



# Mishawaka Communicator



*Working together to build the “Best Hometown in America” by delivering exceptional services, promoting safe and clean neighborhoods, elevating the quality of life, and inspiring pride in our community.*

Mishawaka, Indiana

Jeff Rea, Mayor

July 2010

## A Letter from Mayor Jeff Rea

As I encounter citizens around the city I am frequently asked when are the yellow delineator markers on the north and south ends of the Main Street Underpass going to be eliminated? Lawson-Fisher Associates of South Bend, Indiana was selected as consulting design engineer for widening of the section of Main Street north of Donaldson. The pavement width will match the five lanes of pavement for the underpass and will include dual left turn lanes and a right turn lane on all four approaches at the intersection of Main Street and McKinley Avenue.



The final pavement alignment of the underpass shifted the street to the east to avoid Fairview Cemetery and to minimize the impact upon John Young Middle School. It was necessary for the city

(continued on back page)

## Wastewater Treatment Improvements

Faced with a 16 percent population increase in the last 20 years, the City required a major upgrade and expansion of its wastewater treatment plant to meet the increased demands on the City's wastewater treatment system. One of the key goals for the upgrade, which increased the plant's capacity from 12 to 20 million gallons per day, was to reduce overall plant energy costs. By performing extensive energy analyses during design, the upgraded plant has achieved multiple sustainable goals, including:

- Achieving an overall improvement in energy performance;
- Decreasing the plant's carbon footprint;
- Reducing combined sewer overflows (CSOs) for public health and safety; and
- Reducing energy utility costs.

Wastewater treatment plants are large consumers of energy. In the treatment process, aeration and pumping require the highest energy usage. To reduce this demand, one of the first high-efficiency turbo blowers in the state of Indiana has been installed. Eligible for grant funding under the **American Recovery and Reinvestment Act Green Project Reserve**, the new turbo blower passed EPA green initiative requirements. The turbo blower has the potential to reduce aeration electrical consumption by more than 30 percent and requires less maintenance compared to the existing blower. Other energy-efficient upgrades include installing new pump and blower variable frequency

(continued on back page)

### Learn How to Prevent Storm Water Pollution

Storm sewers drain directly to the river. Keeping pollution out of storm sewers helps to protect the water quality in the St. Joseph River. Learn how you can do your part by visiting [Mishawaka.IN.Gov](http://Mishawaka.IN.Gov). Click on the MS4 logo to access a wealth of information.

### Utility Email Statements

Beginning in late July or early August, Mishawaka Utilities customers will have access to their utility billing statement online. This option will include receiving their billing statement sent via e-mail or continuing to receive their paper statement, the choice will be up to the customer.

The benefits of this system will save time, reduce paper, postage and improve efficiencies as well as customer convenience and satisfaction. With every year brings challenges and opportunities to enhance our services and with that we are committed to providing the citizens of our community the best services possible.

## A Letter From Mayor Jeff Rea (continued)

to purchase a total of twelve residential properties along the east side of Main Street. The turn lanes at the intersection of McKinley required the acquisition of four commercial properties located on the east and west sides of Main Street.

The 2.6 million dollar Main Street reconstruction project from Donaldson and extending north to Guam was awarded in April 2010 to the low bidder Walsh and Kelly Construction from South Bend, Indiana. They began the work of relocating utilities and removing trees in May. To allow north-south traffic to be maintained on Main Street during construction and to provide access to John Young Middle School at Omer Street until June 1, 2010, work on Main Street was divided into phases.

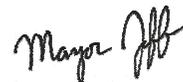
**Phase A:** Removal of pavement on the east side of Main between Donaldson and McKinley except at the Omer Street to provide access to John Young Middle School until school is out for summer. This phase will include the widening of Main Street at the intersection of McKinley to provide dual left turn lanes for north bound traffic and a north bound right turn lane. A new traffic signal will be installed at the intersection of Main and Omer Streets to provide access to the middle school when it reopens on August 15, 2010.

**Phase B:** Construction of the center turn lane between Donaldson and Russ Streets. Upon completion Main Street traffic will be shifted to the new pavement on the east side.

**Phase C:** With traffic on the east side, pavement on the west side of Main between Donaldson and McKinley will be removed. The intersection of McKinley will be widened to the west to provide east bound dual left turn lanes as well as shifting the south curb line on west McKinley to provide an east bound right turn.

**Phase D:** As work moves north of McKinley traffic will be maintained on center lanes to permit removal of curbs and sidewalks on both sides of Main north to Guam. The east curb line will be shifted approximately seven feet to the east and the west curb line approximately twenty feet to the west to provide south bound dual left turn lanes a south bound right turn onto McKinley.

**Phase E:** Upon completion of work at the intersection of Main Street and McKinley the road from Schumacher Drive east to Sarah Street will be receive new asphalt surface.



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## Wastewater Treatment Improvements (continued)

drives to optimize run speeds and decrease energy usage. To reduce plant heating energy costs, a new central heating system was installed to serve all buildings. The system was converted from steam heat to an all hot water system for reduced maintenance and improved energy control. Digester gas which is produced in the treatment process is also recovered and burned in the new plant boilers to provide "free" building and process heat. Digester gas provides "free" energy that replaces natural gas. Prior to the upgrade, the old boilers were quite inefficient and suffered from steam losses. A new building management system and a computer control and data acquisition system, control and monitor the process, electric, heating, and air-handling systems, reducing labor and energy costs.

To date, the program has produced the following results:

Mishawaka has documented a 16 percent improvement in overall wastewater energy performance.

Even before the expansion, Mishawaka was in the upper percentiles of efficient plants with a benchmark of approximately 1,030 kWh per million gallons treated. However, after the expansion, the benchmark for the first full year of operation has improved to approximately 870 kWh per million gallons.

The upgrade has decreased natural gas consumption over 30 percent, which is significant considering the upgrade required over a 35 percent increase in heating capacity due to increased building area and safety code-mandated increases in building ventilation.

The upgrade improvements made to the digester systems, especially the new digester mixing systems, have increased digester gas production an average of 15 percent. Prior to the upgrade, the maximum utilization of digester gas was 40 percent or less. The new central heating system more efficiently burns digester gas and distributes "free" heat wherever there is a need. Current digester gas utilization approaches 70 percent.

The Mishawaka Wastewater Treatment Plant volunteered to participate in a two-year energy pilot project sponsored by the EPA and IDEM. The pilot project will be used to tailor a systematic approach to finding energy conservation opportunities at water and wastewater treatment plants throughout Indiana. Even after the upgrade and expansion, Mishawaka continues to look for opportunities to increase efficiencies and reduce energy consumption and cost at the treatment plant.