

## Forget baby boomers, aging infrastructure real crisis

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The average age of Colorado Springs' reservoirs and dams is 83 years old; its raw water pipe system, treatment plants and collection mains are in their 30s; and hydrants and water distribution mains are in their 20s.



Because the city is not located on a major river, water infrastructure is a major issue for Colorado Springs Utilities, and the cost of maintaining and upgrading the system is substantial.

CSU has budgeted more than \$246 million during 2010 to replace aging equipment, start the Southern Delivery System and build new infrastructure.

"It's a capital intensive system," said Bill Cherrier, chief planning and finance officer. "And because it is, we have to plan far ahead in order to balance infrastructure needs with customer

rate adjustments. Our plan, particularly with the Southern Delivery System, is to increase a little as we go, instead of huge rate increases."

The utility company plans to spend 22 percent of its 2010 budget on capital improvements. Projects include small items like repairing underground cable and large plans such as replacing the cover for the Highline water storage facility, which was built in 1958.

The total cost of that project is \$8.6 million, spread over two years.

"This is only one example of the challenges Springs Utilities is facing over the next several years as we balance putting in new infrastructure to meet growing demands while upgrading and maintaining aging infrastructure on our existing systems to ensure we continue providing reliable service," said spokeswoman Janet Rummel.

About 70 percent of the city's water comes from the Western Slope through the Homestake pipeline, she said, so "in addition to planning for future water needs with new infrastructure like the Southern Delivery System, we must maintain our existing system."

Bruce McCormick, chief water services officer at CSU, said that some of the city's water infrastructure is nearing the end of its life, and will have to be replaced.

“For some parts, it’s a matter of safety,” he said. “Some of our dams are 100 years old. Addressing those safety issues will be a main priority.”

McCormick said CSU has identified several main projects for next year: upgrading and maintenance for Northfield and Nichols Dam (both are 100 years old); maintaining the Homestake reservoir and dam (which is 42 years old); the Mesa Treatment Plant; Pine Valley Treatment Plant; and hydrant rehabilitation and replacement.

Construction is under way at the Highline water storage facility.

The city’s wastewater system — the largest in the state under a single permit — also will require maintenance and updates.

During 2010, CSU plans to upgrade the Las Vegas Wastewater Treatment plant by installing a \$12.6 million chlorine-free, ultraviolet disinfection system and replace a back-up pump to meet new governmental requirements.



### **Not just water**

But CSU also has another responsibility: energy. And with new federal and state mandates, costs in that sector of its business are expected to increase.

“Just like the car you drive, as our power plants, wires and other electrical equipment get older, the maintenance costs go up,” Rummel said. “Of our major power generation units, the Nixon coal unit is the newest at 30 years old.”

The Drake power plant has units that range from 35 to 47 years old, and the Birdsall plant units are 52 to 56 years old. Installing new technology, required by the federal government to control emissions will cost \$160 million by 2015.

“It becomes a process of construction,” said Tom Black, chief energy services officer. “We have a robust maintenance plan. We take the plant off line during low electricity needs to perform that maintenance.”

The utility company also is finding innovative ways to save money, Black said. About 70 percent of electric and gas cables are underground — and were installed in the 1960s.

“We’ve found a way to extend the life of our underground cables,” he said. “We spray a compound in them that helps extend their life — it’s worked remarkably well, and saves us from having to dig up the cable and replace it. Whenever possible, we do the replacement on an incremental basis.”

But not all fixes are that easy.

## **State and federal issues**

The struggle to replace and maintain infrastructure is echoed throughout the state. According to the American Society of Civil Engineers, Colorado needs to spend \$45.32 billion during the next 20 years for drinking water infrastructure alone.

The state earned Cs for its water supply, wastewater treatment, air quality and energy infrastructure.

While the drinking water and wastewater treatment plans are in “adequate condition,” the report warns that the future depends on continued funding.

“Tracking needed maintenance and system improvements, supported by appropriate asset management practices will ensure that utilities can continue to maintain sufficient level of service,” the report said.

But deteriorating infrastructure isn’t just a local or state problem.

“The ongoing economic crisis has pushed the nation to a pivot point — either the country can risk further productivity decline, transportation congestion, and potential catastrophes from dilapidated systems, or it can develop new networks and land use models to accommodate the expected 100 million in population growth over the next generation,” according to the Urban Land Institute. “Current infrastructure stimulus spending may help fix some outmoded and crumbling roads, transit lines and sewage systems; but it offers no long-term solutions for keeping the U.S. competitive in global markets or addressing related energy consumption and environmental concerns.”

Becky Hurley contributed to this story.