

WATER FACTS



Volumetric Wastewater Pricing: Frequently Asked Questions

1. Will volumetric pricing of wastewater service require the installation of meters on sewer lines, and is that even practical?

No—separate installation of meters on household sewer lines is not necessary, and would not be practical. Residential customers with volumetric sewer rates are billed for sewer service based on the amount of water use shown on the water meter serving the home.

2. How can residential sewer service be billed from the customer's water meter, since so much of the water used at home is used outdoors and does not enter the sanitary sewer system?

Here's how—in areas where landscape irrigation is a significant amount of total water use, as is the case in much of California, it is common to use meter readings for the winter months (when outdoor use is at its lowest) as the basis for the volume charge on the sewer bills for the remainder of the year.

3. If wastewater service is billed from the water meter readings, won't wastewater utility revenues fluctuate from one month to the next depending on the weather, and be mismatched with wastewater system costs, which are much more consistent between months?

Not really—Most California wastewater utilities will find it advantageous to base the volumetric charge on the level of use recorded by the water meter during the winter months. Billing throughout the year will be quite stable because the residential bills can be re-set once a year and need not fluctuate month-to-month.



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4. If a wastewater agency serves a customer that has no water meter, either because the house has a private well or because the water supplier has not yet installed a water meter, would a separate wastewater meter be installed?

No—in cases where a residential customer receives sanitary sewer service but the home has no water meter, the wastewater utility cannot be expected to bill by volume. All public water suppliers are required by state law to install water meters at any remaining unmetred households by 2025.

5. Volumetric billing makes sense for water utilities, but does it work for sewer utilities? Aren't most wastewater system costs fixed costs?

Yes—but the portion of total costs that is fixed is similar for both water and sewer systems. As with water systems, in the short run, the majority of wastewater costs are fixed, although energy and other variable costs may be significant. But in the long run, also as with water systems, a wastewater system may be able to avoid additional fixed costs by reducing wastewater flows, so billing at least in part by volume makes sense.

6. Must a customer's entire sewer bill be based entirely on metered water use?

No—most utility bills are a combination of fixed charges unrelated to the amount of usage, and variable (or volumetric) charges based on the level of usage recorded by the water meter. Fixed charges can be 10 to 30 percent of an average customer's total bill.

7. How will wastewater agencies obtain the customer water consumption data that is to be used for billing sewer service?

Here's how—wastewater utilities will collect customer consumption data from water suppliers with whom they have common residential customers. Data-sharing is already in place between many water and wastewater utilities for the large commercial and industrial customers that they have in common. These arrangements would need to be expanded to cover the more numerous residential customers.

In some cases, the wastewater agency's service area is served by more than one water supplier, which complicates the process. However, with today's electronic databases and file transfer capabilities, meter data can readily be transferred between utilities.

8. With volumetric billing, would wastewater agencies have to let water suppliers issue their sewer bills and collect their revenue for them?

No—not unless they found it convenient or economical to do so. Wastewater agencies could continue to generate their own bills for their own customers if they so choose. Agencies that bill on the tax rolls can derive volumetric rates and continue to bill the charges on the tax rolls.

9. With volumetric billing, would wastewater agencies have to send out bills more frequently than they do now?

No—water utilities usually bill their residential customers on a monthly or bi-monthly basis, while many wastewater agencies bill annually or semi-annually. Customers may find it more convenient to be billed at the same frequency for both services, but changing billing frequency is not an essential part of the conversion to volumetric billing for wastewater service.

10. Won't volumetric billing have an effect on the amounts customers pay for wastewater service?

Maybe—if a household is a large water user. Individual customers will see increases or decreases in their individual bills based on their relative indoor (wintertime) water consumption compared to the average customer in the community. However, with the typical distribution of bills above and below the average, the expectation is that slightly more customers will experience bill reductions rather than increases. And as customers learn they can lower their sewer bills by conserving water, more customers' bills will decrease over time. The total amount that wastewater utilities collect from their residential customers should remain virtually the same.

11. Are any sanitary sewer systems being supported by volumetric billing today?

Yes—this is the prevailing form of revenue supporting sanitary sewer systems around the country (for example, in Boston, New York, Philadelphia, Atlanta, Houston, and Seattle). In California, cities large and small support their sewer service with volumetric rates billed from the water meter (for example, Los Angeles, San Diego, San Francisco, Long Beach, Pasadena, and San Luis Obispo). Furthermore, non-residential sewer customers have commonly been billed with volumetric rates for decades. Often, however, sewer service that is provided by a separate local agency, such as a sanitation district rather than a municipality, is billed with flat rates.

Because over 75 percent of residential sewer accounts in California are billed flat rates, the state is missing a huge opportunity for water conservation. However, momentum is gaining to convert residential sewer customers from flat to volumetric rates. In California, two factors are contributing to this accelerating conversion. First, the California Urban Water Conservation Council's best management practices require utilities that provide both water and wastewater service to bill with volumetric sewer rates. Second, the soaring cost of providing wastewater service has encouraged consumers to ask for volumetric rates, which are more equitable and affordable for conserving customers.

12. Won't this conversion take a lot of time to implement?

Not necessarily—in contrast with physical construction projects, a new rate structure may be undertaken and completed in a relatively short period of time. Some time will be required, however, to make arrangements for the regular transfer of meter data from water suppliers to the wastewater agencies with which they share customers. Just as importantly, time has to be allowed for customer education and outreach, to ensure that the community is fully informed of the conversion and how it will affect the basis for their sewer bills in the future. After the initial implementation, subsequent ongoing administration is comparatively routine.

13. How much money will this conversion take to implement?

It varies—the cost per account will vary depending on the size of the system and the method of billing. For agencies that already bill for both metered water service and non-volumetric sewer service, the cost should be minimal for one-time programming changes. For wastewater agencies that do not have direct access to meter data and that bill annually on the tax rolls, the initial implementation cost can range from \$2.00 to \$5.00 per account, depending on the size of the agency and the amount of effort required to align meter accounts from the water supplier with assessor parcel numbers from the county; ongoing administration may be \$1.50 per account per year in addition to the existing charges by the county, which is typically \$2.00 per account, per year. These costs do not include the incremental additional cost of staff time. Most water suppliers provide their meter data at no cost.

14. How much water can volumetric wastewater pricing save across the state of California?

A recent study by A&N Technical Services (http://docs.nrdc.org/water/files/wat_11121301a.pdf) commissioned by NRDC quantifies the effect of shifting residential sewer service billing in California, from collections based on flat charges to a billing system based on the volume of water consumption. Table 1 below shows that conversion can save California approximately 141,000 acre-feet per year (AFY) in the short term (a one to four year period), and over 283,000 AFY in the long term (over a 10 to 20 year period). Table 2 below shows the savings expressed as gallons per capita per day (GPCD). For California as a whole, conversion could save four GPCD in the short run, and seven GPCD in the long run.

Table 1: Estimate of the Statewide Volume of Price-Induced Water Conservation from Volumetric Sewer Pricing by Hydrologic Region, Expressed in Acre-Feet per Year

Hydrologic Region	Total Estimated Residential Use (AFY)	Short Run Water Savings (AFY)	Long Run Water Savings (AFY)
North Coast	22,335	715	1,429
San Francisco Bay	782,250	25,025	50,051
Central Coast	123,283	3,944	7,888
South Coast	2,173,581	69,536	139,073
Sacramento River	588,625	18,831	37,662
San Joaquin River	180,141	5,763	11,526
Tulare Lake	516,986	16,539	33,078
North Lahontan	1,770	57	113
South Lahontan	9,753	312	624
Colorado River	29,331	938	1,877
California (Total)	4,428,055	~141,700	~283,400

~ =approximately

Table 2: Estimate of Price-Induced Water Conservation after Adoption of Volumetric Sewer Pricing by Hydrologic Region, Expressed in Gallons per Capita per Day

Hydrologic Region	Baseline GPCD (1995-2005)	GPCD-After, Short Run	GPCD-After, Long Run	2015 Target	2020 Target
North Coast	165	164	163	151	137
San Francisco Bay	157	153	150	144	131
Central Coast	154	152	149	139	123
South Coast	180	177	173	165	149
Sacramento River	253	247	240	215	176
San Joaquin River	248	245	242	211	174
Tulare Lake	285	277	269	237	188
North Lahontan	243	242	242	208	173
South Lahontan	237	237	236	204	170
Colorado River	346	345	343	278	211
California	192	188	185	173	154

GPCD=Gallons per capita per day