

DENVER WATER RATE SETTING



PROJECT SUMMARY

Denver Water adopted an increasing block tariff rate structure with water budget provision, to fund essential repairs and upgrades to the drinking water system.

WHAT HAPPENED?

Problem Statement and Project Goal

To keep up with Denver, Colorado's water infrastructure repairs, Denver Water needed to increase the water rates for every customer. The new rates use an increasing block tariff structure with a water budget provision. As with all increasing block structures, customers which use more water will be charged more per gallon. The water budget provision ensures that residents are charged a lower rate for essential indoor uses (e.g., cooking and cleaning), and a higher rate for other outdoor uses. Denver Water calculates the essential indoor use rate based on a household's average water usage during the winter quarter. The new water rates increased both the fixed service charge portion of the water bill, and the consumption charge per gallon, for every customer.



Denver Water adopted rate changes to fund essential repairs and upgrades to their delivery system.

Drivers that spurred on the Project/Program: What lifted the project off the ground?

- | | |
|---|---|
| <input type="checkbox"/> Community Demand | <input checked="" type="checkbox"/> Policy |
| <input type="checkbox"/> Politics | <input checked="" type="checkbox"/> Practitioners |
| <input type="checkbox"/> Financing | <input type="checkbox"/> Unclear |
| <input type="checkbox"/> Other | |

Challenges/Barriers to adopt: What were the challenges to moving the project forward?

- | | |
|--|--|
| <input checked="" type="checkbox"/> Community Demand | <input type="checkbox"/> Policy |
| <input type="checkbox"/> Politics | <input type="checkbox"/> Practitioners |
| <input type="checkbox"/> Financing | <input type="checkbox"/> Unclear |
| <input type="checkbox"/> Other | |

Proponents: Was the project supported by government or community members?

- | | |
|--|----------------------------------|
| <input checked="" type="checkbox"/> Public | <input type="checkbox"/> Private |
|--|----------------------------------|



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HOW DID IT HAPPEN?

Ingredients for Success

A Rate Structure Review Committee gave direction to Denver Water on the rate setting process. The committee represented interests such as the City of Denver, the Hispanic Chamber of Commerce, conservation organizations, developers, and distributors. The committee and the Board of Commissioners proposed and approved the new rate structure. The new rates were approved despite opposition from some residents. Community feedback has prompted consideration of additional affordability programs. Currently, affordability programs include opting into a payment plan that allows customers to finance their bills, and a plan that annualizes the bill.

System Specifications, Scale, and Cost

Denver Water, the main water supplier for the City of Denver and its surrounding suburbs, serves 1.4 Million people with more than 3,000 miles of pipe, some of which dates to the 1890s. The water supply is sourced by a collection of rivers and streams fed by mountain snowmelt. It serves about a quarter of the state's population despite using less than two percent of all water found in the State of Colorado.

Beneficiary

The beneficiaries include Denver Water and its customers, which receive a safe and reliable supply of water.

Decision-Making Timeframe

1994: Introduction of increasing block tariff

1999: Adoption of three-tier increasing block tariff rate structure

2006: Addition of fourth block in rate structure

2007: Modification of block structure to maximize conservation

2014 - 2015: Adoption of three-tier increasing block rate structure with water budget provision

Funding, Financing, and Management

Denver Water has a suite of construction projects and capital improvement plans scheduled into the future. There are currently 192 major construction projects in the capital plan. Funding for day-to-day operations and capital projects is derived from water rates, bond sales, cash reserves, hydropower sales, and system connection fees for new users.

Because Denver Water's charter prohibits operating for profit, they must charge rates that cover revenue requirements. Rates are determined by identifying customer classes and then performing a cost of service analysis for each class. All customers of Denver Water are grouped by customer classes (residential, commercial, and industrial) and their location inside or outside the City

and County of Denver. Cost-of-service rates recover costs from each customer class in proportion to the cost of providing the service to each class.

The two components of Denver Water rates include a fixed charge per account and a consumption charge for every 1,000 gallons of water consumed. Additionally, Denver Water charges customers for the service based on an increasing block tariff. The rate structure utilized by the system varies the cost of the water service for each household depending on its water consumption pattern.

The increasing block tariff water rate structure was introduced in 1994 as a two-block system in which customers were designated by the amount of water used. Customers that utilized less than a certain number of gallons paid a specific rate for every gallon while customers that utilized more than that number of gallons paid a higher rate. In this way, the increasing block tariff system encourages water conservation.

In 1999, Denver Water adopted a three-tier inclining block rate structure and a fourth block was added in 2006 to achieve finer distinction between high and low volume customers. In 2014, it returned to a three-block system but began distinguishing between indoor and outdoor consumption by implementing water budgets based on the winter demands of each customer.

DID IT WORK?

Maintenance, Monitoring, and Outcomes

Maintenance for this project includes updating the finance plan, cost of service, and rates annually. Some ongoing issues are yet to be resolved, such as high connection fees, shared water connections for poor households, and the potential for low income residents to live in larger households which require more water. Water affordability policies, currently limited to bill financing and annualizing water bills, are being evaluated. Denver Water is exploring the creation of a more robust affordability policy in near future, though this policy is not yet outlined.

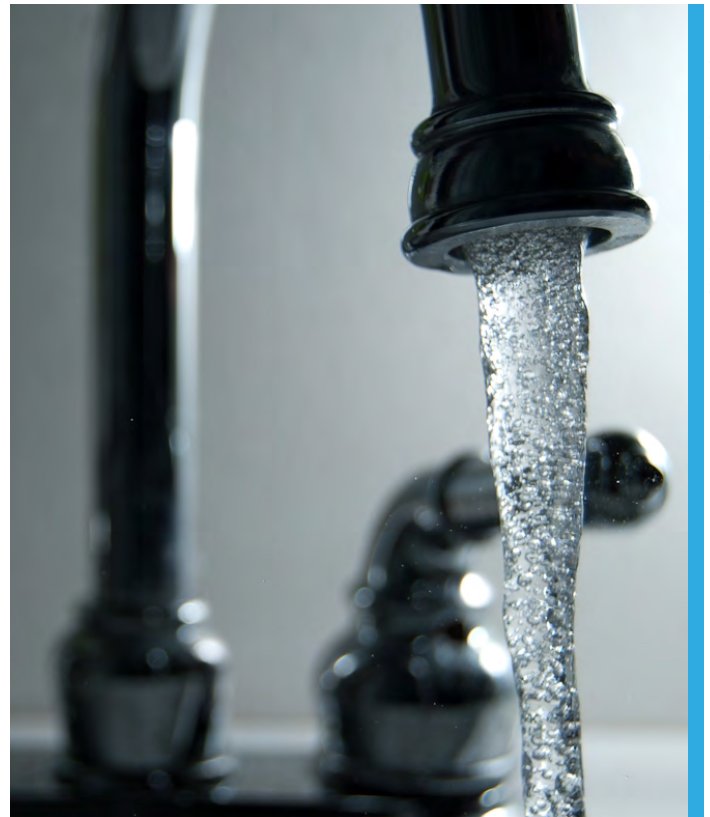


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Lessons Learned

Rate structures should be evaluated frequently and updated as needed to reflect current usage needs. The history of Denver Water's increasing block rate structure indicates that it has been effective in promoting water conservation, but water revenue decreased with improving household water efficiency. The new three-tier block rate structure lowers the first tier from 11,000 to 5,000 gallons, incorporates a water budget system, and increases the fixed service charge. These strategies should help ensure a sustainable level of water rate revenue.

Some financial protection can be provided for larger households by using a water budget system which identifies the essential water use for each household and ties that use to the lowest rate. However, increased rates should be rolled out alongside robust affordability programs for low-income residents.

RELEVANT PROJECT CONTACT DETAILS: Fletcher Davis, Rates Manager for Denver Water, was interviewed for this case study. He can be reached at Fletcher.Davis@denverwater.org

SOURCES:

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