

Back In The Growth Mode

by Robert Carpenter ■ Editor

If ever a year could be termed “transitional,” 2005 fits the bill.

Going into 2005, municipal sewer, storm water and water managers were still extremely cautious in their work estimates. After all, recovery from the recession was ongoing and some parts of the economy were still struggling. The price of fuel was climbing dramatically. The need to raise user fees, while almost universally needed across the U.S., was still being resisted due to potential political and public fallout. It was understandable that, while most sewer/water personnel recognized that their system upkeep and growth had been ne-

glected for the last few years, they were reluctant to be optimistic in their expenditure expectations.

But as the year progressed, funding for much of the country’s municipal systems did return to fully budgeted levels. In some areas, spending was even accelerated due to growth considerations or concern (fear?) about complying with EPA mandates. Much of the nation’s systems switched into a rapid “catch-up” after several years of stagnation.

All things considered, 2005 was a strong rebound year for sewer and water work. But the really good news is that 2006 is

projected to continue with strong growth, substantial increases in overall new construction and rehabilitation spending with a projected increase of 7.7 percent.

This information comes from the results of the exclusive 9th Annual Municipal Sewer and Water Survey conducted by *Underground Construction* in November and December 2005. This survey polls public works management personnel from around the country on their spending plans plus a variety of topics impacting the underground sewer and water infrastructure.

Survey respondents ranged from large cities such as New York, San Antonio, Seattle, Miami, Chicago, Los Angeles and Phoenix, to small towns such as Granton, WI, population 400, Franklin, MN, with 499 residents, the Village of Lyons Falls, NY, population 600, and Sierra Blanco, TX, with 770 residents.

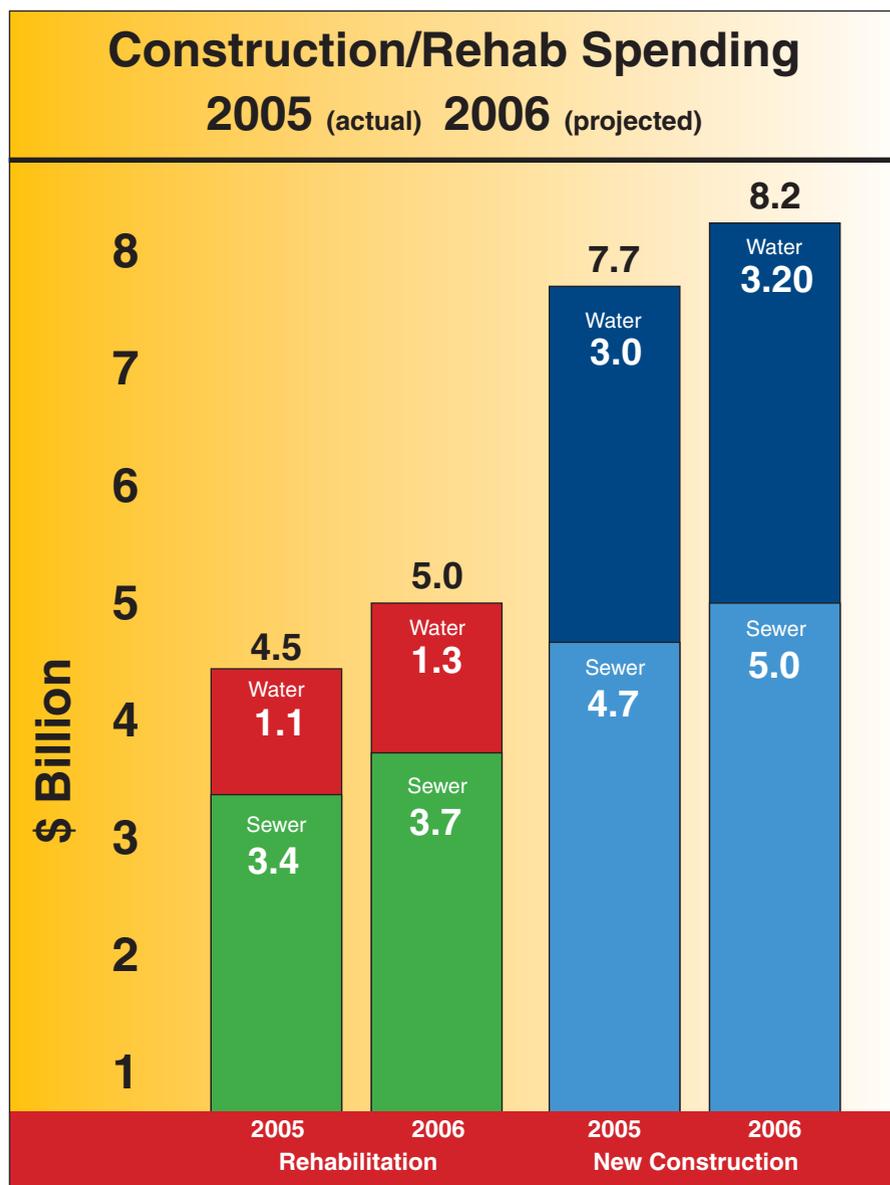
Surveys were distributed to approximately 8,218 municipal sewer/water management personnel directly involved or responsible for underground piping infrastructure. Responses are categorized by region and city size to avoid artificially skewing results. The non-duplicated, regional response rate was sufficient enough to allow projections and conclusions from the data.

Balancing growth & funding

What is even more amazing is that these spending increases are coming at a time when federal government funding programs for local utilities are being cut dramatically. Cities have been forced to scramble to find alternative funding mechanisms such as rate hikes (for example, the well-publicized city of Atlanta passed a 25 percent increase in 2004 with more increases planned), implementing special utility fees, earmarking local tax increases or even private financing sources.

Many municipalities are hoping that another funding source will become available if the proposed “user fee” program is adopted. Though passage of such a measure in the 2006 Congressional session appears unlikely, the groundwork will have been laid for debate over the proposals and backers believe such a program could become a reality in the near future.

Whatever the reason, the survey results, both in terms of numbers and comments, reflect a municipal industry finally gaining confidence not only in regard to their budgeted spending levels, but also in their ability to better deal with various infra-



structure needs and costs that always arise unexpectedly throughout the year.

Actual spending on new construction for sewer/storm sewers in 2005 was \$4.72 billion. Spending is expected to increase by 5.8 percent in 2006 to \$5.06 billion.

As has been the trend since the late 90s, rehabilitation spending continues to increase at an even greater rate than new construction, with the trend continuing in 2006, the survey revealed. Last year, approximately \$3.4 billion was spent on rehab work, but in 2006, city personnel expect to increase that spending level by 8.8 percent to a record \$3.7 billion.

Water on the radar

As strong as the sewer/stormwater market is projected to be in 2006, it is obvious that water spending needs are beginning to receive the attention – and funding – that advocates have been seeking for years. Water as a diminishing and poorly-maintained resource continues to gain high levels of attention at the local, state and national levels. That attention translated into significant spending increases in 2005 with the trend continuing in 2006.

Water construction levels reached almost \$3 billion in 2005 and is projected to increase by 7 percent to \$3.2 billion in 2006.

Perhaps even more significant was the huge increase in water rehabilitation spending. For the first time in 2005, water rehab became a billion dollar industry. In 2006, municipal water authorities expect their water rehab spending to experience another large leap of 15.8 percent to \$1.27 billion.

It was apparent in 2005 that many cities underestimated the demand that would be placed on their water infrastructure. As drought conditions persist in the Southwest and Western states, water lines are fracturing along with the dry soils. The need to

transport water to growing communities also continues to be a major driver.

Overall, survey respondents expect construction spending for sewer and water in 2006 to increase by 6.5 percent to \$8.2 billion, with rehabilitation spending levels to rise by 10.1 percent to almost \$5 billion. It all adds up to an estimated \$13.2 billion spending level for 2006.

All these projected increases in spending do have municipal managers concerned about where the funding will come from. In fact, when polled about the major concerns affecting their department, funding was cited by 67.5 percent of the respondents. Other major concerns cited included: government/EPA regulations, 57.2 percent; safety, 45.3 percent; finding qualified employees, 37.1 percent; and the only area to see a substantial jump from 2005 was in the area of community relations which was cited by 35.6 percent of the respondents compared to 28 percent a year ago.

Another question asked if there was a funding gap between what was budgeted and what was actually needed to properly address infrastructure needs. Over 65 percent agreed their budget was inadequate and the average increase in spending needed on an annual basis was pegged at 35 percent. One large city said it could use a 300 percent annual increase for the next five years before it could catch up with needs.

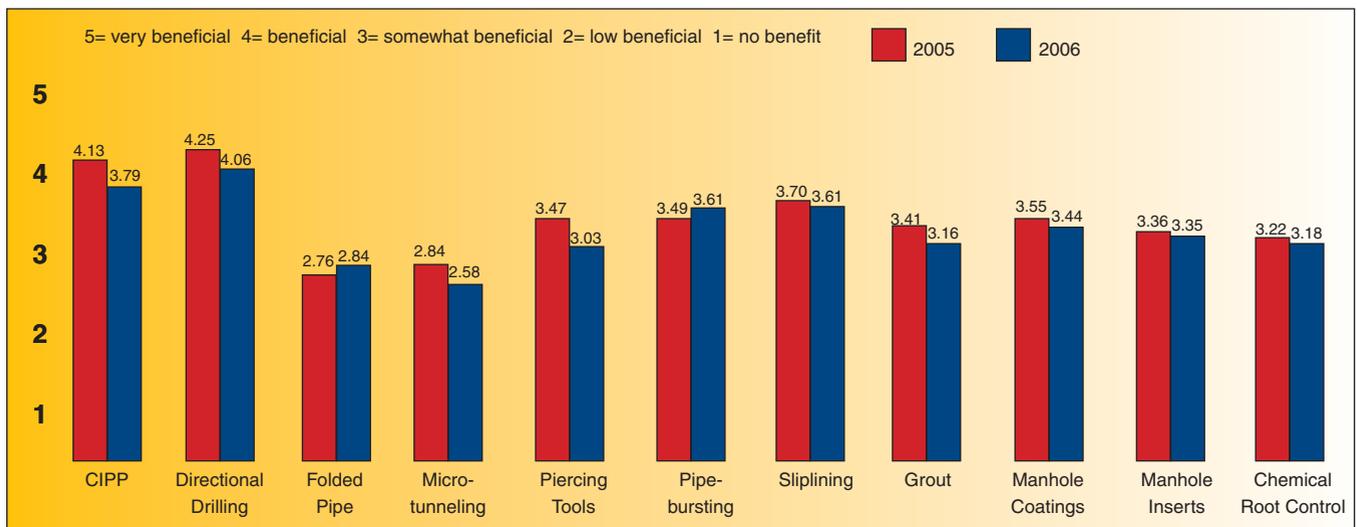
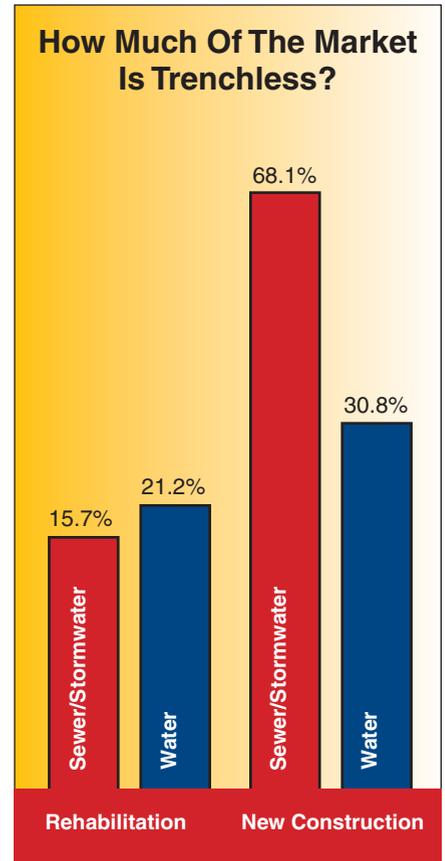
Another financial headache municipal departments will battle in 2006 is the rising cost of fuel. Almost 60 percent believe fuel costs will negatively impact their budgets.

Trenchless

With trenchless construction and rehabilitation methods increasingly being absorbed into routine sewer and water projects, the survey asked questions to assess how municipalities are reacting to the trenchless market.

One of the questions centers around how cities perceive the effectiveness of various methods (see related chart for specific technology ratings). Overall this year, the confidence level in trenchless methods was down slightly.

Municipal respondents indicated that as they are gearing up for renewed program activities, they are less concerned about methods and specific technologies and



more concerned about results. One municipal official from a large Southwest city pointed out that “trenchless is no longer magic. We know what it can do – and what it can’t do. There is certainly a strong role for trenchless to play, but the bottom line is that we’ve got a lot of work to do and we’re going to use the most cost-effective, beneficial solutions we can find.”

Indeed, a “hybrid” approach, using both conventional construction and trenchless methods, seems to be the way most cities are approaching major projects. Municipal managers said they expect trenchless operations to be just as reliable as excavators, trenchers or backhoes.

Most cities, 59.4 percent, said they had used trenchless construction/rehab methods on their projects within the last year. Of those that hadn’t used trenchless, 36 percent estimated they would in 2006 and 78.1 percent anticipate using trenchless methods within the next five years.

For new construction, municipal personnel expect that 15.7 percent of their work will utilize trenchless techniques while 68.1 percent of all rehabilitation projects will be trenchless. For water, 21.2 percent of new construction and 30.8 percent of rehabilitation will be trenchless.

About 40 percent of the respondents reportedly used horizontal directional drilling on projects, primarily for water and force mains. About 5.5 percent of cities actually own and operate rigs.

Manholes continues to be a strong market. Cities across the country will average replacing or repairing 75 manholes per community.

Engineers

Municipal personnel were asked to evaluate their relationship with consulting engineers on a scale of 1 (low) to 5 (high). That valuation was down from 3.76 in 2004, to 3.68 in 2005.

Among the qualities municipal personnel most value in engineers, quality of work still remained the strongest value cited by 84.6 percent of the respondents. And, as municipalities gear up for increased work loads in 2006, they want to make sure engineering firms provide the most value for the dollar as 57.4 percent cited “affordability” as a desirable quality of an engineering firm, up from only 40 percent a year ago.

To make projects run smoothly, increasingly municipal managers are wanting to end the somewhat adversarial relationships that exist between engineers and contractors. In the past, “productive relationships with contractors” was a minor consideration for municipal personnel. This year, however, 55 percent of the respondents

cited the need for improved relationships. Said one muni manager from the Southeast, “I’m tired of the friction and distrust [between engineers and contractors]. The only way we can make the budget and schedules work is if we all develop a more cordial, productive relationship.” Another comment from an upper Midwest city suggested that engineers should “listen to what the operators and contractors have to say.”

With technology playing an increasingly important role in the construction and maintenance of sewer and water systems, more and more municipal personnel are relying on the technical knowledge of consulting engineers. For the past few years, engineers’ technical expertise has been consistently rated positive at between 60 and 70 percent. This year, the positive rating jumped to 77.6 percent.

As in years past, municipal managers believe engineers should gain the perspective of valuable field experience. This topic was mentioned by numerous respondents when asked how engineers could do a better job for sewer/water agencies.

“Keep in mind budget constraints and have field knowledge,” said one employee of a mid-sized Texas community. “Be observant and engineers need to have field experience,” stated a Northeast municipal manager. And this respondent from a Western state emphasized that engineers “must go out in the field to witness the installation and maintenance of the jobs.”

As systems continue to age, municipalities are continually running into complications when it comes time to repair or replace such systems. Several suggestions centered around addressing those concerns. “Design it [sewer/water systems] so it can be maintained,” stressed a respondent from Pennsylvania. A California municipal manager reminded engineers that “accuracy of as-built conditions are very important.” Said this city official from the Southeast: “Be more sensitivity to funding and life-cycle replacement costs.”

Building stronger relationships with cities was also a consistent suggestion from survey respondents. A manager from Florida said that engineers “need to be more familiar with the utilities they are working with.” Another from the Mid-Atlantic region stressed that engineers “need to pay attention to details – do more listening and less lecturing.” A Midwest city official explained that engineers should “realize that we are their customer and listen to our needs; do not always try and sell us something or be our ‘yes’ men.” This respondent from the Mountain West region simply counsel engineers to “become owner oriented.”

Several comments also put forth the idea that engineers should take a more proactive approach. This respondent from the

Midwest believes that engineers should “anticipate problems that are looming such as future growth or suburban sprawl.” “Dare to make a change. Stop making the same mistakes,” offered this Southeast city official. And a municipal manager from the Midwest had this sage advice for engineers: “Don’t always design a Cadillac when a Chevy is perfectly fine.”

Contractors

The approval score for contractors also saw a small decline this year. In 2004, contractors’ approval rating was 3.77 but fell to 3.7 in 2005.

Desirable contractor qualities most cited by respondents remained relatively unchanged from the previous year. Quality of work was the topic drawing the most response, being cited by 93.8 percent of respondents. Almost 80 percent also emphasized both timeliness and experience; dealing with the public was mentioned by 53 percent; and low cost was cited by 49.4 percent.

Municipal personnel also had plenty of advise on how contractors could do a better job of working with cities. One of the areas most commented on involved quality of work. Contractors should “take responsibility and be honest and proud of their work,” believes this Northeast city official. “Quality, quality, quality – in both materials and especially workmanship,” pointed out a respondent from the Mid-Atlantic region. Added this municipal manager from the Pacific Northwest “Have pride in their work. Effectively train their crews down to the people who do the work, not just management.”

Many survey participants also expressed concern that too often contractors rush through jobs, making mistakes and having to repeat work. “Make sure the job is done correctly the first time,” counseled a Midwest respondent. “Do it right the first time and complete the job when they say it will be done,” stated a municipal manager from California. Another respondent from the West stressed that contractors “be diligent in following the plans and specifications. Do not take shortcuts.”

Safety concerns were also a subject of high interest to the survey participants. This Midwest city official wants contractors to “do a more thorough job of potholing and locating other utilities.”

Several respondents are concerned that contractors don’t understand or don’t always follow specifications and guidelines. Said this Southeast municipal manager: “Contractors should always understand specs before they bid a job.” ■