

# DWSD Rates



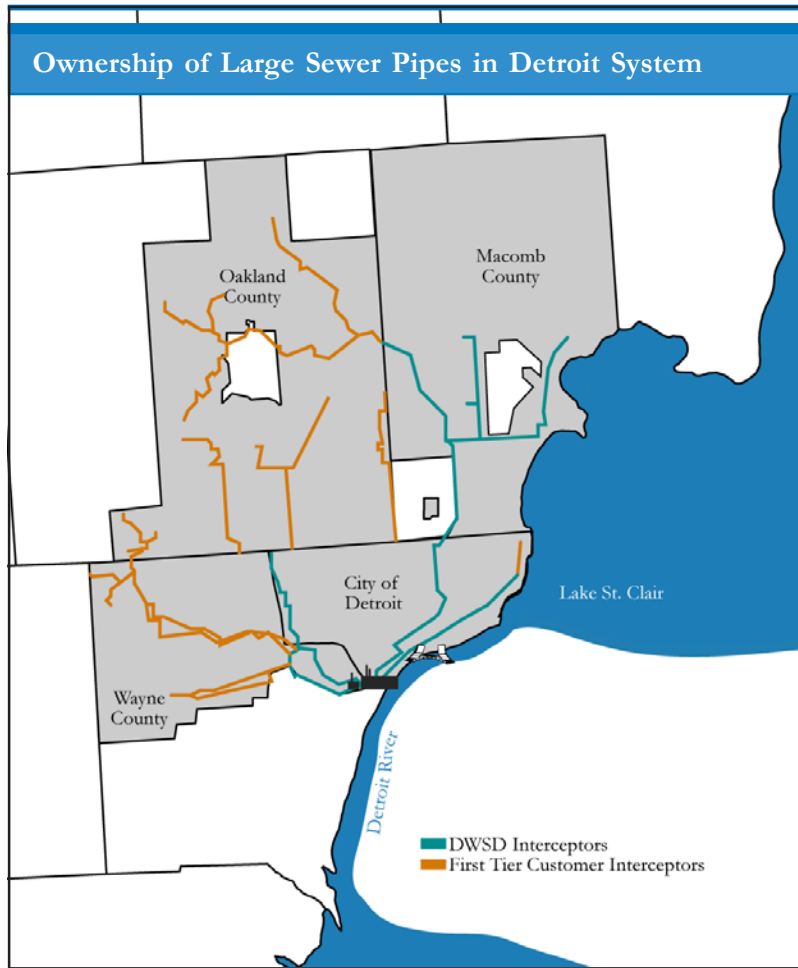
## Understanding DWSD Wholesale Sewer Rates

Clean, fresh water is plentiful in southeast Michigan. Like many things in good supply, we sometimes take our water for granted. Rarely is a second thought given to what happens after water goes down the drain. The value of treating our used water or wastewater is significant – the benefits are far reaching.

Sewer systems protect public health – they are a cornerstone of developed nations. Sewer systems prevent the spread of bacteria and viruses that cause dysentery, cholera, polio and hepatitis. Sewer systems protect our drinking water sources by preventing contamination. They contribute to overall cleaner water and limit our exposure to harmful organisms while swimming. They protect our environment, enable economic sustainability and are necessary to meet federal regulations.

This document was created by the Rates Work Group of the Detroit Water and Sewerage Department (DWSD) Wastewater First Tier Customer Partnering Effort to help wholesale customers gain a better understanding of the sewer rate setting process. Learning more about the sewer rate process will enable wholesale customers to provide specific input to the process and to feel confident that their rates are allocated in a fair and equitable manner. It also empowers local officials with the information needed to aid in decision-making and to answer residents' questions. The Rates Work Group is composed of DWSD and First Tier Wastewater Customers with the goal of assisting first tier customers in understanding background information used in rate development.

# History of the Detroit Sewer System

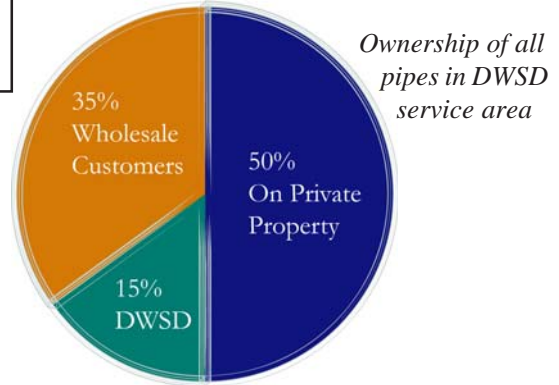


*Owned by DWSD:*  
 Detroit WWTP  
 Interceptors feeding into WWTP  
 Other major interceptors throughout the system  
 Local sewers in City of Detroit  
 System pump stations  
 Combined Sewer Overflow (CSO) treatment facilities

*Owned by Counties:*  
 Interceptors feeding into Detroit interceptors  
 CSO treatment facilities  
 Regional pump stations

*Owned by local communities:*  
 Local sewer systems feeding into County and/or Detroit interceptors  
 Local pump stations  
 CSO treatment facilities

*Owned by residents, businesses and manufacturers:*  
 Lead sewer pipe running from home, business or manufacturing facility to local sewer in street.

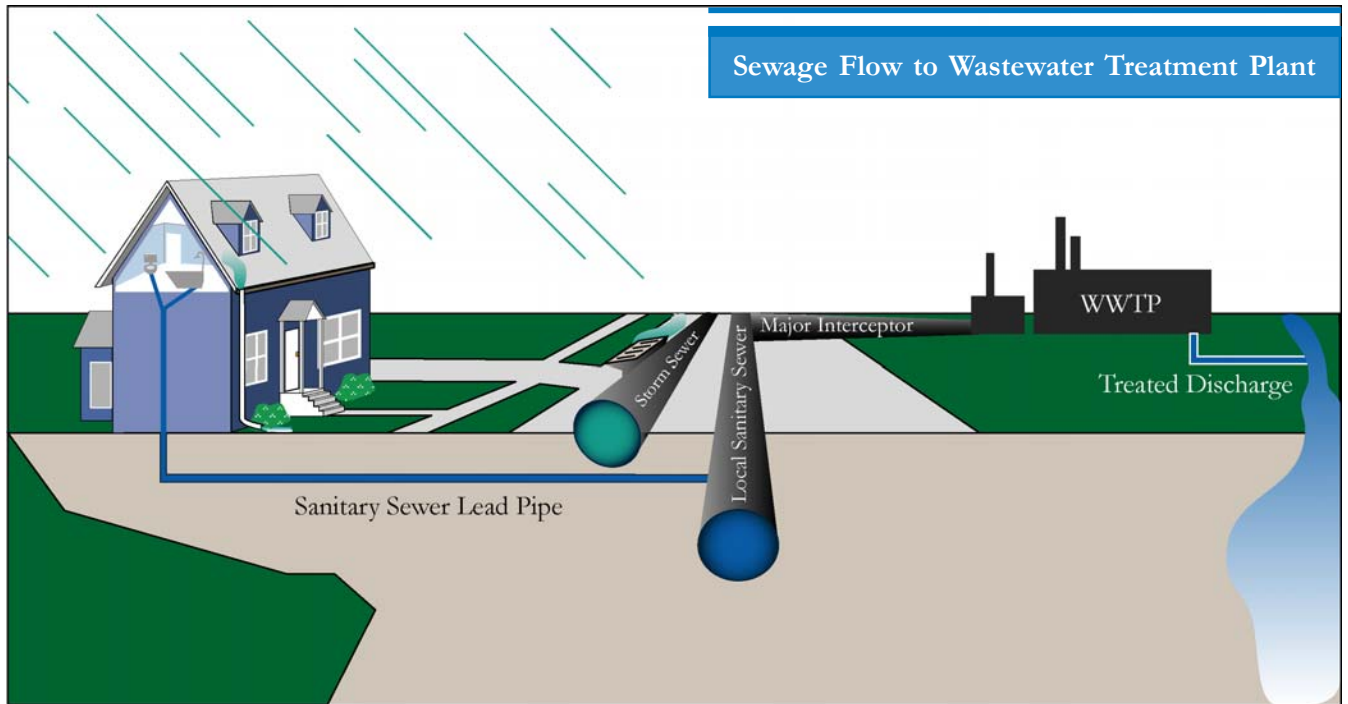


The Detroit Water and Sewerage Department (DWSD) owns and operates one of the largest wastewater systems in the world. The system serves approximately three million residents in 77 communities in southeast Michigan.

The system dates back to 1836 when the first sewer was constructed to drain directly into the Detroit River. By 1910, over 600 miles of sewer had been constructed to serve the City of Detroit. In 1916, the City of Highland Park became the first community to contract with Detroit for wastewater disposal services. By 1940, sewage was being treated before it was discharged into the Detroit River.

The sewer system eventually grew to include a network of sewers, diversion and control devices, pumping stations and the Wastewater Treatment Plant (WWTP). Numerous improvements have been undertaken to ramp the plant up to its current level of treatment and capacity. Today, there are over 3,000 miles of sewer pipes in the system.

Detroit owns the network of large sewer pipes (interceptors) that transports sewage from the suburbs to the Detroit WWTP. Wayne, Oakland and Macomb Counties and the suburban communities own and maintain the sewers that connect into Detroit's main interceptors. (Detroit owns the main interceptors in Macomb County where Detroit constructed them at the request of Macomb County. Macomb County paid for their construction and pays for their operation and maintenance.) The counties and communities contract with the City of Detroit to discharge their sewage into Detroit interceptors for conveyance to the WWTP. Further outlying suburban communities contract with the counties or other agencies for capacity in their interceptors.



## What happens when you flush a toilet?

Sewage takes many different journeys throughout the Detroit sewer system depending on where it comes from. For example, sewage travels across four jurisdictional boundaries to go from a toilet in southeast Livonia to the final point of treatment on the Detroit River. First the sewage flows through private property, down the home's main drain pipe to a sanitary sewer lead pipe in the yard that connects to a local sewer under the street owned by the City of Livonia. The sewage makes its way to a large sewer on Inkster Road where it travels to Hines Drive and enters an interceptor (larger regional sewer) owned by Wayne County in the North Huron Valley/Rouge Valley System. It continues southeasterly to the Southfield Freeway where it enters a main interceptor owned by the DWSD called the Northwest Interceptor. The sewage then travels down to the Oakwood Interceptor where it takes an express route to the Detroit WWTP.

Once at the plant, the sewage is lifted into the plant by a pump station to begin the treatment process. After going through a five-step process, the treated wastewater (effluent) is discharged into the Detroit River. The treated effluent must meet stringent water quality requirements outlined in a permit issued by the Michigan Department of Environmental Quality.

Sewage flows through a network of pipes to get to the Detroit Wastewater Treatment Plant. Detroit owns and operates the core system of sewers, pump stations and the treatment plant. Counties and local communities own and operate the pipes connecting into the core system.



# Wastewater Rate Setting Process

Rate setting is a forward-looking process based on assumptions of how much sewage will be transported and treated in the coming year. In simple terms, it's like determining how much money to charge for a group trip with optional activities. For the trip, you might estimate the costs for different activities and divide it by the number of people you think will attend to come up with unit costs. Each individual's final cost would be proportional to the activities they plan to undertake. If fewer or more people attend than you planned, the unit price for some items, like the bus that is a lump fee, could change. Based on the final number that attend, you may have to refund extra money or go back and collect more if some of the costs increased because the minimum number of people you planned for aren't attending.

Like the group trip example, DWSD uses its best judgment to determine what costs will be for wastewater transport and treatment services for the coming year and establishes a rate to cover those costs. DWSD can only recover the cost of service. An adjustment (called a look-back analysis) is then made at the end of each year to compensate DWSD or the wholesale customer for the difference between the projection and actual system use and expenditures. This adjustment may be the result of customers sending more or less flow than anticipated. (The total volume of sewer flows is dependent upon the weather. Drier weather can have a lower total volume because Detroit has a combined system and the amount of inflow/infiltration of rain and groundwater is dependent on the weather.)

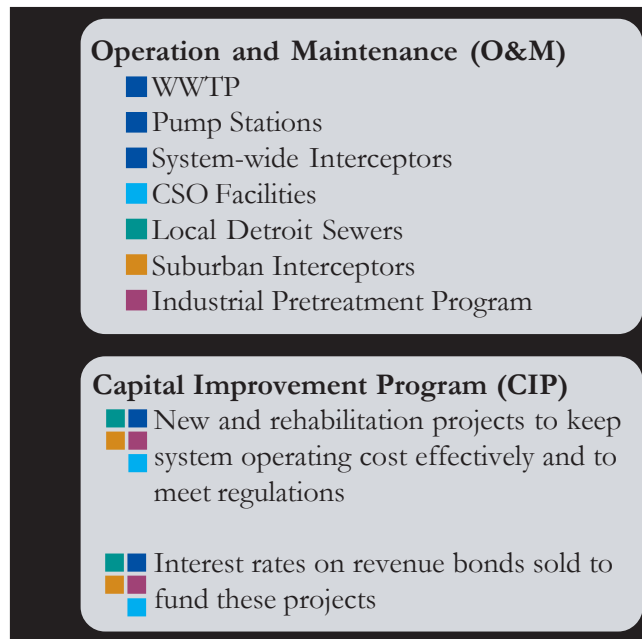
Rates are developed by customer category to fairly allocate costs based on each customer's projected use of transport and treatment facilities.

# Rate Methodology Steps

## 1 Estimate costs to operate system for the coming year

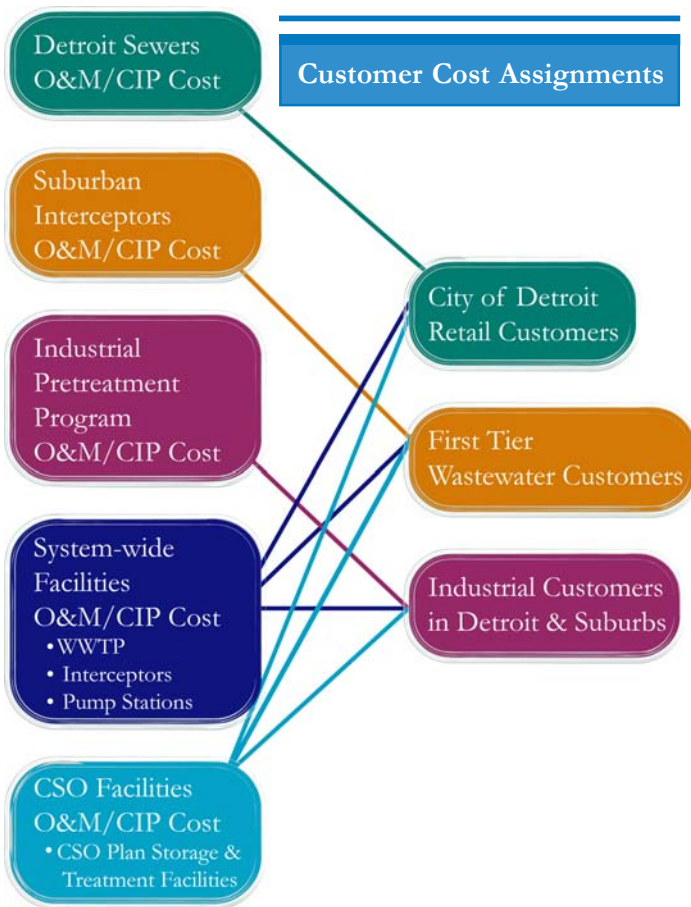
In the first step, costs are estimated for two major categories: Operations and Maintenance (O&M) and Capital Improvement Program (CIP). These costs are later assigned to customer categories as shown by the corresponding colors below and on the next page. CIP financing costs are also referred to as revenue requirements since they are costs DWSD must recover through customer revenues.

O&M and CIP projects are critical to system performance. Each year DWSD reviews and adjusts its five-year CIP that identifies new and rehabilitation projects that should be undertaken to keep the system operating cost-effectively and to meet state and federal regulations. The cost to design and construct CIP projects is financed through the sale of revenue bonds and revenues collected from customers. The CIP has built-in controls to retain a favorable Wall Street rating and to secure lower interest rates that benefit all customers.



## 2 Assign costs to specific customers based on use

In step 2, O&M/CIP costs are assigned to customer categories based on use as shown in the diagram on the next page. Usage is defined in terms of annual flow volume in most categories. Sewage flow is usually measured in cubic feet per second (cfs); sewage volume is measured in thousand cubic feet (Mcf).



An analysis is conducted for each individual First Tier Customer to calculate their estimated flows based on the previous years' usage and anticipated changes. The estimated flows are broken down into three different measurement categories that are used to develop unit or fixed costs for the final rate:

- Estimated sanitary flow - This is the amount of wastewater projected to be delivered based on past wastewater meter readings and any anticipated changes. Approximately 95% of First Tier Customers' wastewater flows are metered. Where sewage meters are not available or not feasible to install, water meter data is used. Sewage flows are assumed to be 90% of water flows for those customers.
- Estimated dry weather inflow & infiltration - This is the estimated amount of water in the ground that is absorbed into the sewer pipes through joints or connections. These flows are estimated based on an analysis of the sewerage flows recorded either by billing meters or by system meters located within the city of Detroit.
- Estimated wet weather flow - This is the estimated amount of storm water that gets into separate and combined sewers during storms and snow melt. These flows are determined from baseline data using Detroit's model called the Greater Detroit Regional Sewer System (GDRSS) model.

Flows are estimated for First Tier Customers, City of Detroit retail and industrial customer groups. A system-wide unit cost is then calculated for WWTP, interceptors and pump station O&M/CIP projects based on the projected flows and costs. The system-wide unit cost is applied to each customer's flow to express their share of the costs on a proportional basis. New CSO treatment facilities' unit costs are split according to the 1999 settlement agreement to 83% Detroit and 17% First Tier Wastewater Customer. As illustrated in the diagram, costs specific to each group are allocated within that group. The customer specific allocations are split within that category.

### 3 Develop structure to calculate rates for each customer

In the final step, a rate structure is developed to recover the projected service costs. The structure includes three components that are unique to each First Tier Customer District and Detroit:

- Commodity charge to recover transportation and treatment cost of sanitary flows and dry weather infiltration based on estimates from the GDRSS Model. This is a unit cost per Mcf that is calculated by dividing cost of service by the anticipated billed volume.
- Fixed monthly charge to recover costs of wet weather flow and each customer's share of the DWSD CSO control program.
- Look-back credit or charge that corrects the difference between the previous year's revenue collected and actual cost of service (actually a two-year difference).

Look-back analyses have been conducted annually since 1980. Rates for the previous year are recalculated using actual expenditures and flow data, and an adjustment is credited or added to the coming year's rate. Bad debt expenses are also included in the look-back. All City of Detroit retail customer bad debt is allocated to City of Detroit retail customers. All First Tier Wastewater Customer bad debt is allocated to First Tier Wastewater Customers. Other Michigan utilities that conduct look-back analyses include Bay City and Kalamazoo.

## How are customers involved in the rate setting process?

The rate setting schedule goes from August to February with the new rates approved by the Board of Water Commissioners (BOWC) and the Detroit City Council and then going into effect in July. Wholesale customers are involved in the process through mailings and work group meetings. Each fall, DWSD sends First Tier Customers their flow projections for review for accuracy and to incorporate any anticipated changes in the coming year. These flow projections are based on each customer's historical trend. If a customer feels their data will change significantly in the coming year, the customer's revised projection is used.

Workshops are held with wholesale customers and the BOWC to review rate information and answer questions. A BOWC public hearing is held in January and the City Council public hearing is held in February. First Tier Customers may obtain input from Second Tier Customers through their own processes.

The counties develop their own rate structure for the communities they serve based on their costs to provide sewer service including the charges they pay to Detroit.

## First Tier Customer Billing Districts

Allen Park  
Center Line  
Dearborn  
    Dearborn East  
    Dearborn West  
    Dearborn NE  
Farmington  
Grosse Pointe  
Grosse Pointe Farms  
Grosse Pointe Park  
Hamtramck  
Harper Woods  
Highland Park  
Macomb County  
Melvindale  
Oakland County  
    Clinton-Oakland  
    SE Oakland County  
    Evergreen-Farmington  
Redford Township  
Wayne County  
    NE Wayne County  
    North Huron Valley  
    Rouge Valley  
    Wayne County #3  
    Wayne County #6

## Rate Setting Schedule

September	Preliminary review of previous year's actual expenditures and sewage billed. DWSD conducts flow analysis to determine flow projections for Detroit and First Tier Customers. Estimated flow projections are sent to each First Tier Wastewater Customer to review. Modifications to units of service are finalized.
October	DWSD determines preliminary cost to operate system (revenue requirements) and conducts preliminary look-back analysis.
Nov-Dec	Cost of service allocations and preliminary rates are calculated based on 1999 Rate Settlement Agreement. DWSD Director approves <i>preliminary</i> rates. DWSD notifies BOWC of rate proposals and mails preliminary rate notifications to customers.
December	BOWC Rates Workshop held. Rates Work Group meeting held with First Tier Wastewater Customers to review methodology and answer any questions.
January	Board of Water Commissioners public hearing and approval.
Feb	City Council public hearing. Rates approved by City Council.
July	New rates effective on all bills issued on or after August 1.



## Groups involved in Detroit Wastewater System

**Board of Water Commissioners** - A seven-member board that is appointed by and serves the Mayor of Detroit. The Board includes four members from the City of Detroit and one each from Oakland, Wayne and Macomb County (based on county recommendation). The Board is the governing body of the utility.

**City of Detroit Administration** - The Detroit City Council, a nine-member board of elected officials, approves the rates established for water and sewer each year and all contracts. The Mayor oversees the Detroit Water and Sewerage Department and appoints the Director to manage the Department.

**Detroit Water and Sewerage Department** - A utility that is a City of Detroit Department employing over 2,800 persons. The DWSD provides sewerage service to 77 communities and drinking water to 126 communities.

**First Tier Wastewater Customers** - Wastewater customers that have contracts for sewage transport capacity and treatment with the City of Detroit. There are 18 First Tier Customer Billing Districts including Wayne, Oakland and Macomb Counties who provide service to second tier customers.

**First Tier Wastewater Partnering Effort** - An effort that started with an agreement in 1997 between DWSD and its First Tier Wastewater Customers to work together to fairly allocate costs for Detroit's Long Term CSO Control Plan. After successfully developing an allocation methodology and addressing other issues, a new agreement was entered into in 2001 to keep ongoing communications. The current partnering effort includes a Steering Committee and eight work groups.

DWSD meets with First Tier Customers to review the rate methodology and answer questions before it is finalized.



*A work group meeting from original 1997 partnering agreement with First Tier Customers.*

**Second Tier Wastewater Customers** - Customers within the DWSD system who contract for wastewater disposal through Wayne, Oakland and Macomb Counties. There are 59 second tier customers in the Detroit wastewater system.

**USEPA** - The United States Environmental Protection Agency is the federal agency responsible for administering the Clean Water Act.

**Michigan Department of Environmental Quality** - Formerly known as the Michigan Department of Natural Resources, the MDEQ has regulatory oversight for and issues all National Pollutant Discharge Elimination Systems (NPDES) permits in the state of Michigan. The NPDES permit functions are delegated to the MDEQ.

**Federal Court** - The Federal Court has been involved in different aspects of the Detroit WWTP operations since 1977 when the state of Michigan sued DWSD. The court, under the guidance of Judge John Feikens has issued rate settlement agreements that impact how DWSD can charge its customers for wastewater transport and treatment service since 1980.

**Water Quality Consortium** - A joint public/private partnership working to resolve key water quality issues in the region. The Consortium was formed at the urging of Judge John Feikens as a voluntary initiative to foster regional cooperation. The Consortium is focusing on several rate-related issues including: full disclosure, incorporating incentives for implementing best management practices, and assuring that rates reflect the true cost of service.

## How does Detroit's rate setting process compare to industry practices?

Detroit follows the Water Environment Federation (WEF) Manual on Rates and Financing, an industry standard for the basic rate methodology. The manual identifies how to allocate service costs, how to distribute service costs to customer classes, and how to develop rate schedules.

Under generally accepted rate-making principles, municipal utilities routinely charge higher rates to suburban customers than to their own citizens. Detroit does not do this. A rate settlement agreement negotiated in federal court prohibits Detroit from charging a higher rate to its wholesale customers for the same service.

## Why do rates change from year to year?

Wastewater transport and treatment depends on an aging infrastructure that must be maintained or replaced. The level of treatment continues to increase due to regulatory requirements. Two major expenses impact rates:

Capital Improvement Program Financing - Continued improvements from an established CIP ensure reliable service for an aging infrastructure. Many CIP projects are also necessary to maintain compliance with environmental regulations. The percentage of CIP expenditures for any given year required to meet regulations can vary from a low of about 27% to a high of 74%. The CIP changes from year to year depending on current needs.

Operations & Maintenance Expense - Inflation impacts both labor and equipment for O&M. This expense rises as new facilities are constructed and brought into service, increasing the amount of O&M that must be performed. O&M expense can be offset by efficiency achievement in some areas. O&M expenses are also impacted by the cost of utilities, chemicals and property insurance that can increase in price. For instance, property insurance has risen since the September 11 terrorist attack.

## How has the federal court been involved in the rate setting process?

The federal court has been involved in DWSD operations and rate setting since 1977 when the USEPA sued DWSD and the MDEQ for violating its discharge permit. Later, MDEQ was made a plaintiff instead of a defendant. Settlement agreements relating to rate setting were developed in response to this and subsequent lawsuits. These settlement agreements have influenced the current DWSD rate methodology that dates back to 1980. Rate settlements have addressed issues such as proportionality, look-backs, cost allocations for specific projects, bad debt expense allocation and flow measurement data.

The most recent rate settlement from the federal court is probably the most significant because it incorporated changes identified as part of the Long Term Combined Sewer Overflow (CSO) Control Plan partnering effort. The partnering group took their final agreement to federal court because it addressed outstanding court issues at the time. This agreement incorporated the following items into the 1999 settlement agreement:

- The costs of new wet weather/CSO treatment facilities will be apportioned 83% to the City of Detroit and 17% to wholesale customers. Program components that solely benefit Detroit such as downspout disconnection are being paid 100% by the City.
- A uniform overflow credit (initially 31%) will be applied to all customers' incremental wet weather flow (the estimated amount of storm water runoff not transported to the WWTP.)
- The latest GDRSS Model and data will be used to reduce the amount of unaccounted flow shared by all customers and better reflect system usage. This amounted to an estimated net volume increase of 14% from First Tier Wastewater Customers to Detroit.
- Mechanism to phase in changes over 3-5 years to avoid dramatic fluctuations in rates.
- An Inflow & Infiltration Study, completed within the City of Detroit in 2004, is providing new flow information.

DWSD's wastewater rate setting process follows established industry practices and has been significantly influenced by federal court rate settlement agreements.





## DWSD and First Tier Wastewater Customers Work Together to Allocate CSO Costs

Partnerships can focus different groups in their efforts to work toward a common goal. For the DWSD and Detroit's First Tier Customers, a partnership agreement provided a process to develop a fair and equitable cost allocation for Detroit's Long Term CSO Control Plan. The process used work groups made up of DWSD and First Tier Customer staff to address issues, resolve differences, and come to agreement. Over 100 work group meetings were held during a two-year period to thoroughly address cost allocation of the Long Term Plan and two other rate issues that had been in litigation since 1992.

In June 1999, decision makers from key First Tier Customers and the DWSD agreed on a method to allocate cost for the \$1.07 billion CSO control plan and address the two other rate issues.

When the August 1, 2000, rates went into effect, it was the first time in eight years that rates went into effect without a CSO rate matter pending in federal court.

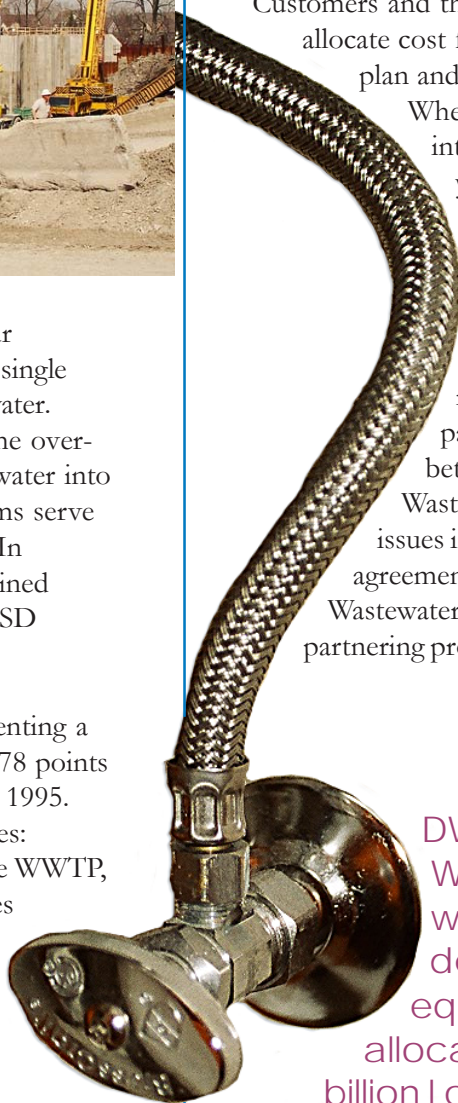
The success of the first partnering agreement has led to new collaborative efforts. In 2001, a new partnering agreement was initiated between DWSD and its First Tier Wastewater Customers to address other issues including rate setting. In 2004, the agreement was updated and Second Tier Wastewater Customers were brought into the partnering process.

### Controlling Detroit's CSO



Combined sewers are remnants of our country's early infrastructure that use a single pipe to carry wastewater and storm water. During wet weather the sewers become overloaded and discharge untreated wastewater into a nearby river. Combined sewer systems serve roughly 900 communities in 32 states. In Michigan, 52 communities have combined sewer systems including 26 in the DWSD service area.

Detroit developed and began implementing a plan to control CSO discharges from 78 points along the Detroit and Rouge Rivers in 1995. The plan includes four control strategies: expanding the treatment capacity at the WWTP, building end-of-pipe treatment facilities like the basin shown above, using existing sewer pipes for additional storage and preventing storm water from getting into the sewer system by disconnecting residential downspouts.



DWSD and its First Tier Wastewater Customers worked together to develop a fair and equitable method to allocate costs for the \$1.07 billion Long Term CSO Control Plan.

## How do wastewater rates in Southeast Michigan compare to other utility rates?

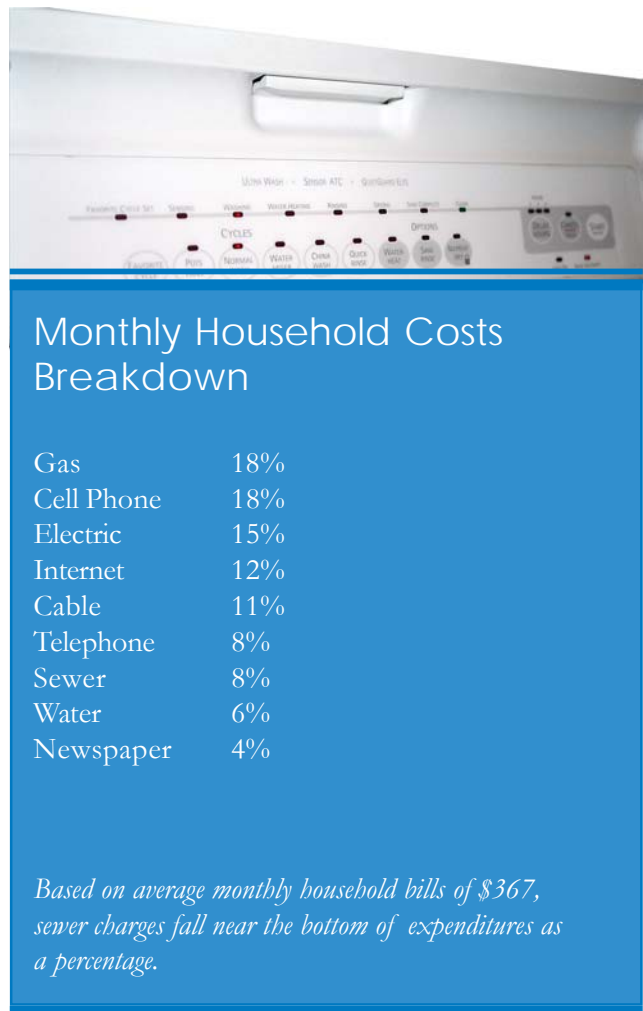
Water and sewage disposal rates are frequently scrutinized more closely than other monthly bills because they vary by community. DTE Energy, Comcast, SBC Ameritech, Verizon and Cellular One all directly serve residents in surrounding communities and charge similar prices for those services. With water and wastewater, there are more service providers since the local government delivers the service rather than a private company. Therefore, residents in adjacent communities may pay the same price for electricity and cable service but different prices for water and sewage disposal service. This difference can make residents question the rate they are charged for their service. Citizen involvement also tends to be much greater since the community adopts rates at the local level.

Wastewater or sewage disposal rates are impacted by a variety of factors and programs so direct comparisons between communities are not always equal. For instance, community residents could elect to pay for a major improvement project like a CSO construction project through property taxes rather than its sewer rate so they can take advantage of the tax write-off. As a result, their rate would appear lower than it really is. Or a community could be forced to undertake a major rehabilitation project because their aging infrastructure needs to be improved or modified to meet new standards established by the USEPA or MDEQ. These types of expenses would dramatically increase CIP spending and subsequently rates.

The household impact of sewage disposal is small when compared to other monthly utility and homeowner bills.

## What is DWSD doing to control costs and proactively manage the utility?

DWSD has been under new leadership since Mayor Kwame M. Kilpatrick appointed Victor M. Mercado as the Director in June 2002. Mr. Mercado has brought a private sector approach to the utility and implemented some major changes to monitor and control costs, and to run the utility like a business.



The DWSD was reorganized at the beginning of 2003 to align divisions along the Department's functional lines and eliminate redundancy. A Customer Service Group was created to assist in-City and suburban customers with questions related to billings, rates and other matters. The Commercial and Meter Operations were reassigned to the Customer Service Group. Department purchasing was streamlined by reassigning the Purchasing and Materials Management Divisions to the Financial Services Group so that everything bought, stored and used is tracked by a single source. Pipeline installation and repair were also reassigned to a single group to maintain DWSD's assets.

Three new divisions were formed to monitor different aspects of DWSD performance and regulations impacting its operations. A Performance Measures Division was formed to monitor the operational performance of each division. A Capital Management Division was created to monitor all capital improvement projects from start to finish. A

Water Resource Division was created to monitor ongoing revisions to the Clean and Safe Drinking Water Acts and other regulatory issues.

Other changes were implemented as part of this restructuring effort. The Director:

- reduced overtime costs through more efficient scheduling and work shifts
- reduced the size of the vehicle fleet
- refinanced capital debt through bond issues

DWSD's goal is to provide better customer service, greater management and employee accountability, and a more efficient business operation.

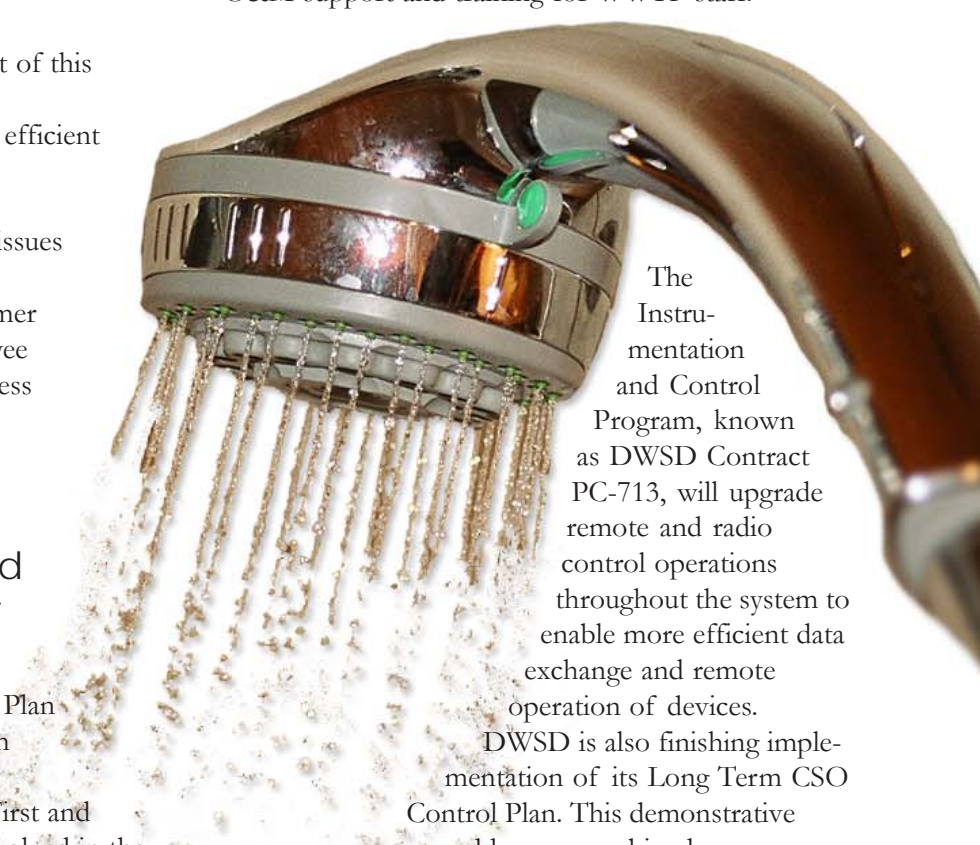
## How is DWSD planning and investing in the system for the future?

DWSD completed a Wastewater Master Plan that takes a long view of what the system should look like in 50 years to meet the demands of the customer service area. First and second tier wholesale customers were involved in the development of the plan providing critical input on how their needs will change over the next 50 years. A Long Term Rehabilitation and Repair Program was developed as part of the Master Plan. This Program identifies maintenance projects that will be necessary over the next 20 to 50 years and project funding that will be needed.

More immediate investments that are being made include the Rehabilitation and Upgrade Program at the WWTP, the Instrumentation and Control Program, and the Long Term CSO Control Plan. These are major wastewater programs underway in addition to ongoing pipe rehabilitation.

The WWTP Rehabilitation and Upgrade Program, known as DWSD Contract PC-744, is in its final year of a five-year program to rehabilitate and upgrade the 1.6 billion gallon per day plant to achieve sustained, continuous long-term regulatory permit compliance. \$330 million in improvements have been completed to date with another

\$75 million planned before project completion in 2005. The program also includes planning, design, O&M support and training for WWTP staff.



The Instrumentation and Control Program, known as DWSD Contract PC-713, will upgrade remote and radio control operations throughout the system to enable more efficient data exchange and remote operation of devices.

DWSD is also finishing implementation of its Long Term CSO Control Plan. This demonstrative program addresses combined sewer outfalls along the Rouge River that will be monitored for performance. Efforts will then focus toward planning improvements along the Detroit River.

Investments to maintain and upgrade the system are ongoing costs that are necessary to keep the system operational and in compliance with state and federal regulation. These costs will be reflected in future rates as CIP costs.

DWSD has undertaken changes to monitor and control costs, and run the utility like a business.





## What regulations could impact rates in the future?

Sewer rates are impacted by regulatory changes that affect the cost of operating the system in compliance with state and federal environmental laws. History has shown that environmental regulations are not static, and new requirements often emerge as more information is obtained about how current practices may impact the environment. As DWSD looks ahead, it is expected that regulatory requirements will continue to have an effect on sewer rates.

For example, the practices used to dispose of biosolids generated during the waste treatment process are currently under review. DWSD's biosolids are either incinerated or trucked to a landfill for disposal. Air quality regulations governing incinerator emissions and landfill regulations governing the operation of these facilities could be modified, and biosolids disposal costs would likely increase if new requirements are imposed.

DWSD is now being required to institute a costly new testing procedure to identify the possible presence of mercury at levels far below levels previously detectable with conventional analytical procedures. Mercury is a common pollutant that may be present in trace amounts in the waste stream. The new "ultra-clean" sampling protocol and testing procedures are far more expensive, and this additional cost must be factored into the rates. Depending on the results of the new mercury testing, additional controls may need to be developed to minimize discharges of this pollutant into the sewer system.

The EPA has drafted new regulations that propose an expansion of federal oversight of local collector sewer systems and that may even require that permits be obtained for the operation of these previously unregulated components. If these measures are adopted, the cost to develop and implement required sewer system management reports and programs will also need to be factored into the rates.

Costs incurred by MDEQ to administer the state's water quality program are to be passed onto permittees under a new law recently passed by the state legislature. Annual permit fees have been established as a way to minimize the state General Fund appropriation by assessing fees to permit holders to supplement MDEQ's budget. These new permit fees will need to be paid out of system revenues under the new legislation.

Another potentially costly regulatory initiative that could be imposed is the installation of dechlorination facilities at CSO basins if the chlorine disinfection systems are shown to have an adverse impact on fish or aquatic life in the receiving water. Studies to date have been inconclusive as to whether it is necessary to remove the chlorine that is added to eliminate bacteria and comply with public health protection standards.

EPA is currently considering new nutrient limitations to control phosphorus and nitrogen levels that impact the water quality in Lake Erie. If more restrictive nutrient requirements are adopted, the cost of providing treatment facilities to achieve these reductions will need to be incorporated in the rates.



Future rates will continue to be impacted by new regulatory requirements such as biosolids disposal, "ultra clean" mercury testing, local collector sewer system permitting, discharge permit fees and nutrients control.