

2024



COST ASSESSMENT

JUNE 2024

CONTENTS

2024 COST ASSESSMENT RESULTS.....	3
Public Water System Cost Assessment Results.....	3
Modeled Solutions Selected	3
Estimated Costs by Solution Type.....	4
Costs by DAC Status	6
Average Long-Term Solution Cost per Service Connection.....	8
Costs by County	9
Estimated Long-Term Managerial Assistance	11
Estimated Modeled Treatment O&M Costs.....	12
State Small Water System & Domestic Well Cost Assessment Results.....	13
Modeled Solutions Selected	13
Estimated Costs by Solution Type.....	14
Costs by DAC Status	16
Average Long-Term Solution Cost per Service Connection.....	18
Estimated Costs by County.....	18
Estimated Modeled Treatment O&M Costs.....	20

2024 COST ASSESSMENT RESULTS

PUBLIC WATER SYSTEM COST ASSESSMENT RESULTS

MODELED SOLUTIONS SELECTED

Table 1: 2024 Count of Modeled Solutions for Failing & At-Risk Public Water Systems

	Failing	At-Risk	Total (2024)	Total (2021)	Change from 2021
# Systems	385	613	998	935	↑ 63 (7%)
Modeled Long-Term Solutions					
Physical Consolidation	168 (44%)	266 (43%)	434 (43%)	206 (22%)	↑ 228 (111%)
Centralized Treatment	194 (50%)	N/A	194 (19%)	138 (15%)	↑ 56 (41%)
Decentralized Treatment	17 (4%)	N/A	17 (2%)	106 (11%)	↓ 89 (84%)
New Well	128 (33%)	188 (31%)	316 (32%)		
OEI	283 (74%)	450 (73%)	733 (73%)	935 (100%)	↓ 43 ¹ (5%)
Managerial Assistance	227 (59%)	404 (66%)	631 (63%)		
Modeled Interim Solutions					
Decentralized Treatment	142 (37%)	N/A	142 (14%)	222 (24%)	↓ 8 (4%)
Bottled Water	72 (19%)	N/A	72 (7%)		

Table 2: 2021 Count of Modeled Solutions for Failing & At-Risk Public Water Systems

	Failing	At-Risk	Total (2021)
# Systems	305	630	935
Modeled Long-Term Solutions			
Physical Consolidation	61 (20%)	145 (23%)	206 (22%)
Centralized Treatment	138 (45%)	N/A	138 (15%)
Decentralized Treatment	106 (35%)	N/A	106 (11%)
Additional Costs (New Well, OEI, & Managerial Assistance)	305 (100%)	630 (100%)	935 (100%)
Modeled Interim Solutions			

¹ There are 892 unique public water systems that have modeled new well, OEI, and/or managerial assistance in the 2024 Cost Assessment. The 2021 Cost Assessment results did not break out the costs for these long-term solutions. Therefore, the comparison between 2024 and 2021 requires a broader look across all three categories.

	Failing	At-Risk	Total (2021)
Decentralized Treatment or Bottled Water	222 (73%)	N/A	222 (24%)

ESTIMATED COSTS BY SOLUTION TYPE

Table 3: 2024 Estimated Cost of Modeled Solutions for Failing & At-Risk Public Water Systems (\$ in Millions)

	Failing	At-Risk	Total (2024)	Total (2021)	Cost Change from 2021
# Systems	385	613	998	935	↑ 63 (7%)
Modeled Long-Term Solutions					
Physical Consolidation	\$633	\$1,031	\$1,664	\$424	↑ \$1,240 (292%)
Centralized Treatment	\$319	N/A	\$319	\$401	↓ \$82 (20%)
Decentralized Treatment	\$1.0	N/A	\$1.0	\$19	↓ \$18 (95%)
New Well	\$652	\$1,131	\$1,783		
OEI	\$304	\$621	\$925	\$2,570	↑ \$356 (14%)
Managerial Assistance	\$118	\$100	\$218		
<i>TOTAL:</i>	<i>\$2,027</i>	<i>\$2,883</i>	<i>\$4,910</i>	<i>\$3,414</i>	<i>↑ \$1,496 (44%)</i>
Modeled Interim Solutions²					
Decentralized Treatment	\$403	N/A	\$403	\$845	↓ \$379 (45%)
Bottled Water	\$63	N/A	\$63		
<i>TOTAL:</i>	<i>\$466</i>	<i>N/A</i>	<i>\$466</i>	<i>\$845</i>	<i>↓ \$379 (45%)</i>
TOTAL COST:	\$2,493	\$2,883	\$5,376	\$4,259	↑ \$1,118 (26%)

Table 4: 2021 Estimated Cost of Modeled Solutions for Failing & At-Risk Public Water Systems (\$ in Millions)

	Failing	At-Risk	Total (2021)
# Systems	305	630	935
Modeled Long-Term Solutions			
Physical Consolidation	\$131	\$293	\$424
Centralized Treatment	\$401	N/A	\$401
Decentralized Treatment	\$19	N/A	\$19

² The modeled interim solution costs captured in this table represents the cost for the full duration of modeled interim assistance which is five years for public water systems.

	Failing	At-Risk	Total (2021)
Additional Costs (New Well, OEI, & Managerial Assistance)	\$1,225	\$1,345	\$2,570
<i>TOTAL:</i>	<i>\$1,776</i>	<i>\$1,638</i>	<i>\$3,414</i>
Modeled Interim Solutions³			
Decentralized Treatment or Bottled Water	\$845	N/A	\$845
TOTAL COST:	\$2,621	\$1,638	\$4,259

³ The modeled interim solution costs captured in this table represents the cost for the full duration of modeled interim assistance which is six years for Failing public water systems.

COSTS BY DAC STATUS

Table 5: 2024 Cost Assessment Results for DAC Failing & At-Risk Public Water Systems (\$ in Millions)

System Type	# Failing DAC Systems	Failing DAC Cost	# At-Risk DAC Systems	At-Risk DAC Cost	Total # DAC Systems (2024)	Total DAC Cost (2024)
# Systems	234 (61%)		421 (67%)		655 (66%)	
Modeled Long-Term Solutions						
Physical Consolidation	98 (42%)	\$362	170 (40%)	\$675	268 (41%)	\$1,038
Centralized Treatment	125 (53%)	\$183	N/A	N/A	125 (19%)	\$183
Decentralized Treatment	8 (3%)	\$0.4	N/A	N/A	8 (1%)	\$0.4
New Well	85 (36%)	\$447	135 (32%)	\$807	220 (34%)	\$1,254
OEI	173 (74%)	\$181	325 (77%)	\$395	498 (76%)	\$576
Managerial Assistance	227 (96%)	\$118	404 (96%)	\$100	631 (96%)	\$218
<i>TOTAL:</i>		\$1,292		\$1,977		\$3,269
Modeled Interim Solutions						
Decentralized Treatment	142 (61%)	\$403	N/A	N/A	142 (22%)	\$403
Bottled Water	72 (31%)	\$63	N/A	N/A	72 (11%)	\$63
<i>TOTAL:</i>		\$466		N/A		\$466
TOTAL:		\$1,758		\$1,977		\$3,735

Table 6: 2024 Cost Assessment Results for Non-DAC Failing & At-Risk Public Water Systems (\$ in Millions)

System Type	# Failing Non-DAC Systems	Failing Non-DAC Cost	# At-Risk Non-DAC Systems	At-Risk Non-DAC Cost	Total # Non-DAC Systems (2024)	Total Non-DAC Cost (2024)
# Systems	151 (39%)	\$735	192 (31%)	\$906	343 (34%)	\$1,641
Modeled Long-Term Solutions						
Physical Consolidation	70 (46%)	\$270	96 (50%)	\$356	166 (48%)	\$626
Centralized Treatment	69 (46%)	\$136	N/A	N/A	69 (20%)	\$136
Decentralized Treatment	9 (6%)	\$0.6	N/A	N/A	9 (3%)	\$0.6
New Well	43 (28%)	\$205	53 (28%)	\$324	96 (28%)	\$529
OEI	110 (73%)	\$122	125 (65%)	\$226	235 (69%)	\$348
Managerial Assistance	N/A	N/A	N/A	N/A	N/A	N/A
<i>TOTAL:</i>		\$735		\$906		\$1,641
Modeled Interim Solutions						
Decentralized Treatment	N/A	N/A	N/A	N/A	N/A	N/A
Bottled Water	N/A	N/A	N/A	N/A	N/A	N/A
<i>TOTAL:</i>		<i>N/A</i>		<i>N/A</i>		<i>N/A</i>
TOTAL:		\$735		\$906		\$1,641

AVERAGE LONG-TERM SOLUTION COST PER SERVICE CONNECTION

Table 7: Average Estimated Total Cost per Service Connection for Failing & At-Risk Public Water Systems⁴

Service Connections	2024 Failing	2021 Failing	Change	2024 At-Risk	2021 At-Risk	Change
0 - 100	\$139,954	\$86,900	↑ \$53,054 (61%)	\$252,513	\$90,700	↑ \$161,813 (178%)
101 - 500	\$31,800	\$18,200	↑ \$13,600 (75%)	\$24,760	\$26,200	↓ \$1,440 (5%)
501 - 1,000	\$15,000	\$11,700	↑ \$3,300 (28%)	\$7,409	\$15,500	↓ \$8,091 (52%)
1,001 - 3,300	\$5,810	\$6,800	↓ \$990 (15%)	\$5,382	\$17,300	↓ \$11,918 (69%)
3,301 – 30,000	\$2,641	\$4,900	↓ \$2,259 (46%)	\$3,161	\$3,620	↓ \$459 (13%)
> 30,000	\$1,409	N/A		N/A	N/A	
TOTAL AVERAGE:	\$97,664			\$167,140		

Table 8: Average Estimated Long-Term Solution Cost per Service Connection for Failing & At-Risk Public Water Systems

Modeled Long-Term Solution	Failing	Failing K-12 School	At-Risk	At-Risk K-12 School	Average
Physical Consolidation	\$93,091	\$1.9 M	\$188,175	\$1.8 M	\$351,705
Centralized Treatment	\$13,462	\$389,262	N/A	N/A	\$52,205
Decentralized Treatment	\$4,734	\$35,860	N/A	N/A	\$15,720
New Well	\$73,910	N/A	\$167,024	\$441,044	\$130,174
OEI	\$13,487	N/A	\$15,963	\$32,846	\$150,53
Managerial Assistance	\$18,834	\$200,703	\$17,232	\$43,262	\$28,023
TOTAL AVERAGE:	\$97,664	\$1.28 M	\$167,140	\$788,767	\$237,397

⁴ Public water systems serving K-12 schools are excluded from this analysis.

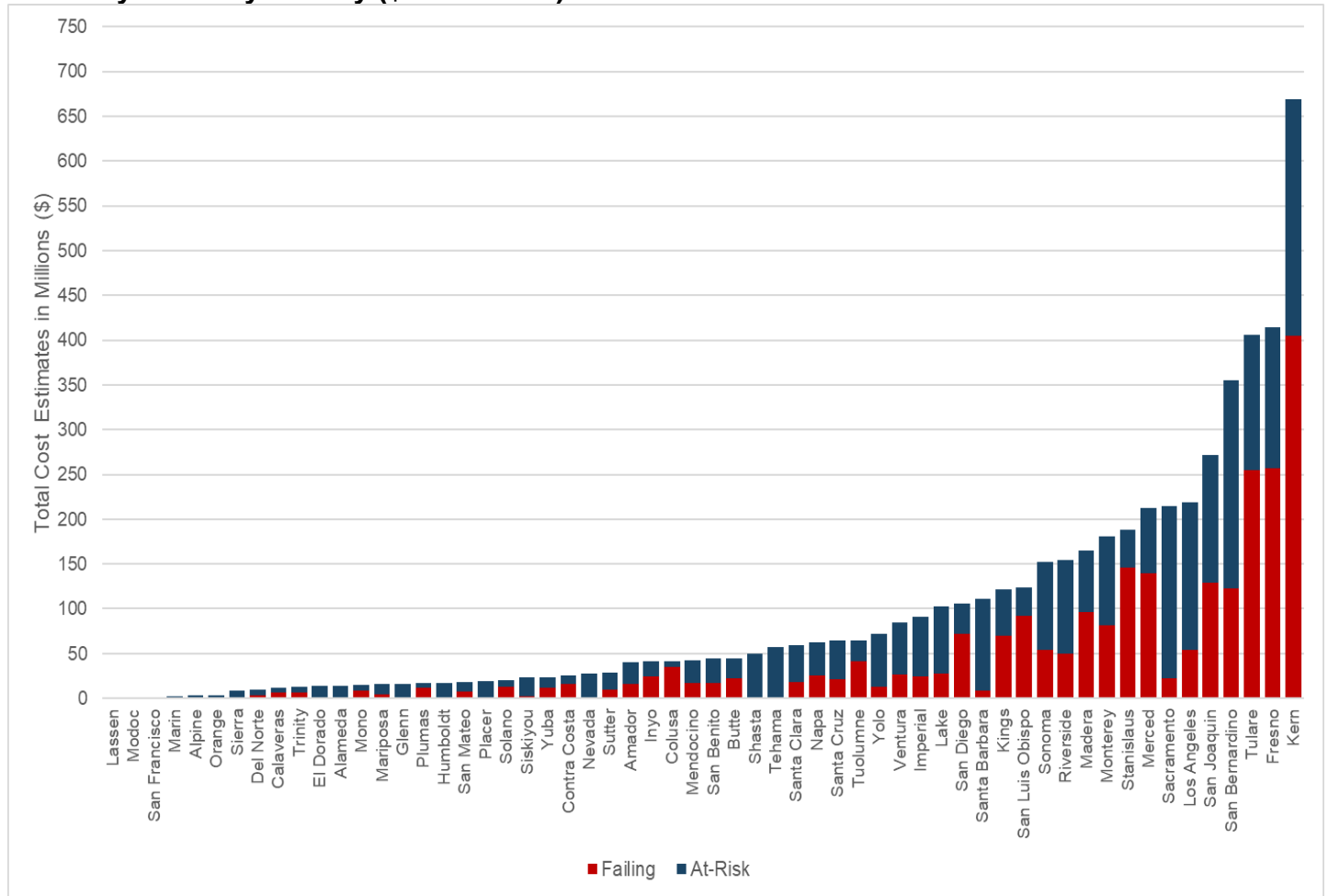
COSTS BY COUNTY

Table 9: Total Interim and Long-Term Cost Estimate for Failing and At-Risk Public Water Systems by County (\$ in Millions)

County	Failing	At-Risk	TOTAL
Alameda	\$0.00	\$13.87	\$13.87
Alpine	\$1.62	\$1.52	\$3.14
Amador	\$16.44	\$23.43	\$39.87
Butte	\$22.33	\$22.06	\$44.39
Calaveras	\$6.63	\$5.40	\$12.03
Colusa	\$34.92	\$6.59	\$41.51
Contra Costa	\$15.73	\$10.10	\$25.84
Del Norte	\$2.87	\$6.74	\$9.61
El Dorado	\$1.70	\$11.78	\$13.48
Fresno	\$256.74	\$157.48	\$414.22
Glenn	\$0.00	\$16.42	\$16.42
Humboldt	\$0.71	\$16.80	\$17.51
Imperial	\$24.07	\$67.24	\$91.31
Inyo	\$23.96	\$16.93	\$40.89
Kern	\$405.13	\$263.67	\$668.81
Kings	\$70.11	\$51.23	\$121.34
Lake	\$27.41	\$74.69	\$102.09
Lassen	\$0.00	\$0.00	\$0.00
Los Angeles	\$54.20	\$165.11	\$219.31
Madera	\$96.34	\$68.74	\$165.09
Marin	\$0.04	\$2.01	\$2.04
Mariposa	\$4.50	\$11.73	\$16.23
Mendocino	\$17.15	\$25.62	\$42.77
Merced	\$139.65	\$73.10	\$212.75
Modoc	\$0.00	\$0.00	\$0.00
Mono	\$8.40	\$6.67	\$15.07
Monterey	\$81.88	\$99.40	\$181.28
Napa	\$25.38	\$37.23	\$62.61
Nevada	\$1.39	\$25.73	\$27.11
Orange	\$0.00	\$3.32	\$3.32
Placer	\$0.00	\$19.23	\$19.23
Plumas	\$11.84	\$5.00	\$16.84
Riverside	\$50.11	\$104.68	\$154.79
Sacramento	\$22.11	\$192.59	\$214.71
San Benito	\$16.99	\$27.21	\$44.20
San Bernardino	\$122.30	\$233.34	\$355.64

County	Failing	At-Risk	TOTAL
San Diego	\$72.38	\$33.18	\$105.55
San Francisco	\$0.00	\$0.00	\$0.00
San Joaquin	\$129.29	\$142.56	\$271.86
San Luis Obispo	\$91.75	\$31.78	\$123.53
San Mateo	\$7.14	\$11.31	\$18.45
Santa Barbara	\$8.52	\$102.33	\$110.86
Santa Clara	\$18.57	\$40.71	\$59.28
Santa Cruz	\$20.80	\$43.35	\$64.15
Shasta	\$1.53	\$47.81	\$49.35
Sierra	\$0.00	\$9.09	\$9.09
Siskiyou	\$2.43	\$21.21	\$23.65
Solano	\$12.97	\$7.31	\$20.29
Sonoma	\$54.03	\$98.18	\$152.21
Stanislaus	\$146.46	\$42.08	\$188.54
Sutter	\$10.13	\$18.35	\$28.48
Tehama	\$0.00	\$57.61	\$57.61
Trinity	\$6.09	\$6.89	\$12.98
Tulare	\$255.14	\$151.01	\$406.15
Tuolumne	\$41.65	\$22.78	\$64.43
Ventura	\$26.64	\$58.38	\$85.03
Yolo	\$12.63	\$59.03	\$71.66
Yuba	\$12.14	\$11.58	\$23.71
TOTAL:	\$2,493	\$2,883	\$5,386

Figure 1: Total Interim and Long-Term Cost Estimate for Failing and At-Risk Public Water Systems by County (\$ in Millions)



ESTIMATED LONG-TERM MANAGERIAL ASSISTANCE

Table 10: 2024 Estimated Managerial Costs for Failing & At-Risk Public Water Systems (\$ in Millions)

Managerial Cost	# Failing Systems	Failing Cost	# At-Risk Systems	At-Risk Cost	Total # Systems (2024)	Total Cost (2024)
Technical Assistance	227 (59%)	\$96	404 (66%)	\$83	631 (63%)	\$179
Administrator Assistance	24 (6%)	\$22	19 (3%)	\$17	43 (4%)	\$39
TOTAL:	251 (65%)	\$118	423 (69%)	\$100	674 (68%)	\$218

ESTIMATED MODELED TREATMENT O&M COSTS

Table 11: 2024 Estimated Long-Term Modeled Treatment Annual O&M Costs for Failing Public Water Systems

	Failing Systems Total Cost	Average Cost per Connection⁵	20-Year NPW⁶
Centralized Treatment	\$60 M	\$905	\$816 M
Decentralized Treatment	\$0.14M	\$660	\$2 M
TOTAL:	\$60 M	\$1,565	\$818 M

⁵ Non transient, non-community Failing public water systems serving K-12 schools are excluded for calculating the average.

⁶ Net Present Worth (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.

STATE SMALL WATER SYSTEM & DOMESTIC WELL COST ASSESSMENT RESULTS

MODELED SOLUTIONS SELECTED

Table 12: 2024 Count of Modeled Solutions for High-Risk State Small Water Systems & Domestic Wells

	State Small Water Systems	Domestic Wells	Total (2024)	Total (2021)	Change from 2021
# Systems	727	143,663	144,390	63,062	↑ 81,328 (129%)
Modeled Long-Term Solutions					
Physical Consolidation	407 (56%)	70,008 (49%)	70,415 (49%)	25,838 (41%)	↑ 44,577 (173%)
Decentralized Treatment	221 (30%)	32,509 (23%)	32,730 (23%)	37,214 (59%)	↓ 4,484 (12%)
New Private Well	149 (21%)	58,663 (41%)	58,812 (41%)	N/A	N/A
Bottled Water	18 (3%)	2,013 (1%)	2,031 (1%)	10 (<0.0%)	↑ 2,021 (20,210%)
Technical Assistance	65 (9%)	9,783 (7%)	9,848 (7%)	N/A	N/A
Modeled Interim Solutions					
Decentralized Treatment	92 (1%)	10,073 (7%)	10,165 (7%)	20,573 (33%)	↑ 19,578 (95%)
Bottled Water	132 (18%)	29,854 (21%)	29,986 (21%)		
Technical Assistance	92 (1%)	10,073 (7%)	10,165 (7%)	N/A	N/A

Table 13: 2021 Count of Modeled Solutions for High-Risk State Small Water Systems & Domestic Wells

	State Small Water Systems	Domestic Wells	Total (2021)
# Systems	455	62,607	63,062
Modeled Long-Term Solutions			
Physical Consolidation	142 (31%)	25,696 (41%)	25,838 (41%)
Decentralized Treatment	303 (67%)	36,911 (59%)	37,214 (59%)

	State Small Water Systems	Domestic Wells	Total (2021)
New Private Well	N/A	N/A	N/A
Bottled Water	10 (2%)	N/A	10 (<0.0%)
Technical Assistance	N/A	N/A	N/A
Modeled Interim Solutions			
Decentralized Treatment or Bottled Water	130	20,443	20,573 (33%)
Technical Assistance	N/A	N/A	N/A

ESTIMATED COSTS BY SOLUTION TYPE

Table 14: 2024 Estimated Cost of Modeled Solutions for High-Risk State Small Water Systems & Domestic Wells (\$ in Millions)

	State Small Water Systems	Domestic Wells	Total (2024)	Total (2021)	Cost Change from 2021
# Systems	727	143,663	144,390	63,062	↑ 81,328 (129%)
Modeled Long-Term Solutions					
Physical Consolidation	\$296.6	\$1,303	\$1,600	\$835	↑ \$765 (92%)
Decentralized Treatment	\$8.8	\$136	\$145	\$314	↓ \$169 (54%)
New Private Well	\$8.14	\$2,980	\$2,988	N/A	N/A
Bottled Water	\$1.5	\$24	\$26	N/A	N/A
Technical Assistance	\$0.44	\$6.6	\$7	N/A	N/A
<i>TOTAL:</i>	\$315.5	\$4,450	\$4,766	\$1,149	↑ \$3,617 (315%)
Modeled Interim Solutions⁷					
Decentralized Treatment	\$6	\$53	\$59	\$201	↓ \$63 (31%)
Bottled Water	\$7	\$72	\$79		
Technical Assistance	\$0.6	\$7	\$8	N/A	N/A
<i>TOTAL:</i>	\$14	\$132	\$146	\$201	↓ \$55 (27%)
TOTAL COST:	\$329.5	\$4,582	\$4,912	\$1,350	↑ \$3,562 (264%)

⁷ The modeled interim solutions cost captured in this table represents the cost for the full supply duration which is five years for state small water systems and two years for domestic wells.

Table 15: 2021 Estimated Cost of Modeled Solutions for High-Risk State Small Water Systems & Domestic Wells (\$ in Millions)

	State Small Water Systems	Domestic Wells	Total (2021)
# Systems	455	62,607	63,062
Modeled Long-Term Solutions			
Physical Consolidation	\$35	\$800	\$835
Decentralized Treatment	\$18	\$296	\$314
New Private Well	N/A	N/A	N/A
Bottled Water	N/A	N/A ⁸	N/A
Technical Assistance	N/A	N/A	N/A
<i>TOTAL:</i>	\$53	\$1,096	\$1,149
Modeled Interim Solutions⁹			
Decentralized Treatment or Bottled Water	\$9	\$192	\$201
Technical Assistance	N/A	N/A	N/A
<i>TOTAL:</i>	\$9	\$192	\$201
TOTAL COST:	\$62	\$1,288	\$1,350

⁸ The 2021 Cost Assessment included long-term bottled water reliance costs in the interim bottled water total cost estimate to avoid double counting.

⁹ Modeled interim solutions costs captured in this table represent the cost for a nine-year term for high-risk state small water systems and domestic wells.

COSTS BY DAC STATUS

Table 16: 2024 Cost Assessment Results for DAC High-Risk State Small Water Systems & Domestic Wells (\$ in Millions)

System Type	# DAC SSWS	DAC SSWS Cost	# DAC DWs	DAC DW Cost	Total # DAC Systems (2024)	Total DAC Cost (2024)
# Systems	234 (32%)		40,755 (28%)		40,989 (28%)	
Modeled Long-Term Solutions						
Physical Consolidation	117 (50%)	\$76	16,095 (39%)	\$299	16,212 (11%)	\$375
Decentralized Treatment	65 (28%)	\$3	9,783 (24%)	\$39	9,848 (7%)	\$42
New Private Well	68 (29%)	\$3	20,166 (49%)	\$1,000	20,234 (14%)	\$1,003
Bottled Water	10 (4%)	\$1	828 (2%)	\$10	838 (1%)	\$11
Technical Assistance	65 (28%)	\$0.44	9,783 (24%)	\$7	9,848 (7%)	\$7
<i>TOTAL:</i>		\$83		\$1,355		\$1,438
Modeled Interim Solutions¹⁰						
Decentralized Treatment	92 (39%)	\$6	10,073 (25%)	\$53	10,165 (7%)	\$59
Bottled Water	132 (56%)	\$7	29,854 (73%)	\$72	29,986 (21%)	\$79
Technical Assistance	92 (39%)	\$0.61	10,073 (25%)	\$7	10,165 (7%)	\$8
<i>TOTAL:</i>		\$14		\$132		\$146
TOTAL:		\$97		\$1,487		\$1,584

¹⁰ The modeled interim solutions cost captured in this table represents the cost for the full supply duration which is five years for state small water systems and two years for domestic wells.

Table 17: 2024 Cost Assessment Results for Non-DAC High-Risk State Small Water Systems & Domestic Wells (\$ in Millions)

System Type	# Non-DAC SSWS	Non-DAC SSWS Cost	# Non-DAC DWs	Non-DAC DW Cost	Total # Non-DAC Systems (2024)	Total Non-DAC Cost (2024)
# Systems	493 (68%)	\$232	102,908 (72%)	\$3,096	103,401 (72%)	\$3,328
Modeled Long-Term Solutions						
Physical Consolidation	290 (59%)	\$221	53,913 (52%)	\$1,004	54,203 (52%)	\$1,225
Decentralized Treatment	156 (32%)	\$6	22,726 (22%)	\$98	22,882 (22%)	\$104
New Private Well	81 (16%)	\$5	38,497 (37%)	\$1,980	38,578 (37%)	\$1,985
Bottled Water	8 (2%)	\$0.6	1,185 (1%)	\$14	1193 (1%)	\$15
Technical Assistance	N/A	N/A	N/A	N/A	N/A	N/A
<i>TOTAL:</i>		\$232		\$3,096		\$3,328
Modeled Interim Solutions¹¹						
Decentralized Treatment	N/A	N/A	N/A	N/A	N/A	N/A
Bottled Water	N/A	N/A	N/A	N/A	N/A	N/A
Technical Assistance	N/A	N/A	N/A	N/A	N/A	N/A
<i>TOTAL:</i>		N/A		N/A		N/A
TOTAL:		\$232		\$3,096		\$3,328

¹¹ The modeled interim solutions cost captured in this table represents the cost for the full supply duration which is five years for state small water systems and two years for domestic wells.

AVERAGE LONG-TERM SOLUTION COST PER SERVICE CONNECTION

Table 18: Average Estimated Long-Term Solution Cost per Service Connection for State Small Water Systems & Domestic Wells

Long-Term Solutions	State Small Water Systems	Domestic Well	Average
Physical Consolidation	\$103,411	\$36,467	\$40,794
Decentralized Treatment	\$4,782	\$4,188	\$4,218
New Private Well	\$9,106	\$51,679	\$50,371
Bottled Water	\$12,012	\$12,012	\$12,012
Technical Assistance	\$711	\$681	\$682
TOTAL AVERAGE:	\$61,449	\$36,026	\$37,342

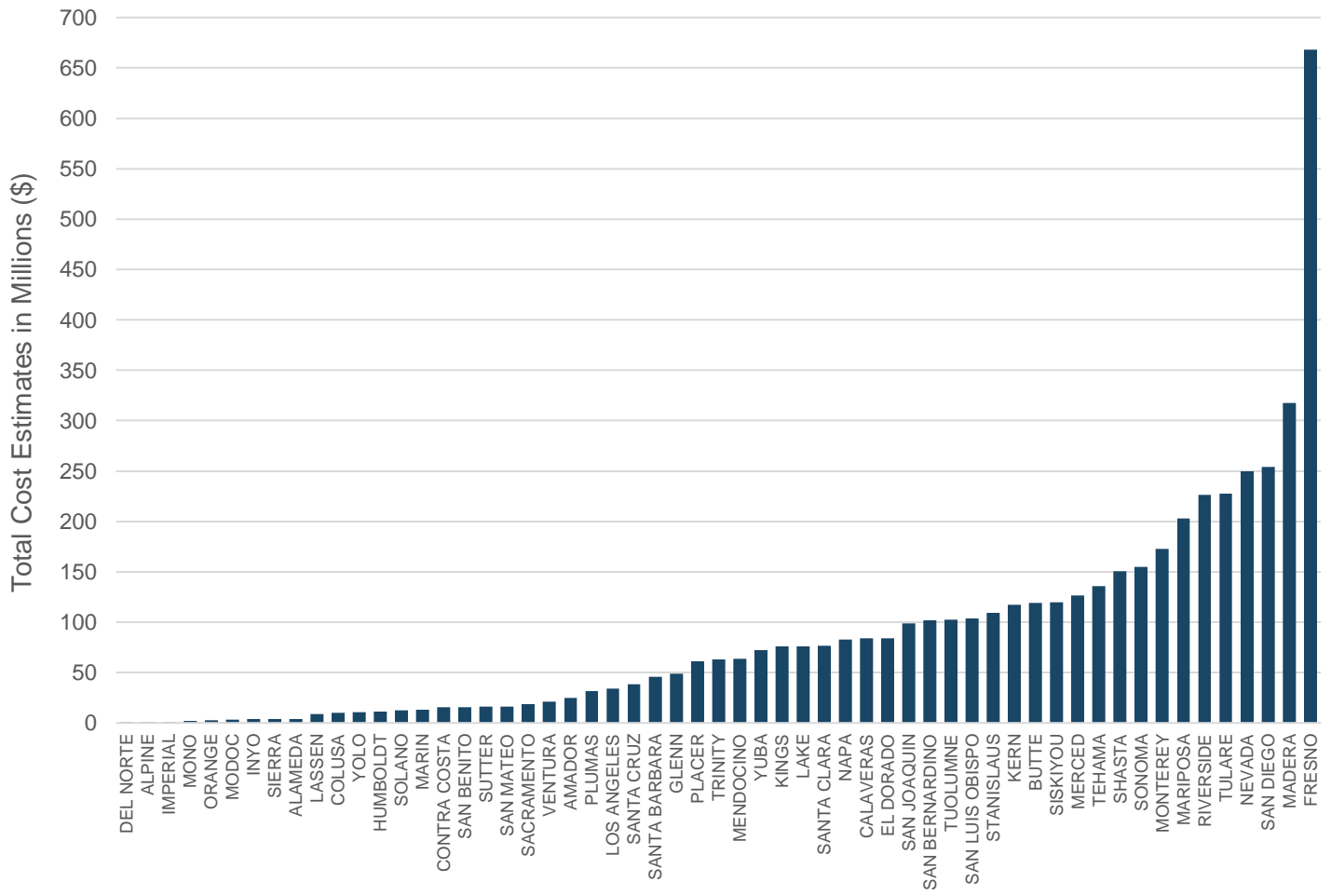
ESTIMATED COSTS BY COUNTY

Table 19: Estimated Total Interim and Long-Term Costs for High-Risk State Small Water Systems and Domestic Wells (\$ in Millions)

County	State Small Water Systems	Domestic Wells	TOTAL
Alameda	\$0	\$4,079,528	\$4,079,528
Alpine	\$0	\$336,976	\$336,976
Amador	\$188,546	\$24,381,881	\$24,570,427
Butte	\$1,133,958	\$118,179,623	\$119,313,581
Calaveras	\$0	\$83,920,784	\$83,920,784
Colusa	\$51,923	\$10,071,471	\$10,123,394
Contra Costa	\$2,404,698	\$12,886,031	\$15,290,729
Del Norte	\$0	\$303,548	\$303,548
El Dorado	\$3,012,573	\$80,991,485	\$84,004,058
Fresno	\$2,014,869	\$666,329,538	\$668,344,407
Glenn	\$0	\$49,118,346	\$49,118,346
Humboldt	\$460,672	\$10,518,711	\$10,979,384
Imperial	\$0	\$569,623	\$569,623
Inyo	\$959,658	\$2,730,159	\$3,689,818
Kern	\$22,805,152	\$94,296,693	\$117,101,846
Kings	\$730,618	\$75,315,687	\$76,046,305
Lake	\$3,391,467	\$72,671,792	\$76,063,259
Lassen	\$129,390	\$8,818,958	\$8,948,349
Los Angeles	\$0	\$34,186,671	\$34,186,671
Madera	\$6,181,131	\$311,523,784	\$317,704,915
Marin	\$1,376,820	\$11,600,518	\$12,977,338

County	State Small Water Systems	Domestic Wells	TOTAL
Mariposa	\$1,728,955	\$200,891,302	\$202,620,258
Mendocino	\$0	\$63,385,331	\$63,385,331
Merced	\$6,157,830	\$120,269,380	\$126,427,209
Modoc	\$0	\$3,503,673	\$3,503,673
Mono	\$59,445	\$2,049,166	\$2,108,611
Monterey	\$107,664,044	\$65,179,443	\$172,843,487
Napa	\$1,578,612	\$81,174,691	\$82,753,303
Nevada	\$98,061	\$249,426,476	\$249,524,537
Orange	\$676,410	\$1,895,906	\$2,572,316
Placer	\$447,722	\$60,557,782	\$61,005,504
Plumas	\$765,601	\$30,696,612	\$31,462,213
Riverside	\$32,080,981	\$194,183,919	\$226,264,899
Sacramento	\$1,516,296	\$17,091,968	\$18,608,264
San Benito	\$3,260,534	\$12,107,557	\$15,368,091
San Bernardino	\$2,243,983	\$99,703,970	\$101,947,953
San Diego	\$3,601,970	\$250,554,194	\$254,156,164
San Francisco	\$0	\$0	\$0
San Joaquin	\$6,692,937	\$91,852,391	\$98,545,328
San Luis Obispo	\$13,335,153	\$90,666,355	\$104,001,507
San Mateo	\$3,331,469	\$13,098,004	\$16,429,473
Santa Barbara	\$9,660,589	\$36,196,628	\$45,857,217
Santa Clara	\$25,536,134	\$50,988,030	\$76,524,164
Santa Cruz	\$3,145,654	\$35,204,266	\$38,349,920
Shasta	\$2,018,990	\$148,412,740	\$150,431,730
Sierra	\$0	\$3,956,749	\$3,956,749
Siskiyou	\$1,383,977	\$118,033,824	\$119,417,801
Solano	\$637,719	\$12,005,820	\$12,643,539
Sonoma	\$12,951,102	\$141,819,114	\$154,770,216
Stanislaus	\$11,317,212	\$98,162,008	\$109,479,221
Sutter	\$3,624,643	\$12,673,548	\$16,298,191
Tehama	\$2,346,802	\$133,471,796	\$135,818,598
Trinity	\$0	\$63,244,853	\$63,244,853
Tulare	\$18,766,708	\$208,883,824	\$227,650,532
Tuolumne	\$3,247,754	\$99,090,279	\$102,338,033
Ventura	\$3,066,453	\$17,941,754	\$21,008,207
Yolo	\$68,745	\$10,611,925	\$10,680,670
Yuba	\$1,612,339	\$70,563,443	\$72,175,782
TOTAL:	\$329.5	\$4,582	\$4,912

Figure 2: Estimated Total Interim and Long-Term Costs for High-Risk State Small Water Systems and Domestic Wells (\$ in Millions)



ESTIMATED MODELED TREATMENT O&M COSTS

Table 20: Estimated Decentralized Treatment Annual O&M Costs for State Small Water Systems and Domestic Wells

	State Small Water Systems	Domestic Well	TOTAL
Decentralized Treatment Total Cost	\$1.51 M	\$23.15 M	\$25 M
Average Cost Per Connection/Well	\$823	\$712	\$1,535

	State Small Water Systems	Domestic Well	TOTAL
20-Year NPW¹²	\$30 M	\$453 M	\$483 M

¹² Net Present Worth (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.