



**COLORADO**  
**Colorado Water Conservation Board**  
 Department of Natural Resources

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**TO:** Colorado Water Conservation Board Members

**FROM:** Cole Bedford, P.E., Project Manager  
 Kirk Russell, P.E., Finance Section Chief

**DATE:** November 15-16, 2023 Board Meeting

**AGENDA ITEM:** CA6. CWCB Policy #4 - Update to Water Projects Loan Program Ratios

**Staff Recommendation**

Staff recommends the Board approve the adoption of new ratios for use by the CWCB Water Projects Loan Program for the purpose of assessing the strength of prospective borrowers. This action will modify CWCB Policy #4: *Construction Fund and Severance Tax Trust Fund Perpetual Base Account Borrower Creditworthiness and Financial Need Determinations*. The new ratios are shown in Table 1 and the proposed updated CWCB Policy #4 is attached.

**TABLE 1: NEW RATIOS**

Financial Ratio	Weak	Typical	Strong
Debt per Tap	>\$3,500	\$300 - \$3,500	<\$300
Average Monthly Water Bill	>\$90	\$30 - \$90	<\$30
Annual Operating Cost per Acre-Foot	>\$24	\$3 - \$24	<\$3



**Introduction**

CWCB Policy #4: *Construction Fund and Severance Tax Trust Fund Perpetual Base Account Borrower Creditworthiness and Financial Need Determinations* establishes a systematic method for evaluating the creditworthiness of potential borrowers in the Water Projects Loan Program. One component of this method is the application of six financial ratios, which serve as indicators of potential borrowers’ fiscal health. Potential borrowers are designated as “weak,” “average,” or “strong” relative to similar water providers across Colorado. The Operating, Debt Service Coverage, and Cash Reserves to Current Expenses ratios are applied to all potential borrowers. The Debt per Tap and Average Monthly Water Bill ratios are only applied to municipal-type borrowers like municipalities and water districts. The Annual Operating Cost per Acre-Foot ratio is only applied to agricultural-type borrowers like mutual ditch companies and irrigation districts. The current ratios were adopted in October 1999 and are shown in Table 2.

**TABLE 2: CURRENT RATIOS**

Financial Ratio	Weak	Average	Strong
Operating (Revenue to Expenses)	<100%	100% - 120%	>120%
Debt Service Coverage	<100%	100% - 125%	>125%
Cash Reserves to Current Expenses	<50%	50% - 100%	>100%
Debt per Tap	>\$5,000	\$2,500 - \$5,000	<\$2,500
Average Monthly Water Bill	>\$60	\$30 - \$60	<\$30
Annual Operating Cost per Acre-Foot	>\$20	\$10 - \$20	<\$10

The first three ratios shown in Table 2—Operating, Debt Service Coverage, and Cash Reserves to Current Expenses—do not need to be updated. They are independent of inflation, cost increases, and other changes to water providers’ operations over time. The second three ratios—Debt per Tap, Average Monthly Water Bill, and Annual Operating Cost per Acre-Foot—do need to be updated. They are based upon values that have changed since 1999.

**Method of Updating Ratios**

It is likely that the current ratios were established through an informal process based on a general knowledge of water providers’ operations across Colorado in 1999. For this update, a representative sample of potential borrowers was obtained for Debt per Tap, Average Monthly Water Bill, and Annual Operating Cost per Acre-Foot. From each sample, the 15<sup>th</sup> percentile was selected as the weak/average threshold and the 85<sup>th</sup> percentile as the average/strong threshold. The threshold numbers were then rounded as necessary for simplicity of use. The following three sections describe how each of the three ratios were updated in more detail.

Furthermore, the “average” category was renamed “typical” to better reflect that potential borrowers falling into this category have finances commonly seen by the CWCB Water Projects Loan Program but not necessarily “average” in a statistical sense.

**Debt per Tap**

The Colorado Department of Local Affairs (DOLA) monitors debt held by public water providers. Their data is current up to 2019. Furthermore, the Colorado Department of Public Health (CDPHE) conducts a periodic review of water providers which includes the number of taps in their systems. CDPHE’s most recent review for which data is available was also conducted in 2019. 127 water providers are included in both agencies’ datasets. Per DOLA’s and CDPHE’s data, the debt held by Colorado water providers per tap in their systems ranges from about \$7 to more than \$16,000 as shown in Figure 1. The complete dataset for debt per tap is attached.

**FIGURE 1: DEBT PER TAP FOR 127 COLORADO WATER PROVIDERS**

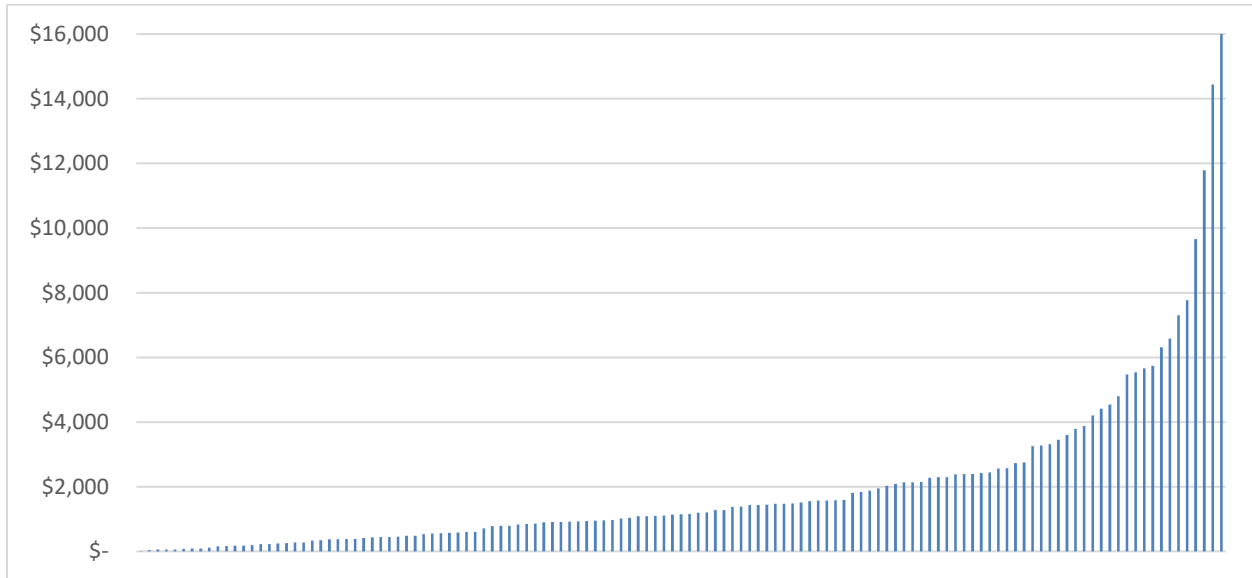


Table 3 shows the key values associated with the debt per tap dataset. Table 4 shows how those values translate to new “weak,” “typical,” and “strong” designations and how they compare to the current values.

**TABLE 3: DEBT PER TAP KEY VALUES**

Minimum	15 <sup>th</sup> Percentile	Median	85 <sup>th</sup> Percentile	Maximum
\$7	\$276	\$1,149	\$3,469	\$16,373

**TABLE 4: DEBT PER TAP RATIO**

Financial Ratio	Weak	Typical	Strong
Current Ratio	>\$5,000	\$2,500 - \$5,000	<\$2,500
New Ratio	>\$3,500	\$300 - \$3,500	<\$300
Difference	-\$1,500	-	-\$2,200
Percent Change	-30%	-	-88%

**Average Monthly Water Bill**

In addition to monitoring water providers’ debt, DOLA periodically conducts the *Municipal and Special District Water and Wastewater Rate Survey*, the most recent of which was conducted in 2021. Average monthly rates were included for 117 providers in the 2021 survey. This data was drawn directly into the attached average monthly water bill dataset. The average monthly water bill ranges from about \$18 to \$200 as shown in Figure 2.

**FIGURE 2: AVERAGE MONTHLY WATER BILL FOR 117 COLORADO WATER PROVIDERS**

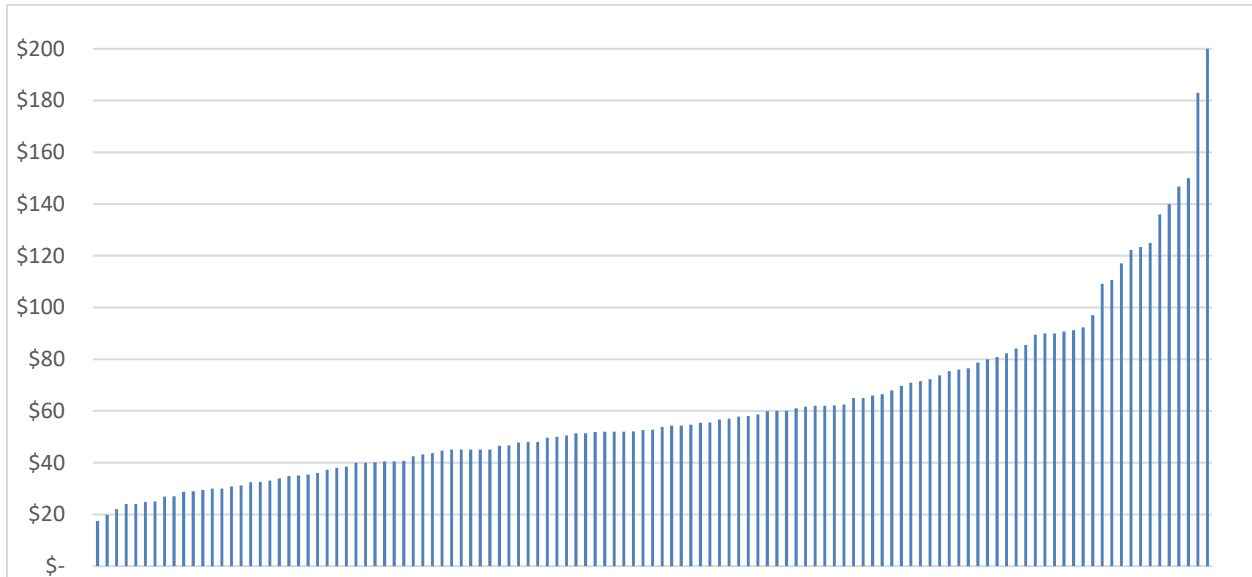


Table 5 shows the key values associated with the average monthly water bill dataset. Table 6 shows how those values translate to new “weak,” “typical,” and “strong” designations and how they compare to the current values.

**TABLE 5: AVERAGE MONTHLY WATER BILL KEY VALUES**

Minimum	15 <sup>th</sup> Percentile	Median	85 <sup>th</sup> Percentile	Maximum
\$18	\$33	\$54	\$90	\$200

**TABLE 6: AVERAGE MONTHLY WATER BILL RATIO**

Financial Ratio	Weak	Typical	Strong
Current Ratio	>\$60	\$30 - \$60	<\$30
New Ratio	>\$90	\$30 - \$90	<\$30
Difference	+\$30	-	+\$0
Percent Change	+50%	-	+0%

**Annual Operating Cost per Acre-Foot**

Unlike the data necessary to calculate the Debt per Tap and Average Monthly Water Bill ratios, the data necessary to calculate Annual Operating Cost per Acre-Foot is not collected by a public entity like DOLA or CDPHE. In order to collect this data, staff contracted with WestWater Research, LLC (WestWater). Between May and August 2023, WestWater collected financial information from 80 agricultural-type water providers representative of the CWCB Water Project Loan Program’s borrowers. These water providers were from every basin in the state and varied by size, governance, and water source. The resulting dataset included annual operating cost per acre-foot ranging from \$0.68 to \$45.07 as shown in Figure 3. This dataset is attached.

**FIGURE 3: ANNUAL OPERATING COST PER ACRE-FOOT FOR 80 COLORADO WATER PROVIDERS**

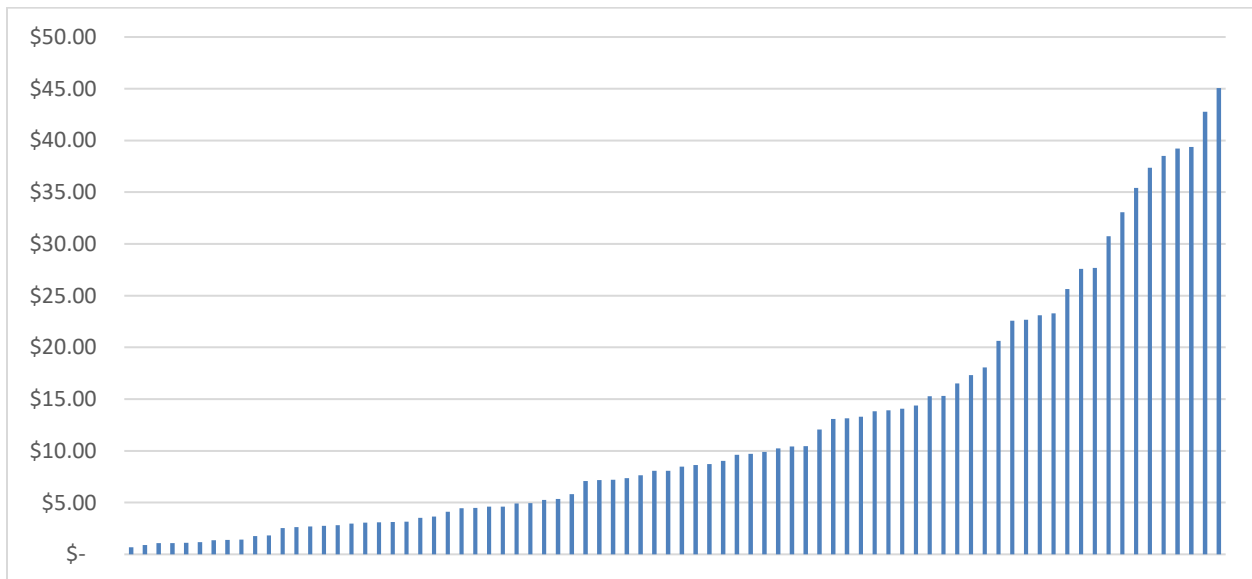


Table 7 shows the key values associated with the average annual operating cost per acre-foot dataset. Table 8 shows how those values translate to new “weak,” “typical,” and “strong” designations and how they compare to the current values.

**TABLE 7: AVERAGE ANNUAL OPERATING COST PER ACRE-FOOT KEY VALUES**

Minimum	15 <sup>th</sup> Percentile	Median	85 <sup>th</sup> Percentile	Maximum
\$0.68	\$2.61	\$8.29	\$23.65	\$45.07

**TABLE 8: ANNUAL OPERATING COST PER ACRE-FOOT RATIO**

Financial Ratio	Weak	Typical	Strong
Current Ratio	>\$20	\$10 - \$20	<\$10
New Ratio	>\$24	\$3 - \$24	<\$3
Difference	+\$4	-	-\$7
Percent Change	+20%	-	-70%

**New Ratios Applied to Recent Loan Reviews**

Between January 2020 and July 2023, loan application reviews were conducted for 12 municipal-type borrowers to which the Debt per Tap and Average Monthly Water Bill ratios were applied and 30 agricultural-type borrowers to which the Annual Operating Cost per Acre-Foot ratio was applied. In order to better understand how the recommended ratios will impact future borrower designations, Table 9 shows the changes that would have occurred had the proposed new ratios been applied to the these most recent loan application reviews.

**TABLE 9: BORROWER DESIGNATION CHANGES**

<b>Financial Ratio</b>	<b>Number of Upgrades</b>	<b>Percent Upgraded</b>	<b>Number of Downgrades</b>	<b>Percent Downgraded</b>
Debt per Tap	0 of 12	0%	4 of 12	33%
Average Monthly Water Bill	1 of 12	8%	0 of 12	0%
Annual Operating Cost per Acre-Foot	1 of 30	3%	9 of 30	30%

These numbers suggest that while the updated ratios better reflect the current financial environment for potential borrowers, their effect on future loan reviews will likely be modest. We can expect that the new ratios will result in very few upgraded borrower designations for any of the ratios. However, some downgrades in Debt per Tap and Annual Operating Cost per Acre-Foot are likely. Most of these will be an adjustment of the designation from “strong” to “typical.”

- Attachments: Updated CWCB Policy #4  
Debt per Tap Dataset  
Average Monthly Water Bill Dataset  
Annual Operating Cost per Acre-Foot Dataset

POLICY NUMBER: 4

SUBJECT: **CONSTRUCTION FUND AND SEVERANCE TAX TRUST FUND PERPETUAL BASE ACCOUNT BORROWER CREDITWORTHINESS AND FINANCIAL NEED DETERMINATIONS**

EFFECTIVE DATE: ~~October 1, 1999~~ December 1, 2023

POLICY: The Colorado Water Conservation Board (CWCB) may make water project loans available to all Project Sponsors (up to the limit of funds available for lending in any one year) who can establish that the project is feasible and that they have the ability to repay the loan. For all loans from the CWCB Construction Fund and Severance Tax Trust Fund Perpetual Base Account, the Board will require analyses of the project sponsor's creditworthiness and financial need.

PURPOSE: To establish a systematic method for evaluating the creditworthiness and financial need of potential loan recipients.

APPLICABILITY: This policy applies to the consideration of all loan applications from the CWCB Construction Fund and Severance Tax Trust Fund Perpetual Base Account.

PROCEDURE: As an integral part of the feasibility investigation for each proposed project, the project sponsor will submit the following to the CWCB staff:

The project sponsor's most recent schedule of rates or assessments,

Copies of the project sponsor's three most recent audit reports or financial statements,

A summary of the results of applications to all other lenders to which the project sponsor has applied for funding of the proposed project,

The cost of the water developed by the project in terms of cost per acre-foot or per 1,000 gallons,

A detailed projection of all revenues and all expenditures by year over the period of debt retirement with the CWCB, and

Where appropriate a current credit report or other documentation from financial institutions that the project sponsor has done business with.

CWCB staff will review these submittals to determine the following:

The project sponsor’s assets, liabilities, net equity and net income,

The extent to which revenues will be available to offset all anticipated expenditures over the period of debt retirement,

Total long-term debt of the entity at the present time and over the period of debt retirement,

Number of water users or shareholders to participate in debt repayment, and

The financial ratios in the following table (the rating system is suggested only as a guideline for the analyses).

<b>Ratio</b>	<b>Weak</b>	<b>Average Typical</b>	<b>Strong</b>
Operating Ratio (1)	<100 %	100-120 %	>120%
Debt Service Coverage Ratio (2)	<100%	100-125%	>125%
Debt per Tap (3)	<del>&gt;\$5,000</del> >\$3,500	<del>\$2,500-\$5,000</del> \$300-\$3,500	<del>&lt;\$2,500</del> <300
Cash Reserves to Current Expense	<50%	50-100%	>100%
Annual Cost per Acre-Foot (Agric.)	<del>&gt;\$20</del> >\$24	<del>\$10-\$20</del> \$3-\$24	<del>&lt;\$10</del> <\$3
Monthly Resid. Water Bill (Munic.)	<del>&gt;\$60</del> >\$90	<del>\$30-\$60</del> \$30-\$90	<\$30

(1) Operating revenue/operating expense

(2) (Total eligible revenues – operating expenses)/total debt service

(3) Total long-term debt/number of taps

The analysis of creditworthiness will be based on all of the available preceding indicators as interpreted by the CWCB staff. Should the analysis indicate that a potential borrower might not be creditworthy, staff will prepare a set of recommendations for measures that could improve the borrower’s ability to repay the loan. The project sponsor must adopt share assessments and/or



water rates necessary to establish creditworthiness prior to entering into a loan contract with the CWCB.

The analysis of financial need will be based on all of the preceding data as well as median household income for municipalities. It is assumed that communities with a lower median household income as well as agricultural borrowers will have a greater need for financial assistance. Agricultural and low-income municipal project sponsors are eligible for the lowest lending rates and for a higher priority in the list of projects recommended to the legislature each year by the Board.

Approved by the CWCB

~~September 27, 1999 Board Meeting~~ November 16, 2023 Board Meeting

~~Agenda Item # 7~~ Agenda Item CA6

DEBT PER TAP DATASET

	Name	Total Debt <sup>1</sup>	Number of Taps <sup>2</sup>	Debt per Tap
1	Severance, Town of	\$ 11,714	1,621	\$ 7.23
2	Woodland Park, City of	\$ 139,779	3,874	\$ 36.08
3	Arvada, City of	\$ 2,175,000	39,327	\$ 55.31
4	Collbran, Town of	\$ 12,750	220	\$ 57.95
5	Granby, Town of	\$ 91,090	1,552	\$ 58.69
6	Nucla, Town of	\$ 52,783	650	\$ 81.20
7	Evans, City of	\$ 623,964	6,896	\$ 90.48
8	Kersey, Town of	\$ 39,470	429	\$ 92.00
9	Montrose, City of	\$ 907,500	7,857	\$ 115.50
10	Berthoud, Town of	\$ 501,455	3,198	\$ 156.80
11	Dinosaur, Town of	\$ 33,872	200	\$ 169.36
12	De Beque, Town of	\$ 58,913	339	\$ 173.78
13	Longmont, City of	\$ 4,776,377	26,816	\$ 178.12
14	Akron, Town of	\$ 192,285	967	\$ 198.85
15	Basalt, Town of	\$ 196,891	870	\$ 226.31
16	Fowler, Town of	\$ 162,936	709	\$ 229.81
17	Ovid, Town of	\$ 45,464	185	\$ 245.75
18	Gilcrest, Town of	\$ 90,857	350	\$ 259.59
19	Eckley, Town of	\$ 42,500	156	\$ 272.44
20	Northglenn, City of	\$ 2,815,001	10,203	\$ 275.90
21	Flagler, Town of	\$ 101,187	300	\$ 337.29
22	Estes Park, Town of	\$ 2,928,836	8,399	\$ 348.71
23	Eaton, Town of	\$ 676,692	1,800	\$ 375.94
24	Norwood, Town of	\$ 299,806	795	\$ 377.11
25	Durango, City of	\$ 2,910,599	7,631	\$ 381.42
26	Monument, Town of	\$ 53,017	137	\$ 386.99
27	Loveland, City of	\$ 11,340,000	27,515	\$ 412.14
28	Del Norte, Town of	\$ 344,237	800	\$ 430.30
29	Dacono, City of	\$ 1,030,803	2,340	\$ 440.51
30	Silverton, Town of	\$ 271,887	606	\$ 448.66
31	Parachute, Town of	\$ 261,421	575	\$ 454.65
32	Calhan, Town of	\$ 168,826	350	\$ 482.36
33	Oak Creek, Town of	\$ 266,127	550	\$ 483.87
34	Grand Junction, City of	\$ 4,985,356	9,300	\$ 536.06
35	Deer Trail, Town of	\$ 207,200	378	\$ 548.15
36	Ramah, Town of	\$ 41,000	73	\$ 561.64
37	Lochbuie, Town of	\$ 1,390,000	2,428	\$ 572.49
38	Greeley, City of	\$ 15,060,000	25,889	\$ 581.71
39	Haswell, Town of	\$ 27,818	46	\$ 604.74
40	Golden, City of	\$ 3,190,000	5,273	\$ 604.97
41	Manassa, Town of	\$ 353,245	495	\$ 713.63
42	Pueblo, City of	\$ 29,070,329	37,245	\$ 780.52
43	Salida, City of	\$ 1,938,642	2,469	\$ 785.19

44	Vona, Town of	\$ 59,807	76	\$ 786.93
45	Mancos, Town of	\$ 458,359	552	\$ 830.36
46	Julesburg, Town of	\$ 583,578	691	\$ 844.54
47	Manitou Springs, City of	\$ 1,937,040	2,258	\$ 857.86
48	La Junta, City of	\$ 2,916,673	3,234	\$ 901.88
49	Rockvale, Town of	\$ 237,640	262	\$ 907.02
50	Hotchkiss, Town of	\$ 724,694	798	\$ 908.14
51	Buena Vista, Town of	\$ 1,929,874	2,092	\$ 922.50
52	Lafayette, City of	\$ 9,000,000	9,666	\$ 931.10
53	Monte Vista, City of	\$ 1,882,800	2,000	\$ 941.40
54	Windsor, Town of	\$ 7,382,000	7,800	\$ 946.41
55	Thornton, City of	\$ 34,200,805	35,596	\$ 960.80
56	Englewood, City of	\$ 10,415,000	10,722	\$ 971.37
57	Milliken, Town of	\$ 4,825,000	4,760	\$ 1,013.66
58	Pritchett, Town of	\$ 110,000	106	\$ 1,037.74
59	Broomfield, City and County of	\$ 15,585,000	14,388	\$ 1,083.19
60	Gypsum, Town of	\$ 2,785,507	2,558	\$ 1,088.94
61	Rangely, Town of	\$ 1,129,863	1,030	\$ 1,096.95
62	Hartman, Town of	\$ 49,780	45	\$ 1,106.22
63	Kim, Town of	\$ 74,733	66	\$ 1,132.32
64	Idaho Springs, City of	\$ 1,147,001	998	\$ 1,149.30
65	Canon City, City of	\$ 9,445,000	8,200	\$ 1,151.83
66	Brookside, Town of	\$ 107,275	90	\$ 1,191.94
67	Coal Creek, Town of	\$ 197,667	164	\$ 1,205.29
68	Ridgway, Town of	\$ 814,521	639	\$ 1,274.68
69	Genoa, Town of	\$ 102,083	80	\$ 1,276.04
70	Swink, Town of	\$ 386,802	282	\$ 1,371.64
71	Sugar City, Town of	\$ 261,580	189	\$ 1,384.02
72	Eagle, Town of	\$ 4,163,512	2,913	\$ 1,429.29
73	Nederland, Town of	\$ 1,408,252	985	\$ 1,429.70
74	Rocky Ford, City of	\$ 2,462,254	1,710	\$ 1,439.91
75	Firestone, Town of	\$ 5,905,801	4,010	\$ 1,472.77
76	Las Animas, City of	\$ 1,655,467	1,123	\$ 1,474.15
77	Nunn, Town of	\$ 333,577	225	\$ 1,482.56
78	Olney Springs, Town of	\$ 323,506	214	\$ 1,511.71
79	Granada, Town of	\$ 357,950	231	\$ 1,549.57
80	Grand Lake, Town of	\$ 1,459,398	929	\$ 1,570.93
81	Wiley, Town of	\$ 339,783	216	\$ 1,573.07
82	Brighton, City of	\$ 19,058,142	12,019	\$ 1,585.67
83	Keenesburg, Town of	\$ 765,084	480	\$ 1,593.93
84	Denver, City And County of	\$ 565,551,000	312,746	\$ 1,808.34
85	Alma, Town of	\$ 370,589	202	\$ 1,834.60
86	La Veta, Town of	\$ 1,103,324	586	\$ 1,882.81
87	Kremmling, Town of	\$ 1,381,355	710	\$ 1,945.57
88	Starkville, Town of	\$ 107,257	53	\$ 2,023.72
89	Hot Sulphur Springs, Town of	\$ 682,500	327	\$ 2,087.16
90	Boulder, City of	\$ 68,257,000	31,959	\$ 2,135.77

91	Cedaredge, Town of	\$ 2,562,922	1,200	\$ 2,135.77
92	Eads, Town of	\$ 859,926	400	\$ 2,149.82
93	Hudson, Town of	\$ 1,154,650	507	\$ 2,277.42
94	Lamar, City of	\$ 8,247,744	3,597	\$ 2,292.95
95	Vilas, Town of	\$ 174,592	76	\$ 2,297.26
96	Log Lane Village, Town of	\$ 814,809	342	\$ 2,382.48
97	Center, Town of	\$ 2,081,829	869	\$ 2,395.66
98	Bethune, Town of	\$ 222,938	93	\$ 2,397.18
99	Arriba, Town of	\$ 336,667	139	\$ 2,422.06
100	Castle Rock, Town of	\$ 58,741,591	24,085	\$ 2,438.93
101	Palmer Lake, Town of	\$ 2,580,208	1,007	\$ 2,562.27
102	Silver Plume, Town of	\$ 339,833	132	\$ 2,574.49
103	Paonia, Town of	\$ 2,537,768	929	\$ 2,731.72
104	Craig, City of	\$ 5,964,821	2,170	\$ 2,748.77
105	Rye, Town of	\$ 387,340	119	\$ 3,254.96
106	Palisade, Town of	\$ 4,351,355	1,327	\$ 3,279.09
107	Stratton, Town of	\$ 1,082,910	327	\$ 3,311.65
108	Ophir, Town of	\$ 262,500	76	\$ 3,453.95
109	Georgetown, Town of	\$ 2,174,238	603	\$ 3,605.70
110	Central City	\$ 492,864	130	\$ 3,791.26
111	Hillrose, Town of	\$ 539,683	139	\$ 3,882.61
112	Sterling, City of	\$ 19,586,334	4,655	\$ 4,207.59
113	Bennett, Town of	\$ 3,828,999	867	\$ 4,416.38
114	Aurora, City of	\$ 392,025,000	86,309	\$ 4,542.11
115	Dillon, Town of	\$ 2,714,954	566	\$ 4,796.74
116	Rifle, City of	\$ 20,769,945	3,795	\$ 5,472.98
117	Walsenburg, City of	\$ 10,683,233	1,928	\$ 5,541.10
118	Marble, Town of	\$ 271,837	48	\$ 5,663.27
119	Erie, Town of	\$ 55,223,045	9,618	\$ 5,741.63
120	Wellington, Town of	\$ 24,502,647	3,882	\$ 6,311.86
121	Branson, Town of	\$ 171,110	26	\$ 6,581.15
122	Fountain, City of	\$ 62,100,000	8,500	\$ 7,305.88
123	Telluride, Town of	\$ 13,378,558	1,723	\$ 7,764.69
124	Florence, City of	\$ 19,172,292	1,986	\$ 9,653.72
125	Breckenridge, Town of	\$ 52,592,710	4,463	\$ 11,784.16
126	Kiowa, Town of	\$ 3,276,852	227	\$ 14,435.47
127	Wiggins, Town of	\$ 6,041,767	369	\$ 16,373.35

Minimum	\$ 7.23
15th Percentile	\$ 275.55
Median	\$ 1,149.30
85th Percentile	\$ 3,469.12
Maximum	\$ 16,373.35

<sup>1</sup> DOLA Municipal Water Debt 2019

<sup>2</sup> CDPHE Drinking Water and Wastewater Service Connections 2019

MONTHLY WATER BILL DATASET

	Name	Average Water Rate <sup>1</sup>
1	Antonito, Town of	\$ 17.50
2	Cripple Creek, City of	\$ 19.77
3	Breckenridge, Town of	\$ 21.99
4	Meeker, Town of	\$ 24.00
5	Swink, Town of	\$ 24.71
6	Morrison, Town of	\$ 25.00
7	Purgatory Metropolitan District	\$ 26.82
8	Gypsum Town of	\$ 26.97
9	Crawford, Town of	\$ 28.75
10	Northglenn, City of	\$ 28.92
11	Lamar, City of	\$ 29.50
12	Prichett, Town off	\$ 30.00
13	Wiley, Town of	\$ 30.00
14	Julesburg, Town of	\$ 30.77
15	Gunnison, City of	\$ 31.42
16	Las Animas, City of	\$ 32.47
17	Akron, Town of	\$ 32.58
18	Aguilar, Town of	\$ 33.00
19	Grand Junction, City of	\$ 33.90
20	Woodland Park, City of	\$ 34.81
21	Rocky Ford, City of	\$ 35.00
22	Heeney Water District	\$ 35.42
23	Saguache, Town of	\$ 36.00
24	Simla, Town of	\$ 37.23
25	Eckley, Town of	\$ 38.00
26	Englewood, City of	\$ 38.48
27	Bethune, Town of	\$ 40.00
28	Palisade, Town of	\$ 40.10
29	Chipeta Water District	\$ 40.42
30	Crestview Water and Sanitation District	\$ 40.48
31	Central Weld County Water District	\$ 40.73
32	San Luis Water and Sanitation District	\$ 42.00
33	Ophir, Town of	\$ 42.50
34	Nederland, Town of	\$ 43.18
35	Keenesburg, Town of	\$ 43.64
36	Parachute, Town of	\$ 44.68
37	Cuchara Sanitation Water District	\$ 45.00
38	Starkville, Town of	\$ 45.00
39	Boulder, City of	\$ 45.00

40	Prairie View Ranch Water District, LLC	\$	45.00
41	Paonia, Town of	\$	45.00
42	Walden, Town of	\$	46.49
43	Rangely, Town of	\$	46.63
44	Mesa Water and Sanitation District	\$	47.75
45	Alma, Town of	\$	48.00
46	Rye, Town of	\$	48.00
47	North Table Mountain Water and Sanitation District	\$	49.64
48	Vona, Town of	\$	50.00
49	Springfield, Town of	\$	50.50
50	Eagle River Water and Sanitation District	\$	51.39
51	Glendale, City of	\$	51.41
52	Sunset Water District	\$	51.86
53	Grand Lake, Town of	\$	52.00
54	Parkville Water District	\$	52.00
55	Craig, City of	\$	52.00
56	Dacono, City of	\$	52.10
57	Morgan County Quality Water District	\$	52.60
58	Byers Water and Sanitation District	\$	52.75
59	Johnstown, Town of	\$	53.78
60	Mt. Crested Butte Water and Sanitation District	\$	54.30
61	Golden, City of	\$	54.33
62	Aurora, City of	\$	54.73
63	Fraser, Town of	\$	55.50
64	Burlington, City of	\$	55.55
65	Brighton, City of	\$	56.65
66	Louviers Water and Sanitation District	\$	57.04
67	Calhan, Town of	\$	57.86
68	Pinon Water and Sanitation District	\$	58.00
69	Hayden, Town of	\$	58.65
70	Cherry Creek Valley Water and Sanitation District	\$	59.92
71	Pueblo West Metropolitan District	\$	60.00
72	Hazeltine Heights Water	\$	60.00
73	Rockvale, Town of	\$	61.00
74	Estes Park, Town of	\$	61.58
75	Bone Mesa Domestic Water District	\$	62.00
76	Nunn, Town off	\$	62.00
77	Glenwood Springs, City of	\$	62.09
78	Ridgewood Water District	\$	62.50
79	Hot Sulphur Springs, Town of	\$	65.00
80	Shannon Water and Sanitation District	\$	65.00
81	Tabernash Meadows Water and Sanitation District	\$	66.00
82	Dillon, Town of	\$	66.42

83	East Alamosa Water and Sanitation District	\$	68.00
84	Hillrose, Town of	\$	69.62
85	Greeley, City of	\$	70.93
86	Crested Butte, Town of	\$	71.50
87	Rock Creek Mesa Water District	\$	72.25
88	Fort Lupton, City of	\$	73.70
89	Georgetown, Town of	\$	75.32
90	Durango West Metro District Number 2	\$	76.00
91	Fort Collins-Loveland Water District	\$	76.50
92	Fountain, City of	\$	78.68
93	Jamestown, Town of	\$	80.00
94	Eaton, Town of	\$	80.82
95	Timbers Water and Sanitation District	\$	82.25
96	Silver Creek Water and Sanitation	\$	84.21
97	East Cherry Creek Valley Water and Sanitation District	\$	85.50
98	Indian Hills Water District	\$	89.50
99	Silver Heights Water and Sanitation	\$	90.00
100	South Adams County Water and Sanitation District	\$	90.00
101	Central City, City of	\$	90.72
102	Williamsburg, Town of	\$	91.15
103	Manitou Springs, City of	\$	92.28
104	Cokedale, Town of	\$	94.00
105	Bennett, Town of	\$	96.98
106	Left Hand Water District	\$	109.10
107	Wiggins, Town of	\$	110.61
108	Roxborough Water and Sanitation District	\$	117.00
109	Oak Creek, Town of	\$	122.22
110	Spring Canyon Water and Sanitation District	\$	123.39
111	Minturn, Town of	\$	125.00
112	Pine Brook Water District	\$	136.00
113	Beulah Water Works District	\$	140.00
114	Florissant Water and Sanitation District	\$	146.70
115	Somerset Domestic Waterworks District	\$	150.00
116	Greatrock North Water and Sanitaiton District	\$	183.00
117	Dominion Water and Sanitation District	\$	200.00

Minimum	\$	17.50
15th Percentile	\$	33.36
Median	\$	54.04
85th Percentile	\$	90.00
Maximum	\$	200.00

<sup>1</sup> DOLA Municipal and Special District Water and Wastewater Rate Survey 2021

ANNUAL OPERATING COST PER ACRE-FOOT DATASET

	Name <sup>1</sup>	Division	Acreage Class <sup>2</sup>	Cost per Acre-Foot <sup>3</sup>
1	Private Ditch Company AA	4	Low	\$ 0.68
2	Silt Water Conservancy District	5	Medium	\$ 0.91
3	Private Ditch Company AB	4	Low	\$ 1.08
4	Private Ditch Company AC	3	Medium	\$ 1.09
5	Private Ditch Company AD	6	Low	\$ 1.12
6	Private Ditch Company AE	6	Medium	\$ 1.19
7	Private Ditch Company AF	1	High	\$ 1.36
8	Private Ditch Company AG	7	Medium	\$ 1.40
9	Private Ditch Company AH	7	Low	\$ 1.42
10	Private Ditch Company AI	5	Low	\$ 1.78
11	Rio Blanco Conservancy District	6	Medium	\$ 1.82
12	Private Ditch Company AJ	6	Low	\$ 2.54
13	Private Ditch Company AK	7	Medium	\$ 2.62
14	Private Ditch Company AL	5	Low	\$ 2.70
15	Private Ditch Company AM	5	Low	\$ 2.77
16	Private Ditch Company AN	7	Medium	\$ 2.81
17	Iliff Irrigation District	1	Medium	\$ 2.97
18	Private Ditch Company AO	1	Low	\$ 3.06
19	Private Ditch Company AP	6	Medium	\$ 3.10
20	Private Ditch Company AQ	7	Medium	\$ 3.12
21	Private Ditch Company AR	6	Low	\$ 3.15
22	Mesa County Irrigation District	4	Low	\$ 3.52
23	Private Ditch Company AS	5	Low	\$ 3.64
24	Private Ditch Company AT	7	Low	\$ 4.11
25	Private Ditch Company AU	2	High	\$ 4.47
26	Private Ditch Company AV	2	Medium	\$ 4.50
27	Private Ditch Company AW	2	Low	\$ 4.61
28	Private Ditch Company AX	5	Medium	\$ 4.61
29	Private Ditch Company AY	3	High	\$ 4.93
30	Private Ditch Company AZ	2	Low	\$ 4.94
31	Pine River Irrigation District	7	High	\$ 5.26
32	Private Ditch Company BA	4	Medium	\$ 5.36
33	Private Ditch Company BB	5	High	\$ 5.81
34	Private Ditch Company BC	3	Medium	\$ 7.08
35	Private Ditch Company BD	1	High	\$ 7.19
36	Private Ditch Company BE	4	Low	\$ 7.22
37	Private Ditch Company BF	6	Medium	\$ 7.36
38	Private Ditch Company BG	7	Medium	\$ 7.64
39	Private Ditch Company BH	1	Low	\$ 8.06
40	Private Ditch Company BI	3	Low	\$ 8.09
41	Private Ditch Company BJ	2	Low	\$ 8.48
42	Private Ditch Company BK	4	Medium	\$ 8.63
43	Monte Vista Water Users Association	3	High	\$ 8.71
44	Private Ditch Company BL	1	High	\$ 9.04



45	Private Ditch Company BM	1	Low	\$	9.61
46	Private Ditch Company BN	5	Low	\$	9.71
47	Private Ditch Company BO	2	High	\$	9.89
48	Private Ditch Company BP	2	High	\$	10.24
49	Private Ditch Company BQ	2	High	\$	10.42
50	Private Ditch Company BR	3	High	\$	10.47
51	Private Ditch Company BS	7	Low	\$	12.06
52	Private Ditch Company BT	6	Low	\$	13.10
53	Private Ditch Company BU	2	Medium	\$	13.15
54	Private Ditch Company BV	2	High	\$	13.29
55	Palisade Irrigation District	5	Medium	\$	13.82
56	Private Ditch Company BW	1	Low	\$	13.91
57	Private Ditch Company BX	1	Medium	\$	14.06
58	Orchard Mesa Irrigation District	5	Medium	\$	14.39
59	Dolores Water Conservancy District	7	High	\$	15.28
60	Private Ditch Company BY	1	Low	\$	15.32
61	Private Ditch Company BZ	7	Medium	\$	16.53
62	Private Ditch Company CA	3	High	\$	17.33
63	Private Ditch Company CB	4	High	\$	18.08
64	Private Ditch Company CC	4	Medium	\$	20.64
65	Private Ditch Company CD	2	Medium	\$	22.58
66	Private Ditch Company CE	2	Medium	\$	22.68
67	Private Ditch Company CF	1	Low	\$	23.10
68	Private Ditch Company CG	1	Medium	\$	23.30
69	Private Ditch Company CH	1	High	\$	25.63
70	Private Ditch Company CI	3	Medium	\$	27.60
71	Private Ditch Company CJ	2	Medium	\$	27.68
72	Private Ditch Company CK	5	Low	\$	30.76
73	Private Ditch Company CL	3	High	\$	33.07
74	Private Ditch Company CM	4	Medium	\$	35.43
75	Private Ditch Company CN	2	Low	\$	37.36
76	Private Ditch Company CO	4	Low	\$	38.51
77	Private Ditch Company CP	2	Low	\$	39.23
78	Private Ditch Company CQ	3	Medium	\$	39.38
79	Private Ditch Company CR	1	High	\$	42.78
80	Julesburg Irrigation District	1	Medium	\$	45.07

Minimum	\$	0.68
15th Percentile	\$	2.61
Median	\$	8.29
85th Percentile	\$	23.65
Maximum	\$	45.07

<sup>1</sup> Mutual ditch companies and other private entities' names are redacted

<sup>2</sup> Low <1,000 acres; Medium = 1,000 acres to 10,000 acres; High >10,000 acres

<sup>3</sup> WestWater Research LLC Memorandum 2023