

Managing Capital Improvements in Difficult Economic Times

By: Beau Schilz

With the economy shrinking and development having slowed significantly over the past few years, utility providers are struggling with how to plan, prioritize, and finance needed capital improvements. Developer and utility-sponsored extensions of water, sewer, and storm water systems have slowed, leaving many municipal utilities with a shortage of expected income from connection fees. Moreover, with increased pressure to delay rate increases – and in some cases suspend rate increases altogether – utilities are having to delay capital improvement/facility plan (CIP) projects or eliminate them to make ends meet. With the American Society of Civil Engineers' latest report card on our nation's infrastructure receiving a D-, overall public awareness of the need to reinvest in aging infrastructure is rising, and the shift toward repairing and replacing aging assets has begun.

Compounding the issue of slowed development, Washington State's Public Works Trust Fund has been suspended for the 2009-2011 biennium, and the Drinking Water State Revolving Fund application deadline for 2009 has been moved from its usual spring date to the fall. These large resources that utilities frequently tap into for needed funding have been temporarily replaced by economic stimulus provided by the American Reinvestment and Recovery Act (ARRA) under the Obama administration. New federal stimulus funding programs have varied requirements that are subject to change in order to speed up the process. On top of requirements acting as a moving target, the funding programs are highly competitive. In 2009, ARRA will provide \$38.5 million in funding to 24 projects in Washington that will protect or provide access to safe drinking water. While the awards are a good start, it represents less than 10 percent of the total amount applied for, and only 7 percent of applicants receive funding. A similar gap exists with the Water Pollution Control Revolving Fund, where 36 projects

received a total of \$58 million, even though more than \$500 million was requested by 112 applicants.

In these challenging times, utilities are wise to re-evaluate their CIPs based on criteria that are unique to the needs of the communities or areas they serve. Now more than ever, it is critical that projects are more thoroughly reviewed to ensure the most competitive projects are submitted when applying for limited financial resources. Equally important is making sure the most essential projects are funded regardless of financial aid cutbacks. The re-evaluation process should include a review of growth projections in the community to confirm the need for previously identified projects. This review should include asking the following questions:

- Has growth occurred as it was predicted?
- Have traffic, water demands, and wastewater flows increased at the anticipated rate?
- Are the planned projects still required?
- Can project schedules be pushed out?
- Do the needed projects maximize efficiency and minimize costs?



PACE can provide a wide array of planning services, modeling analysis, and value

engineering to ensure that the projects in the CIP are appropriately prioritized, efficiently designed, and will achieve the overall goal of providing the highest quality service at the lowest possible cost.

Asset management tools allow utilities to objectively assess system needs and project requirements. GPS data collection techniques have improved and as a system's attributes are more accurately defined in organized databases, modeling capabilities are improved. Modeling software has developed to provide both a static and extended-period state for analyzing the capabilities of the system. In the case of water systems, enhanced analysis can be performed on fire flows, water turnover in reservoirs, and water quality parameters. For storm and sanitary sewers, improved modeling capabilities provide a more accurate picture of system deficiencies, and can assist with NPDES compliance solutions. Most modeling software packages can utilize existing geographic information system (GIS) and/or AutoCAD records, but without broad, technical expertise they can be a challenge to set up and operate. How can cities, towns, and special-purpose districts take advantage of the technology that is available, and how can they be advised to do so in a fiscally responsible manner?

What PACE can do to help!

PACE makes use of numerous internal and external resources to help our clients evaluate and prioritize their CIP projects. Mapping the location of known deficiencies and maintenance issues is an essential task that can provide a base from which to apply additional criteria in the evaluation process. PACE is an implementation partner of Azteca Systems' Cityworks™ asset management software, and has worked with utilities with limited budgets on long-term strategies for mapping their infrastructures and any associated deficiencies. Building upon this base data by utilizing external resources such as USGS soils maps, geology

and slopes, designated critical areas, etc., a certain level of risk can be assigned to pipes based on their spatial relationships to sensitive areas. PACE has a strong modeling team that works with the latest system modeling software to evaluate systems for adequate fire flow, pressure, and water quality. In some cases, PACE has built customized models for clients looking for ease of use and low licensing fees. In addition to the analysis provided, the company has a long history of connecting utilities and coordinating utility plans with regional authorities, neighboring purveyors, or other city departments to ensure that planned projects are consistent with a community's overall vision for development.

In the event a utility finds itself short on funds for planning or construction, the PACE planning team also has decades of experience in making loan applications competitive. PACE has helped our clients secure more than \$100 million in financing through Community Block Development Grant programs, Public Works Trust Fund loans, U.S. Rural Development Association loans, and State Revolving Fund loans. With a highly qualified team of engineers, planners, and GIS specialists, PACE uses a multi-disciplinary approach in the CIP planning process that has saved our clients hundreds of thousands of dollars in staff efficiency gains and avoided costs for unnecessary projects.

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