Prepared for:

US Environmental Protection Agency

Massachusetts Department of
Environmental Protection

TOWN OF ROCKLAND, MASSACHUSETTS

PLAN FOR COMPLIANCE WITH NPDES PERMIT NO. MA0101923

AS REQUIRED IN ADMINISTRATIVE ORDER DOCKET NO. 06-33

February 2007

Prepared By:

Metcalf & Eddy, Inc.
701 Edgewater Drive
Wakefield, Massachusetts

METCALF & EDDY | AECOM

Introduction

Part IV of the EPA's Administrative Order (AO) Docket No. 06-33 for the Town of Rockland, Massachusetts, requires submittal of a detailed "Plan" for achieving compliance with the flow, biochemical oxygen demand (BOD) and total suspended solids (TSS) limits contained in the NPDES Permit No. MA0101923. Presented herein is the detailed Plan. The requirements delineated in Part IV.3 of AO Docket No. 06-33 are presented below in italics followed by the Town's response to each requirement.

AO Docket No. 06-33 Requirement:

IV.3.a *Provide an itemized listing of the recommendations contained in any infiltration/inflow, sewer system evaluation survey, wastewater collection or treatment system capacity evaluation, or wastewater collection system ("Collection System") maintenance report prepared by, or on behalf of, the Town since January 1, 1995 and the status of the Town's implementation of each of the recommendations contained in the reports, including the date that the recommendation was implemented.*

Response:

Since January 1, 1995, several reports have been prepared on behalf of the Town related to the sewer system. Presented in this section is a summary of the reports, a listing of the recommendations and the status of the Town's implementation of the recommendations.

In 1997 and 1998, the following two reports were prepared. These reports are hereinafter identified as the "Planning Reports".

- "Report on the Infiltration/Inflow Study (WPC-I-238)" prepared by Tutela Engineering Associates, December, 1997.
- "Supplemental Report to the Report on the Infiltration/Inflow Study" prepared by Tutela Engineering Associates, October, 1998.

The December, 1997 report includes both an infiltration/inflow (I/I) analysis and a sewer system evaluation survey (SSES). The I/I analysis includes descriptions of the existing sanitary sewer system and flow monitoring performed, and recommends further investigative work in the two sewer subbasins which were found to exhibit the highest infiltration rates, identified as the Emerson and Howard subbasins. The SSES portion of the report summarizes the various investigative work that was performed in the Emerson and Howard subbasins, including flow isolation, television inspection, manhole inspections, smoke testing, and house-to-house inspections. The report includes recommended sewer system rehabilitation work for the Emerson and Howard subbasins as presented in Table 1 (recommendation numbers R-8 through R-12). The report also recommends that SSES work be expanded into the following six additional subbasins: Josh Gray, Liberty, Concord, Division, West Water and John Dunn. A plan showing the locations of all subbasins referenced above is presented in Appendix A.

The October, 1998 report presents the results of SSES work performed on the six additional subbasins recommended for such work in the earlier report. Flow isolation, television inspection, and manhole inspection work was performed. Recommendations for sewer system rehabilitation resulting from this report are also presented in Table 1 (recommendation numbers R-20 through R-23).

In 1999, the Town of Rockland retained the services of Metcalf & Eddy, Inc. to prepare sewer system rehabilitation design documents to remove I/I sources from the existing sewer system that were identified in the Planning Reports. During the initial phase of the rehabilitation design project, it was determined that additional tasks need to be performed to upgrade the recommendations contained in the planning reports to a level which will then allow the rehabilitation design to be performed. Specifically, it was found necessary to confirm I/I sources that were recommended for rehabilitation in the Planning Reports and to assign estimated I/I flows to each source, perform a cost-effectiveness analysis to determine which specific sources are cost-effective to remove, and prepare a supplemental report detailing the findings. It was anticipated that the results of this work would change considerably the I/I sources recommended for rehabilitation in Table 1.

TABLE 1. RECOMMENDED SEWER REHABILITATION WORK FROM PLANNING REPORTS

Description of Work	Quantity (Recommendation No.)	Total Quantity	Unit
Manhole Cover Inserts	75 (R-8)	75	MH
Manhole Cover Gaskets	600 (R-8)	600	MH
Manhole Chimney Seals	108 (R-9) 401(R-20)	509	MH
Manhole Wall Joint Seals	95 (R-10) 265 (R-21)	360	MH
Testing and Sealing Pipes and Services	25,600 (R-11) 17,900 (R-22)	43,500	LF
Spot Repairs:			
Short Liners	40 (R-12) 24 (R-23)	64	EA
Manhole Benches	20 (R-12) 78 (R-23)	98	MH

Subsequently, an engineering agreement was developed between the Town of Rockland and Metcalf & Eddy to perform supplemental SSES work in two phases as described in the text below.

Phase 1 – Supplemental SSES Part 1

The purpose of Phase 1 was to upgrade the recommendations presented in the planning reports to a level which will then allow the rehabilitation design to be performed. The major items performed under Phase 1 are summarized as follows:

1. Infiltration Sources
   a. Reviewed existing CCTV tapes of all of the television inspection work performed during the planning reports: to determine recommended limits of rehabilitation work; to determine rehabilitation method for each infiltration source; and, to confirm infiltration amounts for sources identified on the tapes.

b. Performed a field survey to inspect all manholes previously recommended for bench repair and all manholes previously recommended for wall joint sealing. This work was needed in order to confirm infiltration sources in the manholes, and to assign infiltration amounts to the manholes that are found to contain infiltration sources.

c. Prepared an infiltration summary table with a priority listing by rank of infiltration sources (cost-effectiveness analysis for rehabilitation).

2. Inflow Sources

a. Performed a field survey to inspect all manholes previously recommended for manhole inserts. These manholes needed to be checked in order to assign an inflow amount to each of these sources, and to confirm that manhole insert is the appropriate rehabilitation method (in some instances it may be determined that a more appropriate rehabilitation method may be sealing of pick holes, raising or resetting frame and cover, replacing frame and cover with watertight materials, or no rehabilitation).

b. Performed a field survey to inspect all manholes previously recommended for chimney seals. These manholes needed to be checked in order to assign an inflow amount to each of these sources, and to confirm that chimney sealing is the appropriate rehabilitation method.

c. Prepared an inflow summary table with a priority listing by rank of inflow sources (cost-effectiveness analysis for rehabilitation).

3. Prepared a report entitled "Supplemental Sewer System Evaluation Survey Part 1" by Metcalf & Eddy, dated February 2001 and revised June 2003. This report included a cost-effectiveness analysis and identified those I/I/ sources deemed cost-effective for removal. The report was submitted to the Massachusetts Department of Environmental Protection (DEP) in February 2001 and finalized in June 2003 after DEP completed their review and comment period.

Presented in Appendix B are tables itemizing all I/I sources recommended for rehabilitation in the above referenced report, as described below:

- Table 4-1. Summary Table of Inflow Sources, Rehabilitation Methods and Costs

- Table 4-2. Summary Table of Infiltration Sources, Cost-Effectiveness Analysis for Rehabilitation
- Table 4-3. Potential Infiltration Sources

The cost-effectiveness analysis concluded that all sources with removal unit costs less than $3.80 per gallon per day be removed from the system. Thus, all I/I sources with unit costs less than $3.80/gpd referenced in Tables 4-1 and 4-2, and the potential infiltration sources identified in Table 4-3 were scheduled for rehabilitation under a project entitled "Sewer System Rehabilitation, Contract 04-3" described later in this Plan.

Phase 2 – Supplemental SSES Part 2

Within the eight subbasins that received SSES work during the planning reports, many sewer pipelines and manholes could not be inspected because of various reasons (i.e. inaccessible manhole covers, heavy debris in sewers). The purpose of the Phase 2 work was to revisit these areas and perform the necessary SSES investigative tasks to identify I/I sources. The major items covered in Phase 2 are summarized below:

1. Located and performed physical (man entry) inspection of 90 manholes that were not yet inspected within the subbasins studied under the Planning Reports because they were either paved over, inaccessible, or not found.
2. Performed television inspection of 15,240 linear feet of sewers in selected areas described as follows:
   a. Areas that were previously scheduled for television inspection but the work was not performed because manholes could not be accessed.
   b. Suspect areas identified during a review of the CCTV tapes generated during the internal inspection of adjacent sewers.
   c. Additional areas within the studied subbasins that were previously not televised but showed evidence of high infiltration based on the flow isolation results.
   d. Manhole to manhole segments that were partially televised during the previous SSES work but could not be completed because heavy debris clogged the line, thus

preventing the camera from proceeding. These lines received heavy cleaning by the Town prior to retelevising.

3. Prepared a report entitled "Supplemental Sewer System Evaluation Survey Part 2", by Metcalf & Eddy, dated October 2001 and revised June 2003. The report included a cost-effectiveness analysis to identify I/I sources deemed cost-effective for removal. The report was submitted to DEP in October 2001 and finalized in June 2003 after DEP completed their review and comment period.

Presented in Appendix C are tables itemizing all I/I sources recommended for rehabilitation in the above referenced report, as described below:

- Table 4-1. Summary Table of Inflow Sources, Rehabilitation Methods and Costs
- Table 4-2. Summary Table of Infiltration Sources, Cost-Effectiveness Analysis for Rehabilitation
- Table 4-3. Potential Infiltration Sources

Similar to the Phase 1 work, the cost-effectiveness analysis concluded that all sources with removal unit costs less than $3.80 per gallon per day be removed from the system. Thus, all I/I sources with unit costs less than $3.80/gpd referenced in Tables 4-1 and 4-2, and the potential infiltration sources identified in Table 4-3 were scheduled for rehabilitation under a project entitled "Sewer System Rehabilitation, Contract 04-3" described later in this Plan.

Sewer System Rehabilitation Contract 04-3

In 2004, the Town of Rockland engaged Metcalf & Eddy to prepare the sewer system rehabilitation design documents to remove the I/I sources determined to be cost-effective for removal under the SSES Part 1 and the SSES Part 2 reports referenced above. This project was the culmination of all previous reports related to I/I identification and listed all sources scheduled for rehabilitation in one package. All I/I sources scheduled for rehabilitation under this project are listed in the following tables presented in Appendix D:

- Sewer Manhole Rehabilitation Schedule

- Sewer Pipeline Rehabilitation Schedule

A plan showing the locations of the rehabilitation work is presented in Appendix A. The rehabilitation project was awarded in September 2005 and was completed in July 2006.

Rehabilitation of Sewer Service Connections, Contract 07-1

Television inspection work performed during previous studies showed a significant amount of infiltration entering the sewer system through lateral service connections. On 8/29/06, the Town entered into an agreement with Metcalf & Eddy to prepare the rehabilitation design plans and specifications for the sealing of lateral service connections known to be leaking with infiltration rates estimated to be 1,000 gallons per day or more that are cost-effective for rehabilitation. The rehabilitation design documents were completed and submitted to the Town in November 2006. Presented in Appendix E is a summary table identifying the lateral service connections scheduled for rehabilitation under this project. In summary, the project requires the testing and sealing of 76 service connections. Work will be performed from the mainline sewer utilizing testing and sealing equipment that can extend up to 20 feet into the lateral service connection from the mainline sewer.

The project also requires the television inspection of the top of ten chimneys to observe the lateral service connections that are connected to each side of the chimney and to estimate the infiltration rate that may be entering the sewer from each service connection. Service connections with infiltration rates determined to be cost-effective for removal will be scheduled for rehabilitation under a future project.

AO Docket No. 06-33 Requirement:

IV.3.b *Provide the Town's rationale for not implementing any specific recommendation contained in the above-referenced reports. For those recommendations that will be implemented in the future, the Town must provide a schedule for the recommendation's implementation.*

Response:

Some I/I sources recommended for rehabilitation under Contract 04-3 were not rehabilitated. Presented in Tables 2 and 3 are the I/I sources that were not rehabilitated and the reason that the rehabilitation work was not implemented.

As described in the response to Item IV.3.d of this Plan, the Town intends to implement additional rehabilitation construction contracts over the next several years to remove I/I sources that may be identified during future planned SSES work. Rehabilitation of the I/I sources referenced in Tables 2 and 3 will be incorporated into the first future rehabilitation contract, currently scheduled to be performed in 2008.

AO Docket No. 06-33 Requirement:

IV.3.c *Provide a flow monitoring plan including an implementation schedule that assesses the effectiveness of the Town's completed sewer rehabilitation efforts.*

Response:

Assessing the effectiveness of an I/I rehabilitation program with reliable flow monitoring is historically a difficult task. Attempts to gage the reduction of I/I at a particular location can be effected by a number of variables, including the following:

- Difference in groundwater levels from before the rehabilitation versus after the rehabilitation.
- Changes in wastewater flow in the tributary area from new connections to the system.
- Migration of infiltration from a rehabilitated source to another nearby source that may not have been leaking prior to the rehabilitation work.

Because of the interacting dynamics of the above variables, rehabilitation of I/I sources, although successfully performed, sometimes may not be reflected in the results of flow monitoring.

TABLE 2. MANHOLES NOT REHABILITATED UNDER CONTRACT 04-3

Manhole No.	Location	Recommended Rehabilitation	Reason not Performed Under Contract 04-3
M95	Easement near Arthur Street	Manhole chemical sealing	Inaccessible for required equipment
W6	End of Clark Road	Install manhole insert, raise frame & cover	Manhole not found
W14	Easement near Brookside Road	Repair defective chimney, replace frame & cover	Inaccessible for required equipment
W15	Easement near Brookside Road	Repair defective chimney	Inaccessible for required equipment
W16	Easement near Brookside Road	Replace frame & cover	Inaccessible for required equipment

TABLE 3. SEWER PIPELINE NOT REHABILITATED UNDER CONTRACT 04-3

Location			Recommended Rehabilitation	Reason not Implemented Under Contract 04-3
From MH	To MH	Street Name	Grout Spot Repair (Chemical Seal)	
D7	D6	North Ave.	Drop pipe at MH D6	Inaccessible for required equipment
M15	M14	Arlington St.	Sta. 0 + 35 (1)	(2)

(1) Stationing is distance in feet from first manhole identified in "Location" column.
(2) Equipment could not pass through a buried manhole found 35' upstream of MH 14 towards MH M15.

We propose assessing the effectiveness of the rehabilitation efforts by measuring the minimum night-time flows in the most downstream pipe segment of a subbasin after the completion of rehabilitation in that subbasin. The resulting flow will be compared with similar flow measurements taken during flow isolation work in earlier studies, where such information is available. When historical information is not available from earlier studies, night-time flow measurements will be obtained at the same downstream pipe segment of a subbasin prior to the rehabilitation work and then again at the same location after the rehabilitation work.

A permanent flowmeter is located at the wastewater treatment plant (WWTP). In addition to the minimum night-time flow measurements referenced above, the flowmeter results will be

analyzed on an annual basis to estimate I/I amounts and possibly to identify long term trends related to I/I reduction.

AO Docket No. 06-33 Requirement:

IV.3.d *Identify the specific recommendations of the May, 2006 "Draft Town of Rockland, Massachusetts Infiltration and Inflow Control Plan" (the "Draft Report") prepared by Metcalf & Eddy that will be implemented by the Town. If the Town chooses not to implement a specific recommendation of the Draft Report, the Town must provide its rationale for the decision not to implement the recommendation. For those recommendations that will be implemented in the future, the Town shall provide a schedule for their implementation and estimate the capital and operation and maintenance costs associated with their implementation.*

Response:

Presented below is a list of the recommended tasks included in the I/I Control Plan and the Town's intentions for implementation. A proposed schedule for the implementation of the tasks is presented in Figure 1, entitled "Proposed Schedule for 5 Year I/I Removal Program". As shown in Figure 1, scheduling of the tasks will extend from 2007 through 2011.

Sump Pump Identification and Removal Program

Identification. A sump pump amnesty plan will be initiated in 2007 to identify the locations of sump pumps that are connected to the sewer system for subsequent removal. Specific comments regarding this work are referenced below:

1. The I/I Control Plan includes a sample brochure and an announcement to be mailed to sewer users as part of the amnesty plan. There are approximately 5,500 sewer users in Rockland. To minimize printing costs, language from the announcement will be combined with the brochure to form one document to be mailed.
2. The Town will perform the mailings and maintain a database of the responses.

3. Owners who respond within the specified amnesty period will not be charged for the costs for subsequent sump pump removal. However, an owner found to have an illegal connection after the amnesty period will be required to redirect the connection at his own expense. The owner will also be fined $50/month until the redirection is made and confirmed by the Town.
4. The Town will implement specific changes to the sewer use ordinance to incorporate the above referenced penalty and other enforcement requirements.
5. After identification of an illegal sump pump through the amnesty plan, the Town's plumbing inspector or other official will perform a basement inspection to confirm the illegal connection and to inspect the general premises to determine a proposed legal sump pump discharge location. Standardized inspection forms will be used for this work. This information will be used for the subsequent sump pump removal program.

Removal. Sump pumps identified through the amnesty plan will be removed by one of the following methods:

- Option 1. Any proponent seeking to add more than 440 gpd of new flow to the sewer system must remove 11 gpd of I/I for every gallon of proposed new flow. This translates to one sump pump removal for every 500 gpd of proposed new flow. The Town will provide to the proponent a list of sump pumps to be removed and the proponent would be responsible for implementing the design and construction work necessary to redirect the sump pumps to legal discharge locations.

  As an alternative, the proponent may pay a one-time fee to the Town equal to $10 per gpd of proposed new flow to be added to the system, and this money shall be used by the Town to finance the future removal of I/I sources. A more detailed description of this program is provided in Attachment B of the I/I Control Plan.

- Option 2. The Town will prepare rehabilitation design contract documents for the construction work necessary to redirect the sump pumps to legal discharge locations, and implement the project through the competitive bidding process.

On 8/29/06, the Rockland Board of Sewer Commissioners voted to impose a temporary sewer construction/connection moratorium, effective immediately. The moratorium prohibits the connection of any project larger than a two family residential dwelling. Because of the moratorium, it is likely that there will be a minimal amount of proponents seeking to add new connections to the sewer system. Therefore, we expect that sump pump removal over the next several years will most likely be performed by the option 2 method referenced above. Under this program, we anticipate a large group of sump pumps, such as 30 or 40 sump pumps, would be scheduled for removal under one construction contract. After another large group of sump pumps is identified, a second construction contract would be implemented for their removal. Additional contracts may be prepared as needed dependent on the number of sump pumps identified. Through a combination of the amnesty plan and on-going house-to-house inspections by the town water meter reader or by a member of the Building Department, we anticipate that the identification of illegally connected sump pumps will be an ongoing process that will extend over the next several years. Therefore, the schedule provided in Figure 1 shows four proposed contracts for the removal of sump pumps, extending from 2008 through 2011. For each contract the Town, or possibly an engineering consultant to the Town as needed, will prepare the plans and specifications required for the removal of the sump pumps and implement the project through the competitive bidding process.

House-to-House Inspections. The I/I Control Plan recommends basement inspections by the town water meter reader prior to a real estate transaction or by a member of the Building Department whenever he visits a dwelling for the issuance of a building permit. The Town will explore these possible methods of house-to house inspections for possible future implementation.

Educational Public Outreach Program. In 2007 the Town will mail the educational brochure presented in Attachment A of the I/I Control Plan to all sewer users as part of the sump pump amnesty plan.

Flow Isolation and Television Inspection in Suspect Areas

The I/I Control Plan recommends further investigation in suspect areas identified as the Howard subarea, Pond Street subarea, Leisurewoods area and the Hatherly Road area. The proposed investigation work consists of performing flow isolation to estimate the infiltration rates in sewer segments and performing follow-up television inspection of sewer segments determined to have high infiltration rates. The Town intends to perform this work in all of the recommended areas except for the section of the Leisurewoods area that is tributary to the sewer in Winding Way. The sewer in Winding Way was observed by the Town in 2006 to have very little flow, implying that little or no infiltration comes from that area. As shown in Figure 1, flow isolation and television inspection are scheduled to be performed in the suspect areas in 2007.

Follow-up Work to Remove I/I Sources Found from Television Inspection in Suspect Areas

The I/I Control Plan recommends preparation of a follow-up sewer system evaluation survey (SSES) report to review the results of the field work, summarize the pipeline defects and identify areas where rehabilitation is warranted and the method of repair; preparation of follow-up rehabilitation design documents for the removal of I/I sources found during the SSES; and perform bidding, award and rehabilitation construction. As shown in Figure 1, this work is scheduled to be performed in 2007 and 2008.

Service Connections

The I/I Control Plan recommends preparation of rehabilitation design contract documents for the sealing of service connections that are determined to be cost-effective for rehabilitation, and perform bidding, award and rehabilitation construction.

The rehabilitation design and bidding of this contract were completed in late 2006 and early 2007, respectively. The project is expected to be awarded in the near future with an estimated construction completion date of June 2007.

Systematic Television Inspection of Sewers (Further Investigation and Rehabilitation Work)

The I/I Control Plan recommends further investigation of the Rockland sewer system to identify I/I sources for subsequent rehabilitation. The Plan recommends implementation of a program to systematically inspect and rehabilitate the sewers in each subbasin until the entire system is completed. A more refined description of the proposed further investigative work is provided herein.

I/I Investigation and Rehabilitation in Unexplored Areas. The plan included in Appendix A identifies eight subbasins that received SSES work under previous studies. SSES work was not performed in areas outside of the delineated subbasins, identified herein as the "unexplored areas". The Town intends to expand the I/I investigations into the unexplored areas by performing flow isolation and follow-up television inspection of sewer segments determined from the flow isolation to have high infiltration rates. This investigative work and the follow-up SSES report may identify additional I/I sources that are cost-effective for rehabilitation. The proposed schedule for work in unexplored areas will extend from 2008 through 2009 as shown in Figure 1.

I/I Investigation and Rehabilitation in Previously Explored Areas Not Inspected by Television.

I/I investigatory work in the eight subbasins identified in the plan included in Appendix A was originally performed in 1997 and 1998. The Town intends to revisit these areas and perform flow isolation and television inspection in the sewers that were not already televised during previous SSES work. This work will be divided roughly into two parts and will extend from 2009 though 2011 as shown in Figure 1.

Costs Associated with Implementation

Proposed Work in 2007 Related to Rehabilitation of Sewer Service Connections, Contract 07-1. In 2006, the Town appropriated $276,000 to fund the construction costs and the engineering services during construction associated with this project.

Proposed Work in 2007 Related to the Sump Pump Identification and Removal Program. The identification work to be performed in 2007 will be performed by existing Town employees. Therefore, special appropriation of funds for this task will not be required.

Proposed Work in 2007 Related to Suspect Areas. This task will require field work to perform flow isolation and television inspection and related engineering and coordination services, preparation of an SSES report and preparation of the rehabilitation design contract documents. An estimated budget allowance of $95,000 is recommended for these tasks. The Town has appropriated the necessary funding to perform this work in 2007.

Proposed Work in 2008. Funding will be required for the following projects:

- Sump pump removal Contract No. 1, design and construction.
- Bid, award and construction to rehabilitate I/I sources found in the suspect areas.
- Perform flow isolation and television inspection, prepare SSES report and prepare rehabilitation design contract documents for the unexplored areas.

In the May 2007 Town Meeting, the Town plans to appropriate $300,000 to fund the above referenced projects.

Proposed Work in 2009. Funding will be required for the following projects:

- Sump pump removal Contract No. 2, design and construction.
- Bid, award and construction to rehabilitate I/I sources found in the unexplored areas.

- Perform flow isolation and television inspection, prepare SSES report and prepare rehabilitation design contract documents for the first half of the previously explored areas that have not already received television inspection.

In the May 2008 Town Meeting, the Town plans to appropriate $300,000 to fund the above referenced projects.

Proposed Work in 2010. Funding will be required for the following projects:

- Sump pump removal Contract No. 3, design and construction.
- Bid, award and construction to rehabilitate I/I sources found in the first half of the previously explored areas that have not already received television inspection.
- Perform flow isolation and television inspection, prepare SSES report and prepare rehabilitation design contract documents for the second half of the previously explored areas that have not already received television inspection.

In the May 2009 Town Meeting, the Town plans to appropriate $300,000 to fund the above referenced projects.

Proposed Work in 2011. Funding will be required for the following projects:

- Sump pump removal Contract No. 4, design and construction.
- Bid, award and construction to rehabilitate I/I sources found in the second half of the previously explored areas that have not already received television inspection.

In the May 2010 Town Meeting, the Town plans to appropriate $250,000 to fund the above referenced projects.

AO Docket No. 06-33 Requirement:

IV.3.e. *Identify provisions and a schedule for the development and implementation of an enforceable program for eliminating sump pump and roof leader connections from the Collection System that is based upon flow contributions to the Collection System.*

Response:

The Town will implement a town-wide sump pump identification and removal program described in the above response to item IV.3.d. of this Plan. Throughout the I/I investigative work performed during the previous studies, no roof readers were found connected to the sewer system.

AO Docket No. 06-33 Requirement:

IV.3.f. *Identify the ten (10) largest water users located within the Town and measures that the Town will implement to encourage water use audits and conservation measures at these facilities.*

Response:

Presented in Table 4 is a list of the ten largest water users in the Town of Rockland. The largest water user, Rockland Place, is undergoing a major $9,000,000 renovation project which includes installation of new water saving fixtures and devices.

The Water Department has initiated a 5-year program to replace all existing water meters. The initial result may be an increase in metered water use due to more accurate readings. However, the water use rates are scheduled to increase by thirty percent in 2007. The increased rates will likely encourage consumers to conserve water use.

In June 2007, the Water Department intends to mail a document entitled "Water Quality Report" to all water users. The document will remind users of the benefits of conserving water and will include water saving tips. A sample of the Water Quality Report is provided in Appendix F.

All hotels within the Town of Rockland use water saving devices.

An audit will be performed for the ten largest water users. The audit will begin with an introductory letter to be sent to each user explaining the audit and stressing the importance to conserve water. A sample introductory letter announcing the water use audit is included in Appendix F. The Water Quality Report will also be sent to each of the largest water users. The water use records will be reviewed by the Town on a periodical basis to determine the effectiveness of water conservation measures.

TABLE 4. TEN LARGEST WATER USERS IN ROCKLAND

Business or Owner Name	Address	Type of Facility	Average Daily Water Consumption (gallons)
Rockland Place	Hannah Way	Apartments	12,200
Wearguard	141 Longwater Drive	Industrial	11,000
Radisson Hotel	929 Hingham Street	Hotel	9,640
Serono Labs	1 Technology Park	Research & Development	8,420
Best Western Hotel	909 Hingham Street	Hotel	6,060
Arthur Sharpe	21 School Street	Apartments	5,170
Days Inn	850 Hingham Street	Hotel	4,600
Rockland Housing Authority	Garden Terrace	Apartments	3,940
Gary Taylor	71 John Dunn Drive	Apartments	3,920
Catered Affair	76 Reservoir Park	Food Preparation	3,720

AO Docket No. 06-33 Requirement

IV.3.g *Identify provisions and a schedule for the implementation of additional infiltration/inflow controls and water conservation/reuse programs, as necessary, to achieve compliance with the Flow limits in the NPDES permit.*

Response:

Numerous studies and rehabilitation contracts have been implemented by the Town since 1995 focusing on the identification and removal of I/I sources from the sewer system. The primary sources of I/I in Rockland appear to be leaking joints in the main sewers and lateral service connections, and sump pumps that may be connected to the sewer system. Moving forward, this Plan includes a summary of the Town's proposed efforts in identifying and removing I/I sources and implementing water use conservation and audit measures. The Town is committed to implementing the town-wide, comprehensive, long range plan referenced herein for the investigation, identification and removal of additional I/I sources over the next five years. The ultimate goal of this work is to reduce the flow enough to achieve compliance with the flow, BOD, and TSS limits contained in the NPDES permit.

Despite the extensive efforts and funds yet to be expended by the Town in performing the work outlined herein, there is no guarantee that the proposed plan will result in compliance with the NPDES limits. As EPA is well aware based on historical data, I/I is generally difficult to remove and results are not always positive. Therefore, other measures may need to be considered such as increasing the flow capacity at the WWTP, coupled with a request from the Town to modify the current NPDES permit.