

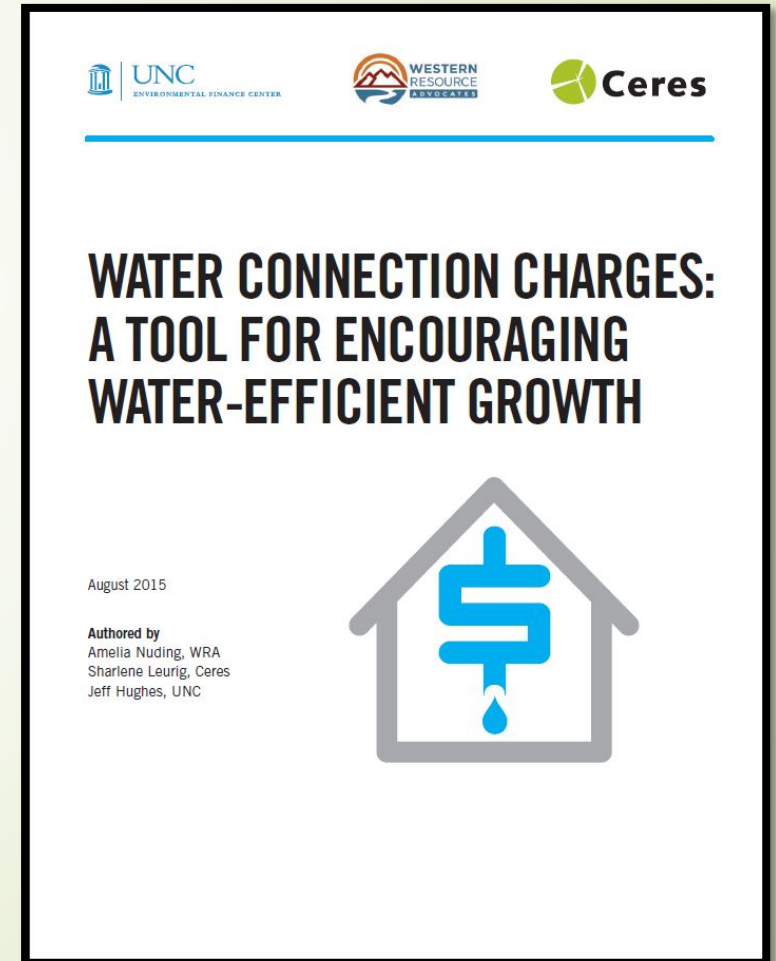
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watersmartinnovations.com



Water Connection Charges: A Tool for Encouraging Water-Efficient Growth

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Water Connection Charges (aka “tap fees”)

- A one-time fee charged to **new developments** (residential, commercial, industrial, institutional) to cover:
 - The cost of physically connection to the water system
 - The capital costs (past and/or future) for “capacity charges”:
 - Acquiring water
 - Water infrastructure
 - Water treatment plants

Big Picture Context: Municipal Water Gaps in River Basins in CO

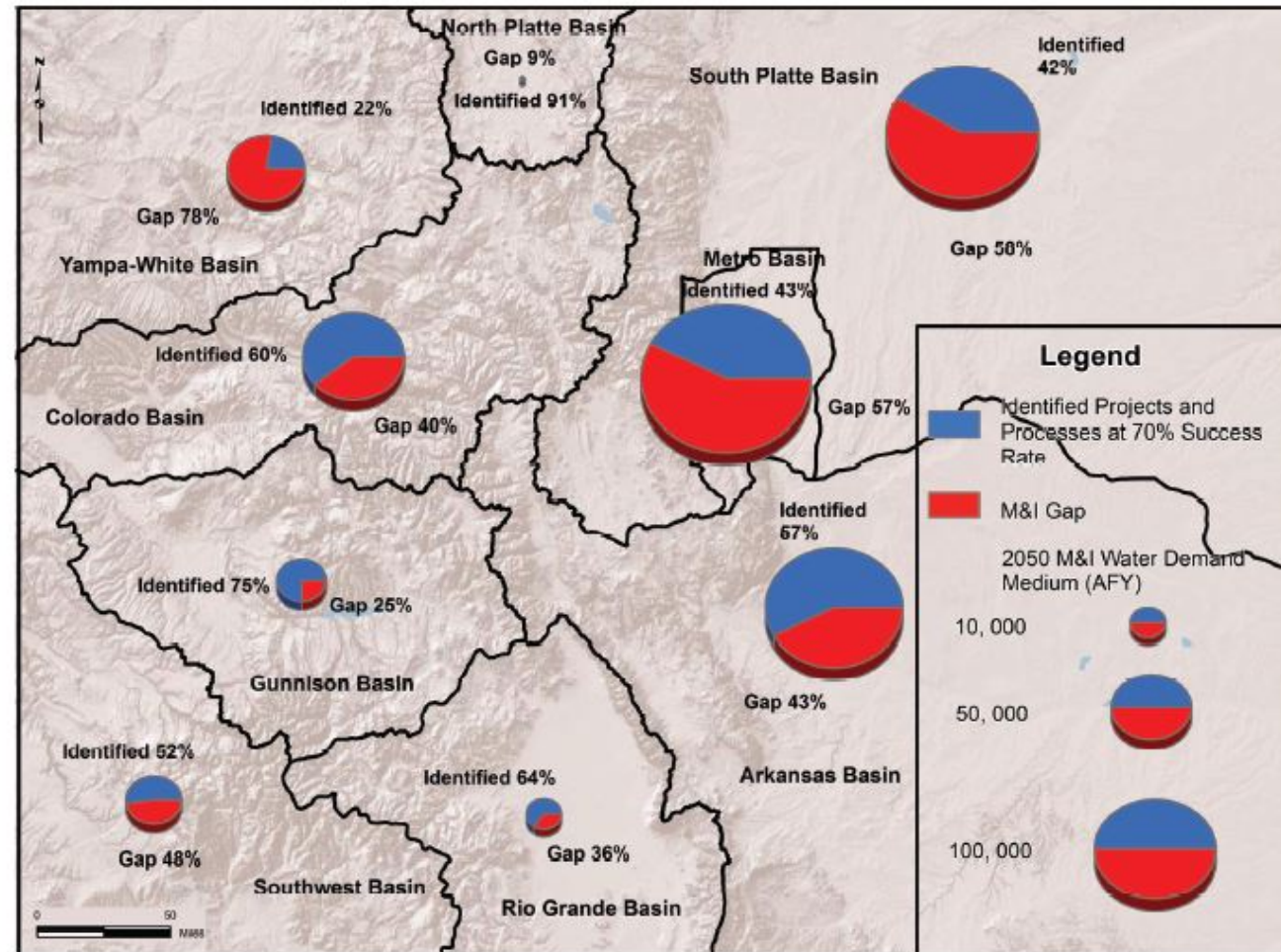


Figure ES-20 2050 M&I and SSI Gap Analysis – Medium Gap Scenario



Research Method

- 840 communities in NC & GA
- 60 communities in AZ, CO & UT (20 in each state)
- Price for SFR charges
- Factors considered in connection charge design
 - meter size, lot size, house size, outdoor area etc.

Connection Charges in Western Communities

- Researched Single Family charges in 60 communities: 20 each in AZ, CO, UT
- Selection criteria included a diversity of population sizes, population growth rates, geographic locations, and water sources

Table 2. Median Connection Charges for New Single-Family Homes in Western States Researched Are Significantly Higher than in the Southeastern States.

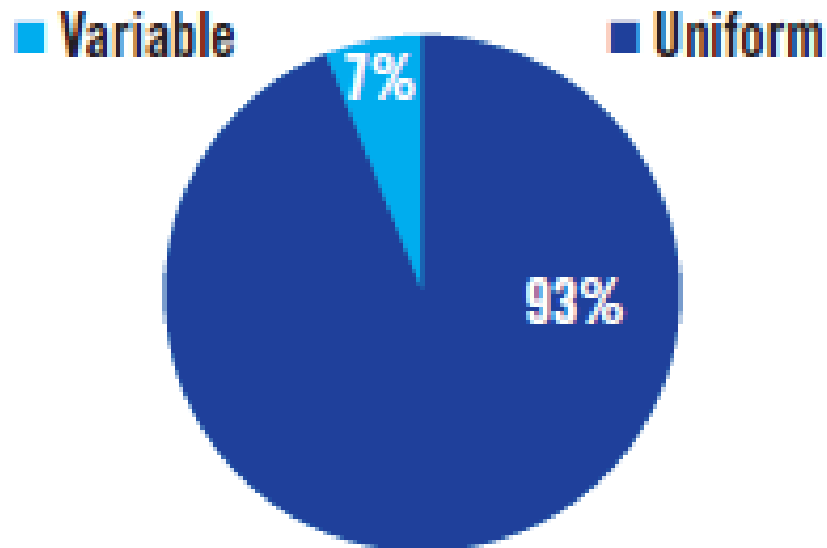
	Arizona (2014/2015) (n=20)	Colorado (2014/2015) (n=20)	Utah (2014/2015) (n=20)
Maximum	\$9,600	\$25,400	\$8,200
Minimum	\$1,700	\$1,000	\$900
Median	\$4,800	\$11,900	\$2,400
Average	\$5,200	\$12,400	\$2,900

Uniform vs. Variable Connection Charges in Single Family Homes

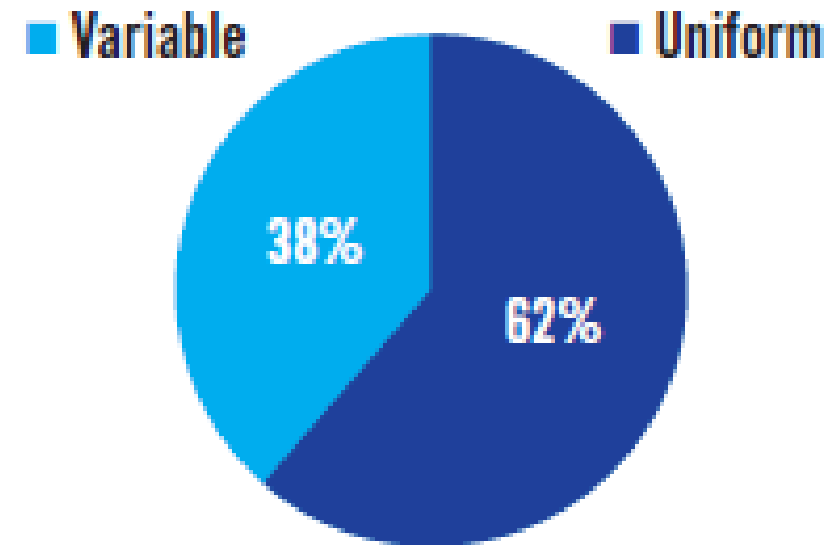
Uniform – Meter only, or other flat fee for SFR

Variable – Other factors considered, including location

Southeastern Communities Connection Charges

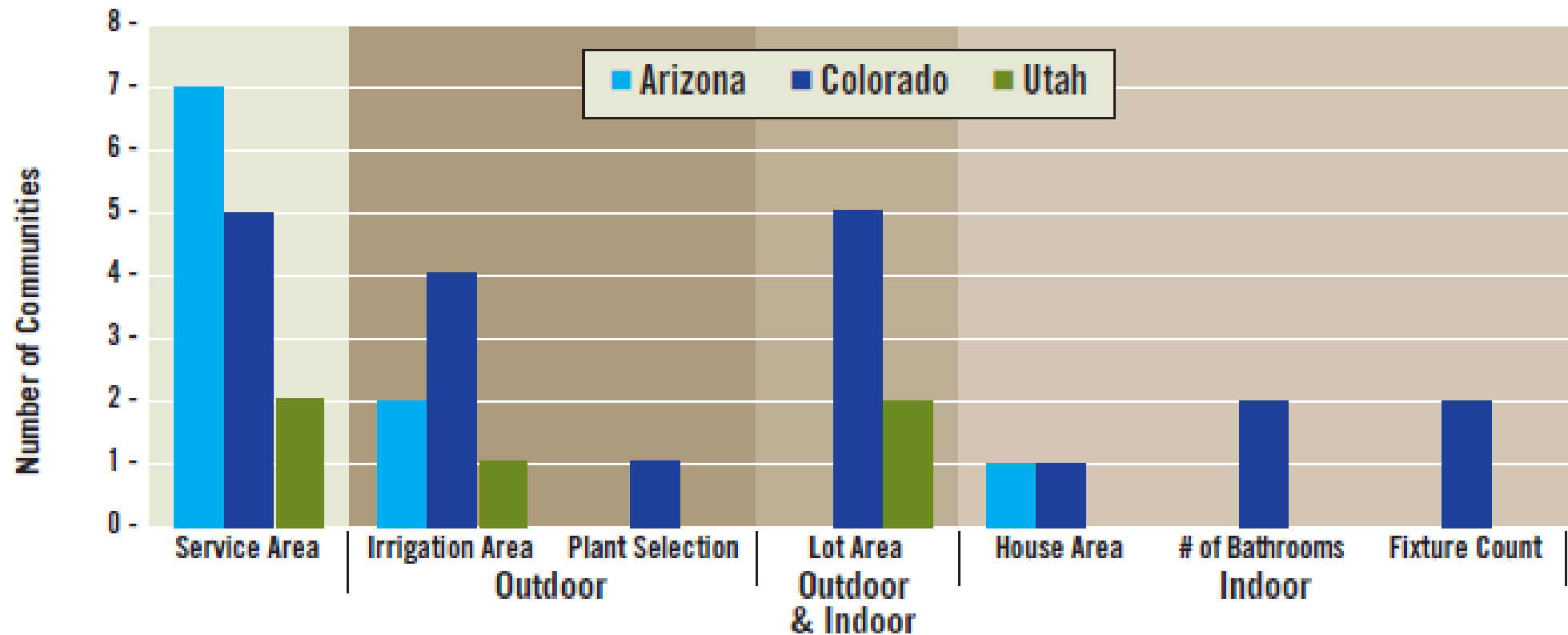


Western Communities Connection Charges



Multiple Factors used in Western Communities

Figure 8. Several Factors Other than Meter Size Were Used in Determining Water Connection Charges in the West. Indoor & Outdoor Water-Demand Factors Were Used Most Frequently in Colorado.





Case Studies in Colorado

Motivation: The “water footprint” of a new home doesn’t always look the same



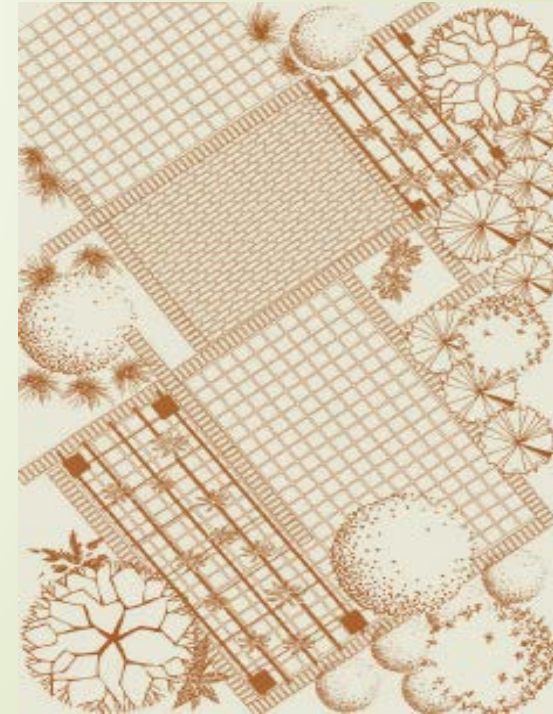
Variable factors that are known before occupancy: lot size, square footage of home, irrigation area, plant type, and others

Case Study Highlights: Fountain, CO



Single Family Residential Connection Charges:

- Smaller Lots pay smaller water acquisition fees
- Reduced Turf Percentage reduces connection charge at 50% and 30%
- Landscape templates help increase adoption of conservation incentive



Case Study Highlights: Westminster, CO

1. The water resources fee is proportionate to each ICI customer's projected annual water use (restaurants, schools, warehouses etc.)
2. Lower connection charges are assessed for Water Efficient Landscapes

	Fee (\$/sq ft)		
	Turf	Medium Water Use	Low Water Use
Potable Irrigation Tap Fee	\$2.05	\$1.02	\$0.51
Reclaimed Water Fee	\$1.68	\$0.84	\$0.41
Water Use and Irrigation Profile	More than 10 gallons per sq. ft. Irrigation methods will typically be spray or rotor heads. Bluegrass turf is a typical grass in this zone.	No more than 10 gallons per sq. ft. Irrigation methods will typically be spray heads. Turf-type tall fescue is a typical grass in this zone.	No more than 3 gallons per sq. ft. Irrigation methods will typically be micro-spray or drip. Buffalo grass is a typical grass in this hydrozone.

Case Study Aurora, CO: Single Family Residential Charges

Previous Uniform Fee: \$24,460

Lot Size (Sq. Ft.)	Proposed Fees		
	1-2 Bath Use	3-4 Bath Use	5+ Bath Use
-	\$5,509	\$8,901	\$15,426
5,000	\$10,213	\$13,605	\$20,130
6,000	\$11,154	\$14,546	\$21,071
7,000	\$12,095	\$15,487	\$22,011
8,000	\$13,036	\$16,428	\$22,952
9,000	\$13,977	\$17,369	\$23,893
10,000	\$14,917	\$18,309	\$24,834
15,000	\$19,621	\$23,014	\$29,538
20,000	\$24,326	\$27,718	\$34,242
50,000	\$52,550	\$55,942	\$62,467
100,000	\$99,591	\$102,983	\$109,507

**+ \$1,000
Credit if
the front
yard uses
xeriscape!**

Median lot size is 7,500 sq ft.
~90% under 11,000 sq ft.

But wait, there's more!

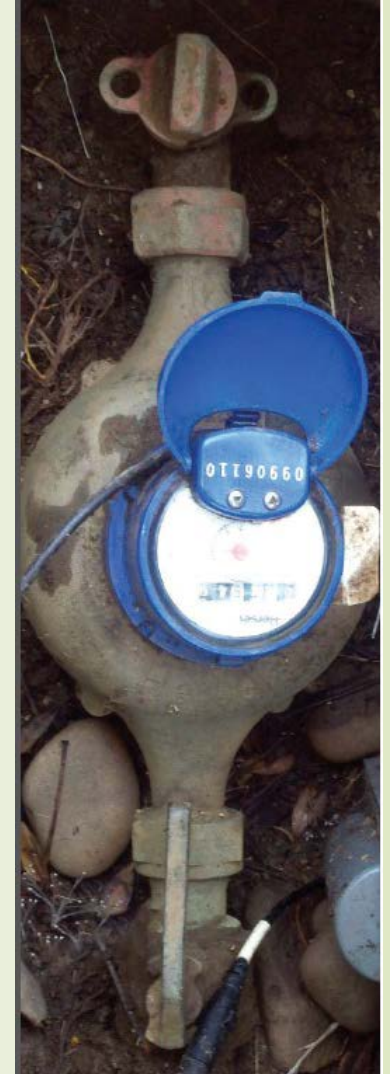


\$0!



Conclusions

- **Meter size** is an imperfect and often imprecise indicator of customer impact on system.
- Some utilities have begun incorporating **multiple factors** such as lawn size or number of fixtures and are sending more precise pricing signals to new customers.
- Successful “multi-factor” water connection charges relied on:
 - *Good Data*
 - *Inviting Customers and Developers into the Design Process*



Recommendations



1. Utilities should consider refined, multi-factor connection charges to encourage water efficiency of new developments and capture the true costs of new development.
2. Utilities should consider putting in place mechanisms to ensure longevity of water savings.
3. Utilities should invite customers and developers into the connection charge design process.
4. Local policymakers and planners should recognize the importance of connection fees in shaping future water demand and development patterns, and in managing costs of this fundamental service.

Thank you! Questions?

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Download report at:

<http://westernresourceadvocates.org/projects/water-connection-charges/>

