PHILADELPHIA WATER DEPARTMENT

Annual CSO Status Report

1996

Chapter 94: Wasteload Management Report

March 31st, 1996

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INTRODUCTION

Philadelphia, Pennsylvania is the nation's 5th largest urban center and spans a total land area of 136 square miles. Like many older cities, approximately 83 square miles (60%) of Philadelphia is serviced by combined sewers carrying a mix of domestic and industrial wastewater which is combined with storm water runoff during wet weather. During heavy rains, the quantity of flow may exceed the capacity of the treatment plants and their tributary sewers. The balance of the storm flow is then discharged to the receiving waters, more specifically, the Delaware and Schuylkill Rivers, and the Pennypack, Frankford, Tacony, and Cobbs Creeks.

The diversion of flow is currently controlled by combined sewerage regulating equipment. The regulator chambers divert the dry weather sewage flows to three Water Pollution Control Plants (WPCPs) to receive full secondary treatment prior to discharge to the Delaware river. The three WPCPs, Northeast, Southwest, and Southeast have design capacities of 210, 210, and 120 million gallons per day respectively. These facilities are permitted for instantaneous peaks and maximum daily average flows of 2 and 1.5 times design capacity in order to provide treatment for a portion of the storm flow.

The three WPCP's and their tributary sewer collection systems are regulated by the US. Environmental Protection Agency (US EPA), Pennsylvania Department of Environmental Protection (PA DEP), Delaware River Basin Commission (DRBC), and the Pennsylvania Fish Commission. The environmental legislation is enforced under the guidelines of the Clean Water Act, or more specifically the National Pollutant Discharge Elimination System (NPDES) permits which were renewed for a 5-year period on September 27th, 1993. As a result, the Department has currently undertaken a multi-year, multi-million dollar program to quantify the effects of Combined Sewer Overflows (CSO's) on the surrounding water bodies and to meet the CSO requirements of the NPDES permit.

An additional requirement of this permit and the Chapter 94 wasteload management report, is that an Annual CSO Status Report be submitted to summarize activities completed pursuant to meeting obligation of the permit and the National CSO Control Policy. The Department's documentation of the completion of this task for calendar year 1996 is contained herein.

It is the intent of this report to serve as the documentation of the status of the various projects and other actions initiated by the Department as part of the CSO Compliance Program. These projects are comprised of the Department's ongoing water pollution control projects, initiated to comply with the terms and conditions of the NPDES permit, and projects required to address specific issues identified through the periodic regulatory meetings. For Calendar year 1996, the status of the individual projects are organized and presented within the same framework as the preceding year's report. This structure allows for progress to be readily cross referenced with individual activities which comprise the permit-related milestones (e.g. Nine Minimum Control (NMC) and Long Term Control Plans (LTCP)). The completion date for the Long Term CSO control plan was extended to 1/27/97. In light of this extension, there were no permit-related deliverables submitted during calendar year 1996. Summaries of the CSO related programs are detailed in the sections to follow.

1.0 OPERATION & MAINTENANCE

Reference Philadelphia NMC Report, 9/27/95 Section 1 pp. 61-62. The operation and maintenance program is well established and any changes or modifications to existing programs are indicated in the section below.

1.1 CSO Regulator Inspection Program

Start: 8/1/95 End: Ongoing Status: In Progress

No changes have been made to the regulator inspection program. Annual summaries of the Flow Control Unit's CSO Inspections are included in Appendix A.

1.1.1 Customized Regulator Inspection Forms

Start: 8/1/95 End: 9/27/97 Status: In Progress

A customized CSO regulator preventative maintenance inspection report form is presently being developed for each individual regulator structure. These reports will be used to document the preventative maintenance which is performed on a yearly basis, ensure that proper regulator settings are maintained, and that system changes are documented.

This project is currently ongoing and will allow for simplified tracking of site specific changes made during implementation of NMC's and ensure longevity and validity of the CSO maintenance program.

1.1.2 Regulator O & M Program

Start: 9/27/96 End: Ongoing Status: In Progress

No changes reported for the existing O & M Program. Annual summaries of the preventative maintenance activities completed the past year are included in Appendix A. The comprehensive chamber maintenance, as detailed in the NMC Report was completed a minimum of once per chamber.

1.2 Pumping Station Maintenance

Start: 8/1/95 End: Ongoing Status: In Progress

Annual summaries of the Wastewater Pumping summaries are included in Appendix B for:

- Flows
- Station Outages
- Station Condition
- Pump Performance

- Pump Availability
- Maintenance Breakdown

1.2.1 Central Schuylkill Pumping Station (CSPS) Quarterly Grit Pocket Cleanings

Start: 8/1/95 End: Ongoing Status: In Progress

Grit removal operations were performed at the Central Schuylkill Pumping on the following dates with the associated quantity of debris removed:

3/19/96	20 cu. yds.
8/22/96	20 cu. yds
10/01/96	20 cu. yds
10/25/96	20 cu. yds.

1.2.2 WW Pumping Predictive Maintenance Program

Start: 8/1/95 End: 1/1/98 Status: In Progress

This program is currently being developed to anticipate maintenance needs before they develop into problems and is in progress. The Predictive Maintenance Committee which is comprised of key Operations Division personnel within the Water Department, is currently developing programs for key facilities in the water conveyance and wastewater collection systems. The program being developed specific to the Flow Control Unit is in the process of collecting baseline data for all equipment, scheduled data readings, and sampling. The data collection is still ongoing at this point in time.

1.3 Pump Station Emergency Backup Power

Start: 9/27/95 End: 9/27/97 Status: In Progress

This project entails the installation of emergency back-up power generators at 8 pumping stations which are presently single source. It is anticipated that this project will eliminate approximately 95% of pumping station failures attributed to power outages. See pump station maintenance annual summaries in Appendix B. Design work has been completed for 8 pump stations and 1 spare generator. Final plans and specifications are completed and the project is scheduled for bid in Spring of 1997 This project has been delayed somewhat due to right-of way-issues.

1.4 Sewer Cleaning Contracts

Start: 12/1/95 End: Ongoing Status: In Progress

The procurement of this contract has moved forward and is nearing completion. The technical specification document has been completed and was designed to address the specialized sewer cleaning needs of the Department, mainly large interceptor and trunk sewer for which the Department does not own equipment capable of cleaning. Additional sites will be selected and prioritized annually based

upon input provided from the field units and their respective field inspection programs (e.g. CCTV, CSO chamber inspections, Sewer Maintenance inspections).

Priority sites which have been incorporated into the first contract include:

1. Somerset Low Level Collector System from Richmond and Somerset Streets to the NEWPCP.

2. Pennsylvania Avenue Sewer from Parrish Street to 33rd Street.

3. Lower Schuylkill West Side Intercepting Sewer from 49th Street to the SWWPCP.

The technical specification is currently undergoing final review in the Procurement Department. Procurement is currently coordinating the site visits and pre-bid logistics for bidding the contract. This procurement is targeted to be bid prior to June 30th, 1997. Upon initiation of the contract, sewer cleaning projects will be scheduled and implemented each year to the current limit of the contract ($300,000)

1.5 Inflow Prevention Program

Start: 8/1/95 End: 1/1/98 Status: In Progress

Program can be referenced on p 2-12 of the NMC Documentation under NMC #2 Maximize Storage It has been moved to the O & M section of this report for organizational and scheduling purposes. The program was designed to evaluate specific locations and implementation schedules for collection system improvements to prevent tidal inflow into the conveyance and treatment system.

1.5.1 Emergency Overflow Weir Modification

Start: 11/7/94 End: 7/30/97 Status: In Progress

88 CSO Locations are tidally affected as identified in the SIAC Report. Many of these sites have openings above the tide gate. During extreme high tides inflow into the trunk sewer can occur. During these events, significant quantities of additional flow can be conveyed to the treatment plant and thus reduce capacity for storm flow, as well as increasing treatment costs. Page 2-12 of the NMC report indicated that a program would be initiated to install tide gates or other backflow prevention structures at regulators having opening above the tide gate in order to reduce the potential for inflow during the extreme high tides.

The status of this program is as follows.

2 flap gates were installed on the emergency overflow weir openings at site
- S_44 on 11/7/94

2 additional sites were indicated to be in progress in the NMC document. Installation of these gates has completed at the following sites.
- D_61 Catherine St. E. of Swanson St. on 12/22/95
- D_71 Bigler St. & Delaware Ave. on 12/27/95

A tide inflow study has been completed and corrective actions determined for remaining sites which may be periodically (excessively high peak high tides) experiencing inflow problems. This study reviewed monitored tide data, modeled inflow rates, and researched past O & M records. For monitored sites, frequency and magnitudes of inflow were determined on a site specific basis. From this information, a prioritized listing of sites, the selected control alternative and implementation schedule were developed. $238,000 has been budgeted for this project. The preliminary implementation schedule was established in Table 1.1 as follows:

Table 1.1 Listing of gates to be installed as part of tide inflow protection project.

Drainage District	# Sites (gates)	Installation Date
Northeast (CC)	7	6/30/97
Northeast	18	1/1/98
Southwest	9	3/1/98
Southeast	10	7/1/98

CC- Computer Controlled Regulators

1.5.2 Tide Gate Inspection Program

Start: 8/1/95 End: Ongoing Status: In Progress

Program found in NMC #2 Maximize Storage, moved to O & M for Tracking Purposes

Preventative Maintenance on tide gates are performed on a yearly basis as indicated the NMC documentation. An annual summary for the Tide Gate Inspection and preventative maintenance program is provided in Appendix A.

1.5.3 Backflow Prevention Assessment

Start: 8/1/95 End: 1/1/98 Status: In Progress

Monitoring in the Northeast Drainage District has shown that, it is possible for regulators at elevations above the tidal stages to be subjected to backflow from the smaller streams during periods of high streamflow. In order to protect these regulators from potential inflow, a program was initiated to install tide gates or other backflow prevention structures at these regulators. A plan is currently in the design phase to install 6 backflow preventers at low lying sites on the Cobbs Creek Low Level Interceptor system in order to prevent the intrusion of river water into the interceptor during high creek levels. The installation of additional diversion dams as part of 2.0 Maximize In-System Storage typically eliminates this possibility at most other locations.

2.0 MAXIMIZE IN-SYSTEM STORAGE

Reference Philadelphia NMC Report, 9/27/95 Section 2 pp. 1-15

An approach that can be implemented to gain additional in-system storage is to raise the overflow elevation by physically modifying the overflow structure. However, this approach must be implemented cautiously, since raising the overflow elevation also raises the hydraulic grade line in the combined trunk sewer during storm flows, and therefore can increase the risk of basement and other structural flooding within the upstream sewer system.

Adding diversion dams was proposed as a means to increasing the hydraulic capacity of slot regulators which presently do not have diversion dams. The flow maximization plan detailed in NMC #4 included the addition of dams at these locations. There are 57 locations at which the addition of dams has been identified; 40 locations in the SWDD, 15 locations in the NEDD and 2 locations in the SEDD. As a means to increase both the hydraulic capacity of the regulators and the available in-system storage, it was deemed feasible to raise the overflow weir elevation at these selected regulator locations.

The specific locations for any modifications to increase available in-system storage were determined by merging the locations where potential storage increases can be most effectively realized (based on the information in Tables 2-1) with the regulator improvement locations defined under NMC4 (see Section 4 of this report). Dam installation was curtailed during calendar year 1996 in order to give the treatment plants experience in handling the increased flows resulting from the regulator modification program as a whole. This is reflective of the additional analysis required to address the fiscal constraints on increased operating costs associated with greater flow volumes treated at the WPCP's as well as the ability of the WPCP's to accept higher flow-rates while continuing to meet NPDES permit conditions.

2.1 Evaluate Real Time Control in LTCP

Start: 2/1/96 End: 1/27/97 Status: Completed

During the development of the NMC documentation, relatively large in-system storage volumes were defined in the collection system conduits, particularly with respect to the SEDD where more than 0.1 inches of storage is available at the mean high tide elevation. This suggested that RTC-based facilities for utilization of this storage may represent a viable option for CSO control under the LTCP. PWD has evaluated RTC-based in-system storage as an alternative long-term CSO control strategy and will include a $350,000 project to establish a real-time control center, as well as several other localized real time control projects which the center will support in the LTCP report due 1/27/97. In future reports, the LTCP plan project updates will be listed in Section 10 Long Term CSO Control Plan Implementation.

2.2 Install Diversion Dams

Start: 8/1/95 End: 7/1/97 Status: In Progress

57 sites which do not have diversion dams on the slot type regulator. 40 were located in the SW DD, 15 in the NE DD, and 2 in the SE DD. Installation of diversions dams increases in-system storage at low cost and reduces susceptibility to dry weather discharge. Presently 20 of the 57 locations have been installed. The remaining 37 sites will be constructed by July 1st, 1997. Table 2.1 details the status of the installations made to date.

Dam Installations for slots w/o Dams - To be completed by June 30, 1997

No. of Dams: 57 Completed: 20 To go: 37

Date Installed	Regulator	Type	District	Tr. Dia. in.	Dam Height
11/10/95	P-04	Slot	NE	39	6
11/11/95	P-01	Slot	NE	42	7
11/11/95	P-02	Slot	NE	60	9
02/07/96	T-04	Slot	NE	48	8
02/08/96	T-09	Slot	NE	48	8
02/09/96	D-42	Slot	SE	42	7
02/10/96	S-12A	Slot	SW	42	7
02/10/96	S-13	Slot	SW	36	6
02/10/96	S-28	Slot	SW	39	6
02/11/96	T-03	Slot	NE	60	9
02/12/96	F-12	Slot	NE	54	9
02/12/96	S-17	Slot	SW	36	6
02/13/96	D-43	Slot	SE	42	7
02/13/96	S-03	Slot	SW	36	6
02/13/96	T-07	Slot	NE	36	6
02/13/96	T-11	Slot	NE	36	6
02/13/96	T-13	Slot	NE	57	9
02/14/96	F-03	Slot	NE	84	13
02/14/96	T-05	Slot	NE	42	7
02/20/96	T-10	Slot	NE	60	9
	C-01	Slot	SW	42	7
	C-02	Slot	SW	30	5
	C-04	Slot	SW	30	5
	C-04A	Slot	SW	63	10
	C-05	Slot	SW	28	5
	C-06	Slot	SW	48	8
	C-07	Slot	SW	36	6
	C-09	Slot	SW	54	9
	C-10	Slot	SW	27	4
	C-12	Slot	SW	39	6
	C-13	Slot	SW	54	9
	C-16	Slot	SW	30	5
	C-18	Slot	SW	54	9
	C-19	Slot	SW	42	7
	C-02	Slot	SW	36	6
	C-21	Slot	SW	42	7
	C-23	Slot	SW	27	4
	C-24	Slot	SW	39	6
	C-25	Slot	SW	42	7
	C-26	Slot	SW	27	4
	C-27	Slot	SW	39	6
	C-28A	Slot	SW	36	6
	C-30	Slot	SW	42	7
	C-32	Slot	SW	42	7
	C-34	Slot	SW	36	6
	C-35	Slot	SW	24	4
	C-36	Slot	SW	24	4
	C-37	Slot	SW	24	4
	S-12	Slot	SW	24	4
	S-30	Slot	SW	39	6
	S-35	Slot	SW	30	5
	S-36	Slot	SW	27	4
	S-39	Slot	SW	42	7
	S-40	Slot	SW	66	10
	S-51	Slot	SW	30	5
	T-12	Slot	NE	24	4
	T-15	Slot	NE	66	10

3.0 MODIFY PRETREATMENT PROGRAM

Reference Philadelphia NMC Report, 9/27/95 Section 3 pp. 1-13 The results of the following programs are summarized in Table 3.1.

3.1 Phase I Implementation

Start: 8/1/95 End: 2/1/97 Status: In Progress

3.1.1 Inventory Significant Non-Domestic

Start: End: Status: Completed

An Inventory of significant non-domestic discharges to the combined sewer system was completed by Industrial Waste Unit engineering support staff.

3.1.2 Guidance Memorandum

Start: 8/1/95 End: 1/26/96 Status: Completed

A guidance memorandum was created to permit the administrators to evaluate all SIU's and target those capable of avoiding or reducing pollutant discharge during wet weather events in which there is an overflow.

3.1.3 Develop Data Form for Annual Inspections

Start: 3/1/96 End: 9/1/97 Start: In-Progress

Collaborate on a form to collect the necessary information during the annual pretreatment inspections.

3.1.4 Pretreatment Inspections - 1st 50%

Start: 3/1/96 End: 7/1/96 Status: Completed

Initiated and completed annual pretreatment inspections for 50% of the SIU's. Used guidance criteria to judge the capability of process discharge restrictions or determine other wet weather process pollution prevention actions.

Industrial Discharger	CSO Downstream	Batch	Continuous	status of inspection	Nature of Pollutants	Action
Abbey Color & Chemical	*yes*	*x*		*completed*	*clean discharge*	*no control needed*
Columbia Silk Dyeing	*yes*	*x*		*completed*	*clean discharge*	*no control needed*
GATX	*yes*	*x*		*completed*	*stormwater only*	*no control needed*
Independence Brewing Co.	*yes*	*x*		*completed*	*high BOD, food source*	*recommend no control*
Maritank Philadelphia, Inc.	*yes*	*x*		*completed*	*dissolved hydrocarbons*	*controls recommended*
McWhorter Varnish	*yes*	*x*		*completed*	*high BOD*	*initiated controls*
National Chemical	*yes*	*x*		*completed*	*high BOD*	*initiating controls*
Neatsfoot Oil Company	*yes*	*x*		*completed*	*high BOD*	*controls in place*
Regal Leather	*yes*	*x*		*completed*	*high BOD,chromium*	*non-cooperative*
United Color Technology	*yes*	*x*		*completed*	*clean discharge*	*no control needed*
Abaco Company	yes		x			
Abbots Plating	yes		x			
Acme Uniform Rental Service	yes		x			
All-Brite	yes		x			
Anchor Dyeing & Finishing	yes		x			
Angelica Health Care	yes		x			
Arbill Industries, Inc.	yes		x			
Arway Apron and Uniform	yes		x			
Clean Rental Services, Inc.	yes		x			
Cooper's Cooperage	yes		x			
Coyne Textile Services	yes		x			
Cutler Dairy Products	yes		x			
Cardone Industries	yes		x			
CCL Company	yes		x			
Chelsea Plating Company	yes		x			
Delaware Valley Wool Scour	yes		x			
Domestic Linen Supply Co.	yes		x			
Frankford Plating, Inc.	yes		x			
Franklin Smelting & Refining	yes		x			
GV. Freda Sausage Co.	yes		x			
General Electric Apparatus	yes		x			
General Felt	yes		x			
Global Pharmaceutical	yes		x			
Globe Dye Works	yes		x			
Gross Metals	yes		x			
Harvey M. Stern & Company	yes		x			
Henshell Div.of Gross Metals	yes		x			
Hillock Anodizing	yes		x			
Inolex Chemical Co.	yes		x			
James Abbott	yes		x			
JWS Delavau	yes		x			
Kelly's Cooperage	yes		x			
Laurel Linen	yes		x			
Leatex Chemical Company	yes		x			
Lustrick Corporation	yes		x			
Martin's Metals	yes		x			

	CSO Downstream	Batch	Continuous	status of inspection	Nature of Pollutants
Max Levy Autograph	yes		x		
ML Desserts	yes		x		
Belmont Filter Plant	yes		x		
Queen Lane WTP	yes		x		
Model Finishing Co.	yes		x		
Mrs. Resslers	yes		x		
Mutual Pharmaceutical Co.	yes		x		
Newman & Company Inc.	yes		x		
O'Neil Industries, Inc.	yes		x		
Parachem	yes		x		
PGW	yes		x		
PGW	yes		x		
Penn Ventilator	yes		x		
Phila. Rust Proof Company	yes		x		
Philadelphia Newspapers Inc.	yes		x		
Philadelphla Coca Cola	yes		x		
Pottero Company, Inc.	yes		x		
Purolite Ltd.	yes		x		
Stone Container	yes		x		
Simkar	yes		x		
Smith Kline Beechman Corp.	yes		x		
Trigen	yes		x		
United States Mint	yes		x		
US Uniform	yes		x		
Wade Technologies, Inc.	yes		x		
Action Manufacturing	zero discharge				
Automotive Rebuiders, Inc.	zero discharge				
Cattie Galvanizing Co.	zero discharge				
Chestnut Display	zero discharge				
Garfield Smelting & Refining	zero discharge				
Gryphyn	zero discharge				
US Banknote	zero discharge				
Viz Manufacturing	zero discharge				
Anzon	closed				
Herman Wolf Co.	closed				
Imperial Metal & Chemicals	closed				
Janbridge, Inc.	closed				
Jerome Foods	closed				
Kurz Hastings	closed				
Kraftco Corp. (Good Humor)	closed				
Acme Plating	closed				
Arrowhead Industrial Water	no	x			
Avery	no	x			
Ajax Adhesives & Chemicals	no	x			
Ashland Chemical Co.	no	x			
Darby Creek Tank Farm	no	x			
Coal Tech, Inc	no	x			
Connelly Container, Inc.	no	x			
Container Corporation	no	x			
Yeager Manufacturing	no	x			

	CSO Downstream	Batch	Continuous	status of inspection	Nature of Pollutants
Arco Chemical Company	no		x		
Buchan Industries	no		x		
Goodmark Foods	no		x		
Multi-Flex Spring & Wire	no		x		
PPG Industries	no		x		
Precious Metals Plating Co.	no		x		
Remco Finishing Corp.	no		x		
United Chemical Technology	no		x		
Yankee Point Water Co.	no		x		
Advanced Plating Tech.	no		x		
Aeco, Inc.	no		x		
Allied Signal	no		x		
Allied Tube Company	no		x		
American Packaging	no		x		
Atochem	no		x		
Cintas Corporation	no		x		
Continental Baking	no		x		
C.W. Industries	no		x		
Computer Components Corp.	no		x		
Curtiss Laboratories	no		x		
Dietz & Watson	no		x		
Durand Products	no		x		
G. Whitfield Richard Co.	no		x		
Hygrade Food Products	no		x		
International Paper Co.	no		x		
Ketema	no		x		
LaFrance Company	no		x		
Lannett Company, Inc.	no		x		
Lavelle Aircraft	no		x		
Marshall Labs	no		x		
Matlack Inc.	no		x		
Merin Studios	no		x		
Nabisco Brands	no		x		
Paper Manufacturers	no		x		
Penn Fishing Tackle Mfg.	no		x		
Penn Maid	no		x		
Pepsi	no		x		
Philadelphia Baking	no		x		
Premier Medical	no		x		
Q Tech	no		x		
Ready Food Products	no		x		
Rohm & Haas Company	no		x		
Sanofi-Bio	no		x		
SPD Technologies	no		x		
SPS Technologies Inc.	no		x		
TastyKake Company	no		x		
Vibroplating Inc.	no		x		
Fleetwash	dry weather discharge only				
My Mobile Cleaning Service	dry weather discharge only				

3.1.5 Asses SIU Wet Weather Monitoring

Start: 7/1/96 End: 8/1/97 Status: In-Progress

Collaborate on determining method(s) for SIU's to determine when a significant wet weather event is happening.

3.1.6 1st 50% of SIU's Reduce Discharge

Start: 10/1/96 End: 1/1/97 Status: Completed

Initiated an outreach program to those of the first 50% of SIU's who exhibit the potential to restrict discharges.

3.1.7 Pretreatment Inspections - 2nd 50%

Start: 7/1/96 End: 12/31/96 Status: Completed

Initiated and completed annual pretreatment inspections and for remaining 50% of SIU's, conduct inspections with guidance criteria to judge the capability of process discharge restrictions or determine other wet weather process pollution prevention actions.

3.1.8 2nd 50% SIU's Reduce Discharge

Start: 1/1/97 End: 12/31/97 Status: In Progress

Initiation of an outreach program to the remaining 50% of SIU's who exhibit the potential to restrict discharges.

3.2 Phase II Implementation

Start: 3/1/97 End: 9/27/98 Status: Planned

Phase II implementation will assess discharge reductions realized from the Phase I Implementation Program.

3.2.1 Report - Performance of Phase I Activities

Start: 3/1/97 End: 3/31/97 Status: Completed

Table 3.1 Summarizes the following performance criteria for the SIU's inspected as part of the Phase I NMC Program:

1. # capable
2. # willing
3. # implementing restrictions

3.2.2 Annual Pretreatment Inspections - Criteria

Start: 3/18/97 End: 9/27/98 Status: Planned

Conduct inspections using guidance criteria on evaluating wet weather pollution prevention efforts

4.0 MAXIMIZE WPCP FLOW

Reference Philadelphia NMC Report, 9/27/95 Section 4 pp. 28-42

The results of the hydraulic modeling of the interceptor sewers and regulators documented in the System Hydraulic Characterization Report (PWD; June 27, 1995) clearly demonstrated that CSOs occur before the WPCPs have reached capacity, and in most cases before the interceptor sewers have reached capacity. This is an intentional result of the prevailing regulator design philosophy at the time that these structures were designed and built. Although an appropriate approach when protection of the WPCPs from hydraulic overloading was the principal concern, this approach is now obsolete in the current situation where the primary objective is maximizing the capture and treatment of wet-weather flows.

The basic strategy of flow maximization, or Modified Regulator Plan (MRP) is to deliver more flow to the WPCPs more frequently, to enable greater pollutant removals. The results of the hydraulic modeling of the interceptor sewers under the flow maximization scenarios indicate that significantly higher rates of flow can be delivered to the WPCPs more frequently than under current conditions. Based on financial and operational considerations (discussed further in Section 4.8 of NMC Report), incremental increases in flow capture were determined and then specific regulator modifications will be selected for implementation to achieve the desired flow increase. Regulators with the highest potential flow increases were identified in Table 4-1 of the NMC Report, so that implementation of modifications to increase % capture could be made in a short time frame with few modifications.

To date, 50% of the projected flow increase associated with the Modified Regulator Plan has been implemented. Since the completion of these modifications, the Department has been compiling data to study the impact that these changes have on the effects of the treatment plants with respect to cost, permit limits, and high flow management issues. Upon gaining this experience with higher storm flows implementation is now expected to continue to the full flow increase identified in the MRP within the next year. High flow management practices will be further analyzed by stress testing of individual unit processes to ensure adequate factors of safety and process availability under high flow circumstances. The following sections detail the status of these efforts.

4.1 POTW Stress Testing of Unit Processes

Start: 2/1/96 End: 8/1/96 Status: Planned

NMC4 requires a determination of the ability of a POTW to operate acceptably at incremental increases in wet weather flows and to estimate the effect on POTW's compliance with its permit requirements. The most effective way to accomplish the requirements of this task is to perform stress testing of the plant and plant's unit processes.

The plant stress testing project will establish:

- Maximum and average flows that should be treated in various unit processes for current and future operations;
- Ranges of hydraulic, solids and BOD_5 loads that could be applied to the various unit processes and yet obtain maximum removal efficiencies in each unit process;
- Changes in plant processes and operations (such as increased loads, MLSS levels, changes in sludge wasting, return activated sludge (RAS) ratios, detention times, etc.) that would increase removal efficiencies; and
- Magnitudes of excess capacity, if any, in each unit operation of the plant (increased flow through plant process units) that could be achieved and still meet the discharge permit requirements for each plant.

The results of stress testing will allow a determination of existing and future optimum flows, loads, and operations of the various unit processes. It can be expected that the actual field stress testing would take about eight to twelve weeks before conclusive results could be obtained from changed/adjusted operations. This study has been incorporated into the Long Term CSO Control Plan to be submitted 1/27/97.

4.1.1 Develop Work Scope for Each Plant

Start: 2/1/96 End: 6/1/97 Status: In Progress

A Request for Proposals (RFP) is now under development for the procurement of a consultant to develop the specific test procedures for each plant.

4.1.2 NE WPCP Stress Testing

Start: End: Status: Planned

Implement stress testing protocol developed in 4.1.1. Scheduling to be developed as part of task 4.1.1.

4.1.3 SE WPCP Stress Testing

Start: End: Status: Planned

Implement stress testing protocol developed in 4.1.1. Scheduling to be developed as part of task 4.1.1.

4.1.4 SW WPCP Stress Testing

Start: End: Status: Planned

Implement stress testing protocol developed in 4.1.1. Scheduling to be developed as part of task 4.1.1.

4.2 Prelim Costs - NMC #4 Implementation

Start: 8/1/95 End: 12/20/95 Status: Completed

This task identified the component costs which would increase as a result of implementing the modified regulator plan. The increases in pumping and biosolids handling (BRC) costs represented the majority of the increase and was accommodated within existing budgets, thus allowing for the MRP to be implemented without delay.

4.3 NE DD Modifications

Start: 1/1/96 End: 1/1/98 Status: In Progress

4.3.1 NE WPCP - 50% MRP

Start: 1/1/96 End: 6/1/96 Status: Completed

The following modifications were completed by 6/1/96 and achieve an estimated 49% of the projected flow increase identified in the Modified Regulator Plan (MRP) for the Southwest WPCP in the NMC Report.

Pennypack:

P_04 Cottage Ave. & Holmesburg Ave. - Installed 6" dam in SWO sewer 3 ft. downstream of slot. Slot plate was removed.

P_01 Frankford Ave. & Ashburner St.- Installed 7.5" dam in SWO sewer 3 ft. downstream of slot. Slot plate was removed.

P_02 Frankford Ave. & Holmesburg Ave. - Installed 9" dam in SWO sewer 3 ft. downstream of slot. Slot plate was removed.

Frankford High Level:

T_09 Roosevelt Blvd. W of Tacony Cr.- Install 8" dam in SWO sewer 32" from slot. Adjust slot plate to full open.

T_03 Champlost Ave. W. of Tacony Cr. - Install 9" dam in SWO sewer 31" from slot. Adjust slot plate to full open.

T_07 Tabor Rd. W. of Tacony Cr. - Install 6" dam in SWO sewer 23" from slot. Adjust slot plate to full open.

T_11 Ruscomb St. E. of Tacony Cr. - Install 6" dam in SWO sewer 16" from. Adjust slot plate to full open.

T_13 Whitaker Ave. W. of Tacony Cr. - Install 9" dam in SWO sewer 40" from slot. . Adjust slot plate to full open.

T_04 Rising Sun Ave. E. of Tacony Cr. - Install 8" dam in SWO sewer 29" from slot. Adjust slot plate to full open.

T_12 Whitaker Ave. W. of Tacony Cr. - Install 4" dam in SWO sewer 31.5" from slot. Adjust slot plate to full open.

T_05 Rising Sun Ave W. of Tacony Cr. - Install 7" dam in SWO sewer 29" from slot. . Adjust slot plate to full open.

T_10 Roosevelt Blvd. E. of Tacony Cr. - Install 9" dam in SWO sewer 54" from slot. . Adjust slot plate to full open.

Upper Frankford Low Level:

F_03 Castor Ave. & Unity St. - Install 13" dam in SWO sewer 18" from slot. . Adjust slot plate to full open.

F_12 Sepviva St. N. of Butler St. - Install 9" dam in SWO sewer 26" from slot. Adjust slot plate to full open.

Lower Frankford Low Level:

F_21 Wakeling St. NW of Creek Basin - Secure B & B shutter gate in full open position and remove orifice plate.

F_25 Ash St. W. of Creek Basin - Adjust Programmable Logic Controller (PLC) to maintain DWO gate at 100% open.

Somerset:

D_18 Venango St. W of Casper St. - Secure B & B shutter gate in full open position and remove orifice plate.

4.3.2 NE WPCP - 100% MRP

Start: 9/1/96 End: 1/1/98 Status: In Progress

The remainder of the flow increase for NMC #4 will be scheduled after assessing the impacts of the 50% MRP implementation and potentially the POTW stress testing. The detailed listing of remaining regulator modifications is currently under development and expected to be completed by 4/4/97.

4.4 SW DD Modifications

Start: 1/1/96 End: 1/1/98 Status: In Progress

4.4.1 SW WPCP - 50% MRP

Start: 11/11/95 End: 6/1/96 Status: Completed

The following modifications were completed by 6/1/96 and achieve an estimated 55% of the projected flow increase identified in the Modified Regulator Plan (MRP) for the Southwest WPCP in the NMC Report.

Southwest Main Gravity:

S_38 56th St. E. of P & R RR - Removed orifice plate and secured B & B shutter gate full open.

S_34 52nd St. & Paschall Ave. - Secure B & B shutter gate in full open position and remove orifice plate.

S_43 64th St. & Buist Ave. - Secure B & B shutter gate in full open position and remove orifice plate.

S_28 43rd St. & Chester Ave. - Install diversion dam in SWO sewer 25.5" from slot. Adjust slot plate to full open.

Central Schuylkill East Side:

S_15 Walnut St. W. of 24th St. - Secured B & B shutter gate full open.

S_12A 24th St. under Chestnut St. Bridge. - Install diversion dam in SWO sewer 30.5" from slot. Adjust slot plate to full open.

S_13 24th & Sansom Sts. - Install diversion dam in SWO sewer 44.5" from slot. Adjust slot plate to full open.

S_17 Spruce St. & 25th St. - Install diversion dam in SWO sewer 26" from slot. Adjust slot plate to full open

Central Schuylkill West Side:

S_03 Spring Garden St. W. of Schuylkill Expressway - Install diversion dam in SWO sewer 15" from slot. Adjust slot plate to full open.

S_14 Schuylkill Expressway under Walnut St. Bridge - Secure B & B shutter gate in full open position and remove orifice plate.

S_22 660' S. of South St. (E of Penn Field) - Secure B & B shutter gate in full open position and remove orifice plate.

Lower Schuylkill East Side:

S_36A 34th St. & Mifflin St. - Secure B & B shutter gate in full open position and remove orifice plate.

4.4.2 SW WPCP - 100% MRP

Start: 9/1/96 End: 1/1/98 Status: In Progress

The remainder of the flow increase for NMC #4 will be scheduled after assessing the impacts of the 50% MRP implementation and potentially the POTW stress testing. The detailed listing of remaining regulator modifications is currently under development. The detailed listing of remaining regulator modifications is currently under development and expected to be completed by 4/4/97.

4.5 SE DD Modifications

Start: 10/30/95 End: 1/1/98 Status: In Progress

4.5.1 SE WPCP - 50% MRP

Start: 10/30/95 End: 6/1/96 Status: Completed

The following modifications were completed by 6/1/96 and achieve an estimated 46% of the projected flow increase identified in the Modified Regulator Plan (MRP) for the Southeast WPCP in the NMC Report.

Lower Delaware Low Level:

D_39 Susquehanna Ave. E. of Beach - Removed orifice plate and secured B& B shutter gate full open. Raised diversion dam 6".

D_63 Christian St. W. of Delaware Ave. - Secure B & B shutter gate in full open position and remove orifice plate.

D_62 Queen St. E. of Swanson St. - Secure B & B shutter gate in full open position and remove orifice plate.

D_54 Front St. S. of Chestnut St. - Secure B & B shutter gate in full open position and remove orifice plate.

D_49 Callowhill St. & Delaware Ave. - Secure B & B shutter gate in full open position and remove orifice plate.

D_45 Laurel St. & Delware Ave. - Secure B & B shutter gate in full open position and remove orifice plate.

D_44 Shackamaxon St. E. of Delaware Ave. Secure B & B shutter gate in full open position and remove orifice plate.

D_43 Marlborough St. & Delaware Ave. Install a 7" dam in SWO sewer. Adjust slot plate to full open.

D_42 Columbia Ave. E of Beach St. Install 8" dam in SWO sewer 4" from dam. Adjust slot plate to full open.

Oregon Avenue:

D_69 Delaware Ave. N. of Porter St. - Removed orifice plate and secured B & B shutter gate full open.

4.5.2 SE WPCP - 100% MRP

Start: 9/1/96 End: 1/1/98 Status: Planned

The remainder of the flow increase for NMC #4 will be scheduled after assessing the impacts of the 50% MRP implementation and potentially the POTW stress testing. The detailed listing of remaining regulator modifications is currently under development. The detailed listing of remaining regulator modifications is currently under development and expected to be completed by 4/4/97.

4.6 NMC 4 Implementation Costs (LTCP)

Start: 5/1/96 End: 9/1/96 Status: Completed

Reassessed NMC #4 Costs in light of actual increase in cost for WPCP, Pumping, and BRC from actual experience resulting from implementation of MRP. Existing budgets were modified accordingly.

5.0 ELIMINATE DWO

Reference Philadelphia NMC Report, 9/27/95 Section 5 pp. 1-5

Dry weather discharges at CSO outfalls can occur in any combined sewer system on either a chronic (i.e., regular or even frequent) basis or on a random basis (i.e., as a result of unusual conditions, or equipment malfunction). Dry weather discharges can occur as a result of numerous site-specific conditions. Random dry weather discharges can occur at virtually any CSO outfall following sudden clogging by unusual debris in the sewer, structural failure of the regulator, or hydraulic overloading by an unusual discharge of flow to the combined sewer system. Chronic dry weather discharges can and should be prevented from occurring at all CSO outfalls. Random discharges cannot be prevented, but they can and must be promptly eliminated by cleaning repair, and/or identification and elimination of any excessive flow and/or debris sources.

As documented in Section 1 of the NMC report, regular inspections and maintenance of the CSO regulators are performed throughout the City. These programs ensure that sediment accumulations and/or blockages are identified and corrected immediately to avoid dry weather overflows. The results of these efforts are reflected in the Department's Monthly CSO Status Report submitted to PaDEP and EPA Region III and summarized on annual basis in the following sections.

5.1 CSO Monitoring Network

Start: 8/1/95 End: 8/1/97 Status: In Progress

The CSO monitoring network now under construction will encompass 255 monitoring sites. A status breakdown is provided in Table 5.1 for the each of the major site types in the contract including:

- CSO's
- Township Metering Stations
- Pump Stations
- Hydraulic Control Points (Miscellaneous points of interest)

The following descriptors are provided to indicate the status of the major site components:

Conduit Complete -	Underground conduit system for sensor cabling
Street Permit -	Street opening permit obtained
Park -	Permit obtain for Fairmount Park Commission (where applicable)
Paved -	Initiation of closure of opened pavement with Streets Dept.
Sensor Installation -	# of sensors installed
Enclosure -	Enclosure mounted on pole
Instrument -	RTU and associated instrumentation installed
Peco Service -	Electric service operational
Bell Service -	Phone service operational

Table 5.1 CSO Monitoring Network Implementation Status

CSO LOCATIONS

1/6/97

SITE NO.	SITE LOCATION	PLAT NO.	COND COMP	POLE TYPE	ST. PERM	PARK PERM	PAVED	SENS INSTAL	EN COL	INSTRU INSTAL	AERIAL UNDGRO SERVICE	PECO SERV	BELL SERV	S&M RETURN	SITE INSTAL COMP	ONE DAY TEST P/F	SEVEN DAY TEST P/F
C-01	City Line Ave. & 73rd St.	32	Y	EX-BOX	Y	N/A	N/A	2-S	E	Y					Y		
C-02	City Line Ave 100' S. Of Creek	32		EX-BOX	N/A	Y	N/A	2-S	E	Y							
C-04	Malvern Ave. & 68th St.	32	Y	WO	N/A	N/A	N/A	2-S	Y	Y	A		Y	Y	Y		
C-04A	Mavern Ave. NW of 68th St.	32	Y	WO	N/A	Y	N/A	3-S	Y	Y				Y	Y		
C-05	Lebanon Ave. SW of 73rd St.	32	Y	WO	N/A	Y	N/A	2-S	Y	Y					Y		
C-06	Lebanon Ave. & 68th St.	32	Y	WO	N/A	Y	N/A	2-S	Y	Y	A		Y	Y	Y		
C-07	Landsdowne Ave. & 69th St.	32	Y	WO	N/A	Y	Y	3-S	Y	Y	A		Y	Y	Y		
C-09	64th St. & Cobbs Cr.	28	Y	WO	N/A	Y	N/A	2-S	Y	Y	U		Y	Y	Y		
C-10	Gross St. & Cobbs Cr.	28	Y	WO	N/A	Y	N/A	2-S	Y	Y	A		Y	Y	Y		
C-11	63rd St. S. Of Maret St.	28	Y	WO	N/A	Y	N/A	3 S	Y	Y	LP-NEUT		Y		Y	P	
C-12	Spruce St. @ Cobbs Cr.	23	Y	AL	N/A	Y	N/A	3-S	Y	Y	U			Y	Y		
C-13	62nd St. @ Cobbs Cr.	23	Y	AL	N/A	Y	N/A	3-S	Y	Y	U		Y	Y	Y		
C-14	Baltimore Ave. & Cobbs Cr.	23	Y	WO	Y	N/A	N/A	3-S	Y	Y	A		Y	Y	Y		
C-15	59th St. & Cobbs Cr. Parkway	18		WO	N/A	Y	N/A	2-S	Y	Y	U			Y	Y		
C-16	Thomas Ave. & Cobb Cr.	18		WO	N/A	Y	N/A	2-S	Y	Y	U			Y	Y		
C-17	**Beaumont St. & Cobbs Cr.**	18	Y	WO	N/A	Y		2-S	Y	Y	U		Y	Y	Y		
C-18	60th St. @ Cobbs Cr. Parkway	18	Y	N/A	N/A	Y	Y	3-S	Y	Y				Y	Y	F	
C-19	Mount Moriah Cemetery & 62nd St.	18	Y	WO	N/A	Y	N/A	3-S	Y	Y	U		Y	Y	Y		
C-20	65th St. & Cobbs Cr. Parkway	18	Y	WO	N/A	Y	N/A	3-S	Y	Y					Y		
C-21	68th St. & Cobbs Cr. Parkway	13	Y	WO	N/A	Y	N/A	2-S	Y	Y	A		Y		Y		
C-22	70th St. & Cobbs Cr. Parkway	13	Y	WO	N/A	Y	Y	2-S	Y	Y	LP-NEUT		Y	Y	Y		
C-23	Upland St. Cobbs. Cr. Parkway	13	Y	WO	Y	N/A	Y	2-S	Y	Y	U	Y	Y	Y	Y		
C-24	Greenway Ave. & Cobbs Cr. Parkway	13	Y	WO	Y	N/A	Y	2-S	Y	Y	A	Y	Y	Y	Y		
C-26	Saybrook Ave. & Island Ave.	13	Y	WO	Y	N/A	Y	2-S	Y	Y	A		Y	Y	Y		
C-28A	Grays Ave. & Island Ave.	13	Y	EX-WO	N/A	N/A	N/A	2-S	Y	Y	EXIST	Y			Y		
C-29	Claymount St. & Grays Ave.	8	Y	WO	N/A	Y	N/A	3-S	Y	Y	A		Y	Y	Y		
C-30	77th St. W. Of Elmwood Ave.	8	Y	WO	Y	N/A	N/A	2-S	Y	Y	U	Y	Y	Y	Y		

Shaded rows are priority sites.

Shaded site numbers only are Penndot and City priority sites.

CSO LOCATIONS

1/6/97

SITE NO.	SITE LOCATION	PLAT NO.	COND COMP	POLE TYPE	ST PERM	PARK PERM	PAVED	SENS INSTAL	EN COL	INSTRU INSTAL	AERIAL UNDGRO SERVICE	PECO SERV	BELL SERV	S&M RETURN	SITE INSTAL COMP	ONE DAY TEST P/F	SEVEN DAY TEST P/F
C-31	Cobbs Cr. Park S. of City Line Ave.	27	Y	WO	N/A	Y	N/A	2-S	Y	Y	A		Y	Y	Y		
C-32	Cobbs Creek Park & 77th St.	27	Y	WO	N/A	Y	N/A	2-S	Y	Y	A		Y	Y	Y		
C-33	S. Of Brockton Rd. & Farrington Rd.	27	Y	WO	N/A	Y	N/A	2-S	Y	Y	A		Y	Y	Y		
C-34	Woodcrest Ave & Morris Park	32	Y	WO	N/A	Y	N/A	2-S	Y	Y	A		Y	Y	Y		
C-35	Morris Park W. Of 72nd St. & Sherwood	32	Y	WO	N/A	Y	N/A	2-S	Y	Y	A		Y	Y	Y		
C-36	69th St. & Woodbine Ave. S. Of brentwoo	32	Y	WO	N/A	Y	N/A	2-S	Y	Y	A		Y		Y		
C-37	Cobbs Cr. Park S. Of 67th St. & Callowhill	27	Y	WO	N/A	Y	N/A	2-S	Y	Y	A		Y		Y		
D-02	Cottman St.-S.E. of Milnor St.	73									A		Y		Y		
D-03	Princeton Ave. SE of Milnor St.	73									U						
D-04	Disston St. SE of Wisinoming St.	73															
D-05	Magee St. SE of Milnor St.	73															
D-06	Levick St. SE of Milnor St.	65															
D-07	Lardner St. SE of Milnor St.	65									A						
D-08	Comly St. SE of Milnor St.	65		EWO													
D-09	Dark Run La & Milnor St.	65									A			Y			
D-11	Sanger St. SE of Milnor St.	65												Y			
D-12	Bridge St. SE of Garden St.	56						1-S			A			Y			
D-13	Kirkbride St. & Delaware Ave.	56						1-S			A						
D-15	Orthodox St. & Delaware Ave.	56															
D-17	Castor Ave. & Balfour St.	50						2-S			A						
D-18	Venango St. W. of Casper St.	50						2-S			A						
D-19	Tioga St. W. of Casper St.	50		EWO				3-S			A						
D-20	Ontario St. W. of Casper St.	50						2-S			A						
D-21	Westmoreland St. W. of Balfour St.	49									A						
D-22	Allegheny Ave. SE of Bath St.	43						2-S									
D-24	Cambria St. E of Melvale St.	43						2-S			U						
D-25	Somerset St. E. of Richmond St.	43						3-S			A						

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CSO LOCATIONS

1/6/97

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D-37	Cumberland St. & Richmond St.	43		EWO	Y	N/A	N/A	4-S	Y	Y		Y					
D-38	Dyott St. & Delaware Ave.	43/37	Y	WO	Y	N/A	N/A	3-S	Y	Y		Y	Y	Y	Y		
D-39	Susquehanna Ave. E. Of Beach St.	37	Y	WO	Y	N/A	N/A	2-S	Y	Y			Y	Y	Y		
D-40	Berks St. E. Of Beach St.	37	Y	WO	Y	N/A	N/A	2-S	Y	Y		Y	Y	Y	Y		
D-41	Palmer St. E. Of Beach St.	37	Y	WO	Y	N/A	Y	2-S	Y	Y		Y	Y	Y	Y		
D-42	Columbia Ave. E. Of Beach St.	37	Y	PADH - R	N/A	Y	N/A	2-S	Y	Y			Y	Y	Y		
D-43	**Marlborough St. & Delaware Ave.**	36/3	Y	PADH - R	N/A			3-S		Y			Y	Y			
D-44	Shackamaxon St. E of Delaware Ave.	36	Y	WO	Y	N/A	Y	2-S	Y	Y		Y	Y	Y	Y		
D-45	Laurel St. & Delaware Ave.	36		WO	Y	N/A		2-S	Y	Y		Y	Y	Y			
D-46	Penn St. & Delaware Ave.	36	Y	WO	Y	N/A	N/A	1-S	Y	Y		Y	Y	Y	Y		
D-47	**Fairmount Ave. W. Of Delaware Ave.**	36	Y	N/A	Y	N/A	Y	8-S	Y	Y		Y	Y	Y	Y	F	
D-48	Willow St. W. Of Delaware Ave.	36	Y	WO	Y	N/A	Y	2-S	Y	Y		Y	Y	Y	Y		
D-49	Callowhill St. & Delaware Ave.	31	Y	WO	Y	N/A	Y	2-S	Y	Y			Y	Y	Y		
D-50	Delaware Ave. N. Of Vine St.	31	Y	WO	Y	N/A	Y	4-S	Y	Y			Y	Y	Y		
D-51	Race St. W. Of Delaware Ave.	31	Y	WO	Y	N/A	Y	2-S	Y	Y			Y	Y	Y		
D-52	Delaware Ave. & Arch St. (Inside I-95 fe)	31	Y		Y	N/A	N/A	1-S	Y	Y							
D-53	Market St. & Front St.	31	Y	PAD	WAVED	N/A	Y	3-S	Y	Y		Y	Y	Y	Y		
D-54	Front St. S. Of Chestnut St.	31	Y	EXIST	Y	N/A	N/A	1-S	Y	Y				Y	Y		
D-58	South St. & Delaware Ave.	26	Y	AL	Y	N/A	Y	2-S	Y	Y				Y	Y		
D-61	Catherine St. E. Of Swanson St.	26	Y	WO	Y	N/A	Y	1-S	Y	Y		Y		Y	Y		
D-62	**Queen St. E. Of Swanson St.**	26	Y	WO	Y	N/A	Y	1-S	Y	Y		Y		Y	Y		
D-63	Christian St. W. Of Delaware Ave.	26	Y	WO	Y	N/A	Y	2-S	Y	Y		Y		Y	Y		
D-64	Washington Ave. E of Delaware Ave.	26	Y	AL	Y	N/A	N/A	1-S	Y	Y		Y		Y	Y		
D-65	Reed St. E of Delaware Ave.	21	Y	WO	Y	N/A	Y	2-S	Y	Y		Y		Y	Y		
D-66	Tasker St. E. Of Delaware Ave.	21	Y	WO	Y	N/A	Y	2-S?	Y	Y		Y	Y	Y	Y		
D-67	Moore St. E. Of Delaware Ave.	21	Y	AL	Y	N/A	N/A	4-S	Y	Y				Y	Y		
D-68	Snyder Ave. & Delaware Ave.	22	Y	WO	Y	N/A	Y	2-S	Y	Y		Y	Y	Y	Y		

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CSO LOCATIONS

1/6/97

SITE NO.	SITE LOCATION	PLAT NO.	COND COMP	POLE TYPE	ST. PERM	PARK PERM	PAVED	SENS INSTAL	EN COL	INSTRU INSTAL	AERIAL UNDGRO SERVICE	PECO SERV	BELL SERV	S&M RETURN	SITE INSTAL COMP	ONE DAY TEST P/F	SEVEN DAY TEST P/F
D-69	Delaware Ave. N of Porter St.	22	Y	AL	Y	N/A	Y	2-S	Y	Y				Y	Y		
D-70	Oregon Ave. & Delaware Ave.	17	Y	WO	Y	N/A	Y	3-S	Y	Y				Y	Y		
D-71	Bigler St. & Delaware Ave.	17	Y	WO	Y	N/A	Y	2-S	Y	Y		Y		Y	Y		
D-72	Packer Ave. E. Of Delaware Ave.	17	Y	WO	Y	N/A	Y	1-S	Y	Y				Y	Y		
D-73	Pattison Ave. & Swanson St.	11	Y	WO	Y	N/A	Y	3-S	Y	Y			Y	Y			
F-03	Castir Ave & Unity St.	63						3-S									
F-04	Wingohocking St. E. of Adams Ave.	63						2-S									
F-05	Bristol St. W. of Adams Ave.	63						4-S									
F-06	Worrel St. E of Frankford Cr.	55						3-S									
F-07	Worrel St. W. of Frankford Cr.	55						4-S									
F-08	Erie Ave. & Hunting Park Ave.	55		EWO													
F-09	Frankford Ave N. of Frankford Cr.	55						2-S									
F-10	Frankford Ave. S. of Frankford Cr.	55		EWO				2-S									
F-12	Sepviva St. N. of Butler St.	55						3-S									
F-13	Duncan St. Under I-95	56						4-S									
F-14	Bristol St. in Cemetery	56															
F-21	Wakeling St. NW of Creek Basin	56															
F-23	Bridge St. NW of Creek Basin	64/56		EWO				2-S									
F-24	Bridge St. SE of Creek Basin	56						1-S									
F-25	Ash St. W. of Creek Basin	56															
F-I-1	Gaul St. & Lebfevre (H-19)	56						1-S									
H-01	**Southwest WPCP**	5	Y	N/A	N/A	N/A	N/A	3-S	Y	Y					Y		
H-02	Southeast WPCP	16															
H-03	Northeast WPCP	50															
H-04	Jnc. of UDLL & Pennypack Interceptors	83		WO	Y	N/A	Y	1-S	Y	Y			Y				
H-05	Jnc. of Pennypack & Sandy Run Interceptors	91		WO					Y								
H-06	Jnc. of Pennypack & Wooden Bridge Run Ints.	91		WO					Y								

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CSO LOC..TIONS

..6/97

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H-07	Jnc. of UDLL & LFC Interceptors	58															
H-08	Jnc. Cresheim Valley Int. & Wissahickon Int.	67		WO					Y								
H-09	Jnc. of Poquessing & Byberry Interceptors	102	Y	WO	Y	N/A	Y	2-S									
H-10	Jnc. of Pauls's Run & Pennypack Int.	104															
H-11	**Jnc. of Wissahickon Valley Int. & CSES Int.**	**52**	**Y**	**PAD**	**N/A**	**Y**	**Y**		**Y**								
H-12	Oregon Ave. Interceptor	16	Y	WO	Y	N/A	Y	1-S	Y	Y		Y	Y	Y	Y		
H-13	Passyunk Ave. Overflow @ 16th St. & Snyder	20	Y	WO	Y	N/A	Y	1-S	Y	Y		Y	Y	Y	Y	P	
H-15	**Central Schuylkill Siphon @ North Shaft**	**25**	**Y**	**WO**	**N/A**	**N/A**	**N/A**		**Y**				**Y**	**Y**			
H-16	24th St. & Indiana (OC4)	47			N/A	N/A		2-S									
H-17	SWMG at 43rd St. & Woodland	24			N/A	N/A		3-S									
H-18	Jnc. of CCHL & SWMG Interceptor	19	Y	WO	Y	N/A	Y		Y	\		Y	Y				
H-20	**Dispersion Chamber at 70th St. & Dicks**	**13**	**Y**	**WO**	**Y**	**N/A**	**Y**	**1-S**	**Y**	**Y**		**Y**	**Y**		**Y**		
H-21	Main Relief Sewer @ 23rd St. & Parrish	35	Y	WO	Y	N/A	Y	3-S	Y	Y		Y			Y		
MA-2	Pine Rd.		Y	E/PAD	N/A	N/A	N/A	2-S1-T	Y	Y		Y	Y	N/A	Y	P	F
MB-1	**Bucks County Pump Station**		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**Y**		**Y**	**Y**	**N/A**	**Y**	**P**	**F**
MBE-2	**Bensalem Shopping CTR** Byberry	**115**	**Y**	**N/A**	**N/A**	**N/A**	**N/A**	**Y**	**Y**	**Y**		**Y**	**Y**	**N/A**	**Y**	**P**	**F**
MBE-3	**Elmwood Apartments**	**116**	**Y**	**N/A**	**N/A**	**N/A**	**N/A**	**Y**	**Y**						**Y**	**P**	**F**
MBE-5	Grant & James	102	Y	E/PAD	N/A	N/A	N/A	2-S1-T	Y	Y		Y	Y	N/A	Y	P	F
MBE-6	Gravel Pike	111	Y	E/PAD	N/A	N/A	N/A	1-T	Y	Y		Y	Y	N/A	Y	P	F
MBE-7	Townsend Rd.		Y	N/A	N/A	N/A	N/A	2-S1-T	Y	Y		Y	Y	N/A	Y	P	
MC-1	Bouvier		Y	E/PAD	N/A	N/A	N/A	2-S1-t	EXIST	Y		Y	Y	N/A	Y	P	F
MC-2	Cheltenham		Y	E/POLE	N/A	Y	N/A		EXIST	Y		Y	Y	N/A			
MC-3	Fillmore & Shlmire		Y	E/PAD	N/A	N/A	N/A	2-S1-T	Y	y		Y	Y	N/A	Y	P	F
ML-1	51st. St & City Line Ave.		N/A	E/PAD	N/A	N/A	N/A	FLUME	EXIST	Y		Y	Y	N/A	Y	P	
ML-3	63rd. St. & City Line Ave.		N/A	E/PAD	N/A	N/A	N/A	FLUME	EXIST	Y		Y	Y	N/A	Y	P	
ML-4	66th St. & City Line Ave.		N/A	E/PAD	N/A	N/A	N/A	N/A	EXIST	Y		Y	Y	N/A	Y	P	F
ML-5	73rd St. & City Line Ave.		N/A	E/PAD	N/A	N/A	N/A	FLUME	EXIST	Y		Y	Y	N/A	Y	P	

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CSO LOCATIONS

1/6/97

SITE NO.	SITE LOCATION	PLAT NO.	COND COMP	POLE TYPE	ST. PERM	PARK PERM	PAVED	SENS INSTAL	EN COL	INSTRU INSTAL	AERIAL UNDGRO SERVICE	PECO SERV	BELL SERV	S&M RETURN	SITE INSTAL COMP	ONE DAY TEST P/F	SEVEN DAY TEST P/F
ML-6	Conshoohocken		Y	PAD	N/A	N/A	N/A	2-S1-T	Y	Y		Y	Y	N/A	Y	P	F
ML-7	Presidential & City Line Ave.		Y	PAD	N/A	N/A	N/A	2-S1-T	Y	Y		Y		N/A	Y	P	
MLM-1	**Philmont**		Y	E/PAD	N/A	N/A	N/A	2-S1-T	Y	Y		Y	Y	N/A	Y	P	F
MLM-2	Welsh Rd. Pump House		Y	N/A	N/A	N/A	N/A	N/A	EXIST	Y		Y	Y	N/A	Y	P	F
MS-2	**Northwestern**	94	N/A	E/PAD	N/A	Y	N/A	2-S	Y	Y		Y	Y	N/A	Y	P	F
MS-3	Stenton & Erdenheim		Y	E/PAD	N/A	N/A	N/A	2-S1-T	Y	Y		Y	Y	N/A	Y	P	F
MS-6	Stenton & Woodbrook		Y	E/PAD	N/A	N/A	N/A	2-S1-T	Y	Y		Y	Y	N/A	Y	P	F
MSH-1	**Trevose Rd.**		Y	E/PAD	N/A	N/A	N/A	2-S1-T	Y	Y		Y	Y	N/A	Y	P	F
MUD-1	**Upper Darby**	18	Y	N/A	N/A	Y	Y	Y	Y	Y		Y	Y	N/A	Y	P	F
P-01	Frankford Ave. & Ashburner St.	92															
P-02	Frankford Ave. & Holmesburg Ave.	91															
P-03	Torresdale Ae. NW of Pennypack Cr.	83															
P-04	Cottage Ave. & Holmesburg Ave.	82						3-S									
P-05	Holmesburg Ave SE of Hegerman St.	83						2-S									
PS-01	Bank St. & Elbow La.	31										Y	Y	N/A			
PS-02	Belfry Dr. & Steeple Dr.	75										Y		N/A			
PS-03	**Central Schuylkill PS**	24	Y	N/A	N/A	N/A	N/A		Y	Y		Y	Y	N/A			
PS-04	Ford Rd. accross from W. Park Hospital	48										Y	Y	N/A			
PS-05	Inside Old Fort Mifflin	2		D	E	L	E	T	E	D		Y	Y	N/A			
PS-06	Hog Island Rd. E. of Airport Control Towe	2										Y	Y	N/A			
PS-07	Linden Ave. & Milnor St.	92										Y		N/A			
PS-08	Lockart St. & Lockart La # DR RW	116										Y	Y	N/A			
PS-09	Milnor St. bet. Grant Ave. & Eden St.	93										Y		N/A			
PS-10	Fairmount Park @ Neil Dr. & Falls Rd.	46										Y	Y	N/A			
PS-11	Police Academy Grounds 8501 State Rd.	83		D	E	L	E	T	E	D		Y	Y	N/A			
PS-12	Philmount Shopping Center Grounds @ Re	116										Y		N/A			
PS-13	42nd St. @ 43rd. St.	24	Y									Y	Y	N/A			

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CSO LOCATIONS

7/6/97

SITE NO.	SITE LOCATION	PLAT NO.	COND COMP	POLE TYPE	ST PERM	PARK PERM	PAVED	SENS INSTAL	EN COL	INSTRU INSTAL	AERIAL UNDGRO SERVICE	PECO SERV	BELL SERV	S&M RETURN	SITE INSTAL COMP	ONE DAY TEST P/F	SEVEN DAY TEST P/F
PS-14	Broad St. @ Roosevelt Blvd. underpass	62										Y	Y	N/A			
PS-15	Mingo Creek: Schuylkill River @ Platt Br.	3										Y	Y	N/A			
PS-16	26th & Vare Ave. @ underpass	2										Y		N/A			
R-06	56th St. & Webster St.	23	Y				Y		EXIST								
R-07	16th St. & Clearfield St.	47	Y	EX-WO			Y		EXIST								
R-12	Pennsylvania Ave. & Fairmount Ave.	35	Y	WO	Y	Y	Y	3-S	Y	Y					Y		
R-13	Levick St. & Everett Ave.	81		EX-WO				2-S	EXIST								
R-14	Oakland St. & Benner St.	72		EX-WO				3-S	EXIST								
R-15	Nedro Ave. & 7th St.	70	Y	EX-WO			Y		EXIST								
R-16	Oregon Relief: Diversion Chamber	17															
R-17	Oregon Relief: Tide Gate Chamber	17	Y	WO	Y	N/A	Y	2-S	Y								
R-18	Frankford High Level Relief Sewer	63						3-S									
R-24	Arch St. & Cobbs Creek		Y	WO			Y	3-S									
RG-02	Catherine-66th St. & Catherine St.											Y	Y	N/A			
RG-03	Farrell - Castor Ave. & Fox Chase Rd.											Y	Y	N/A			
RG-04	Baxter-9001 State Rd.											Y	Y	N/A			
RG-05	Furness-3rd St. & Mifflin St.											Y	Y	N/A			
RG-06	St. Josephs 54th St. & City Line Ave.											Y	Y	N/A			
RG-07	Harrowgate - "G" St. & Ramona											Y	Y	N/A			
RG-08	Heintz - 5500 N. Water St.											Y	Y	N/A			
RG-09	Heston - 54th St. & Lancaster Ave.											Y	Y	N/A			
RG-0l	Atlantic - Essington Ave. bet. 63rd & 67th St.																
RG-10	Medical Mission - 8400 Pine Rd.											Y	Y	N/A			
RG-11	Naval Supply - 700 Robbins Ave.											Y	Y	N/A			
RG-12	Southeast WPCP -25 N. Pattison Ave.											Y	Y	N/A			
RG-13	ortheast H.S. - Frankford & Hunting Park Aves.											Y	Y	N/A			
RG-14	Northeast WPCP-3900 Richmond St.											Y	Y	N/A			

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7/6/97

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RG-15	enn Treaty - Mongomery Ave. & Thompson St.																
RG-16	9th Police District - 20th St. & Penna. Avw.											Y	Y	N/A			
RG-17	Septa Depot - Comly St. & Penn Ave.											Y	Y	N/A			
RG-18	Queen Lane -3500 N. Fox St. PTB Building											Y	Y	N/A			
RG-19	Emlen - Chew St. & Upsal St.											Y	Y	N/A			
RG-20	Shallcross-Knights Rd. & Woodhaven Ave.											Y	Y	N/A			
RG-21	Shawnmont - Shawmont Ave. & Ridge Ave.											Y	Y	N/A			
RG-22	Callowhill-67th & Callowhill St.											Y	Y	N/A			
RG-23	Southwest WPCP-8200 Enterprise Ave.		Y	N/A	N/A	N/A						Y	Y	N/A			
S-01	**Mantua Ave. & West River Dr.**	35			N/A	Y								Y			
S-02	Haverford Ave. & West River Dr.	35															
S-03	Spring Garden St. W. Of Schuylkill Exp.	35						2-S									
S-04	Powelton Ave. W. Of Schuylkill Express	30						2-S						Y			
S-05	24th St. 155' S. Of Park Towne Place	30	Y	AL	Y	N/A	Y	2-S	Y	Y				Y	Y		
S-06	24th St. 350' S. Of Park Towne Place	30	Y	AL	Y	N/A	N/A	2-S	Y	Y				Y	Y		
S-07	24th St. E. Of Schuylkill R. (Vine St.)	30	Y	AL	Y	N/A	Y	1-S	Y	Y				Y	Y		
S-08	**Race St. & Bonsall St.**		Y	AL	Y	N/A	Y	2-S	Y	Y		Y	Y				
S-09	**Arch St. W. Of 23rd St.**	30	Y	WO	Y	N/A	Y	2-S	Y	Y		Y	Y	Y	Y		
S-10	Market St. 25' E of 24th St.	30	Y	AL	Y	N/A	Y	2-S	Y	Y				Y	Y		
S-11	Market St. (In PRR Baggage Room)	30	Y	WALL	N/A	N/A	N/A	2-S	Y			Y	Y				
S-12	24th St. N. Of Chestnut St. Bridge	30	Y	WO	Y	N/A	Y	2-S	Y								
S-12A	24th St. Under Chestnut St. Bridge	30	Y	WO	Y	N/A	Y	2-S	Y								
S-13	Samson St. W. Of 24th St.	30	Y	AL	Y	N/A	N/A	2-S	Y	Y		Y			Y		
S-14	Schuylkill Expressway Under Walnut St.	30		COLM	Y	N/A	N/A	2-S									
S-15	Walnut St. W. Of 24th St.	30		AL	Y	N/A		1-S	Y	Y				Y			
S-16	Locust St. & 25th St.	30	Y	AL	Y	Y	Y	2-S	Y	Y			Y	Y	Y		
S-17	Spruce St. & 25th St.	25	Y	PAD	Y	N/A	Y	1-S	Y	Y							

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S-18	Pine St. W. Of Taney St.	25	Y	AL	Y	N/A	N/A	1-S	Y	Y			Y	Y	Y		
S-19	Lombard St. W. Of 27th St.	25	Y	AL	Y	N/A		2-S	Y	Y			Y	Y			
S-20	440'NNW of South St. (Behind Penn St.)	25			N/A	N/A							Y				
S-21	South St. E. Of 27th St.	25	Y	WO	Y	N/A	Y	2-S	Y	Y		Y	Y	Y	Y		
S-22	660'S. Of South St. E. Of Penn Field	25	Y	WO	N/A	N/A	N/A	2-S	Y	Y					Y		
S-23	Schuylkill Ave. & Bainbridge St.	25	Y	WO	Y	N/A	Y	2-S	Y	Y		Y	Y	Y	Y		
S-24	1060' S of South St. E. Of Penn Field	25		WO	N/A	N/A	Y	1-S	Y	Y					Y		
S-25	Shuylkill Ave. & Christian St.	25	Y	WO	Y	N/A	Y		Y	Y		Y	Y				
S-26	Ellsworth St. E. Of Schylkill R.	25	Y	WO	Y	N/A	Y		Y	Y		Y	Y	Y			
S-27	43rd St. & Locust St.	29	Y	WO	Y	N/A	Y	4-S	Y	Y				Y	Y		
S-28	Chester Ave. W of 43rd St.	29	Y	WO	Y	N/A	Y	3-S	Y	Y				Y	Y		
S-30	46th St. & Paschall Ave.	24	Y	WO	Y	N/A	N/A	2-S	Y	Y		Y	Y	Y	Y		
S-31	Reed St. & Schuylkill Ave.	24	Y	WO	Y	N/A	N/A	2-S	Y	Y		Y	Y	Y	Y		
S-32	49th St. S. Of Botanic St.	19	Y	WO	Y	N/A	Y	4-S	Y	Y		Y	Y	Y	Y		
S-33	**51st St. & Botanic St.**	19	Y	WO	Y	N/A	Y	2-S	Y	Y		Y	Y	Y	Y		
S-34	**52nd St. & Paschall Ave.**	18	Y	WO	Y	N/A	Y	3-S	Y	Y		Y	Y	Y	Y		
S-35	35th St. & Mifflin St.	19		WO	Y	N/A		1-S	Y	Y			Y	Y			
S-36	36th St. & Mifflin St.	19		WO	Y	N/A		2-S	Y	Y			Y	Y			
S-36A	**34th St. & Mifflin St.**	18	Y	WO	Y	N/A	Y	3-S	Y	Y		Y	Y	Y	Y		
S-37	Vare Ave. & Jackson St.	20	Y	WO			N/A	2-S	Y	Y			Y				
S-38	56th St. E. Of P&R RR	19	Y	WO	Y	N/A	Y	3-S	Y	Y			Y	Y	Y		
S-39	57th St. & Grays Ave.	19	Y	WO	Y	N/A	Y	2-S?	Y	Y		Y	Y	Y			
S-40	59th St. & Grays Ave.	19			Y	N/A		2-S						Y			
S-42	Pasyunk Ave. & 29th St.	15		WO	Y	N/A			Y					Y			
S-42A	Passyunk Ave. & 28th St.	15	Y	WO	Y	N/A	Y	2-S	Y	Y		Y	Y	Y	Y		
S-43	**64th St. & Buist Ave.**	14	Y	WO	Y	N/A	Y	2-S	Y	Y		Y	Y	Y	Y		
S-44	26th St. 700'N off Hartranft St.	15	Y	WO	Y	N/A	Y	2-S	Y				Y	Y			

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S-45	**67th St. E of P&R RR**	14	Y	WO	Y	N/A	Y	7-S	Y	Y		Y	Y	Y	Y		
S-46	Penrose Ave. & 26th St.	10	Y	WO	Y	N/A	N/A	2-S	Y	Y		Y	Y		Y		
S-47	69th St. & Buist Ave.	13	Y	WO	Y	N/A	Y		Y	Y			Y				
S-50	43rd St. E. of Woodland Ave.	24	Y	N/A	Y	N/A	Y	5-S	Y	Y					Y		
S-51	**42nd St. SE of Woodland Ave.**	24	Y	N/A	Y	N/A	Y	1-S	Y	Y				Y	Y		
SYP-2	Garden & Reynolds (H-14)	64						1-S									
T-01	Williams Ave. SE of Sedgwick St.																
T-03	Champlost Ave. W of Tacony Cr.	79															
T-04	Rising Sun Ave. E. of Tacony Cr.	71						3-S									
T-05	Rising Sun Ave. W of Tacony Cr.	71						2-S									
T-06	Bingham St. E. Of Tacony Cr.	71						3-S									
T-07	Tabor Rd. W. of Tacony Cr.	71						2-S									
T-08	Ashdale St W. of Tacpmu Cr/	71															
T-09	Roosevelt Blvd. W. of Tacony Cr.	71															
T-10	Roosevelt Blvd. E of Tacony Cr.	71						4-S									
T-11	Ruscomb St. E. of Tacony Cr.	63						2-S									
T-12	Whitaker Ave. E. of Tacony Cr.	63						2-S									
T-13	Whitaker Ave. W of Tacony Cr.	63						5-S									
T-14	I St. & Ramona St.	63						2-S									
T-15	J St. & Juniata Park	63						4-S									

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	SITE INSTALLATION COMPLETE														115		
	ONE DAY TEST COMPLETE (PASS)															24	
	ONE DAY TEST COMPLETE (FAIL)															2	
	SEVEN DAY TEST COMPLETE (PASS)																0
	SEVEN DAY TEST COMPLETE (FAIL)																16
	TOTAL SITES TESTED														26		
	SITES COMPLETE WITH BELL ONLY														27		
	SITES COMPLETE WITH PECO ONLY														9		
	SITES COMPLETE W/ PECO & BELL														49		
	SITES COMPLETE W / O PECO & BELL														27		
	TOTAL NUMBER OF SITES										263						

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	PRIORITY SITES																
	NUMBER OF PRIORITY SITES														24		
	SITE INSTALLATION COMPLETE														18		
	ONE DAY TEST COMPLETE (PASS)															6	
	ONE DAY TEST COMPLETE (FAIL)															1	
	SEVEN DAY TEST COMPLETE (PASS)																0
	SEVEN DAY TEST COMPLETE (FAIL)																5
	TOTAL SITES TESTED														7		
	SITES COMPLETE WITH BELL ONLY														1		
	SITES COMPLETE WITH PECO ONLY														1		
	SITES COMPLETE W/ PECO & BELL														13		
	SITES COMPLETE W / O PECO & BELL														3		

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5.1.1 Implement ENS for DWO's & Inflow

Start: 8/1/95 End: 8/1/97 Status: In Progress

The implementation of the CSO monitoring network is to include the use of an Event Notification System (ENS) to reduce the response time to abate dry weather discharges and wedged open tide gates. For the Northeast Drainage District which already has an automated monitoring system, this is common practice. In light of these improvements, it is expected that the frequency of visual inspections performed by the maintenance crews will decrease considerably, allowing for additional resources to be focused on preventative, comprehensive, and specialize maintenance activities. The implementation of the ENS is ongoing as the new computer system is implemented and site specifics of new sites are incorporated.

5.2 Characterization of 3 New CSO Sites Identified in the SIAC

Start: 3/27/95 End: 4/1/96 Status: Completed

The System Inventory and Characterization (SIAC) identified three (3) sites which currently are not included in the NPDES permits. These sites are inspected on a regular basis and their potential for dry weather overflow has been minimized A plan of action for eliminating these discharges was developed as part of the LTCP. The annual status for the projects listed below in section 5.2.1 Main & Shurs (R_20) and 5.2.3 32nd & Thompson (R_19) will be moved to Section 10 Long Term CSO Control Plan in future reports to address their scheduling and progress consistent with the LTCP due 1/27/97.

5.2.1 Main & Shurs (R-20)

Start: End: Status: In Progress

This site was added to the Flow Control Unit O & M schedules and the associated inspection data required by NPDES permits had been incorporated into monthly and annual reports (See Appendix A). Dry weather monitoring data and inspections continue to indicate no incidences of dry weather discharge excepting that attributed to illicit connection in the stormwater conduit leading to the point source. Resolution of Illicit connections in stormwater conduit has already been incorporated into the Illicit Connection Abatement Program. Plans for elimination of this overflow structure are being incorporated into the Long Term CSO Control Plan discussed in Section 10.

5.2.2 State Rd. & Grant Ave. (R_26)

Start: 3/27/95 End: 3/27/96 Status: Completed

As part of the System Inventory and Characterization, this site was discovered as having the ability to discharge combined sewage to the Poquessing Creek. Review of monitoring data collected from the period from 4/19/95 to present has not observed any incidences of dry weather overflow. Normal sanitary flow levels in the conduit are typically unaffected by storm flow. The site is still continually monitored.

5.2.3 32nd & Thompson St. (R_19)

Start: End: Status: Planned

This site was identified in the SIAC as an overflow not currently included in the NPDES, but as having the ability to discharge combined sewage into the Schuylkill River. The site has been added to the routine regulator inspection program and incidences of dry weather overflow would be reported in normal order as part of the monthly CSO status report. Annual summaries of these inspections are included in Appendix A. Reconstruction of this sewer to abate the grit accumulation has been incorporated into the Long Term CSO Control Plan discussed in Section 10.

5.3 WTP Residuals Management

Start: 12/15/94 End: 8/1/96 Status: In Progress

In the past, aperiodic overflows have been observed at D_39 when certain filter backwash operations were conducted at the Queen Lane Water Treatment Plant; however, these overflows were not chronic or continuous. Further corrective source control flow reduction measures at D_39 were studied within the context of the Department's Water Treatment Plant Residuals Management Study. Regulator modifications and operational changes with respect to back washing have minimized the likelihood of dry weather overflow at this site.

Additionally, the wet-weather impacts were studied and the flow quantities associated with the discharge of backwash can reduce the conveyance capacity left for conveying combined sewer flows. On-site solids management facilities are being considered for future implementation, but are not a priority at this time. The Department anticipates that, after completion of watershed management plans intended to be proposed as part of the Long Term CSO Control Plan due 1/27/97, the level to which these facilities need to be constructed will be more clearly defined in terms of cost and size.

5.4 Somerset Grit Chamber Cleaning

Start: 8/1/95 End: Status: Ongoing

p. 30 SIAC - PWD regularly monitors the sediment accumulation in the grit trap at the origin of the Somerset Intercepting Sewer and in locations downstream to determine appropriate cleaning intervals for the girt trap and downstream interceptor. Driven by the monitoring program, the grit basin was cleaned on the on the dates indicated on Table 5.2 Somerset Grit Removal.

SOMERSET GRIT REMOVAL

DATE	GRIT ELEV	EFFLUENT INVERT	CHAMBER I FLOOR	DATE	AMOUNT OF GRIT REMOVED CU. YRDS.	LBS	MEASUREMENT DOWN TO GRIT	FROM FLOOR
08/16/94	-20.50	-9.23	-20.50	08/16/94	80	257760	31.00	0.00
10/24/94	-20.25	-9.23	-20.50				30.75	0.25
01/05/95	-12.17	-9.23	-20.50				22.67	8.33
01/25/95	-17.67	-9.23	-20.50				28.17	2.83
01/25/95	-20.50	-9.23	-20.50	01/25/95	120	386640	31.00	0.00
01/26/95	-17.67	-9.23	-20.50				28.17	2.83
02/15/95	-19.00	-9.23	-20.50				29.50	1.50
02/28/95	-18.50	-9.23	-20.50				29.00	2.00
03/06/95	-17.00	-9.23	-20.50				27.50	3.50
03/16/95	-16.67	-9.23	-20.50				27.17	3.83
03/27/95	-13.08	-9.23	-20.50				23.58	7.42
04/03/95	-12.08	-9.23	-20.50				22.58	8.42
04/12/95	-11.25	-9.23	-20.50				21.75	9.25
04/27/95	-20.25	-9.23	-20.50	04/27/95	80	257760	30.75	0.25
05/17/95	-20.25	-9.23	-20.50				30.75	0.25
06/05/95	-19.33	-9.23	-20.50				29.83	1.17
06/08/95	-19.00	-9.23	-20.50				29.50	1.50
06/12/95	-19.08	-9.23	-20.50				29.58	1.42
06/22/95	-18.10	-9.23	-20.50				28.60	2.40
06/27/95	-18.10	-9.23	-20.50				28.60	2.40
07/27/95	-15.00	-9.23	-20.50				25.50	5.50
09/12/95	-9.67	-9.23	-20.50				20.17	10.83
09/12/95	-20.50	-9.23	-20.50	09/12/95	71.38	229980	31.00	0.00
11/09/95	-9.50	-9.23	-20.50				20.00	11.00
11/09/95	-20.50	-9.23	-20.50	11/09/95	41.70	134360	31.00	0.00
12/04/95	-19.50	-9.23	-20.50				30.00	1.00
01/02/96	-16.50	-9.23	-20.50				27.00	4.00
01/20/96	-14.50	-9.23	-20.50				25.00	6.00
02/07/96	-12.75	-9.23	-20.50				23.25	7.75
02/12/96	-10.67	-9.23	-20.50				21.17	9.83
02/12/96	-20.50	-9.23	-20.50	02/12/96	49.57	159720	31.00	0.00
04/17/96	-15.33	-9.23	-20.50				25.83	5.17
06/17/96	-13.33	-9.23	-20.50				23.83	7.17
06/17/96	-20.50	-9.23	-20.50	06/17/96	20.83	67100	31.00	0.00
07/01/96	-16.00	-9.23	-20.50				26.50	4.50
07/25/96	-15.00	-9.23	-20.50				25.50	5.50
08/02/96	-12.67	-9.23	-20.50				23.17	7.83
08/15/96	-12.10	-9.23	-20.50				22.60	8.40
08/15/96	-20.50	-9.23	-20.50	08/15/96	38.49	124000	31.00	0.00
09/04/96	-16.25	-9.23	-20.50				26.75	4.25
09/18/96	-12.60	-9.23	-20.50				23.10	7.90
09/24/96	-11.50	-9.23	-20.50				22.00	9.00
10/01/96	-15.25	-9.23	-20.50				25.75	5.25
10/01/96	-17.50	-9.23	-20.50	10/01/96	18.68	60200	28.00	3.00
10/22/96	-12.50	-9.23	-20.50				23.00	8.00
11/06/96	-10.75	-9.23	-20.50				21.25	9.75
11/06/96	-20.50	-9.23	-20.50	11/06/96	56.20	181088	31.00	0.00
12/10/96	-20.00	-9.23	-20.50				30.50	0.50

6.0 SOLIDS & FLOATABLES

Reference Philadelphia NMC Report, 9/27/95 Section 6 pp.1-12

The control of floatables and solids in CSO discharges addresses aesthetic quality concerns of the receiving waters. The ultimate goal of NMC No. 6 is, where feasible, to reduce, if not eliminate, by relatively simple means, the discharge of floatables and coarse solids from combined sewer overflows to the receiving waters. The initial phase of the NMC process has and will continue to focus on the implementation of, at a minimum, technology-based, non-capital intensive control measures.

The effectiveness of this minimum control and the evaluation of the potential need for other methods to more effectively control the discharge of solids and floatables from CSO's has been incorporated into the floatables monitoring and pilot evaluation project. That is, the need to control the discharge of solids and floatables, the degrees of control that will be necessary, and the determination of the controls that may be required, are intended to be an ongoing process throughout the development stage and the early implementation phases of the Long Term Control Plan.

6.1 Assessment of Sensitive Areas (LTCP)

Start: 11/1/95 End: 1/27/97 Status: In Progress

This is addressed in the results of the Long Term Control Plan to be submitted 1/27/97 which will be described in Section 10 Long Term Control Plan in future Annual Status Reports.

6.2 Floatables Monitoring Program

Start: 3/1/96 End: 1/1/98 Status: In Progress

As part of a sewer reconstruction project at CSO T-4 Rising Sun Ave. E. of Tacony Creek, a pilot floatables netting chamber was installed. This chamber is designed to collect floatable materials for subsequent weighing and disposal. The construction of the chamber is complete, however, the details of the netting system and the removal methods are still being worked out with the vendor. Additional pilot-scale, monitoring efforts will be proposed as part of the LTCP due 1/27/97.

6.3 Repair, Rehabilitation, and Expansion of Outfall Debris Grills

Debris grills are maintained at sites where the tide introduces large floating debris into the outfall conduit. This debris can then become lodged in a tide gate thus causing inflow to occur. Additionally, these debris grills provide entry restriction, and some degree of floatables control. Repair, Rehabilitation, and / or expansion of debris grills was performed at the following sites during calendar year 1996:

D_2 Cottman Ave - Retrieved screen from River Channel, repaired headwall, and reinstalled 6" x 6" screen.

D_5 Magee Ave. - Remove, straightened, and reinstalled 4 screens
D_6 Levick St. - Fabricate and install new screen w/ 6" x 6" openings
D_7 Lardner St. - Remove straighten and reinstall 4 screens
D_46 Removed damaged screen and installed new screen w/ 6" x 6" openings
D_25 Somerset St. - Retrieved and reinstalled debris grill w/ 6" x 6" opening
D_37 Clean, straighten and reinstalled debris grill w/ 6" x 6" openings

A new screen will be constructed and installed to limit access to the upstream netting system and flap gate being installed as part of 6.2 Floatables Monitoring Program.

7.0 POLLUTION PREVENTION

Reference Philadelphia NMC Report, 9/27/95 Section 7 pp.1-8

Most of the city ordinances related to this minimum control are housekeeping practices that help to prohibit litter and debris from actually being deposited on the streets and within the watershed area. These include litter ordinances, hazardous waste collection, illegal dumping policies and enforcement, bulk refuse disposal practices, and recycling programs. If these pollutant parameters eventually accumulate within the watershed, practices such as street sweeping and regular maintenance of catch basins can help to reduce the amount of pollutants entering the combined system and ultimately, the receiving water. Examples of these programs are ongoing and were presented in the NMC document. The City will continue to provide public information about litter and stormwater inlets as part of its implementing this minimum control as well as continue to develop the following new programs.

7.1 Bill Stuffers

Bill stuffers are commonly produced by the Department as an educational medium for disseminating information pertaining to billing and environmental issues. Specific bill stuffers will continue to be designed for the CSO and Stormwater Programs to address more specific educational issues over time.

7.1.1 General Stormwater Education

Start: 6/1/95 End: 8/1/95 Status: Completed

7.1.2 General CSO Education

Start: 2/1/96 End: 4/1/97 Status: In Progress

7.1.3 House Hazard Waste Program

Start: 8/1/95 End: 10/1/95 Status: Completed

Information regarding the proper disposal of household hazardous waste and the dates and locations of the household hazardous waste events was inserted in the September 1995 water and sewer bills in the

form of a brochure. Approximately 500,000 water and sewer customers received this information. Similar brochures will be included with bills from time-to-time in the future, with the next one scheduled for spring of 1996.

7.1.4 Grass Clippings & Recycling

Start: 3/1/97 End: 5/1/97 Status: Planned

7.1.5 In's & Out's of Sewer Inlets

Start: 9/1/97 End: 10/1/97 Status: Planned

7.2 Watershed Newsletters

Start: 3/1/96 End: Status: Ongoing

The Department's watershed newsletters targets specific information to the residents living within a particular watershed. In this manner, citizens can be kept informed of Departmental water pollution control initiatives specific to the watershed they live in.

7.2.1 Fall Edition 1996

Start: 5/1/96 End: 10/1/96 Status: Completed

This newsletter introduced watershed concepts in a general fashion and outlined the Department's responsibilities for CSO compliance.

7.2.2 Spring Edition 1997

Start: 3/1/97 End: 5/1/97 Status: In Progress

This newsletter will promote the watershed walks discussed in section 7.7.1 as a token of PWD's participation in National Clean-up Rivers Week. Additionally, this newsletter will provide specific information on PWD's implementation of the US EPA's Nine Minimum Controls and feature watershed specific maps of Philadelphia's waterways with CSO outfall locations designated in order to promote public awareness. The media will be invited to attend the watershed walks to introduce them to the CSO Program and to develop the framework for project 7.6.2 Media Workshops.

7.3 Comprehensive Education Materials

Start: 1/1/96 End: 9/27/97 Status: Planned

Comprehensive education materials to include:

- General Information of City's Combined and Separate sewer systems
- Maps of sewer systems and CSO locations
- Explanations of the National CSO Policy and NMC's
- Tips on what citizens can do

7.4 Citizen Advisory Committee (CAC)

Start: 8/1/95 End: 9/27/98 Status: In Progress

The Pennsylvania Environmental Council is currently facilitating the monthly citizen advisory committee meetings held at the Water Department. The Kick-Off meeting for the CAC was held on March 22nd, 1995 and meetings have been held on roughly a bi-monthly basis. The following activities were completed this past calendar year.

Winter - Spring 1996

- Developed a public outreach campaign.
- Selected logo and slogan - "Clean water begins and ends with you"
- Developed educational materials (e.g. tip sheets, fact sheets, and Delaware River Watershed map.)

June 1996 - Schuylkill River Festival

- Press releases were developed by the CAC to target neighborhood weeklies and included information on stormwater runoff, pollution prevention, and the Schuylkill River Festival.
- Developed press packets with general information
- The CAC acted as a major participant in the Schuylkill River Festival by tending informational booths featuring materials of various environmental interest groups and a physical watershed model.

Fall 1996

- Held a presentation of CSO issues for the CAC
- Conducted initial meetins to discuss how to integrate CSO and stormwater educational messages and additionally began to structure the CAC to discuss educational issues on watershed basis.
- Began planning for a city-wide, informational watershed forum to be held in the winter.

7.5 News Articles

Start: 5/1/96 End: 9/27/97 Status: Planned

Local newspapers will be solicited to develop articles to discuss general awareness of CSO's and their potential impacts on receiving waters and the potential impact within the regional receiving waters. This project will be initiated upon completion of the Comprehensive CSO Education materials in order to facilitate the educating of the media on CSO issues.

7.6 Public Acceptance Program

Start: 1/1/96 End: 9/27/98 Status: Planned

The following programs are outlined in the NMC document and comprise the initial public outreach programs which will eventually evolve into a public acceptance program for the continued implementation of the NMC's and LTCP.

7.6.1 City Council Briefings

Start: 2/2/96 End: 6/1/97 Status: Planned

7.6.2 Media Workshops

Start: 9/1/96 End: 6/1/97 Status: Planned

7.6.3 Community Workshops

Start: 9/1/96 End: 9/27/97 Status: Planned

7.6.4 Meeting with Friends Groups

Start: 6/1/96 End: 9/1/97 Status: Planned

7.6.5 Meeting with Environmental Groups

Start: 9/1/96 End: 12/1/97 Status: Planned

7.7 Watershed Planning - Educational Support Initiatives

The following programs are being developed to support watershed-based planning which will constitute a significant undertaking for the Department. Further documentation of this initiative will be incorporated into the LTCP document.

7.7.1 Watershed Tours

Start: 3/1/97 End: 5/3/97 Status: Planned

PWD's activities this spring are focused on the development of "watershed walks" in conjunction with Fairmount Park, on eight Philadelphia neighborhood watersheds. The walks will feature the function and life of a watershed in an urban environment, combining natural and sewer shed infomration in a guided tour. The tours will emphasize the individual's power to make a difference in the health and quality of their local watershed.

7.7.1 Watershed Informational Exchange Forum

Start: 1/1/97 End: 2/28/97 Status: Planned

8.0 PUBLIC NOTIFICATION

Reference Phialdelphia NMC Report, 9/27/95 Section 8 pp. 1-3

As discussed in Section 7, the Department is developing a series of informational brochures and other materials about its CSO discharges and the potential receiving water impacts. The brochures will provide a telephone number where additional information can be provided by City personnel. The brochures and other proposed materials and actions also will discuss potential direct receiving water impacts (such as fish kills, floatables, etc.) and will request that the public report these incidences as part of the City's CSO documentation and NMC effectiveness monitoring program. In addition, the PWD intends to recruit and solicit the support of watershed groups, enlisting volunteers to act as the Department's watchdogs for specific waterways, aiding the Department in getting out targeted CSO information specific to those watersheds. In order to accomplish this the materials are being developed in a unit watershed format to increase familiarity with specific watershed in which the residents live.

The City's Public Notification Program, to meet the NMC, will continue to consist primarily of public education about CSO discharges and their impacts. The City will rely on a general education program to keep the public aware of any potential public health risks and will concentrate its energies and resources on the pollution prevention aspects of CSO remediation through education and the requisite changes in lifestyle. The public information and education program detailed in Section 7 will be used to carry the message of this issue to the public.

9.0 MONITORING & REPORTING

Reference Philadelphia NMC Report, 9/27/95 Section 9 pp. 1-3

Monitoring and characterization of CSO impacts from a combined wastewater collection and treatment system are necessary to document existing conditions and to identify any water quality benefits achievable by CSO mitigation measures. The tables included in the following section represent the average annual CSO overflow statistics for calendar year 1995 and are presented in the same fashion as

the ones found in the System Hydraulic Characterization (SHC) and NMC Documents. It is important to note that the percent capture values were lower on average when compared to the average annual statistics generated from the 1948-1992 precipitation record used in the SHC report. This is indicative of the relatively wet year in comparison to the other 45 years of record. Also of note is the increased capture in the Pennypack watershed resulting from modifications made to regulators as part of NMC #2 & 4.

9.1 Annual CSO Statistics (1996)

The average annual frequency and volume statistics for calendar year 1996 are presented in Tables 9.1 and 9.2.

9.2 DRBC Receiving Water Support / Water Quality Monitoring

Start: 6/1/93 End: 3/18/98 Status: In Progress

Ongoing support of DRBC CSO Study and development of receiving water model for the Delaware Estuary. PWD and consultant staff have been actively participating in the DRBC's model development process.

9.2.1 Loading Analysis

Start: 3/1/96 End: 4/22/97 Status: In Progress

The pollutant loads generated from CSO's are being determined for use in DRBC model and as an accounting system for representing improvements (load reductions)

9.3 Miscellaneous Programs

Start: 8/1/95 End: Ongoing Status: In Progress

This section will allow for tracking and documentation of emerging projects as the pertain to more effectively managing the combined sewer system

9.3.1 CC TV Inspection Program

Start: 12/1/95 End: Ongoing Status: In Progress

This program is being implemented to assist in the general maintenance, rehabilitation, and repair of the combined and separate sewer system. The 3 new mobile technical inspection units have been procured this calendar year and training of staff completed. Specific to the CSO Program the units will be utilized for monitoring of sewers to ensure no adversities result from implementation of NMC strategies, particularly NMC #2 & #4 and potential grit deposition resulting from them.

Table 9.1 Estimated Annual Combined Sewer Overflow Statistics For 1996
(Based on model simulations of hourly rainfall/runoff/overflow volumes using City Of Philadelphia 1996 Rain Gage Data)

			Frequency		Overflow Volume (MG)				Average Duration (hrs)
Philadelphia Interceptor System	Number of Point Sources	Number of Structures (1)	Range per subsystem	Average per subsystem	Range per subsystem	Annual CSO Capture (%)			Range per subsystem
Northeast Drainage District									
Lower Frankford Low Level	7	8	4 - 78	45	1,953 - 2,073	31%	-	32%	174 - 194
Upper Frankford Low Level	10	10	13 - 79	44	443 - 481	61%	-	63%	144 - 157
Pennypack	5	5	19 - 58	36	81 - 90	55%	-	57%	138 - 158
Somerset	8	9	29 - 63	54	2,559 - 2,756	40%	-	42%	237 - 266
Tacony High Level	16	16	3 - 80	41	5,111 - 5,544	36%	-	38%	173 - 194
Upper Delaware Low Level	13	13	7 - 61	37	1,344 - 1,459	55%	-	56%	118 - 135
Southeast Drainage District									
Lower Delaware Low Level	27	27	0 - 68	44	3,205 - 3,495	53%	-	55%	169 - 194
Oregon Avenue	6	6	40 - 66	53	714 - 778	51%	-	53%	212 - 244

Table 9.1 (con't.) Estimated Annual Combined Sewer Overflow Statistics For 1996
(Based on model simulations of hourly rainfall/runoff/overflow volumes using City Of Philadelphia 1996 Rain Gage Data)

			Frequency		Overflow Volume (MG)				Average Duration (hrs)
Philadelphia Interceptor System	Number of Point Sources	Number of Structures (1)	Range per subsystem	Average per subsystem	Range per subsystem	Annual CSO Capture (%)			Range per subsystem
Southwest Drainage District									
Central Schuylkill East Side	22 (2)	27	0 - 87	31	1,144 - 1,230	49%	-	51%	131 - 145
Central Schuylkill West Side	9	9	0 - 69	48	709 - 782	48%	-	51%	198 - 229
Cobbs Creek High Level	27	31	0 - 87	38	1,390 - 1,502	30%	-	31%	172 - 194
Cobbs Creek Low Level	12	12	2 - 59	34	89 - 101	63%	-	65%	89 - 104
Lower Schuylkill East Side	9	9	0 - 62	47	1,090 - 1,179	41%	-	43%	245 - 272
Lower Schuylkill West Side	4	4	8 - 67	36	760 - 822	27%	-	28%	260 - 283
Southwest Main Gravity	3	3	14 - 71	27	2,487 - 2,708	41%	-	44%	139 - 156

(1) - Number of structures includes overflows from CSO diversion chambers and storm relief diversion chambers within the combined sewer system. In some cases, multiple structures discharge to a common overflow point.
(2) - The Main Relief Sewer is assigned to the Central Schuylkill East Side system as a single overflow point source.

10.0 LONG TERM CSO CONTROL PLAN IMPLEMENTATION

This section will be used to provide updates on the implementation and scheduling of the Long Term CSO Control Plan to be submitted 1/27/97.

10.1 ELIMINATION / CONSOLIDATION OF OUTFALLS

10.1.1 Stokely & Roberts (R_ 22) - Dobson's Run Phase I

Start: 5/1/96 End: 1/1/97 Status: Planned

Capital Improvement Project to reconstruct storm and sanitary sewer from Wissahickon Ave. to Roberts Ave. and eliminated hydraulic control point R_22 Stokely & Roberts. Final design is complete. Contract has been bid and awarded. Construction is underway. The estimated construction cost is $ 5.8 million.

10.1.2 Kelly Drive (S_01T) - Dobson's Run Phase II

Start: 6/1/97 End: 4/1/99 Status: Planned

Phase II of the Dobson's Run Reconstruction consists of the sewer reach from Henry Ave. to Kelly Drive and eliminates temporary CSO S_01T. The design for reach 1 is anticipated to be completed by 4/97 and the design for reach 2 is scheduled to be completed by 4/98. The estimated cost is $ 16.0 million for the 2 reaches.

10.1.3 Main & Shurs

Start: End: Status: Planned

Project will be incorporated in to the CSO LTCP due 1/27/97.

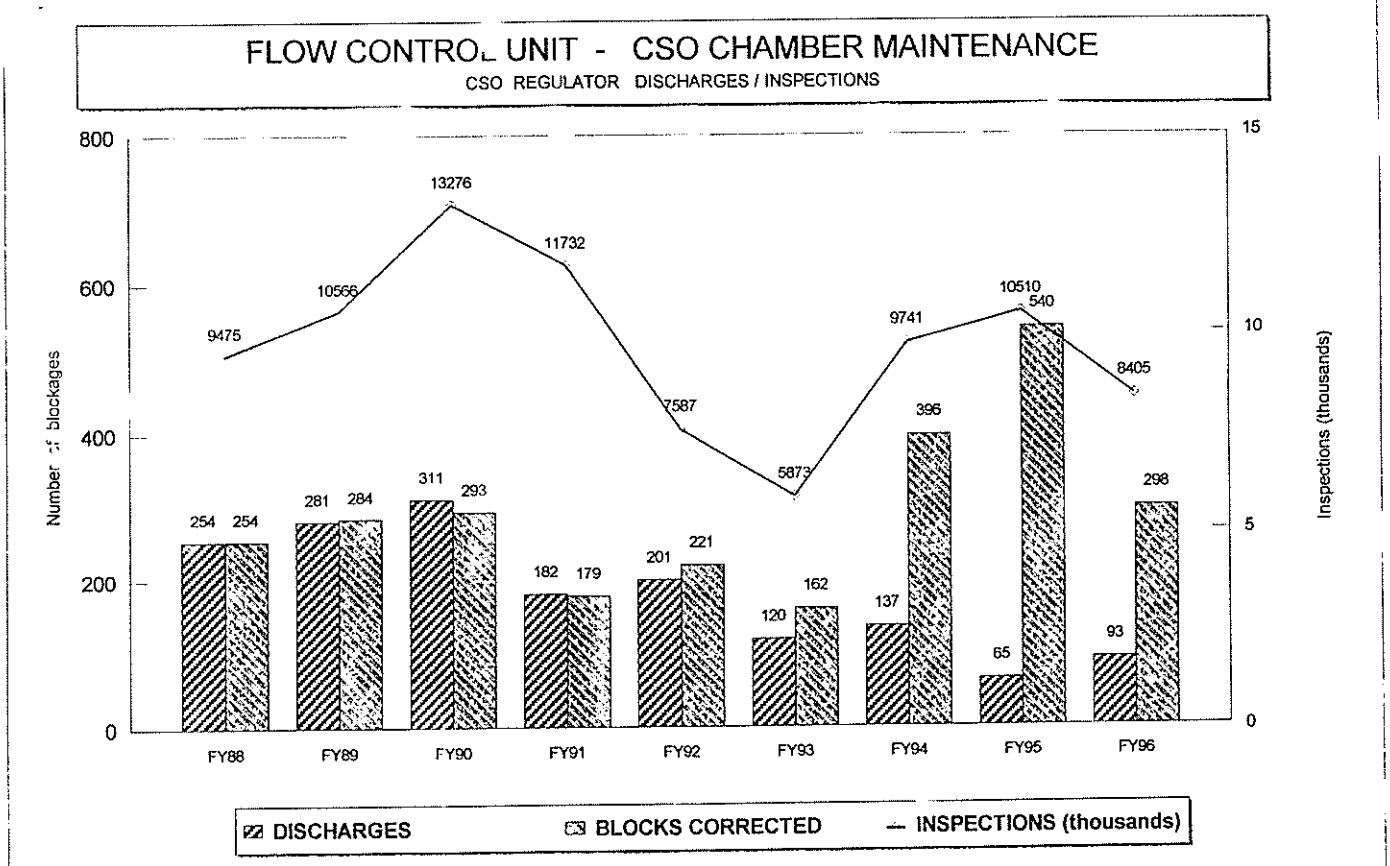
10.1.4 32nd & Thomspon

Start: End: Status: Planned

Project will be incorporated in to the CSO LTCP due 1/27/97.

Appendix A

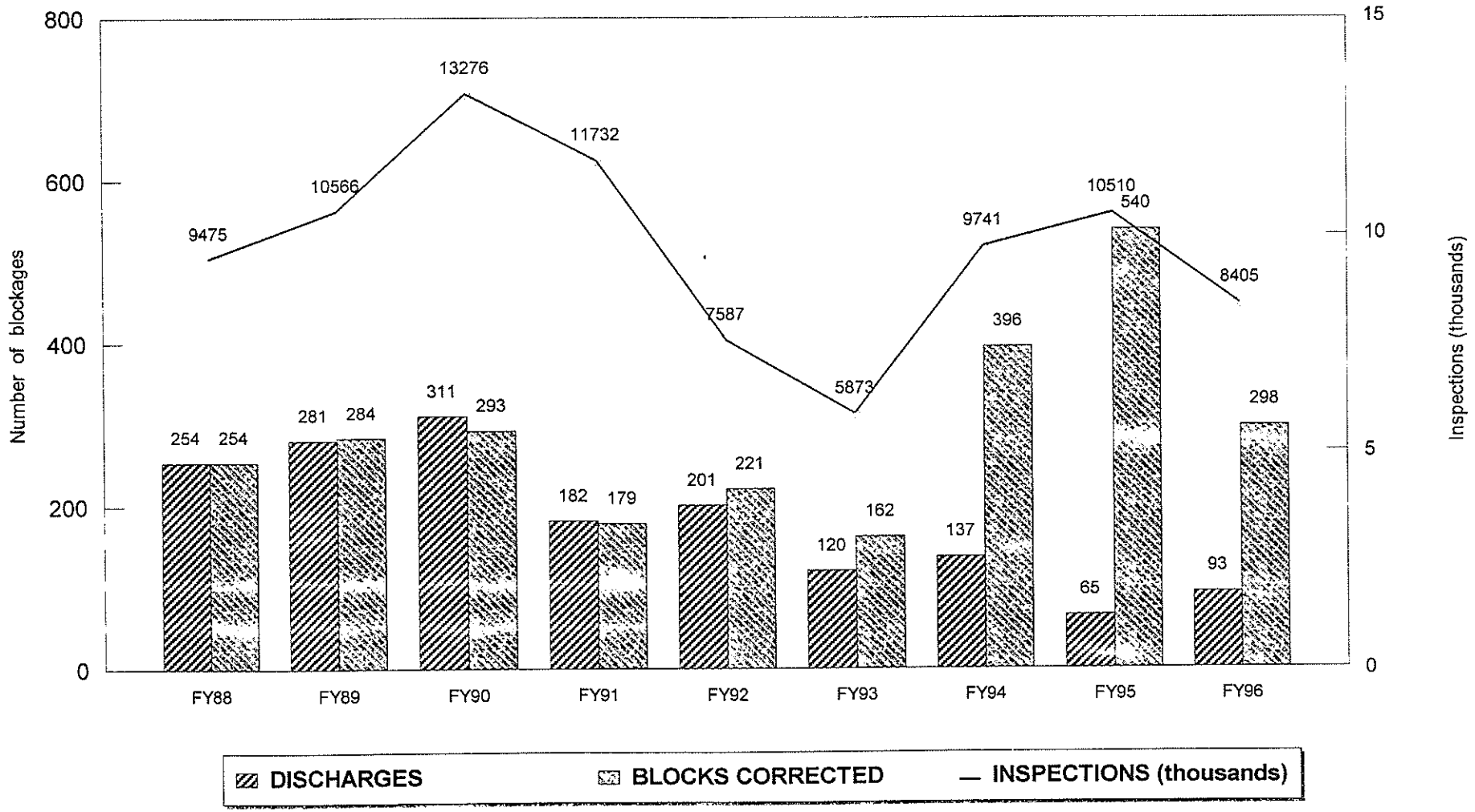
Flow Control Unit - CSO Inspection & Maintenance Summaries



The above chart shows a comparison of the last 9 fiscal years CSO Maintenance. The trend shows the number of Dry Weather Discharges declining over the years. Our emphasis is placed on frequent site visits to clear the minor blockages before they develop into discharges and reviewing the remote monitor reports to alert us to changing conditions in the sewer.

FLOW CONTROL UNIT - CSO CHAMBER MAINTENANCE

CSO REGULATOR DISCHARGES / INSPECTIONS



FY96 REGULATING CHAMBER MONTHLY INSPECTION TOTALS NEWPC & SEWPC PLANT REGULATORS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
UPPER PENNYPACK 5 UNITS															
	27	16	27	34	42	24	16	9	18	11	15	23	262	4.4	7.0
P01	6	4	4	6	9	5	3	1	4	2	3	5	52	4.3	7.0
P02	5	3	5	7	9	5	3	2	4	3	3	5	54	4.5	6.8
P03	5	2	6	7	7	3	3	2	3	2	3	4	47	3.9	7.8
P04	5	2	6	7	9	7	4	2	4	2	3	5	56	4.7	6.5
P05	6	5	6	7	8	4	3	2	3	2	3	4	53	4.4	6.9
UPPER DELAWARE LOW LEVEL 12 UNITS															
TOTAL	44	38	60	77	74	51	50	17	51	33	52	39	586	4.1	8.0
D02	7	3	4	7	10	5	3	1	9	4	6	5	64	5.3	5.7
D03	7	1	10	8	9	5	5	2	4	7	5	6	69	5.8	5.3
D04	7	4	7	7	9	7	6	2	6	7	5	4	71	5.9	5.1
D05	5	2	5	9	8	3	5	2	4	2	5	4	54	4.5	6.8
D06	3	7	5	6	8	5	5	2	4	4	5	3	57	4.8	6.4
D07	3	3	5	4	7	6	6	1	5	3	5	3	51	4.3	7.2
D08	2	4	5	6	3	5	5	2	4	1	4	3	44	3.7	8.3
D09	2	3	4	7	2	3	1	1	4	1	3	3	34	2.8	10.7
D11	2	2	4	5	4	4	4	1	3	1	3	2	35	2.9	10.4
D12	2	3	4	7	5	3	4	1	2	1	3	2	37	3.1	9.9
D13	2	2	4	4	5	2	2	1	4	1	5	3	35	2.9	10.4
D15	2	4	3	7	4	3	4	1	2	1	3	1	35	2.9	10.4
LOWER FRANKFORD CREEK 6 UNITS															
TOTAL	26	21	26	29	18	16	18	11	19	24	13	9	230	3.2	9.9
F13	5	3	5	4	2	3	4	2	4	6	2	2	42	3.5	8.7
F14	5	2	3	5	2	3	3	4	3	5	2	2	39	3.3	9.4
F21	4	3	3	4	3	2	2	2	2	2	2	1	30	2.5	12.2
F23	4	6	7	8	4	3	4	2	4	5	3	2	52	4.3	7.0
F24	5	4	5	5	4	3	3	0	4	3	2	1	39	3.3	9.4
F25	3	3	3	3	3	2	2	1	2	3	2	1	28	2.3	13.0
LOWER FRANKFORD LOW LEVEL 10 UNITS															
	51	47	74	68	38	37	38	12	23	30	27	40	485	4.0	7.9
F03	6	2	5	7	3	3	4	2	3	2	3	3	43	3.6	8.5
F04	6	2	5	6	3	3	5	0	3	2	3	3	41	3.4	8.9
F05	4	2	5	5	3	2	2	0	3	2	3	3	34	2.8	10.7
F06	7	4	7	7	4	4	5	1	3	2	3	4	51	4.3	7.2
F07	4	6	7	7	5	4	5	1	3	4	3	4	53	4.4	6.9
F08	6	6	9	6	3	4	5	0	2	3	2	3	49	4.1	7.4
F09	6	7	11	8	5	6	5	4	3	5	4	5	69	5.8	5.3
F10	6	8	10	8	7	6	3	2	1	4	2	7	64	5.3	5.7
F11	3	5	9	8	2	3	2	0	1	3	2	4	42	3.5	8.7
F12	3	5	6	6	3	2	2	2	1	3	2	4	39	3.3	9.4
FRANKFORD HIGH LEVEL 14 UNITS															
TOTAL	83	88	83	88	69	42	35	27	17	31	45	41	649	3.9	8.5
T01	4	4	4	7	7	1	2	0	2	2	4	2	39	3.3	9.4
T03	7	6	4	7	4	2	2	3	1	2	4	2	44	3.7	8.3
T04	5	5	6	6	3	1	2	3	2	2	4	3	42	3.5	8.7
T05	5	6	4	7	2	2	2	2	1	2	4	4	41	3.4	8.9
T06	7	7	6	8	4	2	3	1	1	2	4	3	48	4.0	7.6
T07	5	7	3	6	4	3	3	2	1	3	4	4	45	3.8	8.1
T08	8	8	5	8	6	4	3	1	1	2	3	3	52	4.3	7.0
T09	9	11	9	4	7	5	2	3	1	3	4	4	62	5.2	5.9
T10	12	15	16	8	8	5	3	4	2	2	3	3	81	6.8	4.5
T11	6	7	6	6	6	4	2	1	1	4	3	3	49	4.1	7.4
T12	4	5	4	5	7	4	3	3	1	2	2	3	43	3.6	8.5
T13	4	3	8	8	7	4	3	2	1	3	2	3	48	4.0	7.6
T14	4	2	4	4	2	3	3	1	1	1	2	2	29	2.4	12.6
T15	3	2	4	4	2	2	2	1	1	1	2	2	26	2.2	14.0

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
SOMERSET LOW LEVEL 9 UNITS															
TOTAL	16	30	31	44	45	50	21	4	33	15	22	21	332	3.1	10.1
D17	3	2	5	5	5	6	2	0	5	2	2	2	39	3.3	9.4
D18	2	3	4	4	6	7	2	1	5	2	2	2	40	3.3	9.1
D19	1	4	3	3	4	7	2	0	4	2	3	2	35	2.9	10.4
D20	2	6	4	6	6	7	2	1	4	2	3	3	46	3.8	7.9
D21	3	4	4	7	5	4	3	1	3	1	3	2	40	3.3	9.1
D22	1	2	3	5	5	4	2	0	3	1	2	2	30	2.5	12.2
D23	1	2	3	5	4	6	2	0	3	1	2	2	31	2.6	11.8
D24	1	3	2	5	4	5	2	0	2	2	2	2	30	2.5	12.2
D25	2	4	3	4	6	4	4	1	4	2	3	4	41	3.4	8.9
LOWER DELAWARE LOW LEVEL 32 UNITS															
TOTAL	73	139	173	177	196	143	153	81	215	138	122	163	1773	4.6	6.7
D37	6	10	6	7	8	7	9	3	10	6	7	5	84	7.0	4.3
D38	3	8	5	4	7	4	8	1	8	4	6	5	63	5.3	5.8
D39	4	6	7	5	8	4	8	1	8	4	6	4	65	5.4	5.6
D40	4	3	6	4	6	4	5	1	8	4	6	3	54	4.5	6.8
D41	2	4	6	4	6	6	6	1	8	4	5	3	55	4.6	6.6
D42	2	4	6	5	6	5	5	4	8	4	5	3	57	4.8	6.4
D43	2	5	7	5	6	6	6	4	8	5	5	3	62	5.2	5.9
D44	3	4	4	7	5	3	6	4	7	5	4	4	56	4.7	6.5
D45	2	5	5	6	8	5	9	3	8	5	4	6	62	5.2	5.9
D46	2	3	4	6	6	5	7	3	7	5	3	5	56	4.7	6.5
D47	3	3	5	6	6	4	5	4	5	5	4	5	55	4.6	6.6
D48	2	3	4	5	6	4	1	4	5	5	3	6	51	4.3	7.2
D49	3	4	8	6	6	5	4	8	5	5	3	7	64	5.3	5.7
D50	2	5	8	7	8	5	5	3	5	8	3	6	63	5.3	5.8
D51	4	5	8	6	6	4	4	3	6	8	3	6	63	5.3	5.8
D52	3	3	5	6	6	3	4	2	7	6	2	6	53	4.4	6.9
D53	2	3	4	5	6	3	3	2	6	5	2	4	45	3.8	8.1
D54	2	3	4	5	6	3	1	2	6	4	3	6	45	3.8	8.1
D58	1	4	6	8	5	5	5	3	6	4	2	4	53	4.4	6.9
D61	2	4	8	7	5	4	4	3	6	5	2	7	57	4.8	6.4
D62	2	3	7	7	5	5	5	3	7	6	2	7	59	4.9	6.2
D63	1	5	3	6	6	5	4	2	7	5	4	7	55	4.6	6.6
D64	1	4	4	5	5	3	2	1	7	4	4	7	47	3.9	7.8
D65	1	3	4	5	5	3	3	2	8	3	4	7	48	4.0	7.6
D66	1	4	5	5	5	3	4	2	5	2	4	6	46	3.8	7.9
D67	1	5	4	5	5	5	4	2	8	3	4	5	49	4.1	7.4
D68	1	5	5	9	9	5	4	2	7	2	4	5	58	4.8	6.3
D69	2	4	3	6	7	5	4	3	6	3	4	4	51	4.3	7.2
D70	3	4	6	4	6	5	4	2	7	2	4	5	52	4.3	7.0
D71	2	5	7	4	11	7	4	2	7	3	4	4	60	5.0	6.1
D72	2	4	5	4	5	4	4	0	7	2	3	4	44	3.7	8.3
D73	2	4	4	3	5	4	3	1	6	2	3	4	41	3.4	8.9
TOTAL	320	379	474	517	482	363	331	161	376	282	296	336	4317		
I/D/C	3.5	4.2	5.2	5.7	5.3	4.0	3.6	1.8	4.1	3.1	3.2	3.7			

33 TOTAL DISCHARGES TO DATE IN NE & SE DISTRICTS

2.8 AVERAGE DISCHARGES PER MONTH

13.1 AVER. DAYS BEFORE RETURNING TO SITE

3.9 AVER. INSPECTIONS PER DAY PER CREW

I/D/C = INSPECTIONS PER DAY PER CREW DTR = DAYS TO RETURN TO SITE

I/D =INSPECTIONS PER DISCHARGE

FY96 REGULATING CHAMBER YEARLY DISCHARGE TOTALS NEWPC & SEWPC PLANT REGULATORS

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
UPPER PENNYPACK 6 UNITS													
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
P01													0
P02													0
P03													0
P04													0
P05													0
UPPER DELAWARE LOW LEVEL 12 UNITS													
TOTAL	1	1	0	0	0	0	0	0	2	0	1	0	5
D02									2				2
D03	1												1
D04											1		1
D05		1											1
D06													0
D07													0
D08													0
D09													0
D11													0
D12													0
D13													0
D15													0
LOWER FRANKFORD CREEK 6 UNITS													
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
F13													0
F14													0
F21													0
F23													0
													0
F29													0
LOWER FRANKFORD LOW LEVEL 10 UNITS													
TOTAL	0	0	0	0	0	0	0	0	0	0	1	1	2
F03													0
F04													0
F05													0
F06											1		1
F07													0
F08													0
F09													0
F10												1	1
F11													0
F12													0
FRANKFORD HIGH LEVEL 14 UNITS													
TOTAL	6	0	1	2	0	0	0	1	0	4	2	1	17
T01													0
T03													0
T04													0
T05													0
T06													0
T07													0
T08													0
T09										1	1		2
T10	3							1					4
T11	1									2	1	1	5
T12	1												1
	1		1	2						1			5
													0
T15													0

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SOMERSET LOW LEVEL 9 UNITS													
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
D17													0
D18													0
D19													0
D20													0
D21													0
D22													0
D23													0
D24													0
D25													0
LOWER DELAWARE LOW LEVEL 32 UNITS													
TOTAL	0	3	0	2	0	0	2	2	0	0	0	0	9
D37				1									1
D38													0
D39		1		1									2
D40													0
D41							1						1
D42													0
D43													0
D44													0
D45								1					1
D46													0
D47													0
D48													0
D49													0
D50													0
D51		2						1					3
D52													0
D53													0
D54													0
D58													0
D61													0
D62													0
D63													0
D64													0
D65													0
D66													0
D67													0
D68							1						1
D69													0
D70													0
D71													0
D72													0
D73													0
TOTAL	7	4	1	4	0	0	2	3	2	4	4	2	33

	NO OF UNITS IN DISTRICT BLOCKED												TOTAL
UP	0	0	0	0	0	0	0	0	0	0	0	0	0
UDLL	1	1	0	0	0	0	0	0	1	0	1	0	4
LFC	0	0	0	0	0	0	0	0	0	0	0	0	0
LFLL	0	0	0	0	0	0	0	0	0	0	1	1	2
FHL	4	0	1	1	0	0	0	1	0	3	2	1	13
SLL	0	0	0	0	0	0	0	0	0	0	0	0	0
LDLL	0	2	0	2	0	0	2	2	0	0	0	0	8

FY96 REGULATING CHAMBER MONTHLY INSPECTION TOTALS SWWPC PLANT REGULATORS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
CENTRAL SCHUYLKILL EAST SIDE 18 UNITS															
[illegible]	83	89	82	133	42	39	51	58	108	77	99	45	906	4.2	7.3
S05	5	6	5	10	1	1	4	3	6	4	6	3	54	4.5	6.8
S06	4	6	5	10	1	1	4	3	6	4	6	3	53	4.4	6.9
S07	4	6	6	10	1	1	4	3	6	4	6	3	54	4.5	6.8
S08	5	4	5	8	1	1	3	3	6	4	6	3	49	4.1	7.4
S09	4	4	5	7	2	4	3	3	6	4	6	2	50	4.2	7.3
S10	4	4	7	7	1	2	3	3	6	4	5	2	48	4.0	7.6
S12	4	4	5	7	2	2	2	3	5	5	6	4	49	4.1	7.4
S12A	4	4	5	7	2	2	2	4	6	5	6	3	50	4.2	7.3
S13	4	4	5	7	2	2	2	4	5	5	6	2	48	4.0	7.6
S15	5	4	4	7	3	4	5	3	5	5	6	2	53	4.4	6.9
S16	5	4	4	7	3	3	4	3	5	4	4	2	48	4.0	7.6
S17	5	4	4	7	3	2	2	5	6	4	4	3	49	4.1	7.4
S18	4	4	4	7	4	3	3	3	5	6	6	4	53	4.4	6.9
S19	6	9	4	6	4	2	3	3	11	5	6	2	61	5.1	6.0
S21	4	5	4	6	3	3	2	3	7	3	5	2	47	3.9	7.8
S23	5	5	4	8	4	2	2	3	5	4	5	2	49	4.1	7.4
S25	7	7	3	6	3	2	1	3	6	4	5	2	49	4.1	7.4
S26	4	5	3	6	2	2	2	3	6	3	5	1	42	3.5	8.7
LOWER SCHUYLKILL EAST SIDE 9 UNITS															
TOTAL	44	33	20	55	15	26	8	23	41	26	48	19	358	3.3	9.6
S31	6	4	3	6	2	5	2	2	5	3	6	2	46	3.8	7.9
S35	5	4	3	6	2	4	1	2	5	3	5	2	42	3.5	8.7
S36	6	4	2	7	2	3	0	2	5	3	5	2	41	3.4	8.9
S36A	5	4	2	7	2	3	2	3	5	3	6	2	44	3.7	8.3
S37	4	3	2	4	1	1	0	1	4	2	5	1	28	2.3	13.0
S42	5	4	2	7	2	4	1	7	5	3	7	5	52	4.3	7.0
S42A	5	4	2	7	2	3	1	3	5	3	4	2	41	3.4	8.9
[illegible]	4	3	2	4	1	1	0	1	3	2	5	1	27	2.3	13.5
[illegible]	4	3	2	7	1	2	1	2	4	4	5	2	37	3.1	9.9
CENTRAL SCHUYLKILL WEST 9 UNITS															
TOTAL	23	49	32	52	25	31	16	19	44	33	49	25	398	3.7	8.4
S01	2	5	4	6	3	3	2	2	7	3	5	4	46	3.8	7.9
S02	2	5	4	6	3	3	2	2	6	4	6	4	47	3.9	7.8
S03	2	4	4	6	3	3	1	4	6	4	5	4	46	3.8	7.9
S04	2	6	5	7	3	4	3	3	5	3	7	3	51	4.3	7.2
S11	2	5	3	4	2	4	1	2	5	4	5	2	39	3.3	9.4
S14	4	7	3	8	4	3	2	2	5	4	6	2	50	4.2	7.3
S20	3	5	3	5	2	4	1	0	0	3	5	2	33	2.8	11.1
S22	3	6	4	5	3	3	3	2	5	4	5	2	45	3.8	8.1
S24	3	6	2	5	2	4	1	2	5	4	5	2	41	3.4	8.9
SOUTHWEST MAIN GRAVITY 10 UNITS															
TOTAL	39	61	49	59	45	28	19	24	72	41	72	25	534	4.5	7.8
S27	4	7	5	6	6	3	1	1	8	8	11	2	62	5.2	5.9
S28	3	7	5	6	5	3	2	2	7	3	6	3	52	4.3	7.0
S30	2	4	5	5	4	3	2	1	7	3	6	2	44	3.7	8.3
S34	2	5	4	5	2	1	0	2	7	3	6	2	39	3.3	9.4
S39	2	5	5	6	3	3	2	2	7	3	6	3	47	3.9	7.8
S40	2	1	1	3	2	1	1	2	5	1	5	1	25	2.1	14.6
S43	2	5	5	5	4	3	1	3	7	2	5	1	43	3.6	8.5
S47	3	5	5	7	4	3	1	3	6	2	5	1	45	3.8	8.1
S50	14	14	10	10	8	4	6	5	9	8	11	6	105	8.8	3.5
S51	5	8	4	6	7	4	3	3	9	8	11	4	72	6.0	5.1
LOWER SCHUYLKILL WEST SIDE 4 UNITS															
TOTAL	24	21	20	25	18	19	17	11	20	19	27	20	241	5.0	6.1
S32	8	6	5	5	4	5	5	3	5	6	6	5	63	5.3	5.8
[illegible]	7	8	6	7	4	5	7	2	5	5	8	6	70	5.8	5.2
[illegible]	6	4	5	8	5	5	2	3	5	4	6	4	57	4.8	6.4
S45	3	3	4	5	5	4	3	3	5	4	7	5	51	4.3	7.2

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
COBBS CREEK HIGH LEVEL 23 UNITS															
TOTAL	41	51	62	120	45	35	24	28	83	65	98	22	674	2.4	12.9
C01	3	2	2	6	2	2	1	1	4	4	5	1	33	2.8	11.1
C02	3	2	2	6	2	2	1	2	4	2	5	1	32	2.7	11.4
C04	1	3	8	7	1	2	1	2	3	5	4	1	36	3.0	10.1
C04A	1	3	6	6	2	1	1	1	3	5	4	1	34	2.8	10.7
C05	1	2	3	6	2	1	1	1	3	4	4	1	29	2.4	12.6
C06	3	2	2	5	1	1	0	1	3	3	4	1	26	2.2	14.0
C07	2	1	2	6	1	2	1	1	3	3	4	1	27	2.3	13.5
C09	1	3	2	6	1	1	1	2	4	2	4	0	27	2.3	13.5
C10	1	3	2	5	2	0	1	1	4	2	4	0	25	2.1	14.6
C11	1	2	2	4	1	0	1	1	3	2	4	0	21	1.8	17.4
C12	1	3	2	4	1	0	1	1	3	2	4	0	22	1.8	16.6
C13	1	3	2	3	1	0	1	1	3	0	5	0	20	1.7	18.2
C14	1	2	2	5	2	2	1	1	3	1	3	1	24	2.0	15.2
C15	1	2	2	5	3	2	1	1	4	1	3	1	26	2.2	14.0
C16	1	2	2	5	3	2	1	1	3	1	3	1	25	2.1	14.6
C17	2	2	2	4	2	2	1	2	5	1	3	1	27	2.3	13.5
C31	3	2	3	5	3	2	3	1	4	4	5	2	37	3.1	9.9
C32	2	2	3	5	2	2	2	1	4	4	5	1	33	2.8	11.1
C33	3	2	3	5	3	2	1	1	4	3	5	2	34	2.8	10.7
C34	2	2	3	5	3	2	1	1	4	4	5	2	34	2.8	10.7
C35	2	2	3	6	3	2	1	2	4	3	5	2	35	2.9	10.4
C36	3	2	4	6	2	2	0	1	4	5	5	1	35	2.9	10.4
C37	2	2	2	5	2	3	1	1	4	4	5	1	32	2.7	11.4
COBBS CREEK LOW LEVEL 13 UNITS															
TOTAL	32	43	38	64	50	13	38	37	53	45	44	18	475	3.0	10.3
C18	1	3	2	6	3	1	2	3	5	5	4	2	37	3.1	9.9
C19	1	3	2	6	4	0	2	2	3	4	4	2	33	2.8	11.1
C20	2	3	3	5	3	0	2	3	3	3	4	3	34	2.8	10.7
C21	1	3	3	5	3	0	1	3	3	3	4	1	30	2.5	12.2
C22	1	3	3	5	3	1	2	5	4	3	4	1	35	2.9	10.4
C23	2	2	3	4	4	1	2	3	4	3	3	1	32	2.7	11.4
C24	4	2	4	6	10	2	8	5	9	3	3	1	57	4.8	6.4
C25	2	2	4	5	5	1	4	2	5	3	3	1	37	3.1	9.9
C26	5	9	3	4	4	1	4	3	5	3	3	1	45	3.8	8.1
C27	5	2	2	4	4	1	3	3	4	3	3	1	35	2.9	10.4
C28A	2	2	4	4	4	3	0	1	2	6	3	2	33	2.8	11.1
C29	3	3	2	4	2	1	3	2	3	3	3	1	30	2.5	12.2
C30	3	6	3	6	1	1	5	2	3	3	3	1	37	3.1	9.9
TOTAL	286	347	303	508	240	191	173	200	421	306	437	174	3586		
I/D/C	3.1	3.8	3.3	5.6	2.6	2.1	1.9	2.2	4.6	3.4	4.8	1.9			

57 TOTAL DISCHARGES TO DATE IN SW DISTRICT

4.8 AVERAGE DISCHARGES PER MONTH

10.3 AVER. DAYS BEFORE RETURNING TO SITE

3.3 AVER. INSPECTIONS PER DAY PER CREW

I/D/C = INSPECTIONS PER DAY PER CREW DTR = DAYS TO RETURN TO SITE

FY96 **REGULATING CHAMBER YEARLY DISCHARGE TOTALS** SWWPC PLANT REGULATORS

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
CENTRAL SCHUYLKILL EAST SIDE — 18 UNITS													
TOTAL	1	2	2	2	1	0	0	0	1	0	0	1	10
S05													0
S06													0
S07													0
S08													0
S09													0
S10			2										2
S12													0
S12A													0
S13													0
S15													0
S16													0
S17													0
S18				1								1	2
S19	1	2			1				1				5
S21													0
S23				1									1
S25													0
S26													0
LOWER SCHUYLKILL EAST SIDE — 9 UNITS													
TOTAL	0	1	1	0	0	1	0	0	0	0	0	0	3
S31													0
S35			1										1
S36													0
S36A						1							1
S37													0
S42													0
		1											1
S44													0
S46													0
CENTRAL SCHUYLKILL WEST — 9 UNITS													
TOTAL	0	1	0	0	0	0	0	0	0	1	0	0	2
S01													0
S02										1			1
S03													0
S04													0
S11													0
S14		1											1
S20													0
S22													0
S24													0
SOUTHWEST MAIN GRAVITY — 10 UNITS													
TOTAL	0	0	0	1	0	0	0	0	1	0	0	0	2
S27													0
S28													0
S30													0
S34													0
S39													0
S40													0
S43													0
S47													0
S50				1					1				2
S51													0
LOWER SCHUYLKILL WEST SIDE — 4 UNITS													
TOTAL	1	0	0	0	1	0	0	0	0	0	0	0	2
													0
S33													0
S38	1												1
S45					1								1

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
COBBS CREEK HIGH LEVEL — 23 UNITS													
TOTAL	1	3	0	0	0	0	1	3	0	0	0	1	9
C01													0
C02								1					1
C04													0
C04A													0
C05													0
C06													0
C07													0
C09		1											1
C10													0
C11								1					1
C12													0
C13													0
C14								1					1
C15													0
C16	1						1						2
C17		2											2
C31													0
C32													0
C33													0
C34													0
C35												1	1
C36													0
C37													0
COBBS CREEK LOW LEVEL — 13 UNITS													
TOTAL	0	6	4	1	6	1	3	3	5	0	0	0	29
C18													0
C19			1										1
C20													0
C21													0
C22													0
C23			1										1
C24					5		3	2	5				15
C25		1	2										3
C26		1											1
C27					1	1							2
C28A													0
C29													0
C30		4		1				1					6
TOTAL	3	13	7	4	8	2	4	6	7	1	0	2	57

NO OF UNITS IN DISTRICT BLOCKED

CSE	1	1	1	2	1	0	0	0	1	0	0	1	8
LSE	0	1	1	0	0	1	0	0	0	0	0	0	3
CSW	0	1	0	0	0	0	0	0	0	1	0	0	2
SWG	0	0	0	1	0	0	0	0	1	0	0	0	2
LSW	1	0	0	0	1	0	0	0	0	0	0	0	2
CCHL	1	2	0	0	0	0	1	3	0	0	0	1	8
CCLL	0	3	3	1	2	1	1	2	1	0	0	0	14

FY96 RELIEF SEWER MONTHLY INSPECTION TOTALS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
	THOMAS RUN RELIEF SEWER								6 UNITS				
R1	2	2	5	2	2	2	1	1	1	0	1	2	21
R2	2	2	2	2	2	2	1	1	1	0	1	2	18
R3	2	2	3	2	2	2	1	1	1	0	1	2	19
R4	2	2	3	3	2	2	1	1	1	0	1	2	20
R5	2	2	2	2	2	2	1	1	1	0	1	2	18
R6	2	2	2	2	2	2	1	1	1	0	1	2	18
	MAIN RELIEF SEWER								6 UNITS				
R7	2	2	2	2	3	2	1	1	1	0	1	2	19
R8	2	2	2	2	3	2	1	1	1	0	1	2	19
R9	2	3	2	2	3	2	1	1	1	0	1	2	20
R10	6	12	6	7	5	2	1	1	1	0	1	2	44
R11	2	2	2	2	5	2	0	1	1	0	1	2	20
R12	2	2	2	2	3	2	0	1	1	0	1	2	18
	WAKLING RELIEF SEWER								2 UNITS				
R13	1	2	2	1	2	1	0	1	1	2	2	1	16
R14	1	2	2	1	2	1	0	1	1	2	2	1	16
	ROCK RUN STORM FLOOD RELIEF SEWER								1 UNITS				
R15	1	2	2	1	0	1	0	1	1	2	2	1	14
	OREGON AVE RELIEF SEWER								2 UNITS				
R16	1	2	2	1	2	1	0	1	1	1	2	1	15
R17	3	6	7	6	7	5	4	3	6	3	6	5	61
	FRANKFORD HIGH LEVEL RELIEF SEWER								1 UNITS				
R18	1	2	2	1	2	1	0	1	1	2	2	1	16
	32ND ST RELIEF SEWER								1 UNITS				
R19	1	2	2	1	2	1	0	1	1	1	2	1	15
	MAIN STREET RELIEF SEWER								1 UNITS				
R20	1	2	2	1	2	1	0	1	1	2	2	1	16
	SOMERSET SYSTEM DIVERSION CHAMBER								1 UNITS				
R21	1	2	2	1	2	1	0	1	1	1	1	1	14
	TEMPORARY REGULATOR CHAMBER								2 UNITS				
R22	1	2	2	1	2	1	0	1	1	2	2	1	16
R23	1	2	2	1	2	1	0	1	1	2	2	1	16
	ARCH ST RELIEF SEWER								1 UNITS				
R24	1	2	2	2	1	1	0	1	1	0	1	1	13
	GRANT & STATE RD. RELIEF								1 UNITS				
R26	2	2	2	2	1	1	0	2	1	2	2	2	19
TOTAL	44	65	64	50	61	41	14	29	30	22	40	42	501

FY96 RELIEF SEWER MONTHLY DISCHARGE TOTALS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
	THOMAS RUN RELIEF SEWER								6 UNITS				
R1		1	1	1									3
R2													0
R3													0
R4			1	1									2
R5													0
R6													0
	MAIN RELIEF SEWER								6 UNITS				
R7													0
R8													0
R9													0
R10	1	2	1	5	1								10
R11													0
R12													0
	WAKLING RELIEF SEWER								2 UNITS				
R13													0
R14													0
	ROCK RUN STORM FLOOD RELIEF SEWER								1 UNITS				
R15													0
	OREGON AVE RELIEF SEWER								2 UNITS				
R16													0
R17													0
	FRANKFORD HIGH LEVEL RELIEF SEWER								1 UNITS				
R18													0
	32ND ST RELIEF SEWER								1 UNITS				
R19													0
	MAIN STREET RELIEF SEWER								1 UNITS				
R20													0
	SOMERSET SYSTEM DIVERSION CHAMBER								1 UNITS				
R21													0
	TEMPORARY REGULATOR CHAMBER								2 UNITS				
R22													0
R23													0
	ARCH ST RELIEF SEWER								2 UNITS				
R24													0
	GRANT & STATE RD. RELIEF								1 UNITS				
R26													0
TOTAL	1	3	3	7	1	0	0	0	0	0	0	0	15
UNITS	1	2	3	3	1	0	0	0	0	0	0	0	

FY97 REGULATING CHAMBER MONTHLY INSPECTION TOTALS NEWPC & SEWPC PLANT REGULATORS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
UPPER PENNYPACK 5 UNITS															
	19	8	21	18	19	14	15	0	0	0	0	0	114	3.3	9.4
P01	5	2	4	4	4	3	3						25	3.6	8.5
P02	4	2	4	4	4	4	3						25	3.6	8.5
P03	3	2	5	3	4	2	4						23	3.3	9.3
P04	3	1	5	4	4	3	2						22	3.1	9.7
P05	4	1	3	3	3	2	3						19	2.7	11.2
UPPER DELAWARE LOW LEVEL 12 UNITS															
TOTAL	47	37	51	40	20	38	40	0	0	0	0	0	273	3.3	11.1
D02	3	6	6	5	1	5	4						30	4.3	7.1
D03	7	5	6	7	2	4	5						36	5.1	5.9
D04	6	7	7	2	5	5	6						38	5.4	5.6
D05	4	4	4	2	1	3	4						22	3.1	9.7
D06	5	4	5	3	1	4	3						25	3.6	8.5
D07	6	3	6	6	1	4	4						30	4.3	7.1
D08	4	2	3	2	1	2	2						16	2.3	13.3
D09	5	2	3	1	1	1	2						15	2.1	14.2
D11	3	1	3	6	4	4	4						25	3.6	8.5
D12	1	1	2	2	1	3	3						13	1.9	16.4
D13	2	1	3	1	1	2	2						12	1.7	17.7
D15	1	1	3	3	1	1	1						11	1.6	19.3
LOWER FRANKFORD CREEK 6 UNITS															
TOTAL	11	8	34	22	8	8	6	0	0	0	0	0	97	2.3	13.5
F13	2	1	4	3	1	1	1						13	1.9	16.4
F14	2	1	6	3	1	3	1						17	2.4	12.5
F21	1	1	5	3	1	1	1						13	1.9	16.4
F23	2	1	7	5	2	1	1						19	2.7	11.2
F24	3	1	7	5	2	1	1						20	2.9	10.6
F25	1	3	5	3	1	1	1						15	2.1	14.2
LOWER FRANKFORD LOW LEVEL 10 UNITS															
TOTAL	37	25	53	44	18	45	22	0	0	0	0	0	244	3.5	8.9
F03	3	2	6	4	3	4	3						25	3.6	8.5
F04	3	2	7	4	2	4	2						24	3.4	8.9
F05	3	2	6	4	1	3	2						21	3.0	10.1
F06	4	2	5	4	2	5	2						24	3.4	8.9
F07	4	2	6	4	3	5	3						27	3.9	7.9
F08	4	2	5	5	1	6	2						25	3.6	8.5
F09	5	5	4	5	2	6	4						31	4.4	6.9
F10	4	2	5	6	1	6	2						26	3.7	8.2
F11	3	1	4	4	1	3	1						17	2.4	12.5
F12	4	5	5	4	2	3	1						24	3.4	8.9
FRANKFORD HIGH LEVEL 14 UNITS															
TOTAL	22	43	84	32	17	59	33	0	0	0	0	0	290	3.0	10.4
T01	4	2	6	2	1	3	2						20	2.9	10.6
T03	1	2	5	2	1	3	3						17	2.4	12.5
T04	1	2	6	4	2	4	3						22	3.1	9.7
T05	1	2	5	2	1	4	3						18	2.6	11.8
T06	3	2	6	4	1	4	3						23	3.3	9.3
T07	2	2	5	2	2	4	3						20	2.9	10.6
T08	2	4	6	2	1	6	4						25	3.6	8.5
T09	1	5	7	2	1	5	2						23	3.3	9.3
T10	1	5	7	2	1	5	2						23	3.3	9.3
T11	2	5	7	2	1	4	2						23	3.3	9.3
T12	1	4	6	2	1	4	2						20	2.9	10.6
T13	1	4	7	2	1	5	1						21	3.0	10.1
T14	1	2	4	2	1	6	2						18	2.6	11.8
T15	1	2	7	2	2	2	1						17	2.4	12.5

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
SOMERSET LOW LEVEL 9 UNITS															
TOTAL	24	24	43	17	25	27	25	0	0	0	0	0	185	2.9	11.3
D17	2	1	4	2	3	1	2						15	2.1	14.2
D18	2	1	3	2	3	1	1						13	1.9	16.4
D19	2	1	3	2	3	2	2						15	2.1	14.2
D20	3	4	3	1	3	7	3						24	3.4	8.9
D21	5	4	6	2	3	5	5						30	4.3	7.1
D22	4	5	4	2	3	2	3						23	3.3	9.3
D23	2	2	4	1	2	2	4						17	2.4	12.5
D24	2	2	5	1	2	3	2						17	2.4	12.5
D25	2	4	11	4	3	4	3						31	4.4	6.9
LOWER DELAWARE LOW LEVEL 32 UNITS															
TOTAL	135	133	138	152	96	169	109	0	0	0	0	0	932	4.2	7.4
D37	5	3	7	5	4	5	4						33	4.7	6.4
D38	5	4	5	5	4	4	3						30	4.3	7.1
D39	4	3	6	4	3	4	4						28	4.0	7.6
D40	4	3	4	4	3	5	5						28	4.0	7.6
D41	4	3	4	4	3	5	4						27	3.9	7.9
D42	4	3	5	5	3	6	4						30	4.3	7.1
D43	4	2	5	4	3	6	4						28	4.0	7.6
D44	4	2	5	4	3	6	3						27	3.9	7.9
D45	5	3	5	6	3	5	5						32	4.6	6.7
D46	3	6	4	6	3	4	4						30	4.3	7.1
D47	4	6	3	6	3	5	4						31	4.4	6.9
D48	1	6	3	6	1	3	3						23	3.3	9.3
D49	5	5	5	6	2	4	4						31	4.4	6.9
D50	4	4	5	6	2	5	3						29	4.1	7.3
D51	3	4	4	6	2	7							28	4.0	7.6
D52	5	3	4	6	3	7	3						31	4.4	6.9
D53	5	5	3	5	4	2	3						27	3.9	7.9
D54	4	5	4	4	4	5	3						29	4.1	7.3
D58	6	6	4	6	4	5	5						36	5.1	5.9
D61	3	7	3	5	4	7	4						33	4.7	6.4
D62	3	6	4	5	3	7	3						31	4.4	6.9
D63	3	6	4	5	3	4	3						28	4.0	7.6
D64	3	4	4	4	3	5	3						26	3.7	8.2
D65	2	4	4	4	3	5	3						25	3.6	8.5
D66	2	4	4	4	3	5	3						25	3.6	8.5
D67	5	5	3	4	3	6	3						29	4.1	7.3
D68	6	5	4	4	2	6	4						31	4.4	6.9
D69	4	4	4	4	3	9	3						31	4.4	6.9
D70	4	3	5	4	4	6	3						29	4.1	7.3
D71	8	3	5	4	3	6	2						31	4.4	6.9
D72	8	3	5	4	3	5	2						30	4.3	7.1
D73	5	3	4	3	2	5	3						25	3.6	8.5
TOTAL	295	278	424	325	203	360	250	0	0	0	0	0	2135		
I/D/C	4.8	4.6	7.0	5.3	3.3	5.9	4.1	0.0	0.0	0.0	0.0	0.0			
	2	2	2	2											

15 TOTAL DISCHARGES TO DATE IN NE & SE DISTRICTS

2.1 AVERAGE DISCHARGES PER MONTH

10.8 AVER. DAYS BEFORE RETURNING TO SITE

5.0 AVER. INSPECTIONS PER DAY PER CREW

I/D/C = INSPECTIONS PER DAY PER CREW DTR = DAYS TO RETURN TO SITE

I/D =INSPECTIONS PER DISCHARGE

FY97 REGULATING CHAMBER YEARLY DISCHARGE TOTALS NEWPC & SEWPC PLANT REGULATORS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
UPPER PENNYPACK													**5 UNITS**
TOTAL	1	0	0	1	0	0	0	0	0	0	0	0	2
P01													0
P02	1												1
P03													0
P04				1									1
P05													0
UPPER DELAWARE LOW LEVEL													**12 UNITS**
TOTAL	0	2	0	0	0	1	1	0	0	0	0	0	4
D02		1					1						2
D03													0
D04		1											1
D05													0
D06													0
D07						1							1
D08													0
D09													0
D11													0
D12													0
D13													0
D15													0
LOWER FRANKFORD CREEK													**6 UNITS**
TOTAL	0	1	0	0	0	0	0	0	0	0	0	0	1
F13													0
F14													0
F21													0
F23													0
F25		1											1
LOWER FRANKFORD LOW LEVEL													**10 UNITS**
TOTAL	0	1	0	0	0	0	1	0	0	0	0	0	2
F03													0
F04													0
F05													0
F06													0
F07													0
F08													0
F09							1						1
F10													0
F11													0
F12		1											1
FRANKFORD HIGH LEVEL													**14 UNITS**
TOTAL	0	0	0	0	1	2	0	0	0	0	0	0	3
T01													0
T03													0
T04													0
T05													0
T06													0
T07													0
T08													0
T09													0
T10					1	1							2
T11						1							1
T12													0
3													0
4													0
T15													0

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
SOMERSET LOW LEVEL													**9 UNITS**
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
D17													0
D18													0
D19													0
D20													0
D21													0
D22													0
D23													0
D24													0
D25													0
LOWER DELAWARE LOW LEVEL													**32 UNITS**
TOTAL	0	0	1	0	0	1	1	0	0	0	0	0	3
D37													0
D38													0
D39													0
D40													0
D41													0
D42													0
D43													0
D44													0
D45													0
D46													0
D47													0
D48													0
D49													0
D50													0
D51			1			1	1						3
D52													0
D53													0
D54													0
D58													0
D61													0
D62													0
D63													0
D64													0
D65													0
D66													0
D67													0
D68													0
D69													0
D70													0
D71													0
D72													0
D73													0
TOTAL	1	4	1	1	1	4	3	0	0	0	0	0	15

	NO OF UNITS IN DISTRICT BLOCKED												TOTAL
UP	1	0	0	1	0	0	0	0	0	0	0	0	2
UDLL	0	2	0	0	0	1	1	0	0	0	0	0	4
LFC	0	1	0	0	0	0	0	0	0	0	0	0	1
LFLL	0	1	0	0	0	0	1	0	0	0	0	0	2
FHL	0	0	0	0	1	2	0	0	0	0	0	0	3
SLL	0	0	0	0	0	0	0	0	0	0	0	0	0
LDLL	0	0	1	0	0	1	1	0	0	0	0	0	3

FY97 REGULATING CHAMBER MONTHLY INSPECTION TOTALS SWWPC PLANT REGULATORS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
CENTRAL SCHUYLKILL EAST SIDE 18 UNITS															
	83	65	89	92	105	109	75	0	0	0	0	0	618	4.9	6.3
S05	6	3	6	7	7	6	4						39	5.6	5.5
S06	6	3	6	5	6	5	4						35	5.0	6.1
S07	7	3	5	5	6	5	4						35	5.0	6.1
S08	6	3	5	6	6	6	4						36	5.1	5.9
S09	5	3	5	6	6	6	4						35	5.0	6.1
S10	4	4	5	5	6	6	4						34	4.9	6.3
S12	4	4	5	5	6	5	4						33	4.7	6.4
S12A	4	4	5	5	6	7	4						35	5.0	6.1
S13	4	3	3	4	5	6	4						29	4.1	7.3
S15	4	4	5	5	7	7	4						36	5.1	5.9
S16	4	4	6	5	8	8	4						39	5.6	5.5
S17	5	4	5	4	7	7	4						36	5.1	5.9
S18	6	4	8	5	6	7	4						40	5.7	5.3
S19	6	4	6	5	6	7	6						40	5.7	5.3
S21	3	3	4	4	5	6	5						30	4.3	7.1
S23	3	4	4	5	4	6	4						30	4.3	7.1
S25	3	4	3	5	4	4	4						27	3.9	7.9
S26	3	4	3	6	4	5	4						29	4.1	7.3
LOWER SCHUYLKILL EAST SIDE 9 UNITS															
TOTAL	45	35	32	29	36	22	33	0	0	0	0	0	232	3.7	8.4
S31	5	5	3	4	5	3	3						28	4.0	7.6
S35	5	4	3	3	5	3	5						28	4.0	7.6
S36	6	3	3	3	4	3	4						26	3.7	8.2
S36A	4	4	3	3	4	3	4						25	3.6	8.5
S37	5	4	4	4	4	2	3						26	3.7	8.2
S42	5	3	4	3	3	2	3						23	3.3	9.3
S42A	5	4	5	3	3	2	5						27	3.9	7.9
	7	5	4	4	4	2	3						29	4.1	7.3
	3	3	3	2	4	2	3						20	2.9	10.6
CENTRAL SCHUYLKILL WEST 9 UNITS															
TOTAL	41	71	33	54	55	64	43	0	0	0	0	0	361	5.7	5.7
S01	5	8	3	9	9	8	5						47	6.7	4.5
S02	8	14	3	9	7	8	5						54	7.7	3.9
S03	6	15	4	7	7	8	5						52	7.4	4.1
S04	8	9	6	7	7	8	6						51	7.3	4.2
S11	2	5	4	4	6	6	4						31	4.4	6.9
S14	2	5	3	5	5	7	5						32	4.6	6.7
S20	2	3	3	5	5	5	3						26	3.7	8.2
S22	4	5	3	4	5	7	4						32	4.6	6.7
S24	4	7	4	4	4	7	6						36	5.1	5.9
SOUTHWEST MAIN GRAVITY 10 UNITS															
TOTAL	48	51	37	35	48	67	58	0	0	0	0	0	344	4.9	7.6
S27	3	4	5	1	5	7	5						30	4.3	7.1
S28	3	3	4	1	5	6	4						26	3.7	8.2
S30	3	4	3	1	3	5	5						24	3.4	8.9
S34	4	4	3	1	5	5	6						28	4.0	7.6
S39	7	4	3	2	4	4	6						30	4.3	7.1
S40	2	0	2	0	0	4	6						14	2.0	15.2
S43	3	4	3	3	4	4	5						26	3.7	8.2
S47	3	4	5	2	4	4	5						27	3.9	7.9
S50	11	13	5	12	9	14	8						72	10.3	3.0
S51	9	11	4	12	9	14	8						67	9.6	3.2
LOWER SCHUYLKILL WEST SIDE 4 UNITS															
TOTAL	38	48	19	19	25	23	30	0	0	0	0	0	202	7.2	4.3
S32	9	11	4	5	5	7	8						49	7.0	4.3
S33	9	10	5	5	8	6	8						51	7.3	4.2
	11	18	6	5	6	5	8						59	8.4	3.6
S45	9	9	4	4	6	5	6						43	6.1	4.9

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	AVER	DTR
COBBS CREEK HIGH LEVEL 23 UNITS															
TOTAL	97	57	71	48	78	36	52	0	0	0	0	0	439	2.7	11.4
C01	6	4	3	3	4	2	2						24	3.4	8.9
C02	4	4	3	3	4	2	2						22	3.1	9.7
C04	3	2	2	2	4	2	2						17	2.4	12.5
C04A	2	2	2	2	4	2	2						16	2.3	13.3
C05	2	2	2	2	4	2	2						16	2.3	13.3
C06	3	2	2	2	4	2	2						17	2.4	12.5
C07	3	2	2	1	4	1	2						15	2.1	14.2
C09	6	4	3	1	4	1	2						21	3.0	10.1
C10	4	3	2	1	4	1	2						17	2.4	12.5
C11	4	3	2	1	4	1	2						17	2.4	12.5
C12	4	2	2	1	4	1	2						16	2.3	13.3
C13	4	2	3	1	4	1	2						17	2.4	12.5
C14	8	3	4	2	3	1	3						24	3.4	8.9
C15	6	2	4	2	2	1	3						20	2.9	10.6
C16	6	2	4	2	2	1	3						20	2.9	10.6
C17	4	1	3	1	2	1	3						15	2.1	14.2
C31	4	2	4	3	3	2	3						21	3.0	10.1
C32	4	2	3	3	3	2	3						20	2.9	10.6
C33	4	2	5	3	3	2	2						21	3.0	10.1
C34	4	2	5	3	3	2	2						21	3.0	10.1
C35	6	4	4	3	3	2	2						24	3.4	8.9
C36	2	2	4	3	3	2	2						18	2.6	11.8
C37	4	3	3	3	3	2	2						20	2.9	10.6
COBBS CREEK LOW LEVEL 13 UNITS															
TOTAL	69	21	42	32	28	14	30	0	0	0	0	0	236	2.6	11.9
C18	6	2	3	4	3	1	2						21	3.0	10.1
C19	7	2	4	4	2	1	3						23	3.3	9.3
C20	5	2	4	3	2	1	3						20	2.9	10.6
C21	4	2	4	3	2	1	3						19	2.7	11.2
C22	4	2	4	2	2	1	2						17	2.4	12.5
C23	6	2	3	2	2	1	2						18	2.6	11.8
C24	6	2	3	2	2	1	2						18	2.6	11.8
C25	7	2	4	2	2	1	2						20	2.9	10.6
C26	6	1	4	2	2	1	2						18	2.6	11.8
C27	5	1	3	2	3	1	2						17	2.4	12.5
C28A	4	1	1	2	2	2	3						15	2.1	14.2
C29	4	1	2	2	2	1	2						14	2.0	15.2
C30	5	1	3	2	2	1	2						16	2.3	13.3
TOTAL	421	348	323	309	375	335	321	0	0	0	0	0	2432		
I/D/C	4.6	3.8	3.5	3.4	4.1	3.7	3.5	0.0	0.0	0.0	0.0	0.0			
	3	3	4	3	3	3	3								

57 TOTAL DISCHARGES TO DATE IN SW DISTRICT

6.1 AVERAGE DISCHARGES PER MONTH

9.3 AVER. DAYS BEFORE RETURNING TO SITE

3.8 AVER. INSPECTIONS PER DAY PER CREW

I/D/C = INSPECTIONS PER DAY PER CREW DTR = DAYS TO RETURN TO SITE

FY97 REGULATING CHAMBER YEARLY DISCHARGE TOTALS SWWPC PLANT REGULATORS

E	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
CENTRAL SCHUYLKILL EAST SIDE 18 UNITS													
TOTAL	0	2	2	4	0	0	0	0	0	0	0	0	8
S05		1	1	2									4
S06													0
S07													0
S08		1											1
S09													0
S10													0
S12				1									1
S12A				1									1
S13													0
S15													0
S16													0
S17													0
S18													0
S19													0
S21													0
S23			1										1
S25													0
S26													0
LOWER SCHUYLKILL EAST SIDE 9 UNITS													
TOTAL	0	1	1	0	0	0	1	0	0	0	0	0	3
S31													0
S35													0
S36													0
S36A													0
S37							1						1
?													0
,2A		1	1										2
S44													0
S46													0
CENTRAL SCHUYLKILL WEST 9 UNITS													
TOTAL	8	10	1	0	1	0	0	0	0	0	0	0	20
S01													0
S02	7	9											16
S03		1											1
S04	1		1		1								3
S11													0
S14													0
S20													0
S22													0
S24													0
SOUTHWEST MAIN GRAVITY 10 UNITS													
TOTAL	0	1	0	0	0	2	0	0	0	0	0	0	3
S27													0
S28													0
S30													0
S34													0
S39													0
S40													0
S43													0
S47													0
S50		1				2							3
S51													0
LOWER SCHUYLKILL WEST SIDE 4 UNITS													
TAL	3	12	2	0	0	0	0	0	0	0	0	0	17
J2													0
S33	2	1											3
S38	1	10	2										13
S45		1											1

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
COBBS CREEK HIGH LEVEL 23 UNITS													
TOTAL	2	2	0	0	0	2	0	0	0	0	0	0	6
C01													0
C02													0
C04													0
C04A													0
C05													0
C06													0
C07													0
C09	1												1
C10													0
C11													0
C12													0
C13		1											1
C14	1	1											2
C15													0
C16						1							1
C17													0
C31													0
C32						1							1
C33													0
C34													0
C35													0
C36													0
C37													0
COBBS CREEK LOW LEVEL 13 UNITS													
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
C18													0
C19													0
C20													0
C21													0
C22													0
C23													0
C24													0
C25													0
C26													0
C27													0
C28A													0
C29													0
C30													0
TOTAL	13	28	6	4	1	4	1	0	0	0	0	0	57

NO OF UNITS IN DISTRICT BLOCKED

CSE	0	2	2	3	0	0	0	0	0	0	0	0	7
LSE	0	1	1	0	0	0	1	0	0	0	0	0	3
CSW	2	2	1	0	1	0	0	0	0	0	0	0	6
SWG	0	1	0	0	0	1	0	0	0	0	0	0	2
LSW	2	3	1	0	0	0	0	0	0	0	0	0	6
CCHL	2	2	0	0	0	2	0	0	0	0	0	0	6
CCLL	0	0	0	0	0	0	0	0	0	0	0	0	0

FY97 RELIEF SEWER MONTHLY INSPECTION TOTALS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
	THOMAS RUN RELIEF SEWER					6 UNITS							
R1	1	1	2	2	1	1	2						10
R2	1	1	1	2	1	1	2						9
R3	1	1	1	2	1	1	2						9
R4	1	1	1	2	1	1	2						9
R5	1	1	1	2	1	1	2						9
R6	1	1	1	2	1	1	2						9
	MAIN RELIEF SEWER					6 UNITS							
R7	1	1	1	2	1	1	2						9
R8	1	1	1	2	1	1	2						9
R9	1	1	1	2	1	1	2						9
R10	1	1	1	2	1	1	2						9
R11	1	1	1	2	1	1	2						9
R12	1	1	1	2	1	1	2						9
	WAKLING RELIEF SEWER					2 UNITS							
R13	1	1	1	1	1	1	2						8
R14	1	1	1	2	1	1	2						9
	ROCK RUN STORM FLOOD RELIEF SEWE					1 UNITS							
R15	1	4	1	1	1	2	2						12
	OREGON AVE RELIEF SEWER					2 UNITS							
R16	1	1	1	1	1	1	1						7
R17	3	4	5	4	3	3	3						25
	FRANKFORD HIGH LEVEL RELIEF SEWER					1 UNITS							
R18	1	1	1	1	1	3	2						10
	32ND ST RELIEF SEWER					1 UNITS							
	2	1	1	1	1	1	2						9
	MAIN STREET RELIEF SEWER					1 UNITS							
R20	2	1	1	1	1	1	2						9
	SOMERSET SYSTEM DIVERSION CHAMBE					1 UNITS							
R21	2	1	1	1	1	2	2						10
	TEMPORARY REGULATOR CHAMBER					2 UNITS							
R22	2	1	1	1	1	2	2						10
R23	2	1	1	1	1	2	2						10
	ARCH ST RELIEF SEWER					1 UNITS							
R24	0	1	1	2	1	1	2						8
	GRANT & STATE RD. RELIEF					1 UNITS							
R26	1	6	6	4	1	3	3						24
TOTAL	31	36	35	45	27	35	51	0	0	0	0	0	260
AVER	1.2	1.4	1.4	1.8	1.1	1.4	2.0	0.0	0.0	0.0	0.0	0.0	1.5
		1	1	1	1	1	1						

FY97 RELIEF SEWER MONTHLY DISCHARGE TOTALS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
	THOMAS RUN RELIEF SEWER					6 UNITS							
R1													0
R2													0
R3	1												1
R4													0
R5													0
R6													0
	MAIN RELIEF SEWER					6 UNITS							
R7													0
R8													0
R9													0
R10													0
R11													0
R12													0
	WAKLING RELIEF SEWER					2 UNITS							
R13													0
R14													0
	ROCK RUN STORM FLOOD RELIEF SEWE					1 UNITS							
R15													0
	OREGON AVE RELIEF SEWER					2 UNITS							
R16													0
R17													0
	FRANKFORD HIGH LEVEL RELIEF SEWER					1 UNITS							
R18						1							1
	32ND ST RELIEF SEWER					1 UNITS							
R19													0
	MAIN STREET RELIEF SEWER					1 UNITS							
R20													0
	SOMERSET SYSTEM DIVERSION CHAMBE					1 UNITS							
R21													0
	TEMPORARY REGULATOR CHAMBER					2 UNITS							
R22													0
R23													0
	ARCH ST RELIEF SEWER					2 UNITS							
R24													0
	GRANT & STATE RD. RELIEF					1 UNITS							
R26													0
TOTAL	1	0	0	0	0	1	0	0	0	0	0	0	2
UNITS	1	0	0	0	0	1	0	0	0	0	0	0	

FY97 SPECIAL INSPECTIONS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
	CASMIER ST												
	6	7	6	4	2	3	3						31
	SOMERSET GRIT LEVEL												
	2	3	11	2	3	1	3						25
	16TH & SNYDER												
	1	1	2	3	1	1	2						11

FY97 SPECIAL INSPECTIONS

SITE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
	NANDINA ST												
	4	7	7	4	3	3	3						31
	UPPER DARBY OVERFLOW												
	2	3	1	3	1	1	2						13

Appendix B

Flow Control Unit - Wastewater Pumping Station Maintenance Summaries

Sent to Joanna Cisse this week

CALENDAR YEAR 1996
MUNICIPAL WASTELOAD MANAGEMENT REPORT
FLOW CONTROL - WASTEWATER PUMPING UNIT

OUTLYING PUMPING S ATION - CAPACITIES

There are twelve outlying wastewater pumping stations that pump to the three W: 'er Pollution Control Plants. Listed below are the station capacities, maximum flows and general condition.

WASTEWATER PUMPING STATION LOCATION	NO. PUMPS IN STATION	RATED CAPACITY PER PUMP GPM	ACTUAL STATION CAPACITY GPM	MAXIMUM INFLOW PERIOD GPM	WPC PLANT FLOW DESTINATION	GENERAL CONDITION
BANK STREET	2	250	496	49	SEWPC	Good, new pumps, controls and electric gear installed in 1994
BELFRY DRIVE	2	150	389	71	SWWPC	Good, built 1978 One pump rebuilt in 1994 One pump rebuilt in 1993
C.S.P.S. VARIABLE SPEED UNIT CONSTANT SPEED UNIT	 4 2	 29,000 29,000	135,417	128,472	SWWPC	Good, station was fully automated in oct. 1996. One pump rebuilt in 1991 Two pums rebuilt in 1994 Two pums rebuilt in 1996 One pump rebuilt in 1997
FORD ROAD	2	900	1,467	148	SWWPC	Excellent, completely rehabilitated in 1981 One pump rebuilt in 1991 One pump rebuilt in 1992
HOG ISLAND ROAD	2	500	927	450	SWWPC	Excellent, new facility built in 1989
LINDEN AVENUE	2	1,400	2,378	179	NEWPC	Good, built in 1937 One pump rebuilt in 1991 One pump rebuilt in 1993
LOCKART STREET	2	600	1,243	148	NEWPC	Good, built in 1967 One pump rebuilt in 1991 One pump rebuilt in 1996
MILNOR STREET	3	300	1,096	479	NEWPC	Good, built in 1947 One pump rebuilt in 1992 One in 1990, one in 1995
NEILL DRIVE	3	1,800	5,568	3,712	SWWPC	Good, completely rehabilitated in 1982 Three pumps rebuilt since 1995
POLICE ACADEMY	2	100	53	22	NEWPC	Good, new pumps, controls and electric gear installed in 1993
RENNARD STREET	2	400	329	49	NEWPC	Good, built in 1968 One pump rebuilt in 1993 One pump rebuilt in 1996
42ND STREET	3	2,000	5,953	5,953	SWWPC	Good, complete rehab in 1984 One pump rebuilt in 1994 One pump rebuilt in 1995 One pump rebuilt in 1996

FLOW CONTROL UNIT
1996 PUMPING STATION FLOW REPORT

WASTEWATER STATIONS	PUMP #1	PUMP #2	PUMP #3	PUMP #4	PUMP #5	PUMP #6	TOTAL FLOW (MG)
BANK STREET	3.486	3.280					6.767
BELFRY DRIVE	5.522	6.456					11.978
CENTRAL SCH.	(Flow metering equipment out of service for construction)						0.000
FORD ROAD	55.701	44.349					100.050
FORT MIFFLIN	0.029	0.421	0.044	0.030			0.073
HOG ISLAND	4.343	5.034					9.377
LINDEN AVENUE	44.361	34.501					78.862
LOCKHART STREET	30.181	44.089					74.270
MILNOR STREET	3.572	3.950	4.379				11.900
NEILL DRIVE	216.099	278.547	177.931				672.577
POLICE ACADEMY	3.922	2.831					6.752
RENNARD STREET	5.823	6.690					12.513
42ND STREET	742.650	619.165	877.860				2239.675
STORMWATER PUMPING STATIONS							
BROAD & BLVD.	0.310	10.229	5.643	16.261			32.444
MINGO CREEK	0.000	0.338	1005.293	914.087	1159.667	572.909	3652.294
26TH & VARE	0.718	0.805					1.524

WASTEWATER PUMPING
STATION OUTAGES AND DRY WEATHER DISCHARGES

AS OF: 03/19/97

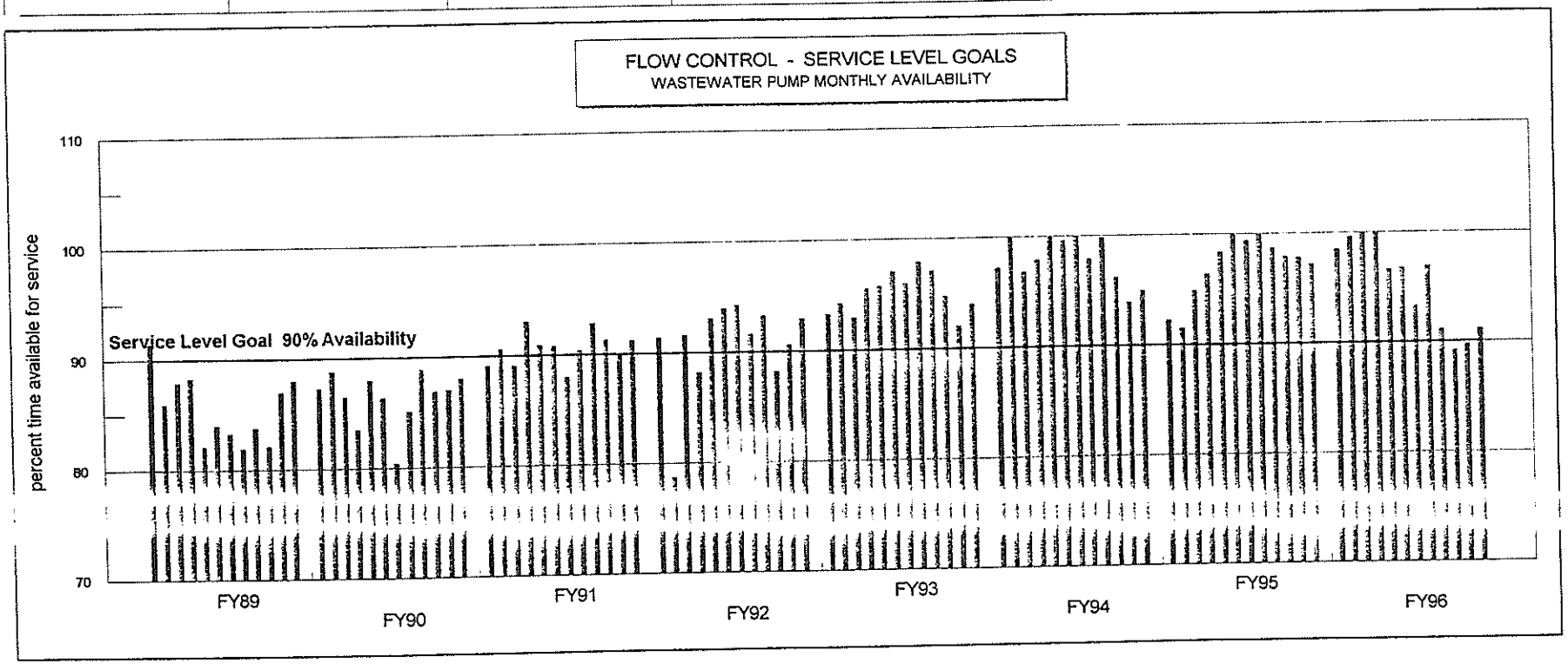
DATE	LOCATION	STATION OUT TIME OUT	STATION OUT TIME IN	DISCHARGE START	DISCHARGE STOP	DURATION HRS	INFLOW GAL/MIN	DISCHARGE TOTAL GAL	REASON
03/19/96	BELFRY DR	05:00 PM	07:45 PM	05:15 PM	08:00 PM	2.75	23.5	3,878	PECO POWER FAILURE, WEATHER RELATED
03/19/96	FORD RD	07:05 PM	11:00 PM	07:15 PM	11:15 PM	4.00	198.8	47,705	FAULT IN THE POWER MONITOR AND SIGNAL
04/03/96	NEILL DR	12:15 PM	12:40 PM	12:15 PM	12:40 PM	0.42	1,249.1	31,228	MECHANICS ERROR OPERATING PUMPS
04/24/96	LINDEN AVE	02:30 AM	03:45 AM	NONE					PECO POWER FAILURE
05/07/96	HOG ISLAND	01:15 PM	05:00 PM	NONE					PECO LINE FAILURE
05/22/96	BELFRY DRIVE	10:00 AM	01:00 PM	NONE					PECO PHASE OUT -LEVEL ROSE TO JUST BELOW DISCHARGE
06/12/96	FORD RD	06:25 PM	07:00 PM	06:45 PM	07:05 PM	0.33	198.8	3,975	LIGHTNING TRIPPED SURGE PROTECTION FOR CONTROLLER
06/22/96	FORD RD	06:00 PM	07:00 PM	06:45 PM	07:00 PM	0.25	198.8	2,982	PCU POWER SUPPLY FAILURE
07/14/96	FORD RD	12:00 AM	01:45 AM	12:15 AM	01:50 AM	1.58	198.8	18,883	PECO LOST B PHASE
07/14/96	FORD RD	07:15 AM	09:55 AM	07:30 AM	10:00 AM	2.50	198.8	29,816	PECO POWER FAILURE AT SUB STATION LN. 2715
1996	TOTALS					11.83		138,467	6 PECO OUTAGES
1996	AVERAGES					1.69		19,781	4 STATION EQUIP PROBLEMS

7-YEAR PUMPING STATION OUTAGE /DISCHARGE HISTORY			
TOTALS	109.45 HRS	76%	PECO OUTAGES
	34.32 HRS	24%	STATION EQUIP PROBLEMS

FLOW CONTROL - FY96 ANNUAL REPORT - MAIN PUMP AVAILABILITY HISTORY

FOR : JUNE 1996

AVAILABILITY FY90		AVAILABILITY FY91		AVAILABILITY FY92		AVAILABILITY FY93		AVAILABILITY FY94		AVAILABILITY FY95		AVAILABILITY FY96	
JUL89	87.3 %	JUL90	89.1 %	JUL91	91.4 %	JUL92	93.3 %	JUL93	97.2 %	JUL94	92.2 %	JUL95	98.5 %
AUG89	88.8 %	AUG90	90.6 %	AUG91	78.7 %	AUG92	94.3 %	AUG93	100.0 %	AUG94	91.5 %	AUG95	99.6 %
SEP89	86.5 %	SEP90	89.1 %	SEP91	91.6 %	SEP92	93.0 %	SEP93	96.8 %	SEP94	94.9 %	SEP95	100.0 %
OCT89	83.5 %	OCT90	93.1 %	OCT91	88.2 %	OCT92	95.6 %	OCT93	97.9 %	OCT94	96.4 %	OCT95	100.0 %
NOV89	88.0 %	NOV90	90.9 %	NOV91	93.1 %	NOV92	95.8 %	NOV93	100.0 %	NOV94	98.4 %	NOV95	96.6 %
DEC89	86.4 %	DEC90	90.8 %	DEC91	94.0 %	DEC92	97.1 %	DEC93	99.6 %	DEC94	100.0 %	DEC95	96.8 %
JAN90	80.4 %	JAN91	88.0 %	JAN92	94.3 %	JAN93	96.0 %	JAN94	100.0 %	JAN95	99.4 %	JAN96	93.3 %
FEB90	85.1 %	FEB91	90.4 %	FEB92	91.6 %	FEB93	97.9 %	FEB94	97.9 %	FEB95	99.9 %	FEB96	96.9 %
MAR90	88.9 %	MAR91	92.8 %	MAR92	93.3 %	MAR93	97.1 %	MAR94	99.8 %	MAR95	98.7 %	MAR96	91.1 %
APR90	86.9 %	APR91	91.3 %	APR92	88.2 %	APR93	94.8 %	APR94	96.2 %	APR95	97.9 %	APR96	89.2 %
MAY90	87.0 %	MAY91	90.0 %	MAY92	90.6 %	MAY93	92.0 %	MAY94	93.9 %	MAY95	97.8 %	MAY96	89.7 %
JUN90	88.0 %	JUN91	91.2 %	JUN92	93.0 %	JUN93	94.0 %	JUN94	95.0 %	JUN95	97.2 %	JUN96	91.1 %
YEAR AVEF	86.4 %	YEAR AVEF	90.6 %	YEAR AVEF	90.7 %	YEAR AVEF	95.1 %	YEAR AVEF	97.9 %	YEAR AVEF	97.0 %	YEAR AVEF	95.2 %
FY90 AVERAGE TO JUNE:	86.4 %	FY91 AVERAGE TO JUNE:	90.6 %	FY92 AVERAGE TO JUNE:	90.7 %	FY93 AVERAGE TO JUNE:	95.1 %	FY94 AVERAGE TO JUNE:	97.9 %	FY95 AVERAGE TO JUNE:	97.0 %	FY96 AVERAGE TO JUNE:	95.2 %
MAX	88.9 %	MAX	93.1 %	MAX	94.3 %	MAX	97.9 %	MAX	100 %	MAX	100 %	MAX	100 %
MIN	80.4 %	MIN	88.0 %	MIN	78.7 %	MIN	92.0 %	MIN	93.9 %	MIN	91.5 %	MIN	89.2 %



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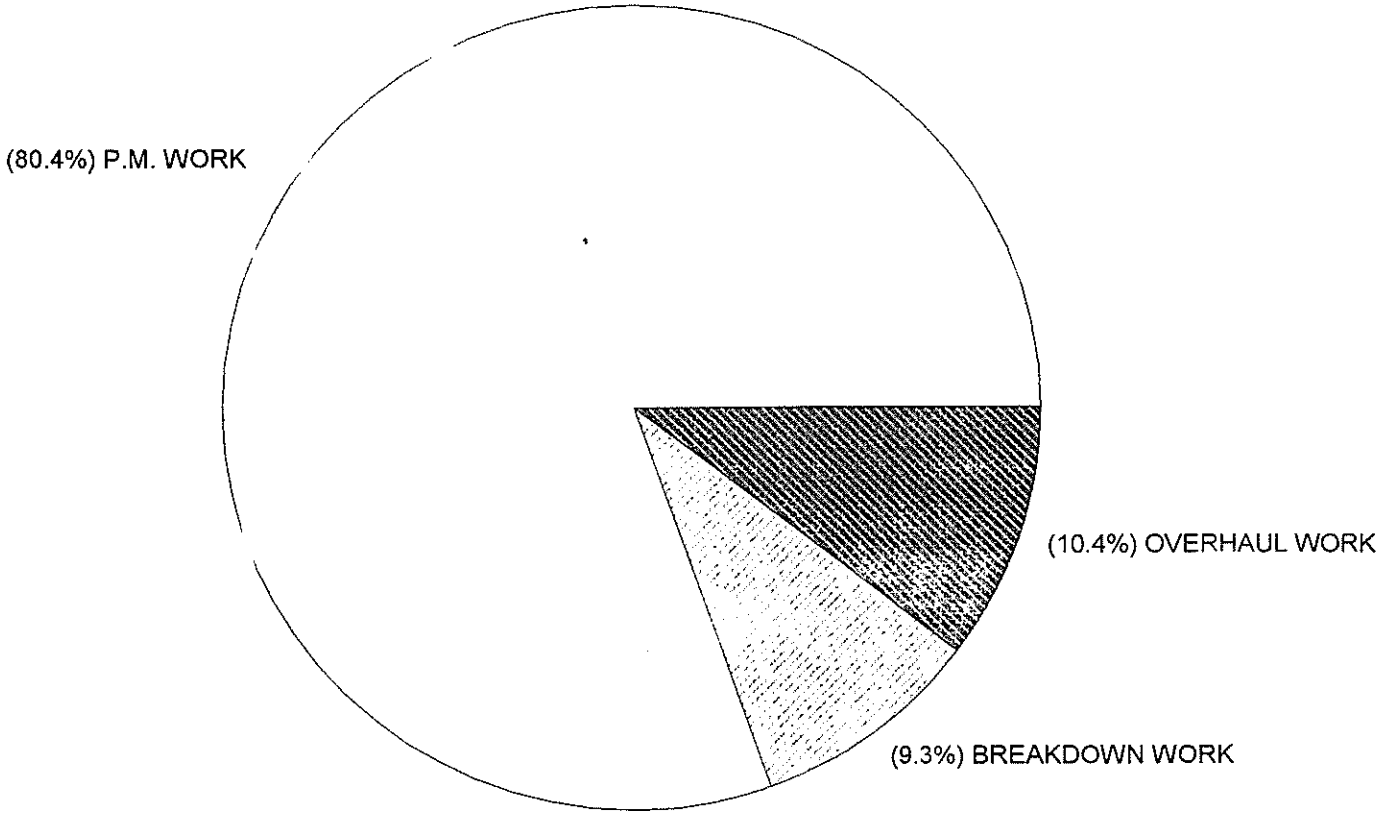
WASTEWATER PUMPING MAINTENANCE BREAKDOWN



(fig. #4)