

# **INFLOW/ INFILTRATION SURCHARGE PROCEDURE MANUAL**

January 2007



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The mission of the Metropolitan Council is to develop, in cooperation with local communities, a comprehensive regional planning framework, focusing on wastewater, transportation, parks and aviation systems, that guides the efficient growth of the metropolitan area. The Council operates wastewater and transit services and administers housing and other grant programs.

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# 2007 INFLOW/INFILTRATION (I/I) SURCHARGE PROCEDURE MANUAL

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# 1. MCES CONTACT LIST FOR INFLOW/INFILTRATION QUESTIONS

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## MCES Finance

### *General Questions and Information*

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## Interceptor Services

### *Meters and Interceptor System Questions*

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## 2. GENERAL

### 2.1 Introduction

Sewers, pump stations and treatment plants are designed to convey and treat wastewater. The Metropolitan Council, through its Environmental Services division (MCES), owns and operates eight wastewater treatment facilities and an extensive interceptor system; in addition, more than 100 communities own and operate local sewer systems that are connected to the MCES regional interceptor system.

The required capacity or size of these facilities is dependent on the flow rate of the wastewater. For conveyance facilities like interceptor sewers and pump stations, the capacity is usually the maximum flow rate expected during a one-hour period. For treatment plants, the facilities must handle not only the maximum hourly rate, but the processes are designed to meet permit limits, usually specified as a peak month condition. Consequently, the maximum 30-day average flow is important for sizing treatment plants. The introduction of non-contaminated, clear water inflow and infiltration (I/I) into the collection system increases the volume of wastewater flow and consumes the capacity of sewers, pump stations and treatment plants intended to serve future development. During significant rainfall events, portions of the interceptor system are at risk of causing a backup of wastewater into basements or spilling wastewater into the environment as a result of excessive I/I.

A Task Force appointed by the Metropolitan Council worked from April 2003 to May 2004 to identify solutions to the region's I/I problem. Based on Task Force recommendations, its statutory authority (Minnesota Statutes, Section 473.145), and the large and unnecessary cost to the Region of building peaking capacity, the Metropolitan Council adopted a policy that it would not provide additional interceptor capacity to handle excessive I/I. The Council decided to establish I/I goals for all communities discharging wastewater to the Metropolitan Disposal System (MDS), based on the designed peak-hour capacity of the interceptor(s) serving the community. Communities that have excessive I/I in their sanitary sewer systems would be required to eliminate the excessive I/I within a reasonable time period.

The Council authorized the Environmental Services division to establish a surcharge program for communities with excessive I/I problems that includes a rebate of the surcharges to communities as they establish and implement I/I reduction programs. This procedure manual provides guidance for administration of the Council's I/I Surcharge Program.

The I/I Surcharge Program will, in all likelihood, avoid hundreds of millions in needless regional expenditures (the MCES estimated cost of handling the existing levels of I/I in the regional infrastructure is at least \$900 million). If the problem is not solved and this expensive capacity not built, there would be significant capacity restrictions on the system leading to growth moratoriums. This surcharge approach minimizes the cost to the region and puts the cost with the properties or communities that have the problem, rather than spread across the system as a whole.

## 2.2 Description of I/I Surcharge Program

The Metropolitan Council adopted an I/I Surcharge Program to reduce the impact of I/I on wastewater capacity and fees and to insure that the wastewater capacity of the system is available for future development. MCES estimates that 300,000 gallons per minute (gpm) of excessive I/I enters the MDS during heavy rains. The most cost-effective way to achieve I/I reductions is through promoting elimination of I/I at its source. The Council's Master Planning Study estimates that approximately 70% of the excessive I/I entering the system is from private property. It is estimated that the average rate of discharge during a wet weather event from either a sump pump or passive drain tile, illegally connected to the sanitary system, is 6 gpm. Using \$3,000/connection as the average cost to disconnect an illegal connection, the Council estimated an exceedance cost of \$500 per gpm ( $\$3,000/6 \text{ gpm}$ ) which equals \$350,000 per million gallons per day (mgd) (see I/I Surcharge Program Book at <http://www.metrocouncil.org/environment/ProjectTeams/I-I-Home.htm>).

This figure was adopted by the Council as the "Exceedance Rate" for 2007. This Exceedance Rate will be applied to each community based on its maximum rate of exceedance, measured as a result of one or more community-specific I/I exceedance events occurring after June 1, 2004.

The purpose of the surcharge program is to provide the Council with contingency funding to build additional capacity if necessary. Or alternatively, provide an incentive and a mechanism for communities to fund the cost of mitigating their excess peak I/I. Communities can avoid surcharges and/or receive a rebate of their surcharges by eliminating their excess peak I/I through a combination of programs and system improvements. It is the intent of this program to encourage communities to eliminate their excess peak I/I over the next five-year period from 2007 through 2011.

The Metropolitan Council's funding of I/I mitigation projects by communities through the surcharge credit and rebate programs is based on the eligibility of these projects as likely to reduce the community's I/I. However, the actual effectiveness of any project is the responsibility of the community and the Metropolitan Council's granting of a credit and/or rebate does not relieve the community of its obligation to reduce its I/I to an acceptable level as determined by MCES.

Starting in 2013, the Council will institute a wastewater demand charge program for those communities that have not met their inflow and infiltration goals(s). The demand charge will help defray the cost of providing attenuation within the MDS to avoid overloading downstream facilities. No credits or rebates to communities will be allowed. MCES will continue to review the communities' progress and will work with them on a case-by-case basis.

### 2007 Surcharges

Beginning in 2007, each community that experienced an excess maximum peak I/I flow event measured during the period June 1, 2004 through June 30, 2006 in any of its metersheds will receive a surcharge under this program. Excess maximum I/I peak flow is defined as the amount of the flow rate in mgd greater than the peak flow rate allowed by MCES.

For each metershed, the peak flow rate allowed by MCES is the annual average dry-weather flow plus a peaking factor. The 2007 surcharge amount will be determined by multiplying this excess maximum I/I peak flow event by the exceedance rate for 2007 of \$350,000 per mgd. These surcharges will be imposed on the community as equal monthly charges over a five-year billing period from 2007 through 2011, subject to adjustments and credits. The formula for these surcharges is shown below:

**Annual 2007 Surcharge = Community's I/I Total Cost (IITC) Estimate/60 months**

Where:

Community's IITC Estimate = (Excess Maximum I/I Peak Flow Event) x (Exceedance Rate)

Excess Maximum I/I Peak Flow Event = Maximum Exceedance measured in the program June 1, 2004 through June 30, 2006

Exceedance Rate for 2007 = \$350,000 per mgd

The Annual 2007 Surcharge will not be reduced unless:

- a) The community demonstrates to MCES, through the adjustment process, that the community can eliminate the excess I/I at a lesser cost, or
- b) The community has spent the entire 2007 IITC earlier than 2011.

Communities subject to I/I surcharges can recover or avoid all or a portion of their surcharges as described later in this manual.

## 2.3 Authority

Inflow/Infiltration Surcharge procedures were adopted by the Metropolitan Council pursuant to Minnesota Statutes (M.S.), chapter 473, including section 473.145-146 and section 473.858, and the Metropolitan Council Environmental Services Waste Discharge Rules, and are declared to be necessary for the efficient, economic, and safe operation of the MDS and for protection of the health, safety, and general welfare of the public in the metropolitan region. Additionally, the Council's *Water Resources Management Policy Plan* established I/I goals for communities served by the regional Metropolitan Disposal System. These goals were based on Metropolitan Disposal System design standards and regional growth requirements and projections.

The I/I Surcharge is based on the authority in M.S. 473.517, subdivision 1, "Except as provided in Subdivision 3, the estimated costs of operation, maintenance, and debt service of the Metropolitan Disposal System to be paid by the council in each fiscal year, and the costs of acquisition and betterment of the system which are to be paid during the year from funds other than bond proceeds, including all expenses incurred by the council pursuant to sections 473.501 to 473.545, are referred to in this section as current costs, and shall be allocated among and paid by all local government units which will discharge sewage, directly or indirectly, into the Metropolitan Disposal System during the budget year according to an allocation method determined by the council. The allocated costs may include an amount for a reserve or contingency fund and an amount for cash flow management." These funds will be held in reserve for Council costs to provide capacity unless municipal actions obviate the need for peak demand improvements to the MDS.

MCES reserves the right to modify the Surcharge program in response to new regulations or changes in existing regulations imposed on MCES by regulatory agencies.

After extensive outreach, the Metropolitan Council adopted the I/I Surcharge Program by motion in February 2006. This action also included authority for staff to develop and implement this procedure manual.

## **2.4 Purpose**

These Procedures are intended:

- 2.4.1** to carry out the comprehensive plan for the MDS, pursuant to the Metropolitan Council's 2030 Development Framework and the Water Resources Management Policy Plan,
- 2.4.2** to comply with provisions of the Federal Clean Water Act, title 33, United States Code, section 1251,
- 2.4.3** to comply with federal (EPA) and state (Minnesota Pollution Control Agency) rules and regulations,
- 2.4.4** to enable each Metropolitan Council treatment plant to meet NPDES/SDS and other permit requirements, and
- 2.4.5** to comply with Metropolitan Council Environmental Services' Waste Discharge Rules.

### **3. ROLES OF MCES AND LOCAL GOVERNMENT UNITS (RELATED TO THE I/I SURCHARGE)**

#### **3.1 MCES' Role**

- 3.1.1** MCES will continue to meter flows during dry and wet weather conditions. MCES will send letters to the public works departments of municipalities showing the peak flow data as measured:
  - a) including peak flows not deemed excessive, as requested, and
  - b) event-driven reports showing excess I/I by community (distributed monthly).
- 3.1.2** Improve MCES I/I program to eliminate excess I/I in the regional infrastructure system:
  - a) As communities monitor local I/I studies, MCES will work with those municipalities to install monitoring devices in the interceptor system and to identify possible sources of excessive I/I entering MCES' system.
  - b) In those areas where the MCES interceptor system is vulnerable to excessive inflow entering its system, MCES will install monitoring devices to identify possible sources of excess I/I, even if the community isn't conducting a local study.
  - c) When excess I/I is identified in the interceptor system, MCES will schedule an improvement project for necessary repairs.
- 3.1.3** Provide technical assistance to communities.
  - a) The Council I/I Tool Box can be accessed from its Web site ([www.metrocouncil.org](http://www.metrocouncil.org)); it provides municipalities with information about how to eliminate excess I/I.
  - b) Explain the Council's I/I program and provide general information on a case-by-case basis, as in the case of 3.2.2. (see below).
- 3.1.4** Meet with communities, upon request, to explain the surcharge program and how the surcharges were derived, or to review a community's I/I program and implementation schedule (Capital Improvement Program) for applicable credits to the program.
- 3.1.5** Implement and manage the I/I surcharge program and administer surcharge funds.
- 3.1.6** Ensure positive and timely communications with communities.

#### **3.2 Local Government Units' Roles**

Local Governments will:

- 3.2.1** Continue maintenance programs for local sanitary systems.
- 3.2.2** Create I/I identification and reduction plans for local systems, to include:
  - a) Flow entering the system from public property not controlled by the community: if excessive I/I is entering the local sanitary sewer system

from public property controlled by a third party, the community must quantify or provide a reasonable estimate of the flow. This excess flow will be deducted from the community's maximum peak flow for the purpose of this surcharge program. The Metropolitan Council will work with communities and third parties to pursue eliminating the excess I/I from the sanitary sewer system.

- b) Flow entering a downstream community from another community through an inter-community agreement: in some communities, wastewater flows from small portions of an upstream community enter the sanitary sewer system of the downstream community through an inter-community agreement. In these cases the upstream community is a customer of the downstream community and thus the downstream community is responsible for working with the upstream community to eliminate excess I/I entering its sanitary sewer system.

**3.2.3** Work with MCES to identify any MCES system problems contributing to I/I peak flows.

**3.2.4** Manage local I/I reduction programs to meet Council I/I goals established for each community.

**3.2.5** Communities are responsible for eliminating their excess peak maximum I/I. MCES assumes no liability for the effectiveness of the methods or approach selected by the community. Moreover, MCES makes no representation that the surcharge amounts or any correspondence relating thereto is sufficient to solve the communities' excess I/I problem(s).

**NOTE:** MCES recommends that all communities, not just those with measured, excessive I/I, have an I/I mitigation program to assure that I/I doesn't become excessive over time.

## 4. SURCHARGE PROGRAM PROCEDURES

### 4.1 Determinations

- 4.1.1 Excess I/I:** MCES established I/I goals for each community by metering their average wastewater flows during the past three years. Excess I/I is defined as the maximum peak flow in mgd above the peak flow goal allowed by MCES for each community. This excess I/I will be used to determine the I/I surcharge for each community.
- 4.1.2 Surcharge Commencement:** Surcharges to communities will begin in 2007 for excess maximum peak I/I measured by MCES during the period June 1, 2004 through June 30, 2006. Bills for January 2007 will be sent to municipalities in December of 2006. All surcharge funds received by the Council under the Surcharge Program will be placed in a Surcharge Reserve/Contingency Fund to be used for managing I/I within the MDS. The Council has developed two incentives that enable communities to recover or avoid all or a portion of their I/I surcharges. The first enables a community to receive rebates of funds equal to the amount of eligible expenditures it makes to reduce I/I (up to a maximum equal to the amount surcharged plus interest earned on the funds). The second allows the community to avoid I/I surcharges by taking official actions to mitigate excess peak flows by spending its own funds or private party funds.
- 4.1.3 Notification of Peak Flow:** Each month, MCES will send a letter to those communities that have experienced an excessive I/I event occurring during the previous month. The letter will inform the community of the date of the occurrence and include a flow chart that shows the peak flow in mgd in relationship to the I/I goal for a specific community metershed. Upon receipt of the peak flow event letter the City should review the flow data and determine if the peak event represents a new maximum peak flow for the City. If the peak flow represents a new maximum peak, the City can either accept the peak flow event as described, understanding it will be used to determine their surcharge, or it can contest the peak flow in the letter.
- 4.1.4 Contesting the Peak Flow in the Letter(s):** The community can contest the peak flow in the letter (if it established a new excess maximum peak flow) by submitting information to MCES for a peak flow adjustment. Peak flow adjustments must be based on the excess I/I being out of the community's control or where extenuating circumstances caused the peak flow event. Information must be submitted to MCES within 60 days from the date of receipt of the peak flow letter (for flows that have already occurred this information must be sent 60 days from the date of receipt of this Procedure Manual). MCES will respond to a request for a peak flow adjustment within 60 days from receipt of the information from the community. If the community accepts the response from MCES, their surcharge will be based on the peak flow in the response from MCES. If the community does not accept the response from MCES, it must appeal to the Metropolitan Council within 15 days from the date of the MCES response. The Metropolitan

Council will render a decision of the community's appeal by December 7 of each year. If the community disagrees with the Metropolitan Council's decision, it can request administrative and judicial review as described later in this manual.

## **4.2 2006 Activities (Related to 2007 Surcharge Amounts)**

**4.2.1 Notification of 2007 Surcharge Amount:** MCES will send preliminary 2007 surcharge amounts to communities by July 15, 2006. The notification will inform the community of the 2007 surcharge amount that they will be billed monthly over the next five-year period (2007 through 2011). Upon receipt of the preliminary surcharge amount the community can either accept the surcharge amount or it can contest the surcharge amount.

**4.2.2 Contesting the 2007 Surcharges:** The community may contest the 2007 surcharge amount by submitting information to MCES for a surcharge adjustment. Surcharge adjustments must be based on one of the following:

- a) Peak flow mitigation expenses underway (described in 4.2.3)
- b) Mitigation charges more than necessary (described in 4.2.4)
- c) Surcharge amount exceeds 25% of its municipal wastewater charge (MWC) charges (described in 4.2.5)
- d) Application for credit for work to be done in 2007 with defined I/I project work (described in 4.2.6).
- e) Application for credit for work to be done in 2007 without specific projects defined (described in 4.2.7).

*Communities must submit 2007 surcharge adjustment information to MCES by September 15, 2006.*

**4.2.3 2007 Surcharge Adjustment Based on Peak Flow Mitigation Expenses Underway:** Communities can apply for an adjustment of the 2007 surcharge when they have expended funds on I/I mitigation after the occurrence of the peak flow event that their 2007 surcharge is based. An adjustment will be made if MCES determines the I/I mitigation expenses will likely reduce the community's excess maximum peak I/I within the metershed where the peak occurred.

**4.2.4 2007 Surcharge Adjustment Based on Mitigation Charges More Than Necessary:** Communities can contest the 2007 surcharge when a study by a registered professional engineer shows that MCES' computed I/I costs are more than necessary to remove **all** of the community's excess I/I.

**4.2.5 Annual Surcharge Amount Exceeds 25% of Annual MWC Charges:** Communities can request a deferral of any surcharge amount that exceeds 25% of its MWC. The amount of the surcharge in excess of 25% will be deferred under the following conditions:

- a) During 2007, the community must undertake an engineering study that includes a complete examination of the causes, the fixes, and the costs for mitigation of its excess peak I/I. The examination must be performed by a

registered professional engineer either on staff or through a consultant. A scope or project description must be submitted to MCES.

- b) In subsequent years, the community must submit the completed engineering study to MCES. MCES and the community must agree on the priority of the I/I mitigation projects with the understanding that eliminating inflow is the highest priority for MCES and the community must proceed in good faith to eliminate excess peak I/I by executing the fixes identified in the study.

Communities granted a 2007 surcharge adjustment under this section will have the end date of their surcharges extended until they have either eliminated their excess peak I/I or they have paid their entire IITC. (See example in Appendix F on page 22.)

**4.2.6 2007 Surcharge Adjustment Based on Community Submitting I/I Project Cost Eligibility Form indicating application for credit for work to be done in 2007:**

Communities can request a surcharge adjustment by submitting a completed *I/I Project Cost Eligibility Form* (see page 18) along with the necessary attachments to MCES. MCES will determine the eligibility of the proposed projects based on the information submitted. Partial eligibility may be granted for pipe lining or replacement projects, storm water projects and flood control projects when they are constructed to improve infrastructure, but may indirectly control inflow entering the sewer system.

The *I/I Project Cost Eligibility Form* must specify the percent of those project costs the community has determined are related to I/I mitigation. Communities that have credits applied to reduce 2007 surcharges must submit a *Surcharge Credit Verification Form* together with required supporting information to verify actual costs for completed I/I mitigations improvements to MCES by the end of March 2008. If the amount expended was less than the 2007 credits, the difference will be added to the 2009 year surcharges. If the amount expended was more than the 2007 credits, the difference will be credited against future surcharges.

**4.2.7 2007 Surcharge Adjustment Based on Community Submitting a Council or Board Resolution that approves an I/I reduction program that commits the community to spend funds in the amount of the 2007 surcharge (this form of credit is available in 2007 only):**

Communities can request a surcharge adjustment by submitting a City Council or Town Board Resolution that approves I/I spending that commits the community to spend funds to achieve the program. Communities that have credits applied to reduce 2007 surcharges must submit a *Surcharge Credit Verification Form* (see page 20) together with required supporting information to verify actual costs for completed I/I mitigations improvements to MCES by the end of March 2008. Credit will be given for expenditures related to work determined by MCES to be eligible for I/I reduction. Communities can call MCES to discuss their I/I program to determine if their proposed expenditures would be considered eligible. If the eligible amount expended

was less than the 2007 credits, the difference will be added to the surcharges imposed in 2009. If the amount expended was more than the 2007 credits, the difference will be credited against future surcharges.

**4.2.8 MCES Response to 2007 Surcharge Adjustments and Credits:** MCES will respond to a community's request for a 2007 surcharge adjustment and credits by November 15, 2006. If the community accepts the response from MCES, MCES will bill the community for its 2007 surcharge by December 15, 2006. If the community does not agree with the response from MCES, it must appeal by November 30, 2006. The community's appeal will be referred to MCES' General Manager who will render a decision by December 7, 2006. If the community accepts the decision, they will be billed for their 2007 surcharges by December 15, 2006 based on the General Manager's decision. If a community disagrees with the decision, it can request administrative and judicial relief as described later in this manual. The community's 2007 surcharge amount will be based on the community's claim and MCES will bill the community for these 2007 surcharges by December 15, 2006. After the dispute resolution process is completed, MCES will reconcile the community's surcharges to reflect the result of any changes resulting from the dispute resolution.

#### **4.3 2007 Activities (Related to the 2007 Surcharge Amounts)**

**4.3.1** Communities must pay 2007 final surcharges in equal monthly installments. These surcharges will be added to the regular monthly Municipal Wastewater Charges (for volume) bills.

**4.3.2** Communities may submit a completed *I/I Project Cost Eligibility Form* along with the necessary attachments to MCES for pre-approval of eligibility of I/I work for which a 2008 rebate will be sought. Communities should call MCES to discuss what attachments will be necessary. MCES will determine the eligibility of the proposed projects based on the information submitted. Partial eligibility may be granted for pipe lining or replacement projects, storm water projects and flood control projects when they are constructed to improve infrastructure, but may indirectly control inflow entering the sewer system. The *I/I Project Cost Eligibility Form* must specify the percent of those project costs the community has determined are related to I/I mitigation. The *I/I Project Cost Eligibility Form* can be submitted any time during the year, but each community can only submit a form one time during 2007. MCES will determine eligibility of projects and costs within 45 days. If MCES determines that some or all of the costs are ineligible, the community can appeal the determination. MCES will follow an amicable dispute resolution process and if necessary, an independent arbiter will be utilized to reach a final decision.

#### **4.4 2008–2011 Activities (Related to 2007 Surcharge Amounts)**

Communities can submit a completed *I/I Project Cost Eligibility Form* along with the necessary attachments to MCES for a rebate of prior-year surcharges for eligible work completed. Communities can call MCES to discuss what attachments will be

necessary. MCES will determine the eligibility of the work completed based on the information submitted. Partial eligibility may be granted for pipe lining or replacement projects, storm water projects and flood control projects when they are constructed to improve infrastructure, but may indirectly control inflow entering the sewer system. *The I/I Project Cost Eligibility Form* must specify the percent of those project costs the community has determined are related to I/I mitigation. The *I/I Project Cost Eligibility Form* can be submitted any time during the year, but each community can only submit a form once a year. MCES will determine eligibility of projects and costs within 45 days and will mail a rebate check to the community within 30 days after determining eligibility. If MCES determines that some or all of the costs are ineligible, the community can appeal the determination. MCES will follow an amicable process and if necessary, an independent arbiter will be consulted for a final decision.

## **4.5 2008–2011 Surcharges**

**4.5.1** The 2007 surcharge must be paid each year until the full IITC (as potentially adjusted) has been paid. New surcharges, in 2008 through 2011, will be imposed only if higher I/I peak events are determined to have occurred. Increased surcharges will be determined based on the previous years' corresponding higher I/I peak events (e.g. billing year 2008 corresponds to peaks during the period beginning July 1, 2006 to June 30, 2007).

**4.5.2** In 2008–2011 new surcharges will be applied as follows:

- a) A surcharge imposed in 2008 will be billed on the incremental IITC over 48 months; a Surcharge imposed in 2009 will be billed on the incremental IITC over 36 months; a Surcharge imposed in 2010 over 24 months; and a Surcharge imposed in 2011 over 12 months.
- b) The Exceedance Rate will be increased for inflation each year, using the most recently available Consumer Price Index-Urban area (CPI-U) for the Region, as published by the federal Bureau of Labor Statistics. The Council may also increase or decrease the rate based on subsequent engineering analysis that determine materially different average costs.
- c) The Maximum Excess I/I Peak Flow Event in each metershed will be the increment over the Maximum event previously used to assess surcharges, if any. If there were no prior Surcharges, fees will be based on the entire peak flow event (the excess portion of the I/I).
- d) If credits (see Sections 4.2.5 and 4.2.6) applied in the previous year exceed the full amount actually expended in the year for eligible I/I mitigation, the unspent portion will be added to subsequent surcharges in the calendar year following determination that this occurred.

**4.5.3 Notification of 2008–2011 Surcharge Amounts:** MCES will send preliminary surcharge amounts to communities by July 15 of each year. The notification will inform the community of its following year surcharge amount that will be billed monthly over the remaining period of the surcharge program. Upon receipt of the preliminary surcharge amount the

community can either accept the surcharge amounts or it can contest the surcharge amount.

**4.5.4 Contesting Surcharges:** The community can contest the surcharge amount by submitting information to MCES for a surcharge adjustment. Surcharge adjustments must be based on one of the following:

- a) Peak flow expenses (described in 4.5.4)
- b) Mitigation charges more than necessary (described in 4.5.5)
- c) Surcharge amount exceeds 25% of its municipal wastewater charge (MWC) charges (described in 4.5.6)

Communities must submit surcharge adjustment information to MCES by September 15 of each year.

**4.5.5 Surcharge Adjustment Based on Peak Flow Expenses:** Communities can appeal their surcharge when they have expended funds on I/I mitigation after the peak flow event their surcharge is based on occurred. An adjustment will be made if MCES determines the I/I mitigation expenses will likely reduce the community's excess peak I/I.

**4.5.6 Surcharge Adjustment Based on Mitigation Charges More Than Necessary:** Communities can appeal the surcharge when a study by a registered professional engineer shows that MCES' computed I/I costs are more than necessary to remove **all** of the community's excess, maximum peak I/I.

**4.5.7 Surcharge Amount Exceeds 25% of MWC Charges:** Communities can request a deferral of any surcharge amount that exceeds 25% of its MWC. The amount of the surcharge in excess of 25% will be deferred as follows:

At the time this adjustment is requested, the community must submit the completed engineering study to MCES. MCES and the community must agree on the priority of the I/I mitigation projects with the understanding that eliminating inflow is the highest priority for MCES and the community must proceed in good faith to eliminate excess peak I/I by executing the fixes identified in the study.

Communities granted a surcharge adjustment under this section will have the end date of their surcharges extended until they have either eliminated their excess peak I/I or they have paid their IITC.

**4.5.8 MCES Response to Surcharge Adjustments:** MCES will respond to a community's request for a surcharge adjustment by November 15, of each year. If the community accepts the response from MCES, MCES will bill the community for its surcharge by December 15 of each year. If the community does not agree with the response from MCES, it must appeal the response by November 30 of that year. The community's appeal will be referred to MCES' General Manager who will render a decision by December 7 of that year. If the community accepts the General Manager's decision, they will be billed for their surcharges by December 15 of that year based on the decision. If a community disagrees with the decision, it can request dispute resolution

as described later in this manual. The community's surcharge amount will be based on the community's claim and MCES will bill the community for these surcharges by December 15 of that year.

## 4.6 Use of Funds

The Council will keep community-specific accounts for all surcharge funds. Rebates of funds to each community's account may be made only to the community that paid the rebated amount.

- 4.6.1** A community may receive a rebate for I/I work by demonstrating, subject to the discretion of MCES, that it has spent funds either on applicable I/I mitigation work or for private I/I mitigation. Private I/I mitigation must be certified by the city and will be rebated at a standard rebate amount established by MCES for the type of mitigation completed. The Community must submit an *I/I Project Cost Eligibility Form*, along with required supporting information.
- 4.6.2** MCES will rebate all remaining funds in a community's account for successful elimination of I/I if in 2012, 2013 or 2014 a community achieves a three-year record with no excess I/I events measured. The community must certify that it believes the excess I/I generated within its jurisdiction has been eliminated (e.g., to qualify for this rebate in 2012, the community would have had no events from calendar years 2009–2011).
- 4.6.3** In 2015 or thereafter, MCES may use any remaining funds in its I/I surcharge accounts for I/I mitigation work anywhere within the MDS.

## 4.7 Dispute Resolution

If a community disagrees with the Metropolitan Council's decision on either its peak flow or surcharge appeal, the community may contest the Council's determination as follows:

- 4.7.1** The community must request, a hearing, in writing, within 90 days of receiving notice of the Council's final determinations.
- 4.7.2** The community must specify in its request for a hearing, the determinations with which it disagrees and its position with regard to those determinations.
- 4.7.3** The Council will grant a hearing, and the hearing must be conducted by the State Office of Administrative Hearings in the manner provided for contested cases.
- 4.7.4** The subject of the hearing is limited to those Council determinations for which the community requested a hearing in its written request.
- 4.7.5** Charges of the State Office of Administrative Hearings will be divided equally between the Council and the community who requested the hearing. Other than the charges for the State Office of Administrative Hearings, each party is responsible for its own expenses in the proceeding.

**4.7.6** Any party to the contested case proceeding who is aggrieved by the final decision may make a judicial appeal in the manner provided for contested cases.

After the dispute resolution process is completed, MCES will reconcile the community's surcharges to reflect the result of any changes resulting from the dispute resolution. During the dispute resolution process, MCES will bill the surcharge based on the community's claims.

## APPENDICES

### Appendix A: Definitions

**CPI-U:** Consumer Price Index—Urban as published by the U.S. Department of Labor (see web site: <ftp://ftp.bls.gov/pub/special.requests/cpi/cpiiai.txt>).

**Demand Charge:** A demand charge is the amount that MCES will charge a community (starting in 2013) for the cost of excess capacity needed by MCES, because of the community's excessive I/I. The charge is not a penalty; it is based on MCES' cost of service for providing improvements that were the community's responsibility. See *Water Resources Management Policy Plan*, page 40.

**Design Average Flow:** The design average flow is calculated as the product of the developable area of the long-term service area times 800 gallons per acre per day. This value represents an annual average flow from a service area at long-term development.

**Design Peak to Average Flow Ratio:** The ratio of the peak hour flow used for hydraulic design divided by the design average flow. MCES has adopted a table (Attachment No. 1) that identifies the Design Peak to Average Ratio to be used for ranges of design average flows.

**Diurnal Peak:** Typical peak flows during a 24 hour period in dry weather conditions. There will be two typical (a.m. and p.m.) peaks in a 24 hour period.

**EPA:** Environmental Protection Agency

**Exceedance Rate:** The charge per mgd of excessive I/I based on the amount of discharge during wet weather events the Council will set this rate annually. Using \$3000/connection as the average cost to disconnect an illegal connection, the estimated exceedance cost of \$350,000 per million gallons per day (mgd) was developed and adopted.

**Excess I/I:** I/I that results in wet weather flows that exceed MCES' established I/I goals for the community.

**gpm:** Gallons per minute

**gpcd:** Gallons per capita per day

**I/I:** Inflow and Infiltration is that component of sanitary sewage flow that originates from clear water connections, i.e., sump pumps and foundation drains, stormwater entering manholes and groundwater entering through pipe joints and cracks. It is water that would normally not require any type of treatment. However, once it is co-mingles with sanitary wastewater it cannot be separated, and must be treated along with the sanitary wastewater.

**I/I Event:** A wet weather time period when excessive I/I is monitored within the sanitary sewer system.

**I/I Goal:** The I/I goal is the product of the daily average of the previous three-year annual flow and the peak hour flow variation factor adopted by the Metropolitan Council for the design of the MDS.

**IITC:** The Inflow/Infiltration Total Cost for each community. See computation of surcharge on page 4.

**I/I Tool Box:** An MCES guide book of tools and resources to assist communities planning and implementing Inflow and Infiltration Programs. (See the Council website: <http://www.metrocouncil.org/environment/ProjectTeams/I-I-Home.htm>)

**Infiltration:** The seepage of groundwater into sewer pipes through cracks or joints in the pipes.

**Inflow:** 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

**Lateral:** The small sewer pipe from buildings to the city sewers in the street.

**MDS:** Metropolitan Disposal System; wastewater facilities owned and operated by the Metropolitan Council.

**mgd:** Million gallons per day

**MPCA:** Minnesota Pollution Control Agency

**Max Excessive I/I Peak Flow Event:** Maximum one hour wet weather exceedance rate of flow measured for a community. The exceedance rate is only the rate of flow in excess of the allowed design peak to average flow ratio.

**Metershed:** The area tributary to an MCES flow meter. Some communities have multiple metersheds.

**NPDES:** National Pollutant Discharge Elimination System.

**Potential Peaking Event:** The amount of flow (usually quoted in mgd) that would have exceeded allowable flow (based on the Design Peak to Average Flow Ratio), had an observed peak flow occurred at the diurnal peak (of the normal dry weather flow cycle) instead of when it actually occurred.

**SDS:** State Disposal System

**Sewershed:** The area tributary to each connection point to the MCES interceptor system.

**Surcharge:** A contingent charge to a local government unit for estimated improvement costs to the MDS to add capacity taken up by excessive I/I.

**WWTP:** Wastewater Treatment Plant

## Appendix B: I/I Project and Cost Eligibility Form

Application for 2007 Credit       Application for 2008 Rebate

This form should be completed by communities requesting a credit for work to be done in 2007 checking the box "Application for Credit". Communities requesting a rebate of eligible expenses should check the box, "Application for Rebate". When approved credits exceed the surcharge amount, the surcharge bill from MCES will be eliminated. Send completed form(s) to:

**Mail:**      Manager, Municipal Services  
              390 N. Robert Street  
              St. Paul, MN 55101

**Fax:**      Attn: Manager, Municipal Services  
              (651) 602-1030

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**Community:** \_\_\_\_\_

**2007 I/I Work (planned or actual expenditures):**      \$ \_\_\_\_\_

- a) **Public Facility Work:** Attach detailed description of the 2007 I/I reduction work. Itemize the type of work to be completed in 2007 or actually completed in 2007 on the public sanitary sewer system, and the estimated or actual costs. MCES may request additional documents to verify actual or planned expenditures. Include the percent of each project that is related to I/I mitigation.

**Summary of Costs:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- b) **Private Property Work:** For Credit, attach a detailed description of the Community's inspection program for broken service laterals and illegal connections of sump pumps or passive drain tile(s). Or for a **rebate** of prior-year expenditures, attach a detailed list itemizing the location and repairs made on private properties within the community.

\_\_\_\_\_ **Sump pump disconnections:** \$150 per dwelling = \$ \_\_\_\_\_

\_\_\_\_\_ **Foundation drain disconnections:** \$3,000 per building = \$ \_\_\_\_\_

\_\_\_\_\_ **Rain leader disconnections:** \$100 per single family dwelling = \$ \_\_\_\_\_

\_\_\_\_\_ **Rain leader disconnections:** \$3,000 per commercial dwelling = \$ \_\_\_\_\_

\_\_\_\_\_ **Service lateral repairs:** \$5,000 per repair = \$ \_\_\_\_\_

**Describe Other Work:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Total estimate or actual for the time period noted above:** \$ \_\_\_\_\_

City or Township Official/Title: \_\_\_\_\_

Date Signed: \_\_\_\_\_ Phone #: \_\_\_\_\_

## Appendix C: Eligible Work Under the I/I Program

### 1) I/I Study

- a. Flow Monitoring
- b. Field Investigations for Inflow sources.
- c. Closed Circuit TV Inspection
  1. Trunks
  2. Laterals
  3. Service Laterals
- d. System Modeling
- e. System Analysis and Work Prioritization
- f. Cost Estimating of Reduction Program

### 2) Public Sector Improvements (Full Credit)

- a. Elimination of cross connections between storm sewers and sanitary sewers.  
Redirecting catch basins from sanitary sewer to storm sewer.
- b. Elimination of yard drains and drain tile connected to the sanitary sewer.
- c. Replacement of manhole covers that have drain holes with sealed covers.
- d. Placement of watertight manhole covers in areas vulnerable to high water levels.
- e. Chimney seals and manhole sealing
- f. Raising of manholes in areas where surface water ponds over manholes.
- g. Moving manholes outside of wet lands and realigning sewer.
- h. Placement of drain tile behind curbs to provide a discharge point for building sump pumps and foundation drains.

### 3) Public Sector Improvements (Partial Credit)

The following improvements are primarily intended to eliminate some infiltration from the sanitary sewer system while also extending the life expectancy of the sewer system. The Community receives a payback based on reduced wastewater treatment costs of clear water and extended structural life of the sewer system. The surcharge program is aimed primarily at peak inflow into the sanitary sewer system. Thus the MCES will allow only partial credit for this work. (\$350-500 per gpm of infiltration eliminated)

- a. Joint sealing
- b. Pipe lining
- c. Line replacement

### 4) Private Sector Improvements

- a. Inspections costs looking for sump pumps, drain tile, yard drains and roof leaders illegally connected to the sanitary sewer.
- b. TV inspection of service laterals
- c. Disconnection of sump pumps, drain tile, and roof leaders from the sanitary sewer system.
- d. Repair or replacement of broken service laterals.

## Appendix D: Surcharge Credit Verification Form

Complete this form and its attachments to assure MCES that the community has spent the surcharge equivalent on applicable projects, approved by MCES, during the calendar year 2007. To receive payment, send the completed form to:

**Mail:** Manager, Municipal Services  
390 N. Robert Street  
St. Paul, MN 55101

**Fax:** Attn: Manager, Municipal Services  
(651) 602-1030

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**Community:** \_\_\_\_\_

**Calendar Year in which Work was Performed:** \_\_\_\_\_

**Was the work pre-approved by MCES?**  **Yes** (Attach MCES letter)  **No**

**a) Public Facility Work:** Attach a detailed breakdown of actual expenditures for the municipal system I/I program. Include only amounts actually paid during the calendar year. MCES may request additional documentation to verify expenditures. Include the percent of each projects costs that are related to I/I mitigation:

**Summary of Costs:** \_\_\_\_\_

\_\_\_\_\_

**b) Private Property Work:** Attach a detailed list itemizing the locations and repairs made on private properties within municipal borders. Summarize the type of repairs and applicable costs using the list below:

\_\_\_\_\_ **Sump pump disconnections:** \$150 per dwelling = \$ \_\_\_\_\_

\_\_\_\_\_ **Foundation drain disconnections:** \$3,000 per building = \$ \_\_\_\_\_

\_\_\_\_\_ **Rain leader disconnections:** \$100 per single family dwelling = \$ \_\_\_\_\_

\_\_\_\_\_ **Rain leader disconnections:** \$3,000 per commercial dwelling = \$ \_\_\_\_\_

\_\_\_\_\_ **Service lateral repairs:** \$5,000 per repair = \$ \_\_\_\_\_

**Describe Other Work:** \_\_\_\_\_

\_\_\_\_\_

**Total claimed for** \_\_\_\_\_ **(calendar year):** \$ \_\_\_\_\_

City or Township Official/Title:

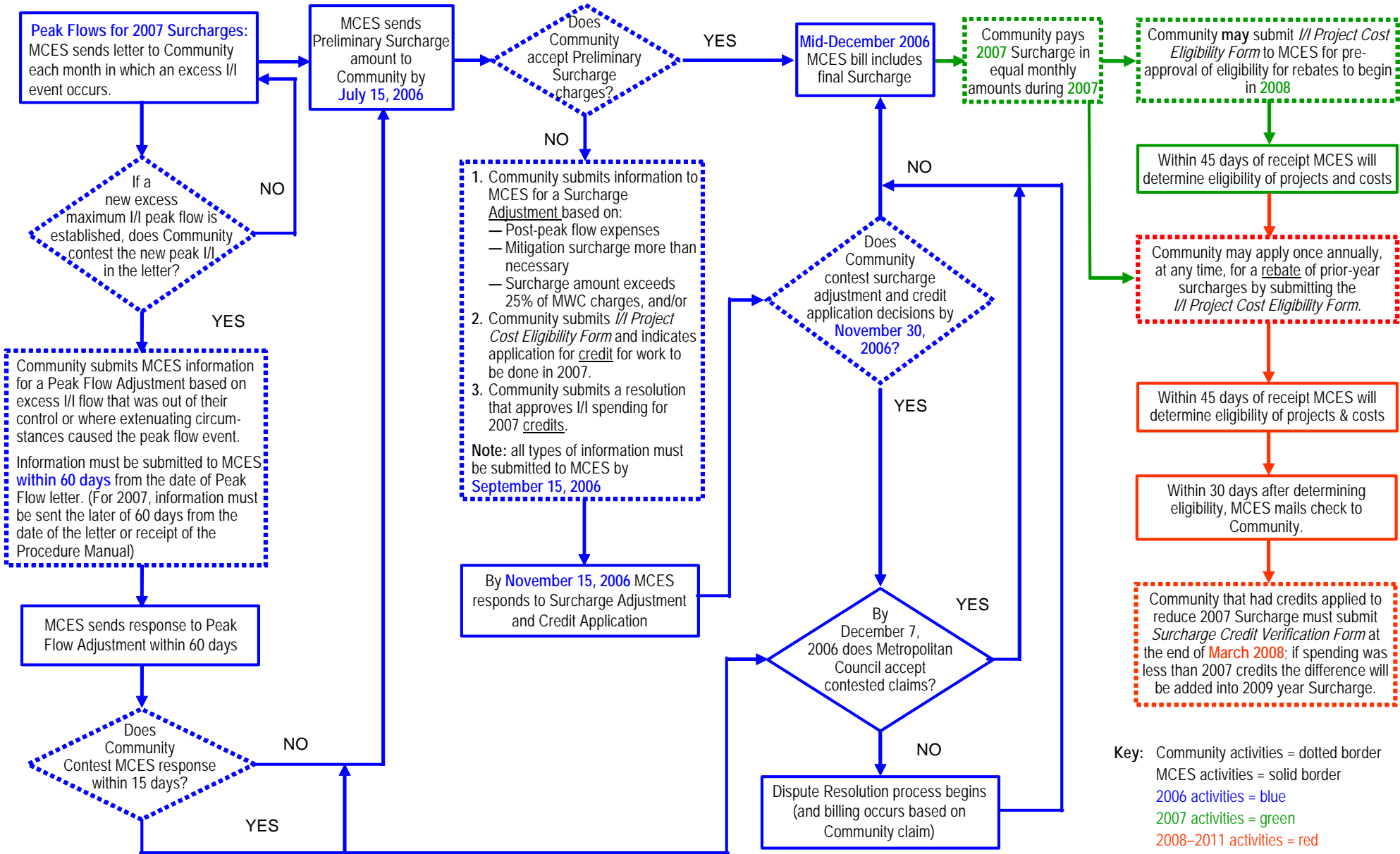
\_\_\_\_\_

Date Signed: \_\_\_\_\_ Phone #: \_\_\_\_\_

**Amount Eligible: \$** \_\_\_\_\_

MCES USE ONLY

### Appendix E. Flow Chart of 2007 Surcharges



Key: Community activities = dotted border  
 MCES activities = solid border  
 2006 activities = blue  
 2007 activities = green  
 2008-2011 activities = red

## Appendix F. Questions and Answers (Q&A)

**Question 1:** Community has just (summer 2006) engaged a consultant to investigate the source of the I/I and what mitigation projects to pursue. In addition, the community wants to avoid the surcharge/rebate scenario by spending its own funds. Will MCES accept this arrangement?

**Answer:** Yes, the community can make a “generic” commitment to the 2007 spending on I/I mitigation and receive credits to offset the surcharge (see section 4.2.7 on page 10). However, the community risks that costs incurred may be ineligible, in which case, MCES would add the unspent I/I amount into subsequent year surcharges.

**Question 2:** MCES’ computed preliminary surcharge is a financial hardship. Can the community defer some of the surcharge to later years?

**Answer:** The deferral adjustment is only permitted when the annual surcharge exceeds 25% of the annual MWC from MCES, and is also subject to other conditions listed in section 4.2.5. An example of the mathematics of the 25% deferral follows:

Year	Surcharge Total	Surcharge/ MWC	25% Cap	Potential Deferral
2007	\$ 100,100	17.2%	\$145,750	\$ -0-
2008	254,900	42.0%	151,750	103,150
2009	273,400	43.3%	157,750	115,650
2010	273,400	41.7%	164,000	109,400
2011	<u>273,400</u>	40.1%	170,500	<u>102,900</u>
	\$1,175,200			\$431,100
2012	\$ 431,000		\$177,320	\$253,780
2013	\$ 253,780		\$184,413	\$ 69,367
2014	\$ 69,367			\$ -0-

**Question 3:** If a study shows that a community can reduce the I/I for less than the IITC, how does it get the surcharges reduced?

**Answer:** The study must be by a registered engineer and must purport to eliminate ALL excess I/I. The study should be submitted to MCES before September 15. If MCES agrees (by November 15), the IITC and annual surcharges will be reduced.

**Question 4:** If a community wishes to fix all its excess I/I within a 2-year period, can it avoid the surcharges?

**Answer:** If the work begins in 2007 (in an amount greater than the surcharge), then yes. If the work begins later, MCES will apply the surcharge in 2007 and the community can receive a rebate after the work is completed for the 2007 surcharge.

**Question 5:** If the community does work equal to all surcharges, will it avoid the demand charge in 2013?

**Answer:** Maybe not. The credits and rebates are intended as incentive for the city to work on I/I projects. However, MCES can make no assurance that this spending level is enough to eliminate all excess I/I. In 2013, the demand charges will be based on actual measured excess I/I with no regard to whether the community has made efforts at mitigation. The demand charge is a cost of service for the capacity demanded at that point. Communities wishing to avoid the demand charge will need to make their own determination of the projects and costs necessary to completely eliminate all excess I/I.

**Question 6:** A community started mitigating I/I in 2004. Are these expenses eligible for credits?

**Answer:** The IITC will be lowered if MCES determines that the work would have contributed to lowering the measured maximum peak flow that is the basis of the surcharges (see section 4.2.3 on page 9).