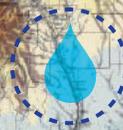


# INCENTIVIZING WATER EFFICIENCY THROUGH SYSTEM DEVELOPMENT CHARGES:

Case Study on **Fountain, Colorado**



# Fountain, Colorado



Fountain is a small community in the middle of Colorado's Front Range, with a population of about 27,000 people. It is a suburban community near Colorado Springs, and adjacent to a military base. In June 2014 the City of Fountain adopted an ordinance to encourage water conservation in new, residential developments. Water acquisition fees are reduced by 50% for lots with 50% or less turf area, and by about 70% for lots with 30% or less turf area. In addition, smaller residential lots are charged smaller fees.

## New Fee Structure Designed to Reduce Water Demands

The majority of Fountain's existing water supplies come from a transbasin water diversion (the Fryingpan-Arkansas Project), and the rest is from groundwater.<sup>1</sup> New water supplies are increasingly difficult and expensive to obtain, so a new fee structure was developed to rein in new water demands. Residential landscapes became the focus; because of Fountain's proximity to a military base, new residents are often from more water-rich regions, and are not aware of the high water needs and costs associated with watering the lawn of their new home.

## Residential Fees Linked to Turf Percentage

The City's fee has two parts: an infrastructure fee and a water acquisition fee.<sup>2</sup> The infrastructure fee takes into account the costs of the existing and planned water delivery infrastructure (fire flow requirements, storage, treatment and distribution). The water acquisition fee is based on the current market price for water (usually priced as \$/AF),<sup>3</sup> and is applied to the assumed volume of water used (e.g. 1/3 acre-foot for one household). Both fees for new commercial and multifamily buildings are based on meter size, but the residential water acquisition fee features a conservation incentive.

The residential water acquisition fee varies by lot size and landscaping type. Lot sizes are divided into three classes, and the water acquisition fees get progressively higher with larger lot sizes (see Table 1). Smaller fees are charged for smaller lots because their irrigation needs are commensurately smaller.

Within each lot size class, a water conservation incentive is given for reduced turf areas. Residential lots with turf on 50% or less of the total landscape-able area are charged half of the full fee. The landscape-able area is not the same as the lot size; it excludes the footprint of the house and driveway. A lot with turf on 30% or less of the total landscape-able area pays about 30% of the full fee.<sup>4</sup> Non-turf areas do not have to meet specific requirements, but generally must have low-water using plants or hardscape. These fee incentives were designed to be financially appealing to builders so that they would go through the extra work to design water efficient landscaping.

### DEFINITION

#### System Development Charges—

Also known as tap fees, impact fees, and plant investment fees, among others—are one-time fees charged to new developments to help pay for the infrastructure and water resources that have been developed to support new development.

1 <http://www.fountaincolorado.org/department/division.php?structureid=179> accessed January 28, 2015.

2 <http://www.fountaincolorado.org/department/division.php?structureid=175> accessed January 28, 2015.

3 An acre-foot (AF) of water is equal to approximately 325,851 gallons.

4 With one exception: the smallest lot size with 30% or less irrigated area pays about 20% of the normal fee. This is an additional incentive.



**Table 1: 2015 Water Acquisition Fees for New, Single Family Residential Lots (Fountain, CO)**

Lot Size Square Feet (sq. ft.)	Water Acquisition Fee	Water Acquisition Fee With Conservation Incentive: 50% Or Less Irrigated Area	Water Acquisition Fee With Conservation Incentive: 30% Or Less Irrigated Area
Less than 9,000 sq. ft.	\$4,875	\$2,438	\$1,024
9,001 to 13,000 sq. ft.	\$5,688	\$2,844	\$1,706
Greater than 13,001 sq. ft. or larger	\$6,500	\$3,250	\$1,950

Fees are smaller for smaller turf areas, and for smaller lots.

**Table 2: 2015 Infrastructure & Water Acquisition Fee Structure for All New Commercial & Multi-family Taps (Fountain, CO)**

Tap Size (Inches)	Infrastructure Fee	Water Acquisition	Total Connection Fee
¾"	\$10,824	\$6,500	\$17,324
1"	\$19,279	\$11,577	\$30,856
1 ½"	\$42,530	\$25,539	\$68,070
2"	\$47,433	\$28,483	\$75,916
3"	\$110,819	\$66,545	\$177,364
4"	\$193,740	\$116,341	\$310,081
¾" Each Unit Multifamily	\$6,173	\$3,640	\$9,813

Above 4" ~ For larger than 4" water rates are to be via contract between user and City of Fountain.

The fees increase with tap size.

## Simple Fee Structure Gained Support of City and Home Builders Association

The director of the water utility initiated discussions about a revised fee structure in 2009, several years prior to its adoption. However because the new housing market significantly declined in 2009, the effort was stalled.

A few years later the effort was revived, and individual meetings with city council members and home builders were held, to talk through the rationale, the economics and the logistics. An initial concern in City Council was the financial implications of this change, and concerns about reducing fees while water rates were increasing. Ultimately, the high cost of new water supplies was significant enough to justify an effort to reduce new water demands through a voluntary fee incentive.

The Home Builders Association (HBA) initially had concerns about the complexity, public (homebuyer) acceptance, program enforcement, and the application process. Once those concerns were addressed, the HBA ultimately supported this new fee structure because it created substantial savings for their home builder members. The City adopted the simple fee structure believing that a simple concept for saving water, paired with a simple fee structure, had a better chance of being understood and accepted by the community.

## Landscape Templates Used to Increase Adoption of Conservation Incentive

After the fee proposal was adopted by City Council, the water utility developed template landscape plans to help the builders and landscape contractors meet the requirements of the conservation incentive. The landscape templates demonstrate where areas of turf can be placed, which types of low-water using plants can be used and how they might be arranged, all while meeting the varying turf percentage requirements. The utility reviews the builder's final landscape plan before it is installed, and once installed the landscapes are inspected before a Certificate of Occupancy is issued, to ensure that the landscape is consistent with the plan and requirements. In addition, the water utility is developing brochures and informational material to promote this incentive and explain the new process to home owners and home builders.

## Fee Structure Benefits Utility, Builders and Home Owners

According to the utilities director, this fee structure is a win for the water utility because they can prolong their existing water supply, a win for home builders because they have an option to pay lower fees, and a win for home buyers because their water bills will be lower.<sup>5</sup>

In addition, the voluntary approach makes this an appealing water conservation program to all parties. The City of Fountain—residents and government alike—would not likely be supportive of a water conservation mandate, and the water utility has limited capacity to enforce those kinds of restrictions anyway.

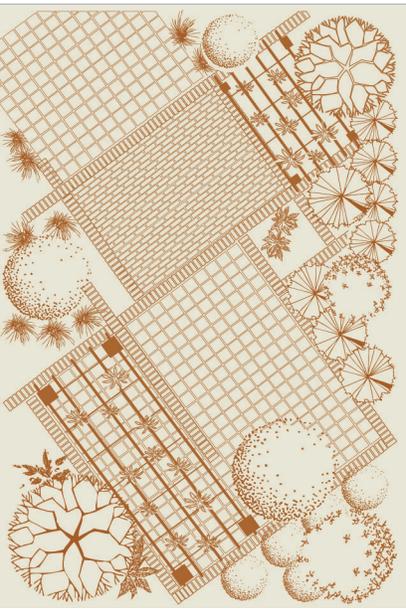
Lastly, whereas several other western communities have implemented turf buy-back programs to replace existing lawns with low-water using landscapes, this program reduces turf area at the outset.

One potential challenge the utility faces is that there is no mechanism to prevent a homeowner from changing their low-water landscaping to one with more turf. The utility does however have an inclining block rate structure with steep rate increases, which is a deterrent against installing water-thirsty landscapes.

## Majority of New Residential Developments are Using Conservation Incentive

This fee schedule has been in place since June 2014 and as of November 2014 approximately 75% of the proposed new residential developments were making use of the incentive.<sup>6</sup>

The water utility plans to develop a database of new homes that were designed to meet the conservation requirements, and perform spot checking periodically in the future to monitor any changes and determine how successful the program is over the longer term.<sup>7</sup>



5, 6 Personal communication, Curtis Mitchell, Utilities Director. November 18, 2014.

7 Ibid.



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