

# Update

September 2008

“EMS certification validates the quality of Louisville Green in an independent audit. Customers prove the product’s quality each day.”

— Bud Schardein  
MSD Executive Director



## MSD obtains EMS certification from National Biosolids Partnership

The MSD Morris Forman Wastewater Treatment Plant’s biosolids program is the first in Kentucky to achieve certification by the National Biosolids Partnership (NBP) for its Environmental Management System (EMS). MSD’s accomplishment recognizes that the agency has been independently verified as having an effective biosolids management system for reducing environmental impacts and for continually improving performance.

The MSD biosolids EMS was independently verified July 31, 2008, by the audit firm KEMA-Registered Quality, Inc. This firm identified numerous strengths that are demonstrated by MSD’s effective biosolids management system. For instance, MSD senior management is very involved in operations and in developing public acceptance and beneficial reuse for agency biosolids. Consumer acceptance of Louisville Green quality is a high priority throughout the Morris Forman Wastewater Treatment Plant. Moreover, exceptional training of employees results in a high level of awareness of their roles and responsibilities in producing an acceptable biosolids product.

The great demand for Louisville Green is largely due to the fact that the product quality has improved significantly during the past two years in response to user input. The nutrient-rich, organic fertilizer now is characterized by less odor, more consistent size/density and less dust. It is sold and distributed in bulk, principally for agricultural purposes, in 11 states. Louisville Green additionally is bagged and sold to homeowners through local hardware stores. Most of the product is beneficially reused in Kentucky.



Louisville Green is a nutrient-rich, organic fertilizer made from the reuse of biosolids from the Morris Forman Wastewater Treatment Plant.



Beneficial reuse of biosolids is saving MSD more than \$500,000 annually by avoiding landfill charges. Management direction for enhancing equipment reliability, employee skills and standard methods has caused a boost in beneficial reuse to 90 percent this year, compared with 84 percent in 2007. MSD’s public outreach has built trust in the agency, creating increased demand for biosolids and acceptance of last year’s rate increase.

MSD will host an awards luncheon at the MFWTP on September 30 to celebrate the EMS certification.



MSD

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(De 8 de la mañana a 5 de la tarde,  
de Lunes a Viernes)

## Upcoming Events

### September 1

**Labor Day** — MSD Offices closed. For emergency service anytime, phone MSD's Customer Relations Department, at 587-0603, or submit a service request online at [www.msdlouky.org](http://www.msdlouky.org).

### September 4

**DiverseWorks for You Certification Orientation**  
9 a.m., 700 W. Liberty, First Floor

### September 8

**MSD Board Meeting**  
10 a.m., 700 W. Liberty, First Floor

### September 22

**MSD Board Meeting**  
10 a.m., 700 W. Liberty, First Floor

### October 9

**Fall Retiree Luncheon**  
11a.m., Masterson's Restaurant

## MSD Milestones

### Welcome to MSD:

**Mark Johnson,**  
Director of Engineering  
and Chief Engineer

**Glenda Larkins,**  
Fleet Services Specialist

**Wes Sydnor,**  
Senior Technical Services Engineer

### Congratulations on your promotion:

**Phillip Bradley,**  
Utility Leader

**Steve Emly,**  
Senior Technical Services Engineer

**Sharise Horne,**  
Contract Administrator

**Stephanie Morford,**  
Stormwater Scheduler

**Larry Ramsey,**  
Process Supervisor/Maintenance

**Donnie Rheinlaender,**  
Process Supervisor/Operations

**Donnie Stirneman,**  
Asst. Telespection Supervisor

### Welcome to a new role:

**Alrick Young,**  
Floodwall Maintenance Mechanic

### We will miss:

(The following employees will retire September 1)

**Charles Holsclaw**  
**Joseph W. Keene Jr.**

## Project DRI progress

### Drainage Response Initiative projects

Project DRI is in the process of solving drainage problems throughout the community. The following projects are ready for construction.

#### Hallsdale Drive

A pipe and yard drain system will be installed, and driveway aprons will be replaced on Hallsdale Drive to alleviate standing water in driveways and along the roadside. This \$134,000 project will resolve five drainage requests and benefit 60 properties.

#### Iroquois Avenue

A pipe and yard drain system will be installed, and driveway aprons will be replaced in the 700 and 800 blocks of Iroquois Avenue to alleviate standing water in driveways and along the roadside. The \$104,600 project will resolve four drainage requests and benefit 39 properties.

#### Kaye Lawn Drive

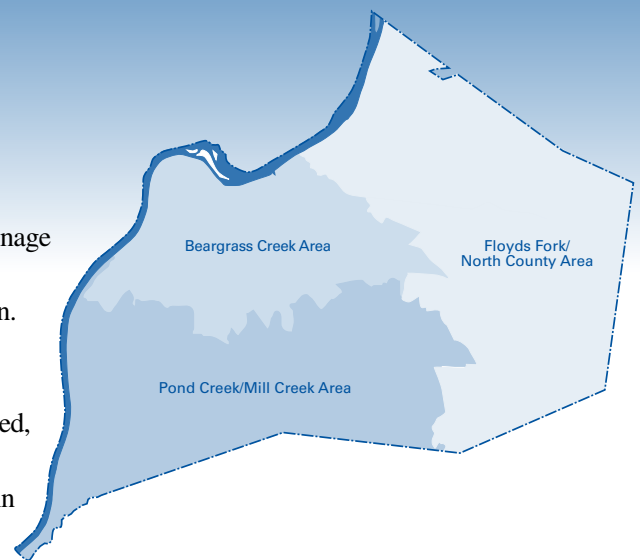
A \$54,000 project will resolve five drainage requests and benefit 20 properties on Kaye Lawn Drive. A pipe and yard drain system will be installed, and driveway aprons will be replaced to alleviate standing water in driveways and along the roadside.

#### Lower River Road

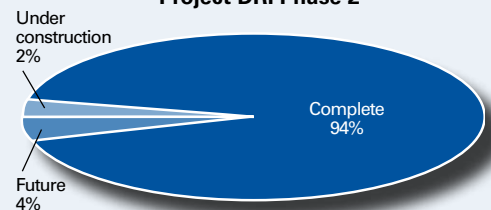
Rear yard drainage improvements will be made along the 12400 block of Lower River Road to resolve drainage service requests in this area due to a poorly defined drainage system. The \$55,000 project will benefit five properties.

#### Spyglass Court/Normie Lane

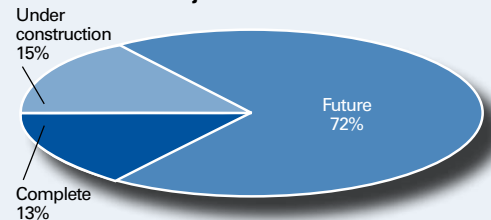
Roadside and rear yard drainage improvements will be made on several cul-de-sacs within Treasure Island Subdivision to address minor-to-severe standing water as well as the flooding of streets and yards within the project boundary. This \$190,000 project will address 17 drainage service requests and positively impact 73 properties.



### Project DRI Phase 2



### Project DRI Phase 3



*Project DRI, a partnership between Louisville Metro and MSD, has improved drainage throughout the Metro area.*

*Since Phase 2 began in 2005, 96 percent of the 368 planned projects are either under way or completed.*

*Twenty-eight percent of projects in Phase 3 are completed or under construction.*

## Certifiable Success

The following businesses have received certification from MSD's DiverseWorks program.

**Land Commercial Construction (M/WBE)** — Landscape installation; planting, design and consulting: *Tyra Oldham, (502) 657-6053*

**OneRain, Inc. (WBE)** — Hardware, software, integration of systems integration services: *Ilse Gayl, (303) 774-2033*

**Adams & Call, Inc. (WBE)** — Business development; campaigns; public affairs; public relations services: *Ellen Call, (502) 500-1049*

## SWOR2 project is moving right along

The second phase of MSD's Real Time Control (RTC) system, which currently is under construction, includes building an inflatable rubber gate within the Southwestern Outfall. Such a rubber gate is being installed about 12,000 feet upstream from the Southwestern Pumping Station. At this location,



John Rice, Rob Jacobs and Mike Rice (MAC Construction) install an inflatable rubber dam (or gate) inside the Southwestern Outfall as normal dry-weather flow passes through the conduit beneath them.

the Southwestern Outfall is an 18-foot by 24-foot pipe with an effective storage volume of 12.6 million gallons.

A mechanical-anchoring system secures the gate's tough rubber layers to the tunnel walls and floor. The gate is equipped with an automated-control system, which is situated in an aboveground building. A fail-safe system regulates each gate operation. A mechanical system will allow the gate's manual

deflation even if a facility power failure occurs. The gate requires a concrete-slab foundation, through which a 6.5-foot conduit is being constructed to allow dry-weather flow through the system.

Construction of the SWOR2 project began in January of this year. Completion of the project has been somewhat delayed until the middle of next month because the high-water levels have affected its progress.



## Hydraulic sewer modeling and overflow abatement planning

MSD's Project Waterway Improvements Now (WIN) team currently is developing overflow abatement projects to support Project WIN objectives and Consent Decree requirements. The MSD Board recently authorized the allocation of \$282,000 for Heritage Engineering to complete an overflow abatement project development for sanitary sewer overflows (SSOs) in the Middle Fork, Ohio River Force Main, Southeast Diversion and Jeffersontown.

This initiative constitutes aligning and sizing conveyance pipes, sewage storage basins and pump station upgrades. Every project alternative to lessen overflow is examined by implementing common benefit and cost tools. Selected projects will be further developed for submittal in the Integrated Overflow Abatement Plan by the end of 2008. Planning effort components additionally include modeling scenarios and simulations involving five small Prospect wastewater treatment plants, potential elimination of the Jeffersontown Wastewater Treatment Plant and the "Big Four" SSO elimination projects.

One purpose of this Phase II Hydraulic Modeling Program, which has been divided into two phases, is developing a range of solutions that will furnish MSD with a tool for evaluating system capacity. SSO solutions will be based on direction from past analysis and planning, input acquired from public outreach and meetings and guidance from the Wet Weather Stakeholders group. System capacity analysis will be based on existing conditions and the impact of future population projections, reserved capacity for future study and new developments and capacity requests that MSD's Development Team now is reviewing.

### MSD names new Director of Engineering and Chief Engineer



Mark Johnson has joined MSD as the new Director of Engineering and Chief Engineer,

filling the position from which Derek Guthrie retired August 1. Johnson is a Louisville native. He graduated from the University of Kentucky with a bachelor of science degree in civil engineering. He has been involved in the ownership of privately held engineering and construction firms for most of his career. Johnson most recently served as president of a local consulting engineering company. Mark and his wife, Nancy—who have been married 20 years—share many of the same interests, including travel and golf.

## Customers First

"The crew of **Darryl Coleman, Horace Gaither, Stephon Gazaway, Eric Kalbhin, Tyrone Moore, Jermaine Murphy, Maurice Nichols** and **Andre Reese** did a great job taking care of our backup. They left the area totally clean. I appreciate their professionalism and quality workmanship."

— *Oliver Williams*  
Waverly Park

"**Adam Bader, Sean Brown, Darrell Goodwin** and **Nate Richardson** are to be commended for their professionalism and efficient work. I am extremely grateful for their quick response and assistance with my backup."

— *Marie Underwood*  
Highlands

"My car stopped running, and I had my kids with me. It was a very scary experience. I greatly appreciate **Ronnie Richards** and **Val Winburn** for taking the time to push my car out of the road!"

— *Brenda Johnson*  
Okolona



# MSD

Louisville and Jefferson County  
Metropolitan Sewer District

700 West Liberty Street  
Louisville, KY 40203-1911



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## Board Actions

- During a recent inspection of Flood Protection System components, the U.S. Army Corps of Engineers found that mature trees and shrubs are encroaching into the floodwall right-of-way. MSD will remove all trees within 15 to 20 feet from the toe of the slope of the existing floodwall right-of-way. Section 2 is located near the Greenwood Road boat ramp at Greenwood and Cane Run roads to Chickasaw Park along Southwestern Parkway. This section of the Board-approved **Floodwall Tree Removal Project**, which is ready for construction, includes 18 miles of floodwall.
- The integration of Wheeler Basin operations and the integration of the Southwestern Pump Station, Main Diversion Structure and Morris Forman Wastewater Treatment Plant operations were combined into one project for ease of bidding and construction; these projects are similar in scope. The MSD Board last month endorsed a contractor to perform work on the resultant project, which is called **RealTime Control Phase II—MDS and Wheeler Basin**.
- In August, MSD's Board allocated \$52,705 annually for the purchase of 492 cylinders of liquid chlorine and 375 cylinders of sulfur dioxide. Liquid chlorine kills any bacteria or microorganisms left in the waste stream, while liquid sulfur dioxide removes any residual chlorine left in the waste stream to satisfy the residual chlorine limits in the discharge permits.

## FY09 CRS Program procures professional services

The Community Rating System (CRS) is a Federal Emergency Management Agency (FEMA) program for rewarding communities that surpass the National Flood Insurance Program minimum requirements. For instance, Jefferson County residents' flood insurance premiums are discounted 25 percent because Jefferson County currently is a Class 5 community.

The CRS Program Team serves MSD in the preparation of reports explaining our community's

participation in the National Flood Insurance Program for FEMA. Such annual and five-year-cycle submittals generally include maps and other hard evidence of MSD's efforts to better manage local floodplains during the assessment period.

MSD's Board recently approved a firm to provide professional services relating to the CRS Program for fiscal year 2009. This contract includes determining the potential for an upgrade to a Class 4 community rating.



# Update *Extra*

A SPECIAL SUPPLEMENT TO UPDATE

September 2008

*“Every MSD employee who volunteered to staff the exhibit or help build it should be proud. You continue to be excellent examples of quality customer service!”*

— Bud Schardein  
MSD Executive Director

## Connecting with our community

For the second consecutive year, MSD served as a Kentucky State Fair Educational Program sponsor and hosted an exhibit and information booth at the fair. The theme of its 2008 exhibit was “Infrastructure: Supporting Kentucky’s Future.”

This exhibit went into great detail displaying and explaining the critical need for dependable infrastructure: from roads, bridges, railroads and river transportation to more common services like sewers, clean drinking water, electricity and natural gas.

Much of the exhibit was interactive. For example, an MSD telespection truck demonstrated to fairgoers the way that television-camera technology is implemented to inspect sewer lines for defects or blockages. Another exhibit component featured a “green house,” which highlighted such water-quality and conservation tools as rain barrels, green roofs, porous concrete paving and rain gardens.

More than 3,000 students from third grade through high school walked through the exhibit with data sheets to complete to help them learn about infrastructure details.

A broad cross section of MSD employees volunteered to work at the booth or assist with the exhibit. According to Executive Director Bud Schardein, “Every MSD employee who volunteered to staff the exhibit or help build it should be proud. You continue to be excellent examples of quality customer service!”



Carolyn Williams (left) speaks with a visitor to the MSD booth about rain gardens.



The MSD booth included a “green house” equipped with a rain barrel, a green roof, porous concrete paving and a rain garden.



An MSD telespection truck shows the way that television-camera technology is employed for inspecting sewer lines.



Two young fairgoers observe the camera technology in action.



MSD

# Board authorizes three professional service agreements

The MSD Board has approved professional service agreements on a work order basis for the following initiatives.



A portion of the Flood Protection System in downtown Louisville.

- MSD's Development Team will require design support during fiscal year 2009 for several initiatives. **Stantec Consulting Services** has provided professional services supporting the Development Team for the past 10 years. This firm's experience and knowledge of MSD's work and qualifications with the Federal Emergency Management Agency make it uniquely qualified for assisting the Development Team. Stantec's contract ceiling of \$120,000 for work next year will include:
  - Mill Creek Flood Insurance Study completion, and
  - FY09 floodplain studies and reviews.

## Board approves Bass-Shirley Area Assessment Report

MSD's Board recently endorsed the final assessment report addressing costs associated with the Bass-Shirley Area Assessment and Drainage Improvement Project and Riverway Drive Drainage Response Initiative Project. Based on actual costs, the Guaranteed Maximum Assessments were approved, and warrants will be issued to homeowners in this project.

In 1999, MSD entered into an Agreed Order—with the City of Prospect and Kentucky Natural Resources and Environmental Protection Cabinet—stipulating that MSD would provide sanitary sewers to Bass-Shirley area residents. This project will serve 176 properties along Bass Avenue, Shirley Avenue, Jacob School Road, Duroc Avenue, Rest Way, Riverway Drive, Carslaw Court and Beech Avenue in Prospect.

- **Carter, Dixon & Partners (CDP) Engineers** will furnish structural/electrical design support for the following projects:
  - Beargrass Flood Pump Station Equalization and Baygate 1-5 Actuator Replacements;
  - Flood Pump Station Actuator Gates 5, 81 and 85 Replacements;
  - Lea Ann Way Pump Station Channel Grinder Replacement;
  - Goose Creek Pump Station Channel Grinder Replacement;
  - Brandeis Viaduct Pump Station Pump No. 2 and Controls Replacement;
  - FY08 Concrete Floodwall Repairs.

MSD chose CDP based on its structural/electrical design expertise and experience in designing comparable projects.

- For tasks related to the Shively Interceptor and Perth/Clyde Collectors projects, MSD selected **Qk4, Inc.**
  - Shively Interceptor Design: The five sanitary sewer pumping stations in Shively identified as frequent sanitary sewer overflows could be eliminated by the construction of gravity sewers with flow conveyed to interceptor sewers. EPA grants will be applied to the construction cost of this project. The upper limit of the contract is \$396,593.
  - Perth/Clyde Collectors Design: Sixty-six Shively homes, not served by sanitary sewers, are located near the proposed interceptor alignment, which would allow sewers to be efficiently extended. Provided a favorable vote is obtained from homeowners, MSD will enter negotiations to finalize the design cost. The maximum cost of this project is \$112,105.



## Ensuring transportation availability for removing and hauling raw wastewater



When stormwater and sewer water volume exceeds the capacity of pumping stations, MSD dispatches tanker trucks to reduce the system's capacity and prevent backups.

During rain events and other overflow emergencies, raw wastewater must be hauled from the overflow point to an area designated by MSD staff. For this reason, MSD must have trucks available to effectively remove and haul large volumes of wastewater on an as-needed basis.

MSD, which often uses all of a hauling company's available trucks because of weather conditions and severe storms, must award multiple contracts to make certain that hauling needs are satisfied. Contracts have been awarded to API Services, Inc.; Mangum Enterprises, Inc.; and B & H Environmental Services, Inc. at an estimated annual expense for external hauling contracts of \$280,000.



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Metropolitan Sewer District

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