THE WATER WELLSPRING

A Flowing Source of Information for Water and Wastewater Utilities

Spring 2014

Cloud Helps Reduce Operating Costs

The rising costs of technology trends challenge small and large water and wastewater utility budgets. Cloud-based computing is becoming more valuable as a way for utilities to reduce costs and obtain almost instant access to the latest technologies. Cloud-based computing is "storing and accessing data and programs over the Internet instead of your computer's hard drive" (Griffith, 2013). There is no hardware server or software to purchase, and the utility has the option to employ its own staff or use a third-party vendor to maintain the cloud onsite or offsite. "Subscribers pay for the use of the infrastructure on a monthly basis, as opposed to making large upfront investments for in-house computing and software" (Combs, 2013).

Supervisory Control and Data Acquisitions (SCADA) is a software application program that gathers data in <u>real time</u> from remote locations. SCADA is used in a variety of industries including power generating plants, oil and gas refineries, telecommunications, transportation, and water and wastewater. SCADA can be configured to work directly from a PC and is "directly connected to the control network and operates onsite, delivering data to the cloud to be stored and distributed" (Griffith, 2013). SCADA can also operate entirely in the cloud and is remotely connected to the control network.

Implementing a SCADA system can be completed in a short amount of time without the purchase of hardware or software. Cloud upgrades are automatic and less expensive. Security is a priority for utilities, and cloud-based SCADA provides a large IT staff that continuously monitors and updates the system for any attempt of a threat to or breach of security.

Although cloud computing may not be for every utility, it is worth examining to see whether the cost savings and benefits would be valuable for the utility's bottom line.

Citation:

Combs, L. (2013). Cloud-based computing in the forecast. *Journal - AWWA*, *105*(9), 60-63.

Griffith, E. (2013, March 13). What is cloud computing? *PCMag.com*, Retrieved from http://www.pcmag.com/article2/0,2817,2372163,00.asp

Water/Wastewater Workshop Scheduled

The workshop has been scheduled for April 25, 2014, from 8:45am – 1:00pm at the Public Service Commission of South Carolina, 101 Executive Center Drive, Suite 100, Columbia. This year's workshop theme is "Successfully Managing Environmental and Regulatory Challenges." Some of the topics include Capacity, Management, Operation, and Maintenance, the use of social media, mediation, and actual case studies presented by one of the regulated utilities. Anyone attending will receive four hours of continuing education credits. If you are interested in attending the workshop, please go to the ORS website (www.regulatorystaff.sc.gov) and click the Water/Wastewater Workshop link under the Water/Wastewater Tab to access the registration form. The completed form may be faxed, mailed, or emailed. The fax number is 803.737.0801, the email address is hmajews@regstaff.sc.gov, and the postal address can be found at the end of this newsletter.

Annual Report Reminder

Annual reports for 2013 are due no later than April 1, 2014. The annual reports are available on the ORS website in .pdf format. Please make sure that your utility downloads the correct class report (i.e., Class A utilities should download a Class A annual report). Utilities that provide both water and sewer services must complete a separate annual report for each service type. Any utility needing additional time to submit its annual report must make the request for an extension in writing to the ORS. Any utility needing more than 30 days after the due date must make its request for an extension in writing to the Public Service Commission of South Carolina.

Accounting for Affiliate Transactions

What is an affiliate?

An *affiliate* is a company or an individual related due to common ownership or control. (Example: John Smith owns Water Company A and Sewer Company B. John Smith, Company A, and Company B are affiliates of one another. Also, any of John Smith's family members would also be considered affiliates.)

What are affiliate transactions?

- Transactions between a company and its owner
- Transactions between two companies with a common owner
- Transactions between a company and a family member of its owner

Why is it so important that affiliate transactions are properly recorded?

- To ensure that only company-related expenses are included in the cost of service to be paid by ratepayers
- To ensure that all required expenses of operating the company are included in the cost of service
- To ensure that each company's cost of service and assets and liabilities are properly accounted for in their respective financial statements

What are shared costs?

- Shared costs are typically expenses that are applicable to two or more affiliates. A good example might be the use of a truck which is owned by Company A and is also used by Company B. Instead of having to purchase two trucks, they instead share Company A's truck.
- Another example could be that both Company A and Company B share one building which houses their offices.
- The two companies might even share employees.

How can we be sure that the shared costs end up in the right company?

To ensure that shared costs are attributed to the right company, they must be allocated. Allocation is a logical systematic assignment of the shared costs to each affiliate that benefits from the cost.

- Using the last example, the shared truck's cost can be based on the number of miles used for each affiliate.
- The office expenses could be divided by the percentage of square feet occupied by each of the companies, compared to the total square feet of the building.
- The allocation of the salaries of shared employees might be based on the hours they work for each of the companies they support.

Should regulated companies combine their books and records with affiliated companies?

No. Each regulated utility should have its own set of books and records aside from any non-regulated or affiliated company. The NARUC Uniform System of Accounts, a specific set of accounts and rules governing recordkeeping, provides guidelines for regulated water and wastewater utilities.

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

EPA: How Weather Affects Water Quality

Weather variations can affect surface-water supply and water quality. Droughts result in decreased reservoir volumes and lake levels. This situation can lead to greater inflows from pollution discharge and sewer outfalls. Another result of drought is an increase in algae growth. Higher algae levels cause a variety of water-quality issues including taste and odor problems, stagnation in water retention tanks, and an increase in disinfection byproducts. At the opposite end of the spectrum, excessive rainfall causes flooding that can result in sewer overflows, groundwater contamination, and system/distribution damage. In addition, for those utilities in coastal areas, flooding can result in saltwater intrusion into the coastal waters. Wind causes erosion that can result in filter clogging and the possible mixture of water from lakes and reservoirs.

The EPA promotes "green" infrastructure as "an approach that communities can choose to maintain healthy waters, provide multiple environmental benefits, and support sustainable communities.

Unlike single purpose gray stormwater infrastructure, which uses pipes to dispose of rainwater, green infrastructure uses vegetation and soil to manage rainwater where it falls. By weaving natural processes into the built environment, green infrastructure provides not only stormwater management, but also flood mitigation, air quality management, and much more. At a time when so much of our infrastructure is in need of replacement or repair and so few communities can foot the bill, we need resilient and affordable solutions that meet many objectives at once. Green infrastructure is one solution." ("Green infrastructure")

Low Impact Development (LID) is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features and minimizing effective imperviousness to create functional and appealing site drainage that treats stormwater as a resource rather than a waste product. Many practices exist that have been used to adhere to these principles such as rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. LID has been characterized as a sustainable stormwater practice by the Water Environment Research Foundation and others. ("Low impact development")

The NPDES Permit Writers Manual - Inclusion of Climate Change Considerations (PDF) (1 pp, 75K, About PDF) addresses the inclusion of climate change considerations as part of National Pollutant Discharge Elimination System (NPDES) permitting.

Citation:
Green infrastructure. (n.d.). Retrieved from http://water.epa.gov/infrastructure/greeninfrastructure/index.cfm
Low impact development (lid). (n.d.). Retrieved from http://water.epa.gov/polwaste/green/
Water quality. (n.d.). Retrieved from http://water.epa.gov/scitech/climatechange/Water-Quality.cfm

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