

# Financial and Risk Performance

MSD operates, maintains, and upgrades the sewer infrastructure in order to meet the expectations of stakeholders, ratepayers, and environmental regulators, as well as to protect water quality and public health. It costs millions of dollars each year to accomplish these goals. Financial stability is, therefore, critical to our sustainability performance.

As with any household or business, we must manage our expenses with respect to income and accept some levels of debt to accomplish our goals. We must also understand and mitigate the various risks inherent to the work that we do.

This section presents MSD's 2009 performance with respect to each of our key performance indicators for financial sustainability and risk management.

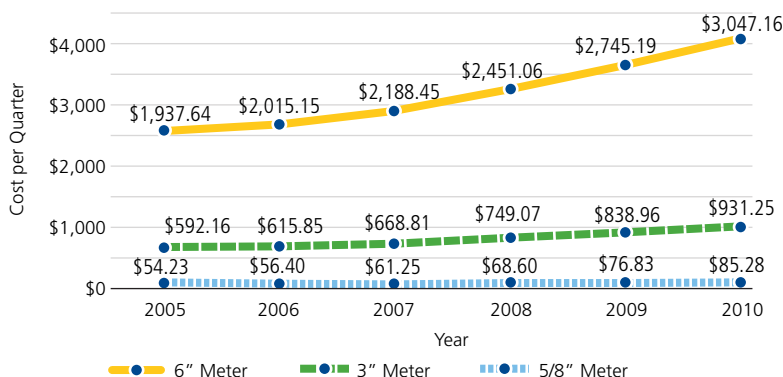
## Sewer Rates

Every year, MSD evaluates spending needs to maintain levels of service and adjusts sewer rates to cover costs. The recent federal Consent Decree requires MSD to make significant investments in sewer infrastructure over the next 10 years and beyond. As a result, sewer rates will rise significantly to cover the investment costs.

Figure 24 shows the average residential and commercial sewer rates for the past 10 years and the anticipated rate increases for the next 3 years, as described in MSD's approved rate plan. Our goal is to make necessary improvements to the system while remaining affordable to our customers. Prudent operational process improvements and strategic capital borrowing will help keep rate increases as low as possible.

Due to the initial ramp-up projects for the Project Groundwork capital program, sewer rates rose 12 percent in both 2008 and 2009, and 11 percent in 2010. This means that the average residential customer is paying about \$5.07 a month more in 2010, compared to 2009. Figure 24 shows the trend in minimum quarterly bills for three different meter sizes.

Figure 24: **Minimum Quarterly Sewer Bill<sup>a</sup>, by Meter Size**



Note:

<sup>a</sup> The minimum quarterly bill is a charge that includes an allowance for the first 900 cubic feet of water used, designated by meter diameter.

## Strategic Plan Goals

- Provide financial stewardship for the utility that achieves and sustains community service level expectations
- Align business strategies with best practice methodologies to optimize organizational performance



## Sustainability Goals

- Maintain financial solvency and liquidity for short- and long-term funding needs
- Maintain a high credit rating
- Maintain affordable sewer rates
- Manage risks proactively

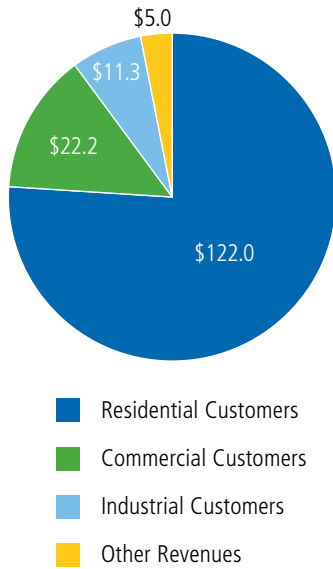


## Key Performance Indicators for Sustainability

- Sewer Rates
- Revenue Sources and Uses
  - Revenues
  - Cash contributed to capital expenditures
  - Operating expenditures
  - Debt service
- Capital Sources and Uses
  - Borrowed capital
  - Annual capital expenditures
- Risk Management

Figure 25: **2009 Revenues** (\$ millions)

Total = \$201,273,000



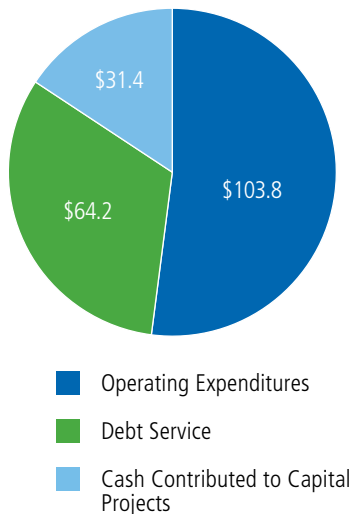
## Revenue Sources and Uses

Customer payments for sewer services comprise MSD’s primary source of income to fund day-to-day operations and the capital program. Other revenues include surcharges collected from industrial customers whose sewage exceeds defined concentration limits, and miscellaneous connection fees, septic hauler charges, and interest on deposits. These revenue-based funds are used to cover MSD operating expenses and debt service on borrowed capital needed to pay for infrastructure projects (the capital program). After these spending needs are met, remaining revenues are used to help fund capital programs.

Figure 25 shows that sewer service charges constitute the bulk of our revenue-derived income. Figure 26 shows that the largest proportion of total expenditures is used to cover operating expenditures. Figure 27 shows how operating expenditures are allocated among personnel, contracted services, and utilities, fuel, and supplies.

Figure 26: **2009 Total Expenditures** (\$ millions)

Total = \$199,426,000



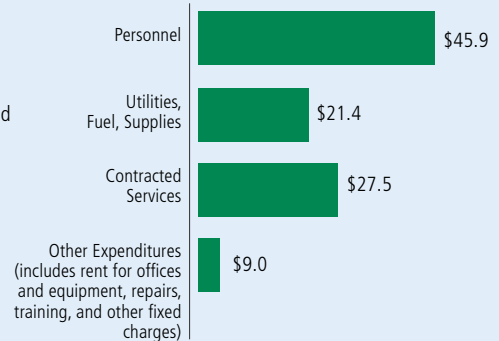
Note:  
MSD strives to contribute cash to capital projects in the range of 20 and 30 percent of annual capital expenditures. In 2009, MSD met this goal by achieving a 25.25 percent contribution.

## Operating Expenditures

Operating expenditures include utilities (such as electricity, natural gas, and water), employee salaries and benefits, maintenance of our facilities, fleet-related costs, professional services/contracted services, and materials and supplies. As new technologies and improvements are implemented, MSD strives to hold the operating budget constant.

Figure 27: **2009 Operating Expenditures** (\$ millions)

Total = \$103,825,000 (less depreciation)  
= \$1,707.65 per million gallons treated



## Debt Service

The majority of annual capital expenditures are covered by funds borrowed through the bond market or low-interest loan programs. The annual interest, or debt service, is paid for by sewer service revenues. MSD is required to show funders that there is enough revenue to cover all operating expenses and the debt service through a performance indicator known as “debt service coverage.” MSD chooses to maintain at least a 1.5 coverage ratio; this means that net revenue is 1.5 times higher than the projected debt payment. The higher the ratio, the more comfortable funders will be in loaning funds, and the lower the interest rate they will offer. That is why we place so much importance on maintaining or improving our bond rating.

In 2009, our debt service coverage was 1.9, somewhat better than our policy target of 1.5. Our debt service as a percentage of total operating expenses was 38.2 percent, well below the maximum of 50 percent set by MSD financial policy.

## Capital Sources and Uses

### Borrowed Capital

MSD utilizes a variety of financial instruments to pay for the capital program. They are:

- Bond sale proceeds
- Low-interest loan programs
- Grant programs that do not need to be repaid

Figure 28 shows the proportion of funds received from each of these three sources. They include:

- \$149.8 million in bond sale proceeds.
- \$5 million from the American Recovery and Reinvestment Act of 2009 (ARRA). These federal stimulus funds are considered “principal forgiveness loans” (grants) that do not need to be repaid.
- \$5.8 million in a low-interest loan from the State of Ohio’s existing Water Pollution Control Loan Fund (WPCLF) for the Little Miami Treatment Plant improvements. MSD has 20 years to repay the loan, at interest rates ranging between 0 and 3.7 percent.
- Figure 28 does not include a \$78 million low-interest loan from WPCLF (at an interest rate of 3.25 percent), for two large improvement projects at the Mill Creek Wastewater Treatment Plant, which treats the majority of the utility’s wastewater. This loan was issued in 2009, but was not officially awarded until January 2010.

Compared to commercial bank loans, these instruments offer lower interest rates, thereby lowering the “cost of capital” and ultimately reducing costs for MSD’s ratepayers. For example, the WPCLF loans carry interest rates that are lower than current bond market rates.

For 2010 and 2011, MSD is in the process of requesting loans from the State of Ohio and the federal government for planning, design, and construction activities for approximately 22 projects and for overall wet weather program management and support services, for a total of \$200 million. MSD will continue to utilize these state and federal programs in the coming years.

### Annual Capital Expenditures

Borrowed capital is used to fund MSD’s annual capital expenditures, which include costs associated with the planning, design, and construction of the wet weather projects, the asset management program, and building new sewers where requested by customers (assessment projects). In addition, MSD spends capital on supplemental environmental projects required by the federal Consent Decree. Figure 29 shows the breakdown of capital expenditures by category.

Figure 28: **2009 Borrowed Capital** (\$ millions)

Total = \$160,600,000

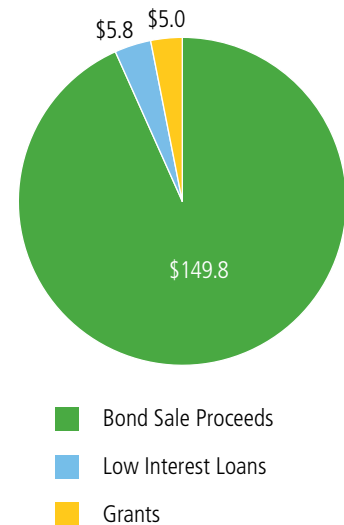
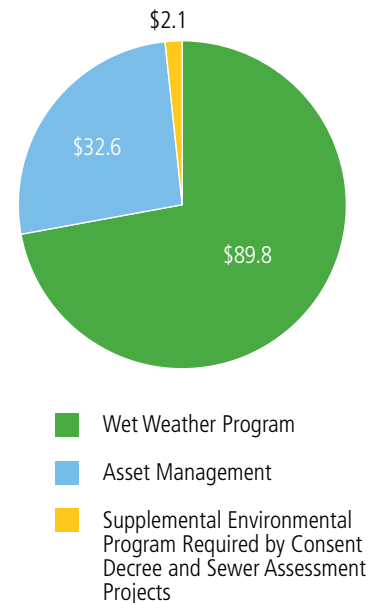


Figure 29: **2009 Capital Expenditures** (\$ millions)

Total = \$124,500,000



### MSD’s Bond Rating Improves

In the past, the bulk of borrowed funds has come from revenue bonds that are sold on the bond market. The cost of these borrowed funds depends in part on MSD’s bond rating, which is similar to a consumer credit rating.

In 2009, MSD’s bond rating was upgraded from AA to AA+ by Standard & Poor’s, on the strength of our financial statement and sound management practices. As a result, MSD will be able to borrow capital funds at a lower interest rate, saving ratepayers millions of dollars in debt service costs over the next 20 to 25 years.

### Enterprise Risk Management Strategy

- Supplement financial reporting
- Define risk tolerance and align with stakeholders and strategy
- Proactively manage leading risks
- Link risk assessment and performance
- Minimize surprises and losses
- Identify and manage cross-enterprise risks
- Seize opportunities
- Enhance communication within MSD
- Enhance external communication

## Risk Management

In 2009, MSD began to develop a comprehensive Risk Management Strategy. This ongoing process defines our organizational risk tolerances, identifies MSD’s leading risks, and establishes the framework for planning mitigation measures. Managing our top risks provides a sound basis for driving MSD decisions, such as budgeting and capital project selection. Just as importantly, MSD will use risk management as an effective way to communicate our activities and decisions to key external stakeholders, including the county, city, customers, and media, thus helping us to achieve our overall objectives.

Figure 30 summarizes MSD’s four categories of risks for consideration in the Risk Management Strategy.

Figure 30: MSD Risk Categories

Corporate Risks	Operational Risks	Asset Risks	Capital Project Risks
These are high level, complex challenges that could prevent MSD from meeting its obligations to customers, regulators, and the environment.	Operational risks affect the day-to-day activities of MSD, which include collecting and treating wastewater, as well as constructing capital programs.	Infrastructure failures, such as sewer pipes, pumps, generators, and electrical systems, can have severe consequences to the public and the environment.	Risks that can occur during the construction of a sewer or facility are considered and mitigation strategies are put in place during the planning and design phases.

Quarterly reporting is the key to MSD’s implementation of the comprehensive risk management strategy. This regular review of identified risks and mitigation measures will allow us to reduce risks over the long term as well as the associated costs and liabilities they impose on MSD and our customers.

### Financial Policy

In 2009, MSD’s management team presented the updated Financial Policy Manual to the Hamilton County Board of Commissioners. The Manual describes the internal financial controls that are in place, the minimum fund balances, the outline of the Risk Management Strategy, and operating and capital budget development and controls. By following the policy and practices described in the Manual, MSD will manage its financial resources more effectively and consistently.

### Managing Assets for Equipment Reliability

Because wastewater treatment is a round-the-clock activity with major consequences in the event of failures, reliability is a key goal for MSD. Accordingly, MSD focuses significant effort on a proactive asset management program, such as being diligent in equipment maintenance. For example, for each piece of equipment, we track its condition using a real-time registry. The registry documents the function and importance of an asset (resulting in a “consequence of failure” score) and its age and overall condition (resulting in an overall probability of failure score). Multiplying these two scores results in a relative risk score.

$$\text{Risk} = \text{Consequence of Failure} \times \text{Probability of Failure}$$

MSD uses the risk scores to establish priorities for spending and to optimize the usable life of equipment. This risk-based approach helps us determine when it is best to repair or replace a piece of equipment and to prevent failures.

From a sustainability perspective, asset management makes efficient use of resources and eliminates waste. Ultimately, this promotes worker and community health and safety, and it protects the environment.

### MSD's Leading Risks

In a series of workshops during March 2010, MSD identified the organization's leading risks, listed below. Beginning in 2011, quarterly risk reports will document risk mitigation strategies, progress made, and newly identified risks when necessary.

Figures 31 and 32 show MSD's risk management process and the priority risks in our risk register.

Figure 31: MSD Risk Management Process

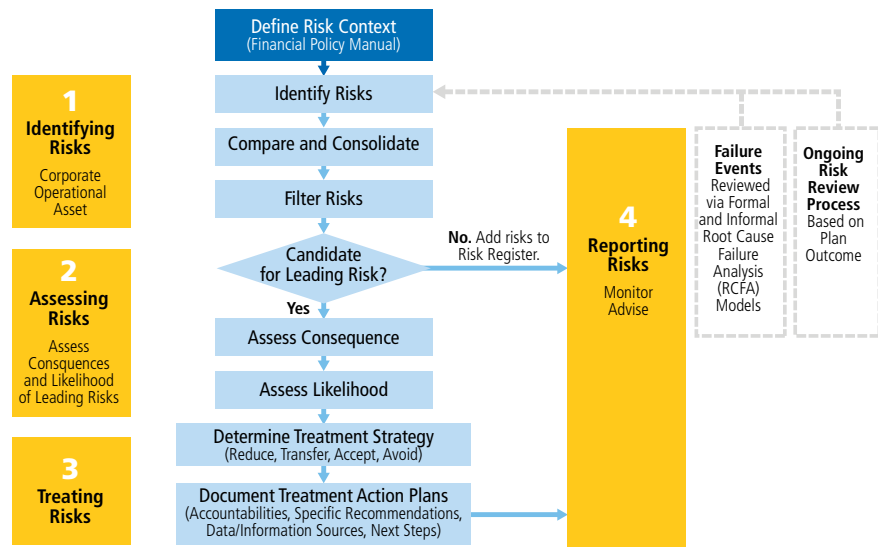


Figure 32: MSD Priority Risk Register

Risk Name	Description	Category
1 Maintaining public trust	Building trust through common understanding of MSD value to the community.	Corporate
2 Maintaining attractive bond rating	Reflects confidence by financial markets and allows borrowing at a reasonable rate.	Corporate
3 Insufficient funding to meet obligations	Increasing obligations due to implementation of Project Groundwork will push bounds of MSD's debt ceiling.	Corporate
4 Sustainable corporate investment	MSD wants today's decisions to be tomorrow's value, not tomorrow's liability.	Corporate
5 Customer base/customer usage	For the past several years, the number of customer accounts, as well as the usage per account, is decreasing.	Corporate
6 Material lawsuits	Could serve to undermine credibility and diminish financial performance.	Corporate
7 Adapting and responding to the general economy	Largely uncontrollable by the utility but can heighten or more likely threaten the financial viability of MSD.	Corporate
8 Conflicting governance structure	MSD is County-governed and City-managed within the 1968 Agreement.	Corporate
9 Limitations of WWIP strictly based on hydraulic model	Wet weather effects are complex and are not completely encompassed by the traditional hydraulic model used commonly in the industry.	Operational
10 Pleasant Run pump station and force main system	Currently this system does not meet current capacity demands during wet weather events.	Asset
11 Performance of WEDECO UV systems	WEDCO brand of UV systems have not performed well at MSD facilities (since the evaluation in March 2010, this risk has been mitigated satisfactorily).	Asset
12 Inadequate real time flow monitoring interface	MSD currently lacks an interface system that collects and presents the data in a useful way for efficient and responsive operations.	Operational
13 Turnover of key staff/Organizational stability	More than 20 percent of the MSD staff is eligible in the next 3 years.	Operational
14 Risk management for construction projects	Risk management at the project level will be incorporated into the process.	Operational
15 Man-made disasters	Severe asset damage and human safety issues can be precipitated by disasters due to vandalism, worker negligence, or lack of proper maintenance.	Corporate
16 New regulatory mandates	New regulatory requirements can be sweeping in scope and extremely costly.	Corporate
17 Sycamore raw pump stations	This pump station is essential to the operation of the Sycamore treatment facility and does not currently meet established levels of service.	Asset
18 Winton Woods aerial sewers	Aerial sewers are at a higher risk, in general, due to their exposure to the elements, excessive vibrations and vulnerability to security hazards.	Asset
19 Power supply to Mill Creek treatment facilities	Parts of the electrical system date back to the 1950s and are in need of upgrading.	Asset
20 Barrier Dam four pack bulkheads and crane system	These primary components are critical to the operation of the Barrier Dam, which prevents the Ohio River from inundating the Mill Creek Valley during flooding events.	Asset
21 Natural disasters	Tornados, floods and earthquakes can have a devastating effect on the operations of the treatment facilities.	Corporate
22 SCADA infrastructure	This system is used to send operational data from remote locations and locations within a facility; older equipment is difficult to operate and maintain.	Asset
23 Four Mile pump station	The current equipment does not provide the reliability needed to protect and maintain the pump station that brings influent wastewater to the Little Miami facility.	Asset