

Orange Water and Sewer Authority (OWASA), NC Using Building Size to Determine Water and Sewer Impact Fees Case Study

Jurisdiction: Orange County, NC
Best Management Practice: Using Building Size to Determine Water and Sewer Impact Fees
Contact: Todd Spencer, P.E., Engineering Manager – Systems Development
400 Jones Ferry Road, Carrboro, NC 27510
Telephone: (919) 968-4421, Fax: 968-4464
Website: www.owasa.org
E-mail: webmaster@owasa.org

Introduction:

Water and sewer availability fees, often called impact or availability fees, are calculated to recover a portion of the capital costs of providing water and sewer system facility capacity. New customers bring new costs, but they also generate new revenues.

Determining the net costs of a new customer can be a challenge and communities have devised different methods to recover up-front costs from new customers. The decision about how significant to make one-time charges is not always a purely financial one. A community's vision and philosophy inevitably are reflected in the rate structure. For example, a community struggling with growth pressures is likely to view the use of significant up-front charges more favorably than a community that is struggling to halt a population decrease.

Description: Orange Water and Sewer Authority (OWASA) provides utility service to approximately 75,000 people in the towns of Carrboro and Chapel Hill and to the University of North Carolina at Chapel Hill. OWASA's availability fees are based on the System Buy-In approach, under which new customers connecting to the system "buy in" to the existing capacity that has already been provided and financed by existing customers. In general, this approach is most appropriate for utilities such as OWASA that are experiencing only moderate growth and desire to have new and old customers share equally in costs of the entire system.

OWASA completed a study in 2001 to determine what factors influenced water use levels. The study clearly showed that customers living in larger houses used more water than customers living in smaller houses and had larger shifts in water use during the year, even if they had the same size meter. Water and sewer facilities need to be sized to meet the peak demands of customers, regardless of whether the peak lasts several days or is consistent across the year.

As a result, OWASA modified its impact charges to take into consideration the size of the building in addition to the size of the meter. OWASA developed a tiered system for assessing service availability fees based on the size (finished square footage) of single family homes. This system was developed so that service availability fees could be assessed more equitably. Water use data from OWASA billing records was correlated with home size based on Orange County property records.

Homes were divided into five size categories based on finished area. Average water use, average sewer demand, peaking factors, and unit capacity factors were analyzed in development of the service availability fees.

Results: OWASA's tiered system has resulted in much greater and more refined variation in what new customers pay than if the utility relied only on the size of the meter. The resulting structure, although put in place to link fees to actual costs, had the secondary effect of lessening the financial impact on low-income community members choosing to build smaller properties. The OWASA fee is designed to cover existing as well as anticipated capital costs of serving new customers. Being able to justify these fees, especially as they get larger, is essential.

The new fee structure was straightforward to administer and the public's response was generally positive due to the perceived fairness of the approach. In addition, local housing advocates praised the new fee structure for its benefits to housing affordability.

Where to find additional information: OWASA's study titled: "Making Your Infrastructure Program Affordable: Service Availability Fees Based on Finished Area of New Homes" is available at www.owasa.org.