

# **FINANCING WATER INFRASTRUCTURE IN THE SAN JOAQUIN VALLEY SUMMIT**

August 12, 2020

## **San Joaquin Valley Water Investment Program Funding Options**

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**Thomas C. Esqueda**

*Former Associate Vice-President Water and Sustainability at Fresno State*

# San Joaquin Valley Water Investment Program

## Take Action Alternative

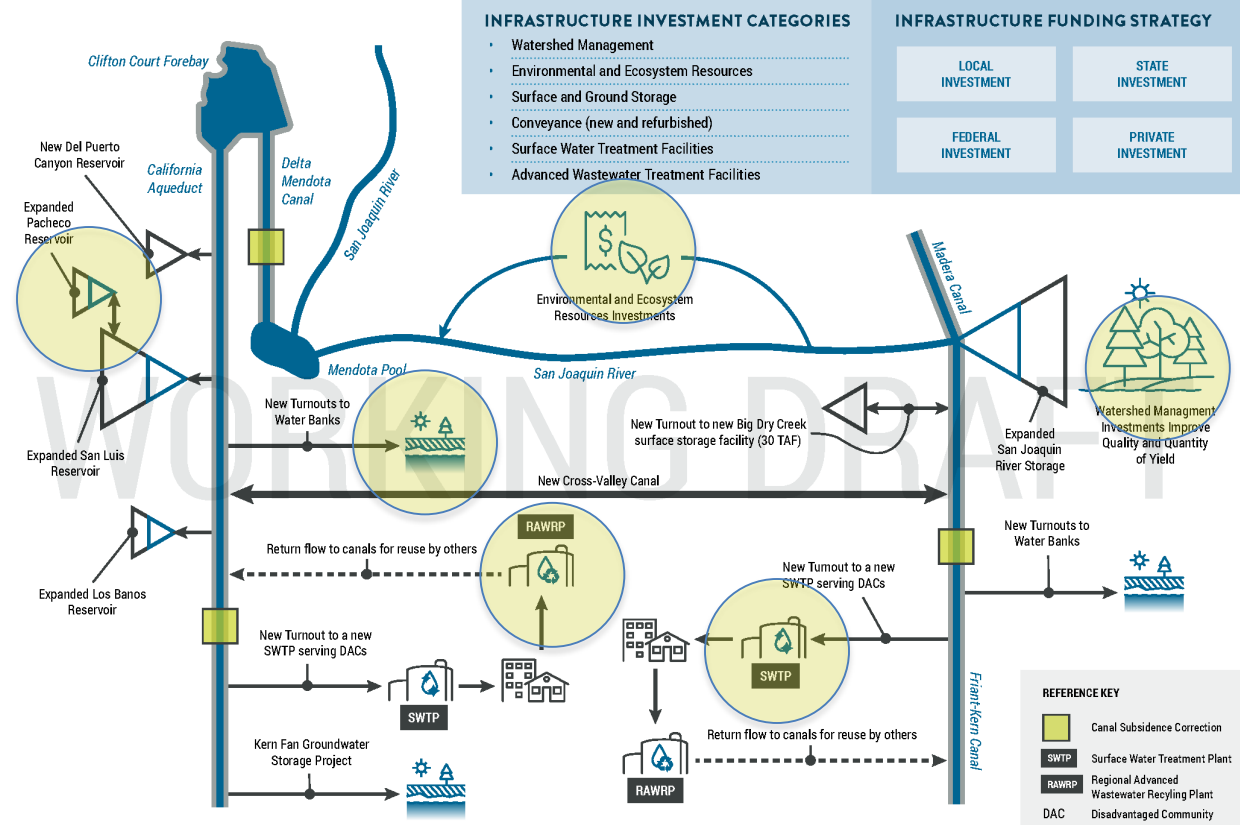
1. \$7 Billion **One-Time** Water Investment Program
2. Funding Plan (40 years)
  - a. State Matching Grant: \$1B
  - b. Federal Matching Grant: \$1B
  - c. Greenhouse Gas Reduction Fund: \$331MM
  - d. Water User Surcharge: \$4 per acre foot (\$1.2B)
  - e. **Special Sales Tax: 0.5 Percent (\$8.2B)**

## Water Blueprint for the San Joaquin Valley

Stakeholder Engagement to Optimize

### San Joaquin Valley Water Infrastructure Investment Needs

(CONCEPT)



# San Joaquin Valley Water Investment Program

## *Take Action Alternative – Infrastructure Elements*

<b>Proposed Infrastructure Elements</b>	<b>Estimated Costs</b>
<b>New Conveyance Canals</b>	<b>\$650,000,000</b>
<b>Existing Conveyance Canal Repair/Rehabilitation</b>	<b>\$800,000,000</b>
<b>New Canal Lifts Stations/Turnouts</b>	<b>\$220,000,000</b>
<b>New Groundwater Storage/Banking Facilities</b>	<b>\$25,000,000</b>
<b>New Groundwater Recovery Facilities</b>	<b>\$180,000,000</b>
<b>New Surface Water Storage Facilities</b>	<b>\$2,000,000,000</b>
<b>New Drinking Water Facilities</b>	<b>\$375,000,000</b>
<b>New Wastewater Recycling Facilities</b>	<b>\$500,000,000</b>
<b>New Watershed Mgmt/Habitat Restoration</b>	<b>\$250,000,000</b>
<b>TOTAL</b>	<b>\$5,000,000,000</b>

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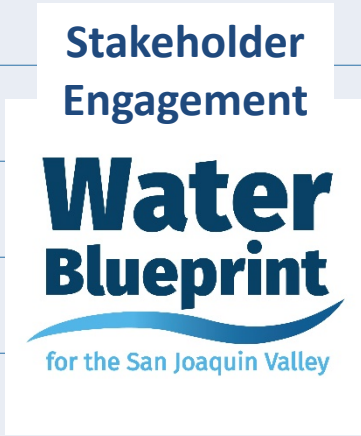
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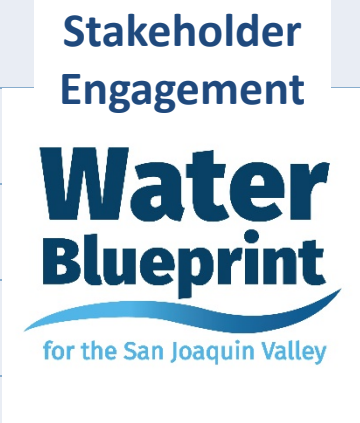
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<b>TOTAL</b>	<b>\$5,000,000,000</b>



# San Joaquin Valley Water Investment Program

## *Take Action Alternative – Program Cost Allocations*

Water Program Cost Allocations	Estimated Costs
Program Management and Coordination Services	\$68,000,000
Program Financial, Legal, and Administrative Services	\$44,000,000
Water User Coordination (State, Urban, Ag, DAC, Environment)	\$22,000,000
Facility Planning (supply, demands, facility location/alignment options)	\$6,000,000
Preliminary Engineering Services	 Stakeholder Engagement \$80,000,000
Land Acquisition	\$245,000,000
Design Services (prepare bid documents, bid projects, award)	\$700,000,000
CEQA (Biological Assessments, Permitting, Mitigation)	\$135,000,000
Construction Services (construction, startup, commission)	\$700,000,000
Construction (Conveyance, Storage, Treatment, Environment, etc.)	\$5,000,000,000
<b>Total Water Investment Program Cost</b>	<b>\$7,000,000,000</b>

# San Joaquin Valley Water Investment Program

## Take Action Alternative

PROGRAM ACTIVITES	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	TOTAL
1. Program Management and Coordination Services	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$68,000,000
2. Program Financial, Legal, and Administrative Services	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$44,000,000
3. Water User Coordination	\$3,000,000	\$3,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$22,000,000
4. Facility Planning		\$3,000,000	\$3,000,000								\$6,000,000
5. Preliminary Engineering Services		\$10,000,000	\$30,000,000	\$30,000,000	\$10,000,000						\$80,000,000
6. Land Acquisition		\$25,000,000	\$75,000,000	\$75,000,000	\$35,000,000	\$35,000,000					\$245,000,000
7. Design Services				\$100,000,000	\$200,000,000	\$200,000,000	\$100,000,000	\$100,000,000			\$700,000,000
8. CEQA			\$10,000,000	\$20,000,000	\$20,000,000	\$10,000,000	\$25,000,000	\$25,000,000	\$25,000,000		\$135,000,000
9. Construction Services						\$100,000,000	\$100,000,000	\$200,000,000	\$200,000,000	\$100,000,000	\$700,000,000
10. Water System Infrastructure Construction							\$1,000,000,000	\$1,500,000,000	\$1,500,000,000	\$1,000,000,000	\$5,000,000,000
PROGRAM CASH FLOW	\$13,000,000	\$51,000,000	\$130,000,000	\$237,000,000	\$277,000,000	\$357,000,000	\$1,240,000,000	\$1,840,000,000	\$1,740,000,000	\$1,115,000,000	\$7,000,000,000



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2. Program Financial, Legal, and Administrative Services	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$44,000,000
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7. Design Services				\$100,000,000	\$200,000,000	\$200,000,000	\$100,000,000	\$100,000,000			\$700,000,000
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2. Program Financial, Legal, and Administrative Services	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$5,000,000	\$44,000,000
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5. Preliminary Engineering Services		\$10,000,000	\$30,000,000	\$30,000,000	\$10,000,000						\$80,000,000
6. Land Acquisition		\$25,000,000	\$75,000,000	\$75,000,000	\$35,000,000	\$35,000,000					\$245,000,000
7. Design Services				\$100,000,000	\$200,000,000	\$200,000,000	\$100,000,000	\$100,000,000			\$700,000,000
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# San Joaquin Valley Water Investment Program

## Take Action Alternative

Revenue Requirements	Program Year	Water User Surcharge	Green House Gas Reduction Fund	State Match Grant	Federal Match Grant	Debt Financing	Total
\$20,000,000	Year 0	\$20,000,000	<i>Expenditure by eight counties in San Joaquin Valley to conduct outreach and education for special sales tax ballot measure</i>				\$20,000,000
\$13,000,000	Year 1	\$13,000,000					\$13,000,000
\$51,000,000	Year 2	\$40,000,000	\$11,000,000				\$51,000,000
\$130,000,000	Year 3	\$40,000,000	\$40,000,000	\$50,000,000			\$130,000,000
\$237,000,000	Year 4	\$40,000,000	\$40,000,000	\$157,000,000			\$237,000,000
\$277,000,000	Year 5	\$40,000,000	\$40,000,000	\$197,000,000			\$277,000,000
\$357,000,000	Year 6	\$40,000,000	\$40,000,000	\$277,000,000			\$357,000,000
\$1,240,000,000	Year 7	\$40,000,000	\$40,000,000	\$319,000,000	\$841,000,000		\$1,240,000,000
\$1,840,000,000	Year 8	\$40,000,000	\$40,000,000	\$	\$159,000,000	\$1,601,000,000	\$1,840,000,000
\$1,740,000,000	Year 9	\$40,000,000	\$40,000,000	\$	\$	\$1,660,000,000	\$1,740,000,000
\$1,115,000,000	Year 10	\$40,000,000	\$40,000,000	\$	\$	\$1,035,000,000	\$1,115,000,000
\$7,000,000,000	TOTAL	\$393,000,000	\$331,000,000	\$1,000,000,000	\$1,000,000,000	\$4,296,000,000	\$7,000,000,000

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\$13,000,000	Year 1	\$13,000,000					\$13,000,000
\$51,000,000	Year 2	\$40,000,000	\$11,000,000				\$51,000,000
\$130,000,000	Year 3	\$40,000,000	\$40,000,000	\$50,000,000			\$130,000,000
\$237,000,000	Year 4	\$40,000,000	\$40,000,000	\$157,000,000			\$237,000,000
\$277,000,000	Year 5	\$40,000,000	\$40,000,000	\$197,000,000			\$277,000,000
\$357,000,000	Year 6	\$40,000,000	\$40,000,000	\$277,000,000			\$357,000,000
\$1,240,000,000	Year 7	\$40,000,000	\$40,000,000	\$319,000,000	\$841,000,000		\$1,240,000,000
\$1,840,000,000	Year 8	\$40,000,000	\$40,000,000	\$	\$159,000,000	\$1,601,000,000	\$1,840,000,000
\$1,740,000,000	Year 9	\$40,000,000	\$40,000,000	\$	\$	\$1,660,000,000	\$1,740,000,000
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# San Joaquin Valley Water Investment Program

## *Take Action Alternative – Debt Financing Plan*

Loan Year	Forecasted Annual Taxable Sales Transactions (SJV)	Forecasted Annual Special Sales Tax Revenue	Annual Water User Fee Revenue	Annual Debt Service Payment	Net Revenue After Debt Service Payment	Net Revenue Allocation to Governance Entity	Net Revenue Allocation to Reserve Funds	Cumulative Reserve Fund Balance
1	\$46,887,274,042	\$234,436,370	\$40,000,000	\$263,738,068	\$10,698,302	\$10,000,000	\$698,302	\$698,302
5	\$48,791,085,386	\$243,955,427	\$40,000,000	\$263,738,068	\$20,217,359	\$11,255,088	\$8,962,270	\$24,079,399
10	\$51,279,921,096	\$256,399,605	\$40,000,000	\$263,738,068	\$32,661,537	\$13,047,732	\$19,613,805	\$100,703,656
15	\$53,895,712,440	\$269,478,562	\$40,000,000	\$263,738,068	\$45,740,494	\$15,125,897	\$30,614,597	\$231,637,597
20	\$56,644,935,432	\$283,224,677	\$40,000,000	\$263,738,068	\$59,486,609	\$17,535,061	\$41,951,548	\$418,590,261
25	\$59,534,396,426	\$297,671,982	\$	\$263,738,068	\$33,933,914	\$20,327,941	\$13,605,973	\$463,188,823
30	\$62,571,248,971	\$312,856,245	\$	\$263,738,068	\$49,118,177	\$23,565,655	\$25,552,521	\$566,947,502
<b>Total</b>		<b>\$8,154,843,709</b>	<b>\$800,000,000</b>	<b>\$7,912,142,050</b>	<b>\$1,042,701,659</b>	<b>\$475,754,157</b>	<b>\$566,947,502</b>	

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# San Joaquin Valley Water Investment Program

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# San Joaquin Valley Water Investment Program

## *Take Action Alternative – Debt Financing Plan*

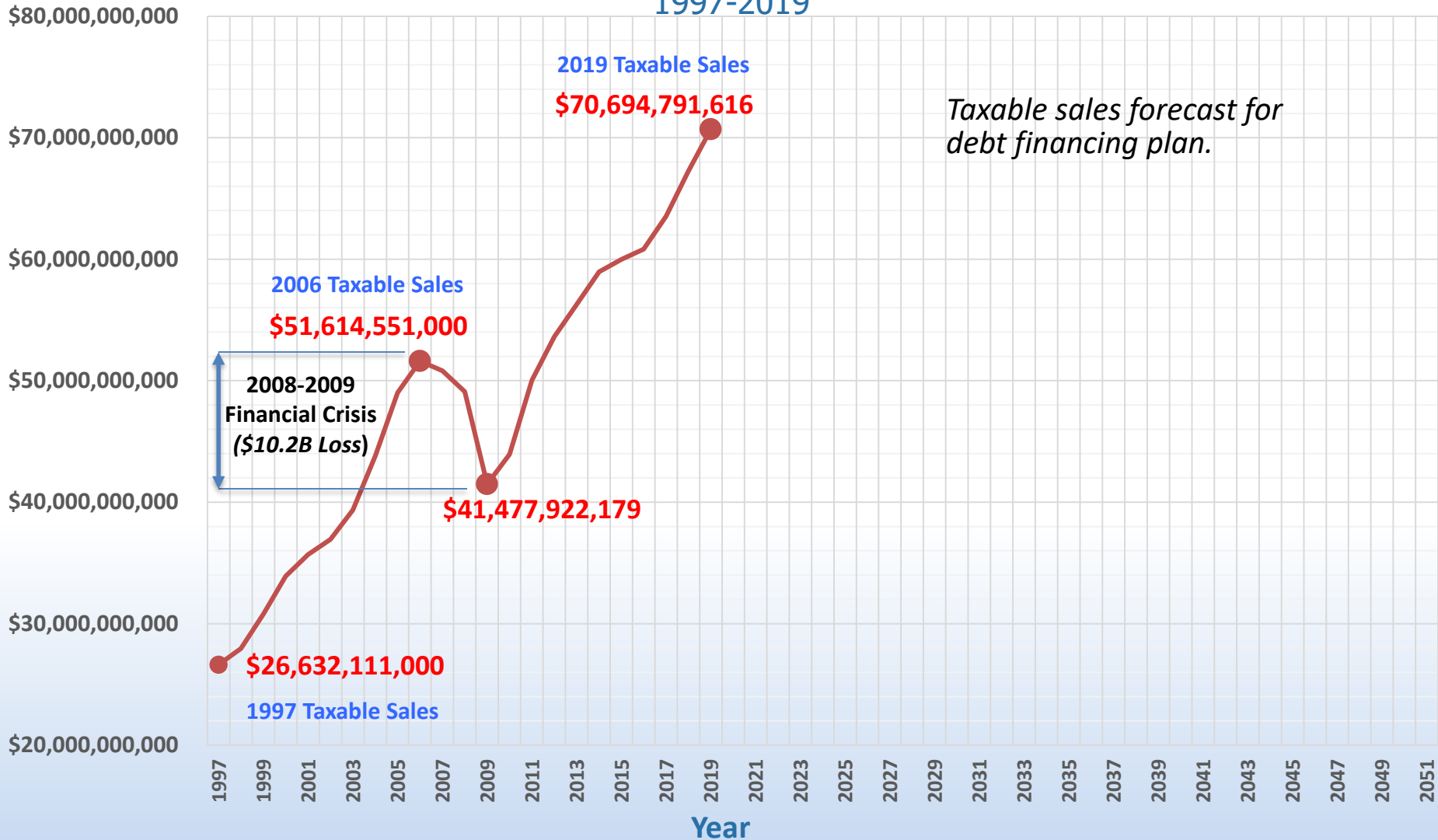
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# San Joaquin Valley Water Investment Program *Debt Financing Plan*

## Annual Taxable Sales Transactions

San Joaquin Valley  
1997-2019

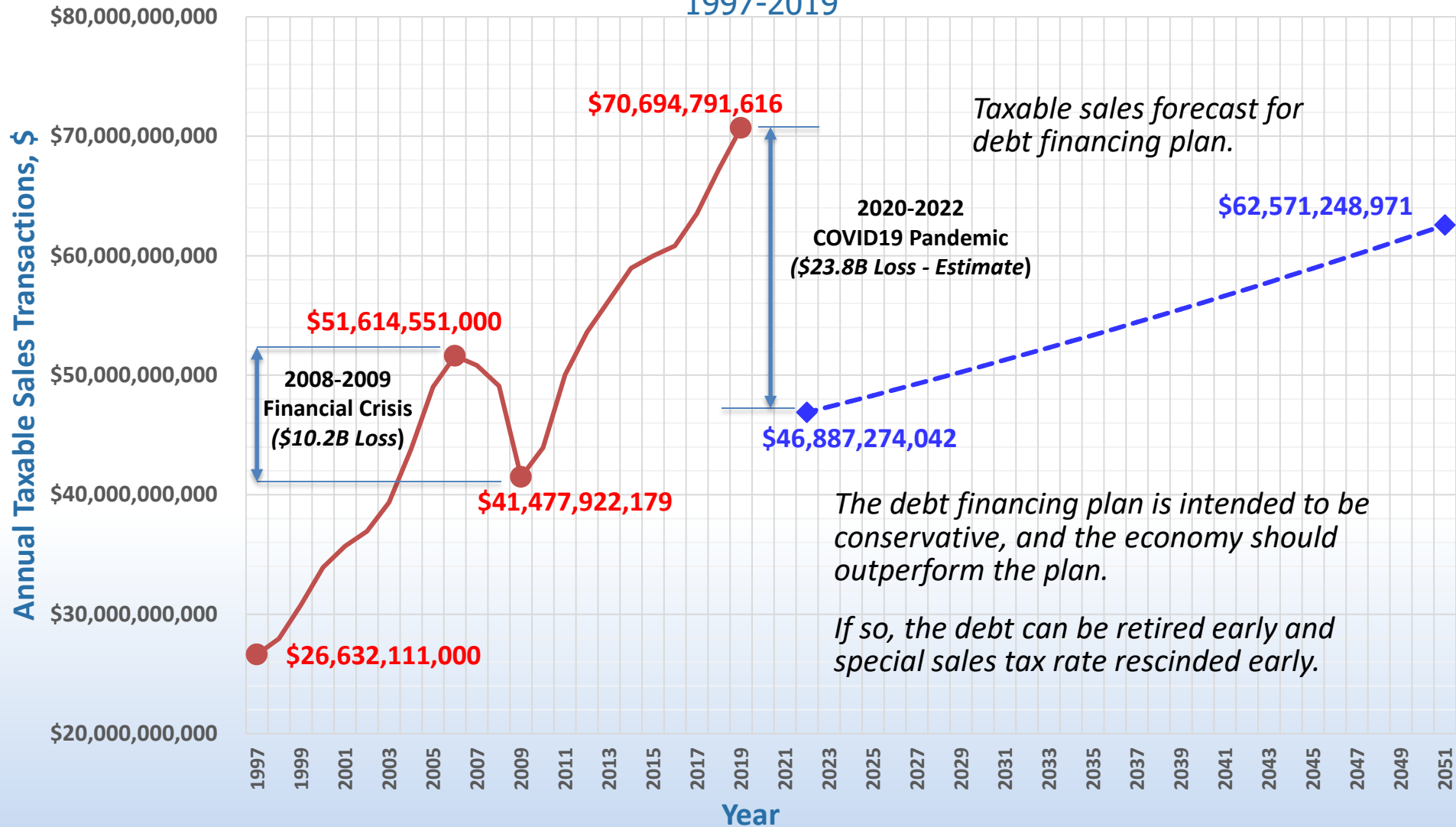


# San Joaquin Valley Water Investment Program

## Debt Financing Plan

### Annual Taxable Sales Transactions

San Joaquin Valley  
1997-2019



# San Joaquin Valley Water Investment Program

## *Debt Financing Plan*

### Special Tax Revenue Potential: San Joaquin Valley

County	Average Taxable Sales Transactions, 1997-2019		Potential Average Annual Revenue, \$	Potential Capital Debt Issuance
	\$	% Distribution	0.50%	30Yr, 4.5%
San Joaquin	\$8,859,760,981	18.49%	\$44,298,805	~\$730MM
Stanislaus	\$6,832,634,299	14.26%	\$34,163,171	~\$560MM
Merced	\$2,344,082,258	4.89%	\$11,720,411	~\$190MM
Madera	\$1,245,113,586	2.60%	\$6,225,568	~\$100MM
Fresno	\$11,334,879,143	23.65%	\$56,674,396	~\$920MM
Kings	\$1,270,004,674	2.65%	\$6,350,023	~\$100MM
Tulare	\$4,857,389,841	10.14%	\$24,286,949	\$400MM
Kern	\$11,178,518,718	23.33%	\$55,892,594	~\$910MM
<b>TOTAL</b>	<b>\$47,922,383,502</b>	<b>100.00%</b>	<b>\$239,611,918</b>	<b>\$3.9 Billion</b>

# San Joaquin Valley Water Investment Program

## *Estimated Sales Tax Impact on Low-Income Residents*

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1. San Joaquin Valley, Total Population = 4.3 million
2. San Joaquin Valley, Average Median Household Income <sup>(1)</sup> = \$53,334
3. San Joaquin Valley, Average Per Capital Income <sup>(1)</sup> = \$22,715
4. Median Gross Rent <sup>(1)</sup> = \$12,022
5. Census Bureau Poverty Threshold (family of four) <sup>(1)</sup> = \$25,701

Assuming a family of four's entire annual earnings (\$25,701) are subject to the special sales tax, the estimated financial impact of the additional special sales tax is approximately **\$11 per month**.

<sup>(1)</sup> Source: US Census Bureau, 2018-2019

# **FINANCING WATER INFRASTRUCTURE IN THE SAN JOAQUIN VALLEY SUMMIT**

## **San Joaquin Valley Water Investment Program Funding Program**

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# **QUESTIONS**

**Thomas C. Esqueda**

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