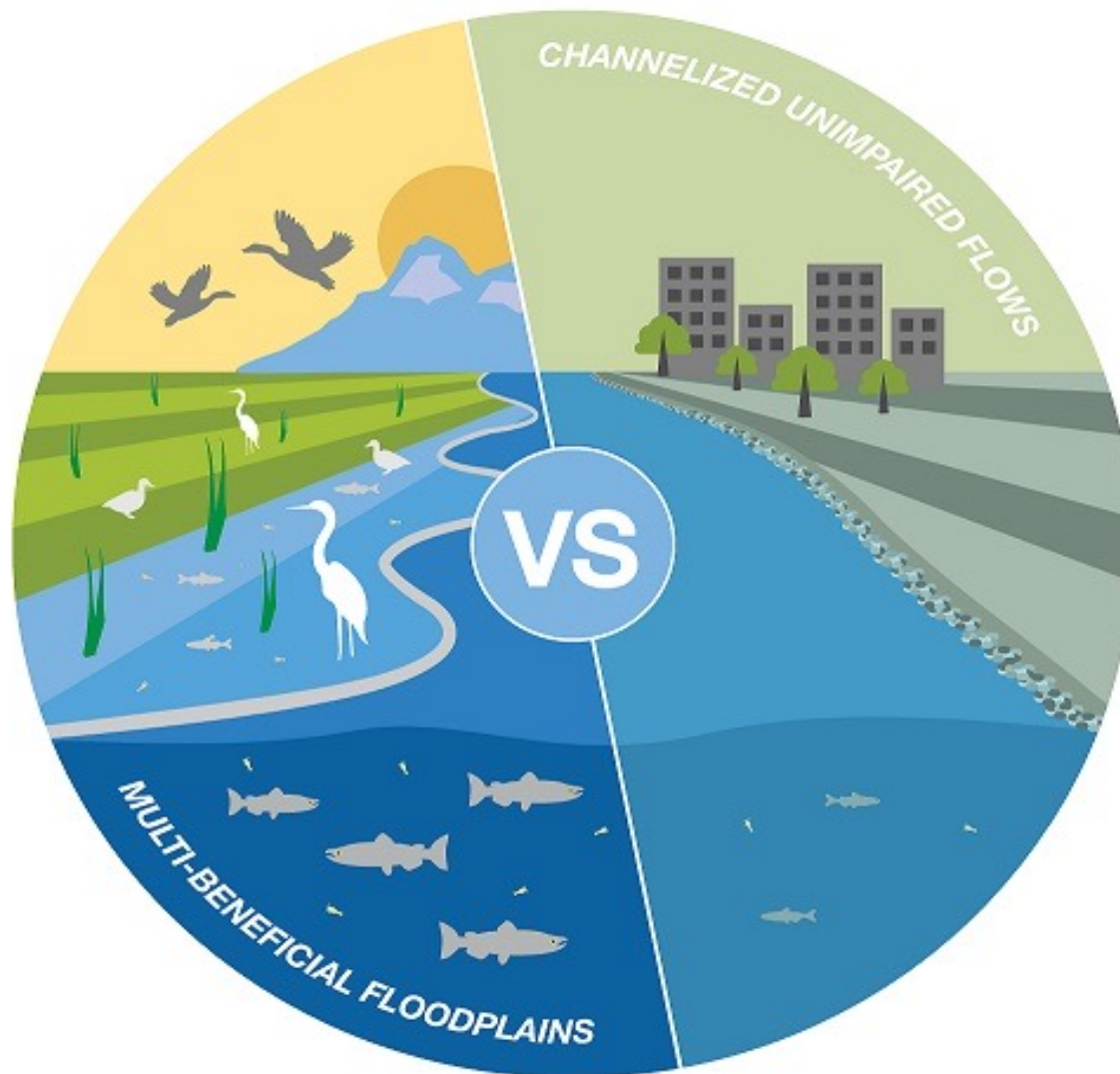
Marrying Land, Sunlight and Water



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. The Sacramento Valley landscape is a perfect testament to what is possible when all three work in harmony.

The Modern Water System







Reactivating Floodplains in the Sacramento River Basin

How working lands on both sides of the levees are aiding fish and wildlife.



Bypasses and Fish Habitat

Boosting imperiled salmon populations by reimagining how we manage our bypasses year-round

Collaborative efforts among farmers, conservationists, universities, and state and federal agencies are proving that by reactivating our historic floodplains and using our bypasses during key times of the year, we can create high-quality habitat **that produces up to 149 times more food for salmon than the river.** This leads to salmon growing five to twelve times faster, thus increasing their chance of survival on their journey to the Pacific Ocean. This ultimately has the potential to **dramatically boost salmon populations in California.**



The Challenge

Fish Food on Floodplain Farm Fields



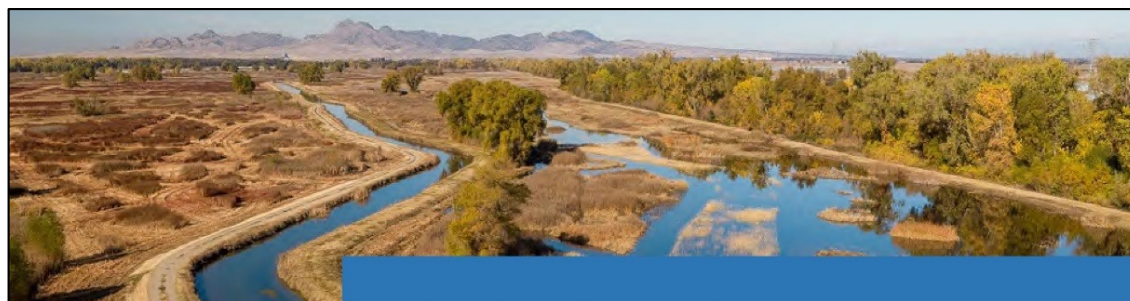
Reactivating our Floodplains – A New Way Forward for California



The Floodplain Forward Coalition

1.2021

A Portfolio for Fish and Wildlife



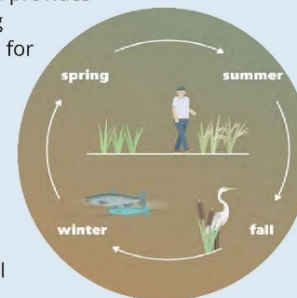
Advancing Floodplain Reactivation in the Sacramento River Basin

A Portfolio for Fish and Wildlife

Our respective organizations, the *Floodplain Forward Coalition*, are very excited to work with you and our various partners in our collective efforts to reactivate the floodplain in California's Sacramento River Basin, which will result in multiple benefits for the region and the State of California. The *Floodplain Forward* leaders have proposed the following portfolio of projects, which together will help reactivate our floodplains for the benefit of fish, wildlife and people.

Reactivating the Floodplain.

We are all very excited that farmland (primarily ricelands), wildlife refuges, private wetlands (primarily duck hunting lands), the rivers, and flood bypasses can be managed together in innovative ways to mimic the historic floodplains of the Sacramento River Basin to recreate a dynamic fisheries and wildlife conservation landscape that continues to provide flood protection for Sacramento, rural communities and nearby lands. Spreading out and slowing down water moving across this landscape is a nature-based, natural infrastructure solution that mimics natural floodplain processes and provides multiple benefits year-round by allowing farmers to cultivate rice and other crops for humans during the spring and summer, provide food and habitat for a diversity of migratory birds and other wetland-dependent wildlife in the fall and winter; and food for juvenile native fish species in the winter. This holistic water management can bring our ecosystem and farmlands to life through the careful interaction of water, sun and land.



Reactivating our Floodplains



Films on Floodplain Reactivation

- 💧 Sharing Butte Creek (2021)
- 💧 A New Way Forward for Wetlands (2018)
- 💧 No Going Back (2016)



The Fix versus the Fight.....

How do we best improve fish and wildlife while providing reliable water for farms, ranches, cities and rural communities?

Pursue voluntary agreement(s) to resolve the Bay-Delta processes for the next 15 years. Voluntary agreements provide an opportunity to advance solutions in an effective and broader way than through any single regulatory process, while maintaining the economy and way of the life in the region.



Voluntary Agreements Concept

- 💧 Portfolio of compensated flows and habitat throughout the watershed
- 💧 Stable regulatory framework
- 💧 Science and structured decision making to increase water-landscape interface (benefit for aquatic species)
- 💧 Transition to landscape flows
- 💧 Ridgetop to river mouth management

Prioritize Storage



ENVIRONMENTAL

Final Draft

SOCIAL

Efficient Water Management for Regional Sustainability in the Sacramento Valley

Prepared for
Northern California Water Association

ECONOMIC

July 2011

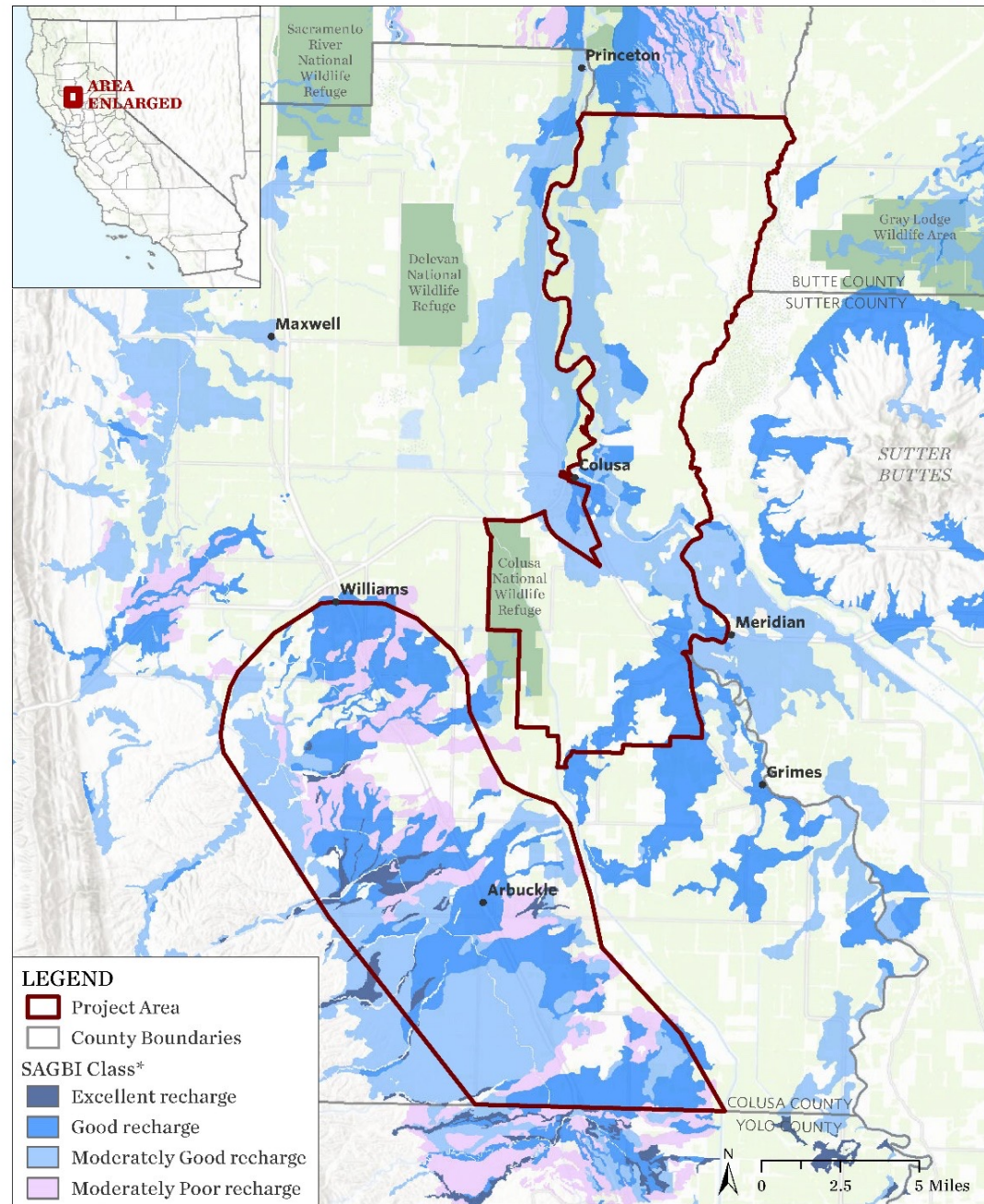
A vertical strip of six circular images. From top to bottom: 1. A city skyline with several tall buildings. 2. A white bird in flight against a blue sky. 3. A close-up of a water faucet with water droplets. 4. A man and a young boy sitting on a log, fishing in a stream. 5. A field of vibrant red flowers. 6. A field of crops, possibly corn, with rows of plants.

Maximize Existing Storage



Advance Groundwater Recharge

Colusa Multi-Benefit Recharge Project Area



*SAGBI (Soil Agricultural Groundwater Banking Index) represents the suitability for groundwater recharge on agricultural land.

Sources: Project Area - TNC, Basemap - Esri, SAGBI - UC Davis

Sites Reservoir

Public Benefits of Sites Reservoir

The Sites Reservoir

Adds about 500,000 acre-feet of water annually to California's water system for...



Drinking Water



Irrigation



Ecosystem
Improvements



Increased
Water Quality



Recreational
Activities

Increases Northern California
water storage by

and

Can be filled from just one or
two major storm events...
even during dry years

23%



1.12
MILLION

Acre-Feet of Water

Allows an additional 1.12 MILLION
acre-feet of water to be stored in
other Sacramento Valley reservoirs
(i.e., Shasta, Trinity, Folsom, Oroville)
during drought years.

Restores Operational Flexibility to California's Primary Water System

- Captures and stores runoff supplies for use in dry and critical years
- Allows other reservoirs to hold more water later into the summer months
- Increases flood management opportunities
- Supports groundwater recharge

Mitigates the Effects of Climate Change

- Guards against salinity intrusion in the Sacramento-San Joaquin Delta (Delta) due to sea level rise
- Ideally located to maximize the capture and storage of rain
- Contributes to the state's renewable energy goals
- Mitigates the negative economic and environmental impacts of historic drought conditions

Provides up to 50% of water to environmental flows, creating a net benefit in:



Water quality
improvements



Reduced salinity
levels in the Delta



Improved Pacific
Flyway habitat for
migratory birds and
other native species



More reliable cold water
for the benefit of salmon
in the Sacramento Valley
river systems



Meets the Coequal Goals
identified in the 2009 Delta Reform Act

Balances human and environmental needs



SITESPROJECT.ORG

Ridgetop to River Mouth:

A Holistic Approach to Water Management



Healthy Forests

Healthy forests and actively managing our state's headwaters increase water supply reliability, reduce flooding risks, improve water quality, reduce impacts from catastrophic wildfires, increase renewable energy supplies, enhance wildlife habitat, and improve response to climate change and extreme weather events.



Reactivating Floodplains

The Sacramento Valley is fertile ground to reactivate our floodplains in a way that benefits fish, wildlife and people as a new path forward for holistic water management that incorporates best available science and practical know-how of farm and refuge managers.



Sustainable Groundwater Management

Actively managing the region's groundwater resources by utilizing the region's natural infrastructure, such as recharging our groundwater aquifers, will be important in the Sacramento Valley to achieve groundwater sustainability.



Vital Rivers and Streams

Our rivers and creeks are the lifeblood for the region—serving drinking water for our communities, vitalizing our economy and ecosystems, and providing opportunities for recreation and play. They lift our spirits and connect us to the natural world, and each other.



Healthy Soils and Farms

Innovative farm and land management practices contribute to the local economy, the environment and communities. Building adequate soil organic matter leads to improvements in soil structure, stability, and increased moisture and nutrient holding capacity for plant growth and reduced greenhouse gas emissions.



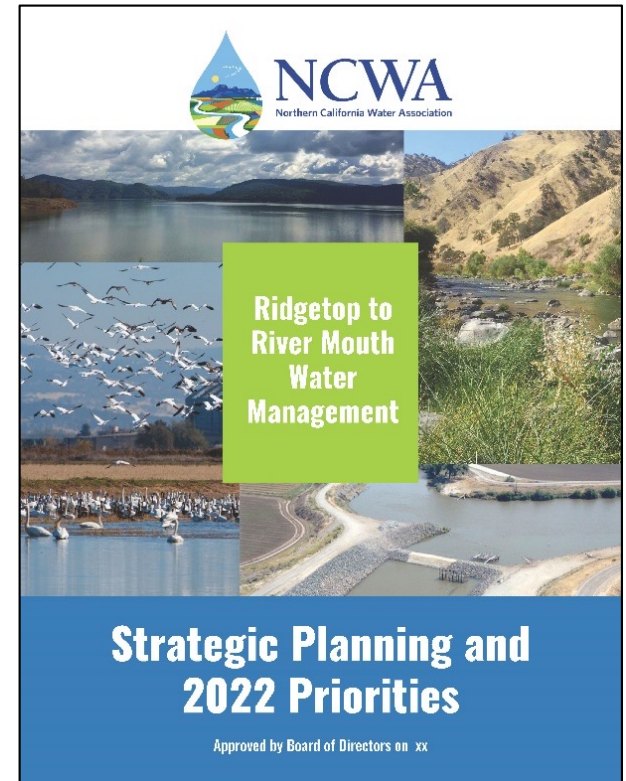
Safe Drinking Water

Successful implementation of sustainable drinking water solutions for local communities is essential to ensure access to safe, clean and affordable drinking water for all Californians.



2022 Strategic Priorities

- A. The Importance of Voluntary Agreements – Fix Rather than Fight
- B. Ridgetop to River Mouth Water Management
- C. Partnerships and Collaboration
- D. Advance Collaborative Science
- E. Secure Funding to Advance the Portfolio





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*Please join us for the
Northern California Water Association's
Annual Meeting*

“Ridgetop to River Mouth Water Management”

March 4, 2022





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California Rice
THE ENVIRONMENTAL CROP

#SourcingOurSustainableFuture:

The Sacramento Valley is sourcing our sustainable future through responsible management of the essential resource that millions of birds, hundreds of thousands of fish, thousands of farms and millions of people all rely on--water.

