

August 31, 2001

Ms. Linda Murphy
Director, Office of Ecosystem Protection
Office of Ecosystem Protection
U.S. Environmental Protection Agency New England
P.O. Box 8127
Boston, MA 02114

Mr. Glenn Haas
Acting Assistant Commissioner
Bureau of Resource Protection
Department of Environmental Protection
One Winter Street
Boston, MA 02108

RE: Massachusetts Water Resources Authority Permit Number MA0103284

Dear Ms. Murphy and Mr. Haas:

In compliance with the requirements of MWRA's NPDES Permit MA0103284 - Part I, Item 18.bb (ii) "Infiltration/Inflow" (page 28 of 32), please find the enclosed Attachments:

Attachment 1 – An update on MWRA's Regional Infiltration/Inflow (I/I) Reduction Plan (page 2);

Attachment 2 – A list of actions take by the Authority in the past fiscal year (July 2000-June 2001) to reduce I/I tributary to the MWRA-owned regional interceptor system (pages 3 and 4);

Attachment 3 – A summary report on the status of I/I Reduction within each MWRA member sewer community (pages 5-27);

Attachment 4 – Estimates of MWRA member sewer community wastewater flow components that are compiled in a spreadsheet "2000 MWRA Community Wastewater Flow Component Estimates" (page 28).

Should you require additional information, please contact Carl H. Leone, Senior Program Manager, Community Support Program at (617) 788-4356.

Sincerely,

Michael J. Hornbrook
Chief Operating Officer

cc: Eric Hall, US EPA
DEP – NERO, Wilmington

DEP-Regulatory Branch, Boston
Steven Lipman, DEP, Boston Harbor

Coordinator

Richard Chretien, DEP, NERO

Grace Bigornia-Vitale, NPDES

Coordinator

Carl H. Leone, Community Support Program

ATTACHMENT 1

MWRA REGIONAL I/I REDUCTION PLAN

Reporting Period: July 2000 through June 2001

The MWRA Board of Directors approved the updated Regional Infiltration/Inflow (I/I) Reduction Plan on May 23, 2001 and authorized staff to submit the Plan to EPA and DEP as required under MWRA's NPDES Permit. The plan was submitted to EPA and DEP under cover letter dated June 29, 2001. The updated Regional I/I Reduction Plan combines recommendations from the I/I Task Force Report (March 2001) with ongoing MWRA I/I reduction initiatives. The updated plan replaces the Authority's 1990 I/I Reduction Policy. Implementation of the Regional I/I Reduction Plan focuses on the cooperative efforts of member communities, DEP, EPA and MWRA to develop and implement I/I reduction and sewer system rehabilitation projects. Per the NPDES Permit, MWRA is awaiting review and approval of the Regional I/I Reduction Plan from EPA and DEP.

Under the updated plan, MWRA has full legal and fiscal responsibility for implementation of operation, maintenance, and I/I reduction programs for the MWRA-owned interceptor system. Each member community retains full legal and fiscal responsibility for implementation of operation, maintenance and I/I reduction programs for community-owned sewers. MWRA will provide technical and financial assistance to member communities and work cooperatively with DEP, EPA and other stakeholders to help solve local and regional sewer problems. MWRA's Regional I/I Reduction Plan is organized into five major goals:

1. MWRA will continue its current operation and maintenance program for the MWRA-owned interceptor system leading to the identification, prioritization and rehabilitation of structural and I/I problems.
2. MWRA will work cooperatively with member communities, DEP and EPA to eliminate sewer system backups into homes and other buildings and to minimize health and environmental impacts of SSOs related to I/I.

3. MWRA will work cooperatively with member communities, DEP and EPA to reduce I/I in the regional collection system with emphasis on the following: (1) inflow reduction in areas tributary to sewer backups and SSOs, (2) private source inflow reduction, (3) infiltration that may impact groundwater or surface water resources, and (4) excessive infiltration as defined in DEP regulations or guidance documents.
4. MWRA will work cooperatively with member communities, DEP and EPA to expand existing efforts to educate and involve the public regarding regional sewer backup, SSO and I/I reduction issues.
5. MWRA will provide technical assistance and work cooperatively with member communities, DEP and EPA regarding guidance on local operation and maintenance and capital improvement programs intended to provide a reasonable level of sewer service to local sewer users/ratepayers.

Details of each of the five goals and implementation schedules are presented in the updated Regional I/I Reduction Plan – Interim Final, June 2001.

ATTACHMENT 2

MWRA ACTIONS TAKEN TO REDUCE I/I Reporting Period – July 2000 Through June 2001

The MWRA Field Operations Department's Technical Inspection program staff have internally inspected approximately 71 miles of Authority-owned interceptors and approximately 9 miles of community-owned sewers, and physically inspected about 1250 sewer manholes during the past twelve months. During the internal inspection process, problems such as physical defects, infiltration, sediment, grease deposits, etc. are noted and stored in MWRA's electronic maintenance database. Problems identified during TV inspection of pipelines and physical inspection of manholes are referred to engineering staff for follow-up review. Significant physical defects and infiltration/inflow sources found through pipeline and manhole inspections are reviewed for cost-effective repair.

The MWRA is undertaking a number of projects to rehabilitate portions of Authority-owned interceptors. Updates on these projects are included below.

1. MWRA's Section 17.5 Sewer Rehabilitation Contract in Everett has been completed. Rehabilitation of 125 feet of 56 x 62-inch brick sewer was completed in August 2001. The project provided a spot repair to replace a section of pipeline with severe physical defects and significant infiltration.
2. MWRA's Wellesley Extension Sewer Replacement (WESR) Project (Contract 8) will provide for the relining of about 3.6 miles of 54 and 60-inch reinforced concrete WESR in Needham and Dedham. This project is in the initial construction stage and is primarily intended to minimize future sewer corrosion.

3. MWRA's Framingham Extension Relief Sewer Project (Contract 5) will provide for the rehabilitation of about 3 miles of 42 and 48-inch concrete pipe within the Framingham Extension Sewer (FES) in Natick and Dover. This \$12 million project began construction in October 2000 with an anticipated completion date of August 2002. This work will reduce infiltration entering the FES system.
4. A contract has been awarded for the rehabilitation of the West Roxbury Tunnel which involves sliplining of approximately 1000 feet of 84-inch pipe (Sewer Section 138) and rebuilding of the drop chamber (Sewer Section 137). Notice to proceed was issued during June 2001.
5. MWRA's Braintree/Weymouth Relief Facilities Project includes rehabilitation of approximately 2000 feet of 60 x 57-inch interceptor within Section 124 in Weymouth. This portion of sewer is severely deteriorated and contributes significant infiltration. This project is expected to reach 100 percent design in September 2001.
6. MWRA's Upper Neponset Valley Sewer Project is intended to provide hydraulic relief to Sewer Sections 26, 27, 28, 29, and 30 located in Newton and West Roxbury, serving West Roxbury, Newton, Brookline and Dedham. As an outcome of this project, I/I and periodic sewer system overflows will be reduced. This project is in the preliminary design stage.
7. MWRA's Cummingsville Replacement Sewer Project is intended to provide hydraulic relief through replacement of about 1 mile of Sewer Section 47 and rehabilitation of about 1 mile of Sewer Section 86 in Winchester. As an outcome of this project, I/I and periodic sewer system overflows will be reduced. This project is on hold pending issue resolution raised by the Town of Winchester.
8. MWRA's Chelsea Branch Sewer and Revere Extension Sewer Rehabilitation Project (Contract 6370) will provide for the rehabilitation of approximately 9270 feet of 30 to 54-inch sewer interceptor. Located in Chelsea, the interceptor serves the communities of Everett, Chelsea and Revere. Bids were received in May 2001. The contract was awarded in August 2001.
9. MWRA's Mill Brook Relief Sewer Project includes rehabilitation of approximately 4,125 feet of sewer section 93A in Lexington. The sewer serves Lexington and Bedford. As an outcome of this project, I/I will be reduced. This project is in the conceptual design stage. A notice to proceed is scheduled for May 2003.
10. MWRA's East Boston Branch Sewer Relief Project will provide for the replacement or rehabilitation of approximately 24,750 feet of existing sewer. The Design Phase Notice to Proceed was issued in March 2000. Construction is scheduled to begin March 2003.
11. MWRA's South Charles River Valley Sewer Project will provide for the rehabilitation of 5,150 feet of 54 x 61.5-inch brick sewer. The pipe will be

rehabilitated using a cured-in-place pipe liner. The project will go to bid during the fall 2001. A Notice to Proceed is anticipated for January 2002. Sewer rehabilitation expected to be completed September 2002.

12. MWRA's Combine Sewer Overflows (CSO) Program includes a number of projects that will provide for the separation of sanitary sewer and stormwater flows. These projects will reduce stormwater inflow to the collection system. Details of MWRA's CSO Control Plan are reported under the requirements of NPDES Permit – Part I, Item 19. Long-term CSO Control Plan.

ATTACHMENT 3

MWRA NPDES PERMIT - I/I STATUS UPDATE FOR MEMBER COMMUNITIES REPORTING PERIOD: 7/00 THROUGH 6/01

The MWRA is working cooperatively with member communities to develop phased I/I reduction programs and ensure uniformity in the programs throughout the service area. The Authority will encourage continuing community efforts in I/I reduction as detailed in the MWRA Regional I/I Reduction Plan (Attachment 1). Many community I/I projects are funded through MWRA's I/I Local Financial Assistance Program. The program was established to provide funding to sewer communities to perform I/I reduction and sewer system rehabilitation projects within their locally-owned collection systems. Following recommendations from the Advisory Board, the Board of Directors has approved a total program budget of \$140.75 million. The funds are allocated among the 43 MWRA sewer communities based on respective shares of overall MWRA wholesale sewer charges. Phase 1 and 2 funds (total of \$63.75 million) were distributed for approved projects as a 25 percent grant and a 75 percent interest-free loan. The grant/loan split was revised for distribution of the Phase 3 and 4 funds (total of \$77 million) to a 45 percent grant and a 55 percent interest-free loan. The loan portion is repaid to MWRA over a five-year period beginning one year after the date the funds are distributed.

The Authority has instituted a computer-based questionnaire format for communities to comply with required annual I/I reporting. All 43 member sewer communities have submitted

the latest I/I status report summary, which have been summarized in the following paragraphs.

1. ARLINGTON: North System

Background Information:

- Miles of Sewer: 106 Sewered Population: 43,612 Three Year ('96-'98) Annual Average I/I: 3.74 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: East End Sewer Main Study. April 2001
- Private Source Inflow Removal Program: Using funds from the MWRA I/I Local Financial Assistance Program, the Town has compiled a final report prioritizing all known inflow sources within a SSES study area.
- I/I Rehabilitation Projects in Design or Construction: Main line inspections performed in utility construction and roadway rehabilitation areas. Ongoing service line CCTV inspections in suspected problem areas.

Reporting Period Activity – Summer St. sewer rehabilitation, July 01. Since this project was done in advance of a roadway reconstruction project, no analysis of I/I reduction was performed. Some reduction in I/I should be realized due to repairs performed.

MWRA I/I Local Financial Assistance Program: The community has financed seven (7) I/I reduction projects through the Authority's funding assistance program. Of the \$1,950,700 allotted through the Program's Phases 1-3, the community has \$673,500 remaining in funding assistance. The community is also using the MMDT accrued interest (approximately \$75,000) to partially fund Summer Street sewer rehabilitation project.

2. ASHLAND: South System

Background Information:

- Miles of Sewer: 43 Sewered Population: 8,023 Three Year ('96-'98) Annual Average I/I: 0.32 mgd
- Massachusetts DEP Administrative Order: No. 594 Issued on November 7, 1985.
- Latest I/I or SSES Report: I/I Investigation and Repair 2001 (Sub-Basins I & II)
- Private Source Inflow Removal Program: The town will be doing I/I removal from homes and businesses in Sub-Basin I this calendar year.
- I/I Rehabilitation Projects in Design or Construction: Both the Douglas Road and Metcalf Avenue sewer rehabilitation projects have been completed with an estimated I/I removal of 60,000 gallons. 1560 linear feet of 18" sewer and a siphon in Framingham are to be replaced.

Reporting Period Activity - In the last year, 160,000 gallons of I/I have been removed by the Developer Flow Reduction Program. Chestnut Street Pump Station rehabilitation/upgrade construction began Spring 2000 and is scheduled for completion in December 2001. Fiske Hill Estates, Harvard Estates, Workman's Circle, Apple Ridge, Oregon Heights, Signature Estates, Orchard II and Cookingham/Green sub-divisions are all under construction.

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. Of the \$403,500 allotted through the Program's Phases 1-3, the community has \$46,000 remaining in funding assistance.

3. BEDFORD: North System

Background Information:

- Miles of Sewer: 68 Sewered Population: 11,625 Three Year ('96-'98) Annual Average I/I: 1.86 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: I/I Study, May 2000
- Private Source Inflow Removal Program: No additional inspections were reported this period.
- I/I Rehabilitation Projects in Design or Construction: The new Polysonic transit time flow meter that was installed at the Great Road Pumping Station is presently being studied by the Town, as well as the MWRA. The Town has submitted a MWRA I/I Local Financial Assistance Application for the rehabilitation design/construction to eliminate private inflow sources at Dunster Road.

Reporting Period Activity – The flow monitoring and SSES study which commenced in December 1996 has been completed and report approved by MWRA in May 2000. Design work by Guertin & Assoc. to replace 3,500 ft. of sewer in Hartwell Road is complete.

MWRA I/I Local Financial Assistance Program: The community has financed one (1) I/I reduction project through the Authority's funding assistance program. Of the \$772,400 allotted through the Program's Phases 1-3, the community has \$583,800 remaining in funding assistance.

4. BELMONT: North System

Background Information:

- Miles of Sewer: 78 Sewered Population: 23,539 Three Year ('96-'98) Annual Average I/I: 3.32 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: SSES, Phase II Final, April 1988
- Private Source Inflow Removal Program: FS&T is presently performing home inspections on over 300 properties to determine the extent of sump pump connections to the Town's sanitary sewer system.
- I/I Rehabilitation Projects in Design or Construction: FS&T is preparing final design plans for connecting homes to the town's storm drain system and anticipates advertising for bids in the fall. This project will remove approximately 1,165,000 gpd of maximum daily inflow from the existing sewer.

Reporting Period Activity – The town has developed, and is working to implement, a program where developers would either remove I/I at a rate of 5:1 or make a one time payment to the town to fund I/I removal work by the town. The three developers at the McLean Hospital site have formally agreed to participate in this program.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$1,167,400 of funding assistance.

5. BOSTON: North and South Systems

Background Information:

- Miles of Sewer: 840 Sewered Population: 557,836 Three Year ('96-'98) Annual Average I/I: 53.29 mgd
- Massachusetts DEP Administrative Order: None (Cooperative agreement exists)
- Latest I/I or SSES Report: SSES, February 1989
- Private Source Inflow Removal Program: A Private Sector Inflow Survey has been initiated in West Roxbury/ Roslindale in six areas tributary to the Roslindale Interceptor involving approximately 5,000 buildings.
- I/I Rehabilitation Projects in Design or Construction: Boston has both completed and is currently working on a wide variety of separation and I/I rehabilitation projects. To date, thirty-four (34) projects have received funding through the MWRA I/I Local Financial Assistance Program. Boston is in the process of a Downspout Disconnection Program of which 50 homeowners have had 101 downspouts disconnected. A total of 2,016 buildings with 5,096 downspouts have been identified. A Disconnection Contract was awarded in CY00 to disconnect 1,300 downspouts on 700 buildings. Since inception, the program has removed 2,189 downspouts from 949 properties. Approximately 480 buildings were dye tested for the Ward Street Headworks Sewer System Evaluation Survey. Of those, 215 building sewers were confirmed as being connected to a sanitary or combined sewer.

BWSC entered into an I/I reduction agreement with the Massachusetts DEP in January 1986. As provided in the agreement, BWSC has performed a Phase II SSES on separated sewer areas within the City. BWSC also has an ongoing tide gate/regulator inspection and repair program and performs separation projects on pockets of combined sewers tributary to separated sewer areas.

Boston is one of MWRA's four combined sewer service communities. As part of the MWRA CSO Facilities Upgrade Project, Boston's flows are being evaluated for volume and discharge locations.

Reporting Period Activity - BWSC is required to report to the EPA on I/I reduction measures under their NPDES permit. This reporting requirement coincides with the MWRA's required submittal dates; therefore, please refer to the BWSC NPDES report for a summary of activities over this period.

MWRA I/I Local Financial Assistance Program: The community has financed thirty-four (34) I/I reduction projects through the Authority's funding assistance program. Of the \$29,280,600 allotted through the Program's Phases 1-3, the community has \$13,690,526 remaining in funding assistance.

6. BRAINTREE: South System

Background Information:

- Miles of Sewer: 135 Sewered Population: 34,534 Three Year ('96-'98) Annual Average I/I: 4.50 mgd
- Massachusetts DEP Administrative Order: No. 546 Issued on April 1, 1985.
- Latest I/I or SSES Report: Allen St. Interceptor Study, June 1999. Inflow Investigation HC2&M2, December 2000. I/I Report of MWRA T.V. inspection work, ongoing.
- Private Source Inflow Removal Program: Union St. & Howard St. tributary areas smoke tested. Town wide sump pump redirection program is ongoing. To date, 700 houses have been inspected and 28 sump pumps removed.
- I/I Rehabilitation Projects in Design or Construction: Union St. interceptor cleaning is complete. Infiltration work on 41 house connections and work identified from MWRA T.V. inspection work is ongoing. The lining in the Allen St. interceptor and infiltration work in sub-areas HC-2 and M-2 is ongoing.

Reporting Period Activity - Inflow investigations were completed in Sub-areas HC2 and M2.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. Of the \$1,614,900 allotted through the Program's Phases 1-3, the community has \$597,800 remaining in funding assistance.

7. BROOKLINE: North and South Systems

Background Information:

- Miles of Sewer: 103 Sewered Population: 53,920 Three Year ('96-'98) Annual Average I/I: 7.28 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: Wastewater System Master Plan, November 1999
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: The Town of Brookline completed the installation of 3,590 L.F. of sewer involved in a sewer separation project including Walnut St., Cypress St., Warren St., Jamaica Rd., and Perrin Rd. The town also completed the installation of 1,700 L.F. of in-place lining on Clinton Rd. The sewer separation and replacement contract No.PW/00-39 is continuing. This project includes the disconnection of approximately 40 catch basins, installation of 6,200 L.F. of storm drains and replacement of approximately 225 L.F. of sewer.

Reporting Period Activity - The Wastewater Master Plan report was completed in November 1999. A copy was submitted to MWRA in December 1999.

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$2,788,500 of funding assistance.

8. BURLINGTON: North System

Background Information:

- Miles of Sewer: 115 Sewered Population: 22,318 Three Year ('96-'98) Annual Average I/I: 2.27 mgd
- Massachusetts DEP Administrative Order: No. 518 Issued (as revised) on October 6, 1986.
- Latest I/I or SSES Report: Town-wide SSES study is ongoing
- Private Source Inflow Removal Program: During the Town-wide SSES study, house to house inspections will be conducted.
- I/I Rehabilitation Projects in Design or Construction: Investigations at Wheeler Road and Blanchard Road are ongoing.

Reporting Period Activity – 349,000 gallons per day of I/I removed from the system as per study done by Fay Spofford & Thorndike for two developers. 18 sump pumps were redirected to the storm drain system. The flushing of sewer lines continues.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. Of the \$1,087,200 allotted through the Program's Phases

1-3, the community has \$657,200 remaining in funding assistance.

9. CAMBRIDGE: North System

Background Information:

- Miles of Sewer: 150 Sewered Population: 93,613 Three Year ('96-'98) Annual Average I/I: 11.23 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: I/I and SSES – Phase I dated February 2001
- Private Source Inflow Removal Program: A total of 3,550 building inspections and over 1029 catch basin dye tracings have been completed.
- I/I Rehabilitation Projects in Design or Construction: As part of its Storm Water Management Memorandum of Understanding, the city will develop interim project review requirements by February 2002, develop site plan review requirements by September 2002, and implement site plan review requirements by December 2003. MWH Americas, Inc. has developed a proposed flow reduction in the Phase II draft report. The I/I & SSES Phase I report dated February 2001 was submitted to MWRA. Comments by MWRA will be submitted in May 2001.

Reporting Period Activity – Common Manhole Contract 2-started May 2001. Common Manhole Contract 3- documents will be submitted to DEP, Sept. 2001. Phase VI, Contracts 2B and 3B, sewerage and drainage improvements at Fresh Pond and Carver/Crescent Streets are ongoing. Phase VI, Contract 3A, sewerage and drainage improvements at Scott/Holden Streets are complete. Bellis Circle Flood Alleviation construction starts fall 2001. The following projects are currently ongoing: Phase VI Contract 8 & 9- building inspections, design phase of CAM 004 sewer separation, Willard St. Outfall Construction – design and permitting, South Mass. Ave- sewerage and drainage improvements.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. Of the \$5,345,700 allotted through the Program's Phases

1-3, the community has \$2,980,660 remaining in funding assistance.

10. CANTON: South System

Background Information:

- Miles of Sewer: 62 Sewered Population: 14,423 Three Year ('96-'98) Annual Average I/I: 2.71 mgd
- Massachusetts DEP Administrative Order: No. 537 Issued on April 3, 1984.
- Latest I/I or SSES Report: Additional Investigation based on 1994 SSES, Ongoing
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: The Additional Investigations Project based on the 1994 SSES is progressing. Plans and Specifications for Phase III Sewer Rehabilitation have been prepared.

Reporting Period Activity – Constructed approximately 9,000 linear feet of sewer lateral extensions in the Algonquin Road area.

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$893,700 of funding assistance.

11. CHELSEA: North System

Background Information:

- Miles of Sewer: 41 Sewered Population: 27,580 Three Year ('96-'98) Annual Average I/I: 2.21 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: FY01 Television inspection of sewers and drains. ongoing
- Private Source Inflow Removal Program: Private inflow source identification is complete for CHE-007 tributary areas.
- I/I rehabilitation Projects in Design or Construction: Construction is complete for the Cottage St. 15" PVC replacement sewer and the Cottage St. @ Eastern Avenue sewer relocation. Construction for the Chestnut St. replacement sewer is on hold pending funding from the city. Construction is also complete for the Highland Park drain replacement project.

Chelsea is one of MWRA's combined sewer service communities. As part of the MWRA CSO Facilities Upgrade Project, Chelsea's flows are being evaluated for volume and discharge locations.

Reporting Period Activity - Construction is complete for the rerouting of two catch basins at Willow and Central Street. Design for the Crescent Avenue sewer replacement is being modified for soil conditions. Construction planned for 2002-2003. The design is complete for the sewer and drain improvements on Fifth, Willow, and Springvale. Design ongoing for sewer and drain improvements on Garfield, Murray, and Garland Streets. The construction is ongoing for the major rehabilitation of the Carter Street Drainage Pump Station. Construction on the rehabilitation of the Lash Street and Washington Ave sewer is planned for FY2002. Design ongoing for sewer and drain improvements on Parker street and Lafayette Avenue. Design/construction ongoing on a variety of other sewer/drain improvement work as part of projects by third parties, including the MWRA, MDC, and MHD.

MWRA I/I Local Financial Assistance Program: The community has financed six (6) I/I reduction projects through the Authority's funding assistance program. Of the \$1,372,100 allotted through the Program's Phases 1-3, the community has \$569,463 remaining in funding assistance.

12. DEDHAM: South System

Background Information:

- Miles of Sewer: 88 Sewered Population: 22,269 Three Year ('96-'98) Annual Average I/I: 4.90 mgd
- Massachusetts DEP Administrative Order: No. 547 Issued on October 1, 1985.
- Latest I/I or SSES Report: East Brook Interceptor Study, January 1995
- Private Source Inflow Removal Program: The Town will be reviewing past inspections and performing smoke testing in conjunction with the Manor/Glenway/Hamilton Avenue investigation to further identify private inflow sources.
- I/I Rehabilitation Projects in Design or Construction: The Town has commissioned M&E to review TV inspection logs and videotapes covering approximately 29,400 LF of sewer. A summary report will be submitted to the MWRA upon completion.

Reporting Period Activity – The Town recently bid Sewer Rehabilitation Contract 2001-1, all aspects of sewer rehabilitation and testing. Sewer defects are contributing approximately 200,000 gpd of I/I. Project construction will begin in August 2001 with an estimated completion date of December 2001.

Under the SRF program, the Town conducted an investigation of the sanitary sewers and storm drains located within the Manor area (Sewer Subareas D1-1, D1-2, D2-1, D2-2 and D2-3). The SRF financed fieldwork, including smoke testing and television inspection of sewers and smoke testing of drains, has been completed. System evaluation to determine the capacity of the sewers and overflows causes will be performed later this year, including a report summarizing the findings and providing recommendations. The Town is currently finalizing a design for a 1,100 LF sewer replacement and extension on Wentworth Street and the Endicott Estate property. As part of the redevelopment project in the Elm Street area, a private developer will be replacing approximately 1,200 LF of cross-country sewer between Elm Street and Rustcraft Road. Additional projects include the development of a grease control program, replacement sewer design on Nelson Drive, and investigation into the failure of the cross-country sewer off Gaffney Road. As part of the road reconstruction project on Washington Street, the Town will be designing replacement sewers, and possibly a pump station, in the Washington Street/Brookdale Avenue area.

MWRA I/I Local Financial Assistance Program: The community has financed six (6) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$1,237,600 of funding assistance.

13. EVERETT: North System

Background Information:

- Miles of Sewer: 57 Sewered Population: 34,971 Three Year ('96-'98) Annual Average I/I: 4.00 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: SSES - Final, December 1990
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: The City is in the process of designing a construction contract based upon smoke testing and TV inspection performed during Fall 1999.

Reporting Period Activity - The City repaired portions of sewers on Shirley Street and Spring Street.

MWRA I/I Local Financial Assistance Program: The community has financed five (5) I/I reduction projects through the Authority's funding assistance program. The community has spent the entire \$1,730,900 of funding assistance.

14. FRAMINGHAM: South System

Background Information:

- Miles of Sewer: 275 Sewered Population: 59,696 Three Year ('96-'98) Annual Average I/I: 4.56 mgd
- Massachusetts DEP Administrative Order: No. 592 Issued on January 8, 1986.
- Latest I/I or SSES Report: Mini-SSES (Sudbury River Interceptor) -Final Review Ongoing
- Private Source Inflow Removal Program: Four residences have been removed from the Town's sewer system.
- I/I Rehabilitation Projects in Design or Construction: Sudbury River Interceptor SSES findings in design phase.

Reporting Period Activity - The Town's Developer Flow Reduction program has removed 45,697 gallons in town and 4,290 gallons out of town for a savings of \$212,445.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. Of the \$2,884,200 allotted through the Program's Phases 1-3, the community has \$1,914,500 remaining in funding assistance.

15. HINGHAM: South System

Background Information:

- Miles of Sewer: 31 Sewered Population: 5,175 Three Year ('96-'98) Annual Average I/I: 1.00 mgd

- Massachusetts DEP Administrative Order: No. 536 Issued on November 15, 1985.
- Latest I/I or SSES Report: TV Inspection, October 1987
- Private Source Inflow Removal Program: A comprehensive district wide inspection and removal program has begun. The commission will pay for sump pump redirection.
- I/I Rehabilitation Projects in Design or Construction: The Town is conducting internal inspection of approximately 2,500 LF of sewer and inspecting associated manholes. Also, a sump pump identification program is being initiated with Town forces. The above mentioned work is being funded through the MWRA I/I Financial Assistance Program (MWRA Project No. WRA-P3-15-1-330).

Reporting Period Activity – Instantaneous flow monitoring and manhole inspection was performed to identify sewer segments contributing excessive infiltration. The primary area of focus was the cross-country section of sewer along the beach immediately upstream of the Belair station, where approximately 100,000 gpd of I/I was found. Flow monitoring was also performed in the area tributary to the Malcolm Street pumping station. Approximately 29,000 gpd of I/I was found to be tributary to this station. The Developer Flow Reduction Program has new connection fees based on a 4 to 1 reduction which are being collected for the sole use of I/I removal.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. Of the \$302,100 allotted through the Program's Phases 1-3, the community has \$197,200 remaining in funding assistance.

16. HOLBROOK: South System

Background Information:

- Miles of Sewer: 40 Sewered Population: 7,099 Three Year ('96-'98) Annual Average I/I: 0.50 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: Facilities Plan, November 1985
- Private Source Inflow Removal Program: Public Works Supervisors inspected Properties connected to municipal systems. New homes were inspected during the installation of water meters. Some commercial establishments were revisited to monitor possible inflow problems.
- I/I Rehabilitation Projects in Design or Construction: Various areas of main trunk lines were flushed during the year.

Holbrook's collection system is relatively new (post 1976). The Town has proposed to hold off on a SSES until additional sewer contracts will have been constructed. The Holbrook collection system is being extended under the present Phase II Construction Project.

Reporting Period Activity - The Town has completed its yearly check of all cross-country sewer manholes. The Town is in the process of applying for funding under the MWRA I/I Local Financial Assistance Program.

MWRA I/I Local Financial Assistance Program: The community has yet to finance any I/I reduction projects through the Authority's funding assistance program. The community has \$361,300 remaining in funding assistance.

17. LEXINGTON: North System

Background Information:

- Miles of Sewer: 156 Sewered Population: 27,509 Three Year ('96-'98) Annual Average I/I: 4.72 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: I/I Analysis, Sewer Basin Nos. 9 and 10, draft letter report dated October 2000
- Private Source Inflow Removal Program: The Town is in the process of preparing a public education brochure.
- I/I Rehabilitation Projects in Design or Construction: The rehabilitation project for Basin No. 1, which received funding through the MWRA Phase 2 I/I Local Financial Assistance Program (WRA-P2-17-3-238), is in progress. The Town issued 84 new sewer service permits this reporting period.

Reporting Period Activity - Contracts were awarded for rehabilitation work in Basins 2, 6, 7 and 8 with an estimated I/I reduction of 100,000 gpd annually. They are now 75% complete. Funding was provided through MWRA I/I Local Financial Assistance Program (WRA-P3-17-3-324).

MWRA I/I Local Financial Assistance Program: The community has financed four (4) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$1,533,600 of funding assistance.

18. MALDEN: North System

Background Information:

- Miles of Sewer: 100 Sewered Population: 52,696 Three Year ('96-'98) Annual Average I/I: 6.51 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: I/I Analysis & SSES in Broadway II Sump Area, March 1996
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: The sewer system rehabilitation project in the Broadway II Sump Area, funded through the MWRA I/I Local Financial Assistance Program (MWRA Project No. WRA-P2-18-3-235) has been designed by FST. Insituform Technologies, Inc. began rehabilitation work in December 1999. The project was completed in May 2000. A total of 210,000 gpd of peak I/I has been removed.

Reporting Period Activity - The City has completed design plans and specifications for sewer rehabilitation in the Broadway II Sump Area. Funding was provided through the MWRA I/I Local Financial Assistance Program (MWRA Project No. WRA-P3-18-3-310).

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. Of the \$2,522,200 allotted through the Program's Phases 1-3, the community has \$533,203 remaining in funding assistance.

19. MEDFORD: North System

Background Information:

- Miles of Sewer: 113 Sewered Population: 56,134 Three Year ('96-'98) Annual Average I/I: 6.29 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: SSES, Phase I completed June 2000—Phase II, Ongoing
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: There have been no modifications or extensions to the collection system over the last 6 months.

Reporting Period Activity – Sewer Lining (Contract 99-1A) is complete except for the guarantee work. Manhole lining (Contract 00-1) and sewer rehabilitation (Contract 99-1B) were both completed in Spring 2001.

MWRA I/I Local Financial Assistance Program: The community has financed five (5) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$2,656,500 of funding assistance under Phases 1-3.

20. MELROSE: North System

Background Information:

- Miles of Sewer: 74 Sewered Population: 27,399 Three Year ('96-'98) Annual Average I/I: 2.78 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: I/I Rehabilitation Design Project, June 1999
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: None.

Reporting Period Activity - The City is continuing its public and private inflow source identification and removal program. As of June 2001, (4) catch basins previously connected to the system have been eliminated.

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. Of the \$1,269,800 allotted through the Program's Phases 1-3, the community has \$690,000 remaining in funding assistance.

21. MILTON: South System (Small Portion Tributary to the North System).

Background Information:

- Miles of Sewer: 83 Sewered Population: 23,730 Three Year ('96-'98) Annual Average I/I: 3.63 mgd
- Massachusetts DEP Administrative Order: No. 580 Issued on June 13, 1985.
- Latest I/I or SSES Report: Smoke Testing, Completed
- Private Source Inflow Removal Program: Inspected approximately 8,000 residences for illegal connections in the past 12 months. The town is in the process of removing illegal sump pumps and catch basins.
- I/I Rehabilitation Projects in Design or Construction: The I/I Reduction Program has removed 90,743 gpd through smoke testing. Additional investigations continue. The Town has contracted \$200,000 for sewer rehabilitation (point repair & sealing). The community Developer Flow Reduction Program has removed 123,000 gpd (4 for 1 reduction).

Reporting Period Activity – The Town relaid approximately 3,000 feet of sewer on Buckingham Road, Reedsdale Road, Canton Avenue, and Cape Cod Lane due to inadequate pipe size. Project was funded by MEMA, with Town matching 25 percent.

MWRA I/I Local Financial Assistance Program: The community has financed nine (9) I/I reduction projects through the Authority's funding assistance program. Of the \$1,248,200 allotted through the Program's Phases 1-3, the community has \$48,369 remaining in funding assistance.

22. NATICK: South System

Background Information:

- Miles of Sewer: 107 Sewered Population: 25,737 Three Year ('96-'98) Annual Average I/I: 2.38 mgd
- Massachusetts DEP Administrative Order: No. 593 Issued on November 15, 1985.
- Latest I/I or SSES Report: Construction Rehabilitation, Ongoing
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: The Town has completed Sewer System Rehabilitation Contract No. S-82. This work is partially funded through the MWRA Phase 2 I/I Local Financial Assistance Program (MWRA Project No. WRA-P2-22-3-206). Re-lining of 30-inch sewer in West Central Street (MWRA connection to Washington Avenue) is complete. Estimated infiltration reduction is 7,500 gpd. Re-lining of 24-inch sewer in Washington Avenue (West Central Street to Middlesex Avenue) is complete. Estimated infiltration reduction is 10,000 gpd.

Reporting Period Activity – Boden Lane Pump Station flow diversion construction is complete. Pump station was eliminated via new gravity sewer to Framingham Extension Sewer. Local sewer installation has been completed at Leach Lane/Eliot Street.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. Of the \$1,309,300 allotted through the Program's Phases 1-3, the community has \$470,300 remaining in funding assistance.

23. NEEDHAM: South System

Background Information:

- Miles of Sewer: 121 Sewered Population: 25,045 Three Year ('96-'98) Annual Average I/I: 4.24 mgd
- Massachusetts DEP Administrative Order: No. 549 Issued on November 21, 1984.
- Latest I/I or SSES Report: Smoke Testing, Ongoing
- Private Source Inflow Removal Program: The Town performed follow-up house-to-house inspections within Needham Sub-Area 19-1.
- I/I Rehabilitation Projects in Design or Construction: Mackintosh Avenue sewer and manhole rehabilitation is complete. Tillotson Street sewer manhole replacement is complete. The Barrett Street and Birchwood Road catch basins and stormdrain installations were completed in the Fall 2000.

Reporting Period Activity – Carol Road and Frank Street sewer system rehabilitation is complete. Grove Street sewer extension project included installation of 6,500 feet of PVC sewer main.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. Of the \$1,428,800 allotted through the Program's Phases 1-3, the community has \$557,200 remaining in funding assistance.

24. NEWTON: North and South Systems

Background Information:

- Miles of Sewer: 271 Sewered Population: 78,232 Three Year ('96-'98) Annual Average I/I: 14.68 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: Concord Street/Albermarle Road Interceptor Investigations, Ongoing
- Private Source Inflow Removal Program: The City continues home inspections for illicit connections to the sanitary sewer collection system.
- I/I Rehabilitation Projects in Design or Construction: Longfellow Road I/I investigation executed. Design of Newton sanitary sewer and under drain separation project ongoing, only the work associated with punch list items and point repair on Watertown Street remains.

Reporting Period Activity - The City added sixty four new sewer connections to the sanitary system. I/I flow evaluations continue.

MWRA I/I Local Financial Assistance Program: The community has financed seven (7) I/I reduction projects through the Authority's funding assistance program. Of the \$4,590,400 allotted through the Program's Phases 1-3, the community has \$1,854,520 remaining in funding assistance.

25. NORWOOD: South System

Background Information:

- Miles of Sewer: 83 Sewered Population: 28,552 Three Year ('96-'98) Annual Average I/I: 4.87 mgd
- Massachusetts DEP Administrative Order: No. 534 Issued on July 25, 1983.
- Latest I/I or SSES Report: Inflow Identification Program, In Progress
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: Contract 4 Sewer Rehabilitation Project construction is substantially complete. Anticipated completion date is Summer 2000. Contract 4 is financed through SRF loan funding.

Reporting Period Activity – The Hawes Brook I/I identification study was initiated in March 2001. Estimated completion date is October 2001. Norwood Commerce Center Phase II Sewer System Improvements on-going.

MWRA I/I Local Financial Assistance Program: The community has financed five (5) I/I reduction projects through the Authority's funding assistance program. Of the \$1,444,600 allotted through the Program's Phases 1-3, the community has \$268,800 remaining in funding assistance.

26. QUINCY: South System

Background Information:

- Miles of Sewer: 240 Sewered Population: 85,446 Three Year ('96-'98) Annual Average I/I: 10.96 mgd
- Massachusetts DEP Administrative Order: No. 644 Issued on October 22, 1986.
- Latest I/I or SSES Report: Quincy-Area 6 Stormwater Pollution Abatement Program. March 2001
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: The North Quincy Sewer Interceptor Improvements (Phase II) have been completed.

Reporting Period Activity - Area 7 Sewer and Water Improvements Project, North Quincy Lateral Sewer Improvements Project (Phase I) and Quincy Shore Drive Sewer Improvement Project (Phase I) are ongoing. Estimated annual I/I reduction totals 0.20 mgd.

MWRA I/I Local Financial Assistance Program: The community has financed five (5) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$4,235,000 of funding assistance.

27. RANDOLPH: South System

Background Information:

- Miles of Sewer: 101 Sewered Population: 30,401 Three Year ('96-'98) Annual Average I/I: 2.54 mgd
- Massachusetts DEP Administrative Order: No. 548 Issued on July 29, 1985.
- Latest I/I or SSES Report: SSES Phase 2, Ongoing
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: Phase II SSES report within Sub-Areas 1/2/3/4/8 has been completed.

Reporting Period Activity - No additional work was reported during this period.

MWRA I/I Local Financial Assistance Program: The community has financed four (4) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$1,330,900 of funding assistance.

28. READING: North System

Background Information:

- Miles of Sewer: 106 Sewered Population: 21,349 Three Year ('96-'98) Annual Average I/I: 1.97 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: Wastewater Collection System Facilities Planning Report. (October 1996)
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: Completed construction of the Walkers Brook Drive Sewer project, estimated I/I removal: 269,000 mgd (CDM estimate). Completed the joint testing and sealing of approximately 16,000 linear feet of vitrified clay sewer lines. There was no estimate of I/I removal for this project.

Reporting Period Activity – Completed sewer extensions include Foster Circle sewer extension (280 L.F. of 8" PVC sewer), Mill Street sewer extension (890 L.F. of 8" PVC sewer and 480 L.F. of 2" low pressure force main), and Short Street sewer extension (310 L.F. of 8" PVC sewer).

MWRA I/I Local Financial Assistance Program: The community has financed one (1) I/I reduction project through the Authority's funding assistance program. The community has spent its entire \$975,400 of funding assistance.

29. REVERE: North System

Background Information:

- Miles of Sewer: 78 Sewered Population: 41,719 Three Year ('96-'98) Annual Average I/I: 5.21 mgd
- Massachusetts DEP Administrative Order: No. 837 Issued on April 21, 1991
- Latest I/I or SSES Report: SSES Phase III, August 1999
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: The city lined 2600 L.F. of 12" sewer along Revere Beach Blvd, 1300 L.F. of 15" sewer along Atlantic Ave, 573 L.F. of 15" sewer and 1096 L.F. of 18" sewer along Winthrop Ave, and 1657 L.F. of 15" sewer along Broadway. Point repairs were performed to collapsed pipes on Atlantic Ave. and Bellingham Ave.

Reporting Period Activity - Replaced 10" sewer with 12" sewer along Bryant St. to Route 60 (1400 L.F.). Extended 1000 L.F. of 8" sewer along Prospect Ave. and Ridge Rd.

MWRA I/I Local Financial Assistance Program: The community has financed four (4) I/I reduction project through the Authority's funding assistance program. Of the \$2,074,200 allotted through the Program's Phases 1-3, the community has \$742,700 remaining in funding assistance.

30. SOMERVILLE: North System

Background Information:

- Miles of Sewer: 107 Sewered Population: 74,282 Three Year ('96-'98) Annual Average I/I: 7.50 mgd
- Massachusetts DEP Administrative Order: No. NON-NE-00-1006 Issued January 21, 2000
- Latest I/I or SSES Report: Final Report - In House Data Sheet, October 1998
- Private Source Inflow Removal Program: Approximately 30 additional homes were inspected. No illegal connections were found.
- I/I Rehabilitation Projects in Design or Construction: The City is continuing with the ongoing maintenance program repairing catch basins, manholes, and sewer segments. The community has spent approximately \$800,000 in the last 12 months. Estimated I/I reduction of 1,500 gpd.

Somerville is one of MWRA's combined sewer service communities. As part of the MWRA CSO Facilities Upgrade Project, Somerville's flows are being evaluated for volume and discharge locations.

Reporting Period Activity – Proposed 13 unit residential development (.5 acres), 24 Lake St. commercial redevelopment (0.5 acres), and South St. commercial parking lot redevelopment will include a detention/infiltration stormwater management system. Estimated I/I removal for all three sites is 3,700 gpd.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. Of the \$3,320,700 allotted through the Program's Phases 1-3, the community has \$2,431,000 remaining in funding assistance.

31. STONEHAM: North System

Background Information:

- Miles of Sewer: 63 Sewered Population: 21,578 Three Year ('96-'98) Annual Average I/I: 2.92 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: Infrastructure Maintenance Management Program Phase II, report dated January 1999.
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: In 1998 the Town initiated a phased program to internally inspect the entire sewer system and to rank the state of deterioration of the manholes and pipelines. From this ranking system, a schedule for further inspection and/or rehabilitation work will be recommended.

Reporting Period Activity – Phase 2 work has been completed and Phase 3 work has begun. Smoke detection will begin along w/flow monitoring in areas where illegal hook-ups are believed to be a problem. Phase 6 of televising is scheduled to start the week of August 6th.

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$1,157,000 of funding assistance.

32. STOUGHTON: South System

Background Information:

- Miles of Sewer: 60 Sewered Population: 17,038 Three Year ('96-'98) Annual Average I/I: 2.70 mgd
- Massachusetts DEP Administrative Order: No. 538 Issued on June 17, 1984.
- Latest I/I or SSES Report: Phase V I/I Reduction Report, October 2000
- Private Source Inflow Removal Program: Sub-area TV inspection of service connections is ongoing.
- I/I Rehabilitation Projects in Design or Construction: Phase V rehabilitation construction has commenced.

Reporting Period Activity – Phase V rehabilitation construction in progress. York Street Pump Station rehabilitation complete.

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$1,001,400 of funding assistance.

33. WAKEFIELD: North System

Background Information:

- Miles of Sewer: 82 Sewered Population: 23,692 Three Year ('96-'98) Annual Average I/I: 3.82 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: House to House Inspection (draft), Sewer Television Inspection
- Private Source Inflow Removal Program: Formulating a sump pump and private inflow source removal plan.
- I/I Rehabilitation Projects in Design or Construction: The Town has commenced the sewer rehabilitation project in the Gould and Albion Street subareas.

Reporting Period Activity – A draft report on the analysis of flow metering conducted by MWRA in the North Avenue area of town has been submitted. The Town has initiated a flow monitoring contract and has performed cleaning of select lines.

MWRA I/I Local Financial Assistance Program: The community has financed five (5) I/I reduction projects through the Authority's funding assistance program. Of the \$1,275,200 allotted through the Program's Phases 1-3, the community has \$160,000 remaining in funding assistance.

34. WALPOLE: South System

Background Information:

- Miles of Sewer: 56 Sewered Population: 13,796 Three Year ('96-'98) Annual Average I/I: 1.68 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: SSES Phases I and II, January 1999

- Private Source Inflow Removal Program: To date, there has been no removal of private inflow sources discovered during the July 1996 smoke testing program.
- I/I Rehabilitation Projects in Design or Construction: The Diamond Brook Sewer/Drain Separation removed approximately 14,400 gpd of I/I. Developers continue to remove infiltration as part of the ongoing 2 for 1 program.

Reporting Period Activity - Phase I sewer rehabilitation is complete. The project removed approximately 420,000 gpd of I/I.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$819,300 of funding assistance.

35. WALTHAM: North System

Background Information:

- Miles of Sewer: 138 Sewered Population: 57,157 Three Year ('96-'98) Annual Average I/I: 7.25 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: SSES Program- ongoing, I/I Analysis dated June 1999, metering-ongoing.
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: Sewer Replacement and Rehabilitation (Contract 01-1) was awarded to Fiore Construction in July, 2001. This contract is scheduled for completion in November, 2001. The project repairs existing sewers that show evidence of infiltration into the drainage system. Design work is nearing completion for the Hobbs Brook Sewer Replacement Project. The project will remove approximately .11 mgd of infiltration, based on metered data.

Reporting Period Activity - The City replaced 3,200 L.F. of 8" sewer with 12" sewer on Weston St. (Regis College).

MWRA I/I Local Financial Assistance Program: The community has financed four (4) I/I reduction projects through the Authority's funding assistance program. Of the \$3,002,500 allotted through the Program's Phases 1-3, the community has \$1,510,200 remaining in funding assistance.

36. WATERTOWN: North System

Background Information:

- Miles of Sewer: 75 Sewered Population: 32,986 Three Year ('96-'98) Annual Average I/I: 2.93 mgd
- Massachusetts DEP Administrative Order: ACOP-NE-97-5004
- Latest I/I or SSES Report: I/I Analysis Draft Report dated September 2000
- Private Source Inflow Removal Program: T.V. inspections are ongoing.
- I/I Rehabilitation Projects in Design or Construction: Foundation drain/pumped systems connecting to the sanitary system were discovered at two municipal buildings. Pumping

discharge under high groundwater conditions were estimated at 0.6 mgd and 0.4 mgd. These locations were corrected in June 2001 and May 2001 respectively.

Reporting Period Activity - The Town of Watertown is about to go forward with the drain improvements and sewer replacements in the Parker St. and Falmouth Road areas. The Town is also planning for the cleaning and lining of the Cottage Street sewer main.

MWRA I/I Local Financial Assistance Program: The community has financed one (1) I/I reduction project through the Authority's funding assistance program. Of the \$1,487,400 allotted through the Program's Phases 1-3, the community has \$1,164,835 remaining in funding assistance.

37. WELLESLEY: South System

Background Information:

- Miles of Sewer: 130 Sewered Population: 25,147 Three Year ('96-'98) Annual Average I/I: 3.04 mgd
- Massachusetts DEP Administrative Order: No. 579 Issued on May 23, 1985.
- Latest I/I or SSES Report: Phase II SSES, November 1994
- Private Source Inflow Removal Program: The Town is preparing for sump pump removal by first identifying existing drainage facilities.
- I/I Rehabilitation Projects in Design or Construction: In April 2001, the Town of Wellesley initiated a sewer rehabilitation project in the Cliff Road area. The project is substantially complete. To date, 6,940 feet of pipe and 1,836 joints have been tested. All leaks have been sealed including approximately 50 vertical feet of manhole sealing.

Reporting Period Activity - In May 2001, the Town of Wellesley forwarded a sanitary sewer plan and profile to the Town of Natick for review. The plan outlines the connection of ten (10) Wellesley properties to the Natick sewer system. This project remains in the planning stage.

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. Of the \$1,255,100 allotted through the Program's Phases 1-3, the community has \$952,600 remaining in funding assistance.

38. WESTWOOD: South System

Background Information:

- Miles of Sewer: 77 Sewered Population: 10,736 Three Year ('96-'98) Annual Average I/I: 1.23 mgd
- Massachusetts DEP Administrative Order: No. 578 Issued on May 23, 1985.
- Latest I/I or SSES Report: SSES Phases 1 and 2, January 1991
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: The FY01 Annual Sewer System Maintenance Program Report is complete. The investigations performed identified and removed approximately 65,000 gpd of I/I.

Reporting Period Activity - The construction of approximately 6,500 LF of new sewer laterals is ongoing.

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$509,100 of funding assistance.

39. WEYMOUTH: South System

Background Information:

- Miles of Sewer: 238 Sewered Population: 50,706 Three Year ('96-'98) Annual Average I/I: 6.87 mgd
- Massachusetts DEP Administrative Order: No. 543 Issued on November 14, 1984.
- Latest I/I or SSES Report: Sanitary Sewer System Assessment Report, March 2000.
- Private Source Inflow Removal Program: 242 sump pumps were redirected for a total of 121,000 gallons of I/I removal.
- I/I Rehabilitation Projects in Design or Construction: Rehabilitation of the Summer St. Ejector is complete. The City has completed 1800 manhole inspections and the Flow Isolation Project on the Old Swamp and Lower Central sub-basins (both sub-basins have

been T.V. inspected). Construction is complete on the Saunders Street Ejector Rehabilitation Project and on Contract 99-3.

Reporting Period Activity - The City has enacted a Water Conservation Program and has reduced 108,022 gpd this reporting period. Phase "D" Pump rehabilitation is in the design stage. The city completed flow isolation in the Southeast & Landing sub-basins and started smoke & dye testing in these areas, including Old Swamp and Lower Central sub-basins. Also complete are the manhole and sewer rehabilitation in Wessagusset & King Cove Way (a total reduction of 194,000 gpd). Construction has started on the replacement of a 30" and 40" main (Washington St. to Essex St.).

MWRA I/I Local Financial Assistance Program: The community has financed nine (9) I/I reduction projects through the Authority's funding assistance program. Of the \$2,481,700 allotted through the Program's Phases 1-3, the community has spent the entire \$2,481,700 of funding assistance through phase 3.

40. WILMINGTON: North System

Background Information:

- Miles of Sewer: 19 Sewered Population: 2,981 Three Year ('96-'98) Annual Average I/I: 1.27 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: Infrastructure Maintenance & Management Program (IMMP) 2001
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: The town is currently reviewing the draft I/I update. Bid documents for a multi-year sewer rehabilitation contract are being developed and are expected to be posted for bid in August 2001. The multi-year contract is being established under the town's IMMP.

Reporting Period Activity – To date, 23,000 L.F. of pipeline has been cleaned and CCTV inspected since the start of the Infrastructure Maintenance and Management Program. Presently, a portion of the Town's 36" diameter interceptor is being cleaned and CCTV inspected.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. The community has spent its entire \$523,000 of MWRA funding assistance through Phases 1-3.

41. WINCHESTER: North System

Background Information:

- Miles of Sewer: 83 Sewered Population: 20,298 Three Year ('96-'98) Annual Average I/I: 2.06 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: I/I Removal, April 1994
- Private Source Inflow Removal Program: Approximately 101 private inflow sources have been disconnected to date.
- I/I Rehabilitation Projects in Design or Construction: The Town received funding for sewer rehabilitation work involving the elimination of private inflow sources under Phase 3 of the MWRA I/I Local Financial Assistance Program. The elimination program reimburses the homeowner up to \$1,000 if they have illegal sump pump connections rerouted to storm drains. To date, 101 homes and businesses have taken advantage of the I/I Sump Pump Redirection/Reimbursement Program.

Reporting Period Activity - The private inflow sources mentioned above were disconnected.

MWRA I/I Local Financial Assistance Program: The community has financed two (2) I/I reduction projects through the Authority's funding assistance program. Of the \$952,300 allotted through the Program's Phases 1-3, the community has \$338,400 remaining in funding assistance.

42. WINTHROP: North System

Background Information:

- Miles of Sewer: 36 Sewered Population: 17,228 Three Year ('96-'98) Annual Average I/I: 1.52 mgd
- Massachusetts DEP Administrative Order: None
- Latest I/I or SSES Report: SSES Part 2, Ongoing
- Private Source Inflow Removal Program: No additional inspections were reported during this period.
- I/I Rehabilitation Projects in Design or Construction: The Town has recently completed a Phase 2 SSES. This work, funded through the MWRA I/I Local Financial Assistance Program, includes: rainfall simulation, house- to-house inspections and flow data analysis.

Reporting Period Activity – The Town is preparing a construction contract to eliminate cost-effective inflow sources.

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. Of the \$783,400 allotted through the Program's Phases 1-3, the community has \$496,300 remaining in funding assistance.

43. WOBURN: North System

Background Information:

- Miles of Sewer: 141 Sewered Population: 35,346 Three Year ('96-'98) Annual Average I/I: 6.32 mgd
- Massachusetts DEP Administrative Order: No. 619 Issued (as revised) on July 14, 1987.
- Latest I/I or SSES Report: Long Term Flow Monitoring of the Horn Pond Sewer, May 1999
- Private Source Inflow Removal Program: A developer has implemented a private source inflow removal program in the downtown section of the city. To date, nine sources of private inflow have been confirmed totaling in excess of 60,000 gpd.
- I/I Rehabilitation Projects in Design or Construction: Construction associated with MWRA project No. WRA-P2-43-3-249 is substantially complete. Estimated I/I removal is 60,000 gpd.

Reporting Period Activity – The City extended a storm drain on Richard Circle to provide as outlet for sump pump flow. As part of the project, a catch basin was disconnected from the sewer and tied into the new storm drain. Estimated I/I removal is 34,000 gpd.

MWRA I/I Local Financial Assistance Program: The community has financed three (3) I/I reduction projects through the Authority's funding assistance program. Of the \$2,370,200 allotted through the Program's Phases 1-3, the community has \$1,453,800 remaining in funding assistance.

