INTERBASIN TRANSFER ACT PERFORMANCE STANDARDS

WATER RATES AND BILLING

STAFF PROPOSAL – PART 2
(Performance Standards, Appendix B)

Water Resources Commission Meeting, March 2021

Purpose of update

- Reflect updated Interbasin Transfer Regulations (2018)
- Reflect updated Water Conservation Standards (2018)
- Align with industry best practice

Interbasin Transfer Act Regulations (313 CMR 4.09(3)(c)1.a.)

(iii) Implementation of Rate Structures that reflect the costs of operation, proper maintenance, proposed capital improvements, and water conservation and that encourage the same

Interbasin Transfer Act Regulations (313 CMR 4.09(3)(c)1.a.)

(iii) Implementation of Rate Structures that **reflect the costs** of operation, proper maintenance, proposed capital improvements, and water conservation and that **encourage the same**

Proposed Language for Performance Standards

"The rate structure must encourage water conservation. Appendix B provides guidance on financially sustainable conservation-oriented rate structures."

Appendix B

- List of resource documents
- Six principles of conservation rates
- Conservation rate structures and submittal requirements for each

Recommended Guidance Documents:

- *Water Conservation Standards*, Pricing Chapter
- *Water Conservation-Oriented Rates: Strategies to Extend Supply, Promote Equity, and Meet Minimum Flow Levels* (AWWA 2005)
- *Building Better Water Rates for an Uncertain World: Balancing Revenue Management, Resource Efficiency, and Fiscal Sustainability* (AWE 2014)
- *Principles of Water Rates, Fees, and Charges* (AWWA M1)
- *Developing Rates for Small Systems* (AWWA M54), if appropriate

Appendix B

- List of resource documents
- Six principles of conservation rates
- Conservation rate structures and submittal requirements for each

Conservation-Oriented Water Pricing Principles

#1 - Rates and charges should reflect the true cost of delivering safe, reliable, and sustainable water services into the future.

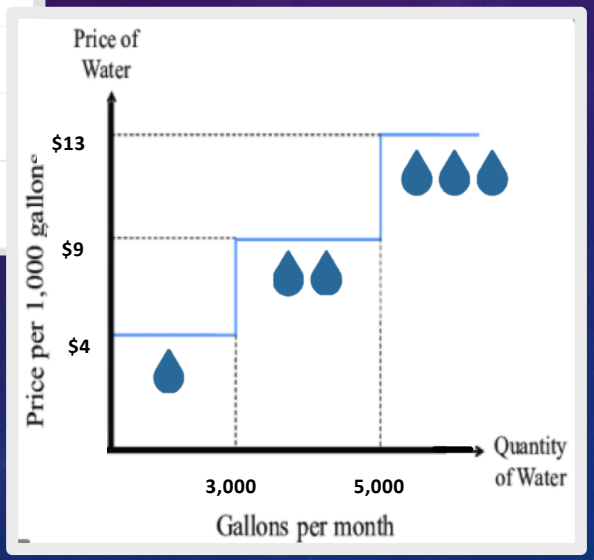
Conservation-Oriented Water Pricing Principles

#2 - Rate structures should send strong price signals that reduce inefficient and nonessential use.

Conservation-Oriented Water Pricing Principles

#3 - Rate structures should incorporate mechanisms to address revenue stability and sufficiency in the face of reduced demand.

Conservation-Oriented Water Pricing Principals

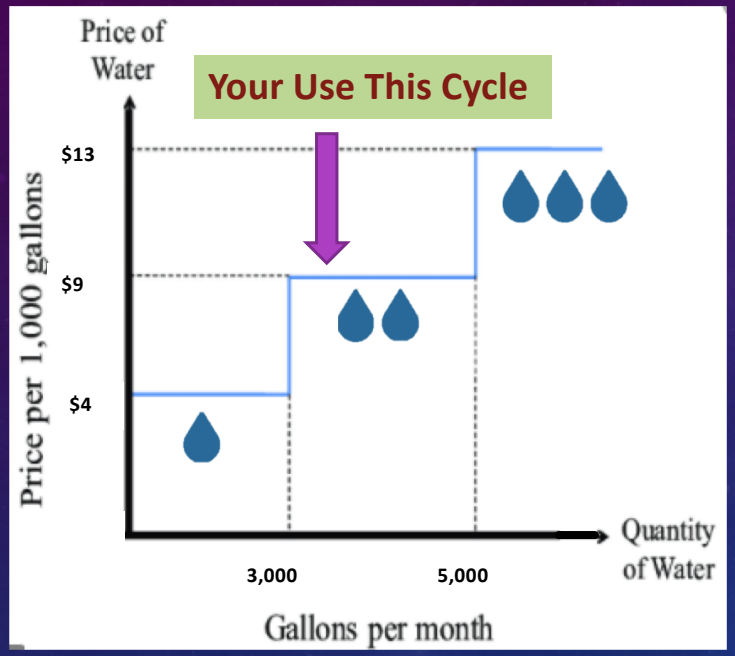


#4 - Rates should be easy to interpret, reflect fair distribution of costs, and incorporate affordability protections for water to meet basic needs.

Conservation-Oriented Water Pricing Principles

#5 - Rates should be reviewed annually and adjusted as needed.

Conservation-Oriented Water Pricing Principles



#6 - Billing practices should support price signals by:

- helping customers understand the impact of their usage on their charges
- occurring frequently enough for customers to adjust their use or investigate possible leaks soon after a sudden increase in metered use; monthly billing is ideal.

Appendix B

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Conservation-Oriented Rate Structures

Two categories

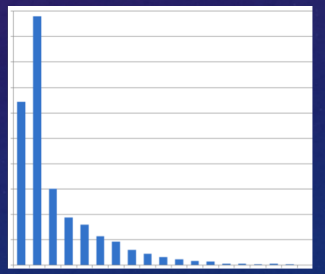
Per-unit price increase(s)

Uniform rate

Per-Unit Price Increase(s)

Two elements needed to be fair and effective:

1) Reasonable basis for determining water targeted for reduction



2) Substantial price increase for water targeted for reduction (i.e. meaningful *percentage increase* and sufficiently high *absolute price*)

Unit-Price Increases Applicable for:

Inefficient use

Nonessential use

Use at burdensome times for system or environment

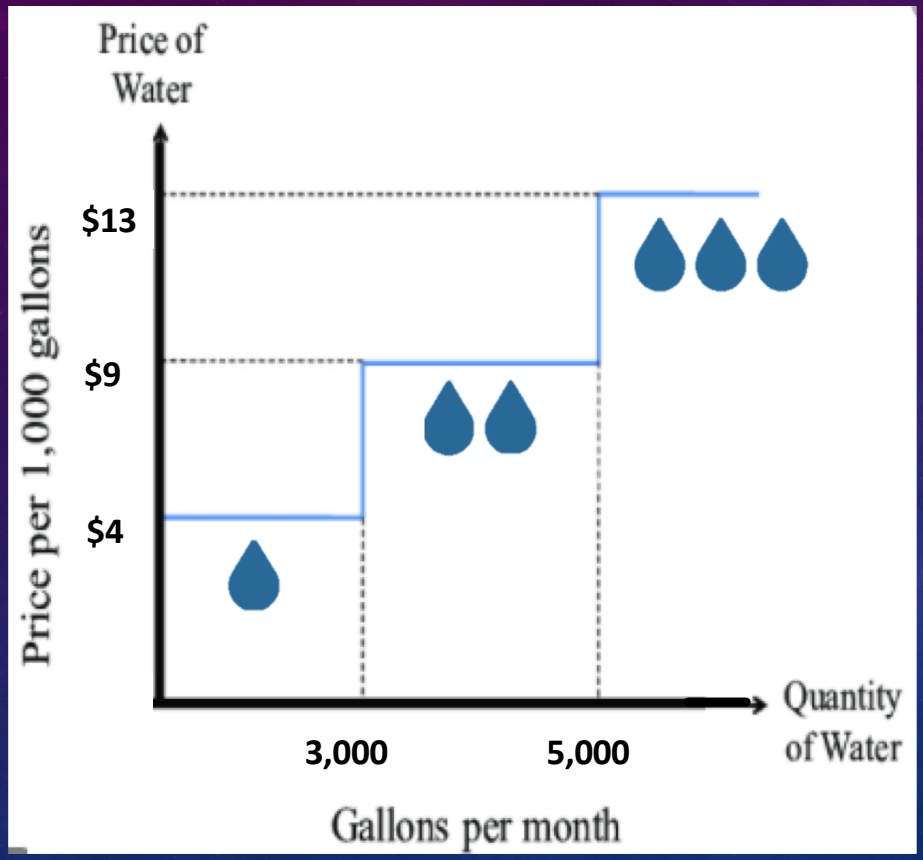
Unit Price Increase
Example

Seasonal Rates

Unit charges increase to reflect seasonal peak demands and/or seasonal source stressors.

Proponents should describe the seasonal triggers and how they were selected.

Unit Price Increase
Example



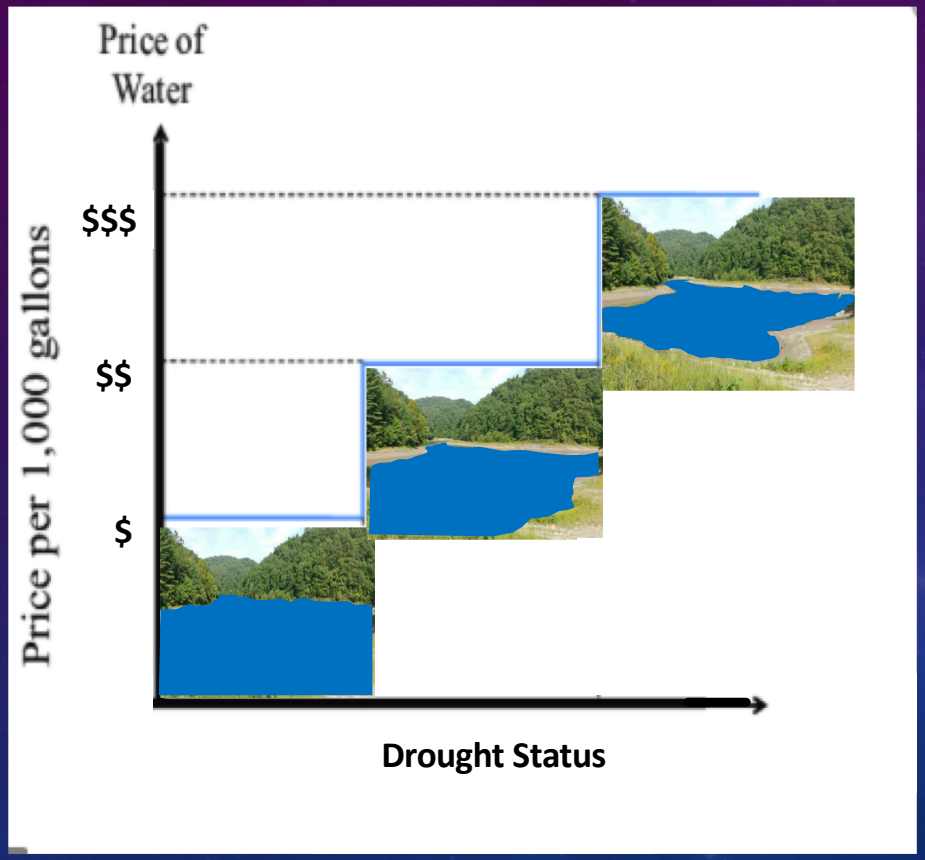
Tiered Rates

Unit charges increase as usage crosses set volume thresholds within a billing period.

Proponents should describe the basis for the tier breaks.

Note! The more distinction made between customer types, the more effective and fair a tiered rate is, but the more administratively complex.

Unit Price Increase
Example



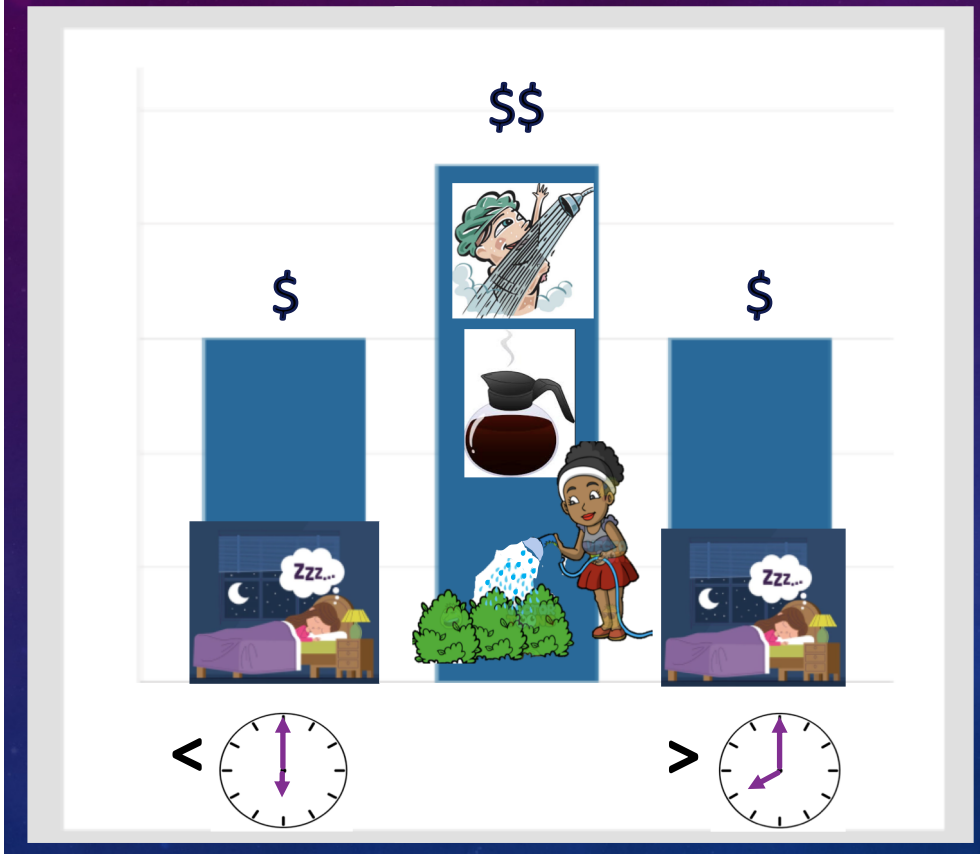
Drought or Scarcity Rates

Unit charges increase based on drought triggers or other specific metrics of source stress.

Proponents should describe how the indicators that trigger price increases are determined and tracked.

Unit Price Increase

Example



Peak Use Rates

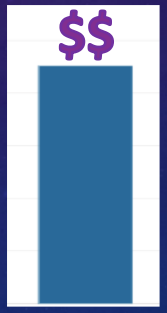
Unit charges increase during times the supply system is under the greatest stress from demand.

Proponents should describe how the peak use period is defined and the basis by which it was determined.

Conservation-Oriented Uniform Rate

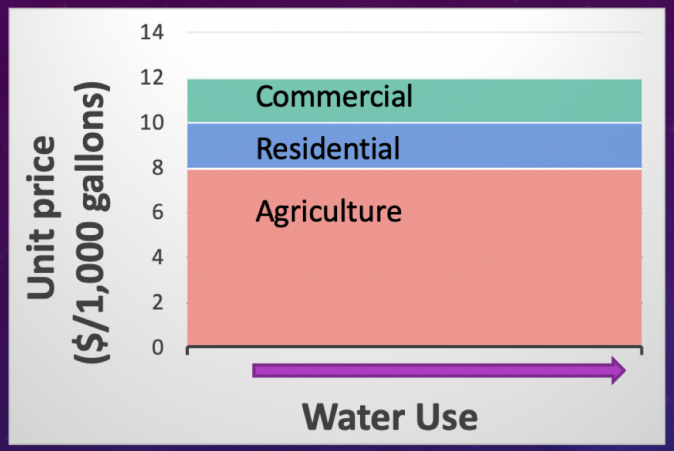
Two elements needed to for a fair and effective price signal:

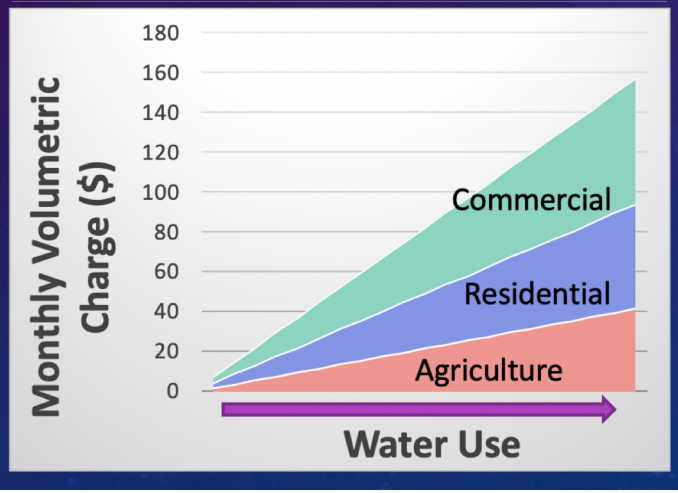
1) Unit price should be sufficiently high to incentivize reduction



2) Program should be in place to help ensure customers can afford water for basic needs

Uniform Rate *Example*





Three sectors

Within each sector, unit charges stay the same, regardless of demand.

Proponents should describe the mechanism(s) in place to protect affordability of water for basic needs.

Evaluation of Conservation Rates

Per Unit Price Increase	Uniform Rate
Reasonable basis for identifying water targeted for reduction	Reasonable affordability protections
Sufficient price signal in categories targeted for reduction	Sufficient price signal overall

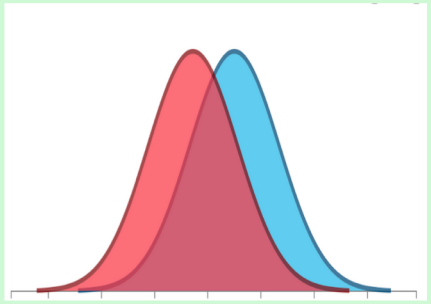
Evaluation of Conservation Rates

Per Unit Price Increase	Uniform Rate
Reasonable basis for identifying water targeted for reduction?	Reasonable affordability protections
Sufficient price signal in categories targeted for reduction	Sufficient price signal overall

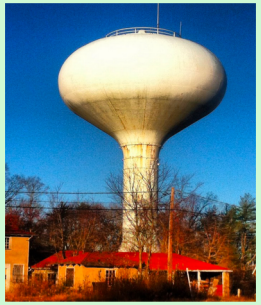
Evaluation of Per Unit Price Increase Structure

Examples of "reasonable" bases for identifying water targeted for reduction:

Analysis of customer usage patterns



Cost of service inflection points



Regulatory or operational thresholds

Other

Does the percentage of accounts exposed to each price category indicate that the targeted customers are receiving the signal(s)?

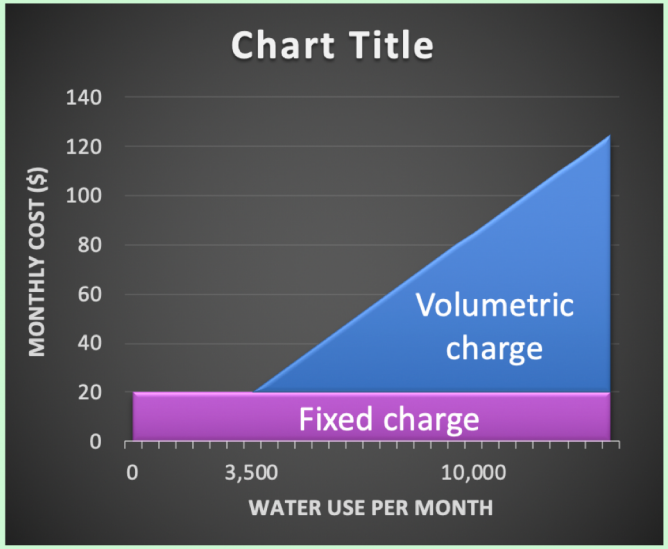
Evaluation of Conservation Rates

Per Unit Price Increase	Uniform Rate
Reasonable basis for identifying water targeted for reduction	**Reasonable affordability protections?**
Sufficient price signal in categories targeted for reduction	Sufficient price signal overall

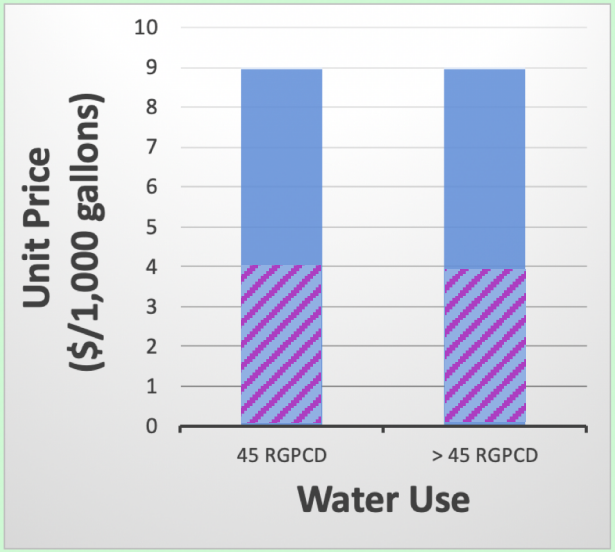
Evaluation of Uniform Rate Structure

Examples of “reasonable” affordability protections:

Base allocation



Income-based lifeline rates



Other

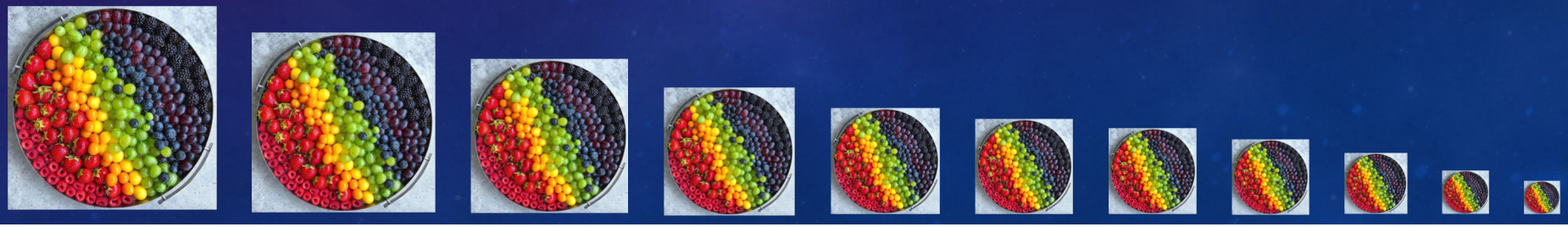
Evaluation of Conservation Rates

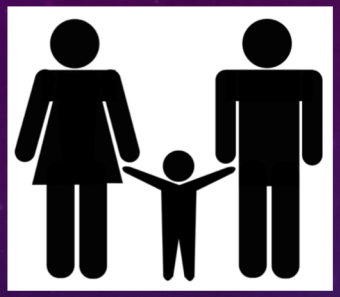
Per Unit Price Increase	Uniform Rate
Reasonable basis for identifying water targeted for reduction	Reasonable affordability protections
Sufficient price signal in categories targeted for reduction?	**Sufficient price signal overall?**

How do you compare price signals across utilities?

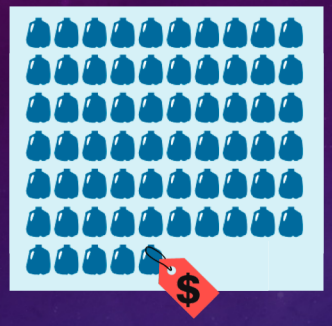
- Different units
- Different billing cycles
- Different base allocations
- Different number of tiers
- Different tier volumes
- Different prices for each tier
- Different average household sizes

…Create common price metrics across all systems.

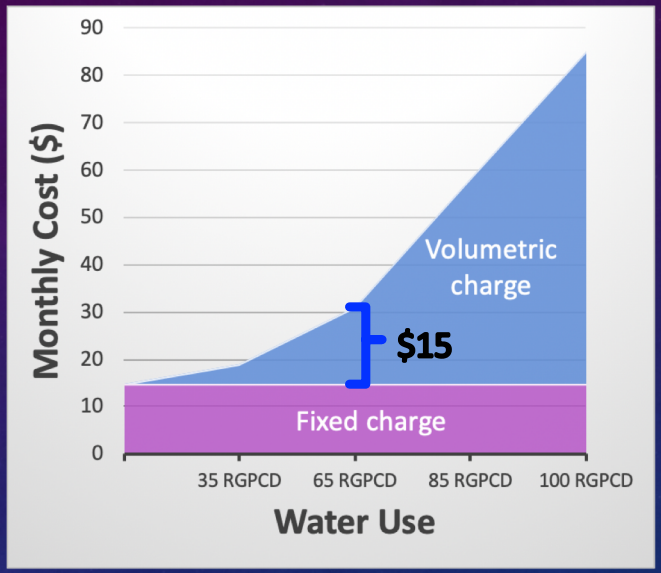




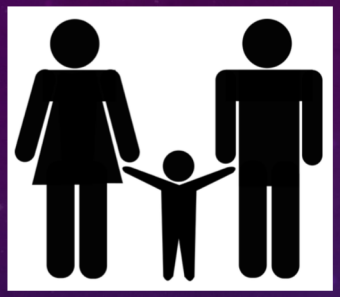
Average household size in the community



Using **65** gpcd



- **Monthly cost from volumetric charges**
- **Cost per gallon for the next gallon used**



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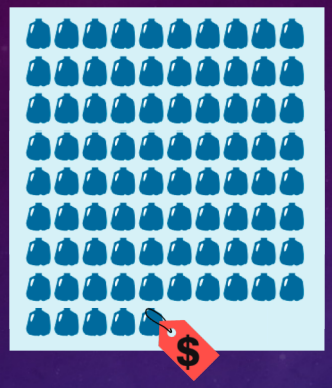
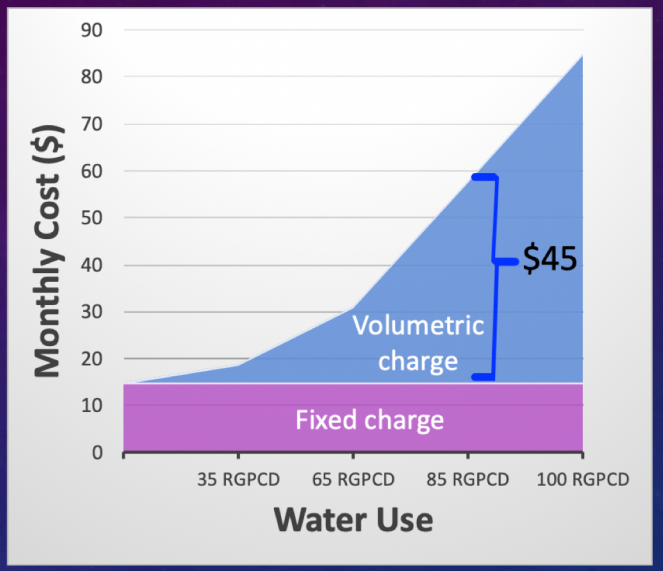


Using **85** gpcd



- **Monthly cost from volumetric charges**
- **Cost per gallon for the next gallon used**

Evaluation of Per Unit Price Increase Structure *and* Uniform Rate Structure

Benchmark for "sufficient" price signal

Volumetric charge and *marginal price for the next gallon* for average-sized households using:

- 65 gpcd
- 85 gpcd

As an initial benchmark, these four metrics should be at or above the state median. *THIS IS REBUTTABLE*.

Potential Reasons for Rebuttal

- Small/simple system with low cost of operation
- Low RGPCD within customer segment(s) facing low prices AND effective structure to target problematic customer segment(s)
- Other?

Evaluation of Conservation Rates

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DISCUSSION