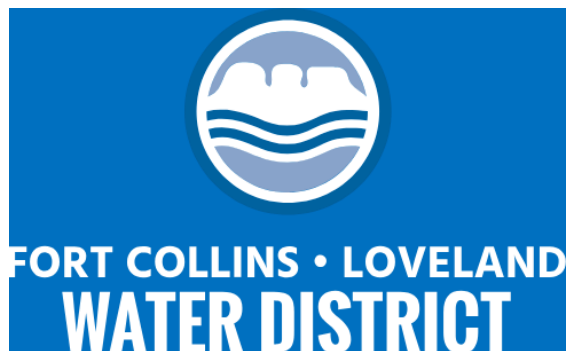


**Fort Collins-Loveland Water District**  
**Tap Fee Analysis**

**December 5, 2024**



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# 1. Introduction

The Fort Collins-Loveland Water District (District) retained Raftelis to complete a comprehensive tap fee analysis, including:

1. Validating demand estimates which adequately reflect new development requirements.
2. Calculating tap fee<sup>1</sup> values that are rationally related to the cost to service new development.
3. Ensuring the fee structure equitably recovers the cost of new development.
4. Reviewing the existing structures and identifying any changes in structure to enhance equity and cost recovery by the District.

## 1.1. Colorado Revised Statutes

The Colorado Revised Statutes (CRS) §29-20-104.5 for Impact Fees (tap fees) outline the requirements for calculating and implementing a tap fee. Colorado cities and counties must comply with this statute. The basic tenets of the Statute are listed below.

- Fees must generally apply to a broad property class (for example, residential, commercial, etc.).
- Fees must be intended to defray the projected impacts on capital facilities caused by the proposed development.
- Fees are directly related to services that local government can provide.
- The asset has an estimated useful life of five years or longer.
- The fee is required by a local government's charter or general policy pursuant to a resolution or ordinance.

Special districts such as Fort Collins-Loveland Water District are not required to follow the requirements in this statute. However, Colorado case law, such as the pivotal case of *Krupps v. Breckenridge Sanitation District* and *Rocky Mountain Festivals v. Parsons Group*, provide case precedent. The Statute and these case precedents support that tap fees must be rationally related to the public purpose and the *rational nexus* test, which are covered in the Colorado Statutes.

## 1.2. District Tap Fees

The District charges a water resources fee and plant investment fee (collectively referred to as tap fees) to all new connectors or existing developments requiring a change in service. The tap fee is intended to recover a new connector's proportionate share of the District's water resource and backbone facility<sup>2</sup> costs.

### *Water Resources Fee*

The amount of water allotted in the water resource fee is based on lot size for single-family development and meter size for nonresidential development. For larger meter sizes, the 3/4-inch (") demand is scaled based on

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<sup>1</sup> District 'tap fees' are a combination of the water resources fee and the infrastructure-related fee, plant investment fee.

<sup>2</sup> Backbone facilities include those major facilities that benefit all customers such as treatment plants, treated storage, transmission mains, pump stations, reservoirs, etc.

the ratio of the larger meter size capacity to that of the 3/4” meter capacity<sup>3</sup>. Multifamily water resource fees are assigned based on the number of units in the complex. The water resource fee is calculated by multiplying the acre-foot dedication requirement per unit by the current market price of raw water.

**Water Infrastructure Fee**

The water infrastructure fee, referred to as a plant investment fee, recovers the cost of capacity to serve new development. The residential and nonresidential PIFs are assessed on meter size. Multifamily is assessed on a per-unit basis.

The District’s assessment schedule for these fees is outlined below.

**Table 1-1: FCLWD Tap Fee Assessment Schedules**

| Customer Designation | PIF (Infrastructure Fee) | Water Resources Fee |
|----------------------|--------------------------|---------------------|
| <b>Residential</b>   | Meter Size               | Lot Size            |
| <b>Multifamily</b>   | Fee per unit             | Fee per unit        |
| <b>Commercial</b>    | Meter Size               | Meter Size          |
| <b>Irrigation</b>    | Meter Size               | Meter Size          |

Utility companies use a wide variety of assessment schedules nationwide and within Colorado. These different assessment schedules are designed, at a minimum, to recover the cost of new development. The ‘how’ of recovery is based on specific objectives and data available. The District is in a unique position regarding data availability. The service area covers portions of four cities and one county, and it does not have any land use powers, such as planning, zoning, or subdivision approval. As a result, data on new development is limited to the land use type (e.g., residential, commercial, etc.) and parcel size. Other information, such as building size, number of bedrooms/bathrooms, fixture count, type of commercial business, irrigable area, etc., is unavailable.

The lack of permitting/planning data limits the assessment schedule options. However, the District uses three structures that are a) widely used and understood and b) attempt to capture the unique characteristics of new development. The lot size schedule for residential water resources provides an ‘individualized’ approach to allocate estimated water demands. The multifamily ‘fee per unit’ also recognizes the differences in water demands on various sizes of multifamily complexes.

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<sup>3</sup> For example, a 1” meter has a maximum design flow capacity 25 gallons per minute while a 3/4” meter has a maximum design flow capacity of 10 gpm. The meter capacity ratio for the 1” meter is equal to 25 gpm/10 gpm or 2.5.

## 2. Water Demand Analysis

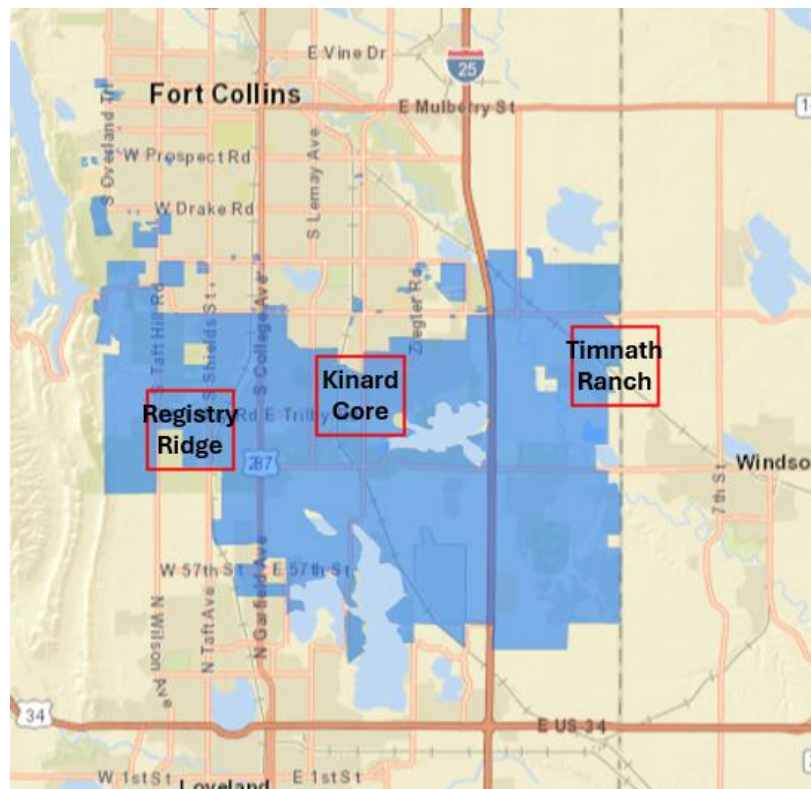
### 2.1. Basis of Analysis

Prior to 2018, the District required 3/4" taps to bring in one (1) Colorado-Big Thompson (C-BT) unit at dedication to account for its water use. After 2018, the District adjusted its requirements, lowering the dedication requirement to one-half (1/2) of a unit to reflect actual water use patterns. In addition, the District added tap classes, structured the fee by lot size, and re-evaluated and adjusted raw water requirements in alignment with actual water use. More details on these adjustments can be found in the 2018 tap fee study report. One C-BT unit is equivalent to up to one acre-foot of water from the C-BT project. However, the actual yield varies from year to year. For example, since 2015, the initial quota allocation has averaged 49%, which on average, increased to 72% after supplemental April allocations. The Board of Directors expressed a desire to evaluate water use between pre- and post-2018 dedication homes to determine if water use patterns were significantly different before and after changing water use dedication requirements, and whether or not water dedication requirements were sufficient to match demand patterns.

### 2.2. Neighborhood Selection

Raftelis mapped the District's water use data and identified three neighborhoods that had a mix of pre- and post-2018 dedication homes, which were geographically distributed throughout the service territory. With Staff guidance, Raftelis selected three neighborhoods: Registry Ridge in the east, Timnath Ranch in the west, and Kinard Core in the central area. The neighborhoods are shown in the three figures below, with green dots representing pre-2018 dedication and blue dots representing post-2018 dedication.

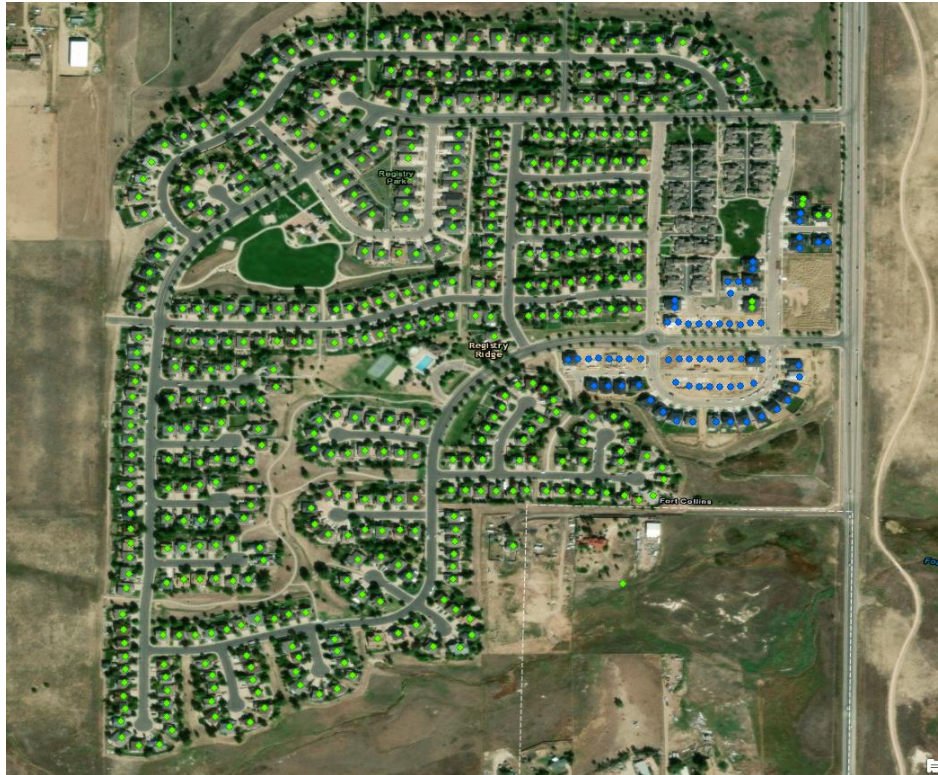
Figure 1: Selected Neighborhoods



## Registry Ridge

Registry Ridge is located on the western side of the District service territory. There were 519 homes in the neighborhood included in the analysis, 87% of which were pre-2018 dedications. The average lot size in the neighborhood was the largest of the three at 8,274 square feet.

Figure 2: Registry Ridge (West)



## Timnath Ranch

Timnath Ranch is located on the eastern side of the District service territory. There were 307 homes in the neighborhood included in the analysis, 66% of which were pre-2018 dedication. The average lot size in the neighborhood is 7,793 square feet.



Figure 3: Timnath Ranch (East)



**Kinard Core**

Kinard Core is located in the central area of the District service territory. There were 231 homes in the neighborhood included in the analysis, 59% of which were pre-2018 dedication. The average lot size in the neighborhood was the smallest of the three at 7,384 square feet.

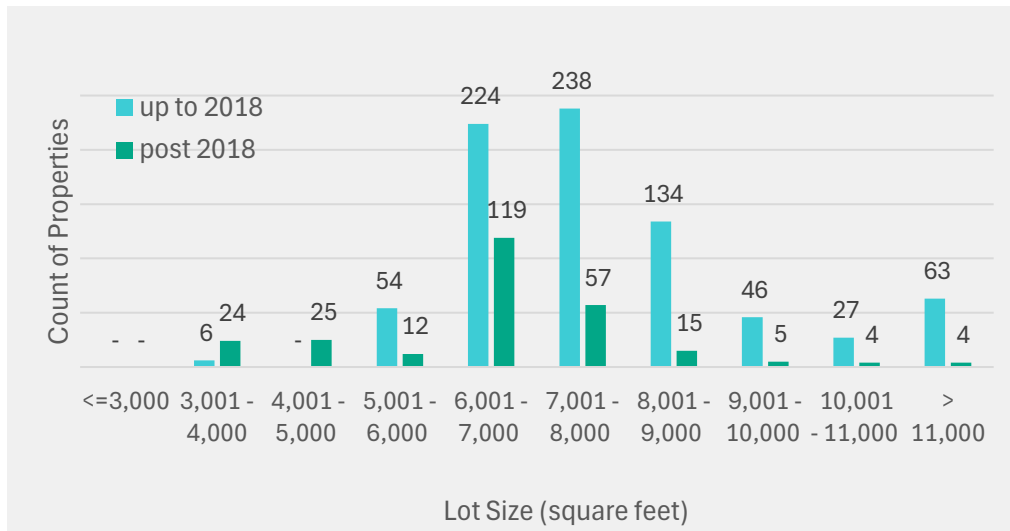
Figure 4: Kinard Core (Central)



**2.3. Lot Size Characteristics**

Over 60% of the lot sizes in the sample neighborhoods were between 6,000 and 8,000 square feet. The distribution of lot sizes is shown in the chart below.

Figure 5: Count of Properties by Lot Size



### 2.4. Comparison of Pre- and Post-2018 Billed Water Usage

Using an average of 2020 – 2023 billing data for all homes in the sample set of the selected neighborhoods, Raftelis evaluated differences in water use between homes dedicated pre- and post-2018. In addition to looking at aggregate use discrepancies between pre-2018 and post-2018 homes, Raftelis reviewed water use by lot size to determine if there were discrepancies in overuse between pre-2018 and post-2018 homes. This analysis was in an effort to determine how use varied across lot sizes and whether or not consumers were using under or over their dedication allotment. Raftelis compared water use to the dedication requirement – regardless of lot size, all single family homes dedicated prior to 2018 were required to dedicate 1 CBT unit, equivalent to 1 acre-foot of annual use using the 50% quote assumption used by the District. Homes dedicated after 2018 have a scaled dedication requirement dependent on lot size, as shown in the figure below.

Figure 6: Dedication Requirements (C-BT Units) for pre- and post-2018 Single Family Homes

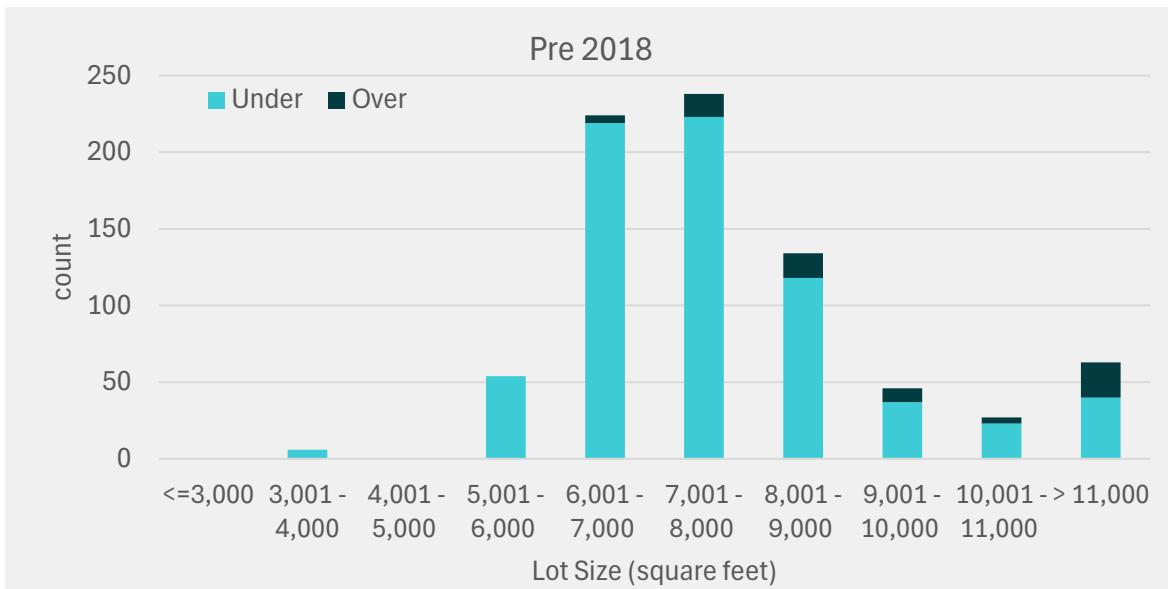
| Lot Size (sf)       | pre-2018 | post-2018 |
|---------------------|----------|-----------|
| <i>Conservation</i> | 1        | 0.29      |
| <=3,000             | 1        | 0.29      |
| 3,001 - 4,000       | 1        | 0.36      |
| 4,001 - 5,000       | 1        | 0.5       |
| 5,001 - 6,000       | 1        | 0.62      |
| 6,001 - 7,000       | 1        | 0.72      |
| 7,001 - 8,000       | 1        | 0.8       |
| 8,001 - 9,000       | 1        | 0.86      |
| 9,001 - 10,000      | 1        | 0.95      |
| 10,001 - 11,000     | 1        | 1.01      |
| > 11,000            | 1        | 1.15      |

Average annual use per account was compared to its respective dedication requirement and determined whether the use was under or over the amount of water brought at the dedication. Trends tracked similarly

between pre- and post-2018 homes. Counting the percentage of homes that used more than their respective allotment, approximately 9.1% of the pre-2018 sample were in the overuse category, compared to 10.2% of the post-2018 sample. When looking at the volume of water used by those homes classified as over-users, 5.3% of total use in the pre-2018 sample was above the dedication requirement, compared to 7% of total use by post-2018 homes. The trends of over and under use by lot size among the pre- and post-2018 samples are shown in the figures below.

In summary, total use in excess of the respective dedication requirement was similar in the pre-and post-2018 sample sets.

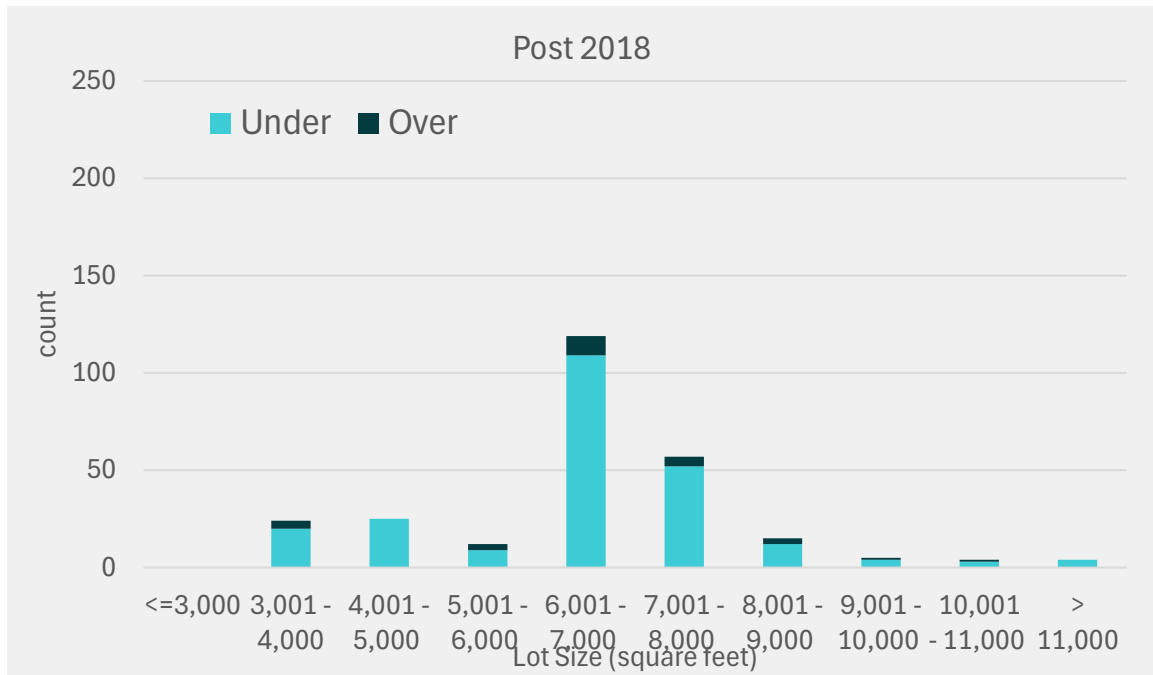
**Figure 7: Over/Under Use Relative to Dedication Requirement for pre-2018 Homes**



Total properties over dedication: 72 (9.1% of sample)

Total volume over dedication: 2.6 million gallons (5.3% of total use)

**Figure 8: Over/Under Use Relative to Dedication Requirement for post-2018 Homes**

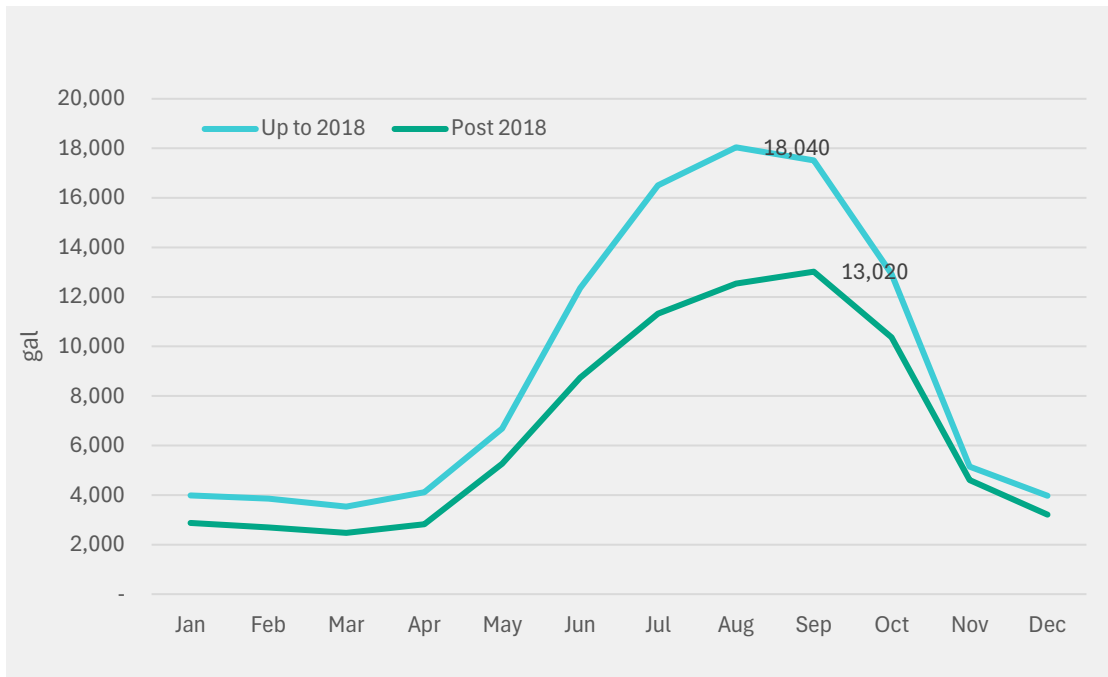


Total properties over dedication: 27 (10.2% of sample)

Total volume over dedication: 765 thousand gallons (7% of total use)

In addition, when reviewing the average water use per account of homes in the selected neighborhoods from 2020-2023, across all neighborhoods in the sample, post-2018 taps showed less water use relative to pre-2018 taps, by approximately 29,000 gallons annually.

Figure 9: Average Use per Account across All Neighborhoods



## 3. Tap Fee Calculation Basics

### 3.1. Calculation Process

The general steps and equation used in calculating tap fees are as follows:

- Determine the value of backbone facilities (existing or future growth-related)
- Estimate current system capacity or level of service
- Calculate the unit cost of capacity
- Determine customer service level demand characteristics
- Apply unit cost of capacity to customer's demand characteristics

$$\frac{\text{Value of Backbone Facilities}}{\text{System Capacity (gpd)}} \times \text{New Customer Demand (gpd)} = \text{Tap Fee}$$

### 3.2. Calculation Methods

The table below summarizes the generally accepted methodologies for calculating tap fees. Each method is designed to recover the cost of capacity to serve new development. The selection of a methodology should consider a utility's goals and objectives for recovering capacity-related capital costs. The three methodologies include buy-in, incremental, and hybrid. Table 3-1 below lists the basic parameters a utility may consider when selecting a method that best meets its needs. The incremental method was used in the previous rate study project and this analysis due to limited available existing capacity.

**Table 3-1: Industry Standard Tap Fee Methodologies**

| Description   | Buy-in | Incremental | Hybrid |
|---|--------|-------------|--------|
| Available existing capacity sufficient to accommodate new growth                                    | X      |             |        |
| No existing capacity with significant future capacity requirements                                  |        | X           |        |
| Some existing capacity available with future capacity requirements needed to accommodate new growth |        | X           | X      |

#### Buy-in

The buy-in method considers the valuation of existing assets and the capacity of those assets to determine the tap fee. This method is typically reserved for utilities with the capacity to serve new customers in the existing system in the near and long term. The buy-in method recoups the new development's proportionate share of capacity, essentially reimbursing the existing ratepayers that funded the original facility investment, which can be seen as the new development "buying into" the system. However, as with the other methodologies, this methodology does not imply a transfer or impart ownership of the assets to the customer.

#### Incremental Method

The water tap fees were calculated using the incremental methodology in the previous rate study project. The incremental method is typically used by utilities experiencing rapid growth with little to no available capacity in their current system. It is a forward-looking approach that considers a utility's growth-related projects in a long-term capital expansion program or master plan. Thus, the incremental method usually relies on a

utility's long-term expansion capital improvement program to estimate the costs and capacity of new facilities. The incremental cost is defined as the cost to serve the next incremental amount of growth.

**Hybrid**

The hybrid or combined methodology combines the system buy-in and the incremental methodologies. The hybrid methodology is appropriate for utilities with some available capacity in the existing system as well as measurable future expansion.

# 4. Tap Fee Assumptions and Calculation

Raftelis evaluated water use among single family homes by lot size. Using lot size bins of 1,000 square feet, Raftelis calculated the average use per lot to estimate the water dedication requirement. The dedication requirement was then adjusted by an assumed system loss of 12.7%. At the Board's direction, a climate contingency factor of 25% was added to the dedication requirement to account for potential reductions in yields from water supplies due to climate change and increasing aridification.

Multifamily, Commercial, and Irrigation dedication requirements use the same allocation as prior studies completed for the District. The dedication requirement for each customer class is shown in Table 4-1 through Table 4-4 below.

**Table 4-1: Residential Dedication Requirement by Lot Size**

| Lot Size                | Required AF | Climate Cont. Factor | Total Required AF |
|-------------------------|-------------|----------------------|-------------------|
| <b>Conservation Tap</b> | 0.12        | 0.03                 | 0.15              |
| <b>&lt;= 3,000</b>      | 0.12        | 0.03                 | 0.15              |
| <b>3,001-4,000</b>      | 0.14        | 0.04                 | 0.18              |
| <b>4,001-5,000</b>      | 0.22        | 0.06                 | 0.28              |
| <b>5,001-6,000</b>      | 0.28        | 0.07                 | 0.35              |
| <b>6,001-7,000</b>      | 0.34        | 0.09                 | 0.43              |
| <b>7,001-8,000</b>      | 0.35        | 0.09                 | 0.44              |
| <b>8,001-9,000</b>      | 0.40        | 0.10                 | 0.50              |
| <b>9,001-10,000</b>     | 0.45        | 0.11                 | 0.56              |
| <b>10,001-11,000</b>    | 0.48        | 0.12                 | 0.60              |
| <b>&gt; 11,000</b>      | 0.50        | 0.13                 | 0.63              |

**Table 4-2: Multifamily Dedication Requirement by Dwelling Unit**

| Tap Description        | Dwelling Units | AF per DU | Total AF | Climate Cont. Factor | Total Required AF |
|------------------------|----------------|-----------|----------|----------------------|-------------------|
| <b>1" MF (2 DU)</b>    | 2              | 0.16      | 0.32     | 0.08                 | 0.40              |
| <b>1.5" MF (4 DU)</b>  | 4              | 0.16      | 0.64     | 0.16                 | 0.80              |
| <b>1.5" MF (6 DU)</b>  | 6              | 0.16      | 0.96     | 0.24                 | 1.20              |
| <b>1.5" MF (8 DU)</b>  | 8              | 0.16      | 1.28     | 0.32                 | 1.60              |
| <b>1.5" MF (10 DU)</b> | 10             | 0.16      | 1.60     | 0.40                 | 2.00              |
| <b>2" MF (12 DU)</b>   | 12             | 0.16      | 1.92     | 0.48                 | 2.40              |
| <b>2" MF (14 DU)</b>   | 14             | 0.16      | 2.24     | 0.56                 | 2.80              |
| <b>2" MF (16 DU)</b>   | 16             | 0.16      | 2.56     | 0.64                 | 3.20              |
| <b>2" MF (18 DU)</b>   | 18             | 0.16      | 2.88     | 0.72                 | 3.60              |
| <b>2" MF (20 DU)</b>   | 20             | 0.16      | 3.20     | 0.80                 | 4.00              |



|               |    |      |      |      |      |
|---------------|----|------|------|------|------|
| 2" MF (22 DU) | 22 | 0.16 | 3.52 | 0.88 | 4.40 |
| 2" MF (24 DU) | 24 | 0.16 | 3.84 | 0.96 | 4.80 |
| 2" MF (26 DU) | 26 | 0.16 | 4.16 | 1.04 | 5.20 |
| 2" MF (28 DU) | 28 | 0.16 | 4.48 | 1.12 | 5.60 |
| 2" MF (30 DU) | 30 | 0.16 | 4.80 | 1.20 | 6.00 |
| 2" MF (32 DU) | 32 | 0.16 | 5.12 | 1.28 | 6.40 |
| 2" MF (34 DU) | 34 | 0.16 | 5.44 | 1.36 | 6.80 |
| 2" MF (36 DU) | 36 | 0.16 | 5.76 | 1.44 | 7.20 |

For multifamily taps that have greater than 36 DUs, the dedication requirement is scaled in the same way using 0.16 AF per DU plus the 25% climate contingency factor.

**Table 4-3: Commercial Dedication Requirement by Meter Size**

| Meter Size | Design GPM | Design GPM Ratio | Required AF | Climate Cont. Factor | Total Required AF |
|------------|------------|------------------|-------------|----------------------|-------------------|
| 3/4"       | 10         | 1                | 0.50        | 0.13                 | 0.63              |
| 1"         | 25         | 2.5              | 1.25        | 0.31                 | 1.56              |
| 1.5"       | 50         | 5                | 2.50        | 0.63                 | 3.13              |
| 2"         | 80         | 8                | 4.00        | 1.00                 | 5.00              |
| 3"         | 175        | 17.5             | 8.75        | 2.19                 | 10.94             |
| 4"         | 300        | 30               | 15.00       | 3.75                 | 18.75             |
| 6"         | 625        | 62.5             | 31.25       | 7.81                 | 39.06             |

**Table 4-4: Irrigation Dedication Requirement by Meter Size**

| Meter Size | Design GPM | Design GPM Ratio | Required AF | Climate Cont. Factor | Total Required AF |
|------------|------------|------------------|-------------|----------------------|-------------------|
| 3/4"       | 10         | 1                | 0.68        | 0.17                 | 0.85              |
| 1"         | 25         | 2.5              | 1.70        | 0.43                 | 2.13              |
| 1.5"       | 50         | 5                | 3.40        | 0.85                 | 4.25              |
| 2"         | 80         | 8                | 5.44        | 1.36                 | 6.80              |
| 3"         | 175        | 17.5             | 11.90       | 2.98                 | 14.88             |
| 4"         | 300        | 30               | 20.40       | 5.10                 | 25.50             |
| 6"         | 625        | 62.5             | 42.50       | 10.63                | 53.13             |

### 4.1. 2022 Billing Data Distribution

With Staff guidance, Raftelis opted to utilize the 2022 billing data for the water use analysis, rather than the existing allocation on the schedule for single family home usage. Multifamily, commercial, and irrigation use continue to use the existing water use dedication assumptions.

## 4.2. Future Growth-Related Costs for Incremental Value

Raftelis utilized the incremental cost approach to calculate tap fees, meaning the 10-year total of growth-related infrastructure in the Capital Improvement Plan (CIP) from 2023. The fees are calculated from the 2023 CIP, which includes the full capital program the District needs over the next ten years. From 2023-2032, growth-related infrastructure capital needs total \$344.8 million.

### 4.2.1. NISP Annual Assessment

NISP annual assessments of \$22.95 million are excluded from the tap fee, as well as the associated costs for treatment capacity in the future Cobb Lake Water Treatment Plant to treat NISP water at project completion. At the time of this study, there is uncertainty around timing of the NISP and Cobb Lake Water Treatment Plant project; therefore, staff elected to not include the estimated costs in this study. These costs will need to be estimated and analyzed in a future study.

### 4.2.2. Future Debt Service

The incremental approach also includes the net present value of interest on debt issued to finance growth-related infrastructure. The District estimated \$162.5 million in bonds would need to be issued in 2023 through 2025. The net present value of the interest associated with this debt issue is approximately \$58.7 million. The net present value is an estimate of the borrowing costs to be included in the tap fee calculation, as future users buying into the system will need to repay the carrying costs of this issuance to existing ratepayers who are currently financing the debt service through rates.

### 4.2.3. Total System Value and Capacity

The total system value used to calculate the PIF is \$403.5 million (\$344.8 million plus \$58.7 million), which is the sum of the growth-related capital costs and future borrowing costs.

The District estimated an additional capacity of 15 million gallons per day will be added from the Cobb Lake Water Treatment Plant.

## 4.3. Demand Profile

The single family residential equivalent capacity demand is calculated by multiplying the average daily demand by the peak demand. The 2022 billing data shows the average daily demand for a single family home is 400.2 gallons per day.

Raftelis used the average peaking factor for single family homes within the District for 2020, 2021, and 2022 to calculate the peak demand factor of 2.5 for the single family PIF. For each year, Raftelis selected the month with the highest use, and calculated the average day within that month of maximum use. The annual peak factor is calculated by dividing the average day within the maximum month by the average day of the entire year.

Thus, the single family residential equivalent capacity demand is 1,010.1 gallons per day (400.212 gallons per day multiplied by the peak demand factor of 2.524).

## 4.4. PIF Calculation

The following table provides the PIF calculations for a single family residential equivalent.

Table 4-5: PIF Calculation

| Line No. | Description                                   | Derivation | Values          | Units   |
|----------|---|------------|-----------------|---------|
| 1        | Future Capacity                               |            | 15,000,000      | gal/day |
| 2        | Single family residential equivalent capacity |            | 1,010.1         | gal/day |
| 3        | Single family units served                    | 1 / 2      | 14,848.4        |         |
|          |   |            |                 |         |
| 4        | System Value                                  |            | \$403.5 million |         |
| 5        | Single family residential equivalent PIF      | 4 / 3      | \$27,175.49     |         |

Note: Hand calculations will differ from the table due to rounding.

#### 4.5. Units of Raw Water Cost

With Staff guidance, Raftelis used a water cost factor of \$120,000 per firm acre-foot of dedicated water required. This is in line with the purchasing costs the District is seeing in the market and the estimated cost for the District to acquire native ditch rights and alternative supplies to Colorado-Big Thompson units, which are limited in the market.

# 5. Tap Fee Schedules

## 5.1. Residential Water Tap Fee Schedule

The tap fee for single family dwellings is scaled based on lot size and consists of a water resource fee calculated by multiplying the required firm acre-foot dedication with the raw water cost of \$120,000, a meter charge of \$510, and a \$27,175 infrastructure PIF. For example, for lot sizes less than or equal to 3,000 square feet with 0.15 AF required, this results in a total tap fee of \$45,685, an increase of 31% from 2024.

**Table 5-1: Residential Water Tap Fee Schedule**

| Lot Size         | Infrastructure PIF | Total Required AF | Water Resource Fee | Meter | Total Water Tap Fee | Change from Existing % | Change from Existing \$ |
|------------------|--------------------|-------------------|--------------------|-------|---------------------|------------------------|-------------------------|
| Conservation Tap | \$27,175           | 0.15              | \$18,000           | \$510 | <b>\$45,685</b>     | 31%                    | \$10,870                |
| <= 3,000         | \$27,175           | 0.15              | \$18,000           | \$510 | <b>\$45,685</b>     | 31%                    | \$10,870                |
| 3,001-4,000      | \$27,175           | 0.18              | \$21,000           | \$510 | <b>\$48,685</b>     | 25%                    | \$9,670                 |
| 4,001-5,000      | \$27,175           | 0.28              | \$33,000           | \$510 | <b>\$60,685</b>     | 28%                    | \$13,270                |
| 5,001-6,000      | \$27,175           | 0.35              | \$42,000           | \$510 | <b>\$69,685</b>     | 28%                    | \$15,070                |
| 6,001-7,000      | \$27,175           | 0.43              | \$51,000           | \$510 | <b>\$78,685</b>     | 30%                    | \$18,070                |
| 7,001-8,000      | \$27,175           | 0.44              | \$52,500           | \$510 | <b>\$80,185</b>     | 23%                    | \$14,770                |
| 8,001-9,000      | \$27,175           | 0.50              | \$60,000           | \$510 | <b>\$87,685</b>     | 27%                    | \$18,670                |
| 9,001-10,000     | \$27,175           | 0.56              | \$67,500           | \$510 | <b>\$95,185</b>     | 28%                    | \$20,770                |
| 10,001-11,000    | \$27,175           | 0.60              | \$72,000           | \$510 | <b>\$99,685</b>     | 28%                    | \$21,670                |
| > 11,000         | \$27,175           | 0.63              | \$75,000           | \$510 | <b>\$102,685</b>    | 19%                    | \$16,270                |

## 5.2. Multi-Family Water Tap Fee Schedule

Tap fees for multi-family dwellings (dwellings that share a common meter) are assessed by the number of dwelling units. For example, for a 1” two-dwelling unit tap, this would include a water resource fee of \$48,000 (total firm acre-foot dedication requirement multiplied by the raw cost of water), a meter charge of \$620, and an infrastructure PIF of \$8,696 (water infrastructure fee multiplied by the number of dwelling units and by the acre-feet per dwelling unit) – for a total tap fee of \$57,316.

Table 5-2: Multifamily Water Tap Fee Schedule

| Tap Description | DU | Infrastructure PIF | Total Required AF | Water Resource Fee | Meter   | Total Water Tap Fee | Change from Previous % | Change from Previous \$ |
|-----------------|----|--------------------|-------------------|--------------------|---------|---------------------|------------------------|-------------------------|
| 1" MF (2 DU)    | 2  | \$8,696            | 0.40              | \$48,000           | \$620   | <b>\$57,316</b>     | 15%                    | \$7,506                 |
| 1.5" MF (4 DU)  | 4  | \$17,392           | 0.80              | \$96,000           | \$1,995 | <b>\$115,387</b>    | 15%                    | \$14,947                |
| 1.5" MF (6 DU)  | 6  | \$26,089           | 1.20              | \$144,000          | \$1,995 | <b>\$172,084</b>    | 15%                    | \$22,364                |
| 1.5" MF (8 DU)  | 8  | \$34,785           | 1.60              | \$192,000          | \$1,995 | <b>\$228,780</b>    | 15%                    | \$29,780                |
| 1.5" MF (10 DU) | 10 | \$43,481           | 2.00              | \$240,000          | \$1,995 | <b>\$285,476</b>    | 15%                    | \$37,196                |
| 2" MF (12 DU)   | 12 | \$52,177           | 2.40              | \$288,000          | \$2,260 | <b>\$342,437</b>    | 15%                    | \$44,592                |
| 2" MF (14 DU)   | 14 | \$60,873           | 2.80              | \$336,000          | \$2,260 | <b>\$399,133</b>    | 15%                    | \$52,008                |
| 2" MF (16 DU)   | 16 | \$69,570           | 3.20              | \$384,000          | \$2,260 | <b>\$455,830</b>    | 15%                    | \$59,425                |
| 2" MF (18 DU)   | 18 | \$78,266           | 3.60              | \$432,000          | \$2,260 | <b>\$512,526</b>    | 15%                    | \$66,841                |
| 2" MF (20 DU)   | 20 | \$86,962           | 4.00              | \$480,000          | \$2,260 | <b>\$569,222</b>    | 15%                    | \$74,257                |
| 2" MF (22 DU)   | 22 | \$95,658           | 4.40              | \$528,000          | \$2,260 | <b>\$625,918</b>    | 15%                    | \$81,673                |
| 2" MF (24 DU)   | 24 | \$104,354          | 4.80              | \$576,000          | \$2,260 | <b>\$682,614</b>    | 15%                    | \$89,089                |
| 2" MF (26 DU)   | 26 | \$113,051          | 5.20              | \$624,000          | \$2,260 | <b>\$739,311</b>    | 15%                    | \$96,506                |
| 2" MF (28 DU)   | 28 | \$121,747          | 5.60              | \$672,000          | \$2,260 | <b>\$796,007</b>    | 15%                    | \$103,922               |
| 2" MF (30 DU)   | 30 | \$130,443          | 6.00              | \$720,000          | \$2,260 | <b>\$852,703</b>    | 15%                    | \$111,338               |
| 2" MF (32 DU)   | 32 | \$139,139          | 6.40              | \$768,000          | \$2,260 | <b>\$909,399</b>    | 15%                    | \$118,754               |
| 2" MF (34 DU)   | 34 | \$147,835          | 6.80              | \$816,000          | \$2,260 | <b>\$966,095</b>    | 15%                    | \$126,170               |
| 2" MF (36 DU)   | 36 | \$156,532          | 7.20              | \$864,000          | \$2,260 | <b>\$1,022,792</b>  | 15%                    | \$133,587               |

For multifamily taps that have more than 36 dwelling units, an infrastructure fee of \$4,348.10 and a water resource fee of \$24,000 are assessed per dwelling unit, and then the associated meter cost is added to the total tap fee. The schedule of meter costs for larger multifamily units is detailed below:

- 2" - \$2,260
- 3" - \$2,780
- 4" - \$4,605

### 5.3. Commercial and Irrigation Water Tap Fee Schedules

Tap fees for commercial and irrigation development are assessed by multiplying the firm acre-foot dedication requirement (based on class and meter size) with the \$120,000 raw water cost per firm acre-foot plus a \$510 meter fee and an infrastructure PIF of \$27,175 for a 3/4" meter. For a 3/4" commercial (0.63 acre-feet required) and irrigation customer (.85 acre-feet required), this would result in a \$102,685 and \$129,685 fee, respectively. The amount of required firm acre-feet increases with the meter size to recognize the greater water demands of those customers, and the infrastructure PIF is scaled by the AWWA designated gallons per minute capacity ratio. In addition, larger meter sizes require additional system capacity to provide service. The water resource fee varies by firm acre-foot required and increases from \$75,000 for a commercial 3/4" meter (\$102,000 for irrigation) to \$4,687,000 for a commercial 6" meter (\$6,375,000 for irrigation). Similarly, the non-residential infrastructure PIF varies by firm acre-foot usage and increases from \$27,175 for a 3/4" meter to \$1,698,468 for a 6" meter.

**Table 5-3: Commercial Water Tap Fee Schedule**

| Meter Size  | Infrastructure PIF | Total Required AF | Water Resource Fee | Meter   | Total Water Tap Fee | Change from Existing % | Change from Existing \$ |
|-------------|--------------------|-------------------|--------------------|---------|---------------------|------------------------|-------------------------|
| <b>3/4"</b> | \$27,175           | 0.63              | \$75,000           | \$510   | <b>\$102,685</b>    | 33%                    | \$25,270                |
| <b>1"</b>   | \$67,939           | 1.56              | \$187,500          | \$620   | <b>\$256,059</b>    | 33%                    | \$63,029                |
| <b>1.5"</b> | \$135,877          | 3.13              | \$375,000          | \$1,995 | <b>\$512,872</b>    | 33%                    | \$125,992               |
| <b>2"</b>   | \$217,404          | 5.00              | \$600,000          | \$2,260 | <b>\$819,664</b>    | 33%                    | \$201,499               |
| <b>3"</b>   | \$475,571          | 10.94             | \$1,312,500        | \$2,780 | <b>\$1,790,851</b>  | 33%                    | \$440,706               |
| <b>4"</b>   | \$815,265          | 18.75             | \$2,250,000        | \$4,605 | <b>\$3,069,870</b>  | 33%                    | \$755,435               |
| <b>6"</b>   | \$1,698,468        | 39.06             | \$4,687,500        | \$6,576 | <b>\$6,392,544</b>  | 33%                    | \$1,573,721             |

**Table 5-4: Irrigation Water Tap Fee Schedule**

| Meter Size  | Infrastructure PIF | Total Required AF | Water Resource Fee | Meter   | Total Water Tap Fee | Change from Existing % | Change from Existing \$ |
|-------------|--------------------|-------------------|--------------------|---------|---------------------|------------------------|-------------------------|
| <b>3/4"</b> | \$27,175           | 0.85              | \$102,000          | \$510   | <b>\$129,685</b>    | 31%                    | \$30,670                |
| <b>1"</b>   | \$67,939           | 2.13              | \$255,000          | \$620   | <b>\$323,559</b>    | 30%                    | \$75,329                |
| <b>1.5"</b> | \$135,877          | 4.25              | \$510,000          | \$1,995 | <b>\$647,872</b>    | 31%                    | \$152,392               |
| <b>2"</b>   | \$217,404          | 6.80              | \$816,000          | \$2,260 | <b>\$1,035,664</b>  | 31%                    | \$242,299               |
| <b>3"</b>   | \$475,571          | 14.88             | \$1,785,000        | \$2,780 | <b>\$2,263,351</b>  | 30%                    | \$527,406               |
| <b>4"</b>   | \$815,265          | 25.50             | \$3,060,000        | \$4,605 | <b>\$3,879,870</b>  | 30%                    | \$900,635               |
| <b>6"</b>   | \$1,698,468        | 53.13             | \$6,375,000        | \$6,576 | <b>\$8,080,044</b>  | 30%                    | \$1,880,621             |