

## Biggest Sewage Overflow Plugged

By Paul Fournier

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**Holyoke, Mass., treatment plant will end state's worst discharge to Connecticut River.**

Massachusetts' worst combined stormwater and sanitary sewage overflows (CSO) to the Connecticut River will be captured and treated with the completion of a \$24-million project in Holyoke.

Metcalf & Eddy Inc. has a design-build contract for a facility that will end the discharge of most of the 250 million gallons of raw wastewater currently pouring into the river each year from the city's combined sewer system.

"There are several CSOs in the city, but this one is the worst," said Scott Thibault, P.E., project manager for Metcalf & Eddy. He said that raw sewage bypasses the plant about 80 times a year because it can't handle excessive flows during severe storms.

The Wakefield, Mass.-based consulting firm is responsible for engineering, permitting and construction management of the 103-mgd (million gallons per day) CSO plant, while R.H. White Construction Co. Inc. of Auburn, Mass., is the general contractor. Work also involves making significant upgrades to the existing wastewater treatment plant.

Construction got under way in May 2006. The new CSO treatment system is designed to intercept, screen and disinfect combined sewage and then convey the processed wastewater to an outfall. Major components include a pumping station; two 127-foot by 22-foot by 20-foot-deep chlorine contact basins; a new 64-foot by 20-foot operations building; and a rehabilitated, 600-foot section of a 100-year-old, 10-foot-diameter outfall tunnel.

The 10-foot tunnel passes right through the new pumping station, supported by tie rods connected to an overhead beam that spans the walls of the structure. Inside the pump station, high-capacity pumps force wastewater into four 36-inch-diameter pipes that discharge into a buried 60-inch manifold pipe. The manifold connects with an influent pipe that conveys raw wastewater to the contact tanks. Eventually, the treated wastewater is returned to the downstream end of the 10-foot outfall and discharged into the river.

According to Thibault, work crews have been making good time on the job due to the streamlined design-build process, and they are expecting to proceed with plant startup and testing in August 2007.

Other major contractors on the job include:

- Francis Harvey & Sons Inc. of Worcester, concrete forming and placing
- Beacon Site Developers and Consultants of Holden, Mass., earthwork
- Elm Electric Co. of Westfield, Mass., electrical work
- Worcester County Welding, miscellaneous metals, railings, roof trusses
- R.H. White, general contractor, is also doing the mechanical work

The new treatment plant will go a long way towards helping this old mill city comply with a directive from the state's Department of Environmental Protection to address the problem of CSOs entering the river. There are reportedly other CSOs in the city but this one is the largest, accounting for more than 50 percent of the untreated combined wastewater flows to the river.

