

Managing Kings River Resources

Cristel Tufenkjian, Director of External Affairs
Kings River Conservation District
April 5, 2019



Kings River Watershed were it all begins

Originates in the Sierra Nevada around 13,000 feet elevation within Kings Canyon National Park.





flowing downward

As the snow melts it cascades down the mountains into tributaries like the Roaring River that feeds into the South Fork, the best-known branch of the Kings River because of its accessibility as it flows through beautiful Kings Canyon.



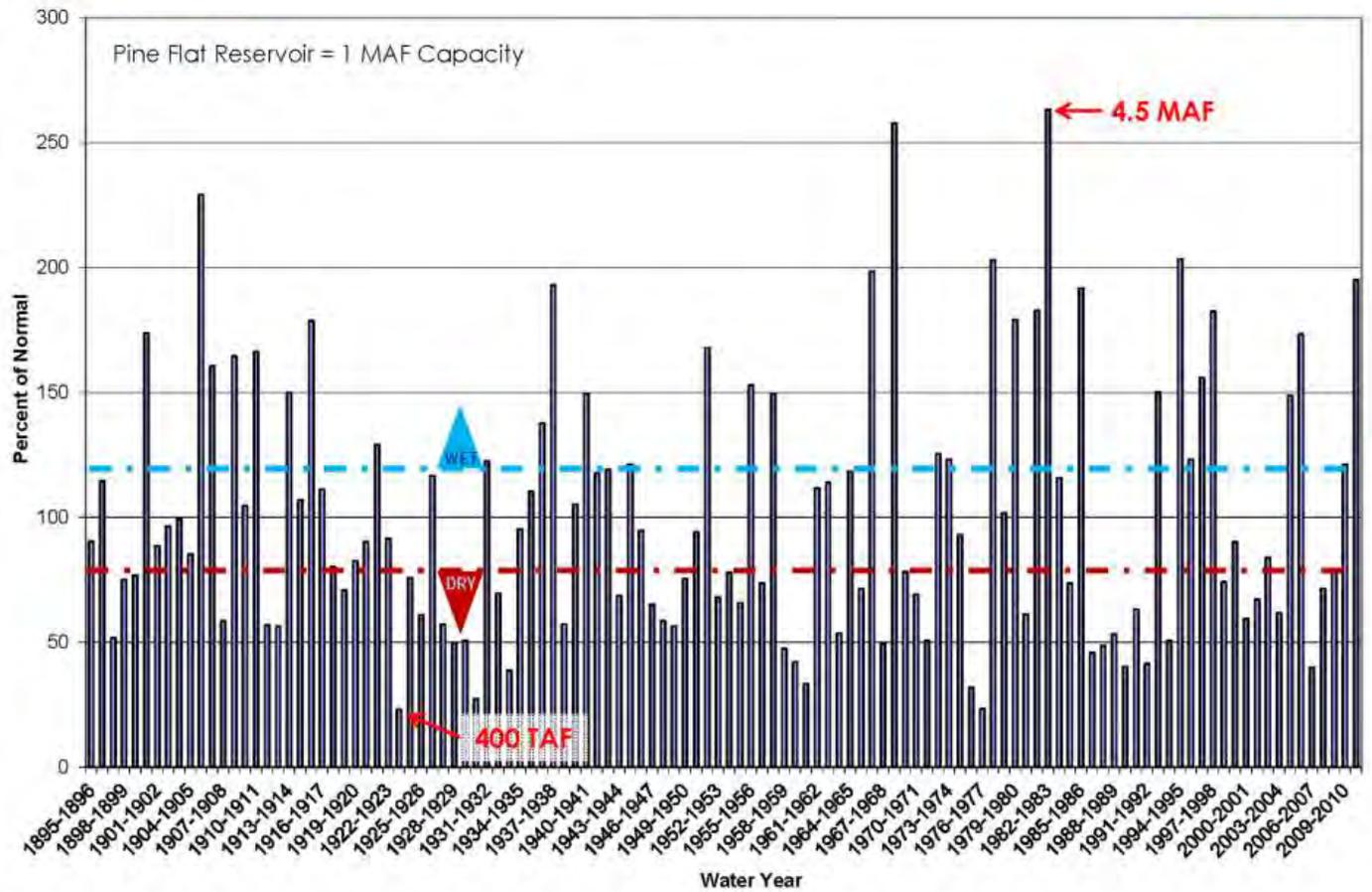
Kings River Runoff starting in 1895

Highly variable

4.5 mill. AF – 263%

360,972 AF – 21%

And every in between



Pine Flat Dam and Reservoir regulating the flows

Built by the Corps of
Engineers

Completed in 1954

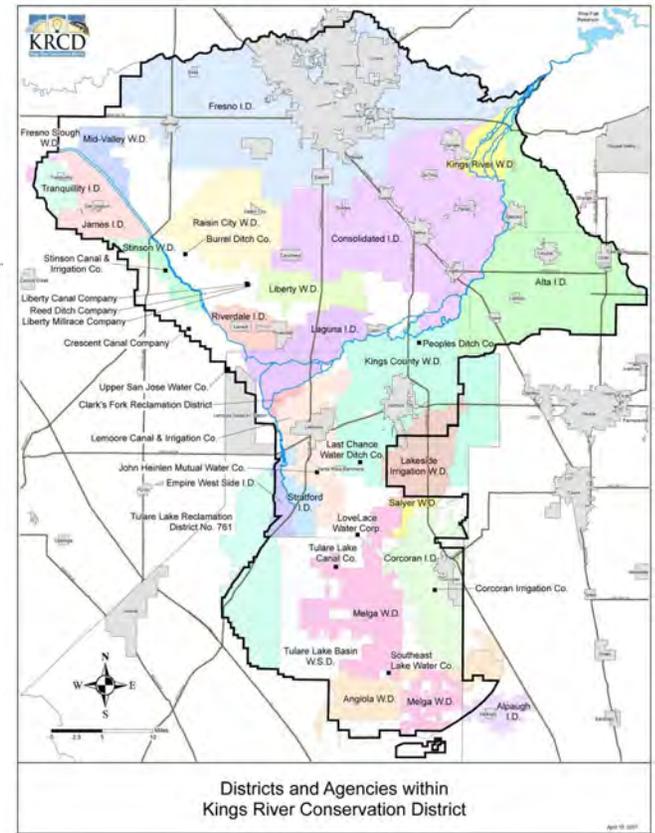
1,000,000 AF capacity



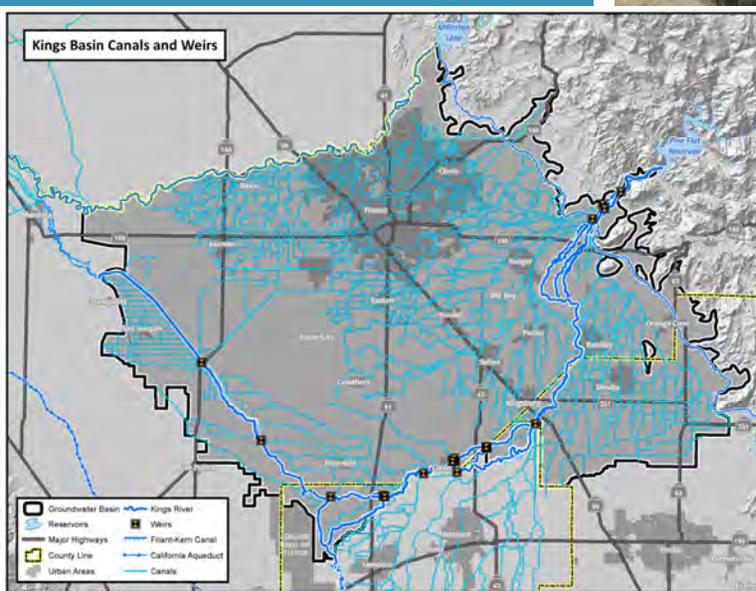
Managing a fully appropriated river

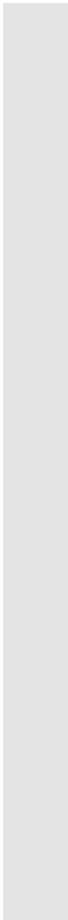


1890 Vineyard



Moving Kings River water through the Valley





Groundwater Management in the Kings River Service Area

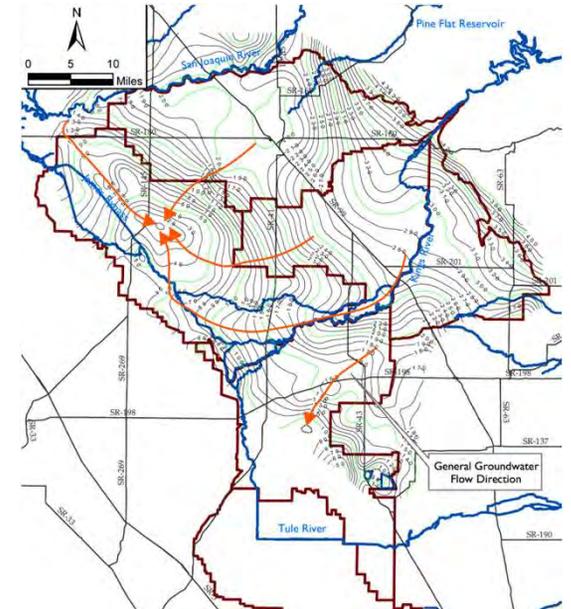
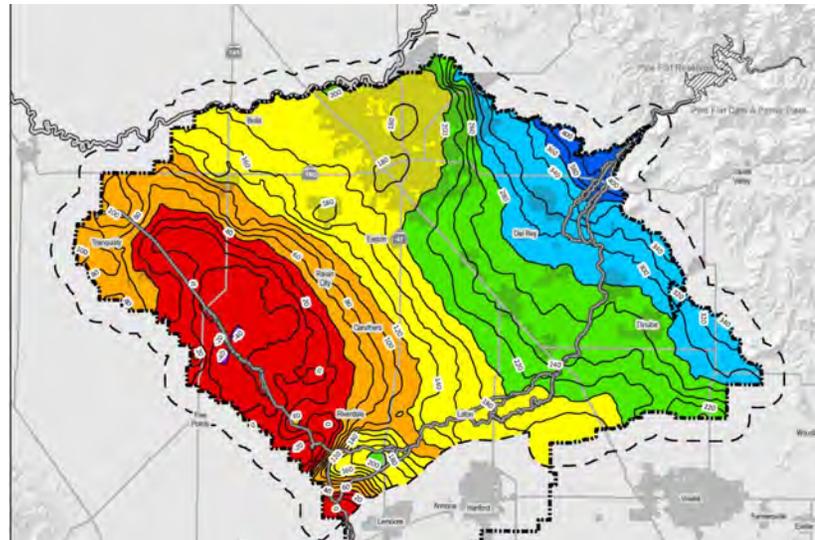
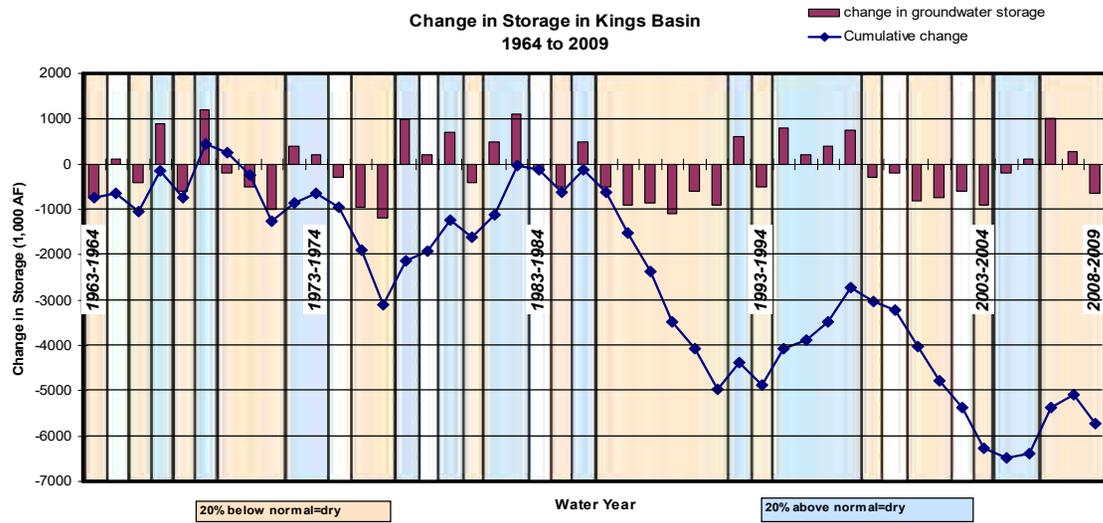
Using data to analyze regional groundwater

Average annual overdraft (1963-2009) approx. 120 acre feet

Largest GW depression located near Raisin City, beyond Kings River place of use

Flows move westerly, drawn to the cone of depression

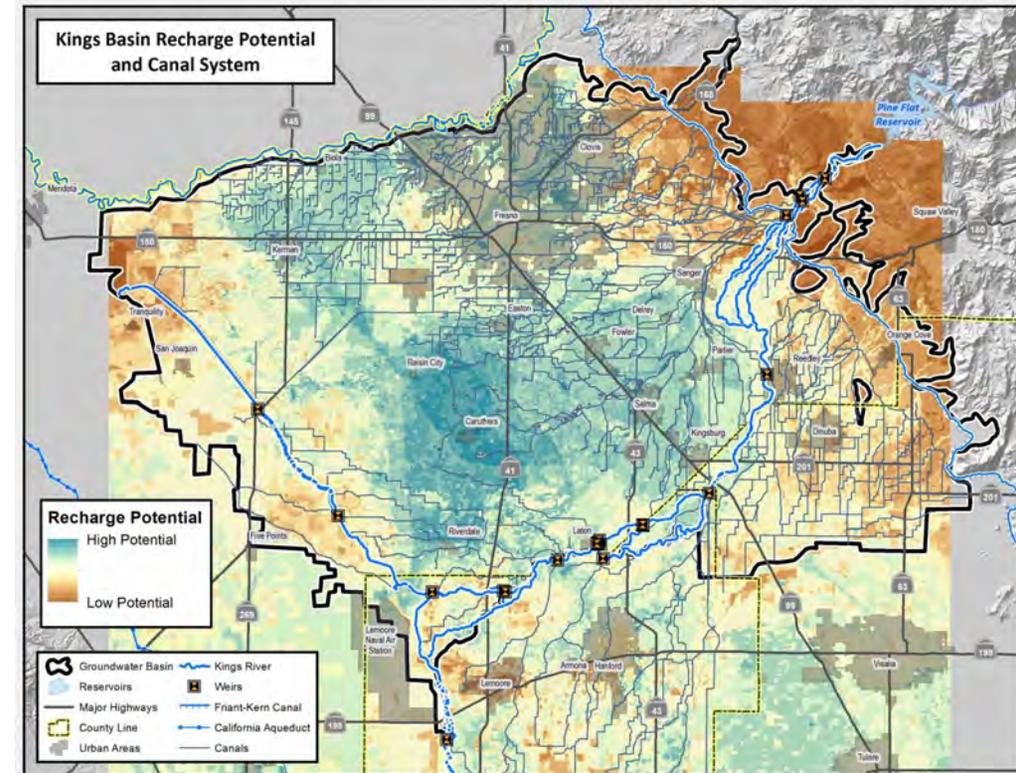
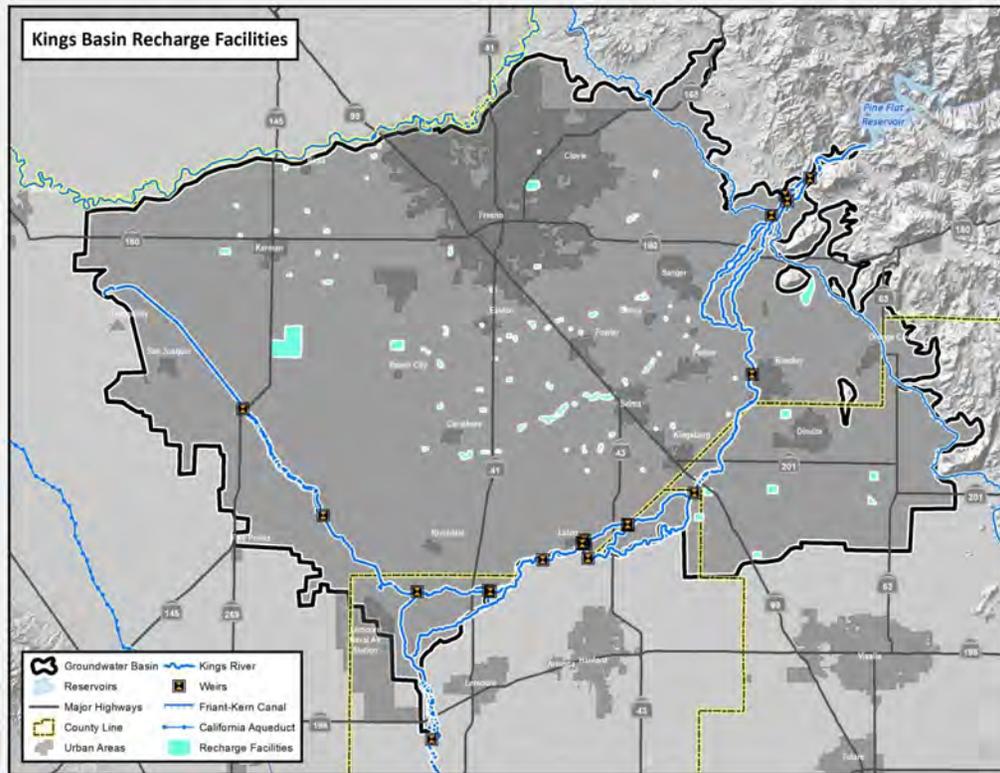
Change in Storage in Kings Basin
1964 to 2009

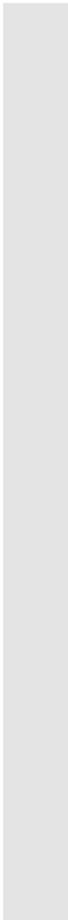


Kings Subbasin



Groundwater Recharge (Flood-MAR) in Kings Subbasin





Water Quality in the Kings River Service Area

Kings DACs

Tulare Lake Basin DAC Water Study

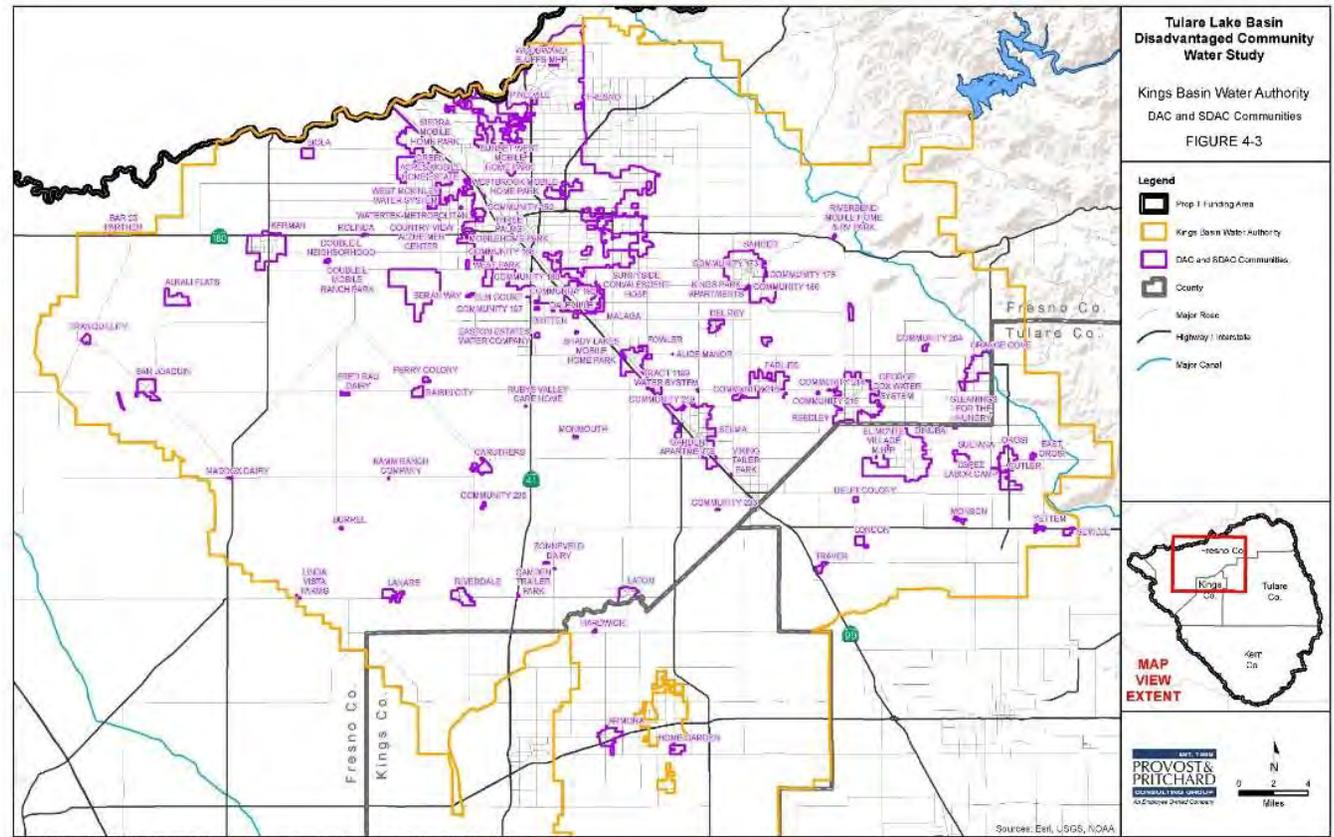
Lack of funding

Lack of technical, managerial, and financial (TMF) capacity

Poor water quality

Inadequate or unaffordable funding to make improvements

Lack of informed, empowered, or engaged residents



1/10/2019 9:11 AM County: 01:369433316707 DAC (rev) Home: 631156 ac/Report/Map/The/ack/Map/Fig 4 - DAC by IFM/CACo - KingsBasinWA.mxd



KINGS RIVER WATER QUALITY COALITION

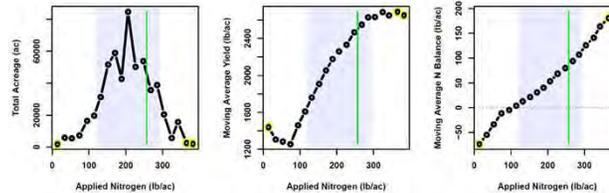
Created by Kings River agencies to support growers in General Order implementation

Requirements

- Farm Evaluation Surveys
- Nitrogen Management Plans
- Nitrogen Summary Reports
- Continuing Education
- Domestic Well Testing*

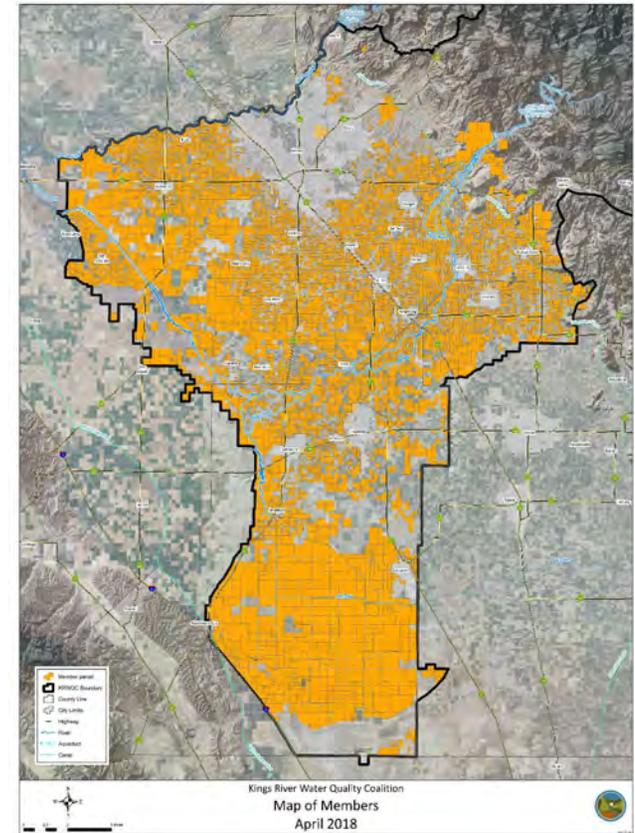
Outcomes

Data collected has given growers new insight into nitrogen use



Solutions

- Construct water kiosks
- Develop Best Management Practices and tools to limit impacts on water quality





10 year stakeholder process

Develop long-term management plan for salts & nitrates

Focuses mostly on groundwater

Assure safe drinking water and sustain agricultural economy

[CV-SALTS video](#)

Irrigated Ag Regulatory Perspective



Porter-Cologne Water Quality Control Act

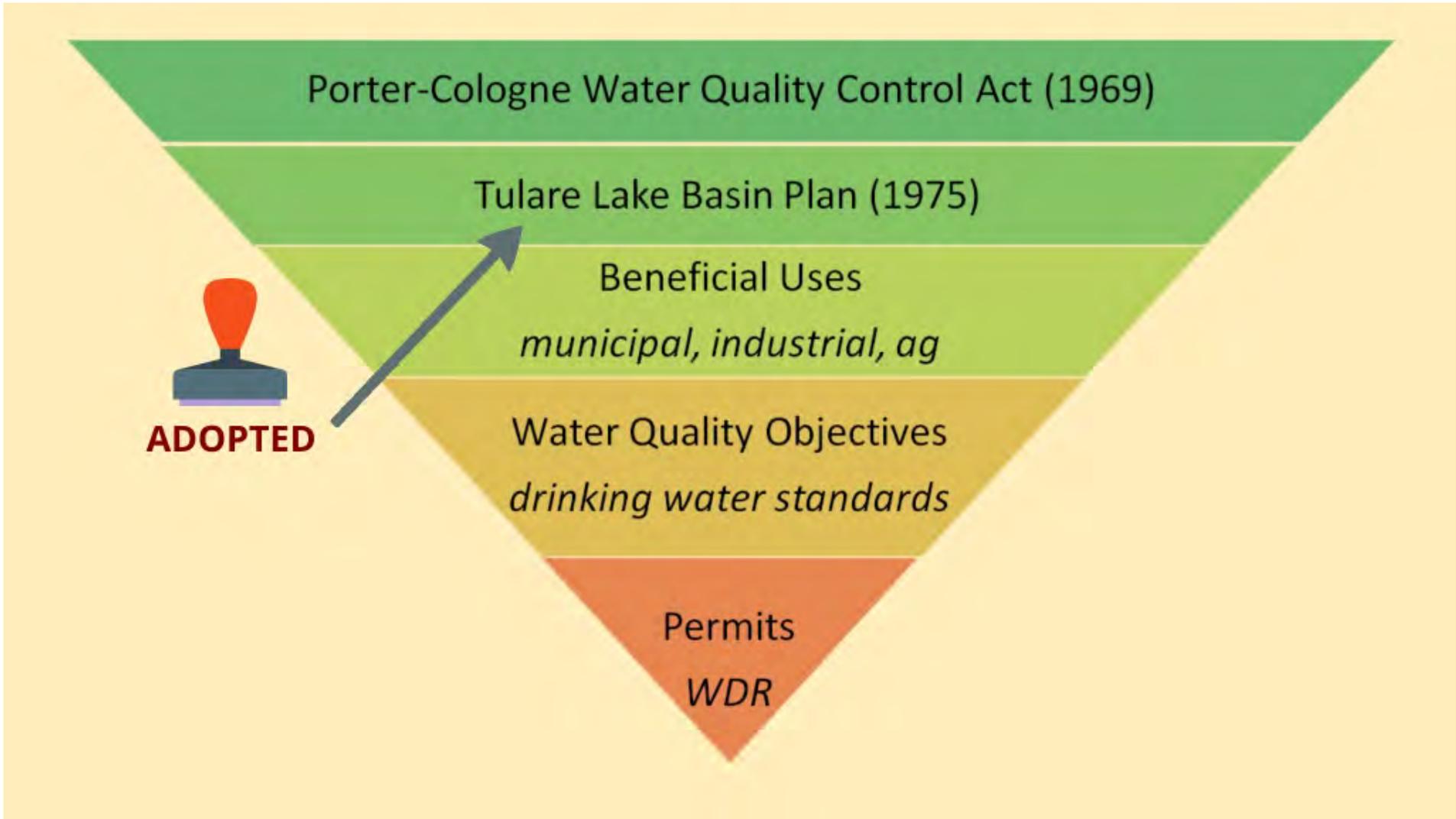
Regional Water Quality Control Boards



Regional
Water
Quality
Control
Plans

Irrigated Ag Regulatory Perspective





Irrigated Ag Regulatory Perspective



suitable for municipal drinking water



water quality
objective attaches



nitrate drinking water standard = 10 mg/L

Irrigated Ag Regulatory Perspective







new agency formed



fees



compliance reporting



required training

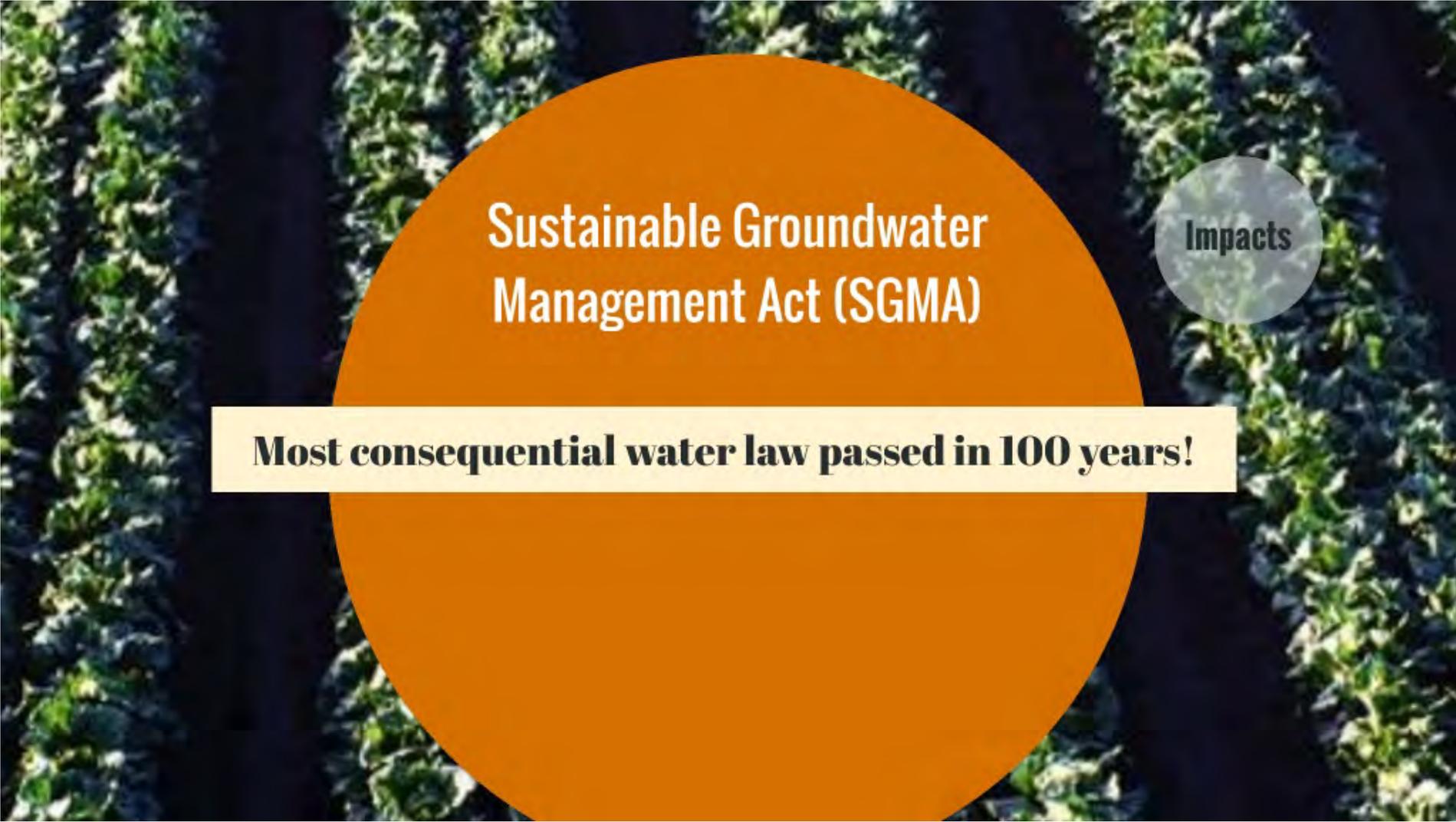


penalties



Irrigated Ag Regulatory Perspective





**Sustainable Groundwater
Management Act (SGMA)**

Impacts

Most consequential water law passed in 100 years!



new agency formed



additional fees



compliance obligations



stakeholder engagement



penalties

Irrigated Lands Regulatory Program

- new agency formation
- additional fees
- compliance reporting
- required training
- penalties



Irrigated Ag Regulatory Perspective







testing requirements



new compliance obligations



additional costs



penalties

SGMA

- new agency formation
- additional fees
- compliance reporting
- stakeholder engagement
- penalties

Irrigated Lands Regulatory Program

- new agency formation
- additional fees
- compliance reporting
- required training
- penalties



Irrigated Ag Regulatory Perspective







Irrigated Ag Regulatory Perspective



Regulatory Impacts

2020 and beyond



three PLANS for each program
three AGENCIES for each program
three FEES and collection methods for each program

same data collected for each program
same monitoring requirements
same local agencies managing each program



KINGS RIVER CONSERVATION DISTRICT

MISSION

ENVIRONMENT

POWER

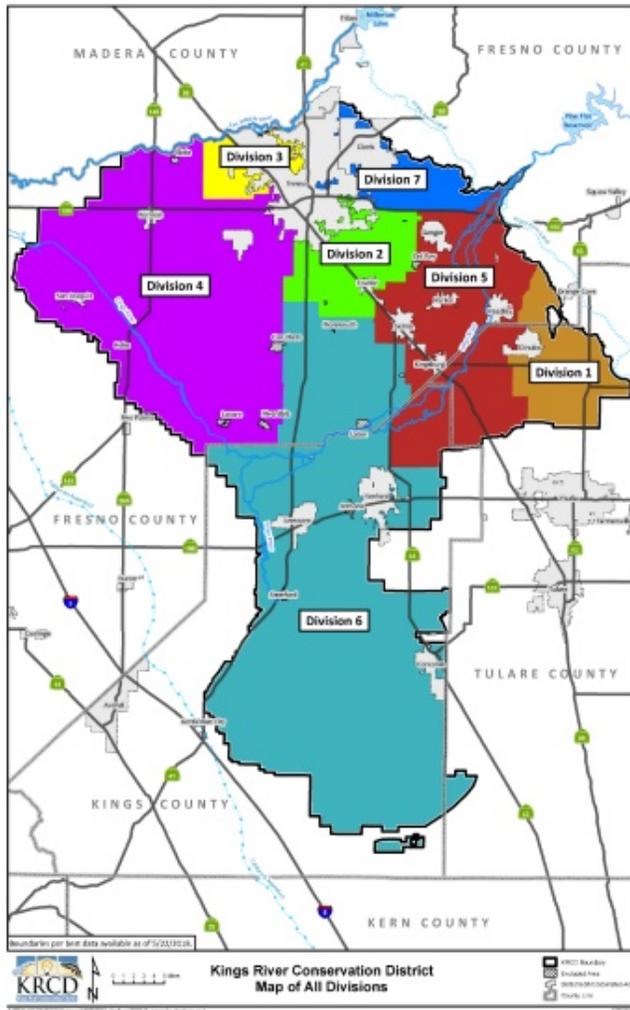
WATER

Rebecca Quist
Public Affairs Associate



MISSION

A leading resource management agency for the **Kings River region** providing flood protection, cooperating with other agencies to achieve a balanced and high quality water supply, providing on-farm support in efficient water practices, and developing power resources for the public good.



Special Act Resources Agency

Established 1951



KINGS RIVER CONSERVATION DISTRICT

MISSION

ENVIRONMENT

POWER

WATER

Rebecca Quist
Public Affairs Associate



WATER

Striving to protect one of our valley's most precious resources, the water of the King's River service area.

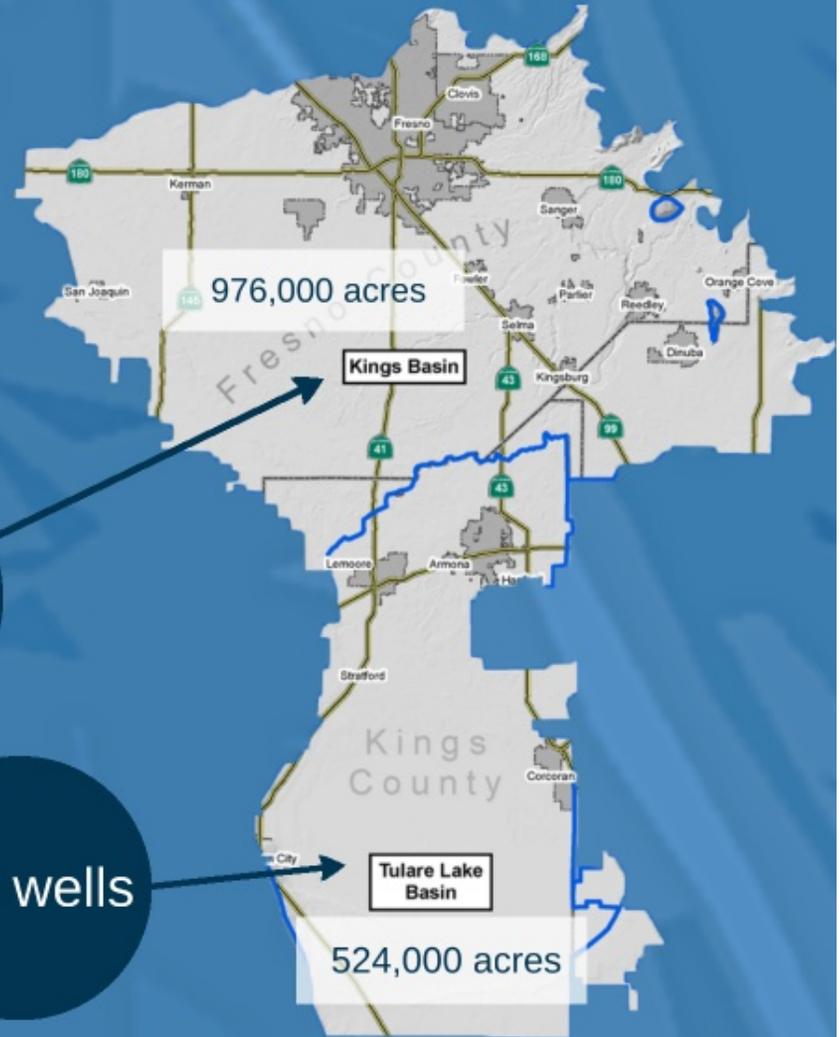
Monitoring

Program
Implementation

Flood
Protection



Monitoring



~90 wells

~30 wells

976,000 acres

Kings Basin

Kings County

Tulare Lake Basin

524,000 acres



Program Implementation



ILRP

Irrigated Lands
Regulatory Program

SGMA

Sustainable Groundwater
Management Act

IRWMP

Integrated Regional
Water Management Plan





Flood Protection

KINGS RIVER CONSERVATION DISTRICT

MISSION

ENVIRONMENT

POWER

WATER

Rebecca Quist
Public Affairs Associate



KINGS RIVER FISHERIES MANAGEMENT PROGRAM

Dedicated to improving and enhancing the lower Kings River watershed and fishery habitat while maintaining its beneficial uses, recognizing that a healthy river is essential to the region's well-being and future quality of life.

Habitat Enhancement

Monitoring

Supplemental Stocking

Scientific Study



California Department of Fish and Wildlife



KINGS RIVER FISHERIES MANAGEMENT PROGRAM

Dedicated to improving and enhancing the lower Kings River watershed and fishery habitat while maintaining its beneficial uses, recognizing that a healthy river is essential to the region's well-being and future quality of life.

Habitat Enhancement

Monitoring

Supplemental Stocking

Scientific Study



California Department of Fish and Wildlife



KINGS RIVER CONSERVATION DISTRICT

MISSION

ENVIRONMENT

POWER

WATER

Rebecca Quist
Public Affairs Associate



JEFF L. TAYLOR PINE FLAT POWER PLANT

Built, owned, and operated by KRCD, Pine Flat Power Plant has generated renewable clean energy to the CA DWR State Water Project since 1984.

1 million
AF
reservoir

165,000
kW
capacity

420
million
kWh
annually

KINGS RIVER CONSERVATION DISTRICT

MISSION

ENVIRONMENT

POWER

WATER

Rebecca Quist
Public Affairs Associate

THANK YOU!

 @kingsrivercd

 @kingsrivercd

LinkedIn  [linkedin.com/company/kingsrivercd](https://www.linkedin.com/company/kingsrivercd)

