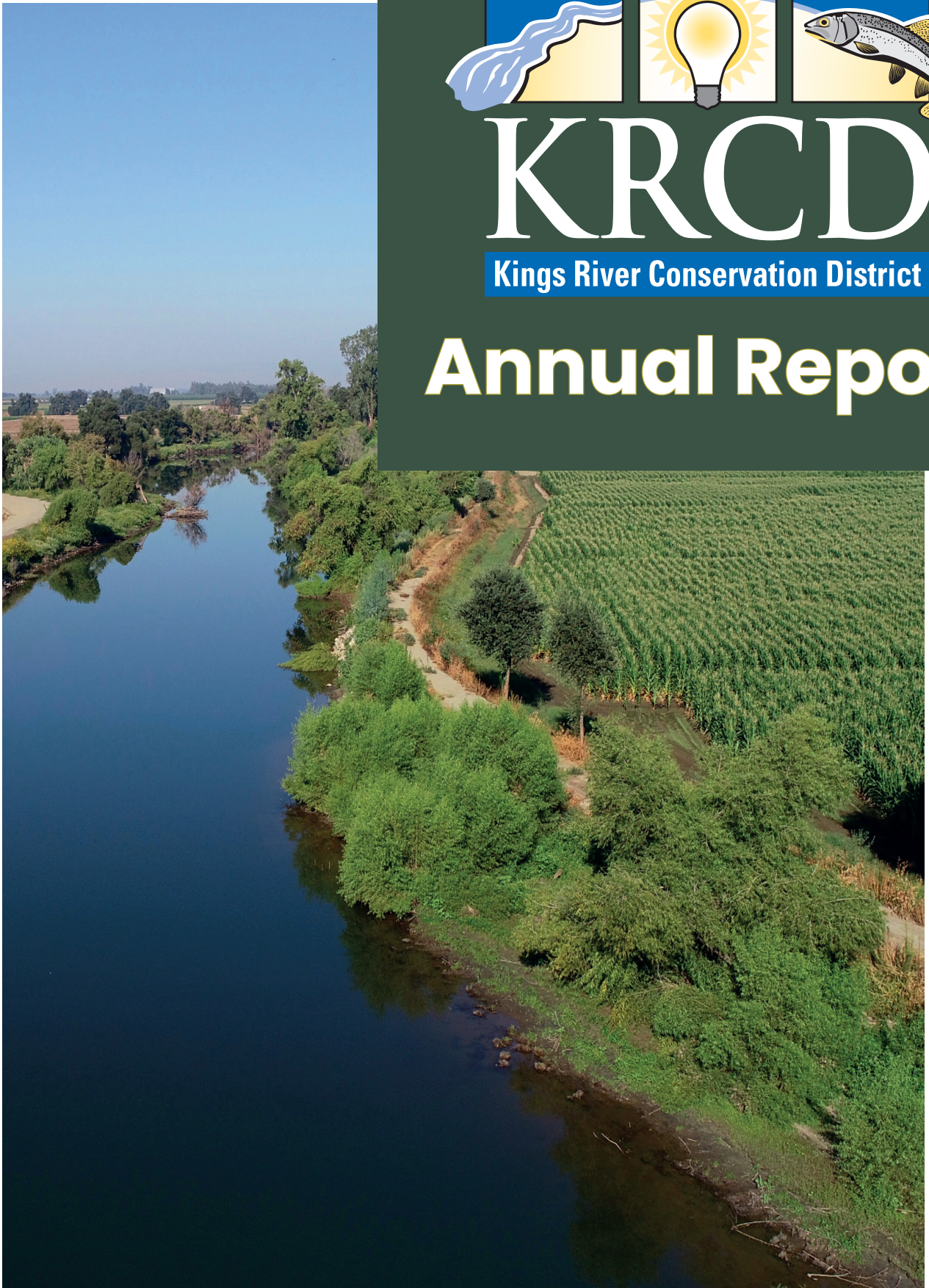




KRCD

Kings River Conservation District

Annual Report



Kings River Conservation District

2023

About Us



1.2 M
Acre Service
Area

140
Miles of Flood
Levees

754
Gigawatts of Carbon-
Free Energy

42
Employees

Our Mission

Responsibly manage the water, energy, and environmental resources entrusted to the District.

Our Vision

Deliver the highest level of customer service and system reliability for the sustained benefit of our stakeholders.

Our Values

Excellence – Achieve a superior level of professionalism, leadership, management, teamwork, safety, and employee growth and development.

Innovation – Create new pathways to solutions that are functional, practical, politically and economically feasible, scientifically sound, and environmentally sensitive.

Integrity – Treat everyone with honesty, respect, and sincerity.



1

About Us

3

Message from GM

4

Directors

5

Water

11

Power

13

Environment

15

External Affairs

17

Financial Report

2

General Manager's Message

Reflecting on the past year, the transformation in the Kings River service area has been truly remarkable. While precipitation expectations were modest entering the 2022/23 water year, we concluded with a historic milestone — the highest recorded runoff in Kings River history, surpassing 4.5 million acre-feet within the watershed. I extend my sincere appreciation to the Flood O&M team for their proactive efforts since the 2017 flood release, culminating in the successful 2023 flood release without any significant issues in the federal flood project.

In addition, the collaborative spirit demonstrated by the US Army Corps of Engineers, Kings River Water Association (KRWA), members, Fresno, Kings, and Tulare Counties, and the support from the State of California through the Office of Emergency Services and the Department of Water Resources have been instrumental to our success with the flood project.

The Jeff L. Taylor Pine Flat Power Plant's achievement of providing 781,710 Megawatt Hours of carbon-free electricity to the Department of Water Resources for the State Water Project in 2023 is a significant accomplishment. Kudos to the power plant team for their dedication, resulting in the fourth-highest generation in 39 years. Progress also continued in advancing the development of a small renewable hydroelectric unit at Pine Flat.

Our commitment to the Fisheries Management Program, in partnership with the California Department of Fish & Wildlife and Kings River Water Association, remains unwavering. The positive feedback from anglers along the lower river, in addition to exceeding stock-

ing commitments, showcases the program's success. Collaborations with local partners like the Kings River Conservancy, including a long-term lease on lower river property and plans to upgrade the Thorburn Spawning Channel, underline our dedication to enhancing recreation and education.

As KRCD continues to oversee state regulatory requirements for salt and nitrate control through the Kings River Water Quality Coalition and Kings Water Alliance, the team's tireless efforts in outreach for rural residential well testing and support for impacted wells are duly recognized.

Looking ahead to 2024, we have numerous opportunities in the works, including the start of our FERC license renewal of the Jeff L. Taylor Pine Flat Power Plant, further development of small hydro at Pine Flat, advancing engineering on raising Pine Flat Dam, ongoing federal flood project improvements, and our relentless focus on water resource activities. I express my gratitude to our dedicated team for their unwavering support, ensuring to our stakeholders, the broader benefits of the Kings River service area.

As always, we encourage our stakeholders to reach out to us with any questions.



Sincerely,

David M. Merritt,
General Manager

2023 Board of Directors



Chris Kapheim

Division 1 - Vice President



Mike M. Yoshimoto

Division 2



Anthony Nonnini

Division 3



Mark McKean

Division 4



D. Paul Stanfield

Division 5- President



Ceil Howe, Jr.

Division 6



Jenifer Marshall

Division 7

Water



Flood Control

A record-breaking wet season led to record-breaking runoff flowing through the Kings River levee system. A series of 12 atmospheric rivers that drenched California from December 2022 to March 2023 produced the highest volume of runoff ever recorded on the Kings River (4,509,100 acre-feet). As a result, there were over 1,214,387 acre-feet of mandatory flood releases from Pine Flat Dam, leading to 74 consecutive days of releases greater than 10,000 cfs (cubic feet/second). This called for 24-hour flood patrols on the 140 miles of levees that make up the Kings River Flood Project. The flood patrols conducted by KRCD's Flood Operations and Maintenance team, other available KRCD staff, and contracted help, started February 23rd and continued for 152 days.

Though the volume of water flowing through the Kings River Flood Project was extreme, there were no levee breaks during the flood release season. This was due to a variety of factors including strategic coordination between Kings River Water Association, U.S. Army Corps of Engineers, Fresno, Kings and Tulare County Offices of Emergency Services, State and Federal agencies, weir operators,



and local landowners. This all-hands-on-deck collaboration helped ensure safety of residents and recreational users by keeping the Kings River closed to the public until August 1st.

Extremely wet years like this one are what KRCD's Flood O&M Division prepare for. With the help of grants in previous years leading up to this record-breaking year, the Flood O&M Division was able to work on multiple projects to increase the efficiency of conveyance of water in the Kings River Flood Project. One project completed at the end of 2022 paid dividends in 2023. The Empire Pool 1 Sediment Removal Project removed 118,100 cubic yards of sediment over 18 acres from the pool in



the South Fork of the Kings River. Removal of invasive vegetation and trash throughout the Kings River Flood Project continued in 2023, thanks to the two State of California Proposition 68 grants awarded to KRCD.

After the end of the flood season, the Flood O&M Division resumed its work to improve the channels and levees. The flood O&M team also resumed the Prop. 68 grant work removing invasive vegetation and trash. In 2023, much staff time was dedicated to debris and sediment removal within the channels. This, along with levee mowing and spraying herbicides on invasive vegetation, were prioritized to get ahead of the growth from the heavy rainfalls earlier in the year. Other critical Flood O&M projects included repairing levee sloughing, strengthening sections where excessive seepage occurred, and correcting erosion concerns along levees of the Kings River Flood Project.



 **4,509,100 acre-feet**
of record-breaking Kings
River runoff

 **7,599 person hours and**
152 days
spent on 24/7 levee flood patrols

 **118,100 cubic yards**
of river sediment removed

Water

Kings Basin Water Authority



The Kings Basin Water Authority (KBWA), administered by KRCD, is a collaborative group of nearly 60 local public, private, and nongovernmental agencies whose purpose is to manage water resources in the Kings Groundwater Subbasin. In the spring of 2023, the KBWA was awarded funding from the California Department of Water Resources' Proposition 1 Round 2 Integrated Regional Water Management Implementation Grant for three multi-benefit projects:

Project 1

Source Monitoring and Control with Nitrate Analyzer: Bakman Water Company received \$302,901 to install in-line nitrate analyzers on four to seven residential drinking water wells in their service area. The nitrate analyzers will be used to monitor water quality during times of seasonal nitrate fluctuations. This project will provide a direct benefit to the disadvantaged community served by Bakman Water Company.

Project 2

Kenneson-Sanchez Recharge Basin: Fresno Irrigation District received \$1,551,976 to enhance groundwater supplies in the Fresno County region by converting 47 acres of vineyards to a recharge basin that will provide an estimated 960 acre-feet of annual recharge benefit.

Project 3

City of Parlier Flood Control & Groundwater Banking Project – Phase 1: The City of Parlier received \$4,364,386 to retrofit three existing stormwater retention basins to increase their storage capacity and serve as groundwater recharge basins that will result in 41 acre-feet increase in capacity for storing stormwater and capturing surface water for recharge. This project will provide a direct benefit to a disadvantaged community and will help the City of Parlier meet their requirements under the Sustainable Groundwater Management Act (SGMA).



Fresno Irrigation District's Kenneson-Sanchez Recharge Basin Project under the Prop 1 Round 2 IRWM Implementation Grant.



Representatives from Bakman Water Company, City of Parlier, and Fresno Irrigation District with the IRWM ceremonial check.



KBWA was highlighted in California Department of Water Resources' video on the 20th Anniversary of the Integrated Regional Water Management Act of 2002.

Water

Kings River Water Quality Coalition



KRCD staff administer the Kings River Water Quality Coalition (KRWQC), a non-profit joint powers agency established by growers in the Kings River service area to help the region comply with Central Valley Regional Water Control Board water quality regulations. In 2023, the KRWQC represented 3,414 members and over 680,000 irrigated acres.

Wet conditions during the first half of the year led to KRCD staff performing surface water sampling at KRWQC's nine monitoring sites including Cross Creek, a new site added in Kings County. KRCD staff also performed groundwater sampling in the summer for 46 of the 48 wells in the groundwater quality trend monitoring well network. As a representative for its members, the KRWQC is responsible for surface and groundwater monitoring, technical reports, management practices evaluation, trend analysis, member reporting, and assistance with on-farm inspections.

The KRWQC also actively pursued grants on behalf of growers in 2023.



Kings Water Alliance



In response to the State's Central Valley Salinity Alternatives for Long-Term Sustainability's (CV-SALTS) Nitrate Control Program requirements, the Kings Management Zone was formed in 2021. Today, it is known as the Kings Water Alliance, a non-profit community benefit organization administered by KRCD. During 2023, Kings Water Alliance continued to promote free well testing for nitrates and bottled water delivery program for people who rely on rural residential water wells. In 2023, approximately 350 well tests were performed and, cumulatively since program inception in 2021, approximately 500 households receive bi-weekly bottled water home delivery.



350 private well tests performed



500 households receiving bottled water



64 outreach events attended

The Kings Water Alliance also submitted its Kings Priority 1 Management Zone Implementation Plan (MZIP) to the Central Valley Regional Water Quality Control Board on September 5, 2023. The MZIP outlines short and long-term drinking water solutions for

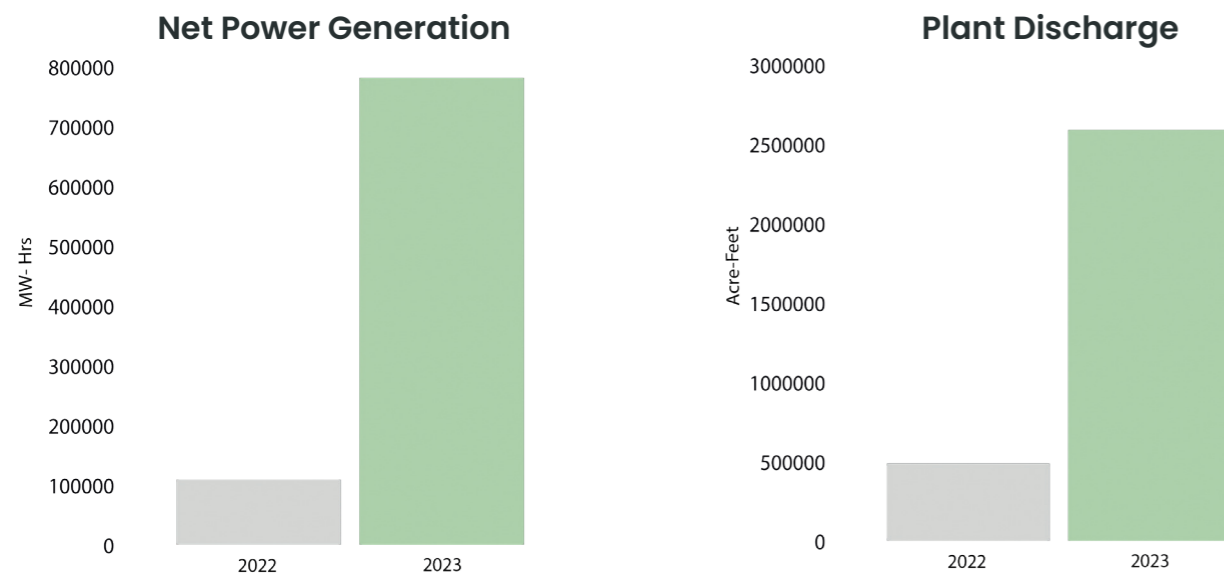
rural residents with unsafe levels of nitrates in their drinking water wells and a nitrate reduction program for dischargers in the Priority 1 area of the Kings Water Alliance boundary.

Other Kings Water Alliance activities included hosting eight community meetings, four of which were highly attended back-to-school events focused on educating families about well contamination and resources for safe drinking water. The Kings Water Alliance also continued to pursue multiple grant opportunities. Lastly, in late December 2023, Notices to Comply with the Nitrate Control Program were sent out to dischargers in Priority 2 area of the Kings Water Alliance. Program outreach work in the Priority 1 area will continue to expand and improve and work in the Priority 2 area begins.

Power

Jeff L. Taylor Pine Flat Power Plant

Power generation by the Jeff L. Taylor Pine Flat Power Plant in 2023 reached top-5 annual performance totals. Thanks to the historic runoff from the 2022/2023 Water Year, the Power Plant saw a huge increase in water available to produce power compared to the dry conditions in the previous year. In 2022, the total amount of water discharged through the Power Plant totaled 488,535 acre-feet, while in 2023, the amount of water discharged through the Power Plant was over five times that amount totaling 2,717,976 acre-feet. As a result, the Power Plant produced a net power generation total of 781,710 Megawatt Hours (MWhrs). This is a 672,655 MWhrs increase from 2022's total power generation. All of the power generated was purchased by the California Department of Water Resources to operate the State Water Project's pumping facilities.



On top of a productive year of carbon free power generation, the Jeff L. Taylor Pine Flat Power Plant made steps toward increasing its renewable energy capacity. In May of 2023, the Federal Energy Regulatory Commission (FERC) issued an amendment to the existing Pine Flat license to include a new 6.3 MW hydro unit (Unit 4) on the bypass that would be used when flows are too small to turn the larger units on. In December of 2023, KRCD awarded the Unit 4 equipment supply to a turbine equipment manufacturer. KRCD staff and consultants also worked on the Unit 4 project design which is expected to be completed by the end of the first quarter of 2024.



Environment

Kings River Fisheries Management Program

The Kings River Fisheries Management Program (KRFMP) is a cooperative effort between the Kings River Water Association, the California Department of Fish and Wildlife, and KRCD to enhance the lower Kings River watershed and fishery habitat. To ensure a sustainable fishery on the Kings River, the KRFMP completed supplemental stocking of rainbow trout, hatched and reared rainbow trout fry and conducted surveys to monitor the fish population.

Although a series of storms (4.5 million acre-feet of runoff into the Kings River for the 2022-2023 water year) in the earlier part of the year washed silt and mud into the raceways where the rainbow trout are reared inside the Trout Incubator Building, the KRFMP was able to successfully release rainbow trout fry into the Kings River. Between the months of January and April, 242,000 trout eggs were incubated and hatched. When the rainbow trout fry grew to about one inch long, they were released in multiple locations between Pine Flat Dam and Highway 180. Thanks to the volunteers who spent 63 hours assisting with daily care of the rainbow trout fry, an estimated 147,000 were released into the Kings River in 2023.

The KRFMP also provided supplemental trout stocking in the Kings River. Between January and March 2023, 9,650 pounds of catchable rainbow trout were released into the Kings River totaling about 24,433 fish, each weighing an average of 0.39 pounds. Between October and December 2023, 6,550 pounds of catchable rainbow trout were released totaling about 19,140 fish, each weighing an average of 0.34 pounds. Supplemental trout stocking by the KRFMP is to enhance the trout population in the Kings River.



The annual fall population electrofishing survey was conducted at four of the six survey sites between November 28, 2023, and December 6, 2023. Two of the survey sites were omitted due to inaccessibility and river flow safety concerns. With help from KRCD staff, Kings River Water Association, California Department of Fish and Wildlife, and several volunteers from the public, the KRFMP collected 2,304 fish and analyzed 2,255 fish. The figure on the opposite page breaks down the fish collected in the population survey by species. This survey helped the KRFMP better understand the assemblage, abundance, and condition of the fish community inhabiting the lower Kings River downstream of Pine Flat Dam.

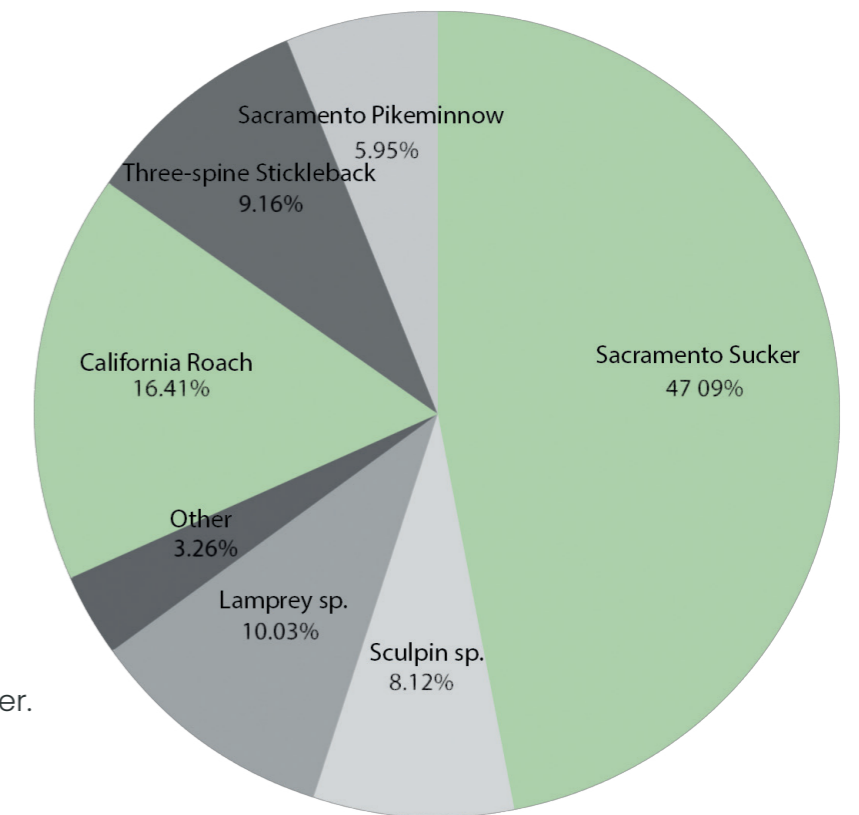
43,573 fish

Between January-March, the KRFMP stocked 24,433 rainbow trout. Between October and December, the KRFMP stocked 19,140 rainbow trout totalling 43,573 fish in 2023.

242,000 eggs

The trout incubator building, located below Pine Flat Dam, hatched 242,000 rainbow trout eggs that were released in multiple locations along the river.

Fall Fish Population Electro-fishing Survey:
2023 Species Composition by Percentage



Kings River Cleanups

The monthly Kings River Cleanups were held in January and February. However, due to flood releases from Pine Flat Dam resulting in high water levels and subsequent river closure, the Kings River Cleanups were paused for several months to ensure the safety of volunteers. The Kings River Cleanups resumed in August 2023 and activities involved picking up trash, removing graffiti, and clearing overgrown vegetation on public trails. Thanks to volunteers, over 88 hours were spent cleaning up the Kings River and 54 bags of trash were collected in 2023. The KRFMP is grateful for its partners: the Kings River Conservancy, the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and the County of Fresno. In 2024, the KRFMP will continue to host Kings River Cleanups every third Saturday of the month. For more information, please visit www.krfmp.org.

External Affairs

Advocacy and Outreach

KRCD's External Affairs team served as the hub for communications, outreach, and legislative advocacy for KRCD and the programs under KRCD's umbrella, and coordinated with Kings River Water Association on shared messaging.

Communicating purpose, responsibilities, and community connections was central to illustrating the value and effectiveness of KRCD and the programs for which it provides support. Target audiences included members of the public, businesses, county and municipal governing bodies, local media, nonprofit organizations, other local government agencies, grant funders, and elected state and federal representatives.

Work included: a rebuild of www.krkd.org, writing and design of social media posts, printed information pieces and mailers, email communications, grant applications, creation of a five-year outreach strategy and work plan for KWA and presence at a range of public events, network building and maintenance of community partnerships, and creation of a KRCD story map to highlight successful completion

and benefit of grant-funded projects.

Legislative advocacy to influence state and federal bills continued in 2023 and required consistent coordination with other local organizations and legislative consultants. KRCD was recognized by the Association of California Water Agencies (ACWA) at its Fall Conference as the Region 6 leader in State legislative advocacy through consistent outreach to State legislators. The first year of the 2023/2024 California regular legislative session produced a series of aggressive bills that threatened farming and water supply through drastic changes to the state's water rights allocation and enforcement system, expand the purposes of the Sustainable Groundwater Management Act (SGMA), target well drilling permit authority, and add new executive branch intervention into groundwater adjudication proceedings.

Funding advocacy in 2023 included seeking grant funding and communicating funding needs to state and federal elected representatives. KRCD program priorities highlighted included levee improvements, river sediment removal, invasive plant

species removal, and hydroelectric power generation. Grant funds were pursued for design and construction of a fourth power generation turbine at the Jeff L. Taylor Pine Flat Power Plant, and

Pine Flat Hydropower Unit 4

Addition of a fourth hydroelectric generating unit at the Pine Flat Powerhouse to expand renewable energy sources.



Levee System Improvements

Invasive plant species removal, tile line interceptors and pump station installation, levee crown improvement, and exploration of expanded sediment removal and use.



Airborne Snow Surveys

Critical to water supply forecasting. Snowpack analysis allows water managers to mitigate flood risks, plan for swings in water supply, and put surplus water to beneficial use.



Pine Flat Dam Raise

Twelve-foot raise to increase storage capacity in Pine Flat Reservoir to increase flood protection, drought resilience, water supply reliability, and hydropower generation capability.



Financial Statements

2022/2023 Fiscal Year

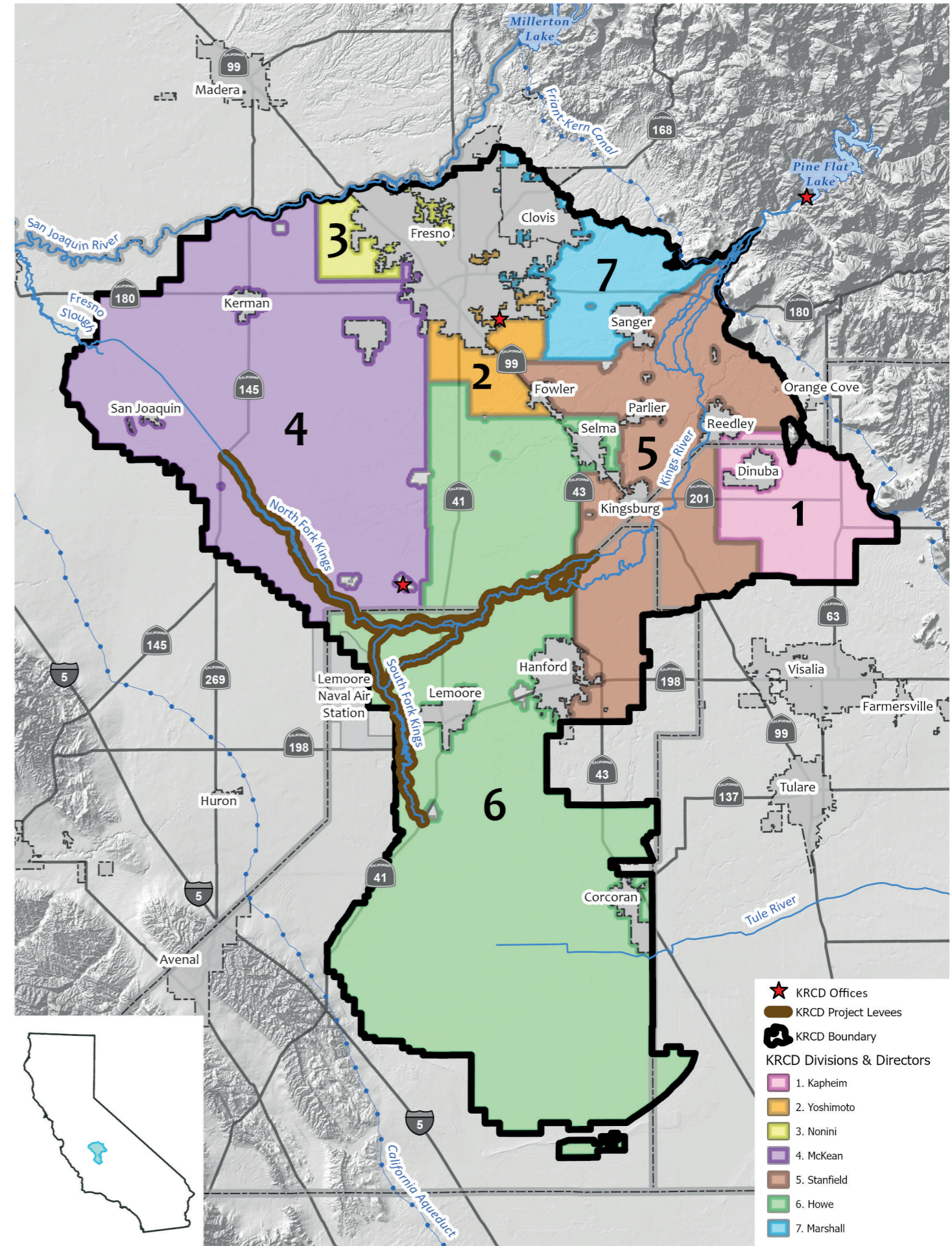
Sources of Funds

Pine Flat Power Benefit	\$1,764,244
Pine Flat O&M	\$10,223,956
Fiscal Agent, Program Coordinator Reimbursements	\$1,285,643
Other Revenue	\$2,519,541
Grant Revenue	\$1,612,544
Taxes, Subventions and Abatements	\$1,529,313
Interest Income	\$765,637
Total	\$19,700,878

Uses of Funds

General and Administrative	\$2,463,041
Pine Flat O&M	\$9,634,488
Grant Expenditures	\$1,812,793
River Maintenance	\$2,024,380
Capital Improvements	\$270,759
Water, Power Resources Development	\$2,257,514
Total	\$18,462,975

KRCD Division Map





4886 East Jensen Ave.
Fresno, CA 93725

(559) 237-5567
www.krcd.org

2023 Annual Report