



Indianapolis *Gregory A. Ballard, Mayor*

REBUILDINDY

Department of Public Works

BELMONT AWT PLANT WET WEATHER SECONDARY TREATMENT EXPANSION

Construction is underway for new wastewater treatment facilities that will double the maximum secondary treatment capacity at the Belmont Advanced Wastewater Treatment (AWT) Plant. The improvements, which will be completed by the Indianapolis Department of Public Works (DPW), will eliminate the single largest source of sewage overflows to the White River during wet weather.

THE PROBLEM

The Belmont AWT Plant serves more than 449,000 homes and businesses in Indianapolis and surrounding communities. Included in this service area is the combined sewer system in the old city limits. The combined system is more than 100 years old and carries both sewage and storm water in the same pipe.

During dry weather, wastewater from the sanitary and combined sewer areas is transported to the treatment plant, and the wastewater cycles through the full treatment process—primary, secondary and tertiary, followed by disinfection.

However, during and after wet weather, both wastewater and high volumes of storm water from the combined sewer area are transported to the Belmont AWT Plant. The addition of storm water overloads city sewers and creates capacity problems at the treatment plant.

When operating at full capacity, the Belmont AWT Plant can treat 300 million gallons per day (MGD) during primary treatment, a process to remove large objects like stones and sticks; sand, sediment and oils; and a portion of the solid matter in the wastewater.

Through secondary and tertiary treatment, the maximum capacity of wastewater that can be treated is 150 MGD. Secondary treatment is a biological phase and involves microorganisms such as bacteria, which break down organic material and ammonia found in wastewater. Removing these substances is crucial to meet water quality standards and ensure that water released to the White River contains a concentration of oxygen that is suitable for fish and aquatic life.

PROJECT DETAILS

PROJECT STATUS: In Construction

ANTICIPATED CONSTRUCTION PERIOD: Spring 2010 to Summer 2012

DESIGN ENGINEER: HNTB Corp.

ESTIMATED PROJECT COSTS: \$53.6 million

CONSTRUCTION: Walsh Construction

PROJECT BENEFITS:

- Improves water quality in the White River during wet weather
- Reduces partially treated sewage overflows into waterways by more than 1 billion gallons per year
- Doubles secondary treatment capacity at the Belmont AWT Plant

Project schedules and costs are subject to change.

www.indy.gov/DPW

When the treatment plant reaches the full secondary treatment capacity (approximately 150 MGD), only 50 percent of the wastewater entering the plant can be fully treated. Additional wastewater can pass through primary treatment, but due to the capacity limitations of secondary treatment, wastewater cannot progress through the remaining processes. As a result, some of the excess wastewater (approximately 150 MGD during wet weather) is released directly into the White River, partially treated.

Releasing partially treated sewage overflows into the White River is a potential health hazard, harms the environment and impacts the quality of life in our neighborhoods.

THE SOLUTION

To resolve capacity problems at the Belmont AWT Plant, DPW will double the secondary treatment capacity from 150 MGD to 300 MGD. The secondary expansion will eliminate partially treated sewage overflows by more than 1 billion gallons per year and improve water quality in the White River.

(continued)



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Secondary treatment currently includes an Oxygen Nitrification System to remove organic waste and ammonia from wastewater. DPW is expanding secondary treatment to include a new Air Nitrification System, which will provide additional biological secondary treatment.

The secondary treatment expansion project will include the following:

- A new Air Nitrification System with two 17 million gallon aeration tanks
- New lift station to transport wastewater from the primary to secondary treatment phases (entry to new Air Nitrification System)
- Upgrades to an existing lift station to transport wastewater from the primary to secondary treatment phases (entry to existing Oxygen Nitrification System) during wet weather
- Improvements to the existing Oxygen Nitrification System to achieve maximum secondary treatment capacity of 300 MGD
- New structure to transport wastewater from secondary treatment to the expanded disinfection facility

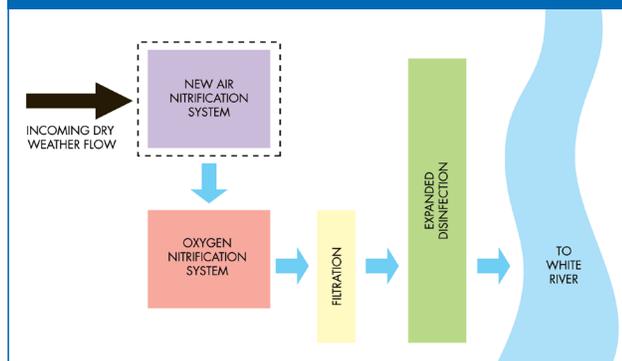
Construction at the Belmont AWT Plant began in March 2010 and is expected to be complete in August 2012. Under the city's Raw Sewage Overflow Long Term Control Plan, the project must achieve full operation by Dec. 31, 2012.

★ HOW YOU CAN HELP

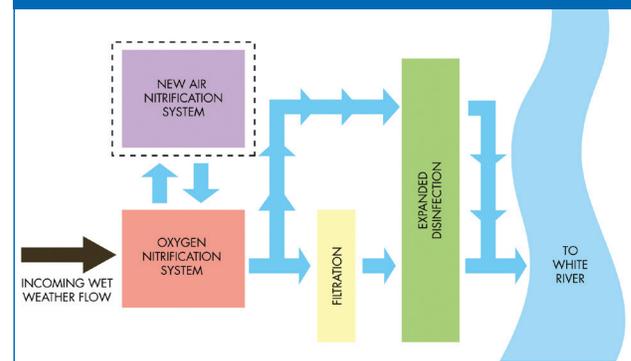
Everyone has a role in protecting our waterways. You can help by adopting the following environmentally friendly practices:

- Disconnect downspouts and sump pumps connected to the sewer system. Their flow takes up capacity we need to carry sewage.
- Don't send fats, oils and grease down the drain. They can clog our sewers and cause overflows and costly repairs.
- Clear gutters and storm sewer drains of leaves and debris.
- Never dispose motor oil, antifreeze, battery acid and household chemicals down the drain. Properly dispose of these materials through the city's ToxDrop program. Log on to www.sustainindy.org/ToxDrop to learn how.
- Reduce water use in your homes and businesses.
- Sign up to receive e-mail warnings of sewer overflows at www.indy.gov/DPW or call the Sewer Overflow Hotline at (317) 327-1643 before an outing near affected waterways.
- Pick up your pet's waste. It can end up in our waterways.
- Reduce or eliminate insecticide, herbicide and fertilizer use. These chemicals also can end up in our waterways.

DRY WEATHER SECONDARY TREATMENT AT BELMONT AWT PLANT



WET WEATHER SECONDARY TREATMENT AT BELMONT AWT PLANT



To resolve capacity problems at the Belmont AWT Plant, DPW will double the secondary treatment capacity from 150 MGD to 300 MGD. Secondary treatment currently includes an Oxygen Nitrification System to remove organic waste and ammonia from wastewater. A new Air Nitrification System will provide additional biological secondary treatment.