Essential water uses are drinking, cooking, sanitation, and processes needed for commercial and industrial production. Examples of nonessential or discretionary water uses include taking long showers, filling swimming pools, washing cars, and irrigating lawns. Discretionary water uses in commercial and industrial production include processes where water can be used more efficiently and better managed—especially in response to increased water prices and supply shortages. Water can be reused, leaks can be repaired, water-efficient technologies can be installed, and water waste eliminated.

Total willingness to pay is the maximum amount of money the customer is willing to pay for all the water consumed and is the sum of the marginal willingness to pay values. In practice, a customer’s total willingness to pay for water is always greater than the customer’s water and sewer bill.

Customer’s Value of Potable Water is Willingness to Pay

The value of potable water is the customer’s well-being, income, and/or profit created when this water is used either for human consumption or for commercial or industrial production. This value is reflected in the customer’s maximum willingness to pay for the water consumed.

“Willingness to pay” is an economics term that means the maximum amount of money a person is willing to pay for a good or service of a particular quality. The value of water to individual customers can be defined in two ways: marginal willingness to pay and total willingness to pay.

Marginal willingness to pay is the marginal value of water to the customer and is the maximum amount of money that the customer is willing to pay for an additional unit of water. Essential water uses have greater marginal values to the customer than nonessential or discretionary water uses.

Willingness to pay is an economics term that means the maximum amount of money a person is willing to pay for a good or service of a particular quality. The value of water to individual customers can be defined in two ways: marginal willingness to pay and total willingness to pay.

Using Value of Potable Water to Justify Infrastructure Investment

Customer water values can be used to assess whether water customers are willing to pay the cost of reducing or eliminating water shortages. Consider a water utility manager contemplating the customers’ desire and affordability to fund a water supply project to avoid future water shortages. If the manager knew the marginal value of water associated with the avoided shortage, then he or she could determine the economic feasibility and public acceptance of the project. For example, an estimated marginal water value of $10
per 1,000 gallons would tell the manager that she could develop additional water supplies as long as the total cost of developing and delivering that water did not exceed the $10 per 1,000 gallons.

Since the marginal value of water falls as the amount of water use increases, there is a limit to how much additional water the utility should provide before the marginal cost exceeds the marginal value. A water demand study specific to the utility would address this issue.

As far as I know, water utility organizations do not explicitly recognize customer willingness to pay as the value of potable water in their outreach materials, nor do they provide estimates of the customers’ value of potable water or define the meaning of the value of potable water. The AWWA Research Foundation commissioned a value of water study in 2005, but the scope did not include methods for utilities to estimate their customers’ value of water, nor did the study estimate any of these values. However, the report, “The Value of Water: Concepts, Estimates, and Applications for Water Managers,” did address these items as areas for future research.

In 2011 the AWWA Research Foundation commissioned a handbook for water utilities to conduct surveys of water customers for the purpose of estimating the economic value of potable water, titled, “Assessing Customer Preferences and Willingness to Pay: A Handbook for Water Utilities.” This study did an excellent job of describing survey research methods related to estimating a customer’s willingness to pay for specific levels of water service. While the handbook is a good utility resource, most of it is focused on how to conduct a valuation survey. Another Foundation study completed in 2005, “Customer Acceptance of Water Main Structural Reliability,” evaluated customer acceptance of and willingness to pay for water main replacement using survey research.

Both studies are excellent utility resources, but their scopes did not include nonsurvey methods for estimating the customers’ value of potable water, nor did they emphasize, in layman’s terms, the many ways in which estimated water values can be used to assess the economic feasibility and customer acceptance of a project.

**Recommendations**

A study that illustrates how estimates of the value of water can be used, describes the different methods to estimate these values, and provides an outreach platform that is visible and easy for noneconomists to digest would help to facilitate the estimation and use of customer potable water values. Research and outreach organizations should estimate and publicize customer values of water and illustrate how these values can be used to evaluate proposed water projects. Most importantly, the results of these studies need to be disseminated to utilities through outreach efforts.

Water organization outreach materials tend to be focused on how much water is needed to produce a commodity, the cost of water, the price of water, the economic impact of water service disruption, and the economic impact to the construction industry and the region when water infrastructure is built. While these measures are useful in illustrating the importance of water and the benefits of water investments they are not helpful in assessing whether a project should be constructed.

Until willingness to pay is recognized in the water industry as the value of water and estimated by or for water utilities, there is no mechanism to provide utility assurance that water infrastructure investment will be accepted by their customers. This acceptance is necessary to fill the nation’s $82 billion annual water infrastructure gap over the next ten years, as projected by the Value of Water Campaign.

I urge AWWA and other organizations to seek guidance from water resource economists and other relevant professionals on how to facilitate utility estimation of the customers’ value of potable water that would be used to assess the economic feasibility and public acceptance of individual water infrastructure projects.

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**FSAWWA Past Chairs Dinner and Summit Event a Huge Success**

The FSAWWA Executive Committee wishes to thank the twenty-one FSAWWA past chairs who attended the Past Chairs Dinner and Summit in Celebration on August 17 and 18. These chairs provided valuable recommendations regarding the Likins Scholarship Fund, Operators Scholarship, training programs, FL 2040 efforts, membership outreach, Utility Council activities, and award presentations.

Several past chairs agreed to form a STEM (science, technology, engineering, and mathematics) Outreach Ad Hoc Committee to recommend methods to recruit high school students to pursue education in the drinking water-related fields and ensure that these students are ultimately hired by Florida utilities, vendors, and consultants.

As FSAWWA chair, I was very impressed and happy with the level of engagement and attention paid to the future performance of FSAWWA and I thank each and every past chair who attended this fun dinner and productive summit. Congratulations to Glenn Yaney, 2004 FSAWWA chair, who is retiring from Tampa Bay Water and was a good sport during his roast that took place after dinner.