

**STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD**

**In the matter of:
July 17, 2020 Water Quality Certification For Federal Permit Or License
for Yuba County Water Agency
Yuba River Development Project (FERC No. 2246)**

**YUBA COUNTY WATER AGENCY'S PETITION FOR
RECONSIDERATION OF JULY 17, 2020 WATER QUALITY
CERTIFICATION FOR FEDERAL PERMIT OR LICENSE**

Appendix F

**TECHNICAL MEMORANDUM ON
YUBA COUNTY PROFILE AND ROLE OF YUBA COUNTY WATER
AGENCY IN SUPPORTING DISADVANTAGED COMMUNITIES**

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APPENDIX F

TECHNICAL MEMORANDUM ON YUBA COUNTY PROFILE AND ROLE OF YUBA COUNTY WATER AGENCY IN SUPPORTING DISADVANTAGED COMMUNITIES

1.0 SUMMARY AND CONCLUSIONS

This technical memorandum details the role of Yuba County Water Agency (Yuba Water) in supporting essential public safety, economic and social programs and projects in Yuba County where more than half of the people live in communities characterized as disadvantaged. As demonstrated in the other technical memoranda and supporting materials submitted with this memorandum, implementation of the July 17, 2020 water quality certification issued by the State Water Resources Control Board's Executive Director could have significant impacts on many Yuba Water operations, including those that generate revenue to support the Yuba Water program discussed in this memorandum.

In the last three fiscal years alone, Yuba Water has contributed \$15.4 million in grant funding and \$36.6 million in low-interest loans that directly support public safety, flood risk reduction and economic development in a region hit hard by flooding in the 1980s and 1990s. The resulting economic fallout of this certification would bring significant public safety, economic and social harm to Yuba County's working families and deprive vulnerable, disadvantaged communities of one of the only local funding sources available to leverage state and federal programs.

2.0 ESTIMATED ECONOMIC IMPACT OF JULY 17, 2020 WATER QUALITY CERTIFICATION

Yuba Water estimates that the actual costs and financial impacts resulting from full implementation of the water quality certification would exceed \$1 billion. This is based on reasonable estimates of lost hydroelectric power generation, lost water-supply transfer revenue and potential costs associated with providing fish passage above the U.S. Army Corps of Engineers Englebright Dam (Table 1). As discussed in the attached Calculation of Projected Lost Water Transfer Revenues, the estimate of \$291 million in lost revenues is based on the amounts Yuba Water has received for water transfers under the Lower Yuba River Accord, projected for a 50-year FERC license term. This estimate is based on the potential effect on transferable water described in Appendix B.

Hydroelectric revenue loss	Water transfer revenue loss	Fish passage cost
\$195 million	\$291 million	\$624 million
Total estimated losses: \$1.1 billion		

Yuba Water’s best estimate of hydroelectric revenue loss is \$195 million in 2020 dollars over a 50-year term of a new license for its hydroelectric project. (See Appendix B1 submitted with this memorandum).¹ Combined with an additional \$291 million in projected water supply transfer revenue losses, Yuba Water estimates \$495 million in total revenue loss alone, which is very conservative because it also does not account for inflation over a 50-year license term. Yuba Water’s best estimate of the cost of a sustainable, long-term fish-passage program is \$624 million in addition to the estimated \$495 million in losses. (See Appendix A submitted with this memorandum.)

3.0 YUBA COUNTY DEMOGRAPHICS

Community Name/Census Tract ²	Population	Est. median household income ³	% below poverty line
Marysville (401)	4,727	\$ 37,008	33.44
Marysville (402)	7,899	\$ 51,594	25.27
Linda (403.01)	3,505	\$ 21,192	44.09
Linda (403.02)	2,129	\$ 35,454	37.99
Linda (403.03)	6,878	\$ 63,264	15.34
Olivehurst, Arboga (404)	5,106	\$ 30,846	44.46
Olivehurst (405)	4,253	\$ 39,156	29.55
Olivehurst (406)	5,913	\$ 48,564	16.13
Plumas Lake (407)	12,604	\$ 76,314	9.05
Wheatland (408)	4,176	\$ 73,296	15.9
Smartsville (409.1)	3,282	\$ 61,056	21.76
Beale Air Force Base (409.02)	1,690	\$ 41,856	11.88
Loma Rica, Browns Valley (410)	6,988	\$ 91,560	10.5
Dobbins, Challenge (411)	7,290	\$ 54,234	27.85
California ⁴	-	\$71,228	12.8

Yuba County is home to approximately 75,493⁵ people, who live and work across 632 square miles of land that stretches east from the Feather River to the slopes of the Western Sierra. Marysville and Wheatland are the County’s only two cities, with the majority of the County’s remaining population living in the census-designated communities of Arboga, Beale Air Force Base, Camptonville, Challenge, Brownsville, Dobbins, Linda, Loma Rica, Olivehurst, Plumas Lake and Smartsville.

More than half of Yuba County’s census-designated communities are considered disadvantaged under Water Code §79505.5(a), that is, communities with an annual median household income less than 80% of the statewide annual median household income, or \$56,982.⁶ The average estimated median household income in Yuba County is \$51,813,

with nearly 25% – twice the state average – of the County’s total population living below the poverty line. In Linda and Olivehurst, nearly 50% of people live below the poverty line, which is four times higher than the state average (Table 2, Map 1).

¹ Because the modeling of YRDP operations that generated this estimate included implementation of the WQC’s Condition 6, there is some overlap in this estimate with the estimate stated in the preceding paragraph.

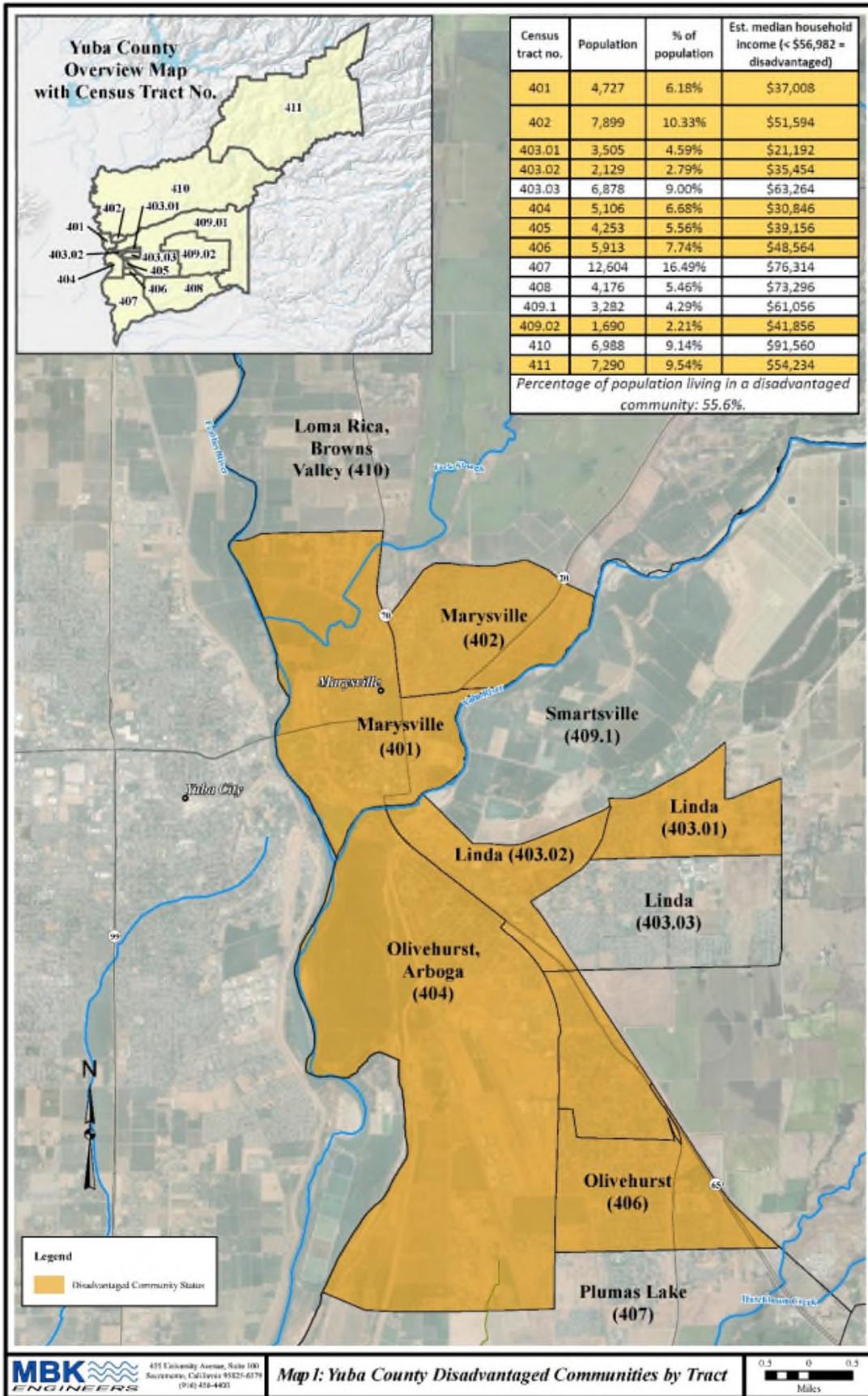
² [U.S. Bureaus of Census, Labor Statistics, and Economic Analysis](#), July 2020.

³ U.S. Census Bureau American Community Survey, [Estimated Median Household Income, 2018 \(California\)](#), Calculations generated by StatsAmerica, Federal Financial Institutions Examination Council, July 2020.

⁴ U.S. Census Bureau, [Median household income \(in 2018 dollars\), 2014-2018 \(California\)](#), July 2020.

⁵ U.S. Census Bureau, American Community Survey, [2014-2018 ACS 5-Year Data Profile Yuba County](#), July 2020.

⁶ California Department of Water Resources Division of Integrated Regional Water Management, [2019 Integrated Regional Water Management Grant Program Guidelines](#).



Yuba County’s ethnic distribution is White (non-Hispanic) 53.80%, Hispanic 28.36%, Asian (non-Hispanic) 7.11%, multiracial (non-hispanic) 4.88%, Black (non-Hispanic) 3.91%, American Indian (non-Hispanic) 1.55%, Pacific Islander (non-Hispanic) 0.37%, and Other (non-Hispanic) 0.03%.

4.0 EDUCATION AND EMPLOYMENT

Educational attainment for Yuba County shows about 15.5% of the population 25 to 64 years of age with at least a bachelor’s degree, which is less than half the proportion for both California and the U.S. The majority of Yuba County’s population has completed high school and/or some college, with no degree (56.1%).

The unemployment rate in Yuba County was 6.6% as of August 2019, which is higher than the seasonally-adjusted rates for both California (4.1%) and the U.S. (3.8%). Between 2008 and 2018, Yuba County’s job base increased from about 17,100 to 17,900 positions, with a compound annual growth rate of 0.5%, which is less than half of the statewide growth trend of 1.1% during the same period.⁷ Yuba County’s pandemic-era unemployment rates rose to 14.8% in June 2020.⁸

5.0 ECONOMIC DEVELOPMENT CHALLENGES

One of the important fiscal and economic development issues for Yuba County is the fact that it fails to capture a commensurate share of taxable sales from its population, business community, and tourism. Yuba County ranked next to last in per capita taxable sales in 2017, compared to other counties in the Sacramento Valley and foothill areas. In contrast, neighboring Sutter County ranks near the top of the list, and even above the state average.⁹

While more than half of Yuba County’s budget is supported by intergovernmental revenues from federal, state and local agencies, property tax is the single largest tax revenue for the county. The total assessed value for property in Yuba County in 2019-20 is \$6.2 billion, of which \$737 million is in Marysville (11.9%) and \$294 million (4.7%) is in Wheatland. The County receives just under 20% of the property tax paid in Yuba County. School districts, cities and other taxing agencies receive the other 80%.¹⁰

6.0 YUBA WATER AS A VITAL REGIONAL PARTNER

Yuba Water is a stand-alone public agency governed by a board of seven elected officials to serve the people of Yuba County. Established by a special act of the California State Legislature in 1959 after flooding from the Yuba, Feather and Bear rivers devastated local communities, Yuba Water’s primary missions are flood risk reduction, water supply reliability, fish habitat protection and enhancement, hydroelectric generation and recreation at New Bullards Bar

⁷ Yuba-Sutter Economic Development Corporation, [Yuba County Demographics, Consumer Expenditures and Labor Force](#), July 2020.

⁸ U.S. Bureaus of Census, Labor Statistics, and Economic Analysis, [Yuba County Census Tract American Community Survey 2018](#), July 2020.

⁹ Applied Development Economics, Inc. based on data provided in Dean Runyan Associates, California Travel Impacts, 2010-2018, April 2019.

¹⁰ [Yuba County Fiscal Year 2019-20 Proposed Budget](#).

Reservoir. In section 26 of the 1959 Yuba County Water Agency Act, the Legislature made the following findings:

The Legislature hereby finds that water problems in the County of Yuba require countywide water conservation, flood control and development of water resources; that all land within the county will be benefited thereby; that the solution of these problems lies within and is peculiar to the area to be included in the Yuba County Water Agency; that the county for many years has made investigations and engineering surveys of the county's water resources by private, public and United States engineers; that county water districts, municipalities, irrigation districts and reclamation districts now exist within portions of the county, have acquired property and works, developed a limited water supply, and have incurred indebtedness, but have been and are unable alone to economically develop an adequate water supply and control the floods of said county, and for such reason it is necessary to have a political entity at least coextensive with the geographical limits of the entire county. It is therefore hereby declared that a general law cannot be made applicable to said county, and that the enactment of this special law is necessary for the conservation, development, control and use of said water for the public good and for the protection of life and property therein.¹¹

Yuba Water plays a major role in flood risk reduction for Yuba County by maintaining the only facility that controls flood flows on the Yuba River – New Bullards Bar Dam and Reservoir – and through coordinating and financing additional flood risk reduction projects like levees.

Recognizing that economically-disadvantaged communities are often disproportionately impacted by the environmental effects of planning and project decisions, Yuba Water has proactively worked with local and regional governmental entities to strategically invest in programs and projects that advance Yuba Water's core mission while supporting economic opportunities for the people of Yuba County.

In the last three fiscal years, Yuba Water contributed **\$15.4 million in grant funding** and **\$36.6 million in low-interest loans** that directly support public safety, flood risk reduction and economic development. In 2020, Yuba Water committed to investing an additional \$10 million annually in projects with significant community benefits.¹² In a June 2020 guest view in the *Appeal-Democrat*, Central Valley Flood Protection Board member and Olivehurst Public Utility District Director Mary Jane Griego characterized Yuba Water as an “incredible asset and partner” and its investments as “a game-changer for a community that has been at a disadvantage for far too long.”¹³

Collectively, these investments support Yuba County's disadvantaged communities in real, meaningful ways, as detailed in 6.1-6.4, below.

6.1 Flood Risk Reduction Investments

Yuba County Levee Bond Repayment: After devastating floods in 1986 and 1997 claimed five lives and resulted in an estimated \$764 million in damages¹⁴ and decades of

¹¹ [Yuba County Water Agency Act](#), 1959.

¹² [Yuba County Water Agency Reserves Policy](#), Yuba Water Agency Policy, June 2020.

¹³ *Appeal-Democrat* Guest View: [Once again, Yuba Water Agency invests in our future in a big way](#), Mary Jane Griego, June 10, 2020.

¹⁴ *Paterno v State of California* [No. C013846. Third Dist. Aug 11, 1999].

economic stagnation in Yuba County, Yuba Water became the local cost-share partner for sweeping levee improvements throughout the region. Yuba Water pays \$5.6 million annually in bond debt to cover both Yuba Water and Yuba County's share for major levee improvements and flood risk reduction efforts in the area and will continue to do so through 2034.

Marysville Ring Levee: Yuba Water has played a critical role in securing local, state and federal funding for reinforcement of the Marysville Ring Levee, which reduces flood risk for 12,000 people, an estimated \$1.1 billion in property and assets, Adventist Health and Rideout Hospital (the region's largest and only level-3 trauma services hospital and the 10,000 jobs it supports), State Routes 20 and 70 and two Union Pacific Railroad mainlines. The project exceeds state requirements for 200-year protection by 2025, which lowers flood insurance premiums and ensures permitting for critical new development.¹⁵

Secondary Spillway at New Bullards Bar Dam: A planned estimated \$225 million secondary spillway at New Bullards Bar Dam will improve public safety by substantially reducing flood risk for Yuba County, with a redundant release option that could independently manage Yuba County's 1997 storm of record.¹⁶

6.2 Community Water Projects

Improving and Expanding Water Infrastructure and Groundwater Quality¹⁷: Yuba Water is partnering with the Olivehurst Public Utility District and City of Wheatland to design sustainable regional solutions for water and wastewater services to lower development and operations costs for large portions of the County.¹⁸ The work also protects groundwater quality, which is the primary source of water for approximately 80% of Yuba County residents, and meets Yuba Water's Groundwater Sustainability Plan commitments under the Sustainable Groundwater Management Act.

6.3 Education and Workforce Development

Water Education Curriculum and Watershed Experience Center: One impediment to attracting labor and expanding Yuba County's housing market is the local school system. Yuba Water is partnering with local and regional governments and organizations to develop ways to invest in enrichment programs for local schools, beginning with supplemental science, technology, engineering and mathematics curriculum oriented to water resources. The goal is to provide a basis for enhancing STEM instruction in schools, and to incorporate the material into a Watershed Experience Center, currently in the master planning process.

¹⁵ [Marysville Ring Levee](#), Yuba Water Agency Fact Sheet, May 2020.

¹⁶ [Reducing Flood Risk, Enhancing Dam Safety at New Bullards Bar](#), Yuba Water Agency Fact Sheet, July 2020.

¹⁷ Appeal-Democrat Guest View: [Once again, Yuba Water Agency invests in our future in a big way](#), Mary Jane Griego, June 10, 2020.

¹⁸ Yuba Water Agency News, [Yuba Water Agency approves \\$3.5 million for major water infrastructure in southeastern Yuba County](#), May 2020.

6.4 Multi-Benefit Environmental Projects

Forest Health: As part of a multi-year, multi-partner effort to reduce the amount of forest fuels that can lead to powerful, catastrophic wildfires in Northern California, Yuba Water is investing \$1.5 million over five years to restore forest health across 15,000 acres in and around Tahoe National Forest in the North Yuba River watershed.¹⁹

Lower Yuba River Accord: The foundation of the Lower Yuba River Accord is the fisheries agreement. In addition to improving salmon and steelhead habitat along the lower Yuba River, the fisheries agreement established an initial \$6 million River Management Fund with a reoccurring annual contribution of \$575,000 financed by Yuba Water for a robust fisheries research and monitoring program.²⁰

Hallwood Side Channel and Floodplain Restoration Project: Reflecting its continued commitment to improving conditions for Chinook salmon, steelhead and other native species while reducing flood risk for Yuba County, Yuba Water is a primary partner in a \$6 million four-phase, multi-agency project to restore 157 acres of year-round and seasonally-flooded food-rich fish-rearing habitat on the lower Yuba River. The project will also reduce flood risk by lowering water surface elevations and velocities during flood events.²¹

7.0 IMPACT OF STATE WATER BOARD'S JULY 17, 2020 WATER QUALITY CERTIFICATION

The Water Quality Certification does not identify or analyze its potential social, economic and environmental consequences to the people of Yuba County.

The Water Quality Certification conditions would significantly impair Yuba Water's ability to meet its core mission of flood risk reduction and water supply reliability, and also severely impact the Agency's ability to generate revenues. These results would directly harm working families by depriving disadvantaged communities of the only local funding source available to leverage state and federal programs.

Furthermore, the majority of information and projects detailed above reflects pre-pandemic budget and revenue levels, further underscoring the irreplaceable role of Yuba Water in local and regional programs and initiatives and the post-pandemic economic recovery ahead.

8.0 REFERENCES

Information cited in this technical memorandum was developed by Yuba Water Agency with support from Yuba County and Applied Development Economics, Inc.

¹⁹ Yuba Water Agency, [North Yuba Forest Partnership webpage](#), July 2020.

²⁰ Yuba Water Agency, [Lower Yuba River Management Team webpage](#), July 2020.

²¹ Yuba Water Agency, [Hallwood Floodplain and Side Channel Restoration Project Fact Sheet](#), September 2019.

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<https://www.yubawater.org/DocumentCenter/View/4652/Yuba-Water-Draft-Economic-Development-Strategy>

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<http://www.chooseyubasutter.com/demographics.html>.

Calculation of Projected Lost Water Transfer Revenues

Based on information from Yuba Water’s consulting engineer Stephen Grinnell, Yuba Water has received transfer revenues under the Yuba River Accord as follows (water volumes in acre-feet):

Sacramento Valley Index	Year	Total Volumes Delivered Surface Water	Revenue
D	2007	125,000	\$ 10,000,000
C	2008	117,211	\$ 10,076,375
D	2009	91,100	\$ 6,597,500
BN	2010	74,179	\$ 4,925,925
W	2011	-	\$ -
BN	2012	86,618	\$ 5,858,850
D	2013	112,544	\$ 8,741,900
C	2014	104,663	\$ 8,507,875
C	2015	59,131	\$ 3,806,558
BN	2016	60,000	\$ 3,862,500
W	2017	869	\$ 55,942
BN	2018	76,576	\$ 11,356,050
W	2019	-	\$ -
D	2020	39,000	7,800,000
Totals		946,891	81,589,475

The annual average amount of revenue is \$5.83 million. Projected over a 50-year FERC license term, this annual average would result in revenues totaling approximately \$291.3 million, in unadjusted 2020 dollars.