



South Carolina
Office of Regulatory Staff

THE WATER WELLSPRING

A Flowing Source of Information for Water and Wastewater Utilities

Winter 2016

PSC Mailing Address Update

The Public Service Commission's PO Drawer will be closed effective January 1, 2016. Please begin directing all mail correspondence to the following address:

**101 Executive Center Drive, Suite 100
Columbia, SC 29210**

Water/Wastewater Workshop Date

The ORS will host a Water/Wastewater Workshop on Friday, April 15, 2016, in the PSC's Hearing Room. More information will be provided at a later date. Please let us know if you have any topics you would like to see discussed at the workshop.

Annual Report Reminder Letters

Letters will be mailed in February reminding water and wastewater utilities of the April 1, 2016, due date for annual reports. Utilities that operate on a calendar year must file their annual report no later than April 1. Utilities that operate on a fiscal year must file their annual report no later than three months after their fiscal year ends.

Preparing For the Next Flood

The torrential rains in early October created massive flooding for many areas in South Carolina. It wreaked havoc for residents and retailers and negatively affected many water and wastewater utilities. Effects from the storm include damaged equipment, breaks in distribution pipelines, and sanitary sewer overflows. Water and wastewater utilities are most vulnerable since they are usually located in low-lying areas.

Utilities can take steps to increase their flood resilience by implementing measures to prevent costly damage and enable the utility to continually provide reliable service during an emergency.

Step 1: Understanding the threat of a flood: Utility assets should be elevated to a specific level. The Federal Emergency Management Agency (FEMA) produces maps of 100-year and 500-year floods. Utilities can plot their assets on these maps to determine if they are in a floodplain. Further action can be taken to relocate assets to specific elevation based on these maps.

Step 2: Identify vulnerable assets: Utilities should identify which assets are vulnerable to flooding which would result in serious consequences to the utility. FEMA produces a *Flood Resilience Guide* that provides on-site inspection forms to collect the needed data to determine which assets or operations to protect.

Step 3: Planning for asset protection: Utilities should identify which assets are priorities in an emergency and then pursue any measures for protection of those assets based on cost, effectiveness, and practicality.

Step 4: Implement the plan: Utilities need to develop plans to implement any asset protection measures including timelines, plans for funding, and project leaders. FEMA's Flood Resilience Guide can assist in developing any plans.

Access FEMA's *Flood Resilience Guide: A Basic Guide for Water and Wastewater Utilities* at www.epa.gov/waterutilityresponse/build-flood-resilience-your-water-utility

Resource:

Goldbloom-Helzner, D., & McFeely, M. (2015, November 1). Flood Resilience Strategies Protect Utilities in Uncertain Times. *Opflow*, 10-13.

News From Around the Country

Generating Power From Every Flush

Washington, D. C. - Early last month, DC Water dedicated a new Combined Heat and Power Facility at its Blue Plains Treatment Plant. This new \$470 million facility captures and converts methane gas in sewage into enough electricity to meet one-third of the plant's energy needs and produces high quality biosolids that can be used in gardens and agriculture.

While producing energy and recovering nutrients and other by-products is a growing trend in wastewater technology and treatment today, this bioenergy facility is unique because it includes a state-of-the-art process called thermal hydrolysis. This two-stage process first uses high heat and pressure to “pressure cook” the dewatered or concentrated sludge before passing it into the digesters. Then, rapid decompression explodes the cell membrane of the organic matter to generate methane at a faster rate. This innovation means DC Water could construct smaller digesters, thus saving hundreds of millions in capital costs.

DC Water’s facility marks the first full-scale use of thermal hydrolysis in a municipal wastewater treatment plant in the United States. DC Water conducted more than a decade of research before bringing this facility online. As a result of the success of this project, many other American cities are considering this process.

Check out EPA’s Water Innovation and Technology website for even more examples of innovative technologies in the water and wastewater sector.

<http://www2.epa.gov/innovation/water-innovation-and-technology>

Rate Base Determination for Water/Wastewater Companies

Companies with a substantial investment in plant, property, and equipment may use rate base to measure required rates of return. The rate base consists of the net book value of investor-owned capital and other allowances, less customer and other contributed capital. For water and wastewater companies in South Carolina, the rate base typically consists of the following components:

Utility Plant in Service

Less: Accumulated Depreciation

Net Plant in Service

Add: Construction Work In Progress

Add: Working Capital Allowance

Less: Accumulated Deferred Income Taxes

Less: Contributions in Aid of Construction

Less: Customer Advances

Equals Net Rate Base for Return

Utility Plant in Service is normally the largest component of rate base. Plant Investment must meet several tests to be included in the company’s rate base for regulatory purposes:

- Asset life more than one year
- Used and Useful

- Legal Ownership
- Physically Verifiable
- Properly Supported

Plant Held for Future Use may be included if there is an immediate plan (within 2 to 3 years) explaining how the plant will be used for utility purposes.

Construction Work-In-Progress (CWIP) accounts for work not yet completed and ready for service. In South Carolina, a utility may be allowed a return on its investment in CWIP.

Working Capital is provided by the utility to pay expenses until money is collected from the customers for services.

Accumulated Deferred Income Taxes (ADIT) accounts for the differences in tax and book income. Most of the differences are due to accelerated depreciation for tax purposes and considered cost free capital.

Contributions-in-Aid of Construction are donations or contributions in cash, services, or property from states, municipalities or other governmental agencies and individuals for construction purposes and considered contributed capital.

Advances-in-Aid of Construction consists of capital provided by customers or potential customers for construction purposes and may be refunded.

If you have any questions, please contact Jay Jashinsky (803-737-1984) or Sharon Scott (803-737-0964) of the ORS Audit Department.

Sources: NARUC Chart of Accounts; Public Utility Accounting: Theory and Application - Suelflow

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