Interviews with Local Government Officials

Gaining Public Support for Water Infrastructure Costs:

Salem, Oregon

Tim Gerling, Director of Public Works

Salem is the state capital and second largest city in Oregon with 131,000 residents and a metro area population of 350,000. The city's water system serves 177,000 water customers, 212,000 sewer customers, and sells water at wholesale rates to nearby communities. As a result of being the state capital over 25 percent of the population works for government agencies. This creates a steady employment base for the community but also results in a lower than average median income of $39,000. Salem also has 7,000 prisoners housed in five correctional facilities and their families who often relocate to Salem to take advantage of social services. The large number of low-income, prison-related residents further depresses the median income and coupled with the large areas of tax-exempt government property (12 percent of Salem's total area), constrains the utility's ability to make infrastructure upgrades and recover costs.

Salem's drinking water comes from the North Santiam River, which has a 490,000-acre watershed that is part of the Mt. Jefferson Wilderness in the Cascade Mountains. Much of the watershed is national forest or Bureau of Land Management property and the corresponding lack of development in the watershed ensures high quality source water. To treat raw water, Salem uses slow sand filtration and adds sodium hypochlorite and fluoride. The system is one of a very few in the country that are able to use such limited treatment, which results in labor and chemical cost savings for the utility. Pumping costs are also low because the treatment plant is above the distribution system, which allows gravity to move water from the plant to the city.

The source water does have one problematic aspect - an elevated pH caused by the type of rock that it interacts with. Elevated pH can cause the release of lead and copper from older plumbing, so the system is installing a corrosion control facility. In spite of this difficulty, Salem's overall low treatment and transport costs have enabled the Public Works Department to focus its limited resources on investing in the future of the water system instead of on treating and delivering source water.

A long-term understanding of Salem's future infrastructure needs has also encouraged the Public Works Department to begin preparing for impending costs. The utility has developed a 100-year plan that indicates that the city will need to incorporate a second source to meet increased demand in the future. Salem has very senior water rights on the North Santiam River but has no other water rights to fall back on. In 1980, the city purchased junior water rights on the Willamette River with the intention of banking them until they are needed in 60 to 80 years. The Willamette River is an impaired source that will require a costly treatment plant. Integration of a Willamette plant into Salem's existing infrastructure will also be expensive. To prepare for these and other future costs, Salem has initiated an aggressive capital campaign.

The Public Works Department is organized as two self-funding enterprise funds. One fund is dedicated to water and sewer needs, and one addresses transportation projects. These funds are financially separate even though they are both administered by the Public Works Department. Neither fund receives subsidies from the general fund—in fact, capital from the water fund has occasionally supported other public services. The Public Works Department issues its own debt and is carrying close to $268 million in debt. The system's annual revenue for water, sewer, and transportation funds in total is approximately $80 million, and up to 28% of that revenue goes towards debt service. Additionally, Salem's capital improvement plan calls for $120-$160 million in improvements annually.

The city made major drinking water investments in the 1930s—1940s and similar sewer investments in the 1970s. Looking forward, the Public Works Department anticipates $1.5 billion in capital needs over the next 20 to 25 years. Salem began accessing Drinking Water State Revolving Fund (DWSRF) loans three years ago, and the city currently holds $25 million in DWSRF loans. Despite the availability of DWSRF funding, administrators feel that a private reserve is necessary to finance capital improvements. These impending capital needs encouraged the system to pursue a full cost pricing strategy that will help to ensure funding for future projects.

Initially, the system's fee structure was based on investment depreciation and return on investment. Rates gradually rose 40 percent in the 1960s and 1970s, and then rose sharply in the 1980s—increasing as much as 68 percent in a single year. This rate increase triggered a City Council recall election and encouraged the system to begin a cost of service analysis (COSA) to dampen the effects of rate increases and to distribute rate burdens more equitably. The COSA broke down the entire physical water and sewer infrastructure and classified customers based on 35 usage characteristics (e.g., average peak water demands).

As a result of the three-year COSA process, Salem now uses a fixed charge and flat fee rate structure adjusted by meter size and customer class. In response to public comment, the utility reduced the contribution of the fixed fee to the water bill from 70 percent to 8 percent, giving greater emphasis to usage charges. Customers appreciate this change, as it has allowed them to control the size of their water bill by altering water use habits. In the mid 1990s, the system achieved self-sustaining full cost pricing but is still perfecting its cost recovery system.

Since most of Salem's customers are moderate-income, rate and debt burdens are becoming economically taxing for many users. Rates have doubled since 1993, and the current single family residential monthly bill is $55 for water and sewer service, higher than in other communities of comparable size. Rates are still increasing at an average annual rate of 6.5 percent, and the utility is beginning to see significant water conservation in some user classes in response to rate increases. The system may implement a lifeline program to assist these users.

Mr. Gerling cites public outreach as a critical part of the Public Works Department's infrastructure campaign. He realizes that for improvement plans to be successful, users must understand the reasoning behind rate increases. Oregon's comprehensive land use law laid the groundwork for this public understanding. In response to urban growth boundaries placed around urban areas, Salem has developed detailed land use master plans, including master plans for its utilities. These documents, which project 20-25 years into the future, make customers aware of the demands the water, sewer, stormwater, and transportation systems will have to meet in the future. These plans are updated every five years, with opportunities for public comment; it was these review sessions that sparked the transition to full cost pricing in the 1980s.

The Public Works Department continues to emphasize outreach efforts as rates increase. Salem's 19 neighborhood associations are key avenues of communication between citizens and the utility. The water system employs four staff members who work at least half-time on public outreach efforts. These individuals attend the monthly meetings of the neighborhood associations and work closely with city-appointed liaisons to create an atmosphere of transparency and accessibility. Outreach efforts intensify every time the utility considers a change to their rate structure or master plan. Mr. Gerling reports that outreach efforts have created a general sense of satisfaction with the utility's planning activities, even as rates increase.

Public discussions have also focused on citizens' expectations of the utility. The water system works to explain the reasoning behind expensive infrastructure projects (e.g., large diameter mains are expensive but are necessary for fire service). The utility takes public comments to heart and incorporates them into its plans when possible. For example, citizens asked if back-up generators at every pump station are necessary since Salem experiences infrequent power outages that usually do not affect the entire electrical grid. The water system explained that back-up generators, although expensive, are important because they ensure that fire protection can be provided even in the event of a power failure. Working together, the citizens and the utility decided to install generators at all first tier pump stations and to purchase portable generators that can be connected to second tier pump stations in the event of an outage.

Salem is still addressing a few difficulties created by the transition to full cost pricing. The water system encourages water conservation but is now beginning to see a drop in revenue (estimated to be $2 million to $4 million per year) due to the success of this campaign. Administrators realize that they may eventually need to raise rates because of depressed revenues; public outreach campaigns are already in place in anticipation of this rate increase. The system is also pursuing wholesale customers to augment income.

Mr. Gerling hopes that by investing in the water system, Salem will attract new and diverse industries to the community. He credits a sustained public outreach campaign and an open, transparent, and responsive relationship between the utility, its users, and Salem's elected officials for the system's success.