

**REPORT TO THE BOARD OF DIRECTORS  
BOARD MEETING OF JUNE 14<sup>th</sup>, 2022  
AGENDA ITEM NO 9.C.**



**AGENDA SECTION: NEW BUSINESS**

**SUBJECT: CONSIDER THE RATE FREEZE AND RECEIVE INFORMATION ON THE SWRCB 2021 DRINKING WATER AFFORDABILITY ASSESSMENT REPORT**

**PREPARED BY:** Adam Coyan, General Manager

**APPROVED BY:** Adam Coyan, General Manager

---

**BACKGROUND**

On September 13<sup>th</sup>, 2017, the Georgetown Divide Public Utilities District (District) Board of Directors (Board) adopted Resolution 2017-30 (Attachment 1) approving new rates after completing a rate study and conducting a Prop 218 hearing process.

On February 12<sup>th</sup>, 2019, the Board adopted Resolution 2019-14 (Attachment 2) freezing treated and irrigation water rates for no more than 12 months.

On January 9<sup>th</sup>, 2020 the Superior Court of The State of California County of Eldorado ruled that the Districts prop 218 was supported by substantial evidence and met the Districts burden of compliance with prop 218. (Attachment 3)

On February 11<sup>th</sup>, 2020, the board adopted Resolution 2020-08 (Attachment 4), to temporarily freeze the treated water rates until July 1<sup>st</sup>, 2020, and freeze the irrigation rates for the remainder of 2020.

The Board adopted Resolution 2021-03 (Attachment 5) freezing the rates until the end of the 2021 calendar year.

On December 14<sup>th</sup>, 2021 the board adopted resolution 2021-56 (Attachment 6) to temporarily freeze the treated water rates until June 30<sup>th</sup>, 2022 and freeze the irrigation rates for the remainder of 2022.

**DISCUSSION**

The current rate freeze that maintains the rate at the 2019 level is due to expire on June 30<sup>th</sup>, 2022, triggering the scheduled rate level to become effective on July 1<sup>st</sup>, 2022. The

Board has at least two options to consider: (1) allow the rate to increase on July 1<sup>st</sup>, 2022; to the full amount for residential and on January 1<sup>st</sup> 2023 for irrigation or (2) extend the rate freeze to a specific date.

The proposed FY 2022-2023 budget does not include a 5% rate increase scheduled to trigger on June 30<sup>th</sup>, 2022.

The California State Water Resource Control Board (SWRCB) created an affordability threshold for disadvantaged communities in the 2021 Drinking Water Affordability Assessment Report (Attachment 7). The report defines the Affordability Threshold: as the “level, point, or value that delineates if a water system’s residential customer charges, designed to ensure the water systems can provide drinking water that meets State and Federal standards, are affordable.”

Staff offers the following information to provide a preliminary comparison of water rates per Median Household Income to show the disparity in our current rates. The median household income for the District service area is approximately \$77,389 based upon the 2020 census data from the United States Census Bureau; while the median household income for California is \$78,672. The Median household income in 2010 was only \$46,136. Median household income has increased 67% between 2010 and 2020. According to the inflation calculator the increase should have only been 32.6 %.

The last rate increase of record prior to the 2018, 218 was in 2011. By the sitting board not raising rates for such an extended period it put the district in dire circumstances and forced the district to increase rates at a steeper rate.

This is a comparison of water rates per median household income and shows the disparity in where our rates currently are at. To get grant funding for a Disadvantaged Community the water bill needs to be over the Affordability Threshold that is described below.

The California State Water Resource Control Board created an Affordability Threshold for Disadvantaged Communities. This is based upon what percent of the Median household income the bill should be. The formula is based upon an annual amount of 600 cubic feet a month. Which is equivalent to 50 gallons a day per person for a three-person household for 30 days. The minimum Affordability Threshold to qualify for grant funding is 1.5%, while the maximum is 2.5% of Median Household income.

Our current Median Household Income based upon our 2020 United States Census Bureau is \$77,389. If we applied the above monthly amount of usage of (600 CF \* \$.0268)+ \$30.88= \$46.96/ month. If we compare that to the Affordability Threshold (1.5% \* \$77,389)/12 = \$96.73 a month. Our rates of \$46.96 for the same amount of water is less than half the amount that they would need to be to get a grant for Disadvantaged Communities.

Also consider that the rates prior to 2018 were way below where they needed to be. If we apply the 2011 Drinking Water Affordability Assessment formula to the 2010 rates compared to the median household income, we end up with an affordability threshold of (1.5%\*\$46,136)/12= \$57.67/ month. That is what the bill should have been in 2010 with 600 CF of water used. The rate however was \$23.57 which is less than half of what it

should be. The affordability threshold based upon the 2010 rate was .05%, remember that the affordability threshold should be 1.5 % to 2.5% of median household income.

Our above rate does not include the supplementary charge of \$15.08 a month, but even if we included that amount it would place our monthly bill based upon the formula to \$62.04/ month which is only 64% of the Affordability Threshold. Also, in the formula for rates supplemental charges were not supposed to be included. We currently have over \$113,000,000 in repairs that need to be completed in the next 40 years. That is only for the pipes in the ground and does not include inflation in labor, tanks, trucks, and accessory charges.

Based upon the 2021 Drinking Water Affordability Assessment usage of 600CF/ month if the rate was allowed to increase it would be an increase from  $(600 \text{ CF} * \$0.0268) + \$30.88 = \$46.96/ \text{ month}$  to  $(600 \text{ CF} * 0.0281) + 32.42 = 49.28$  which is a difference of \$2.32/ month.

### **FISCAL IMPACT**

The approved FY 2022-2023 Operating Budget does not include the additional 5% rate increase.

The District currently has over \$113 million in repairs that need to be completed within the next 40 years refer to “CIP Estimate Table” for a very conservative estimate. The impending Asset Valuation Study should increase the amounts listed in the table.

### **RECOMMENDED ACTION**

After in depth analysis the General Manager recommends the Board of Directors to increase the rate not only the 5% but full amount that is possible with prop 218 effective July 1<sup>st</sup>, 2022 for treated water and January 1<sup>st</sup>, 2023 for irrigation water. This would save the rate payers hundreds of millions of dollars over the next 40 years.

### **ALTERNATIVES**

Alternatively, the Board could reject Staff's recommendation and adopt Resolution 2022-XX (Attachment 8) to continue the freeze to a specific date.

### **ATTACHMENTS**

1. In Depth Analysis
2. CIP Estimate Table
3. Resolution 2017-30 – Approving New Rates
4. Resolution 2019-14 – Freezing Treated and Irrigation Water Rates
5. Superior Court of the State of California County of Eldorado Statement of Decision
6. Resolution 2020-08 – Temporarily Freezing Water Rates
7. Resolution 2021-03 – Freezing Rates Until end of Calendar Year 2021
8. Resolution 2021-56 - Freezing Rates Until June 30<sup>th</sup>, 2022
9. SWRCB 2021 Drinking Water Affordability Assessment Report
10. Draft Resolution 2022-XX – Freezing Rates to (date)

## **In Depth Analysis**

### **CIP Estimate**

I created a CIP estimate spreadsheet, I pulled the numbers from 2021 that lists, year item was acquired, usable life, remaining life, annual maintenance cost, replacement cost, annual cost complete and then the repair only cost. This does not include staff salaries or other charges that cannot be capitalized. I then added all replacement cost together. This I believe is a fair estimate of CIP only costs, if not on the low side. This amount is placed in the starting costs section of the attached charts.

### **Distribution System**

We currently have over 137 miles of water main above 4 inch in diameter that has been installed in 1974. The age of the pipe is on average of 47 years old and should be replaced within the next 30 to 60 years dependent upon what kind of pipe it is. It costs \$50 – 250 per linear foot to install water main. For the calculations I used \$150/foot.

The asbestos concrete pipe has an outside lifespan of 70 years before the pipe starts to degrade and asbestos starts to enter the water. For ductile iron the life expectancy is 100 years. Plastic pipe is a relatively new pipe material, but its life expectancy is 100+ years. In the table the cost of replacement is divided by how many years of expected life is left.

Pipeline replacement is not a choice. It must be done at some point. Currently there are some districts that have put replacement cycle out to 300 years such as Los Angeles Water, which is completely unrealistic. Washington D.C. has a 30-inch water main that was installed in 1860 which is one year before Abraham Lincoln took office. On the other side of the spectrum is the asbestos pipe in our system starts to fail all at once in 23 years at that point it is too late to save for. A rate increase at that time would need to be huge to cover cost of replacement or to get a loan. These things should be considered as we move forward into a rate study.

Currently, the district has a surplus of \$861,693 in 2021/2022 proposed budget this amount will be included in the tables. Also, each year the average rate of inflation for the past 40 years is approximately 2.79% which will be added to the costs yearly. The unfunded amount each year will become the costs for the next year. I didn't include any grant funding in any of the calculations.

### **Treatment Plants, Office Building and Water Tanks**

For the treatment plants office building and water tanks I took the approach of maintaining what is there. There will come a point in the next 40 years where a refurbish or retrofit cost will be incurred, that is the cost that is represented in the table.

### **Charts**

What is not included in the charts is the inflation of services that we already pay. This is the day-to-day activities of the district. The actual amount that we will need to be pay is going to be higher than predicted.

### **Chart A:**

In Chart A, the cost of repairs is projected into the future with the rates staying the same. With average inflation increasing at a rate of 2.79% a year, the inflation costs increase faster than the surplus can pay. After 42 years, the unfunded costs to repair the district would be roughly \$294,341,136 and \$36,191,106 of rate payer's money would have gone to repairs. Total repair costs would be \$330,532,242 if we added the unfunded portion to the money spent by the rate payers.

## GDPUD Construction Costs Chart A

2.79 % Inflation

Year	Surplus	Costs	Unfunded	Total Paid
1	\$861,693	\$113,826,548	\$116,140,616	\$861,693
2	\$861,693	116,140,616	\$118,519,246	\$1,723,386
3	\$861,693	118,519,246	\$120,964,240	\$2,585,079
4	\$861,693	120,964,240	\$123,477,449	\$3,446,772
5	\$861,693	123,477,449	\$126,060,777	\$4,308,465
6	\$861,693	126,060,777	\$128,716,180	\$5,170,158
7	\$861,693	128,716,180	\$131,445,668	\$6,031,851
8	\$861,693	131,445,668	\$134,251,309	\$6,893,544
9	\$861,693	134,251,309	\$137,135,228	\$7,755,237
10	\$861,693	137,135,228	\$140,099,608	\$8,616,930
11	\$861,693	140,099,608	\$143,146,694	\$9,478,623
12	\$861,693	143,146,694	\$146,278,793	\$10,340,316
13	\$861,693	146,278,793	\$149,498,279	\$11,202,009
14	\$861,693	149,498,279	\$152,807,588	\$12,063,702
15	\$861,693	152,807,588	\$156,209,226	\$12,925,395
16	\$861,693	156,209,226	\$159,705,771	\$13,787,088
17	\$861,693	159,705,771	\$163,299,869	\$14,648,781
18	\$861,693	163,299,869	\$166,994,242	\$15,510,474
19	\$861,693	166,994,242	\$170,791,688	\$16,372,167
20	\$861,693	170,791,688	\$174,695,084	\$17,233,860
21	\$861,693	174,695,084	\$178,707,383	\$18,095,553
22	\$861,693	178,707,383	\$182,831,626	\$18,957,246
23	\$861,693	182,831,626	\$187,070,936	\$19,818,939
24	\$861,693	187,070,936	\$191,428,522	\$20,680,632
25	\$861,693	191,428,522	\$195,907,685	\$21,542,325
26	\$861,693	195,907,685	\$200,511,816	\$22,404,018
27	\$861,693	200,511,816	\$205,244,403	\$23,265,711
28	\$861,693	205,244,403	\$210,109,029	\$24,127,404
29	\$861,693	210,109,029	\$215,109,377	\$24,989,097
30	\$861,693	215,109,377	\$220,249,236	\$25,850,790
31	\$861,693	220,249,236	\$225,532,497	\$26,712,483
32	\$861,693	225,532,497	\$230,963,160	\$27,574,176
33	\$861,693	230,963,160	\$236,545,340	\$28,435,869
34	\$861,693	236,545,340	\$242,283,262	\$29,297,562
35	\$861,693	242,283,262	\$248,181,272	\$30,159,255
36	\$861,693	248,181,272	\$254,243,836	\$31,020,948
37	\$861,693	254,243,836	\$260,475,546	\$31,882,641
38	\$861,693	260,475,546	\$266,881,121	\$32,744,334
39	\$861,693	266,881,121	\$273,465,411	\$33,606,027
40	\$861,693	273,465,411	\$280,233,403	\$34,467,720
41	\$861,693	280,233,403	\$287,190,222	\$35,329,413
42	\$861,693	287,190,222	\$294,341,136	\$36,191,106

**Total Paid CIP=**

**\$330,532,242**

**Chart B:**

Chart B projects the costs and payoff of the repairs with a 5% rate increase initially and 5% every 5 years which is a 55% total increase. The unfunded amount to repair the system would be \$196,583,681 after 42 years with \$100,324,408 of rate payer's money spent. The total amount for repairs would be \$296,908,089. The green tint is the rate increases.

In comparison to Chart A this would result in a savings to the rate payers of \$33,624,153 over 42 years.

**5% Rate Increase Initially and 5% every 5 Years  
GDPUD Construction Costs Chart B**

2.79 % Inflation				
Year	Surplus	Costs	Unfunded	Total Paid
1	\$861,693	\$113,826,548	\$116,140,616	\$861,693.00
2	\$1,135,422	116,140,616	\$118,245,517	\$1,997,114.90
3	\$1,135,422	118,245,517	\$120,409,145	\$3,132,536.90
4	\$1,135,422	120,409,145	\$122,633,138	\$4,267,958.90
5	\$1,422,837	122,633,138	\$124,631,765	\$5,690,796.25
6	\$1,422,837	124,631,765	\$126,686,154	\$7,113,633.25
7	\$1,422,837	126,686,154	\$128,797,861	\$8,536,470.25
8	\$1,422,837	128,797,861	\$130,968,485	\$9,959,307.25
9	\$1,422,837	130,968,485	\$133,199,668	\$11,382,144.25
10	\$1,724,623	133,199,668	\$135,191,316	\$13,106,767.36
11	\$1,724,623	135,191,316	\$137,238,531	\$14,831,390.36
12	\$1,724,623	137,238,531	\$139,342,863	\$16,556,013.36
13	\$1,724,623	139,342,863	\$141,505,905	\$18,280,636.36
14	\$1,724,623	141,505,905	\$143,729,297	\$20,005,259.36
15	\$2,041,498	143,729,297	\$145,697,846	\$22,046,757.78
16	\$2,041,498	145,697,846	\$147,721,318	\$24,088,255.78
17	\$2,041,498	147,721,318	\$149,801,245	\$26,129,753.78
18	\$2,041,498	149,801,245	\$151,939,202	\$28,171,251.78
19	\$2,041,498	151,939,202	\$154,136,807	\$30,212,749.78
20	\$2,374,217	154,136,807	\$156,063,007	\$32,586,966.96
21	\$2,374,217	156,063,007	\$158,042,948	\$34,961,183.96
22	\$2,374,217	158,042,948	\$160,078,129	\$37,335,400.96
23	\$2,374,217	160,078,129	\$162,170,092	\$39,709,617.96
24	\$2,374,217	162,170,092	\$164,320,421	\$42,083,834.96
25	\$2,723,572	164,320,421	\$166,181,388	\$44,807,407.11
26	\$2,732,572	166,181,388	\$168,085,277	\$47,539,979.11
27	\$2,732,572	168,085,277	\$170,042,284	\$50,272,551.11
28	\$2,732,572	170,042,284	\$172,053,892	\$53,005,123.11
29	\$2,732,572	172,053,892	\$174,121,623	\$55,737,695.11
30	\$3,099,395	174,121,623	\$175,880,222	\$58,837,090.02
31	\$3,099,395	175,880,222	\$177,687,885	\$61,936,485.02
32	\$3,099,395	177,687,885	\$179,545,982	\$65,035,880.02
33	\$3,099,395	179,545,982	\$181,455,920	\$68,135,275.02
34	\$3,099,395	181,455,920	\$183,419,145	\$71,234,670.02
35	\$3,484,559	183,419,145	\$185,051,980	\$74,719,229.07
36	\$3,484,559	185,051,980	\$186,730,371	\$78,203,788.07
37	\$3,484,559	186,730,371	\$188,455,590	\$81,688,347.07
38	\$3,484,559	188,455,590	\$190,228,942	\$85,172,906.07
39	\$3,484,559	190,228,942	\$192,051,770	\$88,657,465.07
40	\$3,888,981	192,051,770	\$193,521,033	\$92,546,446.32
41	\$3,888,981	193,521,033	\$195,031,289	\$96,435,427.32
42	\$3,888,981	195,031,289	\$196,583,681	\$100,324,408.32

**Total Paid CIP= \$296,908,089.47**



**Chart C:**

Chart C projects the costs and payoff of the deferred maintenance with a 10% initial increase and 10 % every 5 years which is a total increase of 135%. With the cost of unfunded repairs getting paid after 39 years. The total rate payer money spent would be \$214,844,307. This would be a \$115,687,935 saving when compared to Chart A and a \$82,063,782 savings when compared to Chart B and in Chart B the repairs still had not been completed. Once again, the green represents a rate increase.

**10% Initial Rate Increase and 10% every 5 years  
GDPUD Construction Costs Chart C**

2.79 % Inflation				
<b>Year</b>	<b>Surplus</b>	<b>Costs</b>	<b>Unfunded</b>	<b>Total Paid</b>
1	\$861,693	\$113,826,548	\$116,140,616	\$861,693.00
2	\$1,409,151	116,140,616	\$117,971,788	\$2,270,843.80
3	\$1,409,151	117,971,788	\$119,854,050	\$3,679,994.80
4	\$1,409,151	119,854,050	\$121,788,827	\$5,089,145.80
5	\$2,011,355	121,788,827	\$123,175,381	\$7,100,500.38
6	\$2,011,355	123,175,381	\$124,600,619	\$9,111,855.38
7	\$2,011,355	124,600,619	\$126,065,621	\$11,123,210.38
8	\$2,011,355	126,065,621	\$127,571,497	\$13,134,565.38
9	\$2,011,355	127,571,497	\$129,119,387	\$15,145,920.38
10	\$2,673,779	129,119,387	\$130,048,039	\$17,819,699.32
11	\$2,673,779	130,048,039	\$131,002,600	\$20,493,478.32
12	\$2,673,779	131,002,600	\$131,983,793	\$23,167,257.32
13	\$2,673,779	131,983,793	\$132,992,362	\$25,841,036.32
14	\$2,673,779	132,992,362	\$134,029,070	\$28,514,815.32
15	\$3,402,445	134,029,070	\$134,366,036	\$31,917,260.65
16	\$3,402,445	134,366,036	\$134,712,403	\$35,319,705.65
17	\$3,402,445	134,712,403	\$135,068,434	\$38,722,150.65
18	\$3,402,445	135,068,434	\$135,434,399	\$42,124,595.65
19	\$3,402,445	135,434,399	\$135,810,573	\$45,527,040.65
20	\$4,203,978	135,810,573	\$135,395,710	\$49,731,018.61
21	\$4,203,978	135,395,710	\$134,969,273	\$53,934,996.61
22	\$4,203,978	134,969,273	\$134,530,937	\$58,138,974.61
23	\$4,203,978	134,530,937	\$134,080,373	\$62,342,952.61
24	\$4,203,978	134,080,373	\$133,617,237	\$66,546,930.61
25	\$5,085,664	133,617,237	\$132,259,494	\$71,632,594.88
26	\$5,085,664	132,259,494	\$130,863,869	\$76,718,258.88
27	\$5,085,664	130,863,869	\$129,429,307	\$81,803,922.88
28	\$5,085,664	129,429,307	\$127,954,721	\$86,889,586.88
29	\$5,085,664	127,954,721	\$122,869,057	\$91,975,250.88
30	\$6,055,519	122,869,057	\$116,813,538	\$98,030,769.76
31	\$6,055,519	116,813,538	\$110,758,019	\$104,086,288.76
32	\$6,055,519	110,758,019	\$104,702,500	\$110,141,807.76
33	\$6,055,519	104,702,500	\$98,646,981	\$116,197,326.76
34	\$6,055,519	98,646,981	\$92,591,462	\$122,252,845.76
35	\$7,122,359	92,591,462	\$85,469,103	\$129,375,205.14
36	\$7,122,359	85,469,103	\$78,346,744	\$136,497,564.14
37	\$7,122,359	78,346,744	\$71,224,385	\$143,619,923.14
38	\$7,122,359	71,224,385	\$64,102,026	\$150,742,282.14
39	\$7,122,359	64,102,026	\$56,979,667	\$157,864,641.14
40	\$8,295,883	56,979,667	\$48,683,783	\$166,160,524.55
41	\$8,295,883	48,683,783	\$40,387,900	\$174,456,407.55
42	\$8,295,883	40,387,900	\$32,092,017	\$182,752,290.55

**Total Paid CIP= \$214,844,307.96**

**Chart D:**

Chart D projects the costs and payoff of the deferred maintenance with a 5% initial increase and 5 % every year for 10 years which is a total increase of 62%. The total rate payer money spent would be \$243,960,912. This would be a \$86,571,330 saving when compared to Chart A and a \$53,001,177 savings when compared to Chart B. It would be \$29,116,605 more expensive than Chart C.

**5% Rate Increase for 10 years**  
**GDPUD Construction Costs Chart D**

2.79% Inflation				
Year	Surplus	Costs	Unfunded	Total Paid
1	\$861,693	\$113,826,548	\$116,140,616	\$861,693
2	\$1,135,422	116,140,616	\$118,245,517	\$1,997,115
3	\$1,422,837	118,245,517	\$120,121,730	\$3,419,952
4	\$1,724,623	120,121,730	\$121,748,503	\$5,144,576
5	\$2,041,499	121,748,503	\$123,103,787	\$7,186,074
6	\$2,374,218	123,103,787	\$124,164,165	\$9,560,292
7	\$2,723,573	124,164,165	\$124,904,772	\$12,283,865
8	\$3,090,396	124,904,772	\$125,299,219	\$15,374,261
9	\$3,475,560	125,299,219	\$125,319,507	\$18,849,821
10	\$3,879,982	125,319,507	\$124,935,939	\$22,729,804
11	\$4,304,626	124,935,939	\$124,117,026	\$27,034,429
12	\$4,304,626	124,117,026	\$123,275,265	\$31,339,055
13	\$4,304,626	123,275,265	\$122,410,019	\$35,643,681
14	\$4,304,626	122,410,019	\$121,520,632	\$39,948,307
15	\$4,304,626	121,520,632	\$120,606,432	\$44,252,933
16	\$4,304,626	120,606,432	\$119,666,725	\$48,557,559
17	\$4,304,626	119,666,725	\$118,700,801	\$52,862,185
18	\$4,304,626	118,700,801	\$117,707,927	\$57,166,811
19	\$4,304,626	117,707,927	\$116,687,353	\$61,471,437
20	\$4,304,626	116,687,353	\$115,638,304	\$65,776,063
21	\$4,304,626	115,638,304	\$114,559,986	\$70,080,689
22	\$4,304,626	114,559,986	\$113,451,584	\$74,385,315
23	\$4,304,626	113,451,584	\$112,312,257	\$78,689,941
24	\$4,304,626	112,312,257	\$111,141,143	\$82,994,567
25	\$4,304,626	111,141,143	\$109,937,355	\$87,299,193
26	\$4,304,626	109,937,355	\$108,699,981	\$91,603,819
27	\$4,304,626	108,699,981	\$107,428,085	\$95,908,445
28	\$4,304,626	107,428,085	\$106,120,702	\$100,213,071
29	\$4,304,626	106,120,702	\$104,776,844	\$104,517,697
30	\$4,304,626	104,776,844	\$103,395,492	\$108,822,323
31	\$4,304,626	103,395,492	\$101,975,600	\$113,126,949
32	\$4,304,626	101,975,600	\$100,516,093	\$117,431,575
33	\$4,304,626	100,516,093	\$99,015,866	\$121,736,201
34	\$4,304,626	99,015,866	\$97,473,783	\$126,040,827
35	\$4,304,626	97,473,783	\$95,888,676	\$130,345,453
36	\$4,304,626	95,888,676	\$94,259,344	\$134,650,079
37	\$4,304,626	94,259,344	\$92,584,553	\$138,954,705
38	\$4,304,626	92,584,553	\$90,863,036	\$143,259,331
39	\$4,304,626	90,863,036	\$89,093,489	\$147,563,957
40	\$4,304,626	89,093,489	\$87,274,572	\$151,868,583
41	\$4,304,626	87,274,572	\$85,404,906	\$156,173,209
42	\$4,304,626	85,404,906	\$83,483,077	\$160,477,835

**Total Paid CIP=** \$243,960,912

**Chart E:**

Chart E projects the costs and payoff of the deferred maintenance with a 30% initial increase and 10 % every year for 3 years which is a total increase of 73%. The total rate payer money spent would be \$204,407,750. This would be a \$126,124,492 saving when compared to Chart A and a \$92,500,339 savings when compared to Chart B. It would result in a \$10,436,557 saving when compared to Chart C and a saving of \$39,553,162 when compared to Chart D.

**30%Initial Rate Increase and 10% for 3 years  
GDPUD Construction Costs Chart E**

2.79 % Inflation				
Year	Surplus	Costs	Unfunded	Total Paid
1	\$861,693	\$113,826,548	\$116,140,616	\$861,693
2	\$2,504,066	116,140,616	\$116,876,872	\$3,365,759
3	\$3,215,762	116,876,872	\$116,921,976	\$6,581,521
4	\$3,998,626	116,921,976	\$116,185,473	\$10,580,147
5	\$4,859,777	116,185,473	\$114,567,270	\$15,439,924
6	\$4,859,777	114,567,270	\$112,903,920	\$20,299,701
7	\$4,859,777	112,903,920	\$111,194,162	\$25,159,478
8	\$4,859,777	111,194,162	\$109,436,702	\$30,019,255
9	\$4,859,777	109,436,702	\$107,630,209	\$34,879,032
10	\$4,859,777	107,630,209	\$105,773,315	\$39,738,809
11	\$4,859,777	105,773,315	\$103,864,614	\$44,598,586
12	\$4,859,777	103,864,614	\$101,902,659	\$49,458,363
13	\$4,859,777	101,902,659	\$99,885,967	\$54,318,140
14	\$4,859,777	99,885,967	\$97,813,008	\$59,177,917
15	\$4,859,777	97,813,008	\$95,682,214	\$64,037,694
16	\$4,859,777	95,682,214	\$93,491,971	\$68,897,471
17	\$4,859,777	93,491,971	\$91,240,620	\$73,757,248
18	\$4,859,777	91,240,620	\$88,926,456	\$78,617,025
19	\$4,859,777	88,926,456	\$86,547,727	\$83,476,802
20	\$4,859,777	86,547,727	\$84,102,632	\$88,336,579
21	\$4,859,777	84,102,632	\$81,589,318	\$93,196,356
22	\$4,859,777	81,589,318	\$79,005,883	\$98,056,133
23	\$4,859,777	79,005,883	\$76,350,370	\$102,915,910
24	\$4,859,777	76,350,370	\$73,620,769	\$107,775,687
25	\$4,859,777	73,620,769	\$70,815,011	\$112,635,464
26	\$4,859,777	70,815,011	\$67,930,973	\$117,495,241
27	\$4,859,777	67,930,973	\$64,966,470	\$122,355,018
28	\$4,859,777	64,966,470	\$61,919,257	\$127,214,795
29	\$4,859,777	61,919,257	\$58,787,028	\$132,074,572
30	\$4,859,777	58,787,028	\$55,567,409	\$136,934,349
31	\$4,859,777	55,567,409	\$52,257,962	\$141,794,126
32	\$4,859,777	52,257,962	\$48,856,183	\$146,653,903
33	\$4,859,777	48,856,183	\$45,359,493	\$151,513,680
34	\$4,859,777	45,359,493	\$41,765,246	\$156,373,457
35	\$4,859,777	41,765,246	\$38,070,719	\$161,233,234
36	\$4,859,777	38,070,719	\$34,273,115	\$166,093,011
37	\$4,859,777	34,273,115	\$30,369,558	\$170,952,788
38	\$4,859,777	30,369,558	\$26,357,092	\$175,812,565
39	\$4,859,777	26,357,092	\$22,232,678	\$180,672,342
40	\$4,859,777	22,232,678	\$17,993,193	\$185,532,119
41	\$4,859,777	17,993,193	\$13,635,426	\$190,391,896
42	\$4,859,777	13,635,426	\$9,156,077	\$195,251,673

**Total Paid CIP= \$204,407,750**

**Chart F:**

Chart F projects the costs and payoff of the deferred maintenance with a 2% initial increase and 2% every year, which is a total increase of 125%. The total rate payer money spent would be \$273,504,074. This would be a \$57,028,168 saving when compared to Chart A and a \$23,404,015 savings when compared to Chart B. It would be \$58,659,767 more expensive when compared to Chart C and a cost \$29,543,162 when compared to Chart D. It would be \$69,096,324 more expensive than Chart E.

**2%Initial Rate Increase and 2% every year  
GDPUD Construction Costs Chart F**

2.79 % Inflation				
Year	Surplus	Costs	Unfunded	Total Paid
1	\$861,693	\$113,826,548	\$116,140,616	\$861,693
2	\$971,185	116,140,616	\$118,409,754	\$1,832,878
3	\$1,082,866	118,409,754	\$120,630,521	\$2,915,744
4	\$1,196,781	120,630,521	\$122,799,331	\$4,112,524
5	\$1,312,974	122,799,331	\$124,912,458	\$5,425,499
6	\$1,431,491	124,912,458	\$126,966,024	\$6,856,990
7	\$1,552,379	126,966,024	\$128,955,997	\$8,409,369
8	\$1,675,684	128,955,997	\$130,878,185	\$10,085,054
9	\$1,801,456	130,878,185	\$132,728,231	\$11,886,509
10	\$1,929,742	132,728,231	\$134,501,606	\$13,816,252
11	\$2,060,595	134,501,606	\$136,193,606	\$15,876,847
12	\$2,194,065	136,193,606	\$137,799,343	\$18,070,911
13	\$2,330,204	137,799,343	\$139,313,741	\$20,401,115
14	\$2,469,065	139,313,741	\$140,731,529	\$22,870,180
15	\$2,610,704	140,731,529	\$142,047,234	\$25,480,885
16	\$2,755,176	142,047,234	\$143,255,176	\$28,236,061
17	\$2,902,537	143,255,176	\$144,349,458	\$31,138,598
18	\$3,052,846	144,349,458	\$145,323,962	\$34,191,444
19	\$3,206,160	145,323,962	\$146,172,340	\$37,397,605
20	\$3,362,541	146,172,340	\$146,888,007	\$40,760,146
21	\$3,522,050	146,888,007	\$147,464,132	\$44,282,196
22	\$3,684,749	147,464,132	\$147,893,633	\$47,966,945
23	\$3,850,701	147,893,633	\$148,169,164	\$51,817,646
24	\$4,019,973	148,169,164	\$148,283,111	\$55,837,619
25	\$4,192,630	148,283,111	\$148,227,579	\$60,030,249
26	\$4,368,740	148,227,579	\$147,994,388	\$64,398,990
27	\$4,548,373	147,994,388	\$147,575,059	\$68,947,363
28	\$4,731,598	147,575,059	\$146,960,805	\$73,678,961
29	\$4,918,488	146,960,805	\$146,142,523	\$78,597,449
30	\$5,109,115	146,142,523	\$145,110,784	\$83,706,564
31	\$5,303,555	145,110,784	\$143,855,820	\$89,010,119
32	\$5,501,884	143,855,820	\$142,367,513	\$94,512,003
33	\$5,704,179	142,367,513	\$140,635,387	\$100,216,183
34	\$5,910,521	140,635,387	\$138,648,594	\$106,126,704
35	\$6,120,989	138,648,594	\$136,395,901	\$112,247,692
36	\$6,335,666	136,395,901	\$133,865,680	\$118,583,359
37	\$6,554,637	133,865,680	\$131,045,895	\$125,137,996
38	\$6,777,988	131,045,895	\$127,924,088	\$131,915,984
39	\$7,005,805	127,924,088	\$124,487,365	\$138,921,789
40	\$7,238,179	124,487,365	\$120,722,383	\$146,159,968
41	\$7,475,200	120,722,383	\$116,615,337	\$153,635,169
42	\$7,716,962	116,615,337	\$112,151,943	\$161,352,131

**Total Paid CIP= \$273,504,074**



## **Analysis**

In doing a comparison, instituting the bigger rate increase saves the district in some cases hundreds of millions of dollars long term due to the construction inflation costs. The larger the initial rate increase the more the district will save.

If the district pursues a rate increase, then they should look into monthly residential billing instead of billing bi-monthly. With monthly billing, what is paid gets cut in half and helps people on a fixed income pay the bill. With bi-monthly billing even a small rate increase appears as double on the bill.

Chart E represents the best path forward for the district. Not all costs get covered at year 42, however; we will get some grant funding and we are not taking into consideration all of the maintenance and costs involved.

## CIP Estimate Created 2021

QTY	Component	Year Acquired	Life Span	Remaining Life	Annual Maintence	Replacement	Annual Cost Complete	Annual Cost Repair Only	Replaement Cost
<b>Source of Suppily 5100</b>									
1	Mark Edson Dam and Stump Meadow Res	1962	100	45	\$10,000		\$10,000	\$10,000	
1	Tunnel Hill	1962	100	45	\$100,000		\$100,000	\$100,000	
1	Kaiser Siphon Replacement	1964	100	47	\$500		\$500	\$500	
1	Sand Trap Siphon	1964	100	47	\$5,000		\$5,000	\$5,000	
1	Up Country Ditch (Pilot Creek to Tunnel)	1964	100	47	\$45,000		\$45,000	\$45,000	
<b>Shared Transmission 5200</b>									
1	Cabin Waste Gate Replacement	1972	40						
1	Bacon Creek Pipe	1964	40						
1	Buckeye Conduit	1964	40						
1	Up Country(Penn Stock to Shroeder Conduit)	1964	40		\$10,000		\$10,000	\$10,000	
1	Main Ditch #1 Imp	1964	40	40	\$5,000		\$5,000	\$5,000	
1	Main Ditch #2 ALT	1964	40	40	\$5,000		\$5,000	\$5,000	
<b>5200 Irrigation Only</b>									
1	Main Ditch #2 Below ALT	1964	40	40	5000		5000	\$5,000	
1	Pilot Hill Ditch (Main)	1964	40	40	5000		5000	\$5,000	
1	Pilot Hiull Ditch	1964	40	40	5000		5000	\$5,000	
1	Kelsey Ditch #1	1964	40	40	5000		5000	\$5,000	
1	Kelsey Ditch #2 IMP	1964	40	40	5000		5000	\$5,000	
1	Spanish Dry Diggings Ditch	1964	40	40	5000		5000	\$5,000	
1	Taylor Mine Ditch	1964	40	40	5000		5000	\$5,000	
<b>Water Treatment 5300</b>									
1	Lake Walton WTP	1992	50	25		\$2,000,000	\$80,000		\$2,000,000
1	Raw Water Bypass	1974	40	30	\$500			\$500	
1	Lake Walton Outlet Works	1974	40	30	\$1,000			\$1,000	
1	Lake Walton Dredging	1974	40	20	\$10,000			\$10,000	
1	ALT Water Treatment Plant	2018	50	48		\$3,000,000	\$62,500		\$3,000,000
<b>Transmission / Distribution 5400</b>									
1	Angel Camp Tank .5 MG	1974	40	40	\$3,000		\$3,000	\$3,000	
1	Deer Ravine Tank .25MG	1974	40	40	\$3,000		\$3,000	\$3,000	

## CIP Estimate Created 2021

QTY	Component	Year Acquired	Life Span	Remaining Life	Annual Maintenance	Replacement	Annual Cost Complete	Annual Cost Repair Only	Replaement Cost
1	Pilot Hill Tank .47MG	1974	40	40	\$3,000		\$3,000	\$3,000	
1	Black Ridge Road Tank .06MG	1974	40	40	\$3,000		\$3,000	\$3,000	
1	Hotchkiss Hill Tank .06MG	1974	40	40	\$3,000		\$3,000	\$3,000	
1	Spanish Dry Diggins .2MG	1971	40	40	\$3,000		\$3,000	\$3,000	
1	Black Oak Mine .3MG	1974	40	40	\$3,000		\$3,000	\$3,000	
1	Garden Park .2MG	1974	40	40	\$3,000		\$3,000	\$3,000	
1	Kelsey Tank .2MG	1974	40	40	\$3,000		\$3,000	\$3,000	
1	Hotchkiss Hill Subtank .06MG	1974	40	40	\$3,000		\$3,000	\$3,000	
1	Black Ridge Pump Station	1974	40	40	\$3,000		\$3,000	\$3,000	
1	Chipmunk Trail Pump Station	1974	40	40	\$3,000		\$3,000	\$3,000	
1	Reservoir Pump Station	1974	40	40	\$3,000		\$3,000	\$3,000	
1	4 inch (42,130 AC and 50,771 PVC)	1974	70/100	23/53		\$418,452	\$418,452		\$13,935,150
1	6 inch (175,142 AC and 3,981 DI and 235,640 PVC)	1974	70/100/100	23/53/53		\$1,820,403	\$1,820,403		\$62,214,450
1	8 inch (42,068 AC and 85,394 PVC)	1974	70/100	23/53		\$516,038	\$516,038		\$19,119,300
1	10 inch(36,484 AC and 10,359 PVC)	1974	70/100	23/53		\$267,257	\$267,257		\$7,026,450
1	12 inch (42,346 AC)	1974	70/100	23		\$276,170	\$276,170		\$6,351,900
<b>Transportation Equipment</b>									
1	Mobile Radios	1971	10	1		\$15,000	\$15,000	\$15,000	
1	Truck	2017	15	10		\$51,000	\$5,100	\$5,100	
1	Excavator	2017	20	20		\$74,000	\$3,700	\$3,700	
1	Trailer for excavator	2017	20	20		\$15,000	\$750	\$750	
1	Trailer & Hookups	1991	15	10		\$19,000	\$1,900	\$1,900	
1	1998 Ford Pickup	1998	15	10		\$20,000	\$2,000	\$2,000	
1	1999 Ford F150	1999	15	10		\$20,000	\$2,000	\$2,000	
1	2002 Ford F-150 4X4	2001	15	10		\$20,000	\$2,000	\$2,000	
1	Chevy 1500	2003	15	10		\$20,000	\$2,000	\$2,000	
1	2004 Chevy 4X\$	2004	15	10		\$20,000	\$2,000	\$2,000	
1	2005 Chevy	2005	15	10		\$30,000	\$3,000	\$3,000	
1	2006 Chevy Colorado	2006	15	10		\$20,000	\$2,000	\$2,000	
1	2007 Chevy CK2500	2007	15	10		\$25,000	\$2,500	\$2,500	
1	2008 Chevy 1500	2008	15	10		\$20,000	\$2,000	\$2,000	
1	Sundowner Trailer	2010	15	10		\$6,000	\$600	\$600	
1	Re-Manufactured Long Block Unit 32	2013	20	20		\$5,500	\$275	\$275	
1	2016 Ford F-150	2016	15	15		\$20,000	\$1,333	\$1,333	
1	2004 Chevy 1500	2004	15	10		\$30,000	\$3,000	\$3,000	

## CIP Estimate Created 2021

QTY	Component	Year Acquired	Life Span	Remaining Life	Annual Maintence	Replacement	Annual Cost Complete	Annual Cost Repair Only	Replaement Cost
<b>Shop and Equipment</b>									
1	Tool Set	2017	15	10		\$6,765	\$677	\$677	
1	New Radio System	1989	20	5		\$13,825	\$2,765	\$2,765	
1	Steam Cleaner	1989	20	5		\$5,000	\$1,000	\$1,000	
1	Welder	1991	20	5		\$5,000	\$1,000	\$1,000	
1	Backhoe	1991	30	10		\$50,000	\$5,000	\$5,000	
1	Dump Truck	1991	30	10		\$50,000	\$5,000	\$5,000	
1	Tilt Bed Trailer	1992	25	10		\$9,000	\$900	\$900	
1	Dozer	1996	40	15		\$25,000	\$1,667	\$1,667	
1	Mini Excavator	2000	20	7		\$34,000	\$4,857	\$4,857	
1	IR Portable Air Compressor	2003	20	7		\$11,000	\$1,571	\$1,571	
1	2008 Chevy 3500	2008	15	10		\$35,000	\$3,500	\$3,500	
1	Clark Excavator	2010	20	14		\$35,000	\$2,500	\$2,500	
1	Ditch Witch FX 350 Vac	2015	20	19		\$46,000	\$2,421	\$2,421	
1	Rammer Small Compactor	2016	20	20		\$6,221	\$311	\$311	
<b>General Plant</b>									
1	Office Building	1976	40	15		\$100,000	\$6,667		\$100,000
1	Parking Lot	2021	50	50		\$50,000	\$1,000		\$50,000
1	Yard Fence	1986	50	10		\$6,298	\$630		\$6,298
1	Generator	1986	20	5		\$23,000	\$4,600		\$23,000
1	HVAC	1987	in office building						
1	Metal Building	1990	40	15		\$10,000	\$667		
<b>Office Equipment</b>									
1	Computer Network	2001	5	7		\$2,500	\$357	\$357	
1	Copier	2002	5	rental					
1	Phone System	2002	5	5		\$5,000	\$1,000	\$1,000	
1	Dell Server	2005	5	5		\$1,200	\$240	\$240	
5	Dell Compters	2007	5	5		\$6,000	\$1,200	\$1,200	
<b>Diustribution</b>									
38	Preassure Regulating Valves	1987	40	10		\$500,000	\$50,000	\$50,000	
172	Air Releif Valves	1987	40	10		\$500,000	\$50,000	\$50,000	

## CIP Estimate Created 2021

QTY	Component	Year Acquired	Life Span	Remaining Life	Annual Maintenance	Replacement	Annual Cost Complete	Annual Cost Repair Only	Replaement Cost
422	Isolation Valves	1987	40	10	\$20,000		\$20,000	\$20,000	
247	Other Valvews	1987	40	10	\$15,000		\$15,000	\$15,000	
581	Firehydrants	1987	60	35	\$50,000		\$50,000	\$50,000	
20	Pressure Reducing Valves	2017	40	10		\$100,000	\$10,000	\$10,000	
<b>Annual Total:</b>							<b>\$3,991,007</b>	<b>\$548,124</b>	<b>\$113,826,548</b>

**RESOLUTION NO. 2017-30**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT  
ADOPTING NEW RATES FOR TREATED WATER AND  
IRRIGATION WATER SERVICES**

**WHEREAS**, Georgetown Divide Public Utility District (“District”) provides irrigation and treated water services to residents and businesses of the District; and

**WHEREAS**, a Water Rate Study, dated October 24, 2017, prepared by RCAC (“Water Rate Study”), establishes various rates proposed therein, which the District Board finds are reasonably related to the cost of service for the District; and

**WHEREAS**, in preparing the Water Rate Study, staff and RCAC held several workshops and recommended a range of alternatives that the District could adopt regarding the revised water rates, which the District Board has reviewed; and

**WHEREAS**, on December 12, 2017, pursuant to Proposition 218 (Cal. Const., Art. XIID, Sec. 6) the District Board heard and considered all oral testimony, written materials, and written protests concerning the rate increase; and

**WHEREAS**, the District has verified and counted the protests and determined that the District may proceed with the proposed water rates.

**NOW, THEREFORE, BE IT RESOLVED THAT THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT, DOES HEREBY ACCEPT AND CLOSE** the Proposition 218 proceedings in connection with the District’s proposed water rates, with receipt of less than a majority protest vote as declared by the District Secretary. The District Board may adopt multi-year rate increases for water rates, in accordance with the Water Rate Study, in compliance with Proposition 218.

**NOW, THEREFORE, BE IT and it is hereby RESOLVED** by the Board of Directors of the Georgetown Divide Public Utility District as follows:

Beginning on January 1, 2018, the monthly charges (billed bi-monthly) for treated water customers are established as follows:

Meter Size	Monthly Base Charge					
	Current	Jan 1, 2018	Jan 1, 2019	Jan 1, 2020	Jan 1, 2021	Jan 1, 2022
5/8, 3/4, 1”	\$ 23.57	\$ 29.41	\$ 30.88	\$ 32.42	\$ 34.04	\$ 35.74
1.5”	\$ 23.57	\$ 98.02	\$ 102.92	\$ 108.07	\$ 113.47	\$ 119.15
2”	\$ 23.57	\$ 156.83	\$ 164.67	\$ 172.91	\$ 181.55	\$ 190.63
3”	\$ 23.57	\$ 313.66	\$ 329.34	\$ 345.81	\$ 363.10	\$ 381.25
4”	\$ 25.16	\$ 490.09	\$ 514.60	\$ 540.33	\$ 567.34	\$ 595.71

An ALT treatment plant supplemental charge of \$15.08 per month is also added to the above listed base charge for all treated water customers.

Tier	Usage Rate (per CF)					
	Current	Jan 1, 2018	Jan 1, 2019	Jan 1, 2020	Jan 1, 2021	Jan 1, 2022
<1000 CF	--	\$ 0.0255	\$ 0.0268	\$ 0.0281	\$ 0.0295	\$ 0.0310
1000-2000	\$ 0.0138	\$ 0.0255	\$ 0.0268	\$ 0.0281	\$ 0.0295	\$ 0.0310
2001-3000	\$ 0.0165	\$ 0.0255	\$ 0.0268	\$ 0.0281	\$ 0.0295	\$ 0.0310
3001-4000	\$ 0.0193	\$ 0.0255	\$ 0.0268	\$ 0.0281	\$ 0.0295	\$ 0.0310
>4001 CF	\$ 0.0221	\$ 0.0255	\$ 0.0268	\$ 0.0281	\$ 0.0295	\$ 0.0310

**NOW, THEREFORE, BE IT and it is hereby RESOLVED** by the Board of Directors of the Georgetown Divide Public Utility District as follows:

Beginning on January 1, 2018, the monthly charges for irrigation water customers are established as follows:

Meter Size	Monthly Base Charge (Irrigation Season Only)					
	Current	Jan 1, 2018	Jan 1, 2019	Jan 1, 2020	Jan 1, 2021	Jan 1, 2022
½"	\$ 47.00	\$ 77.00	\$ 84.80	\$ 93.20	\$ 102.60	\$ 112.80
Per each 1"	\$ 72.74	\$ 154.20	\$ 169.60	\$ 186.60	\$ 205.20	\$ 225.80

**PASSED, APPROVED, AND ADOPTED** by the Georgetown Divide Public Utility District District at a special meeting held on the 12th day of December 2017; motioned by Director Hanschild, seconded by Director Wadle, and upon roll call was carried by the following vote of:

**AYES:** Halpin, Hanschild, Uso, Wadle

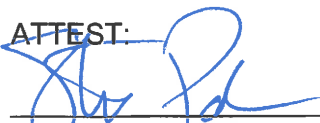
**NAYS:**

**ABSENT:**

**ABSTAIN:**

\_\_\_\_\_  
 Londres Uso, President  
 Board of Directors  
 GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

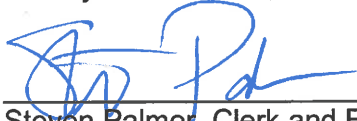
ATTEST:



\_\_\_\_\_  
Steven Palmer, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

CERTIFICATION

I hereby certify that the foregoing is a full, true and correct copy of Resolution 2017-30 duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on the 12<sup>th</sup> day of December 2017.



\_\_\_\_\_  
Steven Palmer, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT



**RESOLUTION NO. 2019-14**  
**OF THE BOARD OF DIRECTORS OF THE**  
**GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT**  
**FREEZING TREATED AND WATER IRRIGATION RATES AT THE 2018 RATES**  
**UNTIL THE END OF THE DECEMBER 2019 BILLING PERIOD**

**WHEREAS**, Georgetown Divide Public Utility District (“District”) provides irrigation and treated water services to residents and businesses of the District; and

**WHEREAS**, in December 2017, the District completed a roughly 15-month process to update its treated and irrigation water rates; and

**WHEREAS**, that process resulted in a Water Financial Analysis (aka Water Rate Study), dated October 24, 2017, prepared by Rural Community Assistance Corporation (RCAC) that established various proposed rates; and

**WHEREAS**, on December 12, 2017, pursuant to Proposition 218 (Cal. Const., Art. XIID, Sec. 6) the District Board heard and considered all oral testimony, written materials, and written protests concerning the rate increase; verified and counted the protests and determined that the District may proceed with the proposed water rates; and

**WHEREAS**, the Board then adopted Resolution 2017-30 Adopting New Rates for Treated Water and Irrigation Water Services; and

**WHEREAS**, those rates were set to increase effective with the January/February 2019 billing period; and

**WHEREAS**, at the January 8, 2019 meeting the Board acted by motion to “temporarily freeze the rate increases for no more than 12 months;” and

**WHEREAS**, Board determinations regarding District rates should be made by resolution or ordinance; and

**NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT HEREBY RESOLVES THE FOLLOWING:**

1. Effective with the January/February 2019 billing period, the monthly charges (billed bi-monthly) for treated water customers are established as follows:

<b>Meter Size</b>	<b>Monthly Base Charge</b>
5/8, 3/4, 1”	\$ 29.41
1.5”	\$ 98.02
2”	\$ 156.83
3”	\$ 313.66
4”	\$ 490.09

An ALT treatment plant supplemental charge of \$15.08 per month is also added to the above listed base charge for all treated water customers.

- Effective with the January/February 2019 billing period, the usage rate for treated water customers will be \$0.0255 per cubic foot.
- Effective with the January/February 2019 billing period, the monthly charges for irrigation water customers are established as follows:

Meter Size	Monthly Base Charge (Irrigation Season Only)
1/2"	\$ 77.00
Per each 1"	\$ 154.20

- The above listed rates will be effective through the November/December 2019 billing period.
- Effective with the January/February billing period for each following year, respectively, the monthly charges (billed bi-monthly) for treated water customers are established as follows:

Meter Size	Monthly Base Charge		
	2020	2021	2022
5/8, 3/4, 1"	\$ 30.88	\$ 32.42	\$ 34.04
1.5"	\$ 102.92	\$ 108.07	\$ 113.47
2"	\$ 164.67	\$ 172.91	\$ 181.55
3"	\$ 329.34	\$ 345.81	\$ 363.10
4"	\$ 514.60	\$ 540.33	\$ 567.34

An ALT treatment plant supplemental charge of \$15.08 per month is also added to the above listed base charge for all treated water customers.

- Effective with the January/February billing period each following year, respectively, the usage rate for treated water customers are established as follows:

Usage Charge (per CF)		
2020	2021	2022
\$ 0.0268	\$ 0.0281	\$ 0.0295

- Effective with the January/February billing period each following year, respectively, the monthly charges for irrigation water customers are established as follows:

Meter Size	Monthly Base Charge (Irrigation Season Only)		
	2020	2021	2022
1/2"	\$ 84.80	\$ 93.20	\$ 102.60
Per each 1"	\$ 169.60	\$ 186.60	\$ 205.20

**PASSED AND ADOPTED** by the Board of Directors of the Georgetown Divide Public Utility District at a meeting of said Board held on the twelfth day of February 2019, by the following vote:

AYES: *Garcia, Halpin, Saunders, Souza*

NOES: *Wadle*

ABSENT/ABSTAIN:

*Dane M. Wadle*

\_\_\_\_\_  
Dane Wadle, President, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

Attest:

*Steven Palmer*

\_\_\_\_\_  
Steven Palmer, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

### CERTIFICATION

I hereby certify that the foregoing is a full, true and correct copy of Resolution 2019-14 duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on this twelfth day of February 2019.

*Steven Palmer*

\_\_\_\_\_  
Steven Palmer, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

**FILED**

JAN 09 2020

EL DORADO CO. SUPERIOR COURT  
BY *Wendy Marden*

(DEPUTY CLERK)

SUPERIOR COURT OF THE STATE OF CALIFORNIA  
COUNTY OF EL DORADO

**Georgetown Divide Taxpayers  
Association, Steven Proe, and  
Michele Turney, on behalf of  
themselves, and all others similarly  
situated,**

**Petitioners/Plaintiffs,**

**v.**

**Georgetown Divide Public Utility  
District and Does 1 to 20,**

**Respondents/Defendants.**

Case No. PC20180211

**Proposed Statement of  
Decision**

(Code of Civ. Proc. § 632; Cal. Rules  
of Ct., Rule 3.1590)

Pursuant to California Rules of Court, rule 3.1590, the court renders its Proposed Statement of Decision. Any party may file and serve a proposal or objection to its contents within the time limits specified by applicable rule. If no party does so, this document shall, without the necessity of another court order, automatically become the court's Statement of Decision. To the extent any of the parties avail themselves of the right to propose or object, the court reminds the parties that a Statement of Decision need not discuss each point listed in a party's request; it need only set forth ultimate facts as opposed to evidentiary

1 facts on the principal controverted issues requested. (*Marriage of Garrity &*  
2 *Bishton* (1986) 181 Cal.App.3rd 675, 687 [226 Cal.Rptr. 485].)

3 **INTRODUCTION**

4 Petitioners/plaintiffs Georgetown Divide Taxpayers Association, Steven  
5 Proe, and Michele Turney, on behalf of themselves and all others similarly  
6 situated, filed this action for a writ of mandate, declaratory relief, an injunction,  
7 and refund of illegal tax against respondent/defendant Georgetown Divide Public  
8 Utility District (“District”).<sup>1</sup> Petitioners ask the court to declare that rates and  
9 charges that went into effect January 1, 2018, are invalid pursuant to  
10 Proposition 218.

11 The matter came on regularly for hearing on October 11, 2019, before the  
12 Honorable Michael J. McLaughlin, Judge of the Superior Court. Marsha Burch  
13 appeared on behalf of petitioners, and Robin Baral and Barbara Brenner  
14 appeared on behalf of respondent. The administrative record having been lodged  
15 with the court, the parties’ briefs having been filed and argument had, the  
16 matter was then submitted for decision by the court.

17 **1. THE PARTIES**

18 Georgetown Divide Taxpayers Association is an unincorporated, informal  
19 organization. The Association states that it was “established to promote  
20 responsible taxation and governmental action within the District.” (Ver. Pet.  
21 at 3:9–11.)

22 Individuals Steven Proe and Michele Turney are ratepayers within the  
23 boundaries of the District. (*Id.* at 3:18–23.)

24 The District is a public utility district established under the Public Utility  
25 Act, Public Utilities Code §§ 15501–15533. (Ver. Resp. at 4:11–13.)

---

26  
27  
28 <sup>1</sup> Per stipulation, petitioners’ causes of action for injunctive relief and refund of  
illegal tax will be the subject of a later litigation phase.

1    **2. BACKGROUND**

2           Georgetown is a community of about 2,300 residents in an unincorporated  
3 area of El Dorado County. (Administrative Record (“AR”) 16.) The town is  
4 registered as California Historical Landmark #484. (*Ibid.*) The median  
5 household income for the District’s service area is approximately \$66,359,  
6 although the budget calculations in the District’s rate study indicate the median  
7 is \$46,700. (AR 16, 38.)

8           The District was formed in 1946. (*Ibid.*) Following the decline in gold  
9 production, agriculture and lumbering became the primary industries on the  
10 Georgetown Divide for many years. (*Ibid.*) In recent decades, vineyards have  
11 increased the demand for irrigation water. (*Ibid.*) Stumpy Meadows Reservoir, a  
12 20,000 acre-foot impoundment on Pilot Creek, is the core of the District’s water  
13 supply system. (AR 17.) The District provides treated water, irrigation water,  
14 and sewer services to the community known as the Georgetown Divide, in the  
15 northwest portion of the county. (*Ibid.*) But, not all three services are provided in  
16 all areas. (*Ibid.*)

17           The District has an elected five-member Board which meets monthly and  
18 oversees a General Manager. (*Ibid.*) The Board sets policy but does not actively  
19 participate in the management of the District. (*Ibid.*) There are 3,774 treated  
20 water customers and 408 irrigation water customers. (*Ibid.*) The treated water  
21 customers are billed bimonthly and pay a monthly base charge—which is  
22 determined from the size of the customer’s water meter—and a usage charge—  
23 which is based on the amount of water the customer uses. (*Ibid.*) Treated water  
24 customers also pay a monthly supplemental charge for the Auburn Lake Trails  
25 Water Treatment Plant (“ALT Plant”). (AR 2.) Irrigation water customers pay a  
26 monthly base charge, based on one miner’s inch of water, during the five-month  
27 irrigation season. (AR 18, 64.) Rates for irrigation water customers are

28

1 supplemented, i.e., reduced, by a portion of the ad valorem property taxes  
2 received by the District. (AR 1281.)

3 Prior to the rate study in dispute, the District last updated its rates in 2008.  
4 (AR 8, 17.) That update included a five-year schedule of proposed rates for 2009–  
5 2013. (AR 8.) The District adopted rate increases for 2009–2011, but not for 2012  
6 or 2013. (*Ibid.*)

7 In September 2016 the District initiated the process of enlisting the Rural  
8 Community Assistance Corporation (“RCAC”) to conduct an updated rate study.  
9 (AR 270.) RCAC receives state funding to help rural communities like the  
10 District stay in compliance with applicable laws and regulations. (AR 8.) RCAC’s  
11 services are provided at no cost to the District. (AR 18.)

12 Multiple Board meetings and public workshops took place over the  
13 following year. (AR 4, 9, 977, 1193–1194, 1478.) Additionally, in May 2017 the  
14 Grand Jury released a report concerning the District and made five  
15 recommendations. (AR 590–591.) The District responded in June 2017 to the  
16 Grand Jury’s report. (AR 602–604.)

17 In October 2017 the Board adopted District Resolution No. 2017-27  
18 authorizing the District’s General Manager to prepare and mail notice of a  
19 public hearing to consider rate increases for all treated water and irrigation  
20 water customers. (AR 1340, 1344.) On October 26, 2017, the District delivered  
21 notice of the Proposition 218 public hearing via mail to all its water customers.  
22 (AR 10, 65.) The notice was mailed more than 45 days prior to the December 12,  
23 2017, public hearing. (AR 10.)

24 On December 12, 2017, the District held the Proposition 218 public hearing.  
25 (AR 70.) At the conclusion of the public hearing, the Board determined that the  
26 protest was not successful. (AR 73.) The Board unanimously adopted District  
27 Resolution No. 2017-29, to accept and close the Proposition 218 hearing, and  
28 then the Board adopted District Resolution No. 2017-30 establishing new water

1 rates, effective January 1, 2018. (AR 73–74.) This Resolution adopted an  
2 amended version of RCAC’s recommended rate structure. (AR 1–2.)

3 **3. LEGAL PRINCIPLES**

4 The California Constitution, as amended by a series of voter initiatives,  
5 limits the authority of state and local governments to collect revenue. (Cal.  
6 Const., arts. XIII A, XIII C, XIII D.) Article XIII D, added by Proposition 218 in  
7 1996, applies to charges for specific services imposed “as an incident of property  
8 ownership,” including a “charge for a property related service.” (Cal. Const.,  
9 art. XIII D, § 2, subds. (e), (h).) Proposition 218 added to Proposition 13’s limits  
10 on property taxes by placing similar restrictions on assessments, charges, and  
11 fees imposed on taxpayers by local governmental entities. (*Howard Jarvis*  
12 *Taxpayers Ass’n v. City of Riverside* (1999) 73 Cal.App.4th 679, 681–683 [86  
13 Cal.Rptr.2d 592].)

14 Article XIII D of the California Constitution contains the following  
15 definitions:

16 “(e) ‘Fee’ or ‘charge’ means any levy other than an ad valorem tax, a special  
17 tax, or an assessment, imposed by an agency upon a parcel or upon a person as  
18 an incident of property ownership, including a user fee or charge for a property  
19 related service. [¶] ... [¶]

20 “(g) ‘Property ownership’ shall be deemed to include tenancies of real  
21 property where tenants are directly liable to pay the assessment, fee, or charge  
22 in question.

23 “(h) ‘Property-related service’ means a public service having a direct  
24 relationship to property ownership.” (*Id.* § 2.)

25 The parties in this case do not dispute that the rates at issue are for a  
26 property-related service. (*See Bighorn-Desert View Water Agency v. Verjil* (2006)  
27 39 Cal.4th 205, 216 [46 Cal.Rptr.3d 73]; *Richmond v. Shasta Cmty. Services Dist.*  
28 (2004) 32 Cal.4th 409, 426–427 [9 Cal.Rptr.3d 121].)



1           There are two types of restrictions on a local governmental entity's power to  
2 increase property-related charges: (1) a set of procedural requirements, including  
3 the requirement that owners, including tenants directly liable for the charges, be  
4 given notice, a hearing, and an opportunity to defeat the increase by submitting  
5 protests; and (2) a set of substantive requirements that regulate the use of the  
6 funds collected and the distribution of the burden.

7           First, with regard to procedural requirements:

8           “Procedures for New or Increased Fees and Charges. An agency shall follow  
9 the procedures pursuant to this section in imposing or increasing any fee or  
10 charge as defined pursuant to this article, including, but not limited to, the  
11 following:

12           “(1) The parcels upon which a fee or charge is proposed for imposition shall  
13 be identified. The amount of the fee or charge proposed to be imposed upon each  
14 parcel shall be calculated. The agency shall provide written notice by mail of the  
15 proposed fee or charge to the record owner of each identified parcel upon which  
16 the fee or charge is proposed for imposition, the amount of the fee or charge  
17 proposed to be imposed upon each, the basis upon which the amount of the  
18 proposed fee or charge was calculated, the reason for the fee or charge, together  
19 with the date, time, and location of a public hearing on the proposed fee or  
20 charge.

21           “(2) The agency shall conduct a public hearing upon the proposed fee or  
22 charge not less than 45 days after mailing the notice of the proposed fee or  
23 charge to the record owners of each identified parcel upon which the fee or  
24 charge is proposed for imposition. At the public hearing, the agency shall  
25 consider all protests against the proposed fee or charge. If written protests  
26 against the proposed fee or charge are presented by a majority of owners of the  
27 identified parcels, the agency shall not impose the fee or charge.” (Cal. Const.,  
28 art. XIIIID, § 6, subd. (a).)

1 And second, with regard to substantive requirements:

2 “Requirements for Existing, New or Increased Fees and Charges. A fee or  
3 charge shall not be extended, imposed, or increased by any agency unless it  
4 meets all of the following requirements:

5 “(1) Revenues derived from the fee or charge shall not exceed the funds  
6 required to provide the property related service.

7 “(2) Revenues derived from the fee or charge shall not be used for any  
8 purpose other than that for which the fee or charge was imposed.

9 “(3) The amount of a fee or charge imposed upon any parcel or person as an  
10 incident of property ownership shall not exceed the proportional cost of the  
11 service attributable to the parcel.

12 “(4) No fee or charge may be imposed for a service unless that service is  
13 actually used by, or immediately available to, the owner of the property in  
14 question. Fees or charges based on potential or future use of a service are not  
15 permitted. Standby charges, whether characterized as charges or assessments,  
16 shall be classified as assessments and shall not be imposed without compliance  
17 with Section 4.” (*Id.*, art. XIIIID, § 6, subd. (b).)

18 After the adoption of a fee or charge subject to Proposition 218, taxpayers  
19 can challenge it by filing a petition for a writ of mandate in the superior court.  
20 (*Silicon Valley Taxpayers’ Ass’n, Inc. v. Santa Clara County Open Space Auth.*  
21 (2008) 44 Cal.4th 431, 440 [79 Cal.Rptr.3d 312].)

22 “In any legal action contesting the validity of a fee or charge, the burden  
23 shall be on the agency to demonstrate compliance” with both the procedural and  
24 substantive requirements of Article XIIIID. (Cal. Const., art. XIIIID, § 6,  
25 subd. (b)(5).) The court exercises its independent judgment in determining  
26 whether the District’s new rate structure is consistent with Article XIIIID.  
27 (*Silicon Valley, supra*, 44 Cal.4th at pp. 443–450.)

28

1 Evidence outside the administrative record is not usually admissible. (*W.*  
2 *States Petroleum Ass'n v. Superior Court* (1995) 9 Cal.4th 559, 565, 576 [38  
3 Cal.Rptr.2d 139].) *Western States* did recognize a narrow exception: Extra-record  
4 evidence is admissible in traditional mandamus proceedings if it existed before  
5 the agency made its decision and it was not possible in the exercise of reasonable  
6 diligence to present it to the agency before the decision was made. (*Id.* at p. 578.)  
7 Other exceptions might exist, but extra-record evidence cannot be used to  
8 contradict the administrative record. (*Id.* at pp. 578–579.)

#### 9 4. PETITIONERS' REQUEST TO AUGMENT THE RECORD

10 Petitioners request that the court augment the Administrative Record by  
11 considering Exhibits A–P to petitioners' Appendix in Support of Opening Trial  
12 Brief. Petitioners contend these documents are admissible on the grounds that  
13 (1) the standard of review supports an augmented record; (2) most of the  
14 documents are subject to judicial notice; and (3) the documents fall within extra-  
15 record exceptions recognized in *Western States, supra*, 9 Cal.4th 559. (Ver. Pet.  
16 at 18:15–20:25.)

17 Petitioners' request to augment the record is denied. Exhibits A, B, H, I, J,  
18 K, and L include copies of District capital improvement plans, summary of fixed  
19 assets and depreciation lists, construction in progress, and District staff costs  
20 payroll for various years. The court agrees with the District that, with the  
21 exception of one column of one page (*see* Exhibit A, page 1), these documents do  
22 not provide information regarding future replacement costs—the methodology  
23 used for the rate study. Additionally, some of the documents do not provide  
24 information as to when they were created or for what purpose. As such, without  
25 adequate foundation, the relevancy of these documents has not been established.

26 Next, Exhibit C is a newspaper article and is not relevant evidence.

27 Exhibits D, E, F, and G are copies of regular meeting agendas, minutes, or  
28 packets of the District from meetings occurring after the adoption of the new

1 rate structure in December 2017. “Extra-record evidence is admissible under this  
2 exception [i.e., evidence that could not be produced at the agency level] only in  
3 those rare instances in which (1) the evidence in question existed *before* the  
4 agency made its decision, and (2) it was not possible in the exercise of reasonable  
5 diligence to present this evidence to the agency *before* the decision was made so  
6 that it could be considered and included in the administrative record.” (*Western*  
7 *States, supra*, 9 Cal.4th at p. 578 [emphasis in original].) Exhibits D through G  
8 do not fall under the *Western States* exception, and therefore will not be  
9 considered by the court.

10 The court also declines to take judicial notice of documents that were  
11 created by the District. “Taking judicial notice of a document is not the same as  
12 accepting the truth of its contents or accepting a particular interpretation of its  
13 meaning.” (*Joslin v. H.A.S. Ins. Brokerage* (1986) 184 Cal.App.3d 369, 374 [228  
14 Cal.Rptr. 878].) “While courts take judicial notice of public records, they do not  
15 take notice of the truth of matters stated therein. [Citation.] ‘When judicial  
16 notice is taken of a document, ... the truthfulness and proper interpretation of  
17 the document are disputable.’ [Citation.]” (*Herrera v. Deutsche Bank Nat’l Tr.*  
18 *Co.* (2011) 196 Cal.App.4th 1366, 1375 [127 Cal.Rptr.3d 362].)

19 Here, while the court may take judicial notice of the existence of these  
20 documents apparently created by the District, the truth of the matters stated  
21 therein and the parties’ interpretation of the hearsay statements is nevertheless  
22 disputed. Furthermore, as stated earlier, the court also cannot determine from  
23 these documents when they were created or for what purpose. As such, taking  
24 judicial notice does not assist the court in its determination.

25 **5. PROPOSITION 218: PROCEDURAL REQUIREMENTS**

26 Petitioners raise one procedural argument, which concerns the number of  
27 votes each parcel received. (Pet. Br. at 31:10–32:2.) Specifically, that despite  
28 some District customers receiving more than one type of service, each parcel was

1 granted only one vote. Petitioners contend that treated water customers “were  
2 allowed to determine the cost of service for all Irrigation Water customers  
3 because of the relative number of irrigation customers.” (*Id.* at 31:12–14.)

4 Petitioners’ argument is not persuasive. Petitioners appear to be referring  
5 to weighted ballots used in the adoption of special assessments under  
6 Article XIIIID, § 4, and not to property-related fees and charges under  
7 Article XIIIID, § 6, in which each parcel is afforded one protest vote. Government  
8 Code § 53755 states that “[o]ne written protest per parcel, filed by an owner or  
9 tenant of the parcel, shall be counted in calculating a majority protest ....” (*Id.*,  
10 subd. (b); *see also Morgan v. Imperial Irrig. Dist.* (2014) 223 Cal.App.4th 892,  
11 910–911 [167 Cal.Rptr.3d 687].)

12 Because no other procedural objections under Proposition 218 were  
13 asserted, the court finds the District met its burden of demonstrating compliance  
14 with Proposition 218’s procedural requirements.

#### 15 **6. PROPOSITION 218: SUBSTANTIVE REQUIREMENTS**

16 The majority of petitioners’ opening brief focuses on alleged violations of  
17 Proposition 218’s substantive requirements. Petitioners assert that the District’s  
18 rate increase is illegal because the new rates exceed the funds required to  
19 provide water service. They further assert that the District inflated its original  
20 cost of assets, included items in its asset list that did not exist at the time of the  
21 rate increase, exaggerated the number or cost of components of the system, and  
22 generally relied upon inaccurate and flawed information to support the rate  
23 increase.

24 As noted earlier, Article XIIIID, § 6, includes specific substantive  
25 requirements for any fee increase: (1) revenues derived from the fee cannot  
26 exceed the funds required to provide the property-related service; (2) the revenue  
27 may not be used for any purpose other than that for which the fee was imposed;  
28 (3) the amount of the fee imposed as an incident of property ownership cannot

1 exceed the proportional cost of the service attributable to the parcel; (4) no fee  
2 may be imposed for a service unless that service is actually used by, or  
3 immediately available to, the owner of the property in question; and (5) a fee  
4 may not be imposed for general government services where the service is  
5 available to the public at large in substantially the same manner as it is to  
6 property owners. (*Id.*, subd. (b).)

7 “The theme of these sections is that fee or charge revenues may not exceed  
8 what it costs to provide fee or charge services. Of course, what it costs to provide  
9 such services includes all the required costs of providing service, short-term and  
10 long-term, including operation, maintenance, financial, and capital  
11 expenditures. The key is that the revenues derived from the fee or charge are  
12 required to provide the service, and may be used only for the service. In short,  
13 the section 6(b) fee or charge *must reasonably represent* the cost of providing  
14 service.” (*Howard Jarvis Taxpayers Assn. v. City of Roseville* (2002) 97  
15 Cal.App.4th 637, 647–648 [119 Cal.Rptr.2d 91] [emphasis added].)

16 The Proposition 218 Omnibus Implementation Act, enacted to construe  
17 Proposition 218, defines “water” as “any system of public improvements intended  
18 to provide for the production, storage, supply, treatment, or distribution of water  
19 from any source.” (Gov’t Code § 53750, subd. (n).) Thus, water service consists of  
20 more than mere delivery of water. (*Griffith v. Pajaro Valley Water Mgmt. Agency*  
21 (2013) 220 Cal.App.4th 586, 602 [163 Cal.Rptr.3d 243].)

22 The ultimate issue to be determined is whether the District’s new rate  
23 structure was based upon substantial evidence. In making that determination,  
24 the court reviewed the Administrative Record, upon which the District’s Board  
25 relied upon in deciding to adopt new rates. The Administrative Record consists  
26 of over 3,000 pages of material, including District resolutions, agenda packets  
27 and meeting minutes, the “Georgetown Divide PUD Water Financial Analysis”  
28

1 prepared by RCAC, email correspondence, community workshop materials and  
2 notices, Capital Improvement Program documents, and press releases.

3 The court carefully read and analyzed the Administrative Record in order to  
4 determine what evidence was considered by the District, and to assess whether  
5 that evidence substantially supports the District's decision. Based upon the  
6 foregoing, the court concludes that the District's new water rates are based upon  
7 substantial evidence and comply with Proposition 218's substantive  
8 requirements.

9 It should be noted that petitioners do not assert that some of the various  
10 costs of providing water service should not have been included in the rate study.  
11 Rather, they contend the District failed to use reliable and accurate information  
12 to form the basis of the analysis, and in particular with regard to the District's  
13 list of assets.

14 The rate study sets forth in detail the process of how the rates were  
15 calculated. The rate setting model used by RCAC was developed over many  
16 years of practice and has been used in more than 60 rate studies throughout the  
17 western United States. (AR 20.) The model is geared to RCAC's clients, which  
18 are communities of less than 10,000 people, such as the community in this case.  
19 (*Ibid.*)

20 The rate study process began with a list of all capitalized assets, the  
21 budget, and the current number of customers. (AR 21.) From the list of assets,  
22 the required reserves are calculated and fed into a five-year budget projection,  
23 which is adjusted for 2% inflation. (*Ibid.*) Expenses are divided between fixed  
24 and variable expenses. (*Ibid.*)

25 Fixed expenses are then allocated among the different customers according  
26 to their hydrological potential, as determined by their meter size, and the result  
27 is a recommended Base Rate. (AR 22.) The Usage Charge is calculated based on  
28 the variable expenses. (*Ibid.*) A Revenue Forecast is arrived at by applying the

1 Sales Forecast—adjusted for future growth and water conservation—against the  
2 Base Rate and Usage Charge. (*Ibid.*) The Revenue Forecast is then inserted in  
3 the forecasted Budget. (*Ibid.*) If the Budget does not balance with the selected  
4 Base Rate and Usage Charge, they are adjusted until the Budget is balanced.  
5 (*Ibid.*) To lessen the impact on District customers, rate increases could be spread  
6 out over a longer period of time. (*Ibid.*) For irrigation rates, the same principle  
7 works except that the rate, per miner's inch, is calculated by dividing total  
8 expenses by the total miner's inches. (*Ibid.*)

9 One component of the rate study is the Capital Replacement Program  
10 ("CRP"). (AR 23.) Steven Palmer, the District's General Manager, explains that  
11 the CRP is a list of all District-owned infrastructure, their projected replacement  
12 date, an estimate of future costs to replace capital improvements, and an  
13 apportionment of funds to those future costs. (Palmer Decl., ¶ 2.) A list of  
14 components, their installation date, and their original costs were supplied to  
15 RCAC by Mr. Palmer, along with input from other knowledgeable District staff,  
16 which was then reviewed by the District's Operations Manager. (*Ibid.*)

17 The District details the process of how the list of assets was compiled. The  
18 list was compiled from multiple sources, including from assets listed in the  
19 accounting system (equipment, tools, vehicles, etc.), a 2002 Water System  
20 Reliability Study by KASL Report (raw and irrigation water facilities), and a  
21 2007 Capital Facility Charge Study (treated water facilities). (Palmer Decl., ¶ 4;  
22 AR 23.) That information was then reviewed by for completeness by the  
23 District's General Manager and the Operations Manager. (*Ibid.*) The asset list  
24 was further refined based on the knowledge of District staff, including the  
25 Operations Manager. (Palmer Decl., ¶ 4.) District staff and RCAC worked  
26 through multiple drafts and versions of the asset list to ensure it was as  
27 complete as possible and complied with directions from the District Board.  
28 (*Ibid.*) Mr. Palmer declares that in developing the CRP, District staff used their



1 expertise, knowledge, and judgment to complete the components of the asset list  
2 as best as possible. (Palmer Decl., ¶¶ 2, 4.)

3 The Normal Estimated Life of all assets was based on American Water  
4 Works Association (“AWWA”) standards and adjusted for actual conditions.  
5 (AR 2891.) The Estimated Remaining Life of the assets was based on the best  
6 judgment of RCAC and the District’s General Manager and Operations  
7 Manager, following visual inspection of each component’s condition. (*Ibid.*)

8 The CRP excluded certain segments of ditch maintenance and repairs  
9 because the District received a grant, called the CABY Grant, in 2017 to update  
10 the earthen ditches with concrete lining or piping. (Palmer Decl., ¶ 5.) The  
11 District removed these ditch segments from the CRP to prevent double counting,  
12 as the District had already received the grant funding. (*Ibid.*) Thus, petitioners  
13 contention that the District failed to properly account for the grant in the rate  
14 study is not well taken. (Pets. Reply Br. at 15:8–26.)

15 The District calculated projected replacement dates for the infrastructure  
16 using AWWA standards as recommended by RCAC, and then the District’s  
17 General Manager and Operations Manager made further adjustments based on  
18 the current condition of that piece of infrastructure. (Palmer Decl., ¶ 6.) The  
19 District concedes that for some facilities or components the exact date of  
20 installation was estimated and used as a starting point to calculate a  
21 replacement date. For example, the District represents that most of its pipelines  
22 were installed in 1974 or earlier. (*Ibid.*) For the CRP, it estimated that 13% of  
23 the pipelines were installed in 1977, and 8% were installed between 1989 and  
24 1991. But, the District contends that, for all assets, the actual installation date  
25 is not as important as the estimated remaining life span. (*Ibid.*) As such, the  
26 installation date and normal estimated life for each piece of infrastructure were  
27 starting points, and then adjusted based on current condition to arrive at an  
28 estimated replacement date. (*Ibid.*)

1 In calculating the future replacement cost of assets, various methods were  
2 used. (Palmer Decl., ¶ 7.) For most assets the estimated current cost to replace  
3 the asset is based on the Stantec Report and the KASL Report. (*Ibid.*) The cost  
4 to replace equipment, tools, and vehicles was based on recent purchases. (*Ibid.*)  
5 More recent cost data was available for other assets, including the Lake Walton  
6 Water Treatment Plant, the ALT Plant, and the Automated Meter Reading and  
7 Meter Replacement Project. (*Ibid.*)

8 Section 6 of Article XIIIID “does not require perfection.” (*Morgan, supra*, 223  
9 Cal.App.4th at p. 918.) Rather, the data relied on must be “reasonably  
10 dependable and adequate,” and can be derived from “reliable estimates.”  
11 (*Morgan, supra*, at p. 916; *Moore v. City of Lemon Grove* (2015) 237 Cal.App.4th  
12 363, 372 [188 Cal.Rptr.3d 130].)

13 The court concludes that while estimates are not ideal, there is nothing in  
14 the record to support that the District ignored better evidence or picked  
15 estimates out of thin air. The information used to create the asset list was  
16 compiled from multiples sources, was reviewed by multiple individuals, and was  
17 subject to multiple revisions as better information was obtained. Accordingly,  
18 the court finds that the information relied on for the CRP and rate study is  
19 reasonably dependable and adequate to pass constitutional muster.

20 The District does concede there was an error in the final CRP because of  
21 the inclusion of the Pilot Hill water storage tank. However, the District asserts  
22 that the error had a negligible impact on the rate study analysis. In reply,  
23 petitioners argue that the rate study “may be used to support future rate  
24 increases, and it includes at least one asset that all parties agree no longer  
25 exist.” (Pets.’ Reply at 14:17–18.)

26 The court finds as credible the District’s explanation as to how the error  
27 occurred and that it had a negligible impact on the rate study analysis.  
28 Mr. Palmer, the General Manager, declares that “[i]n developing the CRP,

1 District staff informed RCAC that the Pilot Hill water storage tank ('Pilot Hill  
2 Tank') should be removed from the CRP asset list because it was  
3 decommissioned in 2015. However, the Pilot Hill Tank was not removed from  
4 and inadvertently left in the final CRP. Despite this oversight, the District  
5 asserts the Pilot Hill Tank ultimately has negligible impact on the Rate Study  
6 analysis for two reasons. First, the Rate Study calculates the capital  
7 replacement cost of this tank as 0.66% of the total capital replacement cost of  
8 the CRP. Second, the rates adopted by the Board are less than the amount  
9 necessary to fully fund the CRP. Since the CRP is underfunded and the Pilot  
10 Hill Tank contributes to less than one percent of the CRP's total capital  
11 replacement costs, the inclusion of the Pilot Hill Tank in the CRP does not  
12 impact the Rate Study analysis. The Pilot Hill Tank will become one of the  
13 projects that go unfunded by the revenues received from the rate increase. In  
14 allocating future revenues towards the replacement of capital assets, the District  
15 will ensure that no funds are used to replace the Pilot Hill Tank." (Palmer Decl.,  
16 ¶ 13.)

17 While the inadvertent inclusion of the Pilot Hill Tank is not ideal, the error  
18 does not rise to the level of unconstitutionality. Moreover, the court is not  
19 persuaded that the error will infect a future rate study. The error was RCAC's,  
20 not the District, who informed RCAC of the error. The District is clearly aware  
21 that it cannot allocate any future revenue to replace the Pilot Hill Tank. It is  
22 speculation that the error will not be accounted for in a future rate study.

23 Petitioners also make numerous other assertions concerning the rate study  
24 that misinterpret the study, which the court will briefly address as warranted.  
25 First, the court is not persuaded by petitioners' argument that the District failed  
26 to separate out general benefits from special benefits. (*See* Pets. Opening Br. at  
27 24:1–8; Resp. Opp'n Br. at 24:19–26:2; Pets. Reply at 11:5–20.) Second,  
28 petitioners confuse debt reserve obligations with debt payments. (*See* Pets.

1 Opening Br. at 24:9–11; Resp. Opp’n Br. at 35:21–27.) Third, petitioners are  
2 incorrect that asset values do not match within the rate study. (See Pets.  
3 Opening Br. at 24:12–14.) The District explains that the table at AR 26 is a  
4 summary subtotal and not meant as a comprehensive list of all assets. (See  
5 Resp. Opp’n Br. at 36:2–14.) Fourth, the court agrees with the District that  
6 petitioners misunderstand the functions of and methodologies used in creating  
7 asset lists for the Capital Improvement Plan and annual audits versus the CRP.  
8 (See Pets. Opening Br. at 24:18–25:6, 27:13–30:28; Resp. Opp’n Br. at 30:2–31:8.)  
9 And lastly, there is substantial evidence to support the District’s treatment of  
10 drought years in the rate study. (See Pets. Opening Br. at 26:7–27:8; Resp.  
11 Opp’n Br. at 36:27–37:10.)

12 In summary, the court is not persuaded that the District inflated its cost of  
13 assets, or exaggerated the number or cost of components. Accordingly, the court  
14 finds that the District’s new rates do not exceed the funds required to provide  
15 water service. Additionally, it is permissible under Proposition 218 that the new  
16 rates adopted by the District are lower than the cost of providing water service.  
17 (*Morgan, supra*, 223 Cal.App.4th at p. 923.)

18 Next, the court finds that the District has met its burden of demonstrating  
19 that the revenue will not be used for any purpose other than that for which the  
20 rates are imposed. (Palmer Decl., ¶ 15.) Petitioners contend that the District did  
21 not provide adequate information concerning where the funds from the rate  
22 increase will be spent. (Pets. Opening Br. at 25:7–20.) This argument is not well  
23 founded. The rate study includes budgets detailing what revenue is needed to  
24 meet operating and other expenses of providing water services. (AR 45–55.)  
25 Here, as discussed earlier, the District has shown that the rates represent the  
26 actual cost of service. Given that, it is permissible for the District to deposit the  
27 collected fees in the general fund, rather than separate accounts, and monitor  
28 the revenue and expenses to ensure compliance with budgetary constraints, as

1 well as make necessary adjustments. (*Moore, supra*, 237 Cal.App.4th at pp. 373–  
2 375.)

3 The new water rates do not exceed the proportional cost of the water service  
4 attributable to each parcel. Petitioners argue that the irrigation water  
5 customers bear an unfair and disproportionate burden. The treated water rates  
6 versus the irrigation water rates are significantly different, but that appears to  
7 be a result of, at least in part, the economies of scale (3,774 treated water users  
8 versus 408 irrigation customers) rather than an unconstitutional method of  
9 apportionment. (AR 17.)

10 “Apportionment is not a determination that lends itself to precise  
11 calculation. [Citation.] In the context of determining the validity of a fee imposed  
12 upon water appropriators by the State Water Resources Control Board, the  
13 Supreme Court has recently held that “The question of proportionality is not  
14 measured on an individual basis. Rather, it is measured collectively, considering  
15 all rate payors.’ [Citation.] [¶] ... Proposition 218 prescribes no particular  
16 method for apportioning a fee or charge other than that the amount shall not  
17 exceed the proportional cost of the service attributable to the parcel ....”

18 (*Griffith, supra*, 220 Cal.App.4th at p. 601.)

19 Here, to avoid one user group from subsidizing the other user group, and  
20 vice versa, the District split assets, budgets, reserves, and debts between the  
21 treated water customers and the irrigation customers proportionally based on  
22 certain rules and standards. (AR 19, 23–36; Palmer Decl., ¶¶ 14, 16.)

23 “[G]rouping similar users together for the same ... rate and charging the users  
24 according to usage is a reasonable way to apportion the cost of service. That  
25 there may be other methods favored by plaintiffs does not render defendant’s  
26 method unconstitutional. Proposition 218 does not require a more finely  
27 calibrated apportionment.” (*Griffith, supra*, 220 Cal.App.4th at p. 601.) So too in this  
28

1 case, that petitioners may favor other methods does not render the District's  
2 method unconstitutional.

3 The court further concludes that the water services are actually used by, or  
4 immediately available to, the property owners. In particular, the court agrees  
5 with the District that it was proper to include the new ALT Plant in the CRP,  
6 even if it was not operational at the time the new rates were adopted. The ALT  
7 Plant will replace an existing treatment plant. (AR 45; Palmer Decl., ¶¶ 8–9.)  
8 Thus, the service is already immediately available via the existing plant.

9 Although the Plant was not completed at the time of the rate study, it is a  
10 significant piece of the District's infrastructure and requires a long timeframe to  
11 fund, and which is estimated to cost \$40 million to replace in the future. (AR 45.)  
12 The new ALT Plant is expected to begin operations during the time period  
13 covered by the new rate structure. (Palmer Decl., ¶ 8.) The ALT Plant's costs are  
14 allocated only to treated water customers given that irrigation customers will  
15 not benefit from the new Plant. (AR 25.) Proposition 218 allows public water  
16 agencies to pass on to their customers the capital costs of improvements with  
17 these longer funding timelines in order to ensure continued water service.  
18 (*Capistrano Taxpayers Ass'n, Inc. v. City of San Juan Capistrano* (2015) 235  
19 Cal.App.4th 1493, 1497, 1501–1502 [186 Cal.Rptr.3d 362].) The court agrees  
20 that the new ALT Plant is a known cost and will be operational during the time  
21 period covered by the new rates. As such, it was proper to include the ALT Plant  
22 in the CRP.

23 For similar reasons, it was not improper for the District to include the  
24 Automated Meter Reading and Meter Replacement Project in the CRP, despite  
25 that the project is not completed. (See Pets. Opening Br. at 11:13–17; Resp.  
26 Opp'n at 33:3–17; Pets. Reply at 14:22–15:6.) There are existing meters being  
27 replaced, and thus the service is immediately available. Even assuming the  
28 District obtains a loan for most of the project cost, it is appropriate for the

1 District to include the project in the CRP given that it is a known asset, and it is  
2 appropriate to use cost data based upon the best available information. (Palmer  
3 Decl., ¶ 10.)


4 Lastly, the District has met its burden of establishing that the fees will not  
5 be imposed for general government services. The court already rejected  
6 petitioners' argument that the District failed to separate out general benefits  
7 from special benefits. (See Pets. Opening Br. at 24:1-8; Resp. Opp'n Br. at  
8 24:19-26:2; Pets. Reply at 11:5-20.)

9 **7. CONCLUSION**

10 After independently reviewing the evidence, the court concludes that the  
11 District's new water rates are supported by substantial evidence, and the  
12 District met its burden of showing compliance with Proposition 218's procedural  
13 and substantive requirements. The petition for writ of mandate is **DENIED**.

14 **IT IS SO ORDERED.**

15  
16 Dated: January 9, 2020

  
17 **Michael J. McLaughlin**  
Honorable Michael J. McLaughlin  
Superior Court Judge

18 //

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA  
2 IN AND FOR THE COUNTY OF EL DORADO

3 CLERK'S CERTIFICATE OF MAILING

4 Georgetown Divide Taxpayers Association, et al  
5 vs.  
6 Georgetown Divide Public Utility District

7 Case Number: PC20180211

8 I, Wendy Warden, Court Clerk of the Superior Court of the State of California, County of El Dorado, do  
9 hereby certify that I am a citizen of the United States and employed in the County of El Dorado, I am over the age of  
10 eighteen years and not a party to the within action; my business address is Superior Court of the State of California,  
11 County of El Dorado, Courthouse, 1354 Johnson Blvd., Suite 2, South Lake Tahoe, CA 96150, and that I served the  
12 following documents: Proposed Statement of Decision on the parties as indicated below:

- 13 • Donald B. Mooney, Esquire; Law Offices of Donald B. Mooney, 417 Mace Blvd., Suite J-334; Davis,  
14 CA 95618  
15 • Robin R. Baral, Esquire; Churchwell White LLP, 1414 K Street, 3<sup>rd</sup> Floor; Sacramento, CA 95814

16 I am familiar with the business practice of the EL DORADO COUNTY SUPERIOR COURT with regard  
17 to collection and processing of documents for mailing with the United States Postal Service. I enclosed a true copy  
18 of said document in a sealed envelope which was placed in a designated area for outgoing mail, addressed as set  
19 forth above. Mail placed in that designated area is given the correct amount of postage and is deposited that same  
20 day in the ordinary course of business in a United States mailbox in the City of South Lake Tahoe, California. I  
21 further certify that local counsel are served a copy of documents either by an attorney service, by Inter-Office Mail  
22 or by placement in their boxes in the Superior Court Clerk's Office.

23 The document described above was mailed and placed for collection and mailing in SOUTH LAKE  
24 TAHOE, CA on January 09, 2020 in the ordinary course of business.

25 Executed on January 09, 2020 in South Lake Tahoe, California.

26 EL DORADO COUNTY SUPERIOR COURT

27 By:   
28 Wendy Warden, Court Clerk



RECEIVED  
JAN 13 2020

BY: \_\_\_\_\_

**RESOLUTION NO. 2020-08**  
**OF THE BOARD OF DIRECTORS OF THE**  
**GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT**  
**FREEZING TREATED AND WATER IRRIGATION RATES AT THE 2018 RATES**

**WHEREAS**, Georgetown Divide Public Utility District (“District”) provides irrigation and treated water services to residents and businesses of the District; and

**WHEREAS**, in December 2017, the District completed a roughly 15-month process to update its treated and irrigation water rates; and

**WHEREAS**, that process resulted in a Water Financial Analysis (aka Water Rate Study), dated October 24, 2017, prepared by Rural Community Assistance Corporation (RCAC) that established various proposed rates; and

**WHEREAS**, on December 12, 2017, pursuant to Proposition 218 (Cal. Const., Art. XIII, Sec. 6) the District Board heard and considered all oral testimony, written materials, and written protests concerning the rate increase; verified and counted the protests and determined that the District may proceed with the proposed water rates; and

**WHEREAS**, the Board then adopted Resolution 2017-30 Adopting New Rates for Treated Water and Irrigation Water Services; and

**WHEREAS**, those rates were set to increase effective with the January/February 2019 billing period; and

**WHEREAS**, at the January 8, 2019 meeting the Board acted by motion to “temporarily freeze the rate increases for no more than 12 months;” and

**WHEREAS**, at the February 12, 2019 meeting the Board adopted Resolution 2019-14 which held the 2019 water rates at the 2018 water rates, and re-affirmed that water rates would increase effective with the January/February billing period each following year (2020, 2021, 2022); and

**WHEREAS**, at the December 10, 2019 meeting the Board directed the General Manager to analyze the impact of a rate freeze on District business and present it at the January 14, 2020 Board meeting; and

**WHEREAS**, the General Manager presented, and the Board reviewed that analysis at the February 11, 2020 Board meeting.

**NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT HEREBY RESOLVES THE FOLLOWING:**

1. Effective with the January/February 2020 billing period, the monthly charges (billed bi-monthly) for treated water customers are established as follows:

<b>Meter Size</b>	<b>Monthly Base Charge</b>
5/8, 3/4, 1"	\$ 29.41
1.5"	\$ 98.02
2"	\$ 156.83
3"	\$ 313.66
4"	\$ 490.09

An ALT treatment plant supplemental charge of \$15.08 per month is also added to the above listed base charge for all treated water customers.

2. Effective with the January/February 2020 billing period, the usage rate for treated water customers will be \$0.0255 per cubic foot.
3. The above listed treated water rates will be effective through the May/June 2020 billing period.
4. Effective with the July/August 2020 billing period, and the January/February billing period for each following year, respectively, the monthly charges (billed bi-monthly) for treated water customers are established as follows:

<b>Meter Size</b>	<b>Monthly Base Charge</b>		
	<b>2020 (July/August)</b>	<b>2021 (Jan/Feb)</b>	<b>2022 (Jan/Feb)</b>
5/8, 3/4, 1"	\$ 30.88	\$ 32.42	\$ 34.04
1.5"	\$ 102.92	\$ 108.07	\$ 113.47
2"	\$ 164.67	\$ 172.91	\$ 181.55
3"	\$ 329.34	\$ 345.81	\$ 363.10
4"	\$ 514.60	\$ 540.33	\$ 567.34

An ALT treatment plant supplemental charge of \$15.08 per month is also added to the above listed base charge for all treated water customers.

5. Effective with the July/August 2020 billing period, and the January/February billing period each following year, respectively, the usage rate for treated water customers are established as follows:

<b>Usage Charge (per CF)</b>		
<b>2020 (July/August)</b>	<b>2021 (Jan/Feb)</b>	<b>2022 (Jan/Feb)</b>
\$0.0268	\$ 0.0281	\$ 0.0295

6. Effective with the January/February 2020 billing period, the monthly charges for irrigation water customers are established as follows:

Meter Size	Monthly Base Charge (Irrigation Season Only)
1/2"	\$ 77.00
Per each 1"	\$ 154.20

7. The above listed irrigation water rates will be effective through the November/December 2020 billing period.
8. Effective with the January/February billing period each following year, respectively, the monthly charges for irrigation water customers are established as follows:

Meter Size	Monthly Base Charge (Irrigation Season Only)	
	2021	2022
1/2"	\$ 84.80	\$ 93.20
Per each 1"	\$ 169.60	\$ 186.60

**PASSED AND ADOPTED** by the Board of Directors of the Georgetown Divide Public Utility District at a meeting of said Board held on the eleventh day of February 2020, by the following vote:


AYES:

NOES:

ABSENT/ABSTAIN:


  
 \_\_\_\_\_  
 David Souza, President, Board of Directors  
 GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

Attest:

  
 \_\_\_\_\_  
 Steven Palmer, Clerk and Ex officio  
 Secretary, Board of Directors  
 GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

## CERTIFICATION

I hereby certify that the foregoing is a full, true and correct copy of Resolution 2020-08 duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on this eleventh day of February 2020.



Steven Palmer, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

**RESOLUTION NO. 2021-03**  
**OF THE BOARD OF DIRECTORS OF THE**  
**GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT**  
**FREEZING TREATED WATER AND IRRIGATION RATES**

**WHEREAS**, Georgetown Divide Public Utility District ("District") provides irrigation and treated water services to residents and businesses of the District; and

**WHEREAS**, in December 2017, the District completed a roughly 15-month process to update its treated and irrigation water rates; and

**WHEREAS**, that process resulted in a Water Financial Analysis (aka Water Rate Study), dated October 24, 2017, prepared by Rural Community Assistance Corporation (RCAC) that established various proposed rates; and

**WHEREAS**, on December 12, 2017, pursuant to Proposition 218 (Cal. Const., Art. XIID, Sec. 6) the District Board heard and considered all oral testimony, written materials, and written protests concerning the rate increase; verified and counted the protests and determined that the District may proceed with the proposed water rates; and

**WHEREAS**, the Board then adopted Resolution 2017-30 Adopting New Rates for Treated Water and Irrigation Water Services; and

**WHEREAS**, those rates were set to increase effective with the January/February 2019 billing period; and

**WHEREAS**, at the January 8, 2019 meeting the Board acted by motion to "temporarily freeze the rate increases for no more than 12 months;" and

**WHEREAS**, at the February 12, 2019 meeting the Board adopted Resolution 2019-14 which held the 2019 water rates at the 2018 water rates, and re-affirmed that water rates would increase effective with the January/February billing period each following year (2020, 2021, 2022); and

**WHEREAS**, at the February 11, 2020 Board meeting the Board adopted Resolution 2020-08 to temporarily freeze the treated water rates until July 1, 2020 and freeze the irrigation rates for the remainder of 2020.

**NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT HEREBY RESOLVES THAT THE RATES FOR TREATED AND IRRIGATION WATER ARE MAINTAINED AT THE CURRENT RATE UNTIL THE END OF THE CURRENT YEAR (DECEMBER 31, 2021) AS OUTLINED IN THE FOLLOWING CHARTS:**

1. Effective with the January/February 2021 billing period, the monthly charges (billed bi-monthly) for treated water customers are maintained at the following level:

Meter Size	Monthly Base Charge
5/8, 3/4, 1"	\$ 30.88
1.5"	\$ 102.92
2"	\$ 164.67
3"	\$ 329.34
4"	\$ 514.60

An ALT treatment plant supplemental charge of \$15.08 per month is also added to the above listed base charge for all treated water customers.

2. Effective with the January/February 2021 billing period, the usage rate for treated water customers will be \$0.0255 per cubic foot.
3. The above listed treated water rates will be effective through the May/June 2021 billing period.
4. Effective with the July/August 2021 billing period, and the January/February billing period for each following year, respectively, the monthly charges (billed bi-monthly) for treated water customers are established as follows:

Meter Size	Monthly Base Charge	
	2021 (Jul/Aug)	2022 (Jan/Feb)
5/8, 3/4, 1"	\$ 30.88	\$ 32.42
1.5"	\$ 102.92	\$ 108.07
2"	\$ 164.67	\$ 172.91
3"	\$ 329.34	\$ 345.81
4"	\$ 514.60	\$ 540.33

An ALT treatment plant supplemental charge of \$15.08 per month is also added to the above listed base charge for all treated water customers.

5. Effective with the July/August 2021 billing period, and the January/February billing period each following year, respectively, the usage rate for treated water customers are established as follows:

Usage Charge (per CF)		
2020 (July/August)	2021 (Jan/Feb)	2022 (Jan/Feb)
\$0.0268	\$0.0268	\$ 0.0281

6. Effective with the January/February 2021 billing period, the monthly charges for irrigation water customers are established as follows:

Meter Size	Monthly Base Charge (Irrigation Season Only)
1/2"	\$ 77.00
Per each 1"	\$ 154.20

7. The above listed irrigation water rates will be effective through the November/December 2021 billing period.

8. Effective with the January/February billing period each following year, respectively, the monthly charges for irrigation water customers are established as follows:

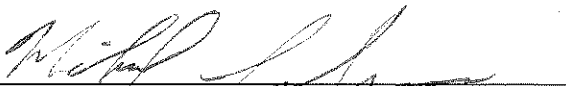
Meter Size	Monthly Base Charge (Irrigation Season Only)	
	2021	2022
1/2"	\$ 77.00	\$ 84.80
Per each 1"	\$ 154.20	\$ 169.60

**PASSED AND ADOPTED** by the Board of Directors of the Georgetown Divide Public Utility District at a meeting of said Board held on the 28th day of January 2021, by the following vote:

**AYES:       MACDONALD, THORNBROUGH, GARCIA, SAUNDERS**

**NOES:       NONE**

**ABSENT/ABSTAIN: NONE**



Michael Saunders, President, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT


*Attest:*

\_\_\_\_\_  
Jeff Nelson, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT



## CERTIFICATION

I hereby certify that the foregoing is a full, true and correct copy of Resolution 2021-03 duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on this 28th day of January 2021.

  
\_\_\_\_\_  
Jeff Nelson, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

**RESOLUTION NO. 2021-56**  
**OF THE BOARD OF DIRECTORS OF THE GEORGETOWN**  
**DIVIDE PUBLIC UTILITY DISTRICT FREEZING TREATED**  
**WATER AND IRRIGATION RATES**

**WHEREAS**, Georgetown Divide Public Utility District ("District") provides irrigation and treated water services to residents and businesses of the District; and

**WHEREAS**, in December 2017, the District completed a roughly 15-month process to update its treated and irrigation water rates; and

**WHEREAS**, that process resulted in a Water Financial Analysis (aka Water Rate Study), dated October 24, 2017, prepared by Rural Community Assistance Corporation (RCAC) that established various proposed rates; and

**WHEREAS**, on December 12, 2017, pursuant to Proposition 218 (Cal. Const., Art.XI, Sec. 6) the District Board heard and considered all oral testimony, written materials, and written protests concerning the rate increase; verified and counted the protests and determined that the District may proceed with the proposed water rates; and

**WHEREAS**, the Board then adopted Resolution 2017-30 Adopting New Rates for Treated Water and Irrigation Water Services; and

**WHEREAS**, those rates were set to increase effective with the January/February 2019 billing period; and

**WHEREAS**, at the January 8, 2019 meeting the Board acted by motion to "temporarily freeze the rate increases for no more than 12 months;" and

**WHEREAS**, at the February 12, 2019 meeting the Board adopted Resolution 2019-14 which held the 2019 water rates at the 2018 water rates, and re-affirmed that water rates would increase effective with the January/February billing period each following year (2020, 2021, 2022); and

**WHEREAS**, at the February 11, 2020 Board meeting the Board adopted Resolution 2020-08 to temporarily freeze the treated water rates until July 1, 2020 and freeze the irrigation rates for the remainder of 2020; and

**WHEREAS**, at the January 28, 2021, Special Board Meeting, the Board adopted Resolution 2021-03 maintaining the water rates until the end of the Fiscal Year 2021 (December 31, 2021); and

**WHEREAS**, the Board has considered the option of maintaining the freeze at the current level.

**NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT HEREBY RESOLVES THAT THE RATES FOR TREATED WATER ARE MAINTAINED AT THE CURRENT RATE UNTIL JUNE 30, 2022; AND IRRIGATION RATES ARE MAINTAINED AT THE CURRENT RATE UNTIL DECEMBER 31, 2022, AS OUTLINED IN THE FOLLOWING CHARTS:**

1. Effective with the January/February 2022 billing period, the monthly charges (billed bi-monthly) for treated water customers are maintained at the following level:

<b>Meter Size</b>	<b>Monthly Base Charge</b>
5/8, 3/4, 1"	\$ 30.88
1.5"	\$ 102.92
2"	\$ 164.67
3"	\$ 329.34
4"	\$ 514.60

An ALT treatment plant supplemental charge of \$15.08 per month is also added to the above listed base charge for all treated water customers.

2. Effective with the January/February 2022 billing period, the usage rate for treated water customers will be \$0.0255 per cubic foot.
3. The above listed treated water rates will be effective through the June 30, 2022, billing period.
4. Effective with the January/February 2022 billing period for each following year, respectively, the monthly charges (billed bi-monthly) for treated water customers are established as follows:

<b>Meter Size</b>	<b>Monthly Base Charge</b>
	<b>2022 (Jan/Feb)</b>
5/8, 3/4, 1"	\$ 30.88
1.5"	\$ 102.92
2"	\$ 164.67
3"	\$ 329.34
4"	\$ 514.60

An ALT treatment plant supplemental charge of \$15.08 per month is also added to the above listed base charge for all treated water customers.

5. Effective with the July/August 2021 billing period, and the January/February billing period each following year, respectively, the usage rate for treated water customers is established as follows:

<b>Usage Charge per CFI</b>		
<b>2020 (July/August)</b>	<b>2021 (Jan/Feb)</b>	<b>2022 (Jan/Feb)</b>
\$0.0268	\$0.0268	\$ 0.0268

6. Effective with the January/February 2022 billing period, the monthly charges for irrigation water customers are established as follows:

Meter Size	Monthly Base Charge irrigation Season Only
½"	\$ 77.00
Per each 1"	\$154.20

7. The above listed irrigation water rates will be effective through the November/December 2022 billing period.
8. Effective with the January/February billing period each following year, respectively, the monthly charges for irrigation water customers are established as follows:

Meter Size	Monthly Base Charge (irrigation Season Only) 2022
½"	\$ 77.00
Per each 1"	\$ 154.20

**PASSED AND ADOPTED** by the Board of Directors of the Georgetown Divide Public Utility District at a meeting of said Board held on the 12th day of December 2021, by the following vote:

**AYES: THORNBROUGH, MACDONALD, SEAMAN, SAUNDERS**

**NOES: NONE.**

**ABSENT/ABSTAIN: STEWART**



Michael Saunders, President, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

Attest:



Adam Coyan, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

**CERTIFICATION**

I hereby certify that the foregoing is a full, true, and correct copy of Resolution 2021-56 duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on this 12th day of December 2021.



---

Adam Coyan, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

# 2021

## DRINKING WATER AFFORDABILITY ASSESSMENT

Informing the 2021-22 Safe & Affordable  
Drinking Water Fund Expenditure Plan

**The Affordability Assessment is a component of the Needs  
Assessment. Access full Needs Assessment Report:**

[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/documents/needs/2021\\_needs\\_assessment.pdf](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2021_needs_assessment.pdf)



April 2021

## **Acknowledgements**

### *Contributors*

This report was prepared by the California State Water Resources Control Board within the California Environmental Protection Agency (CalEPA), in partnership with the UCLA Luskin Center for Innovation (UCLA).

UCLA in turn partnered with Corona Environmental Consulting (Corona), Sacramento State University Office of Water Programs, the Pacific Institute and the UNC Environmental Finance Center to carry out much of the analysis contained in this report.

### *State Water Board Contributing Authors*

Kristyn Abhold, Jeffrey Albrecht, William Allen, Michelle Frederick, Emily Houlihan, Mawj Khammas, David Leslie, Hee Kyung Lim, and Bansari Tailor

### *UCLA Team Contributing Authors*

Gregory Pierce (Principal Investigator, Needs Assessment Contract), Peter Roquemore, and Kelly Trumbull

### *Corona Team Contributing Authors*

Tarrah Henrie, Craig Gorman, Chad Seidel, Vivian Jensen, Carleigh Samson, Nathan MacArthur, Brittany Gregory, and Adam McKeagney

### *OWP at Sacramento State Team Contributing Authors*

Maureen Kerner, Erik Porse, Khalil Lezzaik, Dakota Keene, and Caitlyn Leo

### *Pacific Institute Team Contributing Authors*

Morgan Shimabuku and Lillian Holmes

### *UNC Team Contributing Authors*

Shadi Eskaf

### *Acknowledgments*

We are grateful to Julien Gattaciecce and Jacqueline Adams (UCLA), Laura Feinstein and Leo Rodriguez (Pacific Institute), and Julia Cavalier and Jeff Hughes (UNC) for their advice, analysis and background research which helped to inform this report. We also thank Julia Ekstrom (Department of Water Resources) and Carolina Balazs (Office of Environmental Health Hazards Assessment) for their insight on methodology and coordinating their agency's data sharing which was incorporated into the Risk Assessment. Additionally, we acknowledge the contributions and insights from comment letters received by the Board from a diverse group of stakeholders on a draft version of this report, as well as input received at public meetings and workshops on versions of this work held around the state.

# CONTENTS

<b>DEFINITION OF TERMS</b> .....	<b>4</b>
<b>AFFORDABILITY ASSESSMENT RESULTS</b> .....	<b>10</b>
Overview .....	10
Affordability Assessment Methodology .....	11
Aggregated Affordability Assessment Results .....	14
Affordability Results by Community Economic Status.....	14
Affordability Results by Water System SAFER Program Status .....	20
Small Water System Rates Dashboard.....	25
Affordability Assessment Limitations.....	26
Affordability Assessment Refinement Opportunities .....	27
<b>APPENDIX E: AFFORDABILITY ASSESSMENT METHODOLOGY</b> .....	<b>29</b>
<b>INTRODUCTION</b> .....	<b>29</b>
Affordability Assessment Methodology Development Process .....	30
<b>AFFORDABILITY ASSESSMENT METHODOLOGY</b> .....	<b>30</b>
DAC & SDAC Determination.....	31
Affordability Indicators.....	32
% Median Household Income .....	32
Extreme Water Bill .....	36
% Shut-Offs.....	38



## DEFINITION OF TERMS

This report includes the following defined terms.

**“Affordability Threshold”** means the level, point, or value that delineates if a water system’s residential customer charges, designed to ensure the water systems can provide drinking water that meets State and Federal standards, are unaffordable. For the purposes of the 2021 Affordability Assessment, the State Water Board employed affordability thresholds for the following indicators: Percent Median Household Income; Extreme Water Bill; and Percent Shut-Offs. Learn more about current and future indicators and affordability thresholds in Appendix E.

**“Adequate supply”** means sufficient water to meet residents’ health and safety needs at all times. (Health & Saf. Code, § 116681, subd. (a).)

**“Administrator”** means an individual, corporation, company, association, partnership, limited liability company, municipality, public utility, or other public body or institution which the State Water Board has determined is competent to perform the administrative, technical, operational, legal, or managerial services required for purposes of Health and Safety Code section 116686, pursuant to the Administrator Policy Handbook adopted by the State Water Board. (Health & Saf. Code, §§ 116275, subd. (g), 116686, subd. (m)(1).)

**“Affordability Assessment”** means the identification of any community water system that serves a disadvantaged community that must charge fees that exceed the affordability threshold established by the State Water Board in order to supply, treat, and distribute potable water that complies with Federal and state drinking water standards. The Affordability Assessment evaluates several different affordability indicators to identify communities that may be experiencing affordability challenges. (Health & Saf. Code, § 116769, subd. (2)(B).)

**“At-Risk public water systems”** or **“At-Risk PWS”** means community water systems with 3,300 service connections or less and K-12 schools that are at risk of failing to meet one or more key Human Right to Water goals: (1) providing safe drinking water; (2) accessible drinking water; (3) affordable drinking water; and/or (4) maintaining a sustainable water system.

**“At-Risk state small water systems and domestic wells”** or **“At-Risk SSWS and domestic wells”** means state small water systems and domestic wells that are located in areas where groundwater is at high risk of containing contaminants that exceed safe drinking water standards. This definition may be expanded in future iterations of the Needs Assessment as more data on domestic wells and state small water systems becomes available.

**“California Native American Tribe”** means Federally recognized California Native American Tribes, and non-Federally recognized Native American Tribes on the contact list maintained by the Native American Heritage Commission for the purposes of Chapter 905 of the Statutes of 2004. (Health & Saf. Code, § 116766, subd. (c)(1).) Typically, drinking water systems for Federally recognized tribes fall under the regulatory jurisdiction of the United States Environmental Protection Agency (U.S. EPA), while public water systems operated by non-Federally recognized tribes currently fall under the jurisdiction of the State Water Board.

**“Capital costs”** means the costs associated with the acquisition, construction, and development of water system infrastructure. These costs may include the cost of infrastructure (treatment solutions, consolidation, etc.), design and engineering costs, environmental compliance costs, construction management fees, general contractor fees, etc. Full details of the capital costs considered and utilized in the Needs Assessment are in Appendix C.

**“Community water system”** or **“CWS”** means a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system. (Health & Saf. Code, § 116275, subd. (i).)

**“Consistently fail”** means a failure to provide an adequate supply of safe drinking water. (Health & Saf. Code, § 116681, subd. (c).)

**“Consolidation”** means joining two or more public water systems, state small water systems, or affected residences into a single public water system, either physically or managerially. For the purposes of this document, consolidations may include voluntary or mandatory consolidations. (Health & Saf. Code, § 116681, subd. (e).)

**“Contaminant”** means any physical, chemical, biological, or radiological substance or matter in water. (Health & Saf. Code, § 116275, subd. (a).)

**“Cost Assessment”** means the estimation of funding needed for the Safe and Affordable Drinking Water Fund for the next fiscal year based on the amount available in the fund, anticipated funding needs, and other existing State Water Board funding sources. Thus, the Cost Assessment estimates the costs related to the implementation of interim and/or emergency measures and longer-term solutions for HR2W list systems and At-Risk public water systems, state small water systems, and domestic wells. The Cost Assessment also includes the identification of available funding sources and the funding and financing gaps that may exist to support interim and long-term solutions. (Health & Saf. Code, § 116769.)

**“Disadvantaged community”** or **“DAC”** means the entire service area of a community water system, or a community therein, in which the median household income is less than 80% of the statewide annual median household income level. (Health & Saf. Code, § 116275, subd. (aa).)

**“Domestic well”** means a groundwater well used to supply water for the domestic needs of an individual residence or a water system that is not a public water system and that has no more than four service connections. (Health & Saf. Code, § 116681, subd. (g).)

**“Drinking Water Needs Assessment”** or **“Needs Assessment”** means the comprehensive identification of California drinking water needs. The Needs Assessment consist of three core components: the Affordability Assessment, Risk Assessment, and Cost Assessment. The results of the Needs Assessment inform the State Water Board’s annual Fund Expenditure Plan for the Safe and Affordable Drinking Water Fund and the broader activities of the SAFER Program. (Health & Saf. Code, § 116769.)

**“Fund Expenditure Plan”** or **“FEP”** means the plan that the State Water Board develops pursuant to Article 4 of Chapter 4.6 of the Health and Safety Code for the Safe and Affordable Drinking Water Fund, established pursuant to Health and Safety Code § 116766.

**“Human consumption”** means the use of water for drinking, bathing or showering, hand washing, oral hygiene, or cooking, including, but not limited to, preparing food and washing dishes. (Health & Saf. Code, § 116275, subd. (e).)

**“Human Right to Water”** or **“HR2W”** means the recognition that “every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking and sanitary purposes,” as defined in Assembly Bill 685 (AB 685). (California Water Code § 106.3, subd. (a).)

**“Human Right to Water list”** or **“HR2W list”** means the list of public water systems that are out of compliance or consistently fail to meet primary drinking water standards. Systems that are assessed for meeting the HR2W list criteria include Community Water Systems and Non-Community Water Systems that serve K-12 schools and daycares. The HR2W list criteria were expanded in April 2021 to better align with statutory definitions of what it means for a water system to “consistently fail” to meet primary drinking water standards. (California Health and Safety Code § 116275(c).)

**“Interim replacement water”** or **“Interim solution”** includes, but is not limited to; bottled water, vended water, and point-of-use or point-of-entry treatment units. (Health & Saf. Code, § 116767, subd. (q).)

**“Loan”** means any repayable financing instrument, including a loan, bond, installment sale agreement, note, or other evidence of indebtedness.

**“Local cost share”** means a proportion of the total interim and/or long-term project cost that is not eligible for a State grant and would therefore be borne by water systems, their ratepayers, and/or domestic well owners. Some local cost share needs may be eligible for public or private financing (i.e. a loan). Some local costs share needs may not be eligible for financing and is typically funded through available reserves or cash on hand.

**“Maximum contaminant level”** or **“MCL”** means the maximum permissible level of a contaminant in water. (Health & Saf. Code, § 116275, subd. (f).)

**“Median household income”** or **“MHI”** means the household income that represents the median or middle value for the community. The methods utilized for calculating median household income are included in Appendix A and Appendix E. Median household incomes in this document are estimated values for the purposes of this statewide assessment. Median household income for determination of funding eligibility is completed on a system by system basis by the State Water Board’s Division of Financial Assistance.

**“Net present worth”** or **“NPW”** means the estimate of the total sum of funds that need to be set aside today to cover all expenses (capital, including other essential infrastructure costs, and annual O&M) during the potential useful life of the infrastructure investment, which is conservatively estimated at 20-years. The estimate of the total sum of funds is adjusted by an annual discount rate which accounts for the higher real cost of financial outlays in the immediate future when compared to the financial outlays in subsequent years.

**“Non-Community Water System”** means a public water system that is not a community water system. (Health & Saf. Code, § 116275, subd. (j).)

**“Non-transient Non-Community Water System”** means a public water system that is not a community water system and that regularly serves at least 25 of the same persons for six months or more during a given year, such as a school. (Health & Saf. Code, § 116275, subd. (k).)

**“Operations and maintenance”** or **“O&M”** means the functions, duties and labor associated with the daily operations and normal repairs, replacement of parts and structural components, and other activities needed by a water system to preserve its capital assets so that they can continue to provide safe drinking water.

**“Other essential infrastructure”** or **“OEI”** encompasses a broad category of additional infrastructure needed for the successful implementation of the Cost Assessment’s long-term modeled solutions and to enhance the system’s sustainability. OEI includes storage tanks, new wells, well replacement, upgraded electrical, added backup power, replacement of distribution system, additional meters, and land acquisition.

**“Potentially At-Risk”** means community water systems with 3,300 service connections or less and K-12 schools that are potentially at risk of failing to meet one or more key Human Right to Water goals: (1) providing safe drinking water; (2) accessible drinking water; (3) affordable drinking water; and/or (4) maintaining a sustainable water system.

**“Primary drinking water standard”** means: (1) Maximum levels of contaminants that, in the judgment of the state board, may have an adverse effect on the health of persons. (2) Specific treatment techniques adopted by the state board in lieu of maximum contaminant levels pursuant to Health & Saf. Code, § 116365, subd. (j). (3) The monitoring and reporting requirements as specified in regulations adopted by the state board that pertain to maximum contaminant levels. (Health & Saf. Code, § 116275, subd. (c).)

**“Public water system”** or **“PWS”** means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. A PWS includes any collection, pretreatment, treatment, storage, and distribution facilities under control of the operator of the system that are used primarily in connection with the system; any collection or pretreatment storage facilities not under the control of the operator that are used primarily in connection with the system; and any water system that treats water on behalf of one or more public water systems for the purpose of rendering it safe for human consumption. (Health & Saf. Code, § 116275, subd. (h).)

**“Refined grant needs”** means the estimated costs, generated from the Cost Assessment Model, that have been adjusted by removing costs for water systems that have existing funding agreements with the State Water Board and identifying the proportion of costs that are grant-eligible.

**“Resident”** means a person who physically occupies, whether by ownership, rental, lease, or other means, the same dwelling for at least 60 days of the year. (Health & Saf. Code, § 116275, subd. (t).)

**“Risk Assessment”** means the identification of public water systems, with a focus on community water systems and K-12 schools, that may be at risk of failing to provide an

adequate supply of safe drinking water. It also includes an estimate of the number of households that are served by domestic wells or state small water systems in areas that are at high-risk for groundwater contamination. Different Risk Assessment methodologies have been developed for different system types: (1) public water systems; (2) state small water systems and domestic wells; and (3) tribal water systems. (Health & Saf. Code, § 116769)

**“Risk indicator”** means the quantifiable measurements of key data points that allow the State Water Board to assess the potential for a community water system or a transient non-community water system that serves a K-12 school to fail to sustainably provide an adequate supply of safe drinking water due to water quality, water accessibility, affordability, institutional, and/or TMF capacity issues.

**“Risk threshold”** means the levels, points, or values associated with an individual risk indicator that delineates when a water system is more at-risk of failing, typically based on regulatory requirements or industry standards.

**“Safe and Affordable Drinking Water Fund”** or **“SADWF”** means the fund created through the passage of Senate Bill 200 (SB 200) to help provide an adequate and affordable supply of drinking water for both the near and long terms. SB 200 requires the annual transfer of 5 percent of the annual proceeds of the Greenhouse Gas Reduction Fund (GGRF) (up to \$130 million) into the Fund until June 30, 2030. (Health & Saf. Code, § 116766)

**“Safe and Affordable Funding for Equity and Resilience Program”** or **“SAFER Program”** means a set of State Water Board tools, funding sources, and regulatory authorities designed to meet the goals of ensuring safe, accessible, and affordable drinking water for all Californians.

**“Safe drinking water”** means water that meets all primary and secondary drinking water standards, as defined in Health and Safety Code section 116275.

**“Score”** means a standardized numerical value that is scaled between 0 and 1 for risk points across risk indicators. Standardized scores enable the evaluation and comparison of risk indicators.

**“Secondary drinking water standards”** means standards that specify maximum contaminant levels that, in the judgment of the State Water Board, are necessary to protect the public welfare. Secondary drinking water standards may apply to any contaminant in drinking water that may adversely affect the public welfare. Regulations establishing secondary drinking water standards may vary according to geographic and other circumstances and may apply to any contaminant in drinking water that adversely affects the taste, odor, or appearance of the water when the standards are necessary to ensure a supply of pure, wholesome, and potable water. (Health & Saf. Code, § 116275, subd. (d).)

**“Service connection”** means the point of connection between the customer’s piping or constructed conveyance, and the water system’s meter, service pipe, or constructed conveyance, with certain exceptions set out in the definition in the Health and Safety Code. (See Health & Saf. Code, § 116275, subd. (s).)

**“Severely disadvantaged community”** or **“SDAC”** means the entire service area of a community water system in which the MHI is less than 60% of the statewide median household income. (See Water Code § 13476, subd. (j))

**“Small community water system”** means a CWS that serves no more than 3,300 service connections or a yearlong population of no more than 10,000 persons. (Health & Saf. Code, § 116275, subd. (z).)

**“Small disadvantaged community”** or **“small DAC”** means the entire service area, or a community therein, of a community water system that serves no more than 3,300 service connections or a year-round population of no more than 10,000 in which the median household income is less than 80% of the statewide annual median household income.

**“State small water system”** or **“SSWS”** means a system for the provision of piped water to the public for human consumption that serves at least five, but not more than 14, service connections and does not regularly serve drinking water to more than an average of 25 individuals daily for more than 60 days out of the year. (Health & Saf. Code, § 116275, subd. (n).)

**“State Water Board”** means the State Water Resources Control Board.

**“Technical, Managerial and Financial capacity”** or **“TMF capacity”** means the ability of a water system to plan for, achieve, and maintain long term compliance with drinking water standards, thereby ensuring the quality and adequacy of the water supply. This includes adequate resources for fiscal planning and management of the water system.

**“Waterworks Standards”** means regulations adopted by the State Water Board entitled “California Waterworks Standards” (Chapter 16 (commencing with Section 64551) of Division 4 of Title 22 of the California Code of Regulations). (Health & Saf. Code, § 116275, subd. (q).)

**“Weight”** means the application of a multiplying value or weight to each risk indicator and risk category within the Risk Assessment, as certain risk indicators and categories may be deemed more critical than others.



## AFFORDABILITY ASSESSMENT RESULTS

### OVERVIEW

Ensuring drinking water is affordable is key to meeting California’s Human Right to Water mandate.<sup>1</sup> The COVID-related economic crisis has served to further highlight the need to address affordability, both to ensure that households can afford the water that they drink as well as to support drinking water systems in maintaining enough financial viability to provide safe reliable drinking water.<sup>2</sup>

The purpose of the Affordability Assessment is to identify disadvantaged community water systems, that have instituted customer charges that exceed the “Affordability Threshold” established by the State Water Board in order to provide drinking water that meets State and Federal standards.<sup>3</sup> Legislation does not define what the Affordability Threshold should be. Nor is there specific guidance on the perspective in which the State Water Board should be assessing the Affordability Threshold. Figure 43 illustrates the nexus of affordability definitions that exist.

**Figure 43: Nexus of Affordability Definitions**



<sup>1</sup> [State Water Board Resolution No. 2016-0010](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2016/rs2016_0010.pdf)

[https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2016/rs2016\\_0010.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2016/rs2016_0010.pdf)

<sup>2</sup> [Drinking Water COVID-19 Financial Impacts Survey | California State Water Resources Control Board](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/covid-19watersystemssurvey.html)

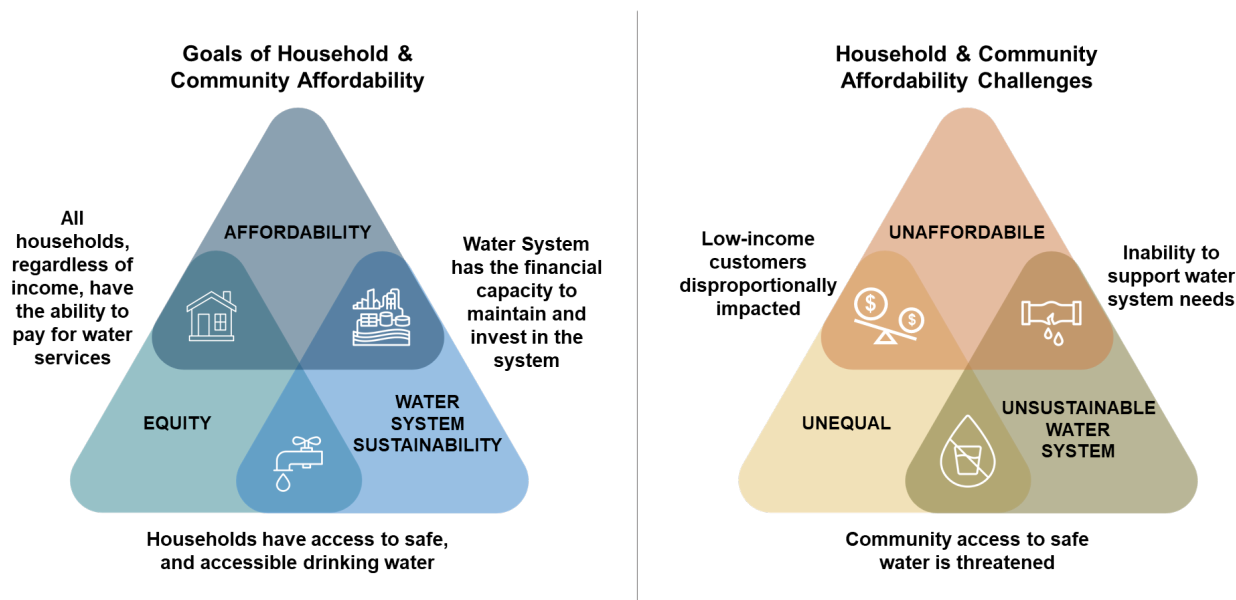
[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/covid-19watersystemssurvey.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/covid-19watersystemssurvey.html)

<sup>3</sup> California Health and Safety Code, § 116769, subd. (a)(2)(B)

- (1) **Household Affordability:** The ability of individual households to pay for an adequate supply of water.
- (2) **Community Affordability:** The ability of households within a community to pay for water services to financially support a resilient water system.
- (3) & (4) **Water System Financial Capacity:** The ability of the water system to financially meet current and future operations and infrastructure needs to deliver safe drinking water. The financial capacity of water systems affects future rate impacts on households. The inability to provide adequate services may lead households served by the system to rely on expensive alternatives such as bottled water.

Affordability of drinking water services is an important challenge to assess because issues surrounding equity and water system sustainability overlap in numerous aspects of addressing affordability challenges and ensuring that all Californians have safe drinking water. Figure 44 illustrates this relationship and the potential consequences of inaction.

**Figure 44: The Relationship Between Affordability, Equity and Water System Sustainability**



## AFFORDABILITY ASSESSMENT METHODOLOGY

The Affordability Assessment is conducted annually for all Californian community water systems. It is worth noting that, while there is some overlap, the systems included in the Affordability Assessment differ from the list of water systems analyzed in the Risk Assessment for public water systems. The Affordability Assessment includes large and small community water systems and excludes non-transient, non-community water systems, like schools. The Risk Assessment, on the other hand, analyzed smaller public water systems with 3,300 service connections or less and non-transient, non-community K-12 schools are included. Table 45 provides an overview of the systems included in the Affordability Assessment.



**Table 45: Systems Included in the Affordability Assessment**

SAFER Program Status	Risk Assessment	Affordability Assessment
HR2W List Systems	326	276
At-Risk Systems	617	467
Not HR2W or At-Risk System	1,836	2,134
<b>TOTAL:</b>	<b>2,779</b>	<b>2,877</b>

In 2020, the State Water Board conducted an Affordability Assessment for community water systems, which analyzed one affordability indicator, water charges as a percent of median household income (%MHI), for the FY 2020-21 Safe and Affordable Drinking Water Fund Expenditure Plan. The Fund Expenditure Plan used an affordability threshold of 1.5% MHI to identify DAC water systems that may have customer charges that are unaffordable.<sup>4</sup>

For the 2021 Needs Assessment, the State Water Board explored additional affordability indicators to identify disadvantaged communities (DAC)<sup>5</sup> and Severely Disadvantaged Communities (SDAC)<sup>6</sup> that may be experiencing affordability challenges. The identification of additional affordability indicators was undertaken in conjunction with the identification of possible affordability risk indicators for the Risk Assessment. A full list of potential affordability indicators considered can be found in the white paper *Evaluation of Potential Indicators & Recommendations for Risk Assessment 2.0 for Public Water Systems*.<sup>7</sup>

Ultimately, the affordability indicators “Extreme Water Bill” and “% Shut-Offs” were included in the 2021 Risk Assessment and Affordability Assessment alongside %MHI. The State Water Board analyzed all three affordability indicators for the Affordability Assessment and applied the same thresholds as utilized in the Risk Assessment. The prevalence of community water systems that meet these thresholds, and are DAC or SDAC systems, are summarized for each affordability indicator in the sections below.

Additional analysis was conducted to identify the DAC and SDAC water systems that met more than one affordability indicator threshold. Scores of 0 (no threshold met), 1 (lower “minimum”

<sup>4</sup> [FY 2020-21 Fund Expenditure Plan](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/docs/sadwfep_2020_07_07.pdf)

[https://www.waterboards.ca.gov/water\\_issues/programs/grants\\_loans/sustainable\\_water\\_solutions/docs/sadwfep\\_2020\\_07\\_07.pdf](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/docs/sadwfep_2020_07_07.pdf)

<sup>5</sup> Disadvantaged Community or DAC mean the entire service area of a community water system, or a community therein, in which the median household income is less than 80 percent of the statewide annual median household income level.

<sup>6</sup> Severely Disadvantaged Community or SDAC means the entire service area of a community water system in which the median household income is less than sixty percent of the statewide median household income.

<sup>7</sup> October 7, 2020 White Paper:

[Evaluation of Potential Indicators & Recommendations for Risk Assessment 2.0 for Public Water Systems](https://www.waterboards.ca.gov/safer/docs/e_p_i_recommendations_risk_assessment_2_public_water_systems.pdf)

[https://www.waterboards.ca.gov/safer/docs/e\\_p\\_i\\_recommendations\\_risk\\_assessment\\_2\\_public\\_water\\_systems.pdf](https://www.waterboards.ca.gov/safer/docs/e_p_i_recommendations_risk_assessment_2_public_water_systems.pdf)

threshold met), and 1.5 (higher “maximum” threshold met) were applied to each affordability indicator threshold and tallied across the three indicators for each system to identify which systems may be facing the greatest affordability challenges.

---

### % Median Household Income

This indicator measures annual system-wide average residential customer charges for 6 Hundred Cubic Feet (HCF) per month relative to the annual Median Household Income (MHI) within a water system’s service area. Six HCF indoor water usage per month is roughly equivalent to 50 gallons per person per day for a three-person household for 30 days.

Percent median household income (%MHI) is commonly used by state and Federal regulatory agencies and by water industry stakeholders for assessing community-wide water charges affordability for decades. %MHI is utilized by the State Water Board (at 1.5% threshold) and the U.S. EPA (at 2.5% threshold) for assessing affordability. The State Water Board uses %MHI to determine DAC status<sup>8</sup> and has for some time used the 1.5% MHI threshold in the Drinking Water State Revolving Fund (DWSRF) program as a metric for determining whether a small DAC will receive repayable (loan) or non-repayable (e.g., grant or non-repayable) funding.

The FY 2020-21 Fund Expenditure Plan uses 1.5% of the annual median household income (MHI) of the community served by the water system as the Affordability Threshold. Any community water system with annual customer charges, based on residential customer water usage of six hundred cubic feet (HCF) of water per month, that exceeded 1.5% of the MHI was identified on the list included in Appendix A for the FY 2020-21 Fund Expenditure Plan.<sup>9</sup>

For the 2021 Affordability Assessment, the State Water Board utilized two % MHI affordability thresholds. These thresholds correspond to the same thresholds used in the Risk Assessment. The minimum affordability threshold is 1.5% MHI and the maximum affordability threshold was set at 2.5% MHI. Additional details on the data sources, calculation methodology, and full analysis results for % MHI are in Appendix E.

While exceeding these thresholds alone does not necessarily mean that water charges are unaffordable for a community, the 1.5% and 2.5% MHI affordability thresholds allow for a preliminary evaluation of systems that may have challenges with affordable customer charges.

---

<sup>8</sup> It is important to note that the estimated designation of community economic status is for the purposes of the Affordability Assessment only and will not be used by the State Water Board’s Division of Financial Assistance (DFA) to make funding decisions. Further MHI analysis on a per system basis will be conducted by DFA when a system seeks State Water Board assistance.

<sup>9</sup> [FY 2020-21 Fund Expenditure Plan Appendix A](#)

[https://www.waterboards.ca.gov/board\\_info/agendas/2020/jul/070720\\_6\\_draftfinal\\_sadwfep\\_appendices\\_clean.pdf](https://www.waterboards.ca.gov/board_info/agendas/2020/jul/070720_6_draftfinal_sadwfep_appendices_clean.pdf)

---

## Extreme Water Bill

This indicator measures drinking water customer charges that meet or exceed 150% and 200% of statewide average drinking water customer charges at the six HCF level of consumption. The State Water Board's AB 401 report<sup>10</sup> recommended statewide low-income rate assistance program elements which utilize the two recommended tiered indicator thresholds of 150% and 200% of the state average drinking water bill for 6 HCF.

---

## % Shut-Offs

This affordability indicator measures the percentage of a water system's residential customer base which experienced service shut-offs due to non-payment in a given year. For the purposes of the State Water Board's Needs Assessment a threshold of 10% or greater customer shut-offs over the last calendar year for non-payment was utilized.

It is worth noting that on April 20, 2020, in response to the COVID-19 crisis, Governor Newsome issued an Executive Order N-42-20 to temporarily restrict water shut-offs due to non-payment.<sup>11</sup> The data used for this indicator is from the 2019 reporting year Electronic Annual Report (EAR). While the data utilized in the 2021 Needs Assessment was not impacted by the Executive Order, it will be taken into account in future years of the Needs Assessment.

# AGGREGATED AFFORDABILITY ASSESSMENT RESULTS

---

## AFFORDABILITY RESULTS BY COMMUNITY ECONOMIC STATUS

For the 2021 Affordability Assessment, State Water Board staff analyzed 2,877 community water systems, of which approximately 32 water systems lacked the data necessary to calculate any of the three affordability indicators. Some additional water systems lacked the necessary data for calculation of some of the affordability indicators and are summarized in Table 46.

Overall, comparing the three indicators in cases where data were available, systems were slightly more likely to exceed an Extreme Water Bill threshold (22% of systems with data) than a %MHI threshold (21% of systems with data). Systems were much less likely to exceed the % Shut-Offs threshold. Staff identified 592 water systems that exceeded the minimum 1.5% MHI affordability threshold, 222 of which exceeded the maximum 2.5% MHI threshold. Of those, 121 systems were identified that serve DACs and 313 systems that serve SDACs. The Assessment identified 628 water systems that exceeded the minimum 150% extreme water bill threshold and 365 of those systems exceeded the maximum 200% extreme water bill threshold. Of those that exceeded the 150% extreme water bill threshold, 113 systems were

---

<sup>10</sup> AB 401 Final Report:

[Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program](https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_report.pdf)

[https://www.waterboards.ca.gov/water\\_issues/programs/conservation\\_portal/assistance/docs/ab401\\_report.pdf](https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_report.pdf)

<sup>11</sup> Executive Department, State of California. [Executive Order N-42-20](https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_report.pdf)

[https://www.waterboards.ca.gov/water\\_issues/programs/conservation\\_portal/assistance/docs/ab401\\_report.pdf](https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_report.pdf)

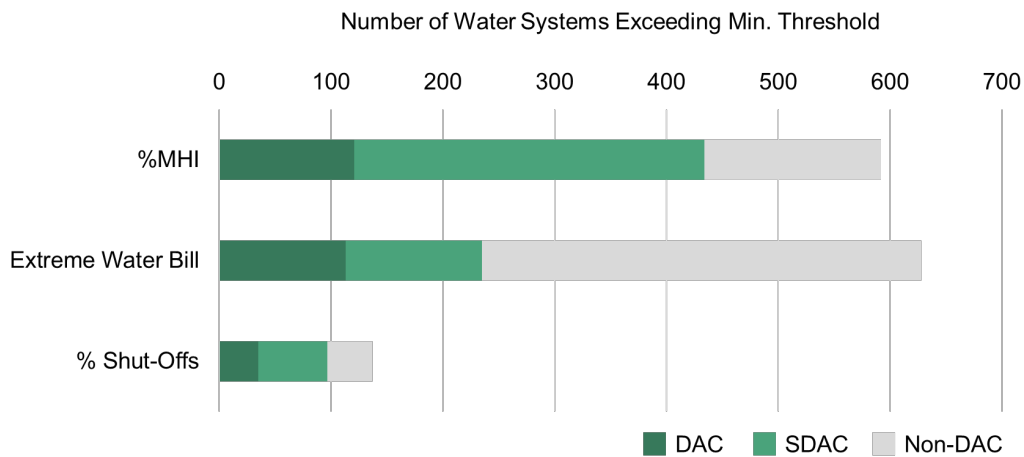
identified that serve DACs and 122 that serve SDACs. Finally, staff identified 139 systems that exceeded the 10%+ shut-offs for non-payment affordability threshold. Of those, 35 systems were identified that serve DACs and 62 that serve SDACs.

Table 46 summarizes the number of water systems, by their community economic status, that exceeded the minimum affordability threshold for each indicator assessed.

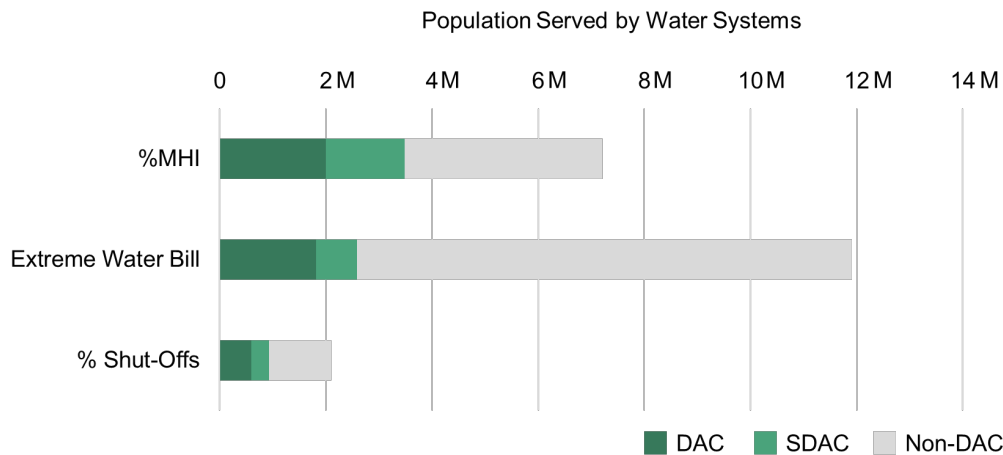
**Table 46: Aggregated Assessment Results by Community Economic Status**

Community Status	Total Systems	% MHI Min. Threshold Met	Extreme Water Bill Min. Threshold Met	% Shut-Offs Min. Threshold Met
<b>DAC</b>	578	121 (21%)	113 (20%)	35 (6%)
<b>SDAC</b>	993	313 (32%)	122 (12%)	62 (6%)
<b>Non-DAC</b>	1,210	158 (13%)	393 (32%)	40 (3%)
<b>Missing DAC Status</b>	96	0 (0%)	0 (0%)	2 (2%)
<b>TOTAL:</b>	<b>2,877</b>	<b>592 (21%)</b>	<b>628 (22%)</b>	<b>139 (5%)</b>
<b>Missing Data</b>		<i>201 (7%)</i>	<i>118 (4%)</i>	<i>49 (2%)</i>

**Figure 45: Number of Water Systems, by Community Economic Status, that Exceeded Each Minimum Affordability Indicator Threshold**



**Figure 46: Population of Systems that Exceeded Each Affordability Indicator Threshold**



To assess which systems may be facing the greatest affordability challenges, State Water Board staff further analyzed how many water systems exceeded the affordability threshold for one or more affordability indicator (Table 47). Of the 2,877 water systems analyzed, two thirds of water systems (n=1911) did not exceed any of the minimum affordability thresholds for the three indicators assessed. It is worth noting, there are no clear trends across community economic status and the number of systems exceeding affordability thresholds.

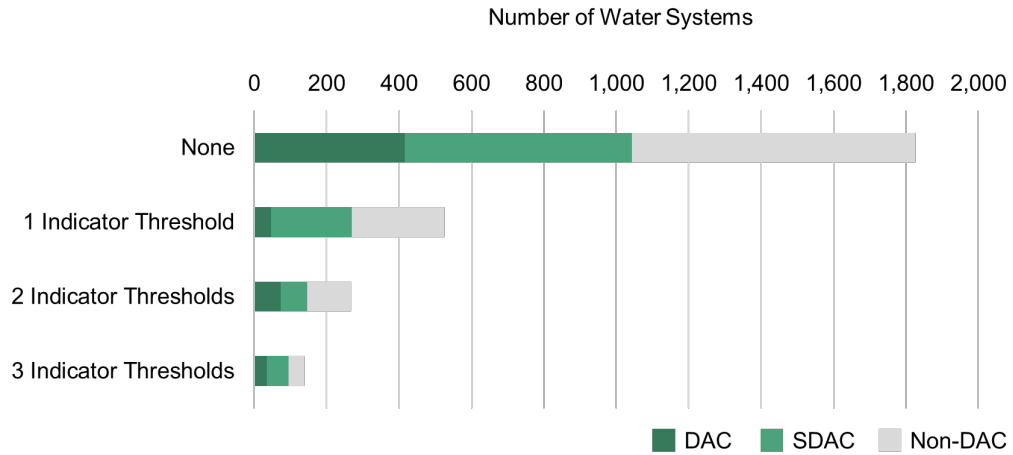
Staff identified 585 water systems that exceeded only one of the three minimum affordability thresholds, 46 of which are DACs and 224 are SDACs. The Assessment identified 267 water systems that exceeded two of the three minimum affordability thresholds, 73 of which are DACs and 74 are SDACs. Finally, staff identified 139 water systems that exceeded all three minimum affordability thresholds; 35 of these water systems are DACs and 60 are SDACs. It is worth noting that of the 139 water systems that exceeded all three affordability indicator thresholds, 7 systems exceeded all maximum affordability thresholds (e.g. 2.5% MHI, 200% Extreme Water Bill, and 10% or greater % Shut-Offs).

**Table 47: Total Number of Systems that Exceeded an Affordability Indicator Threshold**

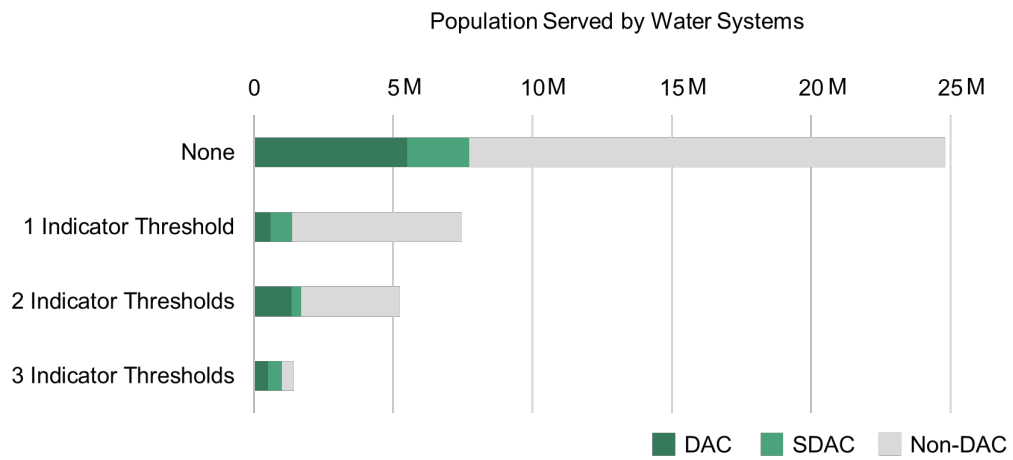
Community Status	Total Systems	None	1 Indicator	2 Indicators	3 Indicators
<b>DAC</b>	578	416 (72%)	46 (8%)	73 (13%)	35 (6%)
<b>SDAC</b>	993	627 (63%)	224 (23%)	74 (7%)	60 (6%)
<b>Non-DAC</b>	1,210	784 (65%)	256 (21%)	120 (10%)	44 (4%)
<b>Missing DAC Status</b>	96	84 (88%)	2 (2%)	0 (0%)	0 (0%)
<b>TOTAL:</b>	<b>2,877</b>	<b>1,911 (66%)</b>	<b>528 (18%)</b>	<b>267 (9%)</b>	<b>139 (5%)</b>
<b>Missing Data</b>		<b>32* (1%)</b>			

\* These water systems were missing data necessary to calculate all three affordability indicators. All other water systems had sufficient data to calculate at least one affordability indicator.

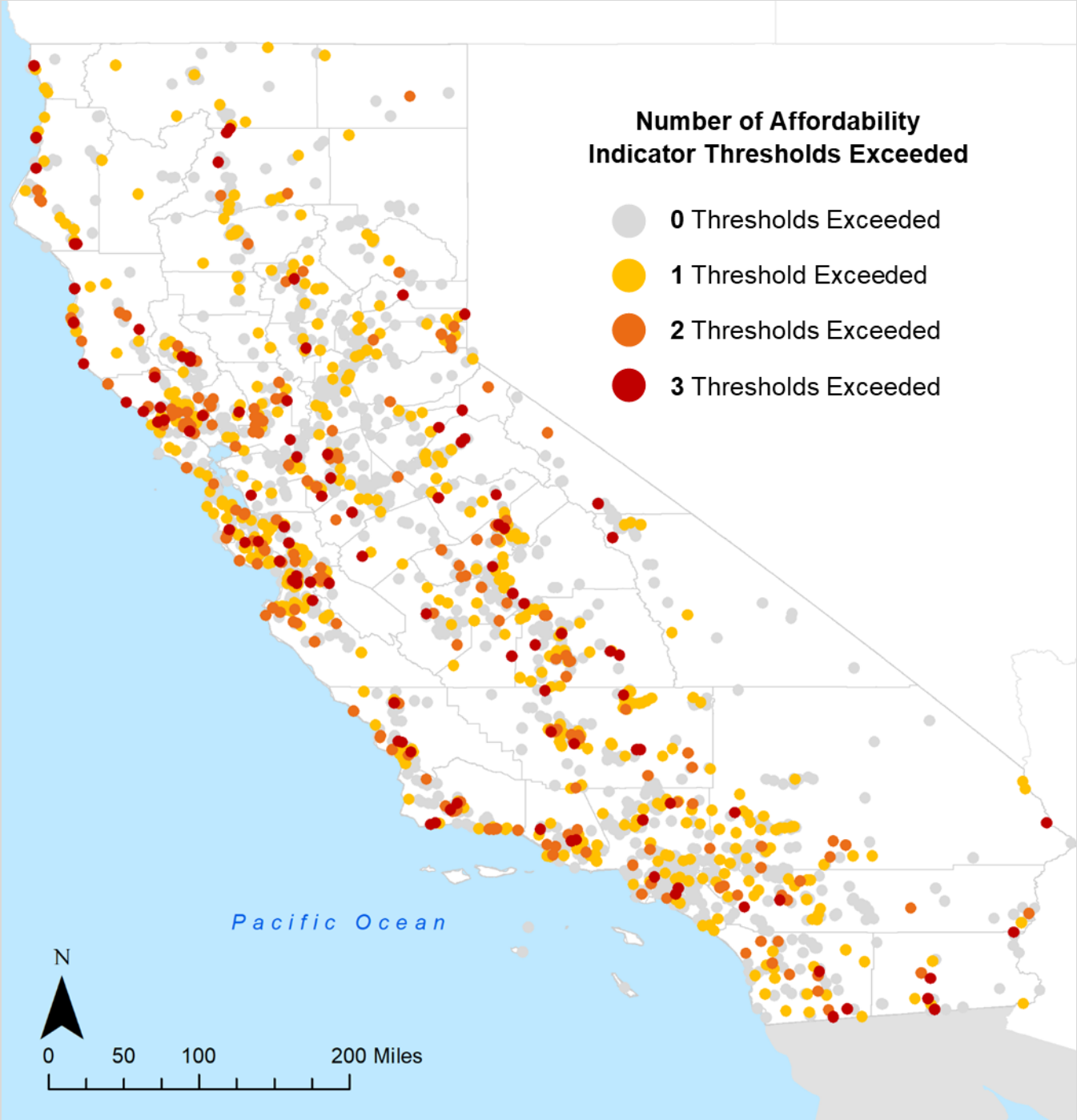
**Figure 47: Total Number of Systems, by Community Economic Status, that Exceeded an Affordability Indicator Threshold**



**Figure 48: Population of Water Systems, by Community Economic Status, that Exceeded an Affordability Indicator Threshold**

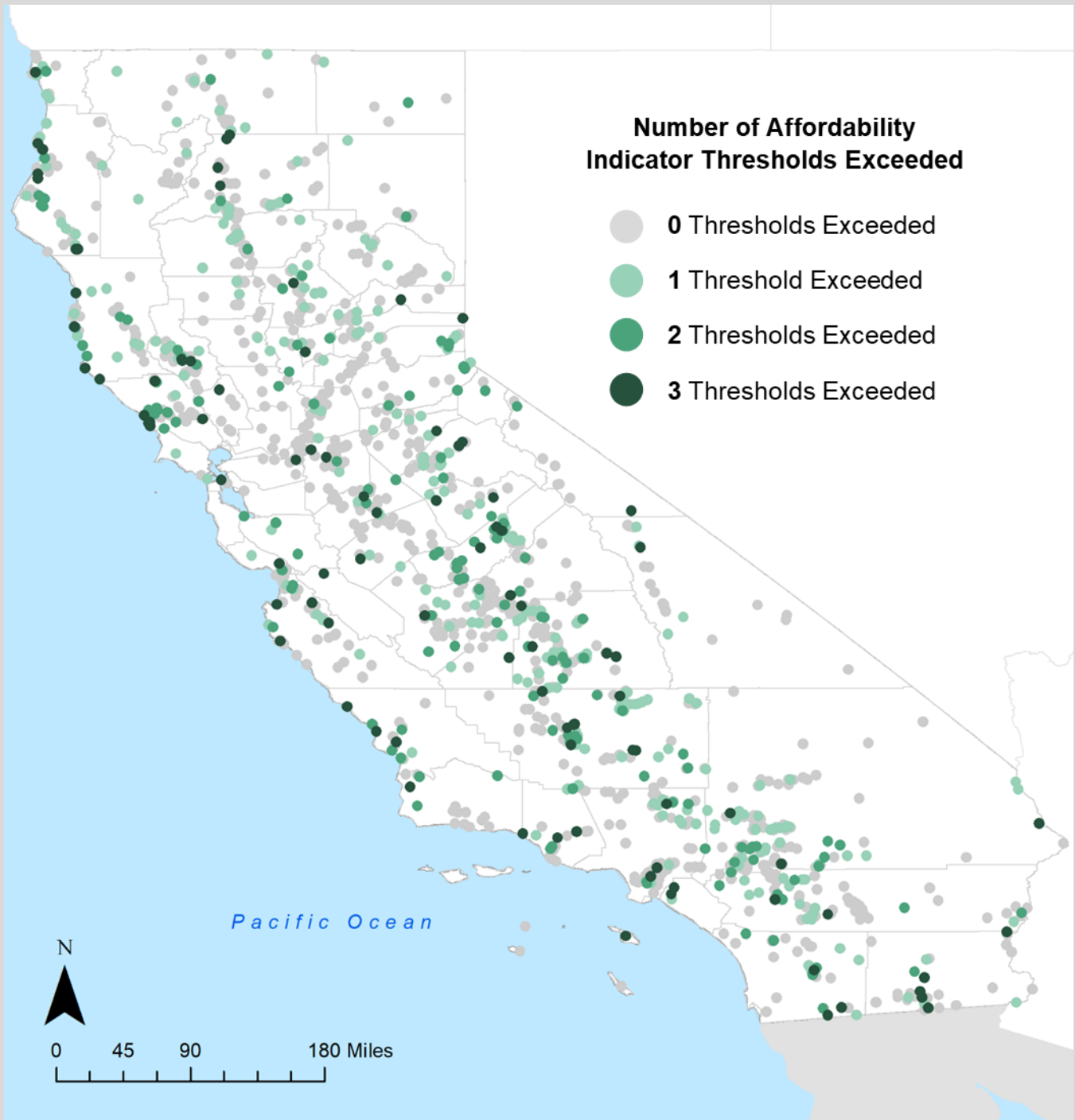


**Figure 49: All Water Systems that Exceeded an Affordability Indicator Threshold (n=2,189)\***



\* 86 water systems were not able to be mapped due to missing service area boundaries.

**Figure 50: DAC and SDAC Water Systems that Exceeded an Affordability Indicator Threshold (n=1,554)\***



\* One system was unable to be mapped due to missing service area boundary.



## AFFORDABILITY RESULTS BY WATER SYSTEM SAFER PROGRAM STATUS

While SB 200 only mandates the identification of DAC water systems that have customer charges that exceed affordability thresholds, the 2021 Affordability Assessment also identified if HR2W list and At-Risk public water systems exceeded affordability thresholds as well. Table 48 and the section below summarizes the number of failing HR2W list and At-Risk water systems, by their community economic status, that exceeded the minimum affordability threshold for each indicator assessed.

**% MHI:** Staff identified 77 HR2W list systems (10 DAC and 56 SDAC) and 119 At-Risk (20 DAC and 63 SDAC) water systems that exceeded the minimum 1.5% MHI affordability threshold. Of these, 32 HR2W list systems (5 DAC and 23 SDAC) and 55 At-Risk (5 DAC and 40 SDAC) water systems exceeded the maximum 2.5% MHI threshold.

**Extreme Water Bill:** 54 HR2W list systems (10 DAC and 20 SDAC) and 106 At-Risk (19 DAC and 33 SDAC) water systems exceeded the minimum 150% statewide MHI affordability threshold. Of these, 29 HR2W list systems (6 DAC and 8 SDAC) and 67 At-Risk (9 DAC and 17 SDAC) systems exceeded the maximum 200% statewide MHI threshold.

**% Shut-Offs:** Finally, staff identified 21 HR2W list systems (4 DAC and 13 SDAC) and 17 At-Risk (2 DAC and 12 SDAC) water systems that exceeded the 10% or greater shut-offs for non-payment affordability threshold.

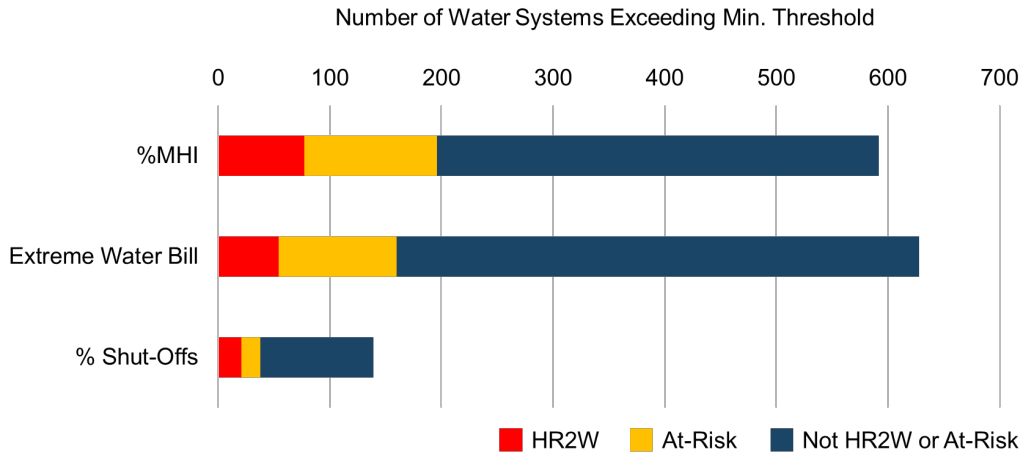
The full results of this analysis by affordability indicator are detailed in Appendix E.

**Table 48: Aggregated Affordability Assessment Results by Water System SAFER Program Status**

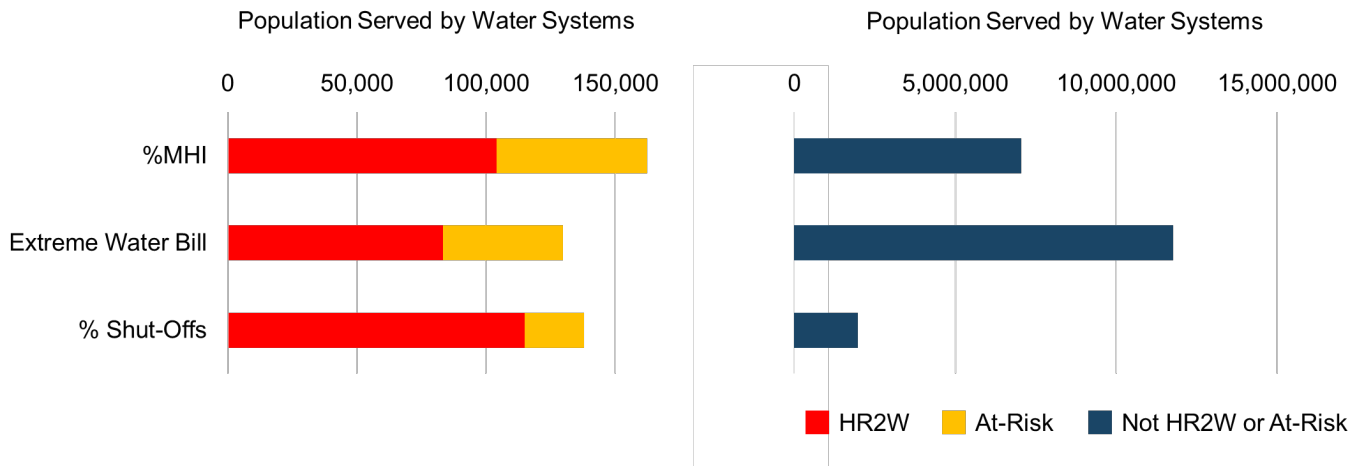
SAFER Program Status*	Total Systems	% MHI Min. Threshold Met	Extreme Water Bill Min. Threshold Met	% Shut-Offs Min. Threshold Met
<b>HR2W Systems</b>	<b>276</b>	<b>77 (28%)</b>	<b>54 (20%)</b>	<b>21 (8%)</b>
HR2W DAC	45	10	10	4
HR2W SDAC	142	56	20	13
<b>At-Risk Systems</b>	<b>467</b>	<b>119 (25%)</b>	<b>106 (23%)</b>	<b>17 (4%)</b>
At-Risk DAC	103	20	19	2
At-Risk SDAC	189	63	33	12
<b>Not HR2W or At-Risk System</b>	<b>2,134</b>	<b>396 (19%)</b>	<b>468 (22%)</b>	<b>101 (5%)</b>
DAC	430	91	84	29
SDAC	662	194	69	37
<b>TOTAL:</b>	<b>2,877</b>	<b>592 (21%)</b>	<b>628 (22%)</b>	<b>139 (5%)</b>
<b>Missing Data</b>		<b>201 (7%)</b>	<b>118 (4%)</b>	<b>49 (2%)</b>

\* Water systems that are not DAC/SDAC or are missing DAC status designations are excluded from sub-categories within this table.

**Figure 51: Total Number of HR2W List and At-Risk Water Systems that Exceeded Each Minimum Affordability Indicator Threshold**



**Figure 52: Total Population of Water Systems that Exceeded Each Affordability Indicator Threshold**



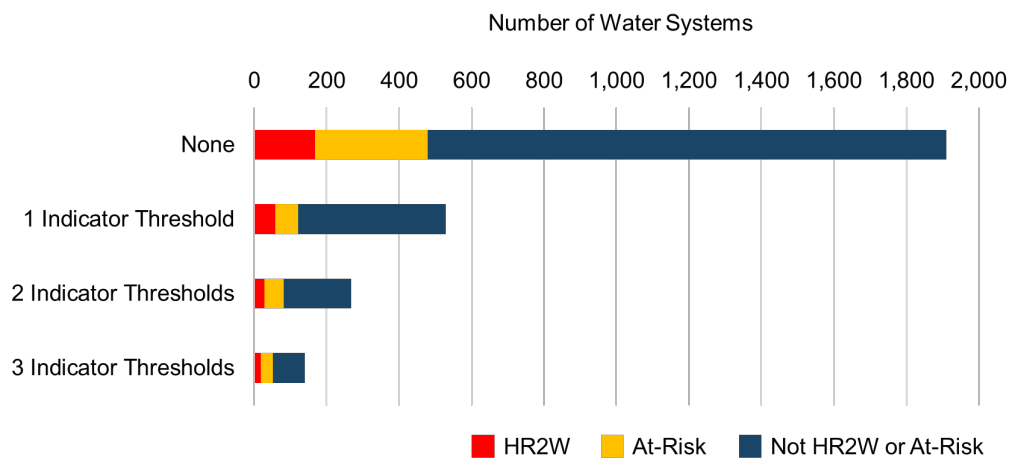
Further analysis of the aggregated Affordability Assessment results shows that HR2W list systems and At-Risk water systems exceeded one or more affordability thresholds at the same proportion (within 30%) as Not-HR2W or Not At-Risk water systems (Table 49).

**Table 49: Aggregated Affordability Assessment Results by Water System SAFER Program Status: Total Number of Systems that Exceeded an Affordability Indicator Threshold**

SAFER Program Status	Total Systems	None	1 Indicator	2 Indicators	3 Indicators
<b>HR2W Systems</b>	<b>276</b>	<b>168 (61%)</b>	<b>58 (21%)</b>	<b>28 (10%)</b>	<b>18 (7%)</b>
HR2W DAC	45	30	3	5	5
HR2W SDAC	142	77	38	16	9
<b>At-Risk Systems</b>	<b>467</b>	<b>311 (67%)</b>	<b>63 (13%)</b>	<b>54 (12%)</b>	<b>34 (7%)</b>
At-Risk DAC	103	80	5	13	5
At-Risk SDAC	189	114	39	17	16
<b>Not HR2W or At-Risk System</b>	<b>2,134</b>	<b>1,432 (67%)</b>	<b>407 (19%)</b>	<b>185 (7%)</b>	<b>87 (4%)</b>
DAC	430	306	38	55	23
SDAC	662	436	147	41	34
<b>TOTAL:</b>	<b>2,877</b>	<b>1,911 (66%)</b>	<b>528 (18%)</b>	<b>267 (9%)</b>	<b>139 (5%)</b>
<i>Missing Data</i>		32* (1%)			

\* These water systems were missing data necessary to calculate all three affordability indicators. All other water systems had sufficient data to calculate at least one affordability indicator.

**Figure 53: Total Number of HR2W List and At-Risk Systems that Exceeded an Affordability Indicator Threshold**



**Figure 54: Total Population of Water Systems that Exceeded an Affordability Indicator Threshold**

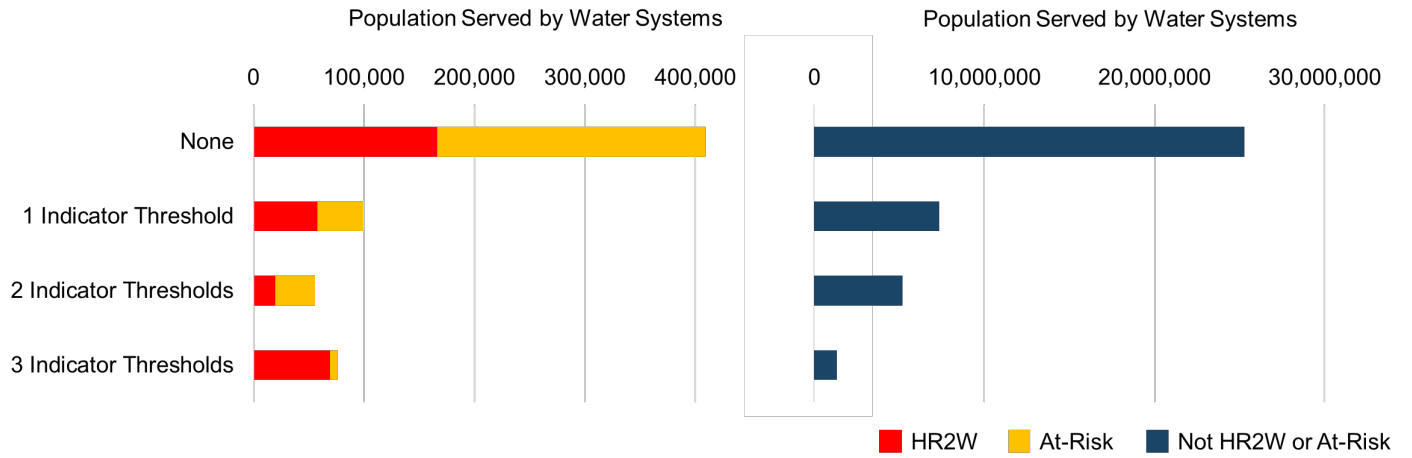
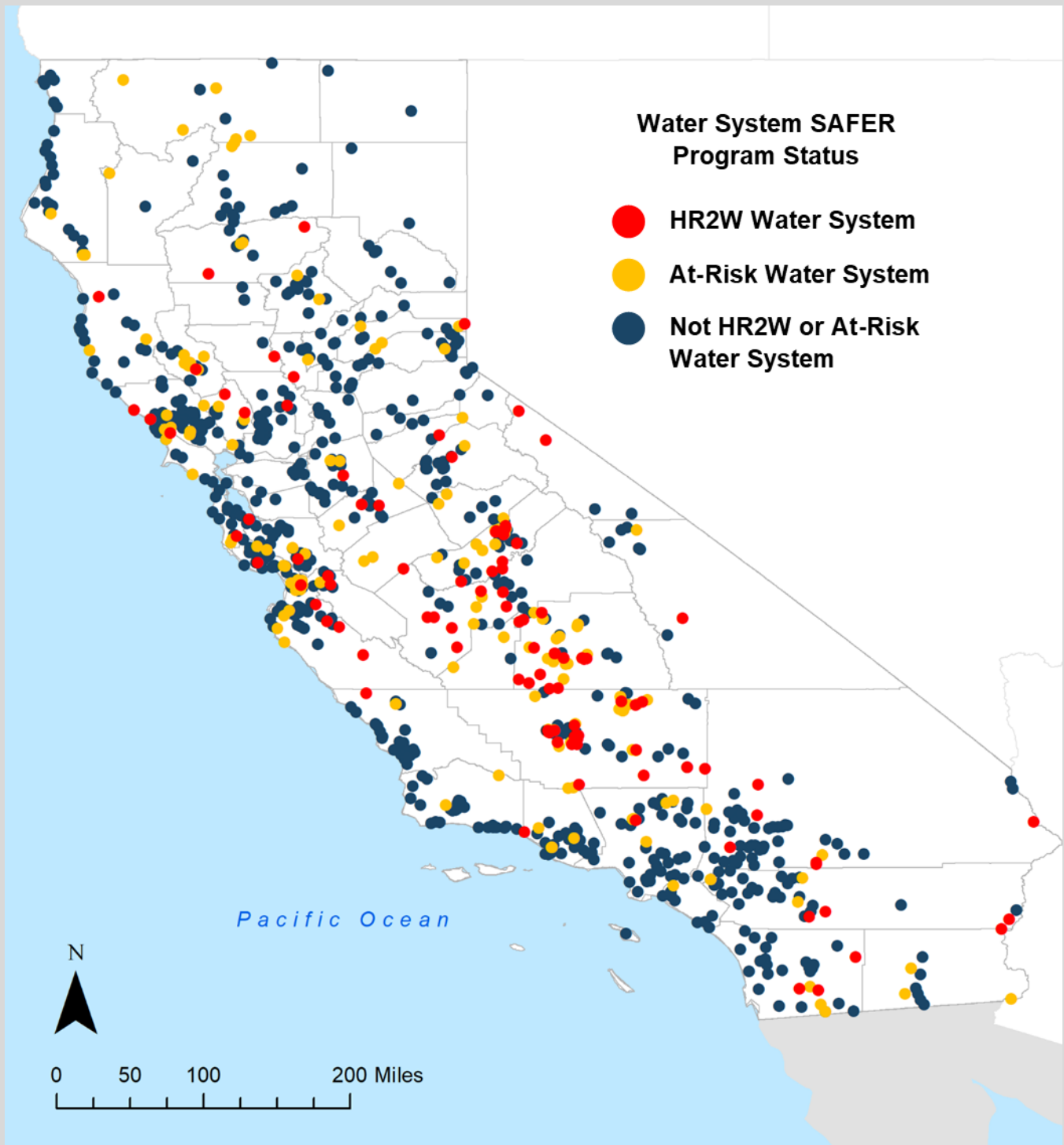


Figure 55: HR2W List and At-Risk Water Systems that Exceeded an Affordability Indicator Threshold (n=932)\*



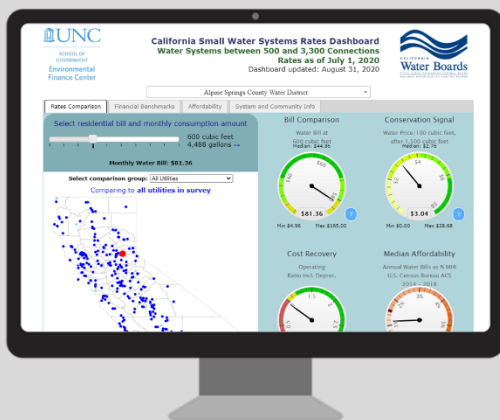
\*Two water systems were not able to be mapped due to missing service area boundaries.

## SMALL WATER SYSTEM RATES DASHBOARD

The California Small Water Systems Rates Dashboard (dashboard) is an online information sharing resource with an interactive interface that allows users to compare or benchmark residential rates, financial, and system performance data of community water systems serving between 500 and 3,300 connections. This dashboard was commissioned by the State Water Board as a pilot resource for small community water systems as part of the Needs Analysis contract with UCLA. The dashboard was created by the Environmental Finance Center at the University of North Carolina, Chapel Hill (EFC at UNC), working with the UCLA Luskin Center for Innovation, during the spring and summer of 2020. A publicly available white paper<sup>12</sup> on the dashboard was published and a public webinar was held on its potential uses on October 30, 2020.<sup>13</sup> The release of the publication and webinar was followed by a public comment period.

The dashboard utilizes an interactive interface that visualizes information via easy-to-understand graphics. The visualization allows the user to gain a multi-faceted understanding of the water system's financial health and performance. The dashboard is already populated with data for each water system and no data inputs are required.

The dashboard was created with data that were available during the summer of 2020. Not all data were available for every water system on the dashboard. As detailed in the white paper and dashboard itself, key data categories are: residential water rates and rate structures, water system financial indicators, other water system characteristics including compliance status data, and socioeconomic and population data joined from the U.S. Census. The data displayed in the dashboard are not updated by the State Water Board or the EFC at UNC. The State Water Board is exploring how tools like the dashboard can help water systems better assess affordability of drinking water services in their community.



### Explore the Rates Dashboard

The California Small Water Systems Rates Dashboard allows comparison and benchmarking of water rates, financial metrics, and other system performance measures with peers, according to important factors such as system size and customer demographics.

<https://efc.sog.unc.edu/resource/california-small-water-systems-rates-dashboard>

<sup>12</sup> October 30, 2020 White Paper:

[Introducing the California Small Water Systems Rates Dashboard](https://www.waterboards.ca.gov/drinking_water/programs/safer_drinking_water/docs/introducing_california_small_water_systems_rates_dashboard.pdf)

[https://www.waterboards.ca.gov/drinking\\_water/programs/safer\\_drinking\\_water/docs/introducing\\_california\\_small\\_water\\_systems\\_rates\\_dashboard.pdf](https://www.waterboards.ca.gov/drinking_water/programs/safer_drinking_water/docs/introducing_california_small_water_systems_rates_dashboard.pdf)

<sup>13</sup> [October 30, 2020 Webinar Presentation](https://www.waterboards.ca.gov/drinking_water/programs/safer_drinking_water/docs/rates_dashboard.pdf)

[https://www.waterboards.ca.gov/drinking\\_water/programs/safer\\_drinking\\_water/docs/rates\\_dashboard.pdf](https://www.waterboards.ca.gov/drinking_water/programs/safer_drinking_water/docs/rates_dashboard.pdf)

## AFFORDABILITY ASSESSMENT LIMITATIONS

The 2021 Affordability Assessment makes progress in identifying communities that may be struggling with water affordability challenges; however, State Water Board staff have identified the following limitations that are worth noting:

### **Affordability Assessment Scope**

As described above, there are multiple lenses through which to assess water “affordability.” SB 200 does not define how the State Water Board should measure affordability. Nor does it specify if the “Affordability Threshold” is meant to assess household affordability, community affordability, and/or a water system’s financial capacity. All three aspects of affordability are interrelated, but metrics or indicators that measure each can differ greatly. More engagement with the public, water systems, and stakeholders is needed to better define the scope of the Affordability Assessment and how its results will be utilized.

### **Affordability Indicator Data**

The State Water Board acknowledges that there are some data coverage issues and data quality uncertainties for all the affordability indicators utilized in the Affordability Assessment. Customer charges, MHI, and/or customer shut-off data are not available for some water systems included in this assessment. Water system customer charge data do not always represent the current same or current year for systems in the Affordability Assessment and Risk Assessment. This data is self-reported and has historically lacked full quality assurance. Finally, water system boundaries, which are used to calculate MHI, may not be accurate. In some cases, they reflect a water system’s jurisdiction boundary rather than their service area boundary.

An additional consideration that may be impacting the results of the Affordability Assessment is that water system customer charges may not reflect the full cost water systems face in order to meet current and future operations and infrastructure needs to deliver safe drinking water. For example, many small water systems lack asset management plans, capital improvement plans, and financial plans to assist them in setting customer charges appropriately. This may result in customer charges that are lower than what is needed to support resilient water systems. If more systems were to implement full-cost pricing of their customer charges, the Affordability Assessment results may be different.

### **Affordability Indicators**

There has been criticism of %MHI by academics, water system associations, and the broader water sector mostly around its accuracy in measuring household affordability for those truly in need and the setting of arbitrary %MHI thresholds, limitations which the U.S. EPA has recently acknowledged. Furthermore, some affordability indicators may be more applicable to some governance types of systems than others. For instance, some of the feedback received on the affordability indicators from the Risk Assessment public engagement was that using rates-based indicators, like %MHI and Extreme Water Bill, does not capture the ways in which some systems finance the full cost of service provision. Another point raised was that some individual water systems are connected to larger utility structures that help mitigate affordability challenges in ways that are not currently in the Affordability Assessment.

It is also worth noting that many other State agencies are developing and utilizing affordability indicators in similar complementary efforts. The selection of affordability indicators for the Needs Assessment fully considered affordability indicators used by the Office of Environmental Health Hazard Assessment (OEHHA), the Department of Water Resources (DWR), and the California Public Utilities Commission (CPUC). However, many of the indicators selected for the Needs Assessment differ from those used by these other efforts. The use of different indicators, and corresponding thresholds, across State agencies and Federal agencies can lead to some confusion for water systems and communities. The State Water Board will continue to collaborate with other State agencies and work towards better alignment.

## AFFORDABILITY ASSESSMENT REFINEMENT OPPORTUNITIES

The State Water Board will be conducting the Affordability Assesses on an annual basis as part of the Needs Assessment. To begin addressing the limitations highlighted above, the State Water Board will begin exploring new opportunities to refine the next iteration of the Affordability Assessment:

### **Better Define Affordability Scope**

The State Water Board will begin conducting targeted stakeholder engagement to better define the scope of the Affordability Assessment.

### **Improved Data Collection Efforts**

The State Water Board has already begun taking necessary steps to improve data coverage and accuracy for the Affordability Assessment. Improvements to the 2020 reporting year EAR include new requirements for completing survey questions focused on customer charges and affordability.<sup>14</sup> EAR functionality has been developed that will help auto-calculate average customer charges for 6 HCF, which will help reduce data errors. Furthermore, the EAR will be able to better distinguish between water systems that do not charge for water compared to those that do.

### **Refinement of Affordability Indicators and Thresholds**

During the Risk Assessment methodology development process, three additional Affordability indicators were recommended for inclusion in future iterations of the Risk Assessment and, potentially, the Affordability Assessment as well:<sup>15</sup> 'Household Burden Indicator,' 'Poverty Prevalence Indicator,' and 'Housing Burden.'<sup>16</sup> The State Water Board will begin conducting

---

<sup>14</sup> [Electronic Annual Report \(EAR\) | California State Water Resources Control Board](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/ear.html)  
[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/ear.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/ear.html)

<sup>15</sup> October 7, 2020 White Paper:

[Evaluation of Potential Indicators and Recommendations for Risk Assessment 2.0 for Public Water Systems](https://www.waterboards.ca.gov/safer/docs/e_p_i_recommendations_risk_assessment_2_public_water_systems.pdf)  
[https://www.waterboards.ca.gov/safer/docs/e\\_p\\_i\\_recommendations\\_risk\\_assessment\\_2\\_public\\_water\\_systems.pdf](https://www.waterboards.ca.gov/safer/docs/e_p_i_recommendations_risk_assessment_2_public_water_systems.pdf)

<sup>16</sup> *Household Burden Indicator*: This indicator measures the economic burden that relatively low income households face in paying their water service costs by focusing on the percent of these costs to the 20th percentile income (i.e. the Lowest Quintile of Income (LQI) for the service area). This indicator is calculated by adding the average drinking water customer charges, dividing them by the 20th Percentile income in a community water system, and multiplying this by one hundred.



the proper research and stakeholder engagement needed to develop the appropriate affordability thresholds necessary for inclusion in the Risk Assessment and potentially the Affordability Assessment as well.

### **Improved Aggregated Assessment**

Moving forward, the State Water Board will explore the possibility of developing a singular Affordability Threshold that can then be applied to a combined assessment of the identified affordability indicators.

Further consideration will also be given to how systems that do not charge for water services or have extremely low customer charges should be assessed for affordability and more broadly for risk. These systems may be more at-risk for falling out of water quality compliance or may be imposing affordability burdens on their customers through other means other than customer charges.

---

*Poverty Prevalence Indicator:* This indicator measures the percentage of population served by a community water system that lives at or below 200% the Federal Poverty Level. This measurement indicates the degree to which relative poverty is prevalent in the community.

*Housing Burden:* This indicator measures the percent of households in a water system's service area that are both low income and severely burdened by housing costs (paying greater than 50% of their income for housing costs). This metric is intended to serve as an indicator of the affordability challenges low-income households face with respect to other non-discretionary expenses, which may impact their ability to pay for drinking water services.

# APPENDIX E: AFFORDABILITY ASSESSMENT METHODOLOGY

## INTRODUCTION

The purpose of the Affordability Assessment is to identify disadvantaged community (DAC) and severely disadvantaged community (SDAC) water systems, that have instituted customer charges that exceed the “Affordability Threshold” established by the State Water Board in order to provide drinking water that meets State and Federal standards.<sup>17</sup>

The Affordability Assessment is conducted annually for all Californian community water systems. It is worth noting that, while there is some overlap, the systems included in the Affordability Assessment differ from the list of water systems analyzed in the Risk Assessment for public water systems. The Affordability Assessment includes large and small community water systems but excludes non-transient, non-community water systems, like schools. The Risk Assessment, on the other hand, analyzed smaller public water systems with 3,300 service connections or less and non-transient, non-community K-12 schools are included. Both assessments exclude all transient water systems, state small water systems and domestic wells. Table E1 provides an overview of the systems included in the Affordability Assessment.

**Table E1: Systems Included in the Affordability Assessment**

SAFER Program Status	Risk Assessment	Affordability Assessment
HR2W List Systems	326	276
At-Risk Systems	617	467
Not HR2W or At-Risk System	1,836	2,134
<b>TOTAL:</b>	<b>2,779</b>	<b>2,877</b>

The difference in the number of HR2W list systems and At-Risk systems between the Risk Assessment and Affordability Assessment in Table E1 demonstrates the impact of the type of systems analyzed. For example, schools on the HR2W list were not assessed for affordability and make up a large portion of the change in numbers assessed between the two pieces of the Needs Assessment.

<sup>17</sup> California Health and Safety Code, § 116769, subd. (a)(2)(B)

## AFFORDABILITY ASSESSMENT METHODOLOGY DEVELOPMENT PROCESS

From April through October 2020, the State Water Board and UCLA conducted extensive research and public engagement to identify potential affordability indicators that could be used to assess affordability challenges in both the Risk Assessment and Affordability Assessment. This effort identified 23 potential affordability indicators (white paper, Table 10)<sup>18</sup> and six were ultimately recommended (Table E2). Three of the recommended affordability indicators were not used in either the 2021 Risk Assessment or the Affordability Assessment because the State Water Board did not have sufficient time to conduct the proper research and stakeholder engagement needed to develop appropriate affordability thresholds for the 2021 Needs Assessment. The State Water Board will begin conducting the proper research and stakeholder engagement needed to develop the appropriate affordability thresholds necessary for inclusion in the Risk Assessment and potentially the Affordability Assessment as well.

**Table E2: Recommended Affordability Indicators**

Affordability Indicator	Affordability Assessment
Percent of Median Household Income (%MHI)	2020, 2021
Extreme Water Bill	2021
% Shut-Offs	2021
Household Burden Indicator (HBI)	<i>Future</i>
Poverty Prevalence Indicator (PPI)	<i>Future</i>
Housing Burden	<i>Future</i>

## AFFORDABILITY ASSESSMENT METHODOLOGY

In 2020, the State Water Board conducted an Affordability Assessment for community water systems, which analyzed one affordability indicator, water charges as a percent of median household income (%MHI), for the FY 2020-21 Safe and Affordable Drinking Water Fund Expenditure Plan. The Fund Expenditure Plan used an affordability threshold of 1.5% MHI to identify DAC water systems that may have customer charges that are unaffordable.<sup>19</sup>

For the 2021 Needs Assessment, the State Water Board explored additional affordability indicators to identify DACs and SDACs that may be experiencing affordability challenges.

<sup>18</sup> [White Paper: Evaluation of Potential Indicators and Recommendations for Risk Assessment 2.0 for Public Water Systems](https://www.waterboards.ca.gov/safer/docs/e_p_i_recommendations_risk_assessment_2_public_water_systems.pdf)

[https://www.waterboards.ca.gov/safer/docs/e\\_p\\_i\\_recommendations\\_risk\\_assessment\\_2\\_public\\_water\\_systems.pdf](https://www.waterboards.ca.gov/safer/docs/e_p_i_recommendations_risk_assessment_2_public_water_systems.pdf)

<sup>19</sup> [FY 2020-21 Fund Expenditure Plan](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/docs/sadwfep_2020_07_07.pdf)

[https://www.waterboards.ca.gov/water\\_issues/programs/grants\\_loans/sustainable\\_water\\_solutions/docs/sadwfep\\_2020\\_07\\_07.pdf](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/sustainable_water_solutions/docs/sadwfep_2020_07_07.pdf)

Ultimately, the affordability indicators “Extreme Water Bill” and “% Shut-Offs” were included in the 2021 Risk Assessment and Affordability Assessment alongside %MHI. The State Water Board analyzed all three affordability indicators for the Affordability Assessment and applied the same thresholds as utilized in the Risk Assessment (summarized in the sections below).

Additional analysis was conducted to identify the DAC and SDAC water systems, HR2W list systems, and At-Risk water systems that met more than one affordability indicator threshold. Scores of 0 (no threshold met), 1 (lower “minimum” threshold met), and 1.5 (higher “maximum” threshold met) were applied to each affordability indicator threshold and tallied across the three indicators for each system to identify which systems may be facing the greatest affordability challenges.

## DAC & SDAC DETERMINATION

SB 200 requires the identification of DAC systems that meet the Affordability Threshold. For the purposes of the Affordability Assessment, the State Water Board determined DAC and SDAC economic status for water systems using available data.

**Disadvantaged Community** or DAC mean the entire service area of a community water system, or a community therein, in which the MHI is less than 80% of the statewide annual MHI level.

**Severely Disadvantaged Community** or SDAC means the entire service area of a community water system in which the MHI is less than 60% of the statewide MHI.

The State Water Board used the methodology detailed below to estimate MHI. **It is important to note that the estimated designation of community economic status is for the purposes of the Affordability Assessment only and will not be used by the State Water Board’s Division of Financial Assistance (DFA) to make funding decisions.** Further MHI analysis on a per system basis will be conducted by DFA when a system seeks State Water Board assistance.

**Table E3: Water System Community Economic Status for the Affordability Assessment**

Community Economic Status	Total Systems	HR2W List Systems	At-Risk Systems
<b>DAC</b>	578	45	103
<b>SDAC</b>	993	142	189
<b>Non-DAC</b>	1,210	76	161
<b>Missing DAC Status</b>	96	13	14
<b>TOTAL:</b>	<b>2,877</b>	<b>276</b>	<b>467</b>

## AFFORDABILITY INDICATORS

### % MEDIAN HOUSEHOLD INCOME

This indicator measures the annual system-wide average residential water bill for 6 Hundred Cubic Feet (HCF) per month relative to the annual Median Household Income (MHI) within a water system's service area. To calculate %MHI for individual water systems, MHI must be determined for the water service area and customer charges are needed. The following section provides an overview of how the State Water Board determined these two datapoints and calculated %MHI.

#### **Calculation Methodology**

##### *Required Risk Indicator Data Points & Sources:*

- Water system service area boundaries: System Area Boundary Layer (SABL).<sup>20</sup>
- 2015-2019 block group-Income: U.S. Census Bureau's American Community Survey.
- Drinking Water Customer Charges: Electronic Annual Report (EAR).

Average monthly drinking water customer charges is collected through the EAR. However, this data has historically not been required for reporting. Therefore, the 2019 EAR data had coverage and accuracy issues. The State Water Board attempted to validate and supplement this dataset through a water rate survey conducted in November 2020. Additionally, customer charges data was collected through the UNC EFC's development of the Small Water System's Rates Dashboard. This data was used when available and applicable. It is anticipated that the coverage and accuracy of drinking water customer charges data will improve with the revisions made to the 2020 reporting year EAR.

##### *Risk Indicator Calculation Methodology:*

Median household income (MHI) is determined for a water system using American Community Survey data for household income. Community Water System boundaries typically do not align with census boundaries where per capita income data is regularly collected. In order to assign an average median household income to a community water system spatially weighted income data is aggregated by census block group within the water system service area.

The methodology for this indicator was based on the Division of Financial Assistance (DFA) MHI methodology. While the MHI calculation methodology for the Affordability Assessment generally aligns with the DFA MHI determination methodologies, there are slight differences. The differences found in the calculation of MHI's for cities and census designated places and in the application of the Margin of Error (MOE).

The DFA methodology dictates that when it is determined that a system boundary exactly matches city boundaries or closely matches a census designated place boundary, the MHI for

---

<sup>20</sup> State Water Board [System Area Boundary Layer \(SABL\)](https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=272351aa7db14435989647a86e6d3ad8)

<https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=272351aa7db14435989647a86e6d3ad8>

the entire city or census designated place should be directly applied to the system rather than using areally-interpolated block group data. This likely leads to more accurate MHI estimation in these cases. However, this method was not used in the Affordability Assessment given that a case by case determination of matching of cities and census designated places to system boundaries was not feasible for the entire state. The MHI for each water system is a population-weighted MHI, using census block group area and population data. A population factor is generated based on the area of each census block group that falls within the water system boundary. The water system MHI is then calculated using population-adjusted MHIs for each census block group that falls within the water system boundary using the formula below:

$$\sum \frac{(Block\ Group\ MHI) \times (Adjusted\ Block\ Group\ Population)}{(Total\ Adjusted\ Block\ Groups\ Population)}$$

MOE for MHI American Community Survey data is also included in the MHI calculation. A population adjusted MOE is found using the same methodology described for MHI. The lower range of the MOE will be applied to a community’s estimated MHI up to a maximum MOE value of \$7,500 for communities with more than 500 people and \$15,000 for communities with 500 or fewer people. The MOE will be subtracted from the estimated MHI.

The DFA methodology uses a lower bound MHI by subtracting the block group MOE from the block group MHI, with limits based on community size prior to applying the population factor to MHI and MOE. The methodology applied in the Needs Assessment set margin of error limits and then applied them to population adjusted MHI figures, resulting in slightly different community water system MHI calculations than the DAF methodology.

As a result of these slight variations and the changing nature of household income, all funding related financial assessments must be completed by the DFA as their assessments are water system specific as opposed to the aggregated analysis done for the purposes of the Needs Assessment.

Average monthly drinking water customer charges are calculated using:

- Drinking water service costs estimated at 6 Hundred Cubic Feet per month. This level of consumption is in line with statewide conservation goals of 55 gallons per capita per day, in an average 3-person household.
- When data becomes available, additional approximated customer charges (not collected through a customer’s bill) will be added to this figure to calculate Total Drinking Water Customer Charges.

$$\%MHI = [Average\ Monthly\ Drinking\ Water\ Changes] / [MHI]$$

### **Threshold Determination**

%MHI is commonly used by state and Federal regulatory agencies and by water industry stakeholders for assessing community-wide water charges affordability for decades. %MHI is utilized by the State Water Board (at 1.5% threshold) and the U.S. EPA (at 2.5% threshold) for assessing affordability. The State Water Board and DWR use %MHI to determine

Disadvantaged Community (DAC) status, among other income-related metrics. DAC status is often used to inform funding eligibilities for different financial programs offered by the State and other agencies. OEHHA’s Human Right to Water (HR2W) tool also utilizes<sup>21</sup> the thresholds determined by the State Water Board for this indicator.<sup>22</sup> Other states, including North Carolina,<sup>23</sup> presently or have recently used 1.5% of MHI spent on water and sewer costs as a threshold for water system funding decisions.

**Table E4: % MHI Affordability Thresholds**

Threshold Number	Threshold	Score
0	<b>Below 1.5% MHI</b>	0
1	<b>1.5% to 2.49% MHI</b>	1
2	<b>2.5% MHI or greater</b>	1.5

**Indicator Analysis**

State Water Board staff analyzed 2,877 community water systems, of which approximately 118 CWSs lacked the data necessary to estimate water rates and 83 water systems lacked the data to estimate MHI. Of the 2,676 water systems with sufficient data, staff identified 592 water systems that exceeded the 1.5% MHI affordability threshold, 222 of which exceeded 2.5% MHI. Of those, 121 systems were identified that serve DACs and 313 systems that serve SDACs. Tables E5 and E6 summarize the full results of this indicator analysis. The tables of the full results from the affordability threshold calculations are included in Attachment E1.<sup>24</sup>

**Table E5: % MHI Assessment Results by Community Status**

Community Status	Total Systems	Threshold Not Met	Threshold 1 Met (1.5%)	Threshold 2 Met (2.5%)
<b>DAC</b>	570	449 (79%)	89 (15%)	32 (6%)
<b>SDAC</b>	902	589 (65%)	161 (18%)	152 (17%)
<b>Non-DAC</b>	1,204	1,046 (87%)	120 (10%)	38 (3%)

<sup>21</sup> On the other hand, there has been criticism of this metric by academics, water system associations, and the broader water sector mostly around its accuracy in measuring household affordability for those truly in need and the setting of arbitrary %MHI thresholds, limitations which the U.S. EPA has recently acknowledged.

<sup>22</sup> Arkansas Natural Resources Commission (2020). [Safe Drinking Water Fund Intended Use Plan SFY 2019](https://www.agriculture.arkansas.gov/wp-content/uploads/2020/05/0_-_2019_DWSRF_IUP_-_AMENDED_January_2019_01082019_1156hrs.pdf): [https://www.agriculture.arkansas.gov/wp-content/uploads/2020/05/0\\_-\\_2019\\_DWSRF\\_IUP\\_-\\_AMENDED\\_January\\_2019\\_01082019\\_1156hrs.pdf](https://www.agriculture.arkansas.gov/wp-content/uploads/2020/05/0_-_2019_DWSRF_IUP_-_AMENDED_January_2019_01082019_1156hrs.pdf)

<sup>23</sup> North Carolina Department of Environmental Quality, [Joint Legislative Economic Development and Global Engagement Oversight Committee \(March 17, 2016\)](https://www.ncleg.gov/DocumentSites/Committees/JLEDGEOC/2015-2016/Meeting%20Documents/3%20-%20March%2017,%202016/2%20%20DEQ_Kim%20Colson%20Water%20Infrastructure%20JLOC%20EDGE%2020160317.pdf): [https://www.ncleg.gov/DocumentSites/Committees/JLEDGEOC/2015-2016/Meeting%20Documents/3%20-%20March%2017,%202016/2%20%20DEQ\\_Kim%20Colson%20Water%20Infrastructure%20JLOC%20EDGE%2020160317.pdf](https://www.ncleg.gov/DocumentSites/Committees/JLEDGEOC/2015-2016/Meeting%20Documents/3%20-%20March%2017,%202016/2%20%20DEQ_Kim%20Colson%20Water%20Infrastructure%20JLOC%20EDGE%2020160317.pdf)

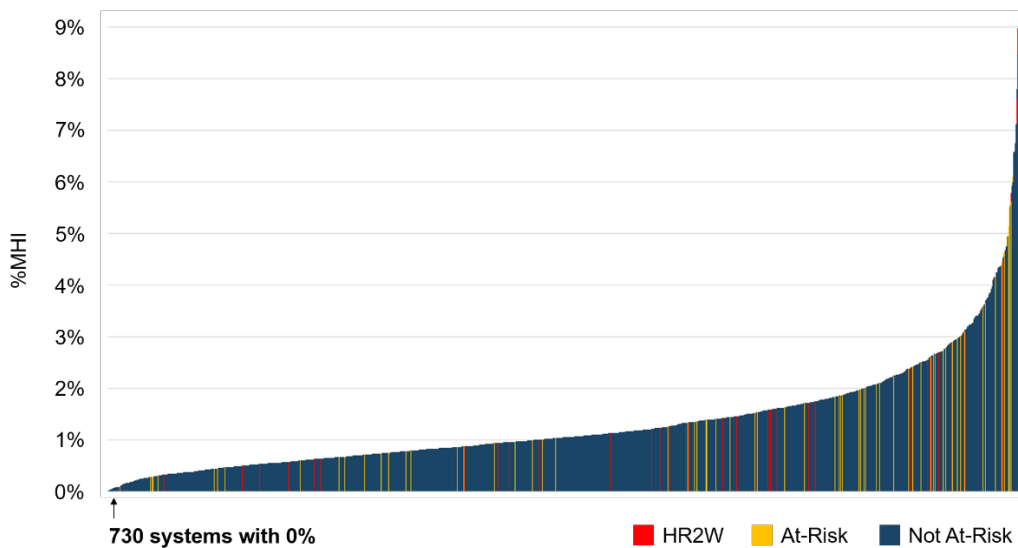
<sup>24</sup> [Attachment E1: 2021 Affordability Assessment Data](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/e1.xlsx) [https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/docs/e1.xlsx](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/e1.xlsx)

Community Status	Total Systems	Threshold Not Met	Threshold 1 Met (1.5%)	Threshold 2 Met (2.5%)
<b>TOTAL:</b>	<b>2,676</b>	<b>2,084 (78%)</b>	<b>370 (14%)</b>	<b>222 (8%)</b>
<i>Missing Data</i>	201			

**Table E6: %MHI Assessment Results by Water System SAFER Program Status**

SAFER Program Status	Total Systems	Threshold Not Met	Threshold 1 Met (1.5%)	Threshold 2 Met (2.5%)
<b>HR2W Systems</b>	<b>256</b>	<b>179 (70%)</b>	<b>45 (18%)</b>	<b>32 (12%)</b>
HR2W DAC	43	33	5	5
HR2W SDAC	137	81	33	23
<b>At-Risk Systems</b>	<b>434</b>	<b>315 (73%)</b>	<b>64 (15%)</b>	<b>55 (13%)</b>
At-Risk DAC	103	83	15	5
At-Risk SDAC	172	109	23	40
<b>Not HR2W or At-Risk System</b>	<b>1,986</b>	<b>1,590 (80%)</b>	<b>261 (13%)</b>	<b>135 (7%)</b>
DAC	424	333	69	22
SDAC	593	399	105	89
<b>TOTAL:</b>	<b>2,676</b>	<b>2,084 (78%)</b>	<b>370 (14%)</b>	<b>222 (8%)</b>
<i>Missing Data</i>	201			

**Figure E1: Distribution of %MHI, Excluding 12 Systems Above 10% (n=2,664)**





---

## EXTREME WATER BILL

This indicator measures drinking water customer charges that meet or exceed 150% of statewide average drinking water customer charges at the 6 Hundred Cubic Feet (HCF) level of consumption.

### Calculation Methodology

*Required Risk Indicator Data Points & Sources:*

- Drinking Water Customer Charges: EAR
- Other Customer Charges: EAR

Average monthly drinking water customer charges is collected through the EAR. However, this data has historically not been required for reporting. Therefore, the 2019 EAR data had coverage and accuracy issues. The State Water Board attempted to validate and supplement this dataset through a water rate survey conducted in November 2020. Additionally, customer charges data was collected through the UNC EFC's development of the Small Water System's Rates Dashboard. This data was used when available and applicable. It is anticipated that the coverage and accuracy of drinking water customer charges data will improve with the revisions made to the 2020 reporting year EAR.

*Risk Indicator Calculation Methodology:*

Extreme Water Bill for a water system is determined using Average Monthly 6 HCF Drinking Water Customer Charges and Other Customer Charges divided by the State's Monthly Average Drinking Water Charges. The Risk Assessment is applied to water systems with less than 3,300 service connections, however, this methodology utilizes the statewide average customer charges to calculate extreme water bill, which includes systems with greater than 3,300 connections.

### Threshold Determination

The State Water Board's AB 401 report<sup>25</sup> recommended statewide low-income rate assistance program elements utilize the two recommended tiered indicator thresholds of 150% and 200% of the state average drinking water bill for 6 CCF of service.

**Table E7: Extreme Water Bill Affordability Thresholds**

Threshold Number	Threshold	Score
0	<b>Below 150%</b> of the statewide average.	0
1	<b>Greater than 150%</b> of the statewide average.	1
2	<b>Greater than 200%</b> of the statewide average.	1.5

---

<sup>25</sup> AB 401 Final Report "[Recommendations for Implementation of a Statewide Low-Income Water Rate Assistance Program](https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_report.pdf)"

[https://www.waterboards.ca.gov/water\\_issues/programs/conservation\\_portal/assistance/docs/ab401\\_report.pdf](https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/docs/ab401_report.pdf)

## Indicator Analysis

State Water Board staff analyzed 2,877 community water systems, of which approximately 118 water systems lacked the data necessary to estimate water rates. Of the 2,759 water systems with sufficient data, staff identified 628 systems that exceeded the 150% statewide MHI affordability threshold and 365 of those systems exceeded the 200% statewide MHI threshold. Of those that exceeded the 150% MHI affordability threshold, 113 systems were identified that serve DACs and 122 that serve SDACs. Tables E8 and E9 summarize the full results of this indicator analysis. The tables of the full results from the affordability threshold calculations are included in Attachment E1.<sup>26</sup>

**Table E8: Extreme Water Bill Assessment Results by Community Status**

Community Status	Total Systems	Threshold Not Met	Threshold 1 Met (150%)	Threshold 2 Met (250%)
<b>DAC</b>	570	457 (80%)	57 (10%)	56 (10%)
<b>SDAC</b>	985	863 (88%)	60 (6%)	62 (6%)
<b>Non-DAC</b>	1,204	811 (67%)	146 (12%)	247 (21%)
<b>TOTAL:</b>	<b>2,759</b>	<b>2,131 (77%)</b>	<b>263 (10%)</b>	<b>365 (13%)</b>
<i>Missing Data</i>	118			

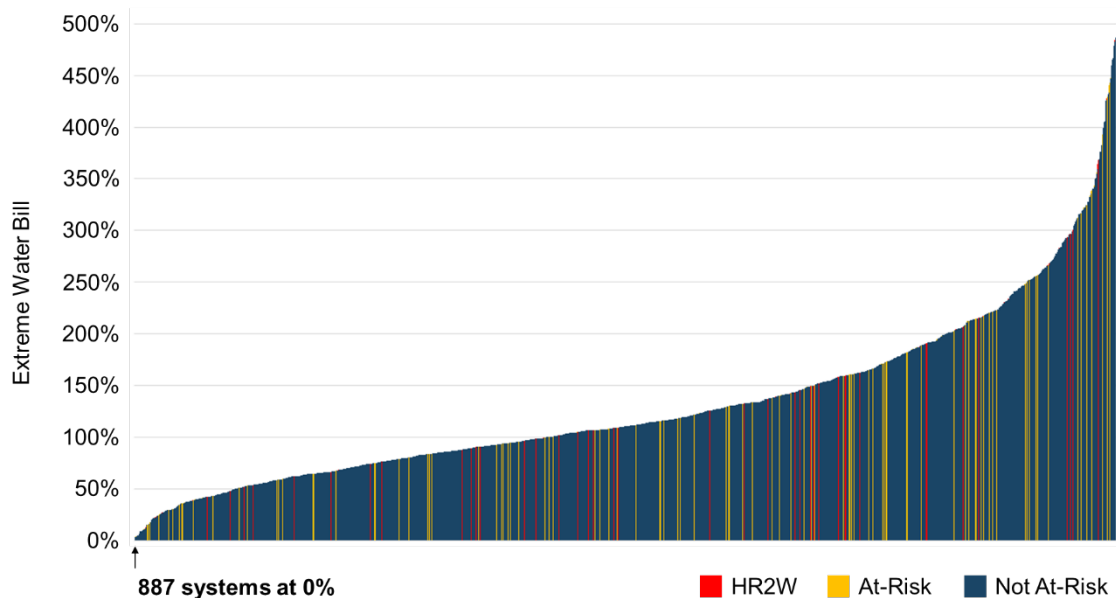
**Table E9: Extreme Water Bill Assessment Results by Water System SAFER Program Status**

SAFER Program Status	Total Systems	Threshold Not Met	Threshold 1 Met (150%)	Threshold 2 Met (250%)
<b>HR2W Systems</b>	<b>259</b>	<b>205 (79%)</b>	<b>25 (10%)</b>	<b>29 (11%)</b>
HR2W DAC	43	33	4	6
HR2W SDAC	140	120	12	8
<b>At-Risk Systems</b>	<b>449</b>	<b>343 (76%)</b>	<b>39 (9%)</b>	<b>67 (15%)</b>
At-Risk DAC	103	84	10	9
At-Risk SDAC	187	154	16	17
<b>Not HR2W or At-Risk System</b>	<b>2,051</b>	<b>1,583 (77%)</b>	<b>199 (10%)</b>	<b>269 (13%)</b>
DAC	658	340	43	41
SDAC	424	589	32	37
<b>TOTAL:</b>	<b>2,759</b>	<b>2,131 (77%)</b>	<b>263 (10%)</b>	<b>365 (13%)</b>
<i>Missing Data</i>	118			

<sup>26</sup> [Attachment E1: 2021 Affordability Assessment Data](#)

[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/docs/e1.xlsx](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/e1.xlsx)

**Figure E2: Distribution of Extreme Water Bill, Excluding 23 Systems Above 500% (n=2,736)**



## % SHUT-OFFS

Percentage of residential customer base with service shut-offs due to non-payment in a given year.

### Calculation Methodology

*Required Risk Indicator Data Points & Sources:*

- Number of residential service connections with water shut-off more than once due to failure to pay: EAR
  - Total Single-Family Shut-offs
  - Total Multi-Family Shut-offs
- Total Number of Service Connections: EAR

*Risk Indicator Calculation Methodology:*

$\% \text{ Shut-Offs} = \left( \frac{\text{Total Single-Family Shut-offs} + \text{Total Multi-Family Shut-offs}}{\text{Total Number of Service Connections}} \right) \times 100$

### Threshold Determination

An indicator threshold for the percent of residential service connections shut-off due to non-payment, as defined here or a similar measure, has not to the State Water Board's knowledge been assessed in other previous studies as related to water system failure or to determine

affordability challenges. However, a standard of zero has been employed by the State,<sup>27</sup> other regulatory agencies and stakeholders as a threshold of concern particularly during the COVID-19 pandemic. For the purposes of the State Water Board’s Needs Assessment a threshold of 10% or greater customer shut-offs over the last calendar year for non-payment was utilized.

**Table E10: % Shut-Offs Affordability Thresholds**

Threshold Number	Threshold	Score
0	<b>Below 10%</b> customer shut-offs	0
1	<b>Greater 10% or greater</b> customer shut-offs.	1

**Indicator Analysis**

State Water Board staff analyzed 2,877 community water systems, of which approximately 49 water systems lacked the data necessary estimate the percent of customers who had their services shut-off due to non-payment. Of the 2,828 water systems with sufficient data, staff identified 139 systems that exceeded the 10% or greater shut-offs for non-payment affordability threshold. Of those, 35 systems were identified that serve DACs and 62 that serve SDACs. Tables E11 and E12 summarize the full results of this indicator analysis. The tables of the full results from the affordability threshold calculations are included in Attachment E1.<sup>28</sup>

**Table E11: % Shut-Offs Assessment Results by Community Status**

Community Status	Total Systems	Threshold Not Met	Threshold Met (10% or more)
<b>DAC</b>	569	534 (94%)	35 (6%)
<b>SDAC</b>	974	912 (94%)	62 (6%)
<b>Non-DAC</b>	1,199	1,159 (97%)	40 (3%)
<b>Missing DAC Status</b>	86	84 (98%)	2 (2%)
<b>TOTAL:</b>	<b>2,828</b>	<b>2,689 (95%)</b>	<b>139 (5%)</b>
<i>Missing Data</i>	49		

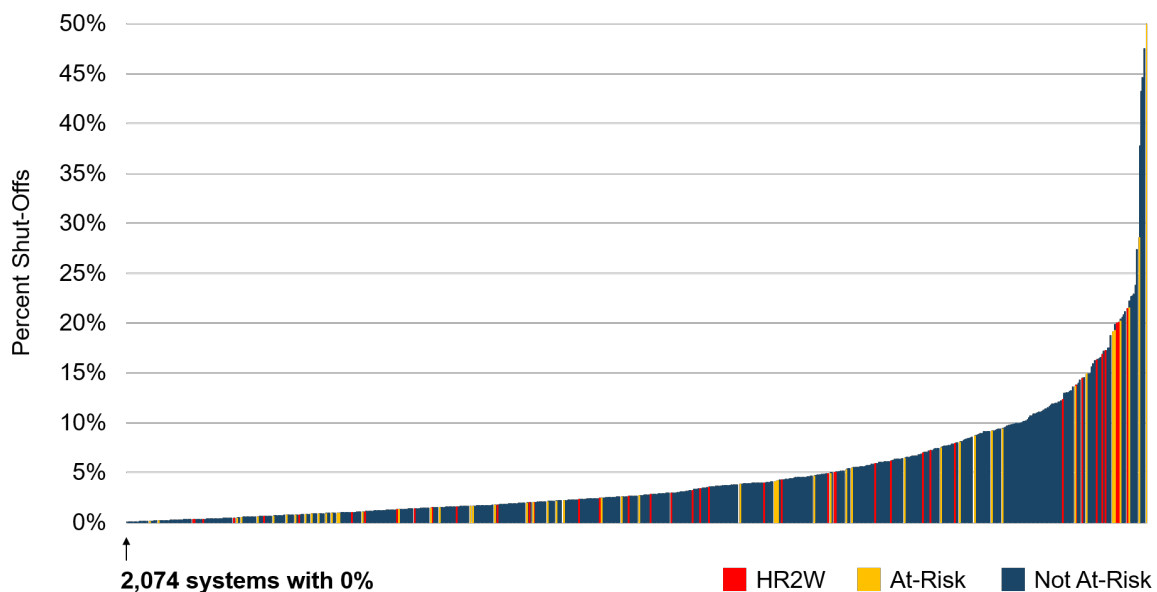
<sup>27</sup> [Executive Order N-42-20](https://www.gov.ca.gov/wp-content/uploads/2020/04/4.2.20-EO-N-42-20-text.pdf)  
<https://www.gov.ca.gov/wp-content/uploads/2020/04/4.2.20-EO-N-42-20-text.pdf>

<sup>28</sup> [Attachment E1: 2021 Affordability Assessment Data](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/e1.xlsx)  
[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/docs/e1.xlsx](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/e1.xlsx)

**Table E12: % Shut-Offs Assessment Results by Water System SAFER Program Status**

SAFER Program Status	Total Systems	Threshold Not Met	Threshold Met (10% or more)
<b>HR2W Systems</b>	<b>271</b>	<b>250 (92%)</b>	<b>21 (8%)</b>
HR2W DAC	43	39	4
HR2W SDAC	139	126	13
<b>At-Risk Systems</b>	<b>457</b>	<b>440 (96%)</b>	<b>17 (4%)</b>
At-Risk DAC	102	100	2
At-Risk SDAC	186	174	12
<b>Not HR2W or At-Risk System</b>	<b>2,100</b>	<b>1,999 (95%)</b>	<b>101 (5%)</b>
DAC	424	612	29
SDAC	649	395	37
<b>TOTAL:</b>	<b>2,828</b>	<b>2,689 (95%)</b>	<b>139 (5%)</b>
<i>Missing Data</i>	49		

**Figure E3: Distribution of % Shut-Off, Excluding 54 systems with Shut-Offs above 50% (n=2,774)**



**RESOLUTION NO. 2022-XX**  
**OF THE BOARD OF DIRECTORS OF THE**  
**GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT**  
**FREEZING TREATED WATER AND IRRIGATION RATES**

**WHEREAS**, Georgetown Divide Public Utility District ("District") provides irrigation and treated water services to residents and businesses of the District; and

**WHEREAS**, in December 2017, the District completed a roughly 15-month process to update its treated and irrigation water rates; and

**WHEREAS**, that process resulted in a Water Financial Analysis (aka Water Rate Study), dated October 24<sup>th</sup>, 2017, prepared by Rural Community Assistance Corporation (RCAC) that established various proposed rates; and

**WHEREAS**, on December 12<sup>th</sup>, 2017, pursuant to Proposition 218 (Cal. Const., Art. XIID, Sec. 6) the District Board heard and considered all oral testimony, written materials, and written protests concerning the rate increase; verified and counted the protests and determined that the District may proceed with the proposed water rates; and

**WHEREAS**, the Board then adopted Resolution 2017-30 Adopting New Rates for Treated Water and Irrigation Water Services; and

**WHEREAS**, those rates were set to increase effective with the January/February 2019 billing period; and

**WHEREAS**, at the January 8<sup>th</sup>, 2019 meeting the Board acted by motion to "temporarily freeze the rate increases for no more than 12 months;" and

**WHEREAS**, at the February 12<sup>th</sup>, 2019 meeting the Board adopted Resolution 2019-14 which held the 2019 water rates at the 2018 water rates, and re-affirmed that water rates would increase effective with the January/February billing period each following year (2020, 2021, 2022); and

**WHEREAS**, at the February 11<sup>th</sup>, 2020 Board meeting the Board adopted Resolution 2020-08 to temporarily freeze the treated water rates until July 1, 2020 and freeze the irrigation rates for the remainder of 2020; and

**WHEREAS**, at the January 28<sup>th</sup>, 2021, Special Board Meeting, the Board adopted Resolution 2021-03 maintaining the water rates until the end of the Fiscal Year 2021 (December 31, 2021); and

**WHEREAS**, at the December 14<sup>th</sup>, 2021 Regular Board Meeting the Board adopted Resolution 2021-56 freezing the rates until June 30<sup>th</sup>, 2022.

**WHEREAS**, the Board has considered the option of maintaining the freeze at the current level.

**NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT HEREBY RESOLVES THAT THE RATES FOR TREATED AND IRRIGATION WATER ARE MAINTAINED AT THE CURRENT RATE UNTIL (INSERT DATE) AS OUTLINED IN THE FOLLOWING CHARTS:**

**AYES:**

**NOES:**

**ABSENT/ABSTAIN: NONE**

---

Michael Saunders, President, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

*Attest:*

---

Adam Coyan, Clerk and Ex  
officio Secretary, Board of  
Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

## **CERTIFICATION**

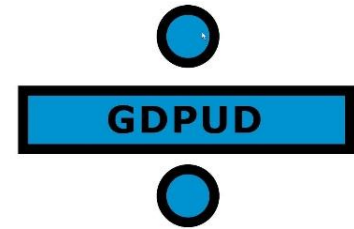
I hereby certify that the foregoing is a full, true and correct copy of Resolution 2022-XX duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on this 14<sup>th</sup> day of June 2022.

---

Adam Coyan, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT



**REPORT TO THE BOARD OF DIRECTORS  
BOARD MEETING OF JUNE 14, 2022  
AGENDA ITEM NO. 9.D.**



**AGENDA SECTION: NEW BUSINESS**

**SUBJECT: ANNUAL REVIEW OF CAPITAL FACILITY CHARGES AND METER INSTALLATION FEES**

**PREPARED BY:** Adam Brown, Operations Manager

**APPROVED BY:** Adam Coyan, General Manager

**BACKGROUND**

On April 7, 2007, the Board of Directors adopted Ordinance 2007-01, *An Ordinance Repealing Ordinance No. 94-03, Amending Ordinance No. 94-04, and Establishing Capital Facility Fee and Capacity Charges for Connections to the District’s Water System*. Ordinance 2007-001 is included as Attachment 1 along with *Georgetown Divide Public Utility District Capital Facility Charge Study*, dated March 2007, which established the methodology behind capital facility charges (CFC). The study, which analyzed the District’s historical practices as well as standards within the industry, recommended principles based on state law to ensure implementation of the *growth-pays-for-growth* principle.

**DISCUSSION**

Article 9 of the Ordinance provides for an annual reassessment of the charges by the amount of the construction cost index, as established in the 20-city Engineering News Record Construction Cost Index (ENRCCI) at discretion of the Board. The charges were last updated in fiscal year 12/13 and the ENRCCI for the period between FY 12/13 and FY 22/23 is calculated at an increase of 27% to cover the necessary costs. The following table details the current fees and what fees could be established utilizing ENRCCI.

**Capital Facility Charge**

<b>Meter Size</b>	<b>FY12/13</b>	<b>FY22/23</b>
5/8 – 3/4 - inch	\$9,200	\$11,684
1 – inch	\$22,575	\$28,670
1 ½ - inch	\$45,148	\$57,337
2 - inch	\$72,239	\$91,743

A Resolution associated with proposed CFC increases is included as Attachment 2.

Article 7 of Ordinance 07-01 established that the cost for new meters and installations shall be assessed at the actual cost to the District. At the time this report, new meter costs to the District are currently at the following and are subject to change:

**Meter Cost**

5/8 – inch	\$255
3/4 – inch	\$270
1 – inch	\$305
1-1/2 – inch	\$695
2 – inch	\$835
3 – inch	\$2,715
4 – inch	\$3,455

**Notes:** Meter cost does not include ancillary supplies (i.e., valves, fittings, adaptors, rental equipment, specialized contractor cost) associated with meter installation that are charged at current cost after installation.

Installation time and material cost can vary per location; however, some portions of work order fees should be standardized such as hourly labor rates and equipment cost. Equipment rates were established utilizing the California State Transportation Agency Department of Transportation Division of Construction, *Labor Surcharge and Equipment Rental Rates*, dated April 1, 2022, and California Department of Transportation – Equipment Rental Rate Approximation<sup>1</sup>. Labor rates were established utilizing District labor costs.

**Labor and Equipment Cost**

<b>Category</b>	<b>Current</b>	<b>Proposed</b>
<b>Labor (per hour)</b>		
Office Management	\$65	\$65
Field Operator	\$45	\$45
Office Staff	\$40	\$40
<b>Equipment (per hour)</b>		
Dump Truck	\$12	\$37.19
Flat Bed	\$11	\$28.65
Service Truck	\$11	\$28.65
Standard Pickup	NE	\$25.30
Ditch Witch	\$25	\$33.78
Excavator	\$25	\$45.18
Loader	NE	\$95.00
Air Compressor	\$4	\$20.80

**Notes:** NE – Not Established

<sup>1</sup> <https://dot.ca.gov/programs/construction/equipment-rental-rates-and-labor-surcharge>

A Resolution adjusting meter installation fees is included as Attachment 3.

**FISCAL IMPACT**

A total of 6 meters were installed in 2021 and 14 during the first 5-months of 2022. New meter connections rates vary depending on development within the District, but on average 15 new installations would result in an approximate increase if \$37,000 annually deposited into capital facilities fund.

**CEQA ASSESSMENT**

This is not a CEQA Project.

**RECOMMENDED ACTION**

Staff recommends the Board of Directors of the District approve resolution 2022-XX and 2022-XX.

**ATTACHMENTS**

Attachment 1 – Ordinance 2007-01  
Attachment 2 – Resolution 2022-XX  
Attachment 3 – Resolution 2022-XX

**ORDINANCE NO. 07-01**

**AN ORDINANCE REPEALING ORDINANCE NO. 94-03, AMENDING ORDINANCE NO. 94-04, AND ESTABLISHING CAPITAL FACILITY FEES AND CAPACITY CHARGES FOR CONNECTIONS TO THE DISTRICT'S WATER SYSTEM**

BE IT ENACTED by the Board of Directors of the Georgetown Divide Public Utility District ("District"), El Dorado County, State of California, as follows:

*ARTICLE 1. Recitals*

A. Pursuant to Government Code Section 66013 et seq. the governing board of a district is authorized to levy a fee or capacity charge for any new connection to the district's water system to defray the cost of the public facilities necessary to serve the new connection.

B. New connections to the District's water system will impact the system and will require the installation of new facilities, upgrades of existing facilities and additional water supplies for the District.

C. By Ordinance 94-03 the District set the Water Development Charge at \$2,000.00 and by Ordinance 94-04 the District set the Treatment Plant Charge at \$955.00, the Pipeline Charge at \$595.00, the Storage Charge at \$700.00, the Service Connection Charge at \$650.00 and the Meter Installation Charge at \$100.00, for a total cost of \$5,000.00.

D. The District completed a Capital Facility Charge Study ("Study") prepared by Stantec Engineering, entitled, "Georgetown Divide Public Utility District Capital Facility Charge Study", to evaluate the fees and charges required to cover the cost of existing facilities and the facility expansions and upgrades necessary to address the increased demands on the system as a result of serving the new development. In addition, new connections to the District's water system will require the District to fund studies to obtain additional water supplies to serve the residents of the District.

E. The District has collected, examined, and analyzed written evidence; and has heard and considered evidence and testimony at a duly noticed public hearing regarding the increased capital facility charges to be levied on new connections to the District's treated water system.

*ARTICLE 2. Repeal of Ordinance No. 94-03 and Amendment of Ordinance No. 94-04:*

Upon the effective date of this ordinance, Ordinance No. 94-03 is repealed. Article 15 of Ordinance No. 94-04, except as described in Article 8 of this Ordinance, and Articles 16 and 17 of Ordinance No. 94-04 are also repealed.

ARTICLE 3. *Procedure:*

The Board hereby finds that prior to the adoption of this Ordinance, a public hearing was held, at which oral and written presentations were made, as part of the Board's regularly scheduled March, 2007 meeting. The public hearing was continued to April 10, 2007. Pursuant to Government Code Section 66016 notice of the time and place of the meeting, including a general explanation of the matter to be considered, and a statement that the data required by this section is available, was mailed at least 14 days prior to the meeting to any interested party who filed a written request with the District for mailed notice of the meeting on new or increased fees or service charges. In addition, notice of the time and place of the meeting, including a general explanation of the matter to be considered, has been published twice in a newspaper of general circulation. The District has made available to the public at least 10 days prior to the meeting, data including the amount of the cost, or estimated cost, required to provide the service for which the fee or service charge is to be adjusted pursuant to the Ordinance, and the revenue sources anticipated to provide this service. By way of such public meeting, the Board received oral and written presentations by the District based upon the District's Study, along with other materials, which formed the basis for the action taken pursuant to this Ordinance.

ARTICLE 4. *Findings:*

The Board has reviewed the Study as it relates to proposed and potential development, the resulting need for facilities, the cost thereof, and the available sources of revenue including the increase in fees provided by the Ordinance, and based thereon and upon all other information and written and oral presentations, the Board hereby approves and adopts the Study, attached hereto as Exhibit "A" and incorporated herein by reference, and adopts the findings and conclusions in Exhibit "A" as its own and finds each of the following:

(a) Purpose of the Charges

The purpose of the fee is to fund improvements to the District's water system as identified in the Study and to provide funds for studies necessary to secure additional water supplies for the District.

(b) Use of Charges

The fees proposed in the Study and implemented pursuant to this Ordinance will be used to finance the construction of facilities indicated in the Study attached as Exhibit "A" and to pay for the District's share of studies undertaken by the El Dorado County Water Agency to secure additional sources of water for the District ("new facilities" herein).

(c) Relationship between Use of Charges and Type of Development

There is a reasonable relationship between the fees proposed herein and the development project on which the fee will be imposed because the fee will be imposed exclusively on projects that require District services and apply to connect to the District's water system. The new users will impact the District's system as set forth in the Study and will use a portion of the limited water capacity available within the District, thus necessitating the construction of capital facilities to serve the new development and requiring the District to seek additional sources of water to serve the new development.

(d) Relationship between Need for Facilities and Type of Project

There is a reasonable relationship between the need for the new facilities and the new development because the new facilities are necessary to serve the new development. To the extent a portion of the new facilities are necessary to serve existing customers of the District, the District will pay for such portion of the new facilities through grants, taxes, rate charges or other sources of revenue of the District.

(e) Relationship between Amount of the Charges and the Cost of Facilities

There is a reasonable relationship between the amount of the fee and the cost of the new facilities because the Study identifies that the cost of the new facilities necessary to serve the new development meets or exceeds the amount that will be raised through the collection of the fees.

(f) Fees do not Exceed the Estimated Amount Required

The fees proposed in the Study and adopted pursuant to this Ordinance do not exceed the estimated amount required to provide funding for the new facilities for which the fees are levied; and in making this finding, the District declares that it has considered the availability of revenue sources anticipated to provide such facilities.

*ARTICLE 5. Connection to the District's Treated Water System*

Based on the foregoing findings, the Board hereby approves, adopts, and levies a Capital Facility Connection Fee and Capacity Charge ("fee" herein) for connection to the District's treated water system in the following amount of \$8,100 for a 5/8-3/4 meter; \$20,025 for a 1 inch meter; \$40,049 for a 1 1/2 inch meter; and \$64,079 for a 2 inch meter. The fee shall be paid directly to District prior to making a new connection or increasing the amount of an existing connection to the District's treated water system for which a service connection charge has not been paid or financed through an assessment district. If a parcel within an assessment district that included financing for connection charges is further subdivided, only the original parcel

shall be exempt from the connection fee.

ARTICLE 6. *Connection to the District's Untreated Water System*

Based on the foregoing findings, the Board hereby approves, adopts, and levies a Capital Facility Connection Fee and Capacity Charge for connection to the District's untreated water system in the amount of \$2,000. The fee shall be paid directly to District prior to making a new connection or increasing the amount of an existing connection to the District's raw water system.

ARTICLE 7. *Pipeline Extensions, Meter Installations*

The Capital Facility Connection Charge and Capacity Charge does not include costs associated with extending pipelines or the cost of installing meters. Charges for pipeline extensions and meter installations shall be assessed at actual cost to the District.

ARTICLE 8. *Kelsey and Pilot Hill Assessment Districts*

The provision in Article 15 of Ordinance 94-04 charging an additional fee of \$500 per parcel for all unassessed parcels within the Kelsey North, Kelsey South, Pilot Hill North, Pilot Hill South Assessment Districts in order to provide a Debt Service Reserve for said Assessment Districts shall remain in force and such fee shall be collected and placed in a separate reserve account for such purpose.

ARTICLE 9. *Fee Adjustment and Limitations*

The fees levied under Article 5 and 6 above shall be adjusted annually on July 1 of each year by the amount of the construction cost index, as established in the 20-city Engineering News Record Construction Cost Index or ENRCCI or its successor. The Board retains the discretion to annually review the amount of the construction cost index and may elect at a regularly scheduled meeting of the Board to refrain from applying all or any portion of the increase to the fee. Absent such an election, the construction cost index shall be applied to the fee for a period of five years from the effective date of this ordinance.

ARTICLE 10. *Deposit of Fees*

All fees and charges, along with any interest income earned thereon, shall be deposited in a separate capital facilities fund in a manner to avoid any commingling of the fees and charges with other revenues and funds of the District, and shall be expended solely for the purposes for which the fees and charges are collected, which the District hereby designates to be for the purpose of funding studies for additional water supplies, construction of the capital facility improvements identified in Tables 5, 6 and 7 of the Study and those purposes permitted by any applicable law. Fees and charges collected for the raw water system shall be expended

solely for the purpose of funding studies for additional water supplies or for the construction of the raw water system capital facility improvements identified in Tables 5, 6 and 7 of the Study.

ARTICLE 11. *Accounting*

Pursuant to Government Code Section 66013 the District shall account for the funds in the separate capital facilities fund annually and will make the findings required by Government Code section 66013(d).

ARTICLE 12. *Additional Mitigation Methods*

The policies set forth in this Ordinance are not exclusive and the District reserves the authority to undertake other additional methods to finance public facilities. In addition, the District reserves the right to negotiate connections to the District’s system and to accept land, easements or other items of value in exchange for the right to connect to the District’s system when such an exchange is determined to be in the best interests of the District.

ARTICLE 13. *Implementation*

For development projects within the District, the General Manager or his designee is authorized to issue Certificates of Compliance upon the payment of any fee levied under the authority of this Ordinance. The fees provided herein shall be collected prior to an applicant’s connection to the District’s treated water system. All other provisions establishing the requirements and procedures to connect to the District’s system shall remain in full force and effect. The Board of Directors retains the authority to grant relief under the provisions of this ordinance upon request. Any appeal or challenge to this fee shall follow the District procedure for filing appeals.

ARTICLE 14. *California Environmental Quality Act*

The Board hereby finds that the increase in fees provided by this Ordinance is to obtain funds for capital projects necessary to maintain service within the District and that therefore, under Public Resources Code section 21080 (b)(8), this action is statutorily exempt from the provisions of the California Environmental Quality Act (CEQA). To the extent a particular construction project necessitates an analysis under CEQA, the analysis shall be undertaken prior to construction of the project.

ARTICLE 15. *Commencement Date*

Pursuant to Government Code Section 66017, the effective date of this Ordinance shall be July1, 2007, which is more than sixty (60) days following its adoption by the Board.



ARTICLE 16. *Severability*

If any portion, phrase or segment of this Ordinance is found by a Court of competent jurisdiction to be invalid, such finding shall not affect the validity of the remaining portions of this Ordinance. The District hereby declares its intent to adopt this Ordinance irrespective of the fact that one or more of its provisions may be declared invalid subsequent thereto.


PASSED AND ADOPTED by the Board of Directors of the Georgetown Divide Public, at its duly held regular meeting on April 10, 2007 by the following vote:

Ayes: Michael Cooper, Bob Diekon, Norman Krizl, Douglas Pickell and JoAnn Shepherd


Noes: None

Absent: None

GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT


By:   
Norm Krizl, President  
Board of Directors  
The Georgetown Divide Public Utility District

ATTEST:

By:   
HENRY N. WHITE, Clerk and ex officio Secretary,  
Board of Directors  
Georgetown Divide Public Utility District

CERTIFICATION

I hereby certify that the foregoing is a full, true and correct copy of Ordinance 2007-01 duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on the 10<sup>th</sup> day of April, 2007.

  
\_\_\_\_\_  
HENRY N. WHITE  
Secretary, Georgetown Divide Public  
Utility District



**Stantec**

**GEORGETOWN DIVIDE  
PUBLIC UTILITY DISTRICT  
CAPITAL FACILITY CHARGE  
STUDY**

**March 2006**

**Updated March 2007**

Prepared for:  
Georgetown Divide  
Public Utility District  
PO Box 4240  
Georgetown, CA 65634

Prepared by:  
Stantec Consulting, Inc.  
2590 Venture Oaks Way  
Sacramento, CA 95833



## **Executive Summary**

---

Management of water utilities is a demanding and complicated business. In addition to meeting the service needs of customers, the GDPUD satisfies the demands of a number of other stakeholders as well. These include health, safety and environmental regulators, bankers and governmental lenders and other interested parties. To accomplish competing objectives the GDPUD has a Capital Improvement Program and Strategic Plan as well as the provisions and limitations of the California codes. Financial responsibility is a key thread in those documents.

Financial objectives for the GDPUD is to seek sufficient capital to build projects and sufficient revenue to properly manage, operate and maintain facilities. Also, the GDPUD seeks fairness and equity in allocating financial burdens among customers. Because utility assets are relatively expensive – partly because most assets are installed underground – and have long useful lives (up to fifty years or more), it is appropriate to factor growth into the calculus of cost allocation. It is often considered inappropriate to have existing customers be entirely responsible for capital costs of all future assets, especially those expansion facilities that would not be built if there were no growth. To resolve this situation, many districts take a two-pronged approach to the allocation financial costs of long-term assets among current and future customers.

First, they engage in long-term debt financings to pay for the facilities, even if there is sufficient cash on hand to fully fund the construction. This concept implements the *pay-as-you-use principle*, wherein future customers participate in future debt service when they connect to the system.

Secondly, districts historically have adopted connection fees as the process for new customers paying the cost of expanding the system to serve them. Since adoption AB 1600 the acceptable terminology to describe these fees is Capacity Facility Charges (CFCs). CFCs are assessed to new customers when they connect to the utility systems to ensure implementation of the *growth-pay-for-growth principle*. In the long run, CFCs provide sufficient funds to fully pay for the construction costs of expansion assets. In the short-run, some years will have more or less growth than other years, producing more or less CFCs revenue, and some years may have more or less than average expansion project capital requirements. Utilization of reserve funds, reliance on rate revenues from existing customers and engagement of funding (borrowing or accepting grants in aid) from external sources are approaches taken to buffer the variances associated with growth and capital requirement.

State law governs capital facility charges. California Government Code Section 66000, *et. seq.*, provides that the purpose and intended use of a proposed CFC must be identified, that there be a reasonable relationship between the use of revenues generated by the fee and the properties paying the fees and that there be a reasonable relationship between the amount of the fee and the cost of the public facility attributable to the properties paying the fees.

## Stantec

### CAPITAL FACILITY CHARGE STUDY

EXECUTIVE SUMMARY

March 2006

Updated March 2007

---

Stantec is of the opinion that this report satisfies these requirements. In summary, the purpose and intended use of the fees is to generate revenue to pay for capital construction cost, or service debt on capital construction cost, of public water facilities. These facilities will be used to provide water service for the newly connecting accounts. Reasonable care is given in the computation of the fees to ensure that only growth-induced portion of new projects, or portions thereof, and unused capacity of existing facilities are to be funded by the charges. The charges are computed on a unit cost basis to ensure a reasonable relationship between facility cost and fee paying properties. In administering the fees, Stantec assumes that the GDPUD will comply with other aspects of the Government Code Section 66000 *et. seq.*, including that CFCs revenues will not be commingled with other revenue sources.

Generally, development/capacity fees are assessed upon connection by a property to the utility system, often in concert with issuance of building permits or occupancy certificates. Fees are determined on a constant dollar value basis. As such, fees should be adjusted periodically to coincide with increasing or decreasing costs of construction. Stantec has prepared this study assuming the GDPUD will adjust fees every year based on the *Engineering News-Record* Construction Cost Index and then revisit planning and costs bases every five years as part of the master planning update process. The CFCs recommended for the GDPUD reflect economic and legal principles for determining capacity charges and impact fees generally, and also reflects the practices of other water agencies in California.

Using the determined replacement cost and valuation for the GDPUD water system a unit cost can be calculated. This unit cost reflects the price of water obtained from this system. Unit costs for a twenty year timeframe are calculated in Table 9, Water System Capital Facility Charge located in Appendix C of this report. The recommended CFC for a new residential connection is \$8,100 (fiscal year 2007-2008). A schedule of Capital Facility Charges is shown in Table 10, Recommended Water System Capital Facility Charges in Appendix C of this report, and below.

**CAPITAL FACILITY CHARGE STUDY**

EXECUTIVE SUMMARY

March 2006

Updated March 2007

---

Table 10 Revised  
Recommended Water System Capital Facility Charges

<b>GDPUD Meter Size</b>	<b>FY 07-08</b>	<b>FY 08-09</b>	<b>FY 09-10</b>	<b>FY 10-11</b>	<b>FY 11-12</b>
5/8 - 3/4 inch	8,100	8,300	8,500	8,800	9,100
1 inch	20,025	20,626	21,245	21,882	22,538
1 1/2 inch	40,049	41,250	42,488	43,763	45,076
2 inch	64,079	66,001	67,981	70,021	72,121

Assumes 3% increase each year & most common fee is rounded to nearest \$100 for 5/8 -3/4 inch meters. The charges will be increased annually by the 20-city Engineering News Record Construction Cost Index.

Chapter two of this report outlines the projected population growth in El Dorado County and within the GDPUD service area. This chapter summarizes recent studies of future water demand for the GDPUD. A complete residential build out analysis and assumptions are also presented in chapter two. This analysis is performed to ensure the CIP is adequate to support the anticipated growth outlined by the El Dorado General Plan and the costs of the necessary infrastructure is reflected in the CFCs.

With an understanding of projected growth in the area, chapter three details the current charges for new connections within the GDPUD and current charges for new connections within the surrounding water purveyors of El Dorado and Placer Counties.

Chapter four details the process for calculating a unit cost of water from the GDPUD system and a proportional fair CFC for new connections. This approach satisfies rational nexus criteria required by the California Government Code.

The technical appendix at the end of this report provide supporting calculations for establishing the CFCs and reference materials pertaining to CFCs.





**CAPITAL FACILITY CHARGE STUDY**

March 2006  
Updated March 2007

**Table of Contents**

EXECUTIVE SUMMARY ..... E.1

LIST OF ACRONYMNS ..... iv

---

**1.0 INTRODUCTION ..... 1.1**

1.1 GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT (GDPUD) ..... 1.1

1.2 PURPOSE ..... 1.2

    1.2.1 County Government Regulations ..... 1.2

1.3 BACKGROUND ..... 1.2

    1.3.1 Publications Regarding Capital Facility Charges ..... 1.3

1.4 APPROACH..... 1.4

---

**2.0 POPULATION AND WATER DEMAND FORECASTS..... 2.1**

2.1 LAND USE ANALYSIS AND BUILDOUT PROJECTION..... 2.1

    2.1.1 Growth Trends ..... 2.1

    2.1.2 Water Demand Forecast ..... 2.1

    2.1.3 Build Out Analysis ..... 2.3

    2.1.4 Agriculture and the Miner’s Inch ..... 2.6

---

**3.0 CURRENT WATER SYSTEM CONNECTION FEES ..... 3.1**

3.1 CURRENT GDPUD CHARGES ..... 3.1

    3.1.1 Generalized Benefit for the Entire District..... 3.2

3.2 COMPARISON OF OTHER WATER PURVEYORS ..... 3.2

    3.2.1 El Dorado County..... 3.2

    3.2.2 Placer County ..... 3.4

---

**4.0 CAPITAL FACILITY CHARGE DEVELOPMENT METHODOLOGY ..... 4.1**

    4.1.1 Inventory and Replacement Cost of Current Assets ..... 4.2

    4.1.2 Projected Capital Improvement Program Expenditures ..... 4.2

    4.1.3 Available Financing ..... 4.4

    4.1.4 Current Water System Capacity ..... 4.5

    4.1.5 Future Development and Water Demand ..... 4.5

    4.1.6 Unit Cost for Capital Facilities ..... 4.6

    4.1.7 Schedule of Capital Facility Charges ..... 4.6

---

**5.0 ACKNOWLEDGMENTS ..... 5.1**

**6.0 REFERENCES ..... 6.1**

**7.0 CONTACTS ..... 7.1**



**CAPITAL FACILITY CHARGE STUDY**

March 2006

Updated March 2007

**LIST OF TABLES**

Table 1: Comparison of 1990 and 2000 Population in El Dorado County

Table 2: Summary of Growth Projections for Georgetown Divide Public Utility District

Table 3: Vacant, Non-Customer Parcels at General Plan Build Out

Table 4: Summary of Regional Connection Fees

Appendix C: Water System Replacement Costs

Table C1: Water System Replacement Cost Data

Table C2: Storage Tank and Pipeline Unit Cost Estimation

Table 5: Water System Structures Replacement Cost

Table 6: Water System Pipelines Replacement Cost

Table 7: Water System Capital Improvement Costs and Reliability Measure Recommendations  
(2005 Dollars)

Table 8: Water System Capital Improvement Costs and Reliability Measure Recommendations  
(Adjusted Dollars)

Table 9: Water System Capital Facility Charge

Table 10: Recommended Water System Capital Facility Charges



**CAPITAL FACILITY CHARGE STUDY**

March 2006  
Updated March 2007

**LIST OF FIGURES (FOLLOWS THE PAGE)**

Figure 1.	Vicinity Map.....	1.1
Figure 2.	Site Map.....	1.1
Figure 3.	GDPUD Vacant and Developed Lands.....	2.4
Figure 4.	GDPUD General Plan Land Use Designations.....	2.7
Figure 5.	GDPUD Land Use Designations for Non Customer Vacant Parcels.....	2.8

**CAPITAL FACILITY CHARGE STUDY**

March 2006  
Updated March 2007

**LIST OF ACRONYMS**

---

APN	Assessor's Parcel Number
CFC	Capital Facility Charge
CIP	Capital Improvement Project
EIR	Environmental Impact Report
GDPUD	Georgetown Divide Public Utility District
GIS	Geographic Information Systems
GPD	Gallons Per Day
MGD	Million Gallons Per Day
SACOG	Sacramento Area Council of Governments
WTP	Water Treatment Plant

## **1.0 Introduction**

---

This report summarizes the development methodology and justification of the recommended Capital Facility Charges (CFCs) for the Georgetown Divide Public Utility District (GDPUD). CFCs are defined by the California Government Code Section 66000 et sequential as “charges for facilities in existence at the time the charge is imposed or charges for new facilities to be constructed in the future that are of benefit to the person or property being charged”. These charges are intended to recover a portion of the District’s Capital Improvement Program (CIP) cost, and water rate payer’s prior investment in capital facilities that support land development through water system expansion.

This study has been prepared to meet the regulatory requirements found in Government Code Section 66000 et sequential regarding the establishment of capacity charges also known as water connection fees. The term connection fee is no longer appropriate terminology due to the adoption of AB 1600. This bill renamed this fee to capital facility charges and specified that this fee must be used for capital expansions, and cannot be used for operating expenses. It is necessary for every water purveyor to evaluate CFCs as new development increases and the water system requires expansion. A CFC should reimburse the GDPUD for a new customer’s benefit of existing capacity in the GDPUD’s water system.

### **1.1 GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT (GDPUD)**

The GDPUD is situated between the Middle and South Forks of the American River in the foothills of the Sierra Nevada Mountains. This region is best known for its influential role in the California Gold Rush, and for the past 150 years, life on the Divide has been greatly influenced by the people, places, and events of the Gold Rush and the subsequent discovery of “green gold”, the Divide’s huge tracts of timber. Figure 1 is a vicinity map depicting the location of the GDPUD within the region.

Founded in 1946, the GDPUD is a public utility district operating under the State of California Public Utility Code and Special District Codes & Procedures. The GDPUD comprises 75,000 acres along the northerly boundary of El Dorado County. As of 2005, the GDPUD provided service to approximately 3,400 water connections and serviced 1,100 wastewater disposal accounts. The GDPUD maintains over 137 miles of treated water pipelines, two water treatment plants, numerous water storage tanks, reservoirs, and miles of open canals (See Figure 2 Site Map).

Today, a number of small communities (most dating back to the Gold Rush) are scattered throughout the GDPUD, including Georgetown, Cool, Garden Valley, Kelsey, Greenwood, and Pilot Hill. Georgetown is named after George Phipps, who led a company of sailors to the area during the nineteenth century. Georgetown was the site of a gold camp and trading center for approximately 10,000 miners during the gold rush. It also was the site for Japanese settlers to form and establish the Wakamatsu Colony in 1868 to operate a tea and silk plantation. This





Table 10 Revised  
Recommended Water System Capital Facility Charges

<b>GDPUD Meter Size</b>	<b>FY 07-08</b>	<b>FY 08-09</b>	<b>FY 09-10</b>	<b>FY 10-11</b>	<b>FY 11-12</b>
5/8 - 3/4 inch	8,100	8,300	8,500	8,800	9,100
1 inch	20,025	20,626	21,245	21,882	22,538
1 1/2 inch	40,049	41,250	42,488	43,763	45,076
2 inch	64,079	66,001	67,981	70,021	72,121

Assumes 3% increase each year & most common fee is rounded to nearest \$100 for 5/8 -3/4 inch meters. The charges will be increased annually by the 20-city Engineering News Record Construction Cost Index.

**Table 9  
Water System Capital Facility Charge**

Item	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	
<b>Water System Replacement Cost</b>																					
Walton Lake WTP (Available Capacity)	\$ 1,500,000	\$ 1,545,000	\$ 1,591,250	\$ 1,639,091	\$ 1,688,263	\$ 1,738,911	\$ 1,791,078	\$ 1,844,811	\$ 1,900,155	\$ 1,957,160	\$ 2,015,875	\$ 2,076,351	\$ 2,138,641	\$ 2,202,801	\$ 2,268,885	\$ 2,336,951	\$ 2,407,080	\$ 2,479,271	\$ 2,553,650	\$ 2,630,259	
Auburn Lake Trails WTP (Available Capacity)	\$ 300,000	\$ 309,000	\$ 318,270																		
Greenwood Lake WTP (Available Capacity)				\$ 3,486,667	\$ 3,670,667	\$ 3,877,787	\$ 4,109,381	\$ 4,368,794	\$ 4,648,817	\$ 4,950,381	\$ 5,284,477	\$ 5,652,131	\$ 6,054,477	\$ 6,492,621	\$ 6,966,556	\$ 7,477,385	\$ 8,024,061	\$ 8,604,686	\$ 9,219,361	\$ 9,869,086	\$ 10,553,861
Structures	\$ 4,896,235	\$ 5,043,123	\$ 5,194,418	\$ 5,350,249	\$ 5,510,758	\$ 5,678,079	\$ 5,846,381	\$ 6,021,752	\$ 6,202,405	\$ 6,388,477	\$ 6,578,131	\$ 6,771,835	\$ 6,969,681	\$ 7,171,767	\$ 7,378,195	\$ 7,588,066	\$ 7,791,491	\$ 7,998,562	\$ 8,209,289	\$ 8,423,672	
Pipelines	\$ 37,120,461	\$ 38,234,075	\$ 39,381,097	\$ 40,562,630	\$ 41,779,400	\$ 43,032,788	\$ 44,323,772	\$ 45,653,485	\$ 47,023,089	\$ 48,433,782	\$ 49,886,785	\$ 51,383,399	\$ 52,924,901	\$ 54,512,848	\$ 56,148,028	\$ 57,832,489	\$ 59,567,443	\$ 61,354,468	\$ 63,195,100	\$ 65,090,953	
<b>Total Water System</b>	<b>\$ 43,616,696</b>	<b>\$ 45,131,197</b>	<b>\$ 46,485,133</b>	<b>\$ 47,918,538</b>	<b>\$ 49,437,585</b>	<b>\$ 51,049,922</b>	<b>\$ 52,757,632</b>	<b>\$ 54,566,844</b>	<b>\$ 56,472,562</b>	<b>\$ 58,474,817</b>	<b>\$ 60,582,656</b>	<b>\$ 62,796,128</b>	<b>\$ 65,114,618</b>	<b>\$ 67,547,356</b>	<b>\$ 70,095,541</b>	<b>\$ 72,764,233</b>	<b>\$ 75,552,440</b>	<b>\$ 78,470,113</b>	<b>\$ 81,526,264</b>	<b>\$ 84,721,113</b>	
<b>Lease Contributions</b>																					
Federal Grant	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	\$ 9,750,000	
<b>Total Contributions</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	<b>\$ 9,750,000</b>	
<b>Water System Valuation</b>	<b>\$ 34,066,696</b>	<b>\$ 35,381,197</b>	<b>\$ 36,735,133</b>	<b>\$ 38,168,538</b>	<b>\$ 39,687,585</b>	<b>\$ 41,299,922</b>	<b>\$ 42,997,632</b>	<b>\$ 44,786,844</b>	<b>\$ 46,722,562</b>	<b>\$ 48,804,817</b>	<b>\$ 51,032,656</b>	<b>\$ 53,366,128</b>	<b>\$ 55,814,618</b>	<b>\$ 58,397,356</b>	<b>\$ 61,125,541</b>	<b>\$ 64,014,233</b>	<b>\$ 67,062,440</b>	<b>\$ 70,270,113</b>	<b>\$ 73,646,264</b>	<b>\$ 77,197,113</b>	
<b>WTP Capacity (Max Day)<sup>5</sup></b>																					
Design Capacity (gpd)		4,600,000	4,600,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	5,300,000	
Peak Day Unit Cost (\$ per Gallon)		\$ 7.6916	\$ 7.9859	\$ 7.7865	\$ 8.0763	\$ 8.3727	\$ 8.6781	\$ 8.9947	\$ 9.3197	\$ 9.6545	\$ 9.9993	\$ 10.3545	\$ 10.7203	\$ 11.0971	\$ 11.4852	\$ 11.8849	\$ 12.2967	\$ 12.7208	\$ 13.1576	\$ 13.6075	
<b>Peak Day Single Family Use<sup>1</sup></b>																					
Average Daily Single Family Dwelling Use (gpd)		357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	357	
Peak Factor		2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	2.81	
Peak Day Single Family Use (gpd)		1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	1003	
<b>Equivalent Single Family Dwelling Charge</b>																					
Calculated		\$ 7,715	\$ 8,010	\$ 8,100	\$ 8,100	\$ 8,398	\$ 8,705	\$ 9,022	\$ 9,348	\$ 9,683	\$ 10,029	\$ 10,386	\$ 10,752	\$ 11,130	\$ 11,520	\$ 11,921	\$ 12,334	\$ 12,759	\$ 13,197	\$ 13,648	
Recommended <sup>4</sup>		\$ 7,715	\$ 8,010	\$ 8,100	\$ 8,100	\$ 8,398	\$ 8,705	\$ 9,022	\$ 9,348	\$ 9,683	\$ 10,029	\$ 10,386	\$ 10,752	\$ 11,130	\$ 11,520	\$ 11,921	\$ 12,334	\$ 12,759	\$ 13,197	\$ 13,648	
<b>Facility Reserve Charges</b>																					
		\$ 7,715	\$ 8,010	\$ 8,100	\$ 8,100	\$ 8,398	\$ 8,705	\$ 9,022	\$ 9,348	\$ 9,683	\$ 10,029	\$ 10,386	\$ 10,752	\$ 11,130	\$ 11,520	\$ 11,921	\$ 12,334	\$ 12,759	\$ 13,197	\$ 13,648	
<b>Meter size</b>																					
		Factor <sup>2</sup>																			
5/8-inch	1.0	\$ 7,715	\$ 8,010	\$ 8,100	\$ 8,100	\$ 8,398	\$ 8,705	\$ 9,022	\$ 9,348	\$ 9,683	\$ 10,029	\$ 10,386	\$ 10,752	\$ 11,130	\$ 11,520	\$ 11,921	\$ 12,334	\$ 12,759	\$ 13,197	\$ 13,648	
3/4-inch	1.0	\$ 7,715	\$ 8,010	\$ 8,100	\$ 8,100	\$ 8,398	\$ 8,705	\$ 9,022	\$ 9,348	\$ 9,683	\$ 10,029	\$ 10,386	\$ 10,752	\$ 11,130	\$ 11,520	\$ 11,921	\$ 12,334	\$ 12,759	\$ 13,197	\$ 13,648	
1-inch	2.5	\$ 19,287	\$ 20,025	\$ 20,250	\$ 20,249	\$ 20,995	\$ 21,763	\$ 22,554	\$ 23,369	\$ 24,209	\$ 25,073	\$ 25,964	\$ 26,881	\$ 27,826	\$ 28,799	\$ 29,802	\$ 30,834	\$ 31,887	\$ 32,963	\$ 34,061	
1 1/2-inch	5.0	\$ 38,573	\$ 40,049	\$ 40,500	\$ 40,498	\$ 41,990	\$ 43,526	\$ 45,108	\$ 46,738	\$ 48,417	\$ 50,147	\$ 51,926	\$ 53,752	\$ 55,626	\$ 57,549	\$ 59,520	\$ 61,548	\$ 63,635	\$ 65,781	\$ 68,000	
2-inch	8.0	\$ 61,717	\$ 64,079	\$ 64,800	\$ 64,795	\$ 67,183	\$ 69,641	\$ 72,173	\$ 74,781	\$ 77,468	\$ 80,234	\$ 83,084	\$ 86,020	\$ 89,043	\$ 92,157	\$ 95,365	\$ 98,669	\$ 102,072	\$ 105,576	\$ 109,179	
3-inch	16.0	\$ 123,434	\$ 128,158	\$ 129,600	\$ 129,592	\$ 134,366	\$ 139,283	\$ 144,347	\$ 149,563	\$ 154,935	\$ 160,469	\$ 166,169	\$ 172,038	\$ 178,086	\$ 184,315	\$ 190,730	\$ 197,337	\$ 204,143	\$ 211,153	\$ 218,373	
4-inch	25.0	\$ 192,666	\$ 200,246	\$ 202,500	\$ 202,488	\$ 209,947	\$ 217,929	\$ 226,542	\$ 235,892	\$ 245,086	\$ 254,129	\$ 263,029	\$ 271,784	\$ 280,402	\$ 289,883	\$ 299,136	\$ 308,172	\$ 317,000	\$ 325,628	\$ 334,065	
6-inch	50.0	\$ 385,332	\$ 400,493	\$ 405,000	\$ 404,976	\$ 419,893	\$ 435,856	\$ 452,884	\$ 470,086	\$ 488,381	\$ 506,772	\$ 525,259	\$ 543,850	\$ 562,554	\$ 581,381	\$ 600,344	\$ 619,453	\$ 638,717	\$ 658,145	\$ 677,737	
8-inch	90.0	\$ 694,318	\$ 720,887	\$ 729,000	\$ 728,957	\$ 755,808	\$ 783,464	\$ 811,950	\$ 841,290	\$ 871,511	\$ 902,638	\$ 934,599	\$ 967,422	\$ 1,001,135	\$ 1,035,756	\$ 1,071,292	\$ 1,107,752	\$ 1,145,145	\$ 1,183,481	\$ 1,222,769	
10-inch	145.0	\$ 1,116,823	\$ 1,161,429	\$ 1,174,500	\$ 1,174,431	\$ 1,217,691	\$ 1,262,248	\$ 1,308,141	\$ 1,355,419	\$ 1,404,101	\$ 1,454,250	\$ 1,505,819	\$ 1,558,856	\$ 1,613,311	\$ 1,669,234	\$ 1,726,585	\$ 1,785,414	\$ 1,845,771	\$ 1,907,695	\$ 1,971,217	
12-inch	215.0	\$ 1,650,447	\$ 1,722,119	\$ 1,741,500	\$ 1,741,398	\$ 1,805,541	\$ 1,871,609	\$ 1,939,668	\$ 2,009,742	\$ 2,081,943	\$ 2,156,302	\$ 2,232,862	\$ 2,311,780	\$ 2,393,035	\$ 2,474,727	\$ 2,558,903	\$ 2,645,614	\$ 2,734,912	\$ 2,826,847	\$ 2,921,459	
<b>Residential</b>																					
Single Family		\$ 7,715	\$ 8,010	\$ 8,100	\$ 8,100	\$ 8,398	\$ 8,705	\$ 9,022	\$ 9,348	\$ 9,683	\$ 10,029	\$ 10,386	\$ 10,752	\$ 11,130	\$ 11,520	\$ 11,921	\$ 12,334	\$ 12,759	\$ 13,197	\$ 13,648	
Duplex		\$ 7,715	\$ 8,010	\$ 8,100	\$ 8,100	\$ 8,398	\$ 8,705	\$ 9,022	\$ 9,348	\$ 9,683	\$ 10,029	\$ 10,386	\$ 10,752	\$ 11,130	\$ 11,520	\$ 11,921	\$ 12,334	\$ 12,759	\$ 13,197	\$ 13,648	
Multiple Family (per unit) <sup>3</sup>		\$ 7,715	\$ 8,010	\$ 8,100	\$ 8,100	\$ 8,398	\$ 8,705	\$ 9,022	\$ 9,348	\$ 9,683	\$ 10,029	\$ 10,386	\$ 10,752	\$ 11,130	\$ 11,520	\$ 11,921	\$ 12,334	\$ 12,759	\$ 13,197	\$ 13,648	
<b>Annual Inflation Rate<sup>4</sup></b>		3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	

Notes:  
1. The Peak Day Single Family Use data were determined using Small Acreage (< 1 acre) data.  
2. An "equivalency factor" is a unitless value that expresses the capacity of a water meter in terms of rated maximum capacity (in gallons per minute) of a standard meter. For example, using the rated maximum flow rate capacity for a 3/4-inch meter as the standard, a single 1-inch meter is equivalent to about 2 and a half, 3/4-inch meters. And, a single 2-inch meter is equivalent to about eight, 3/4-inch meters.  
3. Single family and multi-family residential units demand the same amount of water on an average basis (according to the El Dorado Water Demand Forecast, June 4, 2005). The Water System Reliability Study indicates that one residential unit averages 357 gallons per day with a peak day usage of 888 gallons per day. As shown in Table 10, the charge for a new Residential Single-Family unit is equivalent to the charge for a new Residential Multi-Family unit.  
4. September 2005 20-City ENRCCI is 3.0% per year.  
5. The maximum day water treatment plant capacity for the fiscal years 04-05, 05-06, and 06-07 is based on the combined design capacity for the Auburn Lake Trails and Walton Lake WTPs. The maximum day water treatment plant capacity for the fiscal years starting 07-08 is based on the combined design capacity for the Greenwood Lake and Walton Lake WTPs.  
6. The Greenwood Lake WTP coming on line during 07-08 causes the equivalent cost per dwelling unit to be skewed to a much lower cost than actually exists. The charge should therefore reflect the higher cost applicable the next fiscal year.

**Table 8**  
**Water System Capital Improvement Costs and Reliability Measure.**

Item	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24
Twin Pines Siphon to Black Oaks Siphon								
Black Oaks Siphon to Dukas Wastegate								
Dukas Wastegate to State Hwy 193								
State Hwy 193 to Chicken Flat Wastegate								
Mellows Wastegate to Kelsey Flume								
Kelsey Flume Siphon to Stork Wastegate	\$ 118,128							
Stork Wastegate to Kelsey Reservoir						\$ 44,167		
Overall Kelsey Ditch								
Spanish Dry Diggins Ditch								
SDD Flume to End								
Taylor Mine Ditch								
Taylor Mine Outlet to Shadle Reservoir								
Other								
Overall, GDPUD	\$ 205,585	\$ 216,350						
<b>Total Second Priority Reliability Measure Recommendations</b>	<b>\$ 495,778</b>	<b>\$ 661,061</b>	<b>\$ 502,797</b>	<b>\$ 705,630</b>	<b>\$ 252,742</b>	<b>\$ 783,184</b>	<b>\$ 379,262</b>	<b>\$ 418,521</b>
<b>Total</b>	<b>\$ 495,778</b>	<b>\$ 661,061</b>	<b>\$ 5,711,082</b>	<b>\$ 705,630</b>	<b>\$ 252,742</b>	<b>\$ 783,184</b>	<b>\$ 379,262</b>	<b>\$ 6,071,649</b>
Annual Inflation Rate <sup>1</sup>	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

Notes:  
1. Costs in each year are adjusted based on the cumulative annual inf September 2005 20-City ENRCCI is 3.0% per year.

**Table 8**  
**Water System Capitol Improvement Costs and Reliability Measure Recommendations (Adjusted Dollars)**

Item	FY 05-24	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
Twin Pines Siphon to Black Oaks Siphon	\$ 43,968							\$ 43,968					
Black Oaks Siphon to Dukes Wastegate	\$ 98,274										\$ 98,274		
Dukes Wastegate to State Hwy 193	\$ 111,570						\$ 111,570						
State Hwy 193 to Chicken Flat Wastegate	\$ 238,830			\$ 238,830									
Mellows Wastegate to Kelsey Flume	\$ 11,247											\$ 11,247	
Kelsey Flume Siphon to Stork Wastegate	\$ 116,126												
Stork Wastegate to Kelsey Reservoir	\$ 44,167												
Overall, Kelsey Ditch	\$ 185,326		\$ 185,326										
<i>Spanish Dry Diggins Ditch</i>													
SDD Flume to End	\$ 38,496	\$ 38,496											
<i>Taylor Mine Ditch</i>													
Taylor Mine Outlet to Shadle Reservoir	\$ 41,152				\$ 41,152								
<i>Other</i>													
Overall, GDPUD	\$ 41,844	\$ 41,844											
Overall, GDPUD	\$ 423,975												
<b>Total Second Priority Reliability Measure Recommendations</b>	<b>\$ 9,086,170</b>	<b>\$ 543,299</b>	<b>\$ 325,339</b>	<b>\$ 704,441</b>	<b>\$ 429,284</b>	<b>\$ 219,871</b>	<b>\$ 415,651</b>	<b>\$ 441,110</b>	<b>\$ 485,854</b>	<b>\$ 328,689</b>	<b>\$ 299,408</b>	<b>\$ 271,189</b>	<b>\$ 423,059</b>
<b>Total</b>	<b>\$ 43,416,423</b>	<b>\$ 3,098,729</b>	<b>\$ 4,792,789</b>	<b>\$ 4,402,229</b>	<b>\$ 2,387,669</b>	<b>\$ 6,167,527</b>	<b>\$ 415,651</b>	<b>\$ 441,110</b>	<b>\$ 485,854</b>	<b>\$ 328,689</b>	<b>\$ 5,141,539</b>	<b>\$ 271,189</b>	<b>\$ 423,059</b>
Annual Inflation Rate <sup>1</sup>		3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

Notes:

1. Costs in each year are adjusted based on the cumulative annual inflation rate. September 2005 20-City ENRCCI is 3.0% per year.

**Table 8**  
**Water System Capitol Improvement Costs and Reliability Measure**

Item	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24
Chrysler Cir. & Roller Coaster Replacement								\$ 1,029,483
<b>Subtotal</b>			\$ 5,208,285					\$ 5,653,128
<b>Total Priority Reliability Measure Recommendations</b>			\$ 5,208,285					\$ 5,653,128
<b>Second Priority Reliability Measure Recommendations</b>								
<b>Ditch System</b>								
<b>Up-Country Ditch</b>								
<b>Bacon Creek Pipeline</b>								
Structure #1 to Structure #2						\$ 482,747		
Structure #2 to Structure #3								
Structure #3 to Structure #4								
Structure #4 to Structure #5			\$ 155,700					
Panhook Inter. By pass to Tree House Lane								
Tree House Lane to Balderston Wastegate		\$ 256,857						
Wind Trap Siphon Canyon Creek Conduit	\$ 11,832	\$ 12,290	\$ 12,659	\$ 13,036	\$ 13,426	\$ 13,832	\$ 14,247	\$ 14,678
Buckeye Conduit	\$ 23,864	\$ 24,580	\$ 25,317	\$ 26,076	\$ 26,859	\$ 27,665	\$ 28,494	\$ 29,349
Buckeye Conduit to Schroeder Conduit		\$ 80,221						
Schroeder Conduit	\$ 7,756	\$ 7,988	\$ 8,228	\$ 8,475	\$ 8,729	\$ 8,991	\$ 9,261	\$ 9,539
<b>Overall Up Country Ditch</b>								\$ 80,983
<b>Main/Pilot Hill Ditch (Main Ditch #1)</b>								
The Cralls to Buffalo Hills Conduit			\$ 101,268					
Buffalo Hills Conduit	\$ 11,693	\$ 12,044	\$ 12,405	\$ 12,777	\$ 13,161	\$ 13,558	\$ 13,962	\$ 14,381
Spanish Dry Diggins Rd. to Taylor Mine Outlet				\$ 7,823				
Carl Wastegate to Growersberg Wastegate								
Summers Wastegate to Spools Wastegate								
Spools Wastegate to Jackass Wastegate								
Jackass Wastegate to Greenwood Reservoir				\$ 26,859				
<b>Main/Pilot Hill Ditch (Main Ditch #2)</b>								
SDD Diversion Flume to Blue Heron Falls	\$ 7,875	\$ 8,111	\$ 8,355	\$ 8,605	\$ 8,863	\$ 9,129	\$ 9,403	\$ 9,685
Blue Heron Way Falls to Kaiser Siphon								
Kaiser Pipeline and Kaiser Siphon								
Kaiser Pipeline and Kaiser Siphon	\$ 9,903	\$ 10,201	\$ 10,507	\$ 10,822	\$ 11,146	\$ 11,481	\$ 11,825	\$ 12,180
Ford Siphon to ALT Water Treatment Plant								
ALT Water Treatment Plant to Campground Wastegate				\$ 224,268				
Campground Wastegate to Willow Creek Wastegate								
Willow Creek Wastegate to Baldridge Wastegate	\$ 89,035							
Baldridge Wastegate to Bogus Wastegate								
<b>Main/Pilot Hill Ditch (Pilot Hill Ditch)</b>								
Domnan Wya to Knickerbocker Creek								\$ 237,729
Knickerbocker Creek to Pear Orchard Wastegate				\$ 143,696				
Pear Orchard Wastegate to Therekel Wastegate								
<b>Pilot Hill Ditch</b>								
Therekel Wastegate to State Hwy 49								
State Hwy 49 to Lovejoy Wastegate		\$ 50,389						
Lovejoy Wastegate To Nagle Wastegate							\$ 247,902	
Knickerbocker Wastegate to Wagner Reservoir			\$ 150,337					
Wagner Reservoir to Wagner Reservoir Wastegate						\$ 215,783		
Wagner Reservoir Wastegate to Bayley House Wastegate								
Bayley House Wastegate to Pilot Hill Reservoir								
<b>Overall Pilot Hill Ditch</b>								
<b>Keisey Ditch</b>								
St. James Wastegate to Hwy 49								
State Hwy 49 to (Forrest View Dr.) Falls			\$ 17,722					
(Forrest View Dr.) Falls to Irish Res. Wastegate								
Irish Res. Wastegate to Twin Pines Siphon				\$ 383,758				

**Table 8**  
**Water System Capital Improvement Costs and Reliability Measure Recommendations (Adjusted Dollars)**

Item	FY 05-24	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
Chrysler Cir. & Roller Coaster Replacement	\$ 1,029,483												
<b>Subtotal</b>	<b>\$ 20,083,281</b>												
<b>Total Priority Reliability Measure Recommendations</b>	<b>\$ 24,876,717</b>	<b>\$ 747,780</b>	<b>\$ 833,867</b>	<b>\$ 834,843</b>	<b>\$ 1,125,509</b>	<b>\$ 4,379,737</b>					<b>\$ 4,842,131</b>		
<b>Second Priority Reliability Measure Recommendations</b>						<b>\$ 5,831,174</b>					<b>\$ 4,842,131</b>		
<b>Ditch System</b>													
<b>Up-Country Ditch</b>													
Bacon Creek Pipeline	\$ 287,145				\$ 287,145								
Structure #1 to Structure #2	\$ 13,496												
Structure #2 to Structure #3	\$ 411,743	\$ 411,743										\$ 13,496	
Structure #3 to Structure #4	\$ 482,747												
Structure #4 to Structure #5	\$ 155,700												
Pensacola Inlet Bypass to Tree House Lane	\$ 182,178												
Tree House Lane to Balderston Wastegate	\$ 256,857								\$ 182,178				
Sand Trap Siphon Canyon Creek Conduit	\$ 224,871	\$ 8,369	\$ 8,820	\$ 8,876	\$ 9,145	\$ 9,518	\$ 9,702	\$ 8,893	\$ 10,283	\$ 10,601	\$ 10,919	\$ 11,247	\$ 11,584
Buckeye Conduit	\$ 449,743	\$ 16,738	\$ 17,240	\$ 17,757	\$ 18,290	\$ 18,838	\$ 19,403	\$ 19,985	\$ 20,585	\$ 21,203	\$ 21,839	\$ 22,494	\$ 23,169
Buckeye Conduit to Schroeder Conduit	\$ 80,221												
Schroeder Conduit	\$ 146,166	\$ 5,440	\$ 5,603	\$ 5,771	\$ 5,944	\$ 6,122	\$ 6,306	\$ 6,495	\$ 6,690	\$ 6,891	\$ 7,098	\$ 7,310	\$ 7,530
<b>Overall, Up Country Ditch</b>	<b>\$ 90,983</b>												
<b>Main/Pilot Hill Ditch (Main Ditch #1)</b>													
The Cralls to Buffalo Hills Conduit	\$ 101,268												
Buffalo Hills Conduit	\$ 220,374	\$ 8,201	\$ 8,447	\$ 8,701	\$ 8,962	\$ 9,231	\$ 9,508	\$ 9,793	\$ 10,087	\$ 10,388	\$ 10,701	\$ 11,022	\$ 11,353
Spanish Dry Diggins Rd. to Taylor Mine Outlet	\$ 10,919										\$ 10,919		
Cabin Wastegate to Growlersberg Wastegate	\$ 7,823												
Summers Wastegate to Spools Wastegate	\$ 367,566			\$ 367,566									
Spools Wastegate to Jackass Wastegate	\$ 242,824												
Jackass Wastegate to Greenwood Reservoir	\$ 26,859								\$ 242,824				
<b>Main/Pilot Hill Ditch (Main Ditch #2)</b>													
SDD Diversion Flume to Blue Heron Falls	\$ 148,415	\$ 5,523	\$ 5,689	\$ 5,860	\$ 6,036	\$ 6,217	\$ 6,403	\$ 6,595	\$ 6,793	\$ 6,997	\$ 7,207	\$ 7,423	\$ 7,646
Blue Heron Way Falls to Kaiser Siphon	\$ 175,844												
Kaiser Pipeline and Kaiser Siphon	\$ 196,945							\$ 196,945					\$ 115,844
Kaiser Pipeline and Kaiser Siphon	\$ 186,843	\$ 6,946	\$ 7,154	\$ 7,369	\$ 7,590	\$ 7,816	\$ 8,052	\$ 8,284	\$ 8,543	\$ 8,799	\$ 9,063	\$ 9,335	\$ 9,615
Ford Siphon to ALT Water Treatment Plant	\$ 11,662												
ALT Water Treatment Plant to Campground Wastegate	\$ 224,258									\$ 11,662			
Campground Wastegate to Willow Creek Wastegate	\$ 455,364												
Willow Creek Wastegate to Baldridge Wastegate	\$ 89,035								\$ 190,016	\$ 195,716	\$ 69,632		
Baldridge Wastegate to Bogus Wastegate	\$ 25,859		\$ 25,859										
<b>Main/Pilot Hill Ditch (Pilot Hill Ditch)</b>													
Dorman Wye to Knickerbocker Creek	\$ 237,729												
Knickerbocker Creek to Pear Orchard Wastegate	\$ 143,695												
Pear Orchard Wastegate to Therekel Wastegate	\$ 87,598					\$ 87,598							
<b>Pilot Hill Ditch</b>													
Therekel Wastegate to State Hwy 49	\$ 352,163												\$ 352,163
State Hwy 49 to Lovejoy Wastegate	\$ 50,389												
Lovejoy Wastegate To Nagle Wastegate	\$ 247,902												
Capacron Wastegate to Wagner Reservoir	\$ 150,637												
Wagner Reservoir to Wagner Reservoir Wastegate	\$ 215,783												
Wagner Reservoir Wastegate to Bayley House Wastegate	\$ 18,964		\$ 18,964										
Bayley House Wastegate to Pilot Hill Reservoir	\$ 4,241												
Pilot Hill Reservoir	\$ 492,883		\$ 42,436	\$ 43,709	\$ 45,020	\$ 46,371	\$ 47,762	\$ 49,195	\$ 50,671	\$ 52,191	\$ 53,757	\$ 55,371	\$ 56,981
<b>Overall, Pilot Hill Ditch</b>	<b>\$ 492,883</b>		<b>\$ 42,436</b>	<b>\$ 43,709</b>	<b>\$ 45,020</b>	<b>\$ 46,371</b>	<b>\$ 47,762</b>	<b>\$ 49,195</b>	<b>\$ 50,671</b>	<b>\$ 52,191</b>	<b>\$ 53,757</b>	<b>\$ 55,371</b>	<b>\$ 56,981</b>
<b>Kelsey Ditch</b>													
St. James Wastegate to Hwy 49	\$ 28,257				\$ 28,257								
State Hwy 49 to (Forrest View Dr.) Falls	\$ 17,722												
(Forrest View Dr.) Falls to Irish Res. Wastegate	\$ 43,968								\$ 43,968				
Irish Res. Wastegate to Twin Pines Siphon	\$ 393,755												

**Table 8  
Water System Capital Improvement Costs and Reliability Measure**

Item	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24
Wagner Reservoir to Wagner Reservoir Wastegate								
<b>Kelsey Ditch (Kelsey Ditch #1)</b>								
The Crails to St. James Wastegate								
St. James Wastegate to State Highway 193								
Forest View Drive Falls to Irish Res. Wastegate								
<b>Kelsey Ditch (Kelsey Ditch #2)</b>								
Black Oak Siphon to Dukes Wastegate								
Dikes Wastegate to State Highway 193								
Mellows Wastegate to Kelsey Flume								
Kelsey Flume to Stork Wastegate								
Stork Wastegate to Kelsey Reservoir								
<i>Subtotal</i>								
<b>Water System</b>								
<b>Auburn Lake Trails Service Area</b>								
Greenwood Rd. Feed from WL								
Greenwood Rd. Main Replacement								
Angel Camp Ct. Booster Pump								\$ 1,504,491
Highway 193 Cross-Tie-Brinks Ln Replace			\$ 158,913					
Gravity Raw Water for Golf Course			\$ 415,977					
Digger Tree Ct. to Westview Tr. Tie								
Indian Rock Road Main Replacement			\$ 102,828					
Cherry Acre Road PRV-Cross Tie								
Catecroft Road Main Replacement			\$ 325,815					
Highway 49-Pilot Hill Loop								\$ 688,965
Salmon Falls Road Main Replacement			\$ 800,795					
Second Deer Ravine Tank, 0.6 MG								
Cherry Hills Tank, 0.4 MG			\$ 1,226,120					
<b>Walton Lakes Service Area</b>								
Citabria Ln. Loop Tie								
Main Ln. Extension								
Buffalo Hill Rd. Line Replacement			\$ 149,565					
Quiet Place Loop Tie								
Quiet Place Remove Check Valve								\$ 108,591
Highway Dr. Line Replacement			\$ 115,269					
Longview Ln. Line Replacement			\$ 420,651					
Reservoir Rd. SDD, Hwy. 193 Replacements								
Silent Meadow Ln. Line Replacement			\$ 197,862					
Sanborn Rd. Line Replacement								\$ 999,045
Black Oak Mine Rd. Proposed Improvement								\$ 106,561
Greenwood Rd. Main Replacement								\$ 819,975
Traverse Creek Rd. Line Replacement								
Bayne Rd. Line Extension								
Bayne Rd. Tank								
Lazy Brook Tr. Line Replacement								\$ 231,182
Whitney Ct. Pressure Reducing Station								
Oak Ln. Line Replacement			\$ 235,253					
Shasta Rd. Line Replacement								\$ 196,866
Hamlet Rd. Line Replacement			\$ 171,378					
Pikes Peak Cir. Line Replacement			\$ 99,710					
Garden Park Line Replacement								
Hancock Rd. Tank Tie								
Garden Park Tank Proposed Improvements								
Hotchkiss Hill Sub Tank Addition			\$ 691,738					
Traverse Creek Rd. Booster Pumps			\$ 90,594					

**Table 8**  
**Water System Capitol Improvement Costs and Reliability Measure Recommendations (Adjusted Dollars)**

Item	FY 05-24	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
Wagner Reservoir to Wagner Reservoir Wastegate	\$ 28,840	\$ 28,840											
<b>Kelsey Ditch (Kelsey Ditch #1)</b>													
The Crails to St. James Wastegate	\$ 144,282		\$ 144,282										
St. James Wastegate to State Highway 193	\$ 9,004				\$ 9,004								
Forest View Drive Falls to Irish Res. Wastegate	\$ 79,568		\$ 79,568										
<b>Kelsey Ditch (Kelsey Ditch #2)</b>													
Black Oak Siphon to Dukes Wastegate	\$ 52,530	\$ 52,530											
Dukes Wastegate to State Highway 193	\$ 128,750	\$ 128,750											
Mellows Wastegate to Kelsey Flume	\$ 110,131					\$ 110,131							
Kelsey Flume to Stork Wastegate	\$ 52,451			\$ 52,451									
Stork Wastegate to Kelsey Reservoir	\$ 123,600	\$ 123,600											
<b>Subtotal</b>	<b>\$ 4,793,436</b>	<b>\$ 747,780</b>	<b>\$ 833,867</b>	<b>\$ 834,843</b>	<b>\$ 1,125,509</b>	<b>\$ 1,251,436</b>							
<b>Water System</b>													
<b>Auburn Lake Trails Service Area</b>													
Greenwood Rd. Feed from WL	\$ 357,056					\$ 357,056							
Greenwood Rd. Main Replacement	\$ 1,594,491												
Angel Camp Ct. Booster Pump	\$ 158,913												
Highway 193 Cross Tie-Brinks LN Replace	\$ 415,977												
Gravity Raw Water for Golf Course	\$ 478,780					\$ 478,780							
Digger Tree Ct. to Westview Tr. Tie	\$ 53,757										\$ 53,757		
Indian Rock Road Main Replacement	\$ 102,826												
Cherry Acra Road PKV-Cross Tie	\$ 215,027										\$ 215,027		
Catecroft Road Main Replacement	\$ 325,815												
Highway 89-Prod Hill Loop	\$ 698,965												
Salmon Falls Road Main Replacement	\$ 800,795												
Second Deer Ravine Tank, 0.6 MG	\$ 2,277,974					\$ 2,277,974							
Cherry Hills Tank, 0.4 MG	\$ 1,226,120												
<b>Walton Lakes Service Area</b>													
Citabria Ln. Loop Tie	\$ 123,840										\$ 123,840		
Fain Ln. Extension	\$ 421,976					\$ 421,976							
Buffalo Hill Rd. Line Replacement	\$ 149,565												
Quiet Place Loop Tie	\$ 106,561												
Quiet Place Remove Check Valve	\$ 5,796					\$ 5,796							
Holloway Dr. Line Replacement	\$ 115,290												
Longview Ln. Line Replacement	\$ 420,651												
Reservoir Rd., SDD, Hwy 193 Replacements	\$ 1,232,371										\$ 1,232,371		
Silent Meadow Ln. Line Replacement	\$ 197,882												
Sanromo Rd. Line Replacement	\$ 959,645												
Black Oak Mine Rd. Proposed Improvement	\$ 106,561												
Greenwood Rd. Main Replacement	\$ 279,535										\$ 279,535		
Traverse Creek Rd. Line Replacement	\$ 819,975												
Bayne Rd. Line Extension	\$ 469,506					\$ 469,506							
Bayne Rd. Tank	\$ 1,814,287										\$ 1,814,287		
Lazy Brook Tr. Line Replacement	\$ 231,182												
Whitney Ct. Pressure Reducing Station	\$ 125,202					\$ 125,202							
Oak Ln. Line Replacement	\$ 235,253												
Shasta Rd. Line Replacement	\$ 196,866												
Tamalpais Rd. Line Replacement	\$ 171,378												
Pikes Peak Cir. Line Replacement	\$ 99,710												
Garden Park Line Replacement	\$ 112,450					\$ 112,450							
Hancock Rd. Tank Tie	\$ 130,998					\$ 130,998							
Garden Park Tank Proposed Improvements	\$ 1,123,514										\$ 1,123,514		
Hotchkiss Hill Sub Tank Addition	\$ 691,738												
Traverse Creek Rd. Booster Pumps	\$ 98,594												



**Table 8**  
**Water System Capitol Improvement Costs and Reliability Measure**

Item	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24
<b>Capital Improvements</b>								
<b>Water Treatment</b>								
Greenwood Lake Water Treatment Plant								
Walton Lake WTP Raw Water Bypass								
Inspection of Treated Water Storage Tanks								
Walton Lake Outlet Works								
<i>Subtotal</i>								
<b>Distribution System</b>								
Hwy 193/Sliger Mine Mainline Relocation								
Garden Park Line Replacement								
Garden Park PRV and ACV								
Sliger Mine Road PRV Replacement								
Tank Telemetry Enhancements								
<i>Subtotal</i>								
<b>Conveyance System</b>								
Walton Lake Dredging								
<b>Up-Country Reliability Measures</b>								
Cabin Waste Gate Replacement								
Blue Heron Falls Conservation Plan								
Kaiser Siphon Replacement								
<i>Subtotal</i>								
<b>Wastewater</b>								
Station 16 Enclosure								
<i>Subtotal</i>								
<b>Total Capitol Improvements</b>								
<b>Priority Reliability Measure Recommendations</b>								
<b>Ditch System</b>								
<b>Up-Country Ditch</b>								
Structure #1 to Structure #2								
Structure #2 to Structure #3								
Structure #3 to Structure #4								
Structure #5 to Structure #6								
Balderston Wastegate to Sand Trap Siphon								
Walton Lake								
Buckeye Conduit to Shroeder Conduit								
<b>Main/Pilot Hill Ditch (Main Ditch #1)</b>								
Buffalo Hills Conduit to Spanish Dry Diggins Road								
Spanish Dry Diggins Road to Taylor Mine Outlet								
Taylor Mine Outlet to Cabin Wastegate								
Cabin Wastegate to Growlersberg Wastegate								
Growlersberg Wastegate to Summers Wastegate								
Summers Wastegate to Spools Wastegate								
Spools Wastegate to Jackass Wastegate								
Jackass Wastegate to Greenwood Reservoir								
<b>Main/Pilot Hill Ditch (Main Ditch #2)</b>								
Blue Heron Falls to Kaiser Siphon								
Kaiser Siphon to A.T. Water Treatment Plant								
Willow Creek Wastegate to Baldrige Wastegate								
<b>Main Ditch/Pilot Hill Ditch (Pilot Hill Ditch)</b>								
Dorman Wye to Knickerbocker Creek								
Loveloy Wastegate to Knickerbocker Creek								
Nagle Wastegate to Capcroft Wastegate								

**Table 8**  
**Water System Capital Improvement Costs and Reliability Measure Recommendations (Adjusted Dollars)**

Item	FY 05-24	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
<b>Capital Improvements</b>													
<b>Water Treatment</b>													
Greenwood Lake Water Treatment Plant	\$ 6,671,336	\$ 1,030,000	\$ 3,182,700	\$ 2,458,636									
Walton Lake WTP Raw Water Bypass	\$ 262,135	\$ 103,900	\$ 159,195										
Inspection of Treated Water Storage Tanks	\$ 109,629		\$ 31,827	\$ 32,782	\$ 45,020								
Walton Lake Outlet Works	\$ 53,045		\$ 53,045										
<b>Subtotal</b>	<b>\$ 7,096,145</b>	<b>\$ 1,133,000</b>	<b>\$ 3,426,707</b>	<b>\$ 2,491,418</b>	<b>\$ 45,020</b>								
<b>Distribution System</b>													
Hwy 193/ Siger Mine Mainline Relocation	\$ 463,500	\$ 463,500											
Garden Park Line Replacement	\$ 135,000		\$ 53,045	\$ 31,858									
Garden Park PRV and ACV	\$ 129,854		\$ 42,436	\$ 87,418									
Siger Mine Road PRV Replacement	\$ 56,275				\$ 56,275								
Tank Telemetry Enhancements	\$ 102,815				\$ 50,648	\$ 52,167							
<b>Subtotal</b>	<b>\$ 887,444</b>	<b>\$ 463,500</b>	<b>\$ 95,481</b>	<b>\$ 169,373</b>	<b>\$ 50,648</b>	<b>\$ 52,167</b>							
<b>Conveyance System</b>													
Walton Lake Dredging	\$ 562,754				\$ 562,754								
Up-Country Reliability Measures	\$ 549,841	\$ 105,000	\$ 106,090	\$ 108,273	\$ 112,551	\$ 115,927							
Cabin Waste Gate Replacement	\$ 32,782			\$ 32,782									
Blue Heron Falls Conservation Plan	\$ 119,405					\$ 119,405							
Kaiser Siphon Replacement	\$ 103,000	\$ 103,000											
<b>Subtotal</b>	<b>\$ 1,364,782</b>	<b>\$ 206,000</b>	<b>\$ 106,090</b>	<b>\$ 142,055</b>	<b>\$ 675,305</b>	<b>\$ 235,333</b>							
<b>Wastewater</b>													
Station 16 Enclosure	\$ 54,636			\$ 54,636									
Mainline Sealing	\$ 23,185							\$ 23,185					
Collection System Repair	\$ 27,342	\$ 5,150	\$ 5,305	\$ 5,464	\$ 5,628	\$ 5,796							
<b>Subtotal</b>	<b>\$ 105,164</b>	<b>\$ 5,150</b>	<b>\$ 5,305</b>	<b>\$ 60,100</b>	<b>\$ 5,628</b>	<b>\$ 28,982</b>							
<b>Total Capital Improvements</b>	<b>\$ 9,453,536</b>	<b>\$ 1,807,650</b>	<b>\$ 3,633,583</b>	<b>\$ 2,862,945</b>	<b>\$ 832,877</b>	<b>\$ 316,482</b>							
<b>Priority Reliability Measure Recommendations</b>													
<b>Ditch System</b>													
<b>Up-Country Ditch</b>													
Structure #1 to Structure #2	\$ 625,153				\$ 337,653	\$ 287,500							
Structure #2 to Structure #3	\$ 78,976			\$ 78,976									
Structure #3 to Structure #4	\$ 333,282			\$ 333,282									
Structure #5 to Structure #6	\$ 323,675		\$ 323,675										
Baldierston Wastegate to Sand Trap Siphon	\$ 124,931				\$ 124,931								
Walton Lake	\$ 566,559				\$ 281,377	\$ 285,181							
Buckeye Conduit to Schroeder Conduit	\$ 87,550	\$ 87,550											
<b>Main/Pilot Hill Ditch (Main Ditch #1)</b>													
Buffalo Hills Conduit to Spanish Dry Diggins Road	\$ 61,800	\$ 61,800											
Spanish Dry Diggins Road to Taylor Mine Outlet	\$ 353,579					\$ 353,579							
Taylor Mine Outlet to Cabin Wastegate	\$ 209,207			\$ 72,120	\$ 67,531	\$ 69,556							
Cabin Wastegate to Growlersberg Wastegate	\$ 209,090	\$ 103,000	\$ 106,090										
Growlersberg Wastegate to Summers Wastegate	\$ 12,381				\$ 12,381								
Summers Wastegate to Spools Wastegate	\$ 88,787	\$ 30,900	\$ 31,827	\$ 36,060									
Spools Wastegate to Jackass Wastegate	\$ 8,695					\$ 8,695							
Jackass Wastegate to Greenwood Reservoir	\$ 481,555			\$ 218,545	\$ 243,110								
<b>Main/Pilot Hill Ditch (Main Ditch #2)</b>													
Blue Heron Falls to Kaiser Siphon	\$ 90,885	\$ 20,600	\$ 21,218	\$ 21,855	\$ 27,012								
Kaiser Siphon to ALT Water Treatment Plant	\$ 219,699		\$ 106,090			\$ 119,609							
Willow Creek Wastegate to Baldrige Wastegate	\$ 88,768		\$ 21,218	\$ 21,855	\$ 22,510	\$ 23,185							
<b>Main Ditch/Pilot Hill Ditch (Pilot Hill Ditch)</b>													
Dorman Wye to Knickerbocker Creek	\$ 22,660	\$ 22,660											
Lcvojoy Wastegate to Nagle Wastegate	\$ 83,430	\$ 83,430											
Nagle Wastegate to Capecroft Wastegate	\$ 4,120	\$ 4,120											

**Table 7**  
**Water System Capital Improvement Costs and Reliability Measure**

Item	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24
Pear Orchard Wastegate to Therekel Wastegate								
<b>Pilot Hill Ditch</b>								
Therekel Wastegate to State Hwy 49								
State Hwy 49 to Lovejoy Wastegate		\$ 33,313						
Lovejoy Wastegate To Nagle Wastegate							\$ 141,375	
Capcroft Wastegate to Wagner Reservoir			\$ 96,688					
Wagner Reservoir to Wagner Reservoir Wastegate						\$ 126,750		
Wagner Reservoir Wastegate to Bayley House Wastegate								
Bayley House Wastegate to Pilot Hill Reservoir								
Overall, Pilot Hill Ditch								
<b>Kelsey Ditch</b>								
St. James Wastegate to Hwy 49								
State Hwy 49 to (Forrest View Dr.) Falls			\$ 11,375					
(Forrest View Dr.) Falls to Irish Res. Wastegate								
Irish Res. Wastegate to Twin Pines Siphon				\$ 245,375				
Twin Pines Siphon to Black Oaks Siphon								
Black Oaks Siphon to Dukes Wastegate								
Dukes Wastegate to State Hwy 193								
State Hwy 193 to Chicken Flat Wastegate								
Mellows Wastegate to Kelsey Flume								
Kelsey Flume Siphon to Stork Wastegate	\$ 80,438							
Stork Wastegate to Kelsey Reservoir							\$ 25,188	
Overall, Kelsey Ditch								
<b>Spanish Dry Diggins Ditch</b>								
SDD Flume to End								
<b>Taylor Mine Ditch</b>								
Taylor Mine Outlet to Shadle Reservoir								
<b>Other</b>								
Overall, GDPUD								
Overall, GDPUD	\$ 140,000	\$ 144,375						
<b>Total Second Priority Reliability Measure Recommendations</b>	<b>\$ 337,601</b>	<b>\$ 437,039</b>	<b>\$ 322,726</b>	<b>\$ 439,725</b>	<b>\$ 152,913</b>	<b>\$ 460,038</b>	<b>\$ 216,288</b>	<b>\$ 231,725</b>
<b>Total</b>	<b>\$ 337,601</b>	<b>\$ 437,039</b>	<b>\$ 3,665,726</b>	<b>\$ 439,725</b>	<b>\$ 152,913</b>	<b>\$ 460,038</b>	<b>\$ 216,288</b>	<b>\$ 3,361,725</b>

**Table 7**  
**Water System Capital Improvement Costs and Reliability Measure Recommendations (2005 Dollars)**

Item	FY 05-24	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
Pear Orchard Wastegate to Therekel Wastegate	\$ 75,563					\$ 75,563							
<b>Pilot Hill Ditch</b>													
Therekel Wastegate to State Hwy 49	\$ 247,000												\$ 247,000
State Hwy 49 to Lovejoy Wastegate	\$ 33,313												
Lovejoy Wastegate To Nagle Wastegate	\$ 141,375												
Capacron Wastegate to Wagner Reservoir	\$ 96,688												
Wagner Reservoir to Wagner Reservoir Wastegate	\$ 126,750												
Wagner Reservoir Wastegate to Bayley House Wastegate	\$ 17,875		\$ 17,875										
Bayley House Wastegate to Pilot Hill Reservoir	\$ 3,250									\$ 3,250			
Overall, Pilot Hill Ditch	\$ 404,825		\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 44,625	
<b>Kelsey Ditch</b>													
St. James Wastegate to Hwy 49	\$ 24,375					\$ 24,375							
State Hwy 49 to (Forrest View Dr.) Falls	\$ 11,375												
(Forrest View Dr.) Falls to Irish Res. Wastegate	\$ 35,750							\$ 35,750					
Irish Res. Wastegate to Twin Pines Siphon	\$ 245,375												
Twin Pines Siphon to Black Oaks Siphon	\$ 35,750							\$ 35,750					
Black Oaks Siphon to Dukes Wastegate	\$ 73,125										\$ 73,125		
Dukes Wastegate to State Hwy 193	\$ 93,438						\$ 93,438						
State Hwy 193 to Chicken Flat Wastegate	\$ 218,563			\$ 218,563									
Mellows Wastegate to Kelsey Flume	\$ 8,125											\$ 8,125	
Kelsey Flume Siphon to Stork Wastegate	\$ 80,438												
Stork Wastegate to Kelsey Reservoir	\$ 25,188												
Overall, Kelsey Ditch	\$ 174,688		\$ 174,688										
<b>Spanish Dry Diggins Ditch</b>													
SDD Flume to End	\$ 37,375	\$ 37,375											
<b>Taylor Mine Ditch</b>													
Taylor Mine Outlet to Shadle Reservoir	\$ 36,563				\$ 36,563								
<b>Other</b>													
Overall, GDPUD	\$ 40,625	\$ 40,625											
Overall, GDPUD	\$ 284,375												
<b>Total Second Priority Reliability Measure Recommendations</b>	<b>\$ 5,280,438</b>	<b>\$ 527,475</b>	<b>\$ 306,663</b>	<b>\$ 644,663</b>	<b>\$ 381,413</b>	<b>\$ 189,663</b>	<b>\$ 348,101</b>	<b>\$ 358,663</b>	<b>\$ 383,538</b>	<b>\$ 251,913</b>	<b>\$ 222,788</b>	<b>\$ 195,913</b>	<b>\$ 296,725</b>
<b>Total</b>	<b>\$ 33,535,938</b>	<b>\$ 3,208,475</b>	<b>\$ 4,617,663</b>	<b>\$ 4,158,663</b>	<b>\$ 2,721,413</b>	<b>\$ 5,523,163</b>	<b>\$ 348,101</b>	<b>\$ 358,663</b>	<b>\$ 383,538</b>	<b>\$ 251,913</b>	<b>\$ 3,825,788</b>	<b>\$ 195,913</b>	<b>\$ 296,725</b>

**Table 7**  
**Water System Capitol Improvement Costs and Reliability Measur**

Item	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24
Whitney Ct. Pressure Reducing Station								
Oak Ln. Line Replacement			\$ 151,000					
Shasta Rd. Line Replacement								\$ 109,000
Palmpais Rd. Line Replacement			\$ 110,000					
Pikes Peak Cir. Line Replacement			\$ 64,000					
Garden Park Line Replacement								
Hancock Rd. Tank Tie								
Garden Park Tank Proposed Improvements								
Hotchkiss Hill Sub Tank Addition			\$ 444,000					
Traverse Creek Rd. Booster Pumps			\$ 62,000					
Chrysler Cir. & Roller Coaster Replacement								\$ 570,000
<i>Subtotal</i>			\$ 3,343,000					\$ 3,130,000
<b>Total Priority Reliability Measure Recommendations</b>			\$ 3,343,000					\$ 3,130,000
<b>Second Priority Reliability Measure Recommendations</b>								
<b>Ditch System</b>								
<b>Up-Country Ditch</b>								
Bacon Creek Pipeline								
Structure #1 to Structure #2								
Structure #2 to Structure #3								
Structure #3 to Structure #4						\$ 283,563		
Structure #4 to Structure #5			\$ 99,938					
Penstock Inlet Bypass to Tree House Lane								
Tree House Lane to Balderston Wastegate			\$ 169,813					
Sand Trap Siphon Canyon Creek Conduit	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125
Buckeye Conduit	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250
Buckeye Conduit to Schroeder Conduit		\$ 38,813						
Schroeder Conduit	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281
<i>Overall, Up Country Ditch</i>								\$ 50,375
<b>Main/Pilot Hill Ditch (Main Ditch #1)</b>								
The Crails to Buffalo Hills Conduit			\$ 65,000					
Buffalo Hills Conduit	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963
Spanish Dry Diggins Rd. to Taylor Mine Outlet								
Cabin Wastegate to Growersberg Wastegate				\$ 4,875				
Summers Wastegate to Spools Wastegate								
Spools Wastegate to Jackass Wastegate								
Jackass Wastegate to Greenwood Reservoir					\$ 16,250			
<b>Main/Pilot Hill Ditch (Main Ditch #2)</b>								
SDD Diversion Flume to Blue Heron Falls	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363
Blue Heron Way Falls to Kaiser Siphon								
Kaiser Pipeline and Kaiser Siphon								
Kaiser Pipeline and Kaiser Siphon	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744
Ford Siphon to ALT Water Treatment Plant								
ALT Water Treatment Plant to Campground Wastegate				\$ 139,750				
Campground Wastegate to Willow Creek Wastegate								
Willow Creek Wastegate to Baldrige Wastegate	\$ 67,438							
Baldrige Wastegate to Bogus Wastegate								
<b>Main/Pilot Hill Ditch (Pilot Hill Ditch)</b>								
Dorman Wye to Knickerbocker Creek								\$ 131,625
Knickerbocker Creek to Pear Orchard Wastegate					\$ 86,938			

**Table 7**  
**Water System Capital Improvement Costs and Reliability Measure Recommendations (2005 Dollars)**

Item	FY 05-24	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
Whitney Ct. Pressure Reducing Station	\$ 108,000					\$ 108,000							
Oak Ln. Line Replacement	\$ 151,000												
Shasta Rd. Line Replacement	\$ 109,000												
Talmajais Rd. Line Replacement	\$ 110,000												
Pikes Peak Cir. Line Replacement	\$ 64,000												
Garden Park Line Replacement	\$ 97,000					\$ 97,000							
Hancock Rd. Tank Tie	\$ 113,000					\$ 113,000							
Garden Park Tank Proposed Improvements	\$ 836,000										\$ 836,000		
Hotchkiss Hill Sub Tank Addition	\$ 444,000												
Traverse Creek Rd. Booster Pumps	\$ 82,000												
Chrysler Cir. & Roller Coaster Replacement	\$ 570,000												
<b>Subtotal</b>	<b>\$ 13,854,000</b>					<b>\$ 3,778,000</b>						<b>\$ 3,603,000</b>	
<b>Total Priority Reliability Measure Recommendations</b>	<b>\$ 18,209,500</b>	<b>\$ 726,000</b>	<b>\$ 786,000</b>	<b>\$ 764,000</b>	<b>\$ 1,000,000</b>	<b>\$ 4,857,500</b>						<b>\$ 3,603,000</b>	
<b>Second Priority Reliability Measure Recommendations</b>													
<b>Ditch System</b>													
<b>Up-Country Ditch</b>													
Bacon Creek Pipeline	\$ 255,125				\$ 255,125								
Structure #1 to Structure #2	\$ 9,750											\$ 9,750	
Structure #2 to Structure #3	\$ 399,750	\$ 399,750											
Structure #3 to Structure #4	\$ 283,693												
Structure #4 to Structure #5	\$ 99,938												
Penstock Inlet/Bypass to Tree House Lane	\$ 143,813								\$ 143,813				
Tree House Lane to Balderston Wastegate	\$ 169,813												
Sand Trap Siphon Canyon Creek Conduit	\$ 162,500	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125	\$ 8,125
Buckeye Conduit	\$ 325,000	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250	\$ 16,250
Buckeye Conduit to Schroeder Conduit	\$ 39,813												
Schroeder Conduit	\$ 105,625	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281	\$ 5,281
Overall Up Country Ditch	\$ 50,375												
<b>Main/Pilot Hill Ditch (Main Ditch #1)</b>													
The Crails to Buffalo Hills Conduit	\$ 65,000												
Buffalo Hills Conduit	\$ 159,250	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963	\$ 7,963
Spanish Dry Diggins Rd. to Taylor Mine Outlet	\$ 8,125										\$ 8,125		
Cabin Wastegate to Growersberg Wastegate	\$ 4,875												
Summers Wastegate to Spools Wastegate	\$ 336,375			\$ 336,375									
Spools Wastegate to Jackass Wastegate	\$ 197,438							\$ 197,438					
Jackass Wastegate to Greenwood Reservoir	\$ 16,250												
<b>Main/Pilot Hill Ditch (Main Ditch #2)</b>													
SDD Diversion Flume to Blue Heron Falls	\$ 107,250	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363	\$ 5,363
Blue Heron Way Falls to Kaiser Siphon	\$ 83,688											\$ 83,688	
Kaiser Pipeline and Kaiser Siphon	\$ 164,938						\$ 164,938						
Kaiser Pipeline and Kaiser Siphon	\$ 134,875	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744	\$ 6,744
Ford Siphon to ALT Water Treatment Plant	\$ 8,938								\$ 8,938				
ALT Water Treatment Plant to Campground Wastegate	\$ 139,750												
Campground Wastegate to Willow Creek Wastegate	\$ 351,813							\$ 150,000	\$ 150,000	\$ 51,813			
Willow Creek Wastegate to Baldrige Wastegate	\$ 67,438												
Baldrige Wastegate to Bogus Wastegate	\$ 24,375		\$ 24,375										
<b>Main/Pilot Hill Ditch (Pilot Hill Ditch)</b>													
Dorman Wye to Knickerbocker Creek	\$ 131,625												
Knickerbocker Creek to Pear Orchard Wastegate	\$ 56,938												

**Table 7**  
**Water System Capital Improvement Costs and Reliability Measure**

Item	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24
Willow Creek Wastegate to Baldrige Wastegate								
<b>Main Ditch/Pilot Hill Ditch (Pilot Hill Ditch)</b>								
Dorman Wye to Knickerbocker Creek								
Lovejoy Wastegate to Nagle Wastegate								
Nagle Wastegate to Capecroft Wastegate								
Wagner Reservoir to Wagner Reservoir Wastegate								
<b>Kelsey Ditch (Kelsey Ditch #1)</b>								
The Trails to St. James Wastegate								
St. James Wastegate to State Highway 193								
Forest View Drive Falls to Irish Res. Wastegate								
<b>Kelsey Ditch (Kelsey Ditch #2)</b>								
Black Oak Siphon to Dukes Wastegate								
Dukes Wastegate to State Highway 193								
Mellocs Wastegate to Kelsey Flume								
Kelsey Flume to Stork Wastegate								
Stork Wastegate to Kelsey Reservoir								
<i>Subtotal</i>								
<b>Water System</b>								
<b>Auburn Lake Trails Service Area</b>								
Greenwood Rd. Feed from WL								
Greenwood Rd. Main Replacement								\$ 833,000
Angel Camp Ct. Booster Pump			\$ 102,000					
Highway 193 Cross Tie-Brinks LN Replace			\$ 267,000					
Gravity Raw Water for Golf Course								
Digger Tree Ct. to Westview TIF Tie								
Indian Rock Road Main Replacement			\$ 66,000					
Cherry Acre Road PRV-Cross Tie								
Catecroft Road Main Replacement			\$ 209,000					
Highway 49-Pilot Hill Loop								\$ 367,000
Salmon Falls Road Main Replacement			\$ 514,000					
Second Deer Ravine Tank, 0.6 MG								
Cherry Hills Tank, 0.4 MG			\$ 787,000					
<b>Walton Lakes Service Area</b>								
Citabria Ln. Loop Tie								
Fah Ln. Extension								
Buffalo Hill Rd. Line Replacement			\$ 96,000					
Quiet Place Loop Tie								\$ 59,000
Quiet Place Remove Check Valve								
Holloway Dr. Line Replacement			\$ 74,000					
Longview Ln. Line Replacement			\$ 270,000					
Reservoir Rd., SDD, Hwy. 193 Replacements								
Silent Meadow Ln. Line Replacement			\$ 127,000					
Sanromo Rd. Line Replacement								\$ 531,000
Black Oak Mine Rd. Proposed Improvement								\$ 59,000
Greenwood Rd. Main Replacement								\$ 454,000
Traverse Creek Rd. Line Replacement								
Bayne Rd. Line Extension								
Bayne Rd. Tank								
Long Brook Tr. Line Replacement								\$ 125,000

**Table 7**  
**Water System Capital Improvement Costs and Reliability Measure Recommendations (2005 Dollars)**

Item	FY 05-24	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
Willow Creek Wastegate to Baldridge Wastegate	\$ 80,000		\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000							
<b>Main Ditch/Pilot Hill Ditch (Pilot Hill Ditch)</b>													
Dorman Wye to Knickerbocker Creek	\$ 22,000	\$ 22,000											
Lovejoy Wastegate to Nagle Wastegate	\$ 81,000	\$ 81,000											
Nagle Wastegate to Capcroft Wastegate	\$ 4,000	\$ 4,000											
Wagner Reservoir to Wagner Reservoir Wastegate	\$ 28,000	\$ 28,000											
<b>Kelsey Ditch (Kelsey Ditch #1)</b>													
The Cralls to St. James Wastegate	\$ 136,000		\$ 136,000										
St. James Wastegate to State Highway 193	\$ 8,000				\$ 8,000								
Forest View Drive Falls to Irish Res. Wastegate	\$ 75,000		\$ 75,000										
<b>Kelsey Ditch (Kelsey Ditch #2)</b>													
Black Oak Siphon to Dukes Wastegate	\$ 51,000	\$ 51,000											
Dukes Wastegate to State Highway 193	\$ 125,000	\$ 125,000											
Mellows Wastegate to Kelsey Flume	\$ 95,000					\$ 95,000							
Kelsey Flume to Stork Wastegate	\$ 48,000			\$ 48,000									
Stork Wastegate to Kelsey Reservoir	\$ 120,000	\$ 120,000											
<b>Subtotal</b>	<b>\$ 4,355,500</b>	<b>\$ 726,000</b>	<b>\$ 786,000</b>	<b>\$ 764,000</b>	<b>\$ 1,000,000</b>	<b>\$ 1,079,500</b>							
<b>Water System</b>													
<b>Auburn Lake Trails Service Area</b>													
Greenwood Rd. Feed from WL	\$ 308,000					\$ 308,000							
Greenwood Rd. Main Replacement	\$ 833,000												
Angel Camp Ct. Booster Pump	\$ 102,000												
Highway 193 Cross-Tie-Brinks LN Replace	\$ 267,000												
Gravity Raw Water for Golf Course	\$ 413,000					\$ 413,000							
Digger Tree CL to Westview Tr. Tie	\$ 40,000										\$ 40,000		
Indian Rock Road Main Replacement	\$ 66,000												
Cherry Acre Road PRV-Cross Tie	\$ 160,000										\$ 160,000		
Capcroft Road Main Replacement	\$ 209,000												
Highway 49-Pilot Hill Loop	\$ 387,000												
Salmon Falls Road Main Replacement	\$ 514,000												
Second Deer Ravine Tank, 0.6 MG	\$ 1,885,000					\$ 1,885,000							
Cherry Hills Tank, 0.4 MG	\$ 787,000												
<b>Walton Lakes Service Area</b>													
Citabria Ln. Loop Tie	\$ 92,000										\$ 92,000		
Fain Ln. Extension	\$ 364,000					\$ 364,000							
Buffalo Hill Rd. Line Replacement	\$ 96,000												
Quiet Place Loop Tie	\$ 59,000												
Quiet Place Remove Check Valve	\$ 5,000					\$ 5,000							
Holloway Dr. Line Replacement	\$ 74,000												
Longview Ln. Line Replacement	\$ 270,000												
Reservoir Rd., SDD, Hwy 193 Replacements	\$ 917,000										\$ 917,000		
Silent Meadow Ln. Line Replacement	\$ 127,000												
Saromo Rd. Line Replacement	\$ 531,000												
Black Oak Mine Rd. Proposed Improvement	\$ 59,000												
Greenwood Rd. Main Replacement	\$ 208,000										\$ 208,000		
Traverse Creek Rd. Line Replacement	\$ 454,000												
Bayne Rd. Line Extension	\$ 405,000					\$ 405,000							
Bayne Rd. Tank	\$ 1,350,000										\$ 1,350,000		
Lazy Brook Tr. Line Replacement	\$ 128,000												



**Table 7**  
**Water System Capital Improvement Costs and Reliability Measur**

Item	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24
<b>Capital Improvements</b>								
<b>Water Treatment</b>								
Greenwood Lake Water Treatment Plant								
Walton Lake WTP Raw Water Bypass								
Inspection of Treated Water Storage Tanks								
Walton Lake Outlet Works								
<i>Subtotal</i>								
<b>Distribution System</b>								
Hwy 193/ Silger Mine Mainline Relocation								
Garden Park Line Replacement								
Garden Park PRV and ACV								
Silger Mine Road PRV Replacement								
Tank Telemetry Enhancements								
<i>Subtotal</i>								
<b>Conveyance System</b>								
Walton Lake Dredging								
Up-Country Reliability Measures								
Cabin Waste Gate Replacement								
Blue Heron Falls Conservation Plan								
Kaiser Siphon Replacement								
<i>Subtotal</i>								
<b>Wastewater</b>								
Station 16 Enclosure								
Manhole Sealing								
Collection System Repair								
<i>Subtotal</i>								
<b>Total Capital Improvements</b>								
<b>Priority Reliability Measure Recommendations</b>								
<b>Ditch System</b>								
<b>Up-Country Ditch</b>								
Structure #1 to Structure #2								
Structure #2 to Structure #3								
Structure #3 to Structure #4								
Structure #5 to Structure #6								
Balderston Wastegate to Sand Trap Siphon								
Walton Lake								
Buckeye Conduit to Shroeder Conduit								
<b>Main/Pilot Hill Ditch (Main Ditch #1)</b>								
Buffalo Hills Conduit to Spanish Dry Diggins Road								
Spanish Dry Diggins Road to Taylor Mine Outlet								
Taylor Mine Outlet to Cabin Wastegate								
Cabin Wastegate to Growlersberg Wastegate								
Growlersberg Wastegate to Summers Wastegate								
Summers Wastegate to Spools Wastegate								
Spools Wastegate to Jackass Wastegate								
Jackass Wastegate to Greenwood Reservoir								
<b>Main/Pilot Hill Ditch (Main Ditch #2)</b>								
Blue Heron Falls to Kaiser Siphon								
Kaiser Siphon to ALT Water Treatment Plant								

**Table 7**  
**Water System Capitol Improvement Costs and Reliability Measure Recommendations (2005 Dollars)**

Item	FY 05-24	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
<b>Capital Improvements</b>													
<b>Water Treatment</b>													
Greenwood Lake Water Treatment Plant	\$ 6,250,000	\$ 1,000,000	\$ 3,000,000	\$ 2,250,000									
Walton Lake WTP Raw Water Bypass	\$ 250,000	\$ 100,000	\$ 150,000										
Inspection of Treated Water Storage Tanks	\$ 100,000		\$ 30,000	\$ 30,000	\$ 40,000								
Walton Lake Outlet Works	\$ 50,000		\$ 50,000										
<b>Subtotal</b>	<b>\$ 6,650,000</b>	<b>\$ 1,100,000</b>	<b>\$ 3,230,000</b>	<b>\$ 2,280,000</b>	<b>\$ 40,000</b>								
<b>Distribution System</b>													
Hwy 193/ Sliger Mine Mainline Relocation	\$ 450,000	\$ 450,000											
Garden Park Line Replacement	\$ 125,000		\$ 50,000	\$ 75,000									
Garden Park PRV and ACV	\$ 120,000		\$ 40,000	\$ 80,000									
Sliger Mine Road PRV Replacement	\$ 50,000				\$ 50,000								
Tank Telemetry Enhancements	\$ 90,000				\$ 45,000	\$ 45,000							
<b>Subtotal</b>	<b>\$ 835,000</b>	<b>\$ 450,000</b>	<b>\$ 90,000</b>	<b>\$ 155,000</b>	<b>\$ 155,000</b>	<b>\$ 95,000</b>	<b>\$ 45,000</b>						
<b>Conveyance System</b>													
Walton Lake Dredging	\$ 500,000				\$ 500,000								
Up-Country Reliability Measures	\$ 500,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000						
Cabin Waste Gate Replacement	\$ 30,000			\$ 30,000									
Blue Heron Falls Conservation Plan	\$ 103,000					\$ 103,000							
Kaiser Siphon Replacement	\$ 100,000	\$ 100,000											
<b>Subtotal</b>	<b>\$ 1,233,000</b>	<b>\$ 200,000</b>	<b>\$ 100,000</b>	<b>\$ 130,000</b>	<b>\$ 600,000</b>	<b>\$ 203,000</b>							
<b>Wastewater</b>													
Station 16 Enclosure	\$ 50,000			\$ 50,000									
Mainline Sealing	\$ 20,000					\$ 20,000							
Collection System Repair	\$ 25,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000						
<b>Subtotal</b>	<b>\$ 1,328,000</b>	<b>\$ 205,000</b>	<b>\$ 105,000</b>	<b>\$ 185,000</b>	<b>\$ 605,000</b>	<b>\$ 228,000</b>							
<b>Total Capitol Improvements</b>	<b>\$ 10,048,000</b>	<b>\$ 1,955,000</b>	<b>\$ 3,525,000</b>	<b>\$ 2,750,000</b>	<b>\$ 1,340,000</b>	<b>\$ 476,000</b>							
<b>Priority Reliability Measure Recommendations</b>													
<b>Ditch System</b>													
<b>Up-Country Ditch</b>													
Structure #1 to Structure #2	\$ 548,000				\$ 300,000	\$ 248,000							
Structure #2 to Structure #3	\$ 72,000			\$ 72,000									
Structure #3 to Structure #4	\$ 305,000			\$ 305,000									
Structure #5 to Structure #6	\$ 305,000		\$ 305,000										
Balderston Wastegate to Sand Trap Siphon	\$ 111,000				\$ 111,000								
Walton Lake	\$ 498,000				\$ 250,000	\$ 248,000							
Buckeye Conduit to Schroeder Conduit	\$ 85,000	\$ 85,000											
<b>Main/Pilot Hill Ditch (Main Ditch #1)</b>													
Buffalo Hills Conduit to Spanish Dry Diggins Road	\$ 60,000	\$ 60,000											
Spanish Dry Diggins Road to Taylor Mine Outlet	\$ 305,000					\$ 305,000							
Taylor Mine Outlet to Cabin Wastegate	\$ 186,000			\$ 66,000	\$ 60,000	\$ 60,000							
Cabin Wastegate to Growlersberg Wastegate	\$ 200,000	\$ 100,000	\$ 100,000										
Growlersberg Wastegate to Summers Wastegate	\$ 11,000				\$ 11,000								
Summers Wastegate to Spools Wastegate	\$ 93,000	\$ 30,000	\$ 30,000	\$ 33,000									
Spools Wastegate to Jackass Wastegate	\$ 7,500					\$ 7,500							
Jackass Wastegate to Greenwood Reservoir	\$ 416,000			\$ 200,000	\$ 216,000								
<b>Main/Pilot Hill Ditch (Main Ditch #2)</b>													
Blue Heron Falls to Kaiser Siphon	\$ 84,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 24,000								
Kaiser Siphon to ALT Water Treatment Plant	\$ 198,000		\$ 100,000			\$ 98,000							

**Table 6**  
**Water System Pipelines Replacement Cost (2005 Dollars)**

Pipe	System Wide Linear Feet	Replacement Unit Cost	Replacement Cost
4" AC	42130	\$37	\$1,568,313
6" AC	175142	\$48	\$8,388,928
8" AC	42068	\$58	\$2,459,333
10" AC	36484	\$63	\$2,305,644
12" AC	42346	\$80	\$3,384,071
6" DI	3981	\$48	\$190,681
4" PVC	50771	\$37	\$1,889,979
6" PVC	235640	\$48	\$11,286,653
8" PVC	85394	\$58	\$4,992,210
10" PVC	10359	\$63	\$654,648
<b>Total Water System Pipelines</b>	<b>724315</b>		<b>\$37,120,461</b>

**Table 5**  
**Water System Structures Replacement Cost (2005 Dollars)**

Structure	Description	Location	Construction Date	Replacement Cost	WTP Capacity	
					% Availability	\$ Available
2.3 MGD WTP	Walton Lakes	Balderston Road	1974/1992	\$ 6,900,000	21.7%	\$ 1,500,000
2.3 MGD WTP	Auburn Lake Trails	Sweetwater Trail	1968/1992	\$ 6,900,000	4.3%	\$ 300,000
<b>Subtotal Water Treatment Plants</b>				<b>\$ 13,800,000</b>		<b>\$ 1,800,000</b>

**Note:**

1. Percent availability is the capacity available in the WTP divided by the operating capacity.

Structure	Description	Location	Construction Date	Replacement Cost
0.5 MG Tank	Angel Camp	Angel Camp Court		\$ 776,602
0.25 MG Tank	Deer Ravine	Deer Ravine Court		\$ 388,301
0.47 MG Tank	Pilot Hill	Catecroft Lane		\$ 730,006
0.06 MG Tank		Black Ridge Road		\$ 93,192
0.06 MG Tank	Hotchkiss Hill	Wentworth Springs Road		\$ 93,192
0.2 MG Tank	Spanish Dry Diggins	Reservoir Road		\$ 310,641
0.3 MG Tank	Black Oak Mine	Black Oak Mine Road		\$ 465,961
0.2 MG Tank	Garden Park	Ranier Road		\$ 310,641
0.21 MG Tank	Kelsey	Red Berry Hill Lane		\$ 332,386
0.6 MG Tank	Walton Lake Clearwells	Sweetwater Trail	1974/1992	\$ 931,922
0.06 MG Tank	Hotchkiss Hill Subtank	Chipmunk Ridge Road		\$ 93,192
Pump Station		Black Ridge Road		\$ 123,400
Pump Station		Chipmunk Trail		\$ 123,400
Pump Station		Reservoir Road		\$ 123,400
<b>Subtotal Tanks and Pump Stations</b>				<b>\$ 4,896,235</b>

**Table C2  
Storage Tank Unit Cost Estimation**

Storage Tank (gal)	Engineer's Estimate (Lump Sum)	Teichert Construction (Lump Sum)	Average Cost (Lump Sum))	Average Cost per Gallon
87400	\$ 85,000.00	\$ 186,500.00	\$ 135,750.00	\$ 1.55

Source: Bid Summary Sheet for Turlock Airport Rehabilitation, July 28, 2005.

**Pipeline Unit Cost Estimation**

GDPUD Pipe Diameter	Replacement Pipe	Engineer's Estimate per Linear Foot	Teichert Construction per Linear Foot	Granite Construction per Linear Foot	Average Cost per Linear Foot (2002 Dolars)	Adjusted Cost per Linear Foot (2005 Dollars)
12"	12" DI	\$ 59.40	\$ 81.00	\$ 79.00	\$ 73.13	\$ 79.91
10"	10" DI	\$ 49.50	\$ 74.00	\$ 50.00	\$ 57.83	\$ 63.20
8"	8" DI	\$ 33.00	\$ 74.00		\$ 53.50	\$ 58.46
6"	6" DI	\$ 27.50	\$ 74.00	\$ 30.00	\$ 43.83	\$ 47.90
4"	4" DI					\$ 37.23

Source: Bid Summary Sheet for Hazel Ave./Sierra College Blvd., May 30, 2002.

Notes:

1. The Granite Construction cost for 8" DI pipe was unreasonable and not used.
2. The Adjusted Cost per Linear Foot for the 4" DI pipe was determined by averaging the price change from 12" DI pipe to 6" DI pipe.
3. 2002 costs adjusted to 2005 dollars using 3.0% inflation rate.

**Table C1**  
**Water System Replacement Cost Data**

**Water Storage Tanks**

Capacity (gal)	Description	Location	Replacement Cost
500,000	Angel Camp	Angel Camp Court	\$ 776,602
250,000	Deer Ravine	Deer Ravine Court	\$ 388,301
470,000	Pilot Hill	Catecroft Lane	\$ 730,006
60,000		Black Ridge Road	\$ 93,192
60,000	Hotchkiss Hill	Wentworth Springs Road	\$ 93,192
200,000	Spanish Dry Diggins	Reservoir Road	\$ 310,641
300,000	Black Oak Mine	Black Oak Mine Road	\$ 465,961
200,000	Garden Park	Ranier Road	\$ 310,641
214,000	Kelsey	Red Berry Hill Lane	\$ 332,386
600,000	Walton Lake Clearwells	Sweetwater Trail	\$ 931,922
60,000	Hotchkiss Hill Subtank	Chipmunk Ridge Road	\$ 93,192

Note:

1. Assume 0.06 MG capacity for tank on Black Ridge Road.

**Water Treatment Plants**

Description	Location	Daily Capacity (MG)	Replacement Cost
Auburn Lake			
Trails	Sweetwater Trail	2.3	\$6,900,000
Walton Lakes	Balderston Road	2.3	\$6,900,000

Note: Assume \$3.00 per gallon produced.

## **APPENDIX C: Water System Replacement Costs**





## **6.0 References**

---

1. 2004 El Dorado County General Plan: A Plan for Managed Growth and Open Roads; A Plan for Quality Neighborhoods and Traffic Relief – County of El Dorado Planning Department.
2. El Dorado County 2005: Economic and Demographic Profile, 2005 – Center for Economic Development, California State University, Chico – [www.csuchico.edu/cedp](http://www.csuchico.edu/cedp)
3. El Dorado County General Plan: Final Environmental Impact Report, 2004 – EDAW, County of El Dorado.
4. El Dorado County Water Demand Forecast; EPS #11448, June, 2003 – Economic & Planning Systems.
5. Georgetown Divide Directory – [www.georgetowndivide.com](http://www.georgetowndivide.com)
6. Georgetown Divide Public Utility District: Basic Financial Statements, June 2004 – GDPUD.
7. Georgetown Divide Public Utility District: Five-Year Capital Improvement Program, May 2005 - GDPUD.
8. Manual M26, Water Rates and Related Charges, American Water Works Association.
9. Nelson, Arthur C., System Development Charges for Water, Wastewater and Stormwater Facilities.
10. Nevada Irrigation District: Water Service Regulations - <http://www.nid.dst.ca.us/Water%20Service%20Regulations%20March%202005.pdf>
11. Raftelis, George A., Comprehensive Guide to Water and Wastewater Finance and Pricing
12. U.S. Census Bureau. Table P1 for the 1990 and 2000 Census counts.
13. Water Resources Development and Management Plan (draft), June 2003 – El Dorado County Water Agency.
14. Water System Reliability Study: Georgetown Divide Public Utility District, November 2002 – KASL Engineers

## **5.0 Acknowledgments**

---

The consulting team acknowledges the assistance of the following GDPUD staff:

Hank White, General Manager

Steven Gau, Operations Manger

Mary Pat Frick, Business/Finance Manager

The consulting team comprised the following participants:

Jay Clark

Emily Mah

Brent L. Moore

Mark Smith

George Preston

Corinne Rosenblum

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Capital Facility Charge Development Methodology

March 2006

Updated March 2007

An "equivalency factor" is a unitless value that expresses the capacity of a water meter in terms of rated maximum capacity (in gallons per minute) of a standard meter. For example, using the rated maximum flow rate capacity for a 3/4-inch meter as the standard, a single 1-inch meter is equivalent to approximately 2 and a half, 3/4-inch meters. And, a single 2-inch meter is equivalent to approximately eight, 3/4-inch meters. Rated maximum capacity for water meters is shown in Table 2-2 of Manual M6, Water Meters, published by the American Water Works Association. To determine the cost of a meter multiply the equivalency factor by the charge for a 3/4-inch meter.

It should be noted that single family and multi-family residential units demand the same amount of water on an average basis (according to the El Dorado Water Demand Forecast, June 4, 2003). The Water System Reliability Study indicates that one residential unit averages 357 gallons per day with a peak day usage of 1003 gallons per day. As shown in Table 10, the charge for a new Residential Single-Family unit is equivalent to the charge for a new Residential Multi-Family unit.

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Capital Facility Charge Development Methodology

March 2006

Updated March 2007

#### **4.1.6 Unit Cost for Capital Facilities**

Using the determined replacement cost and valuation for the GDPUD water system a unit cost can be calculated. This unit cost reflects the price of facilities to deliver water obtained from this system. Unit costs for the next twenty years are calculated in Table 9, Water System Capital Facility Charge.

The unit cost reflects the replacement cost for the available water system capacity, contributions, and the maximum day water treatment plant capacity. Available contributions from Federal grants are subtracted from the replacement cost for the water system, and this difference is the water system valuation. The total water system valuation for fiscal year 2005 – 2006 is \$35,381,197.

The peak day unit cost is calculated by dividing the water system valuation by the maximum day water treatment plant capacity. The peak day unit cost reflects the facilities price for one gallon of water obtained through the water system. For the GDPUD system the peak day unit cost is \$7.69. A single family dwelling unit uses an average of 357 gallons per day with a peak day usage of 1003 gallons per day. Values for average and peak day use were calculated using records obtained from GDPUD domestic water demand summaries found in the Water System Reliability Study by KASL Consulting Engineers, November 2002. The values for small acreage (<1 acre) for Garden Valley/Kelsey, Walton Lake/Georgetown/Spanish Dry Diggins, and Auburn Lake Trails/Cool/Pilot Hill regions were averaged to determine the Average Daily Single Family Dwelling use in gallons per day and the Peak Day Single Family Use in gallons per day. For the Peak Day Single Family Use only values greater than 800 gallons per day were used in the average. The quotient of the peak day and average day uses results in the peak factor. Multiplying the peak day single-family use by the unit cost results in the recommended facility reserve charge of \$8,100 for the fiscal year 2007-2008. The equivalent single-family dwelling charge for future fiscal years are calculated in Table 9 by applying a 3.0% annual inflation factor. This procedure was developed by the American Water Works Association.

After the decommission of the Auburn Lake Trails water treatment plant in 2007, it will have no replacement cost and will not benefit new development. In the same fiscal year (2007 – 2008), the Greenwood Lake water treatment plant is scheduled to be operational and will be a benefit to new development. Table 9 reflects this change in the water system replacement cost and valuation. The replacement cost for the Greenwood Lake water treatment plant available capacity is calculated by multiplying the estimation shown in section 4.1.2 by the percentage of capacity available for the Greenwood Lake water treatment plant. This results in the available capacity of \$3,466,667 in the fiscal year 2007-2008.

#### **4.1.7 Schedule of Capital Facility Charges**

As determined by calculating the unit cost for the GDPUD capital facilities, the recommended connection fee for a new residential connection is \$8,100 (fiscal year 2007-2008). A schedule of Capital Facility Charges is shown in Table 10, Recommended Water System Capital Facility Charges.

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Capital Facility Charge Development Methodology

March 2006

Updated March 2007

Greenwood Lake water treatment plant have been deducted from the calculated replacement costs for the total water treatment system.

#### **4.1.3.2 New (Future) Debt Service**

The GDPUD does not currently have any unfunded debt. The District Capital Expenditures budget will only be able to fund a portion of the CIP projected expenditures. Additional funding will be provided through Federal grants. Other sources of funding may include private lending or loans through US Department of Agriculture or the State Revolving Fund administered by the California Department of Health Services. During the preparation of this study, no determination has been made as to the amount or certainty of assuming loans to fund the CIP projected expenditures.

#### **4.1.4 Current Water System Capacity**

The current water system capacity is determined by the sum of the two water treatment plant (WTP) capacities. These are the Auburn Lake Trails and Walton Lake WTPs. A pipeline ties these treatment plants together forming one water treatment system for the GDPUD. The pipeline is located along Greenwood Road and is shown on Figure 2. The combined water system capacity for the GDPUD, currently, is a 4.6 MGD maximum capacity. Both WTPs equally contribute 2.3 MGD to the system. The recorded maximum day production at the Auburn Lake Trails WTP is 2.2 MGD, and the recorded maximum day production at the Walton Lake WTP is 1.8 MGD. These recorded maximum day production values show that the GDPUD water system currently has 0.6 MGD of available capacity. This equates to only 672 acre-feet per year.

- The water system capacity will change with the scheduled decommission of the Auburn Lake Trails WTP and operation of the Greenwood Lake WTP.

The Greenwood Lake WTP will have 3.0 MGD maximum day production. The replacement of the Auburn Lake Trails WTP with the Greenwood Lake WTP will increase the total water system capacity by 0.7 MGD for a total system peak day capacity of 5.3 MGD. With the recorded maximum day production of 4.0 MGD, as shown in production records, the remaining water system capacity will increase to 1.3 MGD which is equivalent to 1456 acre-feet per year. This amount of available capacity could serve 3,640 new residential units assuming an average use of .48 acre-feet per year.

#### **4.1.5 Future Development and Water Demand**

As shown in Chapter 2: Growth and Infrastructure, the population increase within the GDPUD service area will be significant over the next twenty years. An additional 4,625 residences could add 2,220 acre-feet per year to the demand on the water system. Including new residences, additional commercial services, and continued agriculture within the district, the water demand could reach a total of 20,415 acre-feet per year by the year 2025.

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Capital Facility Charge Development Methodology

March 2006

Updated March 2007

modern WTP over upgrading the ALT WTP. The GDPUD has adopted the Greenwood Lake WTP construction plans as part of the district's capital improvement plan (CIP).

The Greenwood Lake Water Treatment Plant will utilize the Greenwood Lake as its fore bay for raw water storage and for continued deliveries of raw water to agricultural customers.

As currently envisioned, the Greenwood Lake WTP would provide the District with the following major benefits:

- Increased treated water production capability;
- Facilities capable of meeting more stringent State and Federal requirements of drinking water;
- Reduction in long-term pumping costs;
- Increase in raw and treated water storage;
- Reduction in long-term operations and maintenance (O&M) costs;
- Enhanced overall system reliability;
- Use of a potentially higher quality raw water source and use of GDPUD's existing property for new facilities;
- A new command and control center; and
- Enhanced system security.

The Auburn Lake Trails Water Treatment Plant will be decommissioned upon the operation of the Greenwood Lake Water Treatment Plant.

#### **4.1.3 Available Financing**

The Capital Facility Charge is intended to reimburse the necessary Capital Improvement Program expenditures that benefit new development. In addition to the CFCs the following funding has been identified.

##### **4.1.3.1 Contributed Capital**

Contributed capital to the CIP projected expenditures is available through Federal grants. These funds will help pay a portion of the development costs for the new Greenwood Lake water treatment plant replacing the Auburn Lake Trails water treatment plant in the GDPUD. The Greenwood Lake water treatment plant will be located adjacent to Greenwood Lake with an operating capacity of 3 million gallons per day (MGD). The decommissioning of the Auburn Lake Trails water treatment plant and operation of the Greenwood Lake water treatment plant is scheduled for 2007. The funds expected from Federal grants for the construction of the

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Capital Facility Charge Development Methodology

March 2006

Updated March 2007

A significant expenditure from the Capital Improvement Program will directly benefit new development. That is the construction of the new Greenwood Lake water treatment plant to replace the existing Auburn Lake Trails water treatment plant. Another benefit is the replacement of the Greenwood Road water main. Replacing this main would increase the ability of either the Greenwood Lake or Walton Lake WTPs to maintain service for the entire GDPUD if one of the plants were offline. The Capital Facility Charge to new customers reflects the costs for these benefits.

Some reliability measure recommendations directly benefit new development, but they are not used in the calculation or development of the Capital Facility Charge. They are listed Tables 7 and 8 as an information resource for GDPUD management, budgeting, and planning purposes.

The GDPUD Five-Year CIP, May 2005, shows the estimate for the Greenwood Lake WTP is \$6,250,000, and for the design capacity of 3.0 MGD the cost per gallon of water produced is \$2.08. Stantec Consulting Ltd. estimates the cost in 2007 dollars per gallon produced is \$3.61, and the additional charge of 20% is required for a construction contingency. This results in an estimated cost for the Greenwood Lake WTP of \$13,000,000.

#### **4.1.2.1 New Greenwood Lake Water Treatment Plant**

The existing Auburn Lake Trails Water Treatment Plant (ALT WTP) is not in compliance with California code for safe drinking water standards. Rather than upgrade the ALT WTP, a new plant has been proposed near Greenwood Lake (GL WTP). The GDPUD plans to abandon the ALT WTP due to its outdated technology, site constraints, and energy savings.

Built in 1971, the ALT WTP relies on pressure filtration, which is an old technology. Components of the plant include its operations building, pressure filter, a clarifier that is now bypassed, an old clearwell, high- and low-service booster pumps, disinfection system, pipes, and accessories. The pressure filtration system of this plant is not an approved technology by the DHS.

The location of the ALT WTP makes expansion at this facility costly and impractical. Built within the Auburn Lake Trails residential development, the ALT WTP lot is constrained by the neighborhoods that surround it. The lot's sloping geography, the limited land around the plant, and its operational issues (smell, noise) near homes conflict with upgrade plans at the current location. Further, the ALT WTP lies near the end of GDPUD's raw water conveyance. Because of its remote location and low elevation, treated water must be pumped back uphill.

Unlike ALT WTP, Greenwood Lake is centrally located within the GDPUD. Replacement capacity at the proposed Greenwood Lake WTP (GL WTP) would be positioned to improve efficiencies in pipelines and would allow a treated water inter-tie with GDPUD's other WTP at Walton Lake. The proposed site is located at a relatively high elevation and would allow gravity to convey water, minimizing pumping costs.

The cost benefits of a new plant with new technology outweigh upgrading the old. For superior water quality and prudent capital investment, both GDPUD and DHS favor construction of a

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Capital Facility Charge Development Methodology

March 2006

Updated March 2007

#### **4.1.1 Inventory and Replacement Cost of Current Assets**

An inventory of the current water system assets includes water treatment facilities, storage tanks, pump stations, and distribution mains. The GDPUD water system consists of 2 water treatment plants, 11 storage tank locations, 3 pump station locations, and 137 miles of pipelines.

Wells, service lateral pipes, and water meters are not applicable to the inventory for this study. Wells are privately owned and not considered part of the GDPUD water system. Service lateral pipes and water meters directly benefit each individual customer and are not considered part of the infrastructure, which provides common benefit. Operational expenses, paid for by existing and future water rate customers, are also not included in the inventory. The inventory includes only those assets that benefit all users and are part of the infrastructure.

Stantec Consulting determined replacement costs for the water treatment facilities, storage tanks, pump stations, and pipelines. These replacement costs for the GDPUD water system are shown in Table 5, Water System Structures Replacement Cost (2005 dollars) and Table 6, Water System Pipelines Replacement Cost (2005 Dollars). The detailed development of the water system replacement costs is located in Appendix C, Water System Replacement Costs Developed by Stantec Consulting Ltd.

The total replacement cost for the two existing water treatment plants (Walton Lake and Auburn Lake Trails) is \$13,800,000 and the total cost to replace the tanks and pump stations in the GDPUD system is \$4,896,235. Replacing all of the pipelines would cost \$37,120,461. These costs are shown in Tables 5 and 6 and are in 2005 dollars.

Inflation adjustments to the replacement costs of the water system are shown in Table 9, Water System Capital Facility Charge. Each successive year has an annual inflation rate of 3%, compounded annually, applied to the cost in the previous year? This is based on the September 2005 ENRCCI.

#### **4.1.2 Projected Capital Improvement Program Expenditures**

In May 2005 the GDPUD adopted a Five-Year Capital Improvement Program to serve as a planning tool for the GDPUD staff to organize capital expenditures. These expenditures outline the top priorities for the GDPUD.

A list of the Capital Improvement Program expenditures and present day costs is shown in the top portion of Table 7, Water System Capital Improvement Costs and Reliability Measure Recommendations (2005 Dollars). Inflation adjustments to those costs are shown in Table 8, Water System Capital Improvement Costs and Reliability Measure Recommendations (Adjusted Dollars), and they are presented for planning and budgeting purposes. The reliability measure recommendations apply to the water and raw water systems. They were developed for the GDPUD to identify and prioritize repairs, upgrades, and measures to reliably meet customer water demands.



## **4.0 Capital Facility Charge Development Methodology**

---

This chapter details the development methodology used to calculate a Capital Facility Charge based on the following: replacement cost of current assets, capital improvement program expenditures, available funding, water system capacity, unit costs of water, and average water usage.

Portions of the water system require expansion or replacement to accommodate new customers. These costs along with estimated future land development are used to set the connection fee, or Capital Facility Charge (CFC), for new customers in the GDPUD. The CFC should be a reasonable rate reflecting a proportionate fair share of the water system capacity.

The CFC developed in this study satisfies rational nexus criteria. In accordance with other Capital Facility Charge studies, a rational nexus-based CFC should:

- Not be arbitrary, discriminatory, or capricious in its application to individuals or customer classes.
- Not exceed the new development's proportional fair share of the cost of facilities needed to serve that development, after crediting it for other contributions it has already made or will make toward that cost.
- Be rationally based on public policy that demonstrates a nexus between new development and the need to expand or build facilities to accommodate it.

The methodology used to develop the CFCs in this study consisted of the following steps:

- Prepared an inventory of current system assets and determined the replacement cost for each asset.
- Prepared a list of projected capital expenditures and reliability measure recommendations that will be built and paid for in the near future.
- Estimated the amount of available financing: new debt service and contributed capital.
- Determined the capacity of the current system.
- Determined the amount of new development.
- Calculated the unit cost of capital facilities.
- Prepared a schedule of capital facility charges.

The development steps are explained in detail in the following sections.

**Stantec**

**CAPITAL FACILITY CHARGE STUDY**

Current Water System Connection Fees

March 2006

Updated March 2007

**Table 4: Summary of Regional Connection Fees**

Water Purveyor	Connection Size	Facility Capacity Charge	Water Meter Charge
<b>El Dorado Irrigation District</b>			
El Dorado Hills Area	3/4" SFR	\$12,518	\$537
Motherlode Area	3/4" SFR	\$8,517	\$537
	3/4" MFR	75% of FCC	\$537
<b>Grizzly Flats Community Services District</b>			
	3/4"	\$5,650	
<b>South Tahoe Public Utility District</b>			
	3/4"	\$2,863.92	
<b>Tahoe City Public Utility District</b>			
	5/8"	\$2,000	
	3/4"	\$2,500	
	1"	\$3,000	
	1.5"	\$6,000	
	2"	\$9,600	
<b>Placer County Water Agency</b>			
Zone 1: Roseville, Rocklin, Auburn, Loomis	5/8"	\$11,096	\$310
<b>San Juan Water District</b>			
		\$2,210*	
		\$18,000**	
<b>Nevada Irrigation District</b>			
	5/8"	\$5,980	
	3/4"	\$9,365	

\*Applicable fee where developer has already paid Capital Facility Fees

\*\*Approximate total fee including Capital Facility Fees

SFR = Single Family Residential

MFR = Multi - Family Residential

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Current Water System Connection Fees

March 2006

Updated March 2007

five housing units per acre in a typical subdivision connection fees would be approximately \$5,810.00 per unit.

#### **NEVADA IRRIGATION DISTRICT**

The Nevada Irrigation District (NID) is an independent California special district operated by and for the people who own land within its 287,000-acre boundaries. The district is organized primarily to supply water for irrigation, municipal, domestic and industrial purposes. NID water is available in areas of Nevada and Placer counties and the district also has storage and distribution facilities in Sierra and Yuba counties. Unique in many respects, NID collects water from its own high mountain watershed, operates a network of water treatment plants, produces hydroelectric power and provides outdoor recreation.

The district remains committed to the supply of irrigation water, but since the 1970s, most new customers have applied for treated water service. Today, three of every four customers use treated drinking water. Average water use is 400 gallons per home per day. Treated water service areas are located in and around Grass Valley and Nevada City, Banner Mountain, the Glenbrook Basin, Loma Rica, Alta Sierra, Lake of the Pines, Penn Valley, Lake Wildwood, Smartville and North Auburn.

Generally, treated water is available in the more populated areas. It is expensive to extend treated water main lines into rural areas where there are few customers to share the costs. In recent years, the district has been successful in working with local property owners to form local water quality improvement districts. NID presently operates 7 water treatment plants that supply some 3 billion gallons, or approximately 9,000 acre-feet, of treated drinking water per year. State-licensed and certified technicians operate the plants. Water treatment processes include chlorination, coagulation, flocculation, sedimentation and filtration. NID treated water meets and exceeds standards set by the California Department of Health Services.

In recent years, NID has supplied an average 145,000 acre-feet of water per year. About 90 percent of this total is used for local agriculture.

There are many factors in determining the connection fee, but the basic meter and connection fees for the Nevada Irrigation District are as follows: 5/8" = \$5,980 and 3/4" = \$9,365

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Current Water System Connection Fees

March 2006

Updated March 2007

- Sewer customers - 7,300
- Parks and recreation customers - over 500,000

The boundaries of the District extend from Emerald Bay to Dollar Hill and along the Truckee River to the Nevada County line. The service area is very large, encompassing almost 22 square miles. The water connection fees for the Tahoe City Public Utility District are as follows:

- 5/8" = \$2,000
- 3/4" = \$2,500
- 1" = \$3,000
- 1 1/5" = \$6,000
- 2" = \$9,600

#### **3.2.2 Placer County**

##### **PLACER COUNTY WATER AGENCY**

The Placer County Water Agency encompasses the entire, 1,500-square-mile, boundary of Placer County, ranging from the rim of the Sacramento Valley on the west to the Sierra Nevada and Lake Tahoe on the east. PCWA carries out a broad range of responsibility including water resource planning and management, retail and wholesale supply of irrigation water and drinking water, and production of hydroelectric energy.

For a 5/8" (1,150 gallons per day) connection in zone 1 (Roseville, Rocklin, Auburn, Loomis), the demand fee is \$11,096. A 5/8" connection is used as a baseline for all connections within the PCWA, including standard single-family residences. The water connection fee, which includes water meter hardware (approximately \$310) and installation, is determined according to certain specifications. If it is an individual connection, the Agency charges on a time and materials basis.

Commercial and industrial connection fees are determined on an individual basis (depending on the size of the meter and projected water demand).

##### **SAN JUAN WATER DISTRICT**

The San Juan Water District is a community services district that was created in 1954. This district purveys water to customers in south Placer County as well as eastern parts of Sacramento County. The connection fee for a subdivision where the developer has paid Capital Facility Fees is \$2,210 (this fee includes the water meter hardware and meter inspection). If these fees have not been paid, the fee is approximately \$18,000/acre for standard single-family residential units. However, this fee is generally determined on a case-by-case basis. Assuming

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Current Water System Connection Fees  
March 2006  
Updated March 2007

The connection fees for these water purveyors (with the exception of the GDPUD for whom this study is being completed) are summarized in Table 4 and described below.

#### **EL DORADO IRRIGATION DISTRICT**

There are two areas within the El Dorado Irrigation District (EID): El Dorado Hills and the Motherlode. Connection fees in El Dorado Hills are higher due to the cost of building infrastructure in that area. The Motherlode is essentially the rest of the district that is serviced with treated water. For a ¾" (typical single family residential) connection, the Facility Capacity Charge is \$12,518 in El Dorado Hills and \$8,517 in the Motherlode area. In both areas, the water meter hardware costs \$537 in addition to the Facility Capacity Charge. If the property does not have an outlet, the District charges time and materials to tap the main and provide the outlet, which generally costs \$1200 - \$1800.

For a multi-family development, each unit is charged 75% of the above Facility Capacity Charge plus the cost of the water meter hardware (\$537). Commercial connection fees are determined on a case-by-case basis because they depend on the size of the connection and number of meters that will be located on the site.

#### **GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT**

This study is being conducted under the direction of the Georgetown Divide Public Utility District. An assessment of the current connection fees for this district is discussed in the previous section (Section 3.2 Current Charges).

#### **GRIZZLY FLATS COMMUNITY SERVICES DISTRICT**

A typical single-family residential connection in the Grizzly Flats Community Services District costs \$5,650. Commercial and Industrial uses within the district are already connected, but the connection fee would most likely be the same as that for a residential connection.

#### **SOUTH TAHOE PUBLIC UTILITY DISTRICT**

The South Tahoe Public Utility District is a public agency that was formed in 1950. The District provides wastewater collection, treatment and recycling and drinking water to the community of South Lake Tahoe.

A ¾" service costs \$2,863.92. A property requiring a fire line would incur additional costs. Commercial and Industrial uses go through a lengthy process to determine the estimated usage (based on the size of the building and other factors).

#### **TAHOE CITY PUBLIC UTILITY DISTRICT**

The Tahoe City Public Utility District was founded in 1938 to provide some of the governmental needs of the residents of Tahoe City. Sewer collection, parks facilities, and recreation services are provided for the entire area of the District. Water service is provided in three separate systems and serves approximately half of the homes and businesses in the District.

- Water customers - 3,500

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Current Water System Connection Fees

March 2006

Updated March 2007

#### **3.1.1 Generalized Benefit for the Entire District**

The recommended process as a result of this study is to charge one uniform CFC to all new customers. The water system is one complete system, which benefits each connection. The system is not divided into sub areas that can be used to determine varying connection fees.

The GDPUD Water System Reliability Study prepared by KASL Engineering in November 2002 was used to establish the connection between improvements required to support growth and benefits to the new connection. Water storage and conveyance throughout the system benefits all users. Therefore the cost to connect to the system should not differ depending on where a new customer connects. With implementation of the CIP the entire district can be ensured reliable service. In addition, the CIP allows for added security of the treated water supply that also benefits the entire district and not just isolated areas of the district.

#### **3.2 COMPARISON OF OTHER WATER PURVEYORS**

To aid in the determination of this CFC, connection fees from regional water purveyors were evaluated to serve as a basis for comparison to our recommended CFC for the GDPUD.

As a point of comparison, this study includes a survey of the water purveyors in El Dorado and Placer Counties. This survey provides an understanding of water connection fees for new residences in the region surrounding the Georgetown Divide. This section provides a summary of the connection fees for these water purveyors.

##### **3.2.1 El Dorado County**

The primary sources of potable water in El Dorado County are surface water resources. Rural areas where surface water is in short supply or where surface water delivery systems are absent rely on groundwater resources. There are five primary public water providers in El Dorado County, all of which are independent public entities:

- El Dorado Irrigation District (EID), which provides water to the southwestern part of the county from El Dorado Hills to Placerville;
- Georgetown Divide Public Utility District (GDPUD), which provides water to the Georgetown Divide;
- Grizzly Flats Community Services District (GFCSD), which provides water to the Grizzly Flat Rural Center;
- South Lake Tahoe Public Utility District (STPUD), which provides water to South Lake Tahoe and surrounding unincorporated areas; and
- Tahoe City Public Utility District (TCPUD), which provides water to the communities along the west shore of Lake Tahoe.

## **3.0 Current Water System Connection Fees**

---

There are several components to determining the recommended CFCs. This chapter covers three main components. This chapter begins with providing an evaluation of the current connection fees charged by the GDPUD and ends with a summary of connection fees for surrounding and respected water purveyors.

### **3.1 CURRENT GDPUD CHARGES**

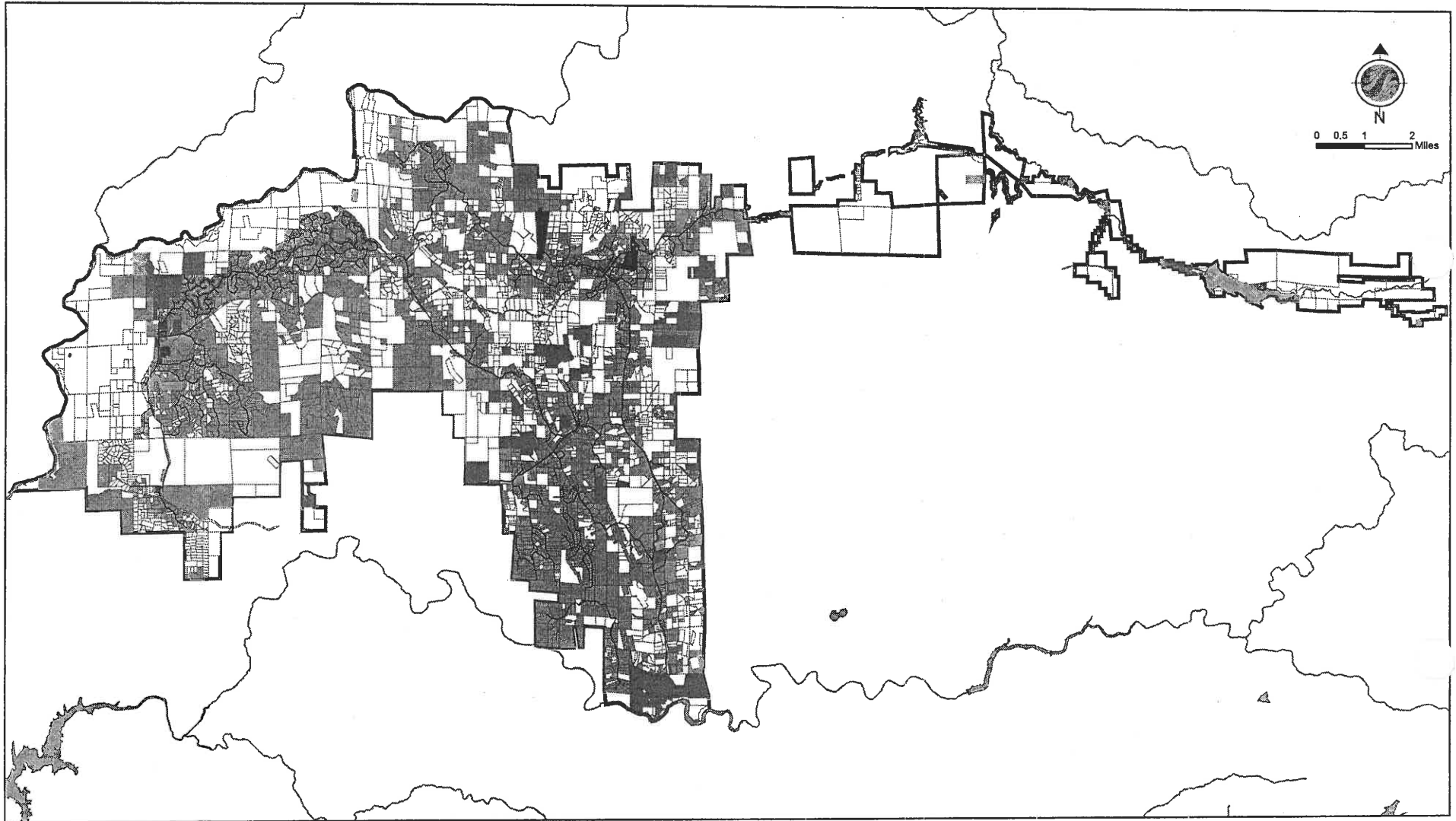
GDPUD Water Ordinances 94-03 and 94-04, adopted in 1994 describe the current charges for a new connection to the water system.

Ordinance 94-03 outlines the purpose and need for a water development charge for new connections to the system to attain the appropriate amount of funding to complete studies for acquisition of additional water sources for the GDPUD. The 93-03 Ordinance established a Water Development Charge of \$2,000.00 to pursue supplemental water supplies.

Ordinance 94-04 outlines the need for treatment plant expansion, storage facilities, and pipelines needed to maintain service within GDPUD service areas. The GDPUD will utilize funds garnered through the charges to expand treatment and storage facilities. The 94-04 Ordinance sets forth the charges separately as follows: treatment plant expansion - \$995; pipeline charge - \$595; storage charge - \$700; service connection charge - \$650; and meter installation charge - \$100.

The total cost for connection established by Ordinances 94-03 and 94-04 amounted to \$5,000 per connection.

It is the goal of this CFC study to recommend the appropriate changes to reflect present day and future needs of the GDPUD. Upon adoption of this study, including the recommended fees, both Ordinance 94-03 and 94-04 establishing the current fees and charges, would be replaced by those outlined in this study.



**Stantec Consulting Inc.**  
 2590 Venture Oaks Way  
 Sacramento, CA  
 95833  
 Tel. 916.569.2500  
 Fax 916.921.9274  
 www.stantec.com

**Legend**

- |                           |                              |                        |
|---------------------------|------------------------------|------------------------|
| — Water System Pipes      | ■ Rural Residential          | ■ Natural Resources    |
| □ GDPUD Parcel Boundaries | ■ Low Density Residential    | ■ Open Space           |
| ■ Existing GDPUD Customer | ■ Medium Density Residential | ■ Public Facilities    |
| ■ Commercial              | ■ Multi-Family Residential   | ■ Tourist Recreational |
| ■ Industrial              | ■ High Density Residential   | □ GDPUD Boundary       |
|                           | ■ Agricultural Lands         |                        |

Client/Project  
 GDPUD  
 Facility Reserve Charge Study

Figure No.  
 5

Title  
**Land Use Designations for  
 Vacant, Non-Customer Parcels**



## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Population and Water Demand Forecasts

March 2006

Updated March 2007

Agricultural Lands (AL) refer to lands that are of sufficient size to sustain agricultural use. Areas with the Natural Resource (NR) land use designation contain economically viable natural resources and are intended to protect the economic viability of those resources and those engaged in the harvesting/processing of those resources. Open space (OS) areas are public lands under government title where no development other than that specifically needed for government-related open space uses is desired.

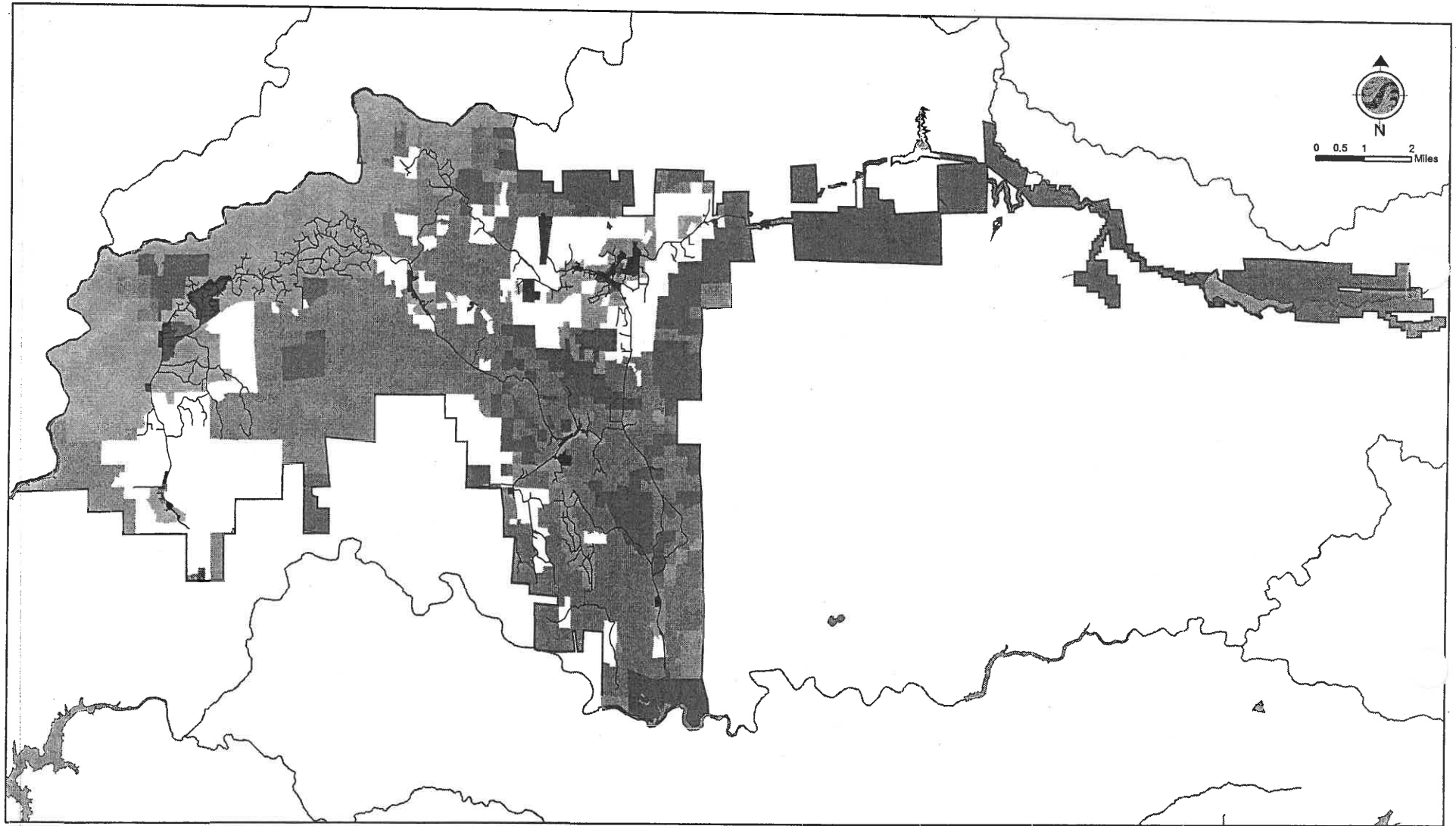
The Commercial (C) land use category is intended to provide a full range of commercial retail, office, and service uses to serve the residents, businesses, and visitors of El Dorado County. The Industrial (I) land use category is designated for a range of light and heavy industrial uses, such as manufacturing, processing, distribution, and storage.

Public Facilities (PF) include only publicly owned lands used for public facilities such as sanitary landfills, storage and maintenance yards, regional parks and recreation facilities, schools, and libraries. The Tourist Recreational (TR) land use category is to provide areas for tourist and resident serving recreational uses, transit and seasonal lodging facilities, and supporting commercial activities. The land use category would have differing intensities of use based on the location.

In addition to the above designated land uses, overlay designations have been established to provide additional direction for the development of land. Figure 5 shows the land use designations for all vacant non GDPUD customer parcels.

The Agricultural District overlay designation identifies general areas that contain the majority of the County's federally designated prime, State designated unique or important, or County designated locally important soils, and which the Board of Supervisors has determined should be preserved primarily for agricultural uses. The Platted Lands overlay designation identifies isolated areas consisting of contiguous existing smaller parcels in the Rural Regions where the existing density level of the parcels would be an inappropriate land use designation for the area based on capability constraints and/or based on the existence of important natural resources.

The Ecological Preserve overlay designation identifies those properties in public or private ownership which have the potential to be established or have been established as habitat preserve areas for rare or endangered plant and animal species and/or critical wildlife habitat and/or natural communities of high quality or of Statewide importance. The Mineral Resource overlay designation identifies those areas that are designated as Mineral Resource Zone 2 on the State Classification Reports. The Important Biological Corridor overlay applies to lands that are identified as having high wildlife habitat values.



**Stantec Consulting Inc.**  
 2590 Venture Oaks Way  
 Sacramento, CA  
 95833  
 Tel. 916.569.2500  
 Fax 916.921.9274  
 www.stantec.com

**Legend**

- |                         |                            |                      |
|-------------------------|----------------------------|----------------------|
| — Water System Pipes    | Medium Density Residential | Open Space           |
| Commercial              | Multi-Family Residential   | Public Facilities    |
| Industrial              | High Density Residential   | Tourist Recreational |
| Rural Residential       | Agricultural Lands         | GDPUD Boundary       |
| Low Density Residential | Natural Resources          |                      |

Client/Project  
 GDPUD  
 Facility Reserve Charge Study

Figure No.  
 4

Title  
**General Plan Land Use Designations**

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Population and Water Demand Forecasts  
March 2006  
Updated March 2007

season if running 24 hours per day can provide a maximum amount of 2.5 million gallons. The flow rate of 20 miner's inches would produce approximately one acre foot per day.

Agricultural uses typically do not require treated water. The GDPUD currently charges a connection fee of \$2000.00 for agricultural accounts. One major component to the raw water system is the ditch system, shown on Figure 2, Site Map. The ditch system is a series of pipelines, lined and un-lined ditches. Construction of this system began in the 1800s. The system continues to undergo maintenance repairs and upgrades are generally associated with the treated water system and water conservation efforts. Agricultural properties pay the monthly users fee for the amount of water taken from the raw water system. The user fees paid by agricultural customers attempt to cover the costs of maintenance and operations for delivery of the water through the GDPUD canal system.

### **Land Use Designations**

The El Dorado County General Plan guides how and where future development occurs. Within the El Dorado County General Plan, the Land Use Element sets forth specific goals, objectives, and policies to guide the intensity, location, and distribution of land uses. The communities served by the GDPUD include Cool, Garden Valley, Greenwood, Georgetown, Kelsey, and Pilot Hill. All six communities have been identified as Rural Centers within the General Plan.

Rural Centers are identified as places of focused activities that provide food and services to the surrounding areas. The remaining areas served by the GDPUD are classified in the General Plan as Rural Regions. Rural Regions include land use patterns that maintain the open character of El Dorado County, preserve its natural resources, recognize the constraints of the land and the limited availability of infrastructure and public services, and preserve the agricultural and forest-timber area to ensure its long-term viability for agriculture and timber operations.

This section summarizes the land use designations that apply to the GDPUD:

The land use designations that apply to the GDPUD are visually presented in Figure 4, GDPUD General Plan Land Use Designations and summarized below.

There are five categories of residential land use designations that apply to the GDPUD. The Multi-family Residential (MFR) land use designation identifies areas suitable for high-density, multi-family structures such as apartments, single-family attached dwelling units, and multiplexes. The High-Density Residential (HDR) land use designation establishes areas suitable for intensive single-family residential development. The Medium-Density Residential (MDR) land use designation identifies areas suitable for detached single-family residences with larger lot sizes, which allow for agricultural land management activities. The Low-Density Residential (LDR) land use designation applies to areas for single-family residential development in a rural setting. The Rural Residential (RR) land use designation establishes areas for residential and agricultural development, and serves as a transition between areas designated as Low-Density Residential and Natural Resource land uses.

**CAPITAL FACILITY CHARGE STUDY**

Population and Water Demand Forecasts

March 2006

Updated March 2007

**2.1.3.4 Analysis**

Table 3, above, summarizes the acreage for each land use within the vacant, non-customer properties. Based on the maximum allowable densities specified in the El Dorado County General Plan, the low density residential land use designation yielded the greatest potential of residential units at 1,181 dwelling units for currently vacant, non-customer properties. The multi-family residential and rural residential land uses generated the next highest numbers of possible new residential units with 1,268 and 1,074 potential units respectively. Medium-density residential reflects a potential yield of 975 dwelling units. High-density residential land use could potentially result in 71 new residences. In addition to residential land uses, the number of potential residential units to support agricultural land use is 53. The GDPUD service area has a potential for 4,625 new residential units based on the maximum allowable densities in the General Plan. Given the water demand factor of .48 acre-feet per year per dwelling unit, this would add a demand for 2,220 acre-feet per year to the GDPUD water system.

The number of potential residential units reflects just that, potential residential units. It does not reflect actual future development. All 4,625 units may not be feasible due to environmental constraints and the overlay restrictions described in the assumptions section above. It should be understood that this projection is used for estimation purposes only. Some new residences may decide to install wells rather than connect to the water system.

**2.1.4 Agriculture and the Miner's Inch**

Agriculture in the Sierra Foothills is substantially different from agriculture within the Central Valley. It has been an important sector in El Dorado County from the standpoint of economics, open space, and recreation. The growing metropolitan population in the Sacramento Region will continue to fuel the demand for greater access to agri-tourism type activities, such as the existing Apple Hill.

As stated previously, the projected water demand for agricultural uses will be 11,770 acre-feet per year in 2025 and 17,530 acre-feet per year at General Plan build out. Currently, the GDPUD is serving 4,463 acre-feet per year for agricultural uses. This is typically through a miner's inch connection. These projections assume that reliable, affordable water supplies are available in the future. The agricultural water demand figures are contingent upon the raw water facilities necessary to provide agricultural irrigation water still being in place.

The future of agriculture in El Dorado County will be influenced by policies related to land use, water supply, and water supply infrastructure. For this reason, it is imperative that this CFC study address agricultural needs for water service.

Currently, agricultural needs are being met by using miner's inch connections to the raw water system. A miner's inch is the volume of water that will flow through a 1" square opening with six inches of head above the opening over a period of 24 hours. The pressure from the six inches of head pushes the water at a consistent flow out of the 1" opening. One miner's inch equals 1.5 cubic feet per minute, or 11.22 gallons per minute. The GDPUD provides agricultural irrigation water 153 days out of the year during the dry season. One miner's inch over the irrigation

**Stantec**

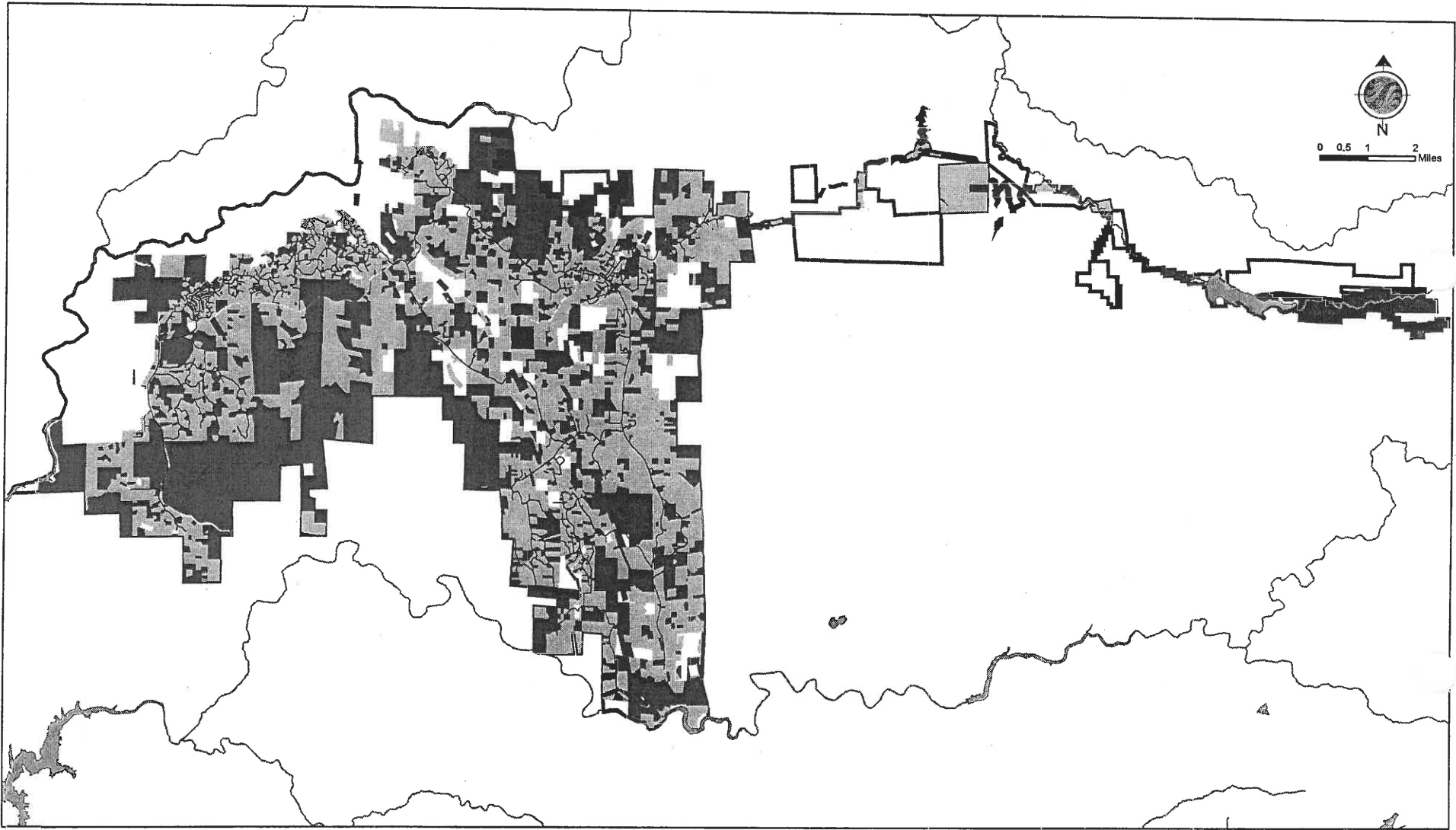
**CAPITAL FACILITY CHARGE STUDY**

Population and Water Demand Forecasts  
 March 2006  
 Updated March 2007

**Table 3: Vacant, Non-Customer Parcels at General Plan Build Out**

Land Use Designation	# of Parcels	Acres	Max. Density	# of Potential Residential Units
Agricultural Lands	33	1071.805	0.05	53.59
Commercial	53	158.3563	4 du/ac in Rural Centers	0.00
High Density Residential	80	35.6645	2 du/ac (standard subdivision)	71.33
Industrial	1	151.3828	---	---
Low Density Residential	330	5906.277	1 du/5 ac	1,181.26
Medium Density Residential	368	975.4348	1 du/ac	975.43
Multi-Family Residential	7	52.87251	24 du/ac	1,268.94
Natural Resources	76	2216.585	1 du/160 ac outside National Forest Service lands and within "timber production areas"; 1 du/40 acres within river canyons outside "timber production areas." If unsuitable for "timber production" 1 du/40 acres.	
Natural Resources-Timberland Preserve Zoning	4	85.36038	.00625 du/ac	0.53
Open Space	13	396.5656	---	---
Public Facilities	5	79.92219	---	---
Rural Residential	485	10748.82	1 du/10 acres	1,074.88
Tourist Recreational	1	0.684499	---	---







<b>Total # of Potential Res. Units</b>	<b>4,625.97</b>
--	-----------------



**Stantec**

**Stantec Consulting Inc.**  
 2590 Venture Oaks Way  
 Sacramento, CA  
 95833  
 Tel. 916.569.2500  
 Fax 916.921.9274  
 www.stantec.com

**Legend**

- |   |                    |   |
|---|--------------------|---|
|  | GDPUD Boundary     | <b>Development Status</b>   |
|  | Water System Pipes |  Vacant Land           |
|   |                    |  Developed Land        |
|   |                    |  Agricultural Preserve |
|   |                    |  Timber Preserve       |

Client/Project  
 GDPUD  
 Facility Reserve Charge Study  
 Figure No.  
 3  
 Title  
**Vacant and Developed Lands**

## Stantec

### CAPITAL FACILITY CHARGE STUDY

Population and Water Demand Forecasts  
March 2006  
Updated March 2007

*Impact from land use overlay designations will be insignificant:* The applicable land use overlays identified in the El Dorado County General Plan are the Agricultural District, the Mineral Resources Zone, and the Important Biological Corridor. The areas of these overlays are generally designated for agricultural land use, natural resources, or rural residential land use; therefore, the added impacts would be minimal to the potential residential units estimated in this build out analysis.

For the purposes of developing a justified connection fee for new customers, this build out analysis provides a reasonable estimation for development and future residential demand for water. Based on the demand for water and the infrastructure necessary to deliver that water the GDPUD's CIP was reviewed and adjusted to reflect the required water system infrastructure.

#### 2.1.3.2 Data

This build out analysis was calculated using El Dorado County's GIS parcel data accompanied by a list of GDPUD customers. The GIS parcel data is part of the County's Geographic Information System. It is a means of tracking spatial data, such as maps, linked to database information. The El Dorado County Planning Department provided a digital parcel shapefile (GIS file format) in which each parcel is coded with its General Plan land use designation. The applicable overlay categories are also identified in this shapefile. The El Dorado County Survey Department provided the same parcel shapefile with each parcel coded as to its development status. These are shown in Figure 3, Vacant and Developed Parcels.

#### 2.1.3.3 Methodology

The customer information provided by the GDPUD listed 3,578 unique Assessor Parcel Numbers (APN). Of these APNs, 3,490 matched the APNs in the shapefiles provided by the County. Using ESRI's ArcGIS 9.0 software, the customer numbers were linked to the parcel map (shapefile). This allowed the vacant parcels that are not current customers to GDPUD to be identified. According to the previously stated assumptions, these are the properties that are likely to develop and connect to the water system in the future.

**CAPITAL FACILITY CHARGE STUDY**

Population and Water Demand Forecasts

March 2006

Updated March 2007

**Table 2: Summary of Growth Projections for Georgetown Divide Public Utility District**

GDPUD Growth Projections Summary	1999	2025	Build Out
Residential Units	3,272	4,302	8,413
Employment	1,341	2,069	7,077
Total Water Demand (acre feet per year)	10,956	15,787	20,415

**2.1.3 Build Out Analysis**

The El Dorado County General Plan and land use designations have been updated since the projections developed by EPS (as provided in the previous section). Using land use information provided by El Dorado County and under the guidance of the GDPUD, a new analysis of potential development was conducted for this study. This section details the assumptions and methods used to estimate the number of new connections projected for the next twenty years.

**2.1.3.1 Assumptions**

No annexations: Over the last twenty years, the GDPUD has had insignificant – minimal growth in terms of annexations. For this reason, the future projection is that annexations to the district will be insignificant over the next twenty years. This report assumes that the GDPUD will not significantly change the boundary for the service area.

New connections will be from new development: The GDPUD has not experienced an increase in customers from existing developed properties. Residences on wells are most likely to remain on wells for the foreseeable future. During the drought of the late 1970s several miles of pipeline were installed and new connections made due to well failures. It is assumed residences that did not connect in previous droughts will not demand connection in the future. Residences connected to the system are not likely to increase their demand (by adding additional units) for the foreseeable future. This study assumes that new connections to the treated water system will come from development of currently vacant properties. It should be noted that there is no policy requiring new development to connect to the treated water system. If a property meets County requirements, it may be developed with a well on site. GDPUD has been contacted by developers and current residents to connect to the system, but substantial connections have yet not been requested.

General Plan maximum densities: This build out analysis uses maximum densities allowed in the General Plan. This allows the assumption that the more strict zoning regulations (used to implement the General Plan) may change as development occurs. It should be noted that the calculations of maximum density in this build out analysis do not include environmental constraints to development such as slopes, creek setbacks, etc. However, the El Dorado County General Plan update process did consider these environmental constraints in designating the new land uses. The calculations are based strictly on area.



## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Population and Water Demand Forecasts  
March 2006  
Updated March 2007

Prior to updating the El Dorado County General Plan, as part of the Environmental Impact Report (EIR) process, Economic and Planning Systems, Inc. (EPS) developed water demand projections for El Dorado County. These are based on land use forecasts, the distribution of land uses between the major water purveyors, and water demand factors provided by the water purveyors. The land use projections were multiplied by a water demand factor to estimate the water demand for each of the major water purveyors and the remaining county area.

EPS developed projections for each of the four alternatives addressed in the EIR. This CFC study assumes the Environmentally Constrained Alternative was the basis for updating the El Dorado County General Plan. That alternative was based on a reduced overall build out capacity of the County as determined by reassigned land use designations proposed by County planning staff on a parcel-by-parcel level. It also included a mixed-use component for commercial properties, with 10 percent of commercial acres designated to have a residential component. Densities in this alternative vary between land uses designated as a Community Region or a Rural Center. For all residential land uses, excluding the mixed-use component, it was assumed that parcels would build out at maximum densities.

These characteristics are consistent with the updated 2004 El Dorado County General Plan policies and assumptions. Therefore, it is realistic to reference the forecasts produced for the Environmentally Constrained Alternative in this CFC study for determining a new connection fee.

Table 2 summarizes the residential and employment projections by EPS for the GDPUD. Their study shows the potential for 5,141 new residential units between 1999 and General Plan Build Out.

The GDPUD provided the following information regarding typical water demand in acre-feet per year. An acre-foot of water is the amount of water necessary to cover on acre of land 1 foot deep. A residential unit demands .48 acre-feet per year. A typical employee (commercial, industrial, or office) demands .18 acre-feet per year. Wood Rodgers, Inc. developed the projected irrigation uses for the GDPUD service area as follows: 11,770 acre-feet per year in 2025 and 17,530 acre-feet per year at general plan build out. Using these water demand factors, EPS calculated the total water demand for the GDPUD to be 10,956 acre-feet per year in 1999, 15,787 acre-feet per year in 2025, and 20,415 acre-feet per year at General Plan build out.

## **2.0 Population and Water Demand Forecasts**

---

### **2.1 LAND USE ANALYSIS AND BUILDOUT PROJECTION**

#### **2.1.1 Growth Trends**

El Dorado County has experienced rapid population growth since the 1970s and is projected to grow by 30,000 households over the next 20 years. Historically, growth in El Dorado County resulted in compact development patterns. Communities such as Cool, Georgetown, and Placerville were small, mixed-use communities where residents lived, worked, and shopped. Recently, although urban-like development has continued in the foothills, large-lot, low-density residential development has infused a more rural lifestyle throughout the county. The natural rural areas are slowly transforming into residential lands requiring additional public infrastructure to support a more intense stewardship.

A comparison of the 1990 and 2000 Census data (see Table 1 below) shows significant growth throughout El Dorado County. The GDPUD only services unincorporated areas within the county, which experienced 28% growth between 1990 and 2000.

**Table 1: Comparison of 1990 and 2000 Population in El Dorado County**

	El Dorado County Comparison of 1990 and 2000 Population		
	1990	2000	% Change
Population, Entire County	125,995	156,299	24
Population, Unincorporated County	96,054	123,080	28

Source: U.S. Census Bureau: Table P1 for the 1990 and 2000 Census counts.

In March 2002, Economic and Planning Systems, Inc. (EPS) completed a detailed land use forecast for the West Slope of El Dorado County. The West Slope area referenced in that report includes the GDPUD area. Based on market research, historical growth patterns, and SACOG projections, EPS estimated that an additional 78,000 people could reside in El Dorado County by 2025, reflecting overall growth of 33%. According to this projection, it is expected that the West Slope population would increase 64% between 2000 and 2025.

#### **2.1.2 Water Demand Forecast**

The demand for water in El Dorado County and the GDPUD over the next twenty years will be related to growth and new development. Understanding the projected water demand is crucial in determining a fair connection fee for new customers in the GDPUD. Agricultural land uses provide a significant amount of demand for water in the GDPUD along with residential and commercial uses.

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Introduction

March 2006

Updated March 2007

need to raise rates to provide for system expansion. As a result, new customers pay fully for the additional facilities without imposing a burden on existing customers.

Due to the current financial structuring of the GDPUD, this study utilizes a combination of both the system buy-in method and the incremental cost-pricing method. Blending these two approaches is common. In the case of the GDPUD, the blended approach includes a partial buy-in; for example, existing assets that have available capacity to serve new customers, combined with the new assets in which specific facilities to accommodate growth are included.

#### **1.4 APPROACH**

The CFCs recommended for the GDPUD reflect economic and legal principles for determining capacity charges and impact fees generally, and also reflects the practices of other water agencies in California.

Chapter two of this report outlines the projected population growth in El Dorado County and within the GDPUD service area. This chapter summarizes recent studies of future water demand for the GDPUD. A complete residential build out analysis and assumptions are also presented in chapter two.

With an understanding of projected growth in the area, chapter three details the current charges for new connections within the GDPUD and current charges for new connections within the surrounding water purveyors of El Dorado and Placer Counties.

Chapter four details the process for calculating a unit cost of water from the GDPUD system and a proportional fair CFC for new connections. This approach satisfies rational nexus criteria required by the California Government Code.

This Capital Facility Charge Study was developed for a twenty-year timeline and serves as a tool to project future capital improvements based on historical development, existing conditions, and future land use planning within the district. As Capital Improvement Plans (CIPs) are adopted on a yearly basis to carry out the water supply of the district as outlined in this document, the ultimate Capital Facility Charge may be amended as necessary to reflect infrastructure needs of the burgeoning communities constituents, future advancements in water treatment technology, and the mutability of water quality in general.

districts seek fairness and equity when allocating financial burdens among customers. Utility assets tend to be relatively expensive – partly because most assets are installed underground and provide long periods of service (up to fifty years or more). It is appropriate to factor growth into the formula of cost allocation. It is often considered inappropriate to have existing customers be entirely responsible for capital costs of future assets, especially those expansion facilities that would not be built if there were no growth. This study utilizes a justified methodology to determine an appropriate Capital Facility Charge while respecting these considerations.

### **1.3.1 Publications Regarding Capital Facility Charges**

Three major publications regarding CFCs for the utility system were reviewed for this study. A basic publication for the water and wastewater industry regarding water system CFCs is Manual M26 published by the American Water Works Association. Manual M26, *Water Rates and Related Charges*, covers a number of water system charges, including CFCs. Other publications reviewed that deal specifically with water system CFCs include George A. Raftelis, *Comprehensive Guide to Water and Wastewater Finance and Pricing*, and Arthur C. Nelson, *System Development Charges for Water, Wastewater, and Stormwater Facilities*.

The most common methodologies for determining water system connection fees are the “system buy-in” and the “incremental facilities” approach which are explained briefly in the paragraphs below.

#### **1.3.1.1 System Buy-In Method**

This concept is based on the notion that new customers are entitled to water service at the same price as existing customers. However, existing customers have already provided the facilities that will serve the new customers, including any costs of financing those facilities. Under this buy-in method, new customers pay an amount equal to the net investment already made by existing customers in the facilities. As described in Manual M26 (American Water Works Association), net investment is based on actual cost less depreciation. This net equity investment is then divided by the number of total / new customers to determine the amount of payment required from the new customer to buy in to the utility at parity with existing customers. Once new customers have paid the CFC, they become equivalent to existing customers and share the responsibility for existing facilities. When additional costs are incurred for system improvements, replacement, or expansion, all customers share the costs of such improvements through monthly user fees.

#### **1.3.1.2 Incremental Cost-Pricing Method**

As detailed in Manual M26, when new customers connect to the water system, they benefit from reserve capacity available in existing facilities or require new capacity. If existing available capacity is used, it must be replaced. If new capacity is required, it must be constructed. Both situations require funding for capital facility improvements. Under the incremental cost-pricing method, new customers would pay for their use of the reserve capacity and for new facilities necessary to provide service to them. The goal of this method is to minimize or eliminate the

## **Stantec**

### **CAPITAL FACILITY CHARGE STUDY**

Introduction

March 2006

Updated March 2007

venture failed after two years. Today, Georgetown remains "The Pride of the Mountains" for its residents, with the surrounding Sierras and its historical Main Street.

## **1.2 PURPOSE**

In July 2005, Stantec Consulting entered into an agreement with the GDPUD to perform a Capital Facility Charge (CFC) Study/Report. The purpose of this study is to determine a fair CFC for new customers of the GDPUD. As the population grows and new development occurs within the district, the water system infrastructure will require expansion. In developing CFCs for the GDPUD, Stantec endeavored to satisfy the rational nexus criteria generally applied to these types of charges. A rational nexus based CFC must:

- ❑ Be rationally based on public policy that demonstrates a nexus between new development and the need to expand or build facilities to accommodate it.
- ❑ Not exceed the new development's proportional share of the cost of facilities needed to serve that development, after crediting it for other contributions that it has already made or will make toward that cost.
- ❑ Not be arbitrary or discriminatory in its application to individuals or customer classes.

The CFCs ensure that "growth pays for growth" by allocating the cost of new facilities and the cost of unused capacity in existing facilities to new development while allocating the cost of repairing and refurbishing facilities used by current customers to water rates.

### **1.2.1 County Government Regulations**

On July 19, 2004, the El Dorado County Board of Supervisors adopted a new General Plan for the County. State planning law requires that every County adopt and maintain a General Plan, which is a document that serves as the "blueprint" for development throughout the county. This General Plan is the County's basic planning document and is the vehicle through which the County addresses and balances the competing interests and needs of its residents. Therefore, it is pertinent to plan future infrastructure that is consistent with the needs of the proposed land uses over the next twenty years. The CFCs developed in this study meet the policies stated in the 2004 El Dorado County General Plan, Public Services and Utilities Element. Specifically, General Plan Policy 5.1.2.3 states that the District should ensure that "new development shall be required to pay its proportionate share of the costs of infrastructure improvement required to serve the project to the extent permitted by State Law."

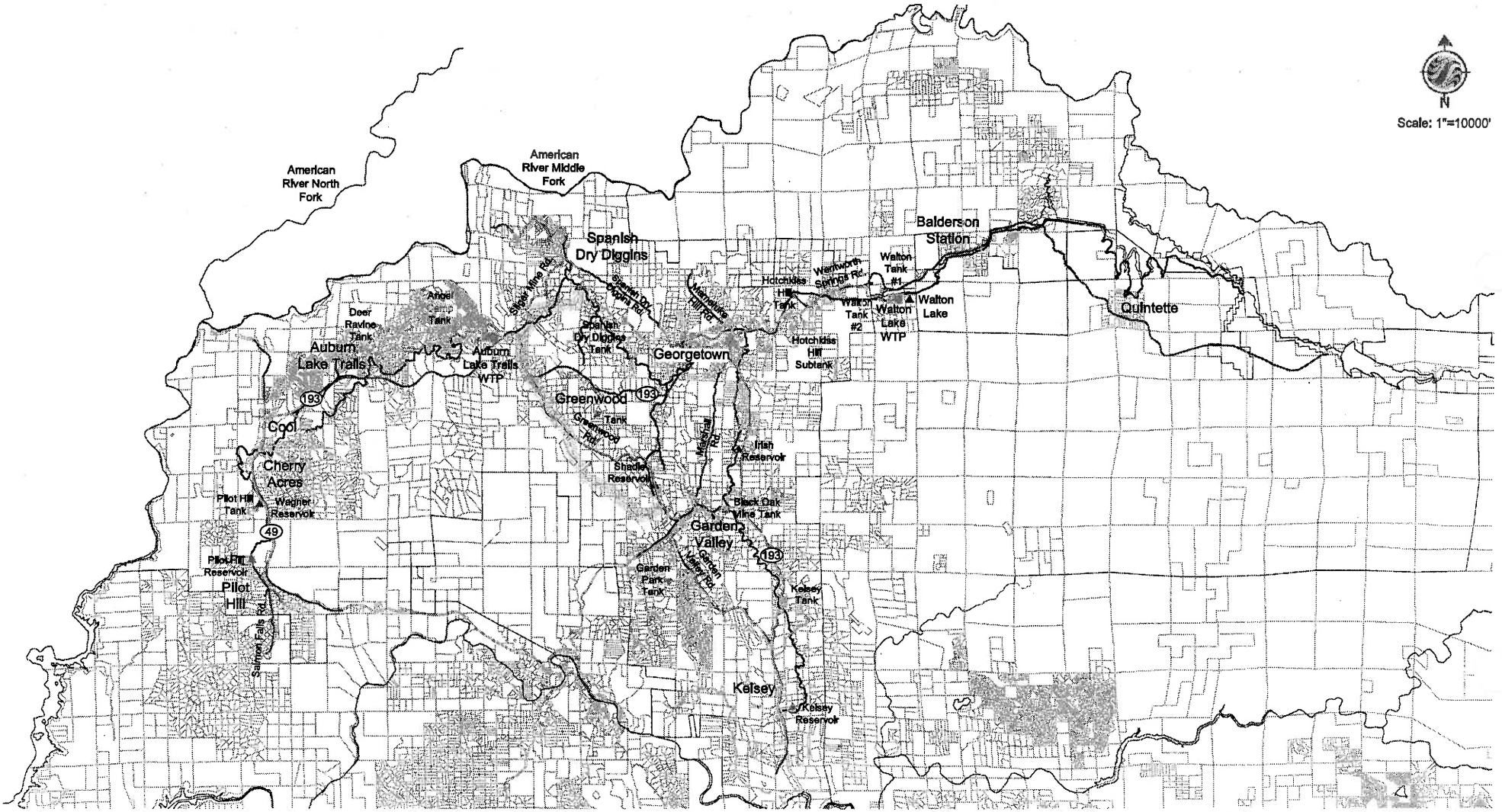
The recommended CFCs (as a result of this study) meet the regulatory requirements found in Government Code Sections 66012 - 66014 regarding the establishment of capacity charges.

## **1.3 BACKGROUND**

Financial objectives for utility districts can be varied. Districts seek sufficient capital to build projects and sufficient revenue to properly manage, operate and maintain facilities. Also,



Scale: 1"=10000'



**Stantec**

**Stantec Consulting Inc.**  
2590 Venture Oaks Way  
Sacramento, CA  
95833  
Tel. 916.569.2500  
Fax. 916.921.9274  
www.stantec.com

**Legend**

-  Water System Pipeline
-  Ditch System
-  GDPUD Boundary
-  Highway/Road
-  Water Feature
-  Reservoir/Lake
-  Water Treatment Plant
-  Water Tank
-  Project Intertie Pipeline
-  Proposed Water System Pipeline

Client/Project  
GDPUD  
Facility Reserve Charge Study

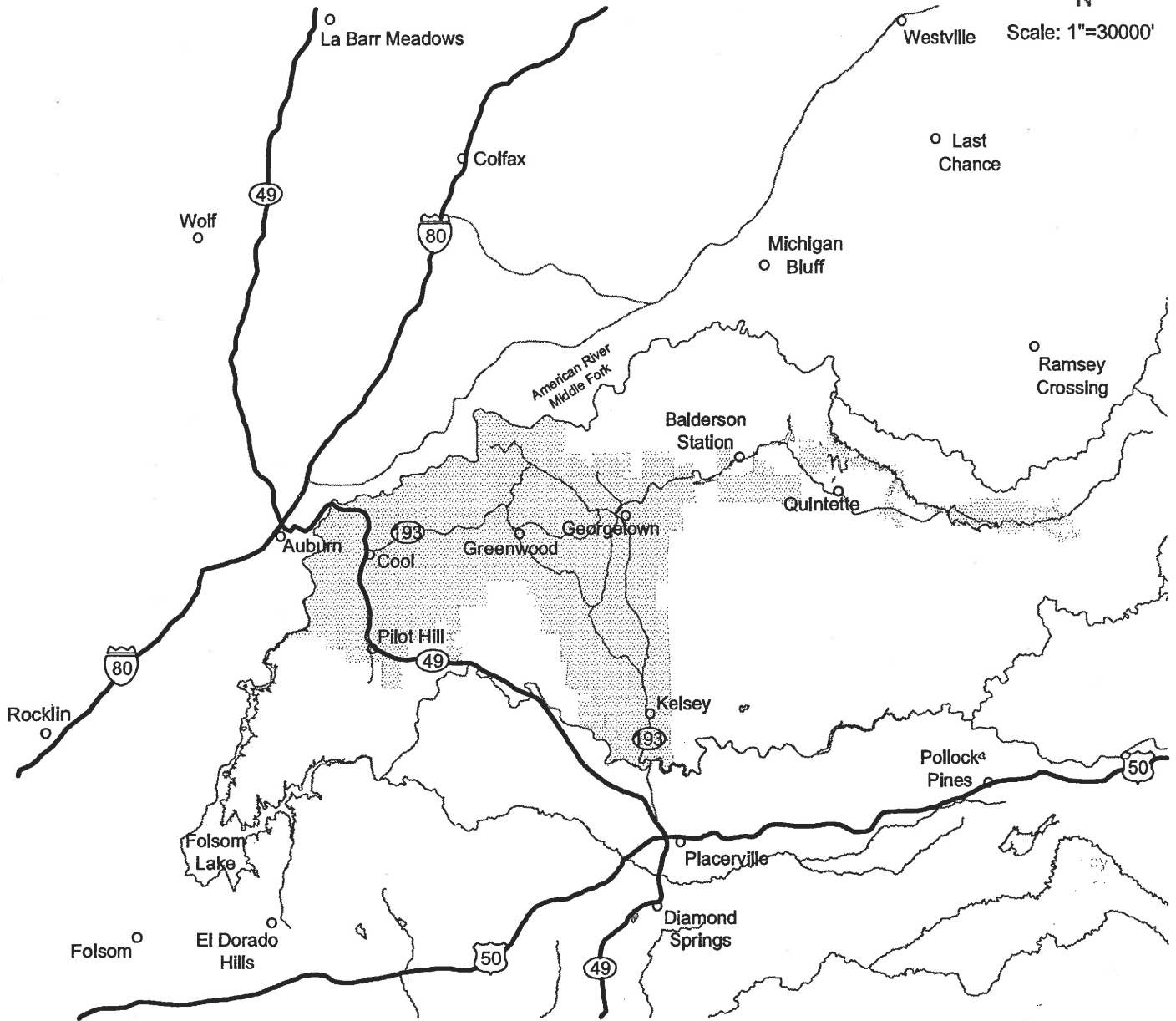
Figure No.  
**2**

Title  
**Site Map**

08/19/05  
184025003







Scale: 1"=30000'



**Stantec**

**Stantec Consulting Inc.**  
2590 Venture Oaks Way  
Sacramento, CA.  
95833  
Tel. 916.569.2500  
Fax. 916.921.9274  
www.stantec.com

Legend

-  Road
-  Highway
-  Water Feature
-  GDPUD

Client/Project  
GDPUD  
Facility Reserve Charge Study

Figure No.  
**1**

Title  
**Vicinity Map**





**RESOLUTION NO. 2022-XX**  
**OF THE BOARD OF DIRECTORS OF THE**  
**GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT**  
**CAPITAL FACILITY CHARGES**

**WHEREAS**, Georgetown Divide Public Utility District (the District) boundary encompasses approximately 68,000 acres and provides approximately 3,800 service connections with potable drinking water;

**WHEREAS**, District boundary encompasses a significant number of parcels that are not connected to the potable drinking water system;

**WHEREAS**, Capital facility charge is a cost levied to a new connection, based on size of meter, to the District potable drinking water system;

**WHEREAS**, District Ordinance 2007-01, established capital facility charges based on growth-pays-for-growth principle;

**WHEREAS**, Article of 9 of District Ordinance 2007-01 provides for an annual reassessment of capital facility charges.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT** as follows:

Beginning June 14, 2022, the capital facility charges are established as follows:

<b>Meter Size</b>	<b>FY22/23</b>
5/8 – 3/4 - inch	\$11,684
1 – inch	\$28,670
1 ½ - inch	\$57,337
2 - inch	\$91,743

**PASSED AND ADOPTED** by the Board of Directors of the Georgetown Divide Public Utility District at a meeting of said Board held on the fourteenth day of June 2022, by the following vote:

AYES:

NOES:

ABSENT/ABSTAIN:

\_\_\_\_\_  
Michael Saunders, President, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

*Attest:*

---

Adam Coyan, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

### **CERTIFICATION**

I hereby certify that the foregoing is a full, true and correct copy of Resolution 2022-XX duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on this fourteenth day of June 2022.

---

Adam Coyan, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

**RESOLUTION NO. 2022-XX**  
**OF THE BOARD OF DIRECTORS OF THE**  
**GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT**  
**METER INSTALLATION FEES AND LABOR/EQUIPMENT FEES**

**WHEREAS**, Georgetown Divide Public Utility District (the District) boundary encompasses approximately 68,000 acres and provides approximately 3,800 service connections with potable drinking water;

**WHEREAS**, District boundary encompasses a significant number of parcels that are not connected to the potable drinking water system;

**WHEREAS**, At the time a connection is made the District incurs specific installation cost including; meter cost, ancillary supplies, equipment cost and labor cost; and

**WHEREAS**, Article of 7 of District Ordinance 2007-01 established that the cost for new meter and installations shall be assessed at the actual cost to the District.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT** as follows:

Meter and material fee is subject to procurement cost and may be adjusted to actual cost of the District; and

Beginning June 14, 2022, labor and equipment rates will be charged were applicable as follows:

<b>Category</b>	<b>Rate</b>
<b>Labor (per hour)</b>	
Office Management	\$65
Field Operator	\$45
Office Staff	\$40
<b>Equipment (per hour)</b>	
Dump Truck	\$37.19
Flat Bed	\$28.65
Service Truck	\$28.65
Standard Pickup	\$25.30
Ditch Witch	\$33.78
Excavator	\$45.18
Loader	\$95.00
Air Compressor	\$20.80

**PASSED AND ADOPTED** by the Board of Directors of the Georgetown Divide Public Utility District at a meeting of said Board held on the fourteenth day of June 2022, by the following vote:

AYES:

NOES:

ABSENT/ABSTAIN:

---

Michael Saunders, President, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

*Attest:*

---

Adam Coyan, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

### **CERTIFICATION**

I hereby certify that the foregoing is a full, true and correct copy of Resolution 2022-XX duly and regularly adopted by the Board of Directors of the Georgetown Divide Public Utility District, County of El Dorado, State of California, on this fourteenth day of June 2022.

---

Adam Coyan, Clerk and Ex officio  
Secretary, Board of Directors  
GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT