

Historical Investment in Water Infrastructure

City tackles large investment in clean water infrastructure.

By Carlton Ray

Indianapolis is embarking upon the largest investment in clean water infrastructure in its history, creating opportunities for new business in one of America's most affordable and entrepreneurial cities. Mayor Bart Peterson's Clean Streams-Healthy Neighborhoods program is an investment of more than \$3 billion dollars over 20 years. This program will address longstanding and well-documented problems with the city's sewage and stormwater systems. The initiative includes a \$435-million capital program in 2006-2008 alone.

The city is addressing prioritized needs in four areas: 1) reducing combined sewage overflows (CSOs), 2) converting 18,000 homes on septic tanks to sewers, 3) addressing current and future needs in the sanitary sewer system, and 4) improving neighborhood drainage and flood protection.

"The scope and size of this program is

unprecedented in our community," said Kumar Menon, director of the Indianapolis Department of Public Works. "Both residents and the business community are excited about this opportunity for healthier neighborhoods, cleaner streams, and economic development."

The program includes a required \$1.8-billion investment under a federal consent decree signed in October 2006. Under the decree, the city has agreed to invest:

- \$1.73 billion by December 2025 to significantly reduce CSOs.
- \$50.4 million by December 2015 to eliminate chronic overflows from seven locations in the separate, sanitary sewer system.
- \$3.5 million by December 2010 on supplemental environmental projects to eliminate septic systems in two neighborhoods.

The city also plans to spend an additional \$64.3 million in watershed improvement projects such as streambank restoration and streamflow augmentation.

"We cannot do this work alone," said Menon. "With the commitment the city has made we need to continue our efforts to cultivate business—engineers, contractors, consultants, and others—who can help us execute the program on time."



Indianapolis Mayor Bart Peterson visits the completed equalization basins at the Belmont advanced wastewater treatment plant.

Expertise in the areas of pipelines, concrete, instrumentation and controls, hauling, and excavation will be needed to effectively implement the program. In addition, material suppliers for stone, asphalt, and concrete as well as other support services such as traffic control, surveying, and inspection services are needed, Menon said.

The consent decree represents just a portion of the city's capital improvement program, which also includes a comprehensive septic tank elimination program, sanitary sewer master plan, and stormwater master plan. By 2025, the city estimates that these programs will require a combined installation of:

- Over 25 miles of new sewers and interceptors to capture and reduce CSOs.
- A new nine-mile long deep underground tunnel to capture and convey CSOs to the city's treatment plants.
- 300 miles of new sewers to serve current septic tank neighborhoods.
- More than 70 miles of new sewers



Equipment used to bore a nine-mile long tunnel that will transport CSOs to city treatment plants is lowered into place.

and interceptors to meet sanitary sewer capacity needs and anticipated future growth.

- Multiple stormwater drainage projects and best management practices to improve stormwater quality.

In addition, the city is implementing an aggressive sewer rehabilitation program that has helped extend the life of existing sewers and prevent hundreds of system failures. Most large diameter pipes in the combined sewer area are more than 100 years old, yet materials utilized for these pipelines generally have a 50-year lifespan. The rehab program has been able to extend expected lifespans significantly.

“Since the 1990s, we have issued contracts for more than 90 sewer evaluation and rehabilitation projects worth more than \$71 million,” Menon said. “These projects range from large-diameter pipes of 48 to 156 inches, down to small 8- to 10-inch diameters, along with significant manhole rehab work.”

An infrastructure assessment completed in 1998 identified nearly 35,000 linear feet of large diameter sewer needing rehabilitation. Rehab or replacement also is needed for many of the city’s small diameter sewers, with 90 percent of the city’s underground sanitary sewer infrastructure 8 to 15 inches in diameter, Menon said.

Beyond wastewater and stormwater infrastructure improvements, Indianapolis is a city on the move. The nation’s 12th largest city is building a new airport terminal to replace the existing terminal. A new stadium is under construction to replace the RCA Dome, and the dome will in turn make way for a convention center expansion. The Indiana Department of Transportation’s “Major Moves” initiative, between 2006 and 2015, will invest nearly \$12 billion on hundreds of new road construction, preservation, resurfacing, and other projects. In addition, the city recently welcomed a new Conrad Hotel downtown—a Hilton family luxury brand found today in only four U. S. cities: New York, Chicago, Miami, and Indianapolis.

Just a few blocks north of downtown, the beautiful and popular Fall Creek

Place neighborhood stands today where abandoned houses, vacant lots, and urban decay once ruled. The neighborhood’s redevelopment recently won recognition from the EPA as an example of “smart growth.”

Indianapolis also has witnessed a revolution in its approach to public education with the creation of mayor-sponsored charter schools that have improved student achievement at a pace far exceeding the state average. Mayor Bart Peterson is the only mayor in the nation with the authority to create charter schools.

The city’s dramatic revitalization and cultural renaissance have made Indianapolis a great place to live, work, and start a business:

- *Forbes* magazine named Indianapolis a “Top 10 city for starting a business and career.”
- The National Association of Home Builders says Indianapolis is the No. 1 city for affordable housing.
- *Expansion Magazine* named Indianapolis the fourth hottest city to expand or relocate a business.
- *Entrepreneur Magazine* called Indianapolis one of the top five hot American cities for entrepreneurs.
- *American Style Magazine* named Indianapolis a “Top 25 art city in the United States.”
- *ESPN The Magazine* says Indy is among the “Top 20 cool cities in America and the second best ultimate sports city.”

“The demand for engineering, construction, and ancillary services is expected to grow significantly with the implementation of the program,” said Jim Garrard, the city’s economic development director and former DPW director. “Indianapolis is a great place to live, with an attractive business climate and a long-term commitment to carry out this infrastructure improvement program.”

Like all older cities, sewer infrastructure in many neighborhoods has begun to reach the end of its useful life and must be repaired or replaced. All these factors have combined to

make improving the sewer system a priority issue for Indianapolis and Mayor Peterson.

The Peterson Plan in 1999 pledged to finally address the sewer overflow and septic system issues and move Indianapolis into the 21st century. Since then, the city has steadily improved water quality, investing more than \$200 million in early action projects to reduce sewer overflows. The pace of improvements will continue to increase, with sanitary capital investments reaching more than \$170 million annually in 2008 and 2009 and stormwater capital approaching \$8 million per year.

Indianapolis remains committed to diversity within this program. The city will continue working with the project management team and potential contractors to ensure the certification, mentoring, and development of minority and women-owned firms. This commitment enhances the quality of vendors doing business with the city and expands the opportunities for diversity in the program. Accordingly, to improve diversity and opportunity in the business community, the city also has established a 15 percent participation goal for minority business enterprises and an eight percent goal for women’s business enterprises. **GE**

For additional information on the program, list of projects planned in 2006-2008, or how to work with the city go to: www.indycleanstreams.org.

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