

Wastewater Service



“The water quality leaving the metropolitan area is as good as the water quality entering the metropolitan area, and in compliance with federal and state regulations.”

– **2030 Regional Development Framework**

Controlling point source pollution is part of a total management program that includes effective nonpoint source pollution control. To achieve the *Framework* goal stated above, the Council will need to collaborate with other regional partners. Point source pollution control efforts over the last 30 years have resulted in a significant reduction in pollutant discharges. For example, the Council has been successful in reducing the amount of phosphorus that is discharged to the major rivers in the metropolitan area using a mix of point source and nonpoint source reduction strategies.

Nonpoint source pollution, however, remains behind in correction efforts, primarily because of the diffuse sources, the diverse entities involved and a significantly different regulatory approach than point source pollution control. In order to minimize impacts to the wastewater system from increased regulatory requirements to reduce pollution, the Council needs to encourage a combination of point and nonpoint source pollution strategies. The Council will focus on cost-effective strategies that result in the best use of regional funds.

Current Wastewater Services

The Metropolitan Council currently provides wastewater collection and treatment services to 2.5 million people in 103 communities. The existing Metropolitan Disposal System (MDS) was designed to provide long-term wastewater services to only a part of the metropolitan area and thus may not have adequate capacity to provide sanitary sewer services to all portions of the developing communities, as shown on the *Framework* planning areas map (Figure 2; page 8).

The wastewater system is operated through the Metropolitan Council’s Environmental Services Division (MCES). The current MDS—consisting of eight wastewater treatment plants (Metropolitan, Empire, Rosemount, Blue Lake, Seneca, Eagles Point, Hastings, and St. Croix Valley) and approximately 600 miles of regional interceptors (see attached map). The treatment system processes up to 300 million gallons of wastewater per day,

which includes high-strength industrial waste from about 800 dischargers permitted by MCES. The treatment system processes waste while maintaining a compliance rate with its state and federal water quality permits of over 99 percent.

The Metropolitan Council's responsibilities for operation of the MDS extend beyond merely collecting and treating domestic wastewater, industrial wastewater, and leachate from its service area. MCES also accepts septage from individual sewage treatment systems (ISTS), community and/or cluster systems, biosolids from municipal wastewater plants located within the rural metropolitan area and, as capacity permits, biosolids from areas located within surrounding counties and Wisconsin. MCES also accepts leachate from throughout Minnesota.

Additional information on the existing wastewater system can be found in the wastewater system section of this *Policy Plan*.

Serving Future Growth

The Council's updated wastewater system plan for the seven-county metropolitan area (see System Plan, pages 49-69) includes a specific plan for how wastewater service will be expanded to serve the region's projected 2030 growth, and a general plan to serve the region's growth well beyond 2030 (map is attached). The wastewater system plan has a longer planning horizon than local comprehensive plans, because sewers have a long useful life (80 years or longer), high capital cost, and significant disruption during construction, especially in developed areas. The wastewater system plan also supports achievement of regional goals for water quality, cost-effective service, and local community flexibility.

The attached map shows the long-term service areas for the wastewater treatment plants currently owned and operated by the Council. The service areas have been determined through a process as follows:

- 1) Estimation of the capacity of each treatment plant site based on potential long-term effluent discharge limits;
- 2) Estimation of the potential developable area that could be served by the plant, in addition to currently served areas; and
- 3) Analysis of existing interceptor capacity and future interceptor capacity, feasibility, and costs to determine the most cost-effective service-area configuration.

The system plan also recognizes the following future needs: wastewater treatment for Rural Growth Centers; future acquisition and expansion of the Rogers Plant; a new Hastings Plant; potential future regional plants in Carver and Scott Counties, discharging to the Minnesota River, and in northwest Hennepin County, discharging to the Crow River; and potential tertiary wastewater treatment with rapid infiltration (groundwater recharge) for moderate-size sewered development in suitable areas of Anoka County.

POLICY

The Metropolitan Council will use the wastewater system plan to support the orderly and economic development of the metropolitan area including the long-term service area of communities. The long-term service area will be generally defined by a community or watershed boundary. A community's comprehensive plan and plan amendments are expected to meet the forecasts and densities specified in the Council's 2030 Regional Development Framework. Inconsistencies will provide the Council with grounds for finding that the community's plan is more likely than not to have a substantial impact on, or contain a substantial departure from, the metropolitan system plan, thus requiring modifications to the local comprehensive plan.

In order to provide cost-effective and efficient use of existing and planned infrastructure on a regional basis, local land-use planning must be consistent with the Council's adopted long-range policy plans, system plans and capital improvement programs for regional wastewater service, and all communities currently served by the Metropolitan Disposal System must remain in the system.

IMPLEMENTATION STRATEGIES

- *The Council will provide a level of wastewater service commensurate with the needs of the growing metropolitan area, and in an environmentally sound manner.*
- *The Council will provide sufficient sewer infrastructure capacity to meet the 20-year growth projections identified in local comprehensive plans. Any capital improvements that the Council needs to provide will be scheduled so that the infrastructure is available at least two years prior to the need identified in the approved comprehensive plan.*

The Council will work cooperatively with communities, regulatory agencies and the citizens of the region to help ensure that costly regional infrastructure, which is designed to provide multiple communities with service decades into the future, can be efficiently built and operated. The Council is responsible for developing system plans for the region that are consistent with the 2030 Regional Development Framework. In response to the system plan, system statements with community-specific information are prepared and sent to each community to guide their local comprehensive planning. The communities prepare local comprehensive plans/sewer plans consistent with the systems statements. Local comprehensive plans/sewer plans are submitted to the Council. The Council reviews the comprehensive plans and, if the plans are consistent with the Framework and system plans, allows them to be put into effect.

- *New wastewater treatment plants, owned and operated by MCES, will be built to serve developing communities if they meet established criteria.*

Where it is not technically or financially feasible to extend the Council's interceptor system beyond the long-term wastewater treatment plant service areas, it will be necessary to construct new wastewater treatment plants to continue to allow for the urban development of the communities. New regional wastewater treatment plants will be built to serve those portions of developing communities that cannot be served through the existing MDS if they meet the following criteria:

- The development of the area not served by the MDS results in wastewater flow of at least 500,000 gallons per day.
- The communities adopt a satisfactory inflow/infiltration program to eliminate excessive inflow and infiltration.
- *The Council may implement early easement acquisition and work closely with communities to preserve utility corridors when it is necessary to expand its facilities or locate new facilities needed to implement the wastewater system plan.*

Siting a wastewater treatment plant is challenging, especially if the need is imminent and development has already encroached on most potential sites. Acceptable corridors for the construction of future interceptor systems are becoming both harder to locate as new construction occurs and more expensive to buy. For this reason, it will be necessary to work with the developing communities early on in the planning process to set aside future wastewater treatment plant sites as well as possible utility corridors for future interceptor systems.

- *The Council will continue to provide wastewater services to communities based on the definition of a metropolitan interceptor.*

The Council seeks to contain the costs of the MDS as much as possible. One strategy is to minimize the number of points at which a regional interceptor meets a community's local sewer system. In providing new interceptor service to a community, the Council's responsibility is to provide the service to the community's border.

Definition: A metropolitan interceptor must meet at least one of the following criteria:

- Be designed to receive an average flow of at least 500,000 gallons per day from, or serve at least 1,000 developable acres in, local governments other than the one in which it is primarily located.
- Is located in one local government unit and conveys or is designed to convey at least 90 percent of the ultimate wastewater flow originating in an upstream local government.
- Is needed to directly connect other facilities owned or to be constructed by the Council.

Rural Growth Centers

The Council recognizes that some of the Rural Growth Centers located within the metropolitan area are under extreme pressure to add housing and employment to their communities, while others are not and do not want to take on large quantities of growth. If a rural center is willing to expand to accommodate the increased growth as forecasted by the Council, it may need the Council's Environmental Services division to become involved in the possible acquisition, operation and betterment of the wastewater treatment plant located in that community.

IMPLEMENTATION STRATEGIES

- *Existing wastewater treatment plants in rural centers (centers that do not want significant growth) will not be owned and operated by the Metropolitan Council.*

- *Existing wastewater treatment plants owned and operated by Rural Growth Centers (centers that want to grow) will be acquired and operated by MCES upon request and established Council criteria. The request for acquisition must be made to the Council through a comprehensive plan amendment.*

As these communities plan for the Council-projected growth for their communities, they may request that the Council acquire their wastewater treatment plants (WWTP) through the comprehensive planning process. Acquisition of WWTP in Rural Growth Centers will be based on the following criteria:

1. As part of the comprehensive planning process, the community must accept the Council's 2030 growth projections as well as preserve areas for growth post-2030.
 - Counties with land-use planning authority must preserve areas surrounding the Rural Growth Centers for future growth.
 - Surrounding townships and cities that have land-use planning and zoning authority must preserve areas surrounding the Rural Growth Center for future growth.
 - Inter-community service agreements must be in place at the time of acquisition that provide for staged orderly growth in the surrounding area
2. The wastewater treatment plant must be determined to be expandable.
 - The existing WWTP site must provide an opportunity for expansion, or there must be an acceptable site available for a new wastewater treatment plant.
 - There must be feasible and economical discharge options.

The following procedure would be used by a Rural Growth Center that wants the Council to consider acquisition of its wastewater treatment plant:

1. The community makes an official request to the Council to consider acquisition of its wastewater treatment plant.
 2. The Council and local governmental units meet to discuss the wastewater treatment acquisition criteria, possible scheduling of needed wastewater treatment plant improvements, and administrative issues dealing with billing and permit requirements.
 3. The community amends its comprehensive plan, requesting that it become a Rural Growth Center, and provides copies of necessary inter-community service agreements to the Council.
 4. The Council reviews the comprehensive plan and, if all of the criteria are met, approves the comprehensive plan.
 5. The Council and the community enter into a plant acquisition agreement.
- *If it is determined that a Rural Growth Center's wastewater treatment plant (WWTP) should be phased out and served by the Metropolitan Disposal System (MDS), then the Council will construct an interceptor from the existing treatment plant site or point of collection to a connection point within the existing MDS. The Rural Growth Center will be responsible to decommission the WWTP and take over the ownership of the interceptor from the WWTP to their corporate limits.*

The Council will review, on a case-by-case basis, requests from Rural Growth Centers that the Council acquire and operate the community's wastewater treatment plant. In some cases it may be more efficient for the region to phase out the treatment plant by extending the MDS to the Rural Growth Center. If so, the Council will not acquire the plant. The Rural Growth Center will be responsible for decommissioning its treatment plant. The Council will construct and pay for the new interceptor and deed that portion of the interceptor located within the community to the community upon completion of the project. In this scenario, the last step in the procedure would be an interceptor service agreement.

- *If comprehensive plans demonstrate that a Rural Growth Center will become contiguous to urban development, the Rural Growth Center will be reclassified under the 2030 Regional Development Framework as a developing community.*

In some cases the urban service area has or will be expanding within the 2030 time frame to a point where urban development is now contiguous to the Rural Growth Center. In these cases the Rural Growth Center will be reclassified under the guidelines for a developing community as shown in the *2030 Development Framework*. Then the Council will determine if it is in the best interest of the region to either operate the existing WWTP or phase it out. The community will be charged for its services consistent with the Council's guidelines for serving urban communities within the MDS.

All communities brought within the MDS must comply with the Waste Discharge Rules (including industrial permits), SAC procedures, infiltration/inflow rules, and other rules or conditions established for existing service areas.

Redevelopment

The *2030 Regional Development Framework* supports higher density redevelopment within the developed communities. The existing interceptor system that provides wastewater services to these communities may not have adequate capacity for the expanded growth. In these circumstances it may be necessary to reconstruct a portion of the existing MDS to provide the additional services to the community.

IMPLEMENTATION STRATEGIES

- *When proposed redevelopment based on the 2030 growth projections exceeds the sewershed capacity of the MDS, the Council will support redevelopment by funding improvements to the MDS for those communities that meet the established criteria.*

The Council will support redevelopment by funding improvements to the MDS for those communities based on the following criteria:

- The redevelopment of the area results in an equivalent increase in flow of at least 500,000 gallons per day.
 - Those communities that do not meet the MCES established inflow/infiltration goals would have an adopted inflow/infiltration program to eliminate inflow and infiltration.
- *If the projected increase in flow from the proposed redevelopment does not reach the 500,000 gallons per day criteria but meets the remaining criteria, the Metropolitan Council will consider cost-sharing improvements to the MDS. Cost sharing will be*

determined on a case-by-case basis. Cost sharing will attempt to limit undue hardship for communities.

Cost Sharing

Cost sharing between the Council and local governments may occur when either 1) the Council builds new regional facilities or makes needed improvements to existing facilities that provide added benefits to local communities, in addition to the expected regional benefits; and 2) when additional costs are incurred by the Council to provide the local benefit.

IMPLEMENTATION STRATEGY

- *The Council will consider the financial implications and the community will share the cost of providing the additional services when construction of new regional facilities provides added benefits to local communities in addition to the expected regional benefits, and when additional costs are incurred by MCES to provide the local benefits.*

The Council will use the current procedures under the existing cost-sharing policy to negotiate cost-sharing agreements. Cost-sharing situations include, but are not limited to, the following:

- A local government seeks to change the timing, capacity, location, or staging of regional facilities to meet local needs.
- An interceptor provides trunk or lateral benefits to a local community.
- MCES and communities undertake joint construction projects.

Rural Area

The *2030 Regional Development Framework* provides direction for development in the rural part of the region with the goal of preserving rural character and continuing to provide landscape diversity. The rural character surrounding the developed part of the metropolitan area provides the region with agricultural production, low-density rural housing, groundwater infiltration opportunities, and a sense of openness that adds to the region's quality of life.

In the Agricultural Preservation Area, regional wastewater investments are to be avoided. If constructing sewer lines across the Agricultural Preservation Area is the only practical solution, the Council will not allow service connections to be made to these interceptors. But since the interceptors are designed to provide for the long-term growth of the region (50 to 80 years) it may be prudent to design the interceptors with adequate capacity to serve the planned long-term service area to the interceptor at the time of its initial construction. These actions will limit the amount of development in these areas, thus preserving the agricultural character while maintaining a reasonable cost of service for the long-term needs of the region. The Council will work with communities through the local comprehensive planning process to determine when and where wastewater service is needed and how it can be provided in a technically sound and economical manner.

POLICY

The Metropolitan Council will not allow connections to the Metropolitan Disposal System within the rural planning area. The Council may provide capacity for the long-term needs of the rural and agricultural planning areas.

IMPLEMENTATION STRATEGY

- *Service will not be provided until the Council, in consultation with the appropriate community, designates the area as a developing community and the community amends its comprehensive plan accordingly.*

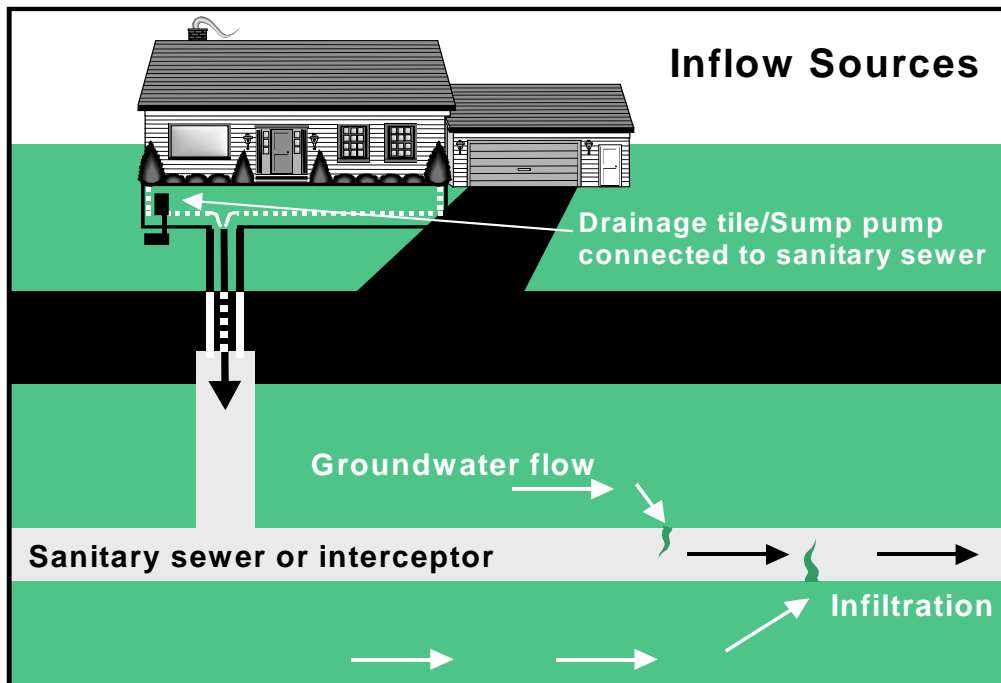
Management of the Wastewater System

Inflow and Infiltration

Infiltration is the seepage of groundwater into sewer pipes through cracks or joints. Inflow is typically flow from a single point, such as discharge from sump pumps and foundation drains, or stormwater entering openings in the sewer access covers (Figure 11). This water is considered an unnecessary addition to the volume of water being conveyed by the sewer.

Inflow during major rainfall events results in large quantities of flow entering the system very quickly in time periods that vary from a few hours to several days. During these periods, the Metropolitan Disposal System (MDS) is taxed to its limits, causing hydraulic surcharging, system backups and wastewater flow bypasses to occur. These high-peak events consume most if not all of the available capacity within the MDS and limit the available capacity needed to serve the projected growth for the region.

Figure 11: Inflow and Infiltration (I/I) into Local and Regional Wastewater Systems



Through its metering system, MCES continuously measures the volume of wastewater received in the MDS. These flow measurements include clear water entering the sewer system as well as the wastewater generated by customers. The flow includes rain-induced clear water that enters the local sewer system through leaks in the publicly owned sewer and manholes, as well as private property sources: rain leaders, sump pumps, foundation drains, and leaking house laterals. MCES flow records show a direct correlation between precipitation and the volume of clear water flow from many communities served by the regional wastewater system.

The addition of clear water into the local sewer systems creates two problems. First, the additional flow takes capacity that was originally designed for growth and, in some cases, the additional flow exceeds the available sewer system capacity. When the capacity of the sewer is exceeded, the wastewater backs up into basements or spills out of a manhole. These occurrences are not allowable under federal and state regulations. Second, MCES charges communities the same rate for its clear water as it does for sewage. Communities, therefore, have a fiscal as well as a public policy reason for ensuring that the total system functions effectively and conforms to federal and state regulations.

The Metropolitan Council has projected significant growth in the metropolitan area by 2030. These population and employment projections are used to predict wastewater flows throughout the interceptor system and at each treatment plant. For the interceptor system, peak-hour flows are projected; and for the treatment plants, annual average, peak-month, and peak-hour flows are projected. The infiltration/inflow (I/I) component of peak-hour flow rates is estimated based on a computer model simulation of how rainfall generates I/I in areas tributary to the interceptor system.

The results of simulating the projected conditions in 2030 using current levels of I/I indicate the need for a significant investment in relief sewers and pump stations. Peak-hour flows to each plant in 2030 were projected with the interceptor model using 25-year and 100-year storm events. The peak flow to the Metropolitan Plant could reach over 1.3 billion gallons per day if enough relief sewers were constructed. This is nearly twice the rate that the twin-barrel joint interceptor can carry into the plant today. Doubling the hydraulic capacity of the Metropolitan Plant is not feasible because of site constraints. Thus, simply adding more capacity to convey and treat I/I is not a feasible option.

On April 8, 2003, the Metropolitan Council appointed individuals to serve on the Infiltration and Inflow Task Force. The task force was charged with reviewing the I/I issues, and formulating and proposing implementation strategies to reduce excessive I/I in local and regional wastewater collection systems. The task force recommendations were accepted by the Council for public meetings. This policy plan incorporates the task force recommendations.

Sewers, pump stations and treatment plants are designed to convey and treat wastewater. Facilities are sized to handle a projected wastewater flow rate. For conveyance facilities, the flow rate is usually the maximum rate expected for a one-hour duration. For treatment plants, the structures must pass not only the maximum rate, but the processes are designed to meet permit limits, usually specified as peak-month and peak-week conditions. Consequently, the maximum 30-day and 7-day average flows are important for sizing treatment plants.

The Council developed its peak hourly design standards in the early 1970s (Table 2). These standards were analyzed by the I/I task force and found acceptable for continued

use by the Council in the design of the MDS. These standards will be used to establish I/I goals for each of the communities served by the MDS. Communities will be asked to develop an I/I reduction plan to reduce their peak hourly flows to meet these design standards. Those communities that discharge flows into the MDS at rates higher than the design standards put the system at risk of overflows and, therefore, have a substantial impact on the MDS.

The actual I/I goal will vary over time based on the average base flow for the community, which changes over time.

Table 2: MCES Flow Variation Factors

Average Flow (MGD)	Peak Hourly Flow Factor		Average Flow (MGD)	Peak Hourly Flow Factor
0.00 - 0.11	4.0		1.90 - 2.29	2.8
0.12 - 0.18	3.9		2.30 - 2.89	2.7
0.19 - 0.23	3.8		2.90 - 3.49	2.6
0.24 - 0.29	3.7		3.50 - 4.19	2.5
0.30 - 0.39	3.6		4.20 - 5.09	2.4
0.40 - 0.49	3.5		5.10 - 6.39	2.3
0.50 - 0.64	3.4		6.40 - 7.99	2.2
0.65 - 0.79	3.3		8.00 - 10.39	2.1
0.80 - 0.99	3.2		10.4 - 13.49	2.0
1.00 - 1.19	3.1		13.5 - 17.99	1.9
1.20 - 1.49	3.0		18.0 - 29.99	1.8
1.50 - 1.89	2.9		over 30.00	1.7

POLICIES

The Council will not provide additional capacity within its interceptor system to serve excessive inflow and infiltration.

The Council will establish inflow and infiltration goals for all communities discharging wastewater to the Metropolitan Disposal System based on the designed peak-hour capacity of the interceptor(s) serving the community. Communities that have excessive inflow and infiltration in their sanitary sewer systems will be required to eliminate the excessive inflow and infiltration within a reasonable time period.

IMPLEMENTATION STRATEGIES

- *The Council will continue to use the current design standards for interceptors.*
- *The Council will develop inflow and infiltration goals for all communities based on the designed peak-hour capacity of the interceptor(s) serving the community as well as guidelines for the preparation of the local inflow and infiltration programs.*
- *The Council will ask all communities served by the MDS to begin the development and implementation of an inflow and infiltration program as soon as practicable and require the communities to include that program within their next comprehensive plan.*

Communities with excessive I/I will need to develop plans that reduce their I/I. Communities currently within their I/I goals will need to develop plans for maintaining acceptable levels as the local infrastructure ages. The Council will provide the communities with a tool box of I/I reduction options that can be used by the communities in the preparation of their plans.

- *Peak inflow during wet weather conditions will be measured by either the MCES metering system or by installation of temporary monitoring equipment in the sanitary sewer system.*

The Council will use its metering system to monitor wet weather events and notify communities when their peak hourly flows exceed the I/I goals for their communities. Meter data by stormwater events are available and can be provided to the communities upon request to help them evaluate their sanitary sewer systems.

- *The Council will require the community to reduce its inflow and infiltration to reach the design flow standard for each connection point to the MDS by no later than 2012.*

Under the requirements of the Metropolitan Land Planning Act communities have three years to update their comprehensive plans once the *Water Resources Management Policy Plan* has been updated. Thus, the Council expects all communities to have an updated plan by 2008. As part of the comprehensive plan, the Council is requiring that the community include an I/I program that will study I/I issues and adopt a five-year schedule for improvements to their system to meet the I/I goals.

- *The Council will limit increases in service within those communities where excessive inflow and infiltration jeopardizes MCES's ability to convey wastewater without an overflow or backup occurring, or limits the capacity in the system to the point where the Council can no longer provide additional wastewater services. MCES will work with those communities on a case-by-case basis.*

If at any time the excessive I/I from a community reaches a level that jeopardizes MCES's ability to convey wastewater without an overflow occurring, MCES will notify the community of the problem, meet with the community and attempt to arrive at an acceptable local solution to the problem. If no timely solution can be found then the Council will recommend to the MPCA that no new sanitary sewer extensions should be approved until the issue is resolved.

There are locations in the MDS where the excessive wet weather flow from several communities is using up the capacity designed for regional growth. But this growth restriction is not always limited to communities that aren't addressing their I/I problem. Other communities served by the same interceptor system that want to grow, and have either no excessive I/I or are taking action to eliminate excessive I/I, are also having their growth restricted. In these cases, the Council will provide wastewater conveyance facilities to serve both regional growth and to convey excessive I/I in the interim until the tributary communities achieve their I/I goals. Wherever possible the investment made to initially convey or treat the excessive I/I will be recovered to provide for long-term dry weather capacity for future growth as the excessive I/I is eliminated from the system.

- *MCES will work with communities to initiate an inflow and infiltration reduction program. Either option A or B listed below will be acceptable.*

Option A – *The Council will initiate an inflow and infiltration financial assistance/surcharge program. In order to provide financial assistance in 2008, the Council will initiate the surcharge program in 2007. This program will allow MCES to surcharge communities exceeding their inflow and infiltration goals in order to collect revenue for the community to use for solving its inflow and infiltration problem.*

Option B – *The Council will allow communities with an inflow and infiltration reduction program in place to continue with their programs and not participate in MCES's surcharge program. This will allow communities to undertake activities for inflow and infiltration reduction using local funds, as long as those funds are equal to or greater than the surcharge program funds.*

The Council's Wastewater Treatment Master Plan has shown that the combination of increased flows from new development and the current levels of the excessive I/I entering the system during wet weather conditions has created an urgency to act now and eliminate the I/I from the system. To encourage a joint effort by all communities with excessive I/I to adopt and implement an I/I reduction program consistent with their 2008 comprehensive plan, the Council is proposing a Community Assistance Surcharge Program. Under the program, the Council will collect additional revenue from communities with excessive I/I and then use this revenue to support a program for I/I reduction.

Under the program communities could choose an alternative approach to "opt-out" of the formal surcharge program (i.e., undertake voluntary I/I reduction programs that are funded at the same or greater level). Under this approach, a community would enter into an agreement with MCES to obligate local funds to undertake the same or greater effort for I/I reduction.

- *Starting in 2013, the Council will limit future increases in wastewater service within those communities that have not met their inflow and infiltration goal(s), until the problem is solved. MCES will work with communities not meeting goals on a case-by-case basis.*

The Council anticipates that all communities served by the MDS should be able to reduce their excessive I/I and meet the established I/I goals by 2012. If a community's I/I program has not been effective, and its excessive I/I reaches a level that either jeopardizes the ability of MCES to convey wastewater without an overflow occurring or limits the capacity in the system to the point where the Council can no longer provide additional wastewater services, MCES will notify the community of the problem. Meetings with the community will be held and attempts made to arrive at an acceptable local solution to the problem. If no timely solution can be found, then the Council will recommend to the MPCA that no new sanitary sewer extensions should be approved until the issue is resolved.

- *Starting in 2013, the Council will institute a wastewater rate demand charge program for those communities that have not met their inflow and infiltration goal(s). The intent of the program will be to help defray the cost of providing attenuation within the MDS to avoid overloading downstream facilities. MCES will continue to review communities' progress and work with them on a case-by-case basis.*

Finally, if a local solution to this problem is not found and implemented, a “demand charge” for not meeting the I/I goals will be implemented. The Council would design the needed improvement to avoid overloading downstream facilities. The cost to MCES to control the peak flow and provide flow attenuation at the point of connection would be assigned back to the community as a demand charge.

- *The Council will work with the Public Facilities Authority to make funds available for inflow and infiltration improvements.*

Currently, I/I projects on private property are not eligible for Public Facility Authority low-interest loans. I/I-related public projects typically receive a lower ranking than other public facility projects. The Council will support a change in the program or a new state program to facilitate discounted funding for all I/I removal projects.

Interceptor Reconveyance

The Council has statutory authority to convey interceptors by determining that the interceptor no longer serves a regional benefit. The Council identifies the local beneficiary(s) and puts the facility on an official pending reconveyance list.

The Council intends to convey existing interceptors that no longer meet the definition of a regional interceptor to benefited communities, thus shifting management and costs to the appropriate government and providing regional service at competitive and equitable rates. If an interceptor has no local benefit, the interceptor and related facilities will be abandoned.

POLICY

Interceptors and related facilities that are no longer a necessary part of the Metropolitan Disposal System will be reconveyed, abandoned, or sold pursuant to related statutes.

IMPLEMENTATION STRATEGY

- *The Council will declare interceptors that no longer function in the role of a metropolitan interceptor as being no longer needed to be part of the Metropolitan Disposal System, and convey the interceptor and ancillary facilities to the appropriate local governmental unit.*

An interceptor (or segment of it) no longer has a regional role when it serves primarily as a local trunk sewer (including service to an upstream community for 200,000 gallons per day or less of wastewater flow) or if it conveys only stormwater. In the case where smaller communities have no other outlet for their wastewater, the Council will consider the interceptor as a metropolitan interceptor under the following conditions:

- The interceptor has been designed to provide wastewater service to all or substantially all of the upstream community, but the forecasted flows are less than 200,000 gallons per day; or,
- The flow from the upstream community, although less than 200,000 gallons per day, is greater than 50 percent of the total forecasted flow within all reaches of the interceptor.

Rules and Regulations

The Metropolitan Waste Control Commission, before it merged with the Metropolitan Council in 1994, adopted Waste Discharge Rules for the Metropolitan Disposal System (MDS). These rules were adopted to provide for the efficient, economic, and safe operation of the MDS, and for the protection of the health, safety, and general welfare of the public in the metropolitan area.

POLICY

The Metropolitan Council, the delegated pretreatment authority, will implement and enforce the Council’s Waste Discharge Rules for the Metropolitan Disposal System.

IMPLEMENTATION STRATEGY

- *To achieve the efficient and effective use of the MDS, the Council regulates the quantity and quality of waste discharges into public sewers.*

Operation of Wastewater Treatment Plants

MCES owns and operates eight wastewater treatment plants. The treatment plants process approximately 300 million gallons of wastewater each day, and discharge treated wastewater into the Mississippi, Minnesota, St. Croix and Vermillion Rivers. (By 2007, wastewater from the Empire WWTP will no longer be discharged into the Vermillion River.) Each year MCES achieves near-perfect compliance with its environmental permits, and is committed to continue this high level of performance.

The Council has developed two strategies designed to reduce phosphorus and mercury pollution and continue the high quality of wastewater treatment.

In implementing its Phosphorus Reduction Strategy, all Council treatment plants have initiated or achieved significant phosphorus reductions. More than 96 percent of all treated wastewater effluent is achieving <1 mg/l total phosphorus.

A highlight of the Council's Mercury Reduction Strategy is the Voluntary Mercury Amalgam Recovery Program. This award-winning program, developed in partnership with the Minnesota Dental Association, will ensure reductions of mercury coming into the sewer system.

POLICY

The Council will ensure that the MCES treatment plants will continue to meet the stringent permit conditions imposed by the Minnesota Pollution Control Agency.

IMPLEMENTATION STRATEGY

- *The Council will continue to maintain the high quality of service of its wastewater system while meeting requirements of its environmental permits, supporting growth in a timely fashion and maintaining a reasonable cost for service.*

Septage

Because sewer service is not provided throughout the seven-county metropolitan area, there remains a need to accept septage that is removed as part of private wastewater treatment systems (individual sewage treatment systems and community or cluster systems). In addition, MCES accepts other hauled liquid wastes including holding tanks, portable toilet waste, landfill leachate, biosolids, commercial wastes and approved industrial waste loads. MCES may accept hauled liquid waste from outside the metropolitan area on a case-by-case basis.

MCES provides for the collection and treatment of hauled liquid wastes at designated disposal sites. The Council has assumed this responsibility to enable proper treatment of septage and other hauled liquid wastes originating from communities within the metropolitan area. During 2004, MCES completed a study to evaluate the effectiveness of this system and the impact that hauled liquid wastes have on its collection and treatment system to determine the most efficient and cost-effective method for treatment and disposal. The recommended plan provides for increased disposal site security, methods to record and monitor loads received, and minimization of adverse infrastructure impacts related to hauled liquid wastes (corrosion, sediment buildup and odors). Implementation will include disposal site improvements at several sites, as well as closures of a number of sites that are currently deficient. Fees collected from the liquid waste haulers (the users of the service) will fund the program at a level that fully recovers the costs for these services.

POLICY

The Council will accept septage, biosolids and other hauled liquid waste at designated sites. All hauled liquid wastes from within the region will be accepted at the full cost of service.

IMPLEMENTATION STRATEGY

- *The Council will continue to accept septage, biosolids and other hauled liquid wastes at designated sites for communities located within the metropolitan area. The Council may accept septage from communities beyond the seven-county metropolitan area as system capacity allows.*
- *Upon Council approval, the system-wide plan for hauled liquid waste acceptance will be implemented in order to provide this service in the most efficient and cost-effective manner.*

Rates and Charges

POLICIES

The Council will design and adopt fees and charges using a regional cost-of-service basis:

- **Municipal wastewater charges will be allocated to communities uniformly, based on flow.**
- **Industrial wastewater strength and load charge rates will each be uniform, and proportionate to the volume and strength of discharges.**
- **Load charges for septage, portable toilet waste, holding tank wastewater and out-of-region wastes will be uniform for each type of load, and based on the volume of the load and the average strength of the types of loads.**
- **Service Availability Charges (SAC) will be uniform within the urban service area of the region. SAC for a Rural Growth Center where a treatment facility is owned by the Council will be based on the reserve capacity of the plant and the Council's debt service specific to the Center. SAC for a Rural Growth Center where interceptor facility(s) are owned by the Council will be the urban SAC charge plus a charge based on the reserve capacity of the specific interceptor(s) and the Council's debt service specific to the Center.**

The Council will seek customer input prior to, and give at least three months notice of, any material changes in the design of fees and charges.

The Council will maintain wastewater rates for MCES that enable the division to:

- **Meet wastewater regulatory requirements;**
- **Implement MCES infrastructure rehabilitation and repair needs; and**
- **Provide wastewater capacity for growth consistent with the Council's *2030 Regional Development Framework*.**

The goals for the allocation method and rate structure continue to be equitable, competitive rates and SAC fees, which completely cover the cost of the Council's wastewater systems and services. The Council's rate structure is designed to collect funds for the operation, maintenance, capital and debt services costs of the system in a way that is equitable to all users of the system and contributes to efficient economics for the region. The SAC rate and financial projections will be analyzed annually by MCES staff, and rate increases submitted to the Council for approval. In addition, staff will review the SAC program and financials at least biennially. Except in a multi-year regional economic downturn, the Council will set SAC rates to maintain a SAC reserve fund with a minimum balance requirement at the end of each year. That minimum balance would allow MCES to meet its SAC debt-service requirement in each of the following five years, even if SAC revenues are 20 percent below projections in each of those years.

A regional approach to defining municipal wastewater and industrial rates is used to ensure that decisions made are optimal for the region's environment and economy as a whole.

The Council's approach to rate design is based on a regional cost-of-service philosophy. Communities pay for the flow originating within their borders. New users pay for the capacity they demand through SAC. Industries pay for the cost of treating their higher strength discharges through a strength charge. Haulers pay for wastewater loads based on the cost of managing the loads. In other words, users are charged for the costs that the Council incurs to provide the specific services used.

The *2030 Regional Development Framework* and this *Policy Plan* allows the Rural Growth Centers that meet certain criteria to request that MCES acquire their wastewater treatment plants. The Council will establish separate and higher SAC rates for the Rural Growth Centers. These rural SAC rates will be separate from the current SAC that all current (urban) communities are charged, and will pay for the reserve capacity portion of the debt service for each individual Rural Growth Center. Rural Growth Center communities will be charged the same municipal wastewater charges and industrial fees as all communities served by the MDS.

Management of Private Wastewater Treatment Systems

Private Wastewater Treatment Systems

There are more than 75,000 individual sewage treatment systems (ISTS) and many more community systems in the metropolitan area. Cities and townships located within the rural area have allowed higher density development using community systems that are permitted by the MPCA. Both individual and community systems largely serve the parts of the region where wastewater collection and treatment is not available. The Council's intent is to work with communities to ensure that ISTS do not cause water quality problems in areas where urban-level sewer service is not available.

POLICIES

The Council will continue to use the Council's review authority under the Metropolitan Land Planning Act to ensure that communities that permit the construction of private wastewater systems within their communities (community systems and individual sewage treatment systems) ensure that these systems are installed, maintained, managed and regulated by the community consistent with Minnesota Pollution Control Agency rules.

The community is responsible for permitting all private wastewater treatment systems. The Council will not provide financial support to assist communities if these systems fail.

The Council will allow the community to connect a failing private wastewater treatment system to the Metropolitan Disposal System, where there is available capacity, at the community's expense.

IMPLEMENTATION STRATEGIES

- *The Council, through the comprehensive planning process, requires that communities demonstrate that they have the capability to ensure that these systems (private wastewater treatment systems) are operated effectively within the standards required by the Minnesota Pollution Control Agency.*

- *The Council will support State rules for individual sewage treatment systems and work with local governments to assist in their implementation.*
- *The Council will support the Minnesota Pollution Control Agency's regulatory approach to community treatment systems.*

The Council's approach to avoid water contamination from private wastewater treatment systems has been to support Minnesota Rules, Chapter 7080, and to provide educational materials on the proper installation and maintenance of these systems.

- *The Council will require that copies of individual sewage treatment system ordinances and information on the management programs be submitted to the Council as part of the comprehensive planning process.*

The Council expects all communities to have an approved ISTS ordinance that is consistent with MPCA Rules, Chapter 7080. Figure 12 shows where the ISTS occur in the region. Most of these ISTS occur in the rural portion of the region.

In addition, the Council expects all communities or counties with ISTS authority to have an ISTS management program. The ISTS management program needs to ensure that facilities are operational and that ISTS are properly installed, maintained, remediated and managed. An ISTS management program would be one that at a minimum:

- Requires inspections or pumping of all systems no less frequently than every three years.
- Requires repair or replacement of failing systems within five years.
- Requires replacement of systems that pose an imminent public health or safety threat within 10 months.
- Includes current number of systems.
- Establishes a tracking and notification database that includes items such as the year the system was built, the date each ISTS was inspected, the condition of the system, the volume and date the septage was pumped out, and information on whether or not systems are compliant with 7080 rules.
- Has an enforcement provision that allows the community to address systems found to be failing and/or imminent public health threats.

ISTS management program data and related information are expected to be submitted to the Council as part of the Council's annual ISTS survey.

Figure 12: Individual Sewage Treatment Systems in Twin Cities Metropolitan Area

