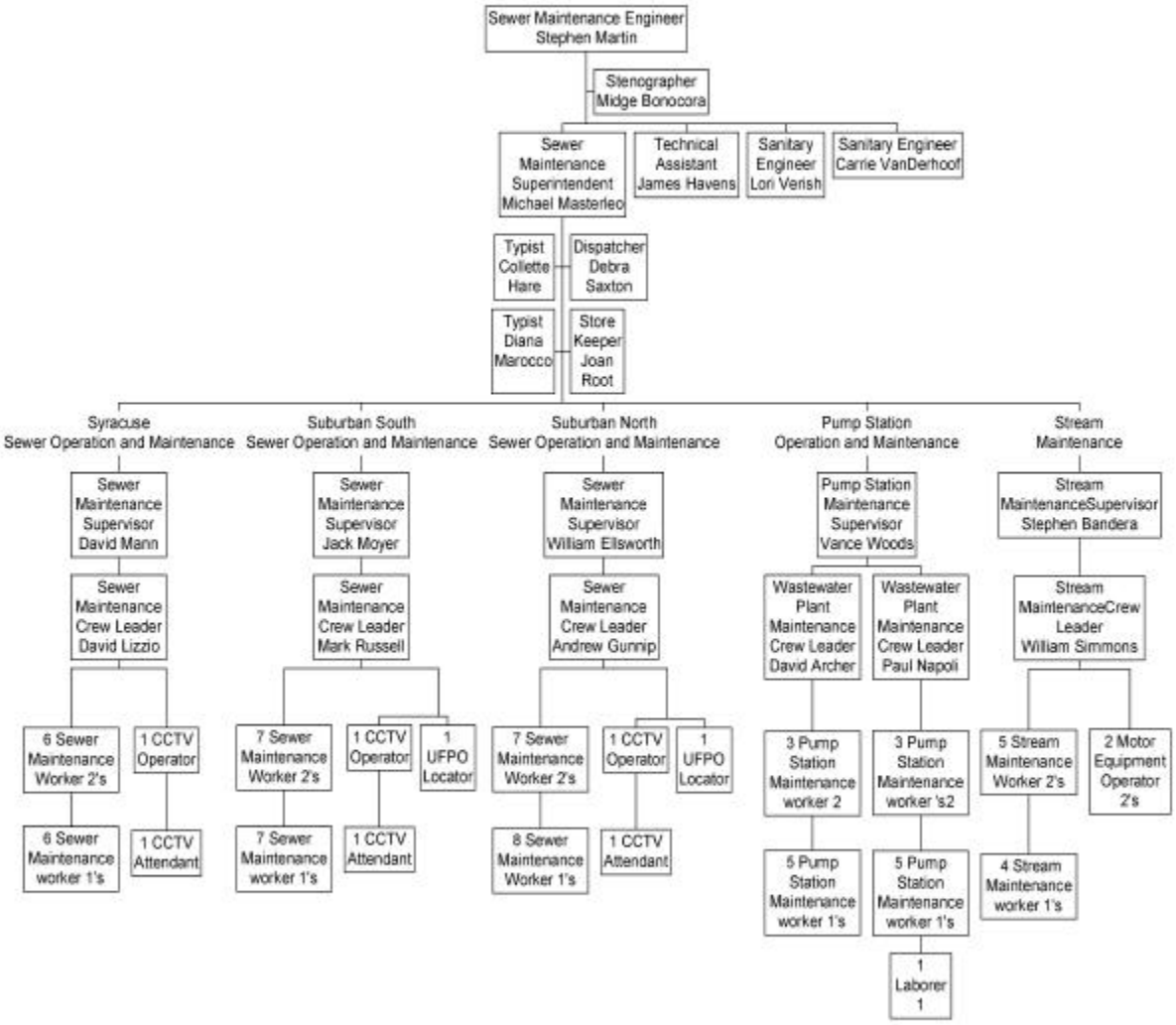
FLOW CONTROL



Chapter 9

Flow Control

9.1 Introduction

The Flow Control Division is comprised of five independent sections, as shown on the organization chart. Each section has its own unique function, with a supervisor in accountable charge of each. In times of emergency, additional or imbalanced workloads, all sections support each other as necessary. Additionally, support is provided to other sections of this Department, or other County agencies, when schedules permit or specific conditions exist, i.e., snow removal, manpower and equipment, assistance in major repairs or projects.

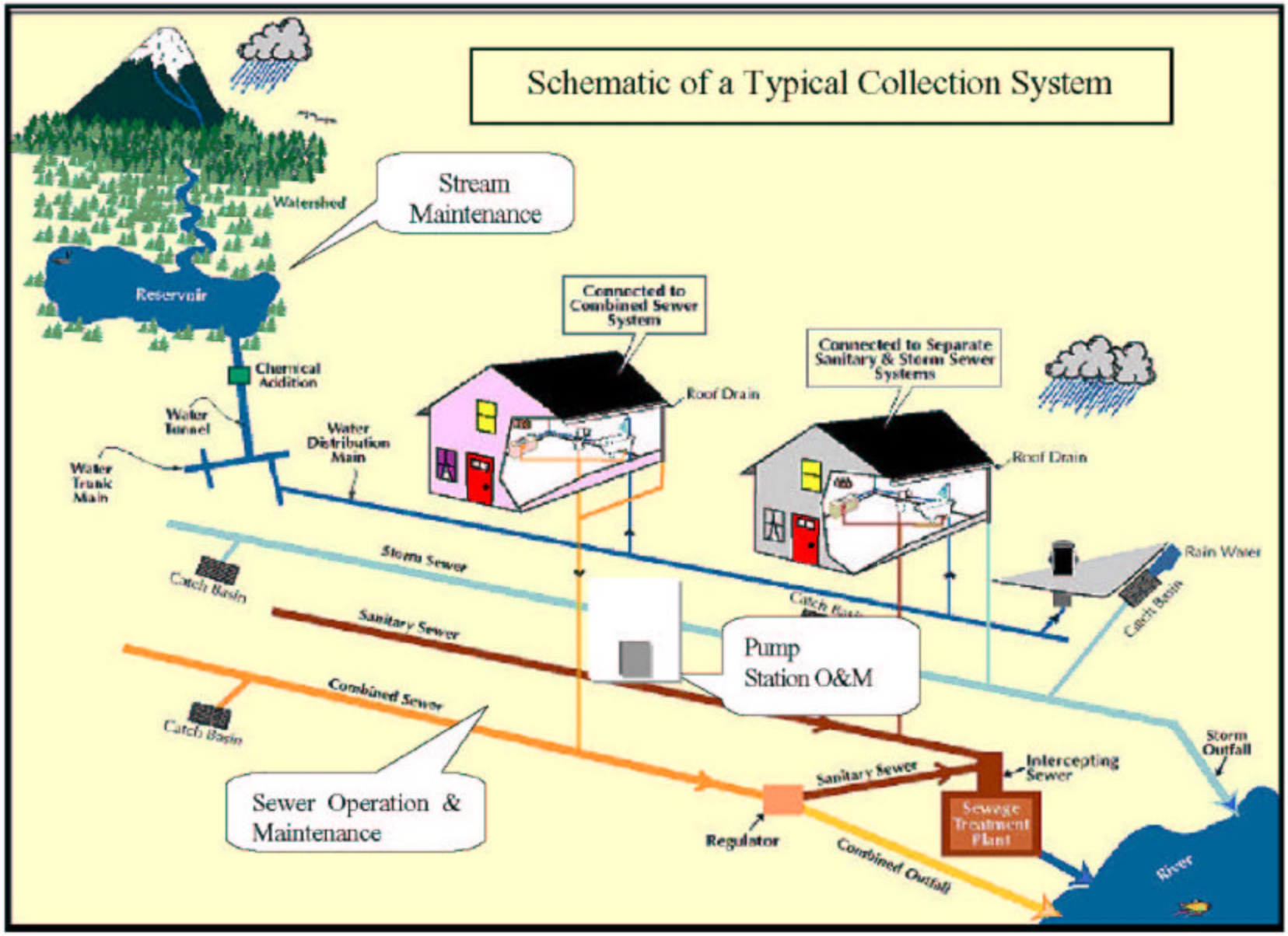
Four sections in this Division— Suburban Sewer Maintenance North, Suburban Sewer Maintenance South, Syracuse Sewer Maintenance and Pump Station Operations are collectively responsible for proper functioning of the collection system and wastewater conveyance to the appropriate wastewater treatment plant, within the Sanitary District. The collection system consists of approximately 3,000 miles of piping from six inches to ten feet in diameter. More than 100 pump and lift stations move sewage to treatment facilities. In addition, these sections provided some 6,664 hours of assistance in 2002 to other Divisions of the Department as well as to other County Departments. The complete area of responsibility serves a population in excess of 450,000 people.

The role of the fifth section, Stream Maintenance, is to inspect, clean and maintain drainage and flood control facilities within the four special districts under the Department's jurisdiction: Bear Trap-Ley Creek, Bloody Brook, Harbor Brook, and Meadowbrook.

Ten individuals provide administrative and technical support to all five sections of the Division which employs 89 workers: Sewer Maintenance Engineer, Superintendent, two Sanitary Engineers, Steno, two Typists, Dispatcher, Storekeeper, and a part-time Technical Assistant.

These five sections are unique in that their workload requires a high level of contact with the Department's customers (sanitary sewer users). Other Divisions in the Department have equally important operations but daily customer contact is not always applicable to their work assignments, an exception being those associated with source control (Engineering & Laboratory Services). This responsibility requires diplomacy, tact, effective communications and other skills which must be demonstrated in day-to-day operations by supervisors, crew leaders and general staff. The image of the Department is in many cases formed by the staff/customer contact in these sections. Therefore, this annual summary of areas of coverage and distribution of workload performed during 2002, although informational from a historical standpoint, cannot totally emphasize the important contribution of personnel involved in performing daily assignments. Finally, Flow Control expects to relocate to, and consolidate all of its personnel and functions at, 7120 Henry Clay Boulevard late in 2003. The site was acquired in July 2002. Design, to renovate the site to accommodate the Flow Control division, the ELS Laboratory and Field Technicians and a new substation for the Onondaga County Sheriff is underway, and construction is scheduled to be complete about October of next year.

The following schematic pictorial provides view of a wastewater system, indicating services as noted throughout the text.


Schematic of a Typical Collection System
Stream Maintenance
Watershed
Reservoir
Chemical Addition
Water Tunnel
Water Trunk Main
Water Distribution Main
Connected to Combined Sewer System
Roof Drain
Connected to Separate Sanitary & Storm Sewer Systems
Roof Drain
Rain Water
Catch Basin
Storm Sewer
Catch Basin
Sanitary Sewer
Pump Station O&M
Combined Sewer
Catch Basin
Sewer Operation & Maintenance
Sanitary Sewer
Intercepting Sewer
Storm Outfall
Sewage Treatment Plant
Regulator
Combined Outfall
River

9.2 Suburban Sewer Maintenance

Suburban Sewer Maintenance has two primary tasks in the Department's collection system operation. The first is for inspection, preventive maintenance, Dig Safely New York (formerly, UFPO), utility location and repairs within the Department's extensive trunk and force main sewer network. The second is for contract sewer system inspection, preventive and corrective maintenance, plus utility location in more than 300 municipal districts in the following Towns and Villages:

TOWNS	VILLAGES
Camillus	Camillus
Cicero	East Syracuse
Clay	Fayetteville
Dewitt	Liverpool
Geddes	Manlius
Hastings	Marcellus
Lysander	Solvay
Manlius	
Marcellus	
Onondaga	
Pompey	
Salina	
Van Buren	

At year's end, 40 personnel were assigned to Sewer Maintenance, Suburban North (Oak Orchard) and Suburban South (Ley Creek).

Contracts with the various towns and villages produces revenues to the Department of approximately one million dollars annually.

A new database to accumulate contract billing data has been developed, tested, and is in effect for billings to towns and villages in April 2003, for year ending December 31, 2002.

A. Municipal Projects

Twenty-two sewer projects were reviewed and approved during 2002, comprising an additional 40,623 feet of gravity and low pressure sewer pipe.

The number of projects received, reviewed and approved is somewhat less than last year with a corresponding reduction in the feet of gravity sewer and low pressure sewer pipe. See Table 9.1.

Table 9.1 Municipal Sewer System Projects 2002	
Municipality	**Feet of Sewers**
TOWN OF CICERO	
Lebeau Acres – Section G	1,647
Gulf Stream Section No. 4	1,425
Becker Property	279
Hancock Air Park	6,517
The Moorings	740
Wallington Meadows Sections 2 & 3	1.472
TOTAL	12,080
TOWN OF CLAY	
Dell Center Section #3 – Clay Shopping Center	3,489
Hafners Landing – Dolshire Drive	797
Villages at Fairway East	1,944
TOTAL	6,230
TOWN OF DEWITT	
Laurel Park	1,554
Dunkin Donuts Collamer Road	733
Britton Knolls	3,813
Northtown Sewer District Ext.#8	750
Northtown Sewer District Ext. #1 (Pump Station Included)	3,000
TOTAL	9,850
TOWN OF LYSANDER	
Park Terrace – Radisson	555
TOTAL	555
TOWN OF MANLIUS	
Spruce Ridge Section 10	483
MPH Northeast Plaza (Kinney Drugs)	530
TOTAL	1,013
TOWN OF ONONDAGA	
Breckenridge Section C-2	1,086
TOTAL	1,086
VILLAGE OF BALDWINSVILLE	
Baldwin Hill Estates	2,337
TOTAL	2,327
VILLAGE OF FAYETTEVILLE	
Briar Brook Phase II	4,100
TOTAL	4,100
GRAND TOTAL	40,623

B. Dig Safely New York (formerly, UFPO)

Onondaga County Department of Water Environment Protection is a founding member of the state-wide organization and is among the first "one call" systems organized in the United States. Table 9.2 includes utility location requests calls requiring action during the year. It is separated by responses to areas where the Department has contracts with municipalities or is required to locate its own underground facilities. Our response to these calls, through the Dig Safely New York Center by contractors and utilities, is required by Public Service Law, Chapter 685. By this law, all utility owners (including this Department) and all municipalities that operate buried facilities must be members of the Dig Safely New York one call system. All owners of buried facilities must contact the Dig Safely New York to provide information and location of their facilities. Currently this data is to be reported within a 48-hour time frame, with the exception of emergency calls, which are responded to on an immediate basis. Two staff members devote full time in responding to calls.

C. Service Calls

A Division representative is available to respond to any customer emergency or complaint within the sanitary district. Customer service representatives are staffed each day of the year from 7:00 A.M. to midnight. A Section Supervisor covers the overnight period on an "on-call" basis.

Table 9.3 itemizes Service Calls to individual properties in the municipalities where contracts exist with the Department.

In answering calls, personnel are available on a 24 hours per day, 365 days per year basis. When the Service Calls are completed, advice is given to the customer or his plumber for correction of current problems, or measures which should be taken to prevent future wastewater service problems. When recurring customer problems warrant further action, the Division provides technical assistance and support to town and village representatives in diagnosing and correcting system defects.

D. Line Stoppages for Towns and Villages

Table 9.4 shows line stoppages responded to in street sewers and corrected in the 2000-2002 period for contracted municipalities.

E. Maintenance and Inspection

In addition to the functions documented above, other major operations carried out by Suburban Sewer Maintenance are as shown in Tables 9.5 and 9.6 for the year 2002.

In Table 9.5, the majority of operations are of a preventive maintenance nature to, wherever possible, minimize or eliminate malfunctions from occurring within the wastewater collection system. Emergency portable bypass pumps may be utilized when power outages have occurred or a storm condition limits the sewer system's ability to accommodate wastewater flows.

Plumber locations provide a service whereby the street sewer connection point for a house or business service connection is located at the time of new construction or structure use modification.

Hydrogen Sulfide (H2S) is created, naturally, as a result of the breakdown of organic matter. A closed wastewater conveyance system creates a near- perfect environment for the production of H2S. At low concentrations, H2S is a nuisance characterized by the strong smell of rotten eggs. At higher concentrations it becomes corrosive and can cause serious damage to exposed equipment. At very high concentrations it can pose a danger to worker health and safety. In Table 9.6, Hydrogen Sulfide readings are measured and recorded at key system locations to trend Hydrogen Sulfide concentrations

generating from the wastewater. The data is used to evaluate and adjust chemical feed rates, track and rate citizen complaints, and plan new or additional odor control/corrosion control programs.

The other operations are, again, preventive measures. Force mains are inspected and cleaned on a scheduled basis, air and vacuum valves are tested and repaired, drain and inspection parts are serviced.

Combination Sewer Cleaner, in operation.

TABLE 9.2

DIG SAFELY NEW YORK LOCATIONS 2002

CONTRACT & NON CONTRACT

CONTRACTED SERVICE:	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS
TOWN OF:													
CAMILLUS	0	0	0	0	0	0	0	0	0	0	0	0	0
CICERO	92	66	94	253	227	142	269	262	226	186	107	86	2,010
DE WITT	56	75	54	117	147	173	138	148	184	181	104	56	1,433
GEDDES	21	18	34	37	57	58	48	48	42	41	20	21	445
LYSANDER	31	30	33	92	109	65	93	90	87	75	38	32	775
MANLIUS	26	20	38	76	79	82	66	81	77	79	57	22	703
ONONDAGA	32	31	36	86	92	91	91	70	88	73	35	37	762
SALINA	63	45	71	156	129	78	177	140	97	118	74	48	1,196
POMPEY	2	4	4	8	14	16	9	14	14	14	12	6	117
VILLAGE OF:													
E. SYRACUSE	0	0	0	0	0	0	0	0	0	0	0	0	0
MANLIUS	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	323	289	364	825	854	705	891	853	815	767	447	308	7,441
NON-CONTRACT SERVICES:													
SUBURBAN NORTH	130	86	113	283	369	334	357	274	319	284	188	124	2,861
SUBURBAN SOUTH	178	147	228	333	403	386	291	359	333	322	251	185	3,416
SYR. SANITARY	368	275	381	621	564	580	486	512	502	503	330	250	5,372
TOTAL	999	797	1,086	2,062	2,190	2,005	2,025	1,998	1,969	1,876	1,216	867	19,090

Table 9.3

Service Calls 2002

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Camillus (T)	61	20	22	32	22	24	21	29	29	31	35	41	367
Cicero (T)	21	27	25	35	18	35	19	16	26	18	30	20	290
Clay (T)t)	30	40	39	49	45	93	46	22	55	42	45	53	559
Dewitt (T)	37	37	38	26	41	70	47	33	37	43	31	42	482
Geddes (T)	47	31	33	26	50	33	27	36	44	41	51	47	466
Lysander (T)	4	1	5	3	1	2	2	2	3	7	2	1	33
Manlius (T)	11	10	13	19	14	12	13	6	11	15	9	26	159
Marcellus (T)	0	0	0	0	0	0	0	0	0	0	0	0	0
Onondaga (T)	11	8	9	12	6	6	8	9	12	11	8	11	111
Pompey (T)	0	0	1	0	0	0	2	1	0	0	2	1	7
Salina (T)	96	83	83	93	78	142	82	65	88	87	75	81	1,053
VanBuren (T)	6	3	3	3	6	6	7	3	3	2	0	3	45
E.Syracuse (V)	0	0	0	0	1	2	0	0	0	1	0	0	4
Fayetteville (V)	0	1	1	0	0	0	0	0	0	0	1	0	3
Liverpool (V)	18	16	8	11	14	22	9	11	6	10	14	14	153
Manlius (V)	1	0	6	1	0	0	1	1	0	1	7	1	19
Marcellus (V)	0	1	0	0	0	0	0	0	0	0	0	0	1
Solvay (V)	15	10	13	16	7	5	8	5	9	12	6	13	119
Camillus (V)	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	358	288	299	326	303	454	290	239	323	321	316	354	3,871

Table 9.4 Line Stoppages by Town & Village			
	2000	2001	2002
TOWN OF:			
Camillus	9	3	7
Cicero	4	4	2
Clay	6	3	5
DeWitt	6	6	7
Geddes	3	1	0
Lysander	1	2	1
Manlius	0	0	3
Onondaga	0	3	1
Pompey	0	0	0
Salina	11	6	7
Van Buren	1	0	1
VILLAGE OF:			
Camillus	0	0	0
East Syracuse	0	0	1
Fayetteville	1	1	0
Liverpool	0	4	3
Manlius	1	1	0
Marcellus	0	0	0
Solvay	1	0	1
Totals	**44**	**34**	**39**

Table 9.5

Sewer Cleaning, Maintenance, and Inspection 2002

Function	Suburban North	Suburban South
	Feet	**Feet**
Jet Flush, Preventive Maintenance (JPM)	168,300	259,500
Jet Vacuum Preventive Maintenance (JVPM)	209,400	200,400
Bucket Machine Crew-Maintenance (BMC)	0	2,400
Inspection (TVI)	56,400	62,100
Test and Seal (TVTS)	0	7,200
	Manhours	Manhours
Manhole & Line Inspection (L&I)	4,768	7,212
Microbial Enzyme Treatment (MET)	32	24
Bypass Pump (BYP)	40	21
Lateral Camera Inspection(TVL)	144	46
	Quantity	Quanity
Plumber Locations (L&I)	68	43
Manhole Rehabilitation (MHR)	185	90

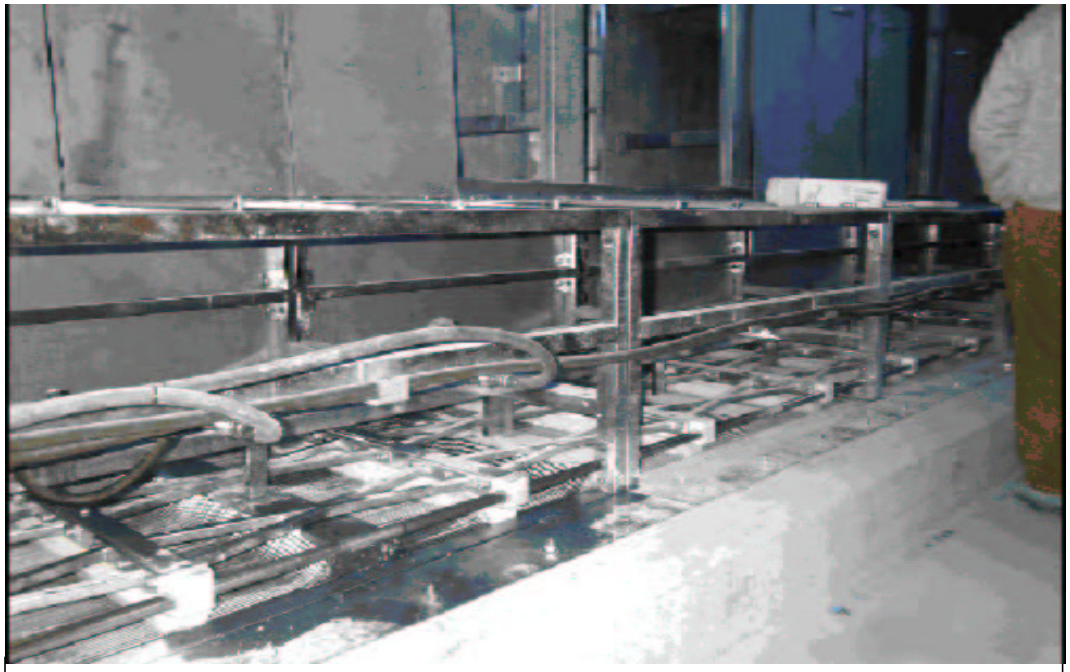
Table 9.6 Force Main Maintenance					
Force Main	**H_2s Readings (Manhours)**	**Valve Maintenance (Manhours)**	**Inspection (Manhours)**	**Cleaning (Feet/ manhours)**	
Nine Mile	16		20		
Ley Creek			56		
Nedrow			24		
Liverpool			104		
Clay/Cicero	40	12			
Oak Orchard	40	8			
Davis Road	40		64		
Gaskin Road			42		
Baldwinsville West	16		16		
Baldwinsville South					
Hillcrest		16	8		
Lakeside					
Baldwinsville North					
Sawmill	4	32	56		
Westside			68		
Camillus			28	36,350	152
Belgium	8	4	40		
Lakeshore	88				
Subtotal Force Mains	252	72	526	36,350	152
Contract Force Mains	112	40	16		
Total Force Mains	**364**	**112**	**542**	**36,350**	**152**

9.3 Syracuse Sewer Maintenance

Syracuse Sewer Maintenance's primary function is to inspect, maintain, and repair the combined sewer system within the City of Syracuse and prevent or minimize the occurrence of combined sewer overflows. The OCDWEP portion of the system consists of four (4) interceptor sewers and 32 trunk sewers, which total approximately 70 miles of pipe, ranging from 8" to 90" in diameter. The system also includes some 58 Combined Sewer Overflows (CSOs), 17 siphon crossings, 6 grit chambers, 4 Floatables Control Facilities (FCF) and one vortex regional treatment facility, at the Central New York Regional Market. To that end, some 141 cubic yards of grit and 51,580 pounds of screenings (floatables) were removed from the system in the past year.

Sixteen individuals staff this section and are headquartered at 500 Hiawatha Boulevard in the Sewer Maintenance Building.

Table 9.7, plus Figure 9.1 indicate activity in the various work functions as noted above.



Horizontal bar racks at the Teall Brook Floatables Control Facility

Hiawatha RTF, Disinfection Tank

Butternut Floatables Control Facility

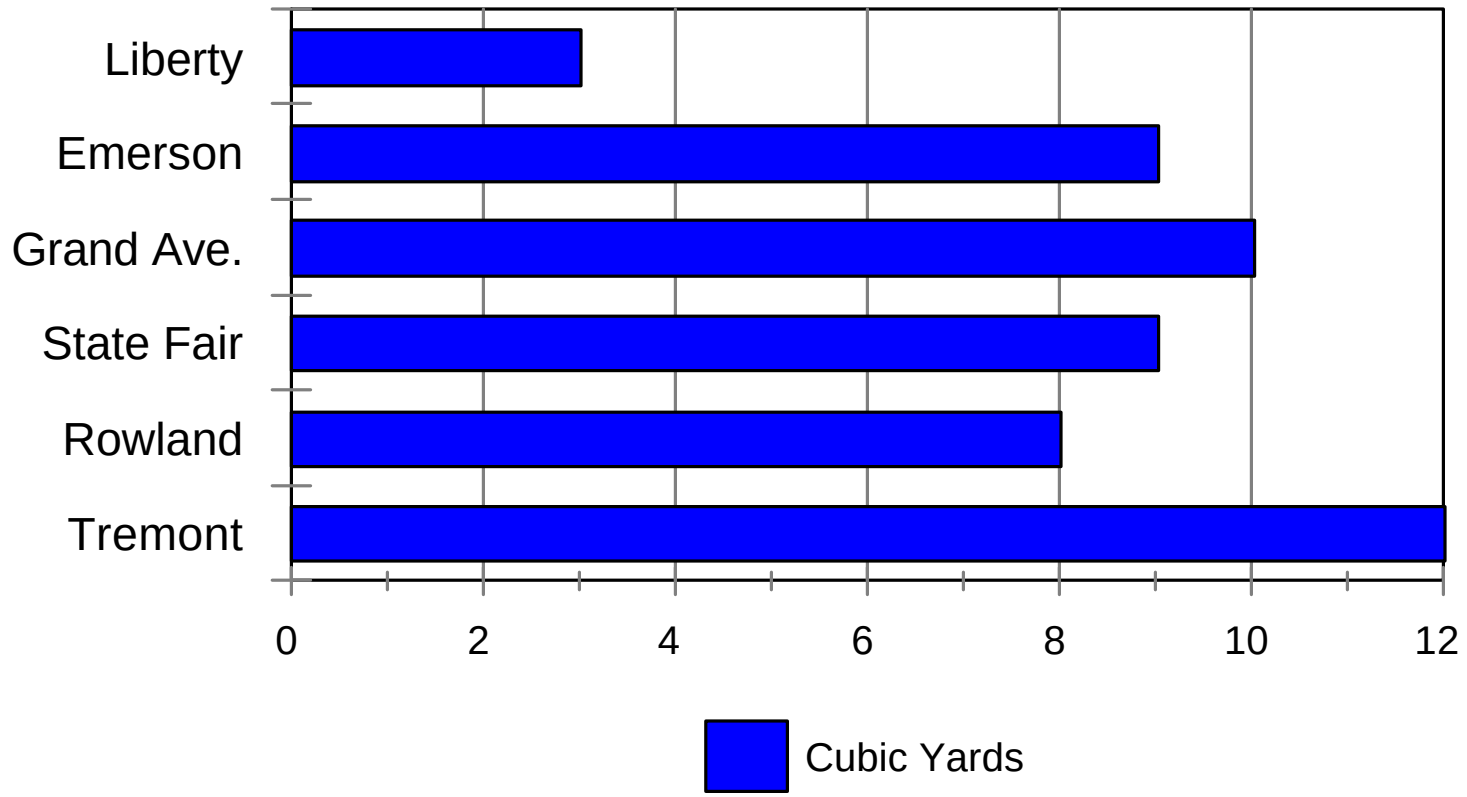
Table 9.7

Syracuse Sewer Maintenance

Sewers	Comb. Clnrs. line		CCTV	Power Bucket Machine		Inspec.	Misc.
	Feet	Cu. Yds. Grit	Inspec Ft.	Feet		Hours	Maintenance
Intercepting							
Main	33,750	19	300	0	0	144	349
Harbor Brook	18,200	40	1,200	0	0	135	336
East Side	300	0	0	0	0	136	9
West Side	5,100	0	0	0	0	0	119
Trunk							
Ainsley/Matson	0	0	0	0	0	66	0
Bellevue	0	0	0	0	0	28	10
Brighton	0	0	0	0	0	78	0
Broadview Hgts.	0	0	0	0	0	48	0
Burnet	0	0	0		0	28	0
Butternut/Grant	0	0	675	0	0	42	48
Colvin	0	0	0	0	0	16	0
Delaware	300	5	300	0	0	30	61
Elmhurst	0	0	0	0	0	54	16
Emerson Ave.	300	1	0	0	0	96	16
Fayette	300	4	300	0	0	28	32
Genesee	50	0	0	0	0	28	11
Harrison	150	4	600	0	0	28	32
Hiawatha	300	5	0	0	0	16	16
Hiawatha Interceptor	0	0	0	0	0	16	0
James St.	0	0	0	0	0	7	0
James/Rigi	600	0	2,400	0	0	33	64
Jefferson	1,200	4	0	0	0	85	30
Kennedy	0	0	0	0	0	38	0
Lemoyne/Darlin	0	0	0	0	0	20	0
Lyncourt/Border	330	0	2,400	0	0	47	47
M-Brook East	0	0	3,900	0	0	69	68
M-Brook West	600	0	4,200	0	0	75	122
Midland	900	0	2,700	0	0	32	80
Onondaga	0	0	0	0	0	24	0
Onondaga/Velasko	0	0	0	0	0	41	0
Polk St.	600	3	900	0	0	65	65
Rowland	0	0	1,200	0	0	86	28
South Salina	0	0	0	0	0	100	16
South Ave.	0	0	600	0	0	20	16
Sunnycrest/Burnet	0	0	0	0	0	51	0
Tallman	600	0	0	0	0	96	6
Tompkins	0	0	675	0	0	84	33
W. Seneca Tnpk.	900	3	2,430	0	0	16	85
Total YTD	64,480	88	24,780	0	0	2,006	1,714

Figure 9.1

Grit Chamber Cleaning 2002



9.4 Pump Station Operations

The Pump Station section's function within the Flow Control Division is to operate and maintain wastewater pumping and lift stations, either those owned by the Department of Water Environment Protection or served under contract with various municipalities within the sanitary district.

Presently, the section is responsible for 71 municipal stations and 50 department-owned stations. The section operates 24-hours per day and covers all emergencies on an immediate basis. The area of responsibility covers all of the Onondaga County Sanitary District. To perform assigned services, the authorized staff of the section is presently 20 staff members.

When station malfunction alarms activate, section staff are immediately dispatched to the facility to determine the cause of the alarm and institute corrective action. Serious malfunction or system failure may cause SSO (sanitary sewer overflow)—release of untreated wastewater to the environment. When this happens, emergency procedures are instituted and notification is made to the State Department of Environmental Conservation. The occurrences as they took place, listed by station, are shown in Table 9.9 for the 2002 year. It can be seen only five stations of the one hundred twenty-one in service, experienced overflows during the year.

Davis Road Pump Station, Force Main Cleaning

The Section staff, in operating stations and performing maintenance, as applicable, develops a detailed knowledge of the structure and makeup of most station components. This knowledge of the municipal stations is a valuable asset when station repairs or upgrades are being performed.

With the many years of experience operating the above mentioned stations, they are in a unique position to provide information and assistance to municipal engineers and municipal staff in the area of component material selection, suggested structure modifications and other comments which will assist in assuring station longevity and reliable performance.

The same degree of cooperation is applicable when new pump stations are designed. During this phase, our staff has regular meetings with engineers and municipal staff. Our function is twofold, one to offer design suggestions based on our operational experience at other stations and two, allow us to become familiar with station design by such time as we take over operating responsibility.

In summary, mutual cooperation between ourselves and municipal parties is essential to day-to-day operation and long-range planning. Our records of station operation are a valuable tool to assist municipalities in a variety of questions which arise from time to time.

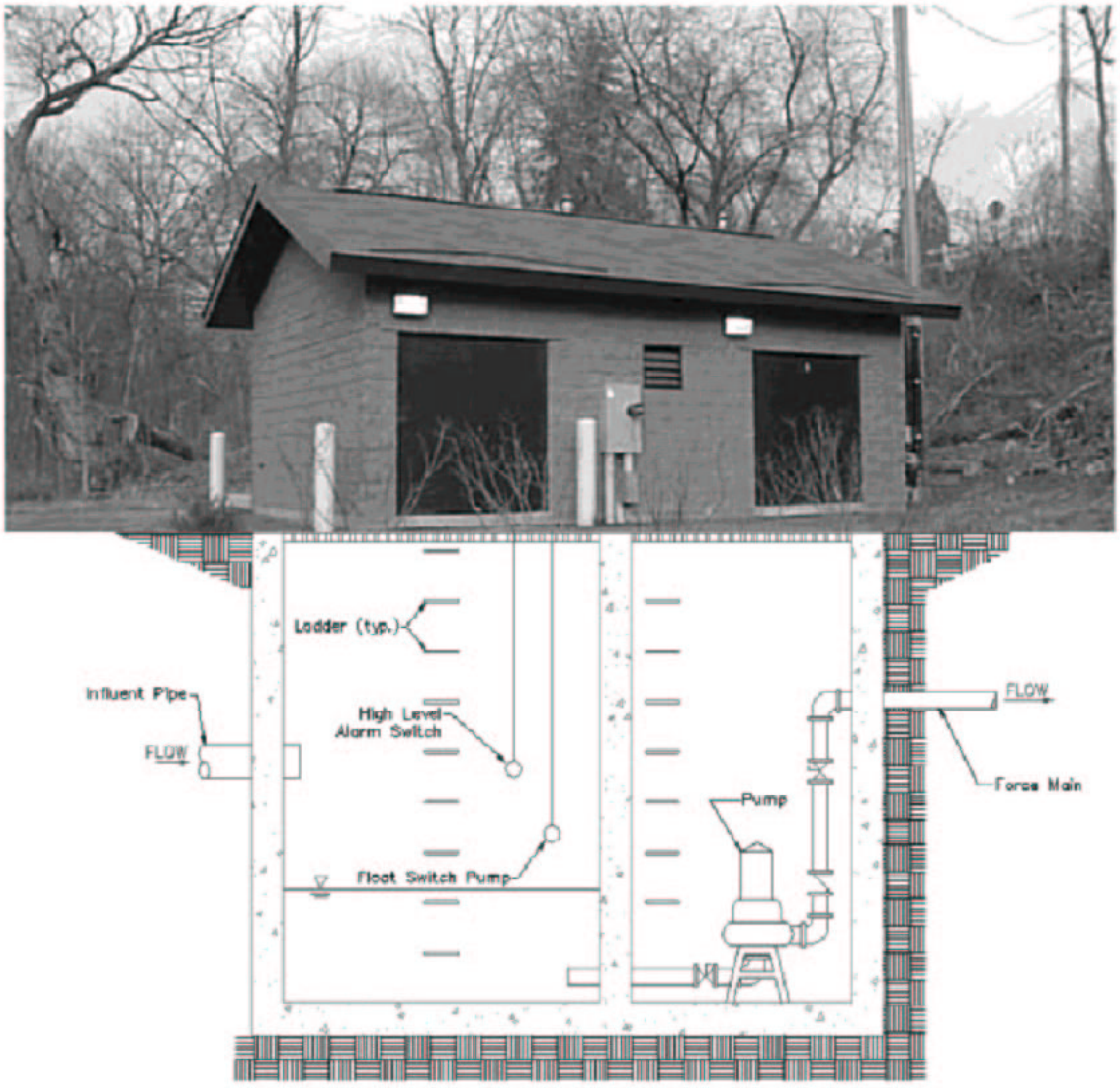
Aside from the prime functions and responsibilities previously described which are "hands on" operation and maintenance in nature, a significant document trail is necessary to maintain records on

the more than 120 operational pump stations. To this end, a computerized database has been developed to provide cost and billing data for all pump stations owned or operated under contract.

This database is up and running in 2002. Also, the addition of the Simplicity HMI V4.X System (SCADA) promises to be of assistance in monitoring and correcting some operating functions in the larger pump stations during both emergency and non-emergency conditions. It will assist in reducing response time in weather event situations where time is critical.

A more substantial overall Division billing system (Database) has been developed to accumulate all Sections' charges to towns and villages and provide records for historical analysis.

A Typical Pump Station



A. Pump Repair Summary

We continue to upgrade, repair and replace station pumps on a planned basis. In addition, repairs and replacements are implemented as emergencies occur. A planned program for installation of atomospheric monitoring equipment has been essentially completed and provides data for reporting and remedial action as necessary. Our pump mechanics are trained and certified by the manufacturers in repairing and rebuilding wastewater pumps. Listed below are pump station rebuilds and replacements accomplished in 2002.

Table 9.8

Pump Rebuilds & Replacements 2002

Station	Rebuilds
Westside #2	Rebuilt CP3300 Flygt
Shepard Point #3	Rebuilt CP3201 Flygt
Brown Ave. #1	Rebuilt CP3082 Flygt
Signal Hill #2	Partial rebuild SPG20 Hydromatic
South Bay #1	Partial rebuild CP3152 Flygt
Towpath Commons #1	Replace pump WGX30 Myers
Schulyer #1	Partial rebuild CP3082 Flygt
Clark Hill	Partial repair 4S4L Hydromatic
Westside Spare	Rebuilt CP3300 Flygt
Long Branch	Partial rebuild CP3085 Flygt
Kendall #1	Partial rebuild SPG20 Hydromatic
Baldwinsville West	Partial rebuild CP3152 Flygt
Westside #6	Rebuilt CP3300 Flygt
Manlius #3, #1	Rebuilt CP3300 Flygt
Westentry	Rebuilt CP3200 Flygt
Davis Reed	Rebuilt CP3311 Flygt
Plum Hollow	Rebuilt 4VC Myers
Gaskin Road	Rebuilt CP3201 Flygt
Euclid #l, #2	Rebuilt CP3127 Flygt
Wellington	Rebuilt G2HX Hydromatic
Westside #3	Replace CP3300 Flygt
Westside #1	Replace CP3300 Flygt
Liverpool #2	Replace NCD8-8-17 Goulds

B. New Projects

Continue to institute requests for decommissioning of inefficient 20+ year old pumps owned by towns and villages and suggest replacement with more energy and cost efficient pumps. This process will, in the long run, allow our Section to provide the most effective service to our municipal clients.

C. Summary

We will continue to plan and upgrade existing components and facilities. In doing so, we will combine system knowledge and prudent fiscal management in providing the best possible operation.

Following is Table 9.9 which indicates all of our Pump Stations, either those owned by the Department or under Municipal Contract, as well as the respective service area applicable.

Kirkpatrick Pump Station Upgrade

Table 9.9 Pump Station Alarm Callouts & Overflow Calls 2002				
Brewerton Service Area		**Municipal Owner**	**Alarm Callouts**	**Overflow**
C701	**Shepard Point**		**14**	
C712	**Harbour Village**		**7**	
C715	**Longpoint**		**33**	
C717	**Maple Bay**		**12**	
C718	**Maple Manor**	**Cic**	**7**	
C720	**Muskrat Bay**		**19**	
C723	**Oneida Park**		**0**	
C724	**Polar Beach**		**14**	
C728	**South Bay**		**14**	
C731	**Jane Lane**	**Cic**	**5**	
C732	**Winterhaven**	**Cic**	**4**	
Baldwinsville-Seneca Knolls Service Area		**Municipal Owner**	**Alarm Callouts**	**Overflow**
B701	**Baldwinsville North**		**12**	**1**
B702	**Baldwinsville South**		**10**	
B703	**Baldwinsville West**		**18**	
B705	**Belgium**		**23**	**1**
B706	**Whispering Oaks**	**Lys**	**3**	
B708	**Farrell Road**		**9**	
B710	**Geddes #9**	**Ged**	**0**	
B711	**Stanford Drive**	**Lys**	**22**	
B712	**Exit 39**	**Van**	**4**	
B713	**Interstate**	**Van**	**12**	
B725	**Radburn**	**Lys**	**6**	
B726	**River Road**	**Lys**	**2**	
B731	**West Entry**	**Lys**	**5**	
B734	**Melvin Drive**	**Lys**	**4**	
B735	**Emerald Cove**	**Lys**	**2**	

Table 9.9 Pump Station Alarm Callouts & Overflow Calls 2002				
B740	**River Mall**	**Van**	**1**	
Meadowbrook/LimestoneService Area		**MunicipalOwner**	**Alarm Callouts**	**Overflow**
D701	**Signal Hill I**	**V. Fay**	**0**	
D702	**Signal Hill II**	**V. Fay**	**0**	
D703	**Kendall Drive**	**Man**	**2**	
D704	**Butternut I**	**Dew**	**5**	
D706	**Towpath**	**Dew**	**21**	
D707	**Clark Hill**	**Man**	**2**	
D708	**Falcon View**	**Man**	**1**	
D70801	**Falcon View II**	**Man**	**3**	
D709	**Butternut II**	**Dew**	**3**	
D710	**Calvary Woods**	**Man**	**2**	
D711	**Fremont**	**Man**	**17**	
D712	**Waitsfield**	**Dew**	**3**	
D713	**Highbridge**	**Man**	**2**	
D718	**Limestone**	**Dew**	**4**	
D719	**Lyndon**	**Dew**	**5**	
D720	**Manlius**		**15**	
D723	**Ninety Acres**	**Man**	**1**	
D729	**Winterton**	**Dew**	**5**	
D731	**Hobson**	**Dew**	**1**	
Metro-Ley Creek Service Area		**Municipal Owner**	**Alarm Callouts**	**Overflow**
E7652	**Marsden SSO**	**Sal**	**0**	
E000	**Greenfield**		**10**	
E400	**Allied**		**7**	

Table 9.9 Pump Station Alarm Callouts & Overflow Calls 2002				
E701	**Brooklawn**		**2**	
E702	**Brookside**		**14**	
E703	**Brown Avenue**		**0**	
E704	**Liverpool**		**70**	**1**
E705	**Camillus**		**29**	
E706	**Westside**		**57**	**1**
Metro-Ley Creek Service Area		**MunicipalOwner**	**AlarmCallouts**	**Overflow**
E707	**Salina North Corp. Ct.**	**Sal**	**3**	
E708	**Enterprise Pkwy.**	**Dew**	**6**	
E709	**First Street**		**9**	
E710	**Fly Road**		**2**	
E711	**Woods Edge**	**Sal**	**3**	
E712	**Kirkpatrick**		**28**	
E713	**Haywood Road**		**14**	
E714	**Hickory**		**9**	
E715	**Hillcrest**		**24**	**1**
E716	**Kinne Street**	**Dew**	**3**	
E717	**Lakeside**		**9**	
E720	**Applewood**	**Ono**	**2**	
E721	**Meyers Road**	**Dew**	**1**	
E722	**Nedrow**		**11**	
E723	**Ley Creek**		**45**	**2**
E724	**Park St.**	**Syr**	**1**	
E725	**Richmond**		**3**	
E726	**Southwood**	**Ono**	**1**	
E727	**Terminal Park**	**Sal**	**0**	
E728	**University Park**	**Ono**	**2**	
E729	**Newell Street CSO**		**6**	

Table 9.9 Pump Station Alarm Callouts & Overflow Calls 2002				
E730	**Sycamore**	**Ono**	**7**	
E731	**Singletree**	**Dew**	**17**	
E732	**Sackett**		**17**	
E733	**Schuyler South**		**5**	
E734	**Taylor Street**		**8**	
E735	**Collamer**	**Dew**	**1**	
E736	**Brittonfield**	**Dew**	**0**	
E7370	**Wellington**	**Cam**	**9**	
E7651	**Hinsdale SSO**	**Sal**	**0**	
E7653	**Roxford Road SSO**	**Sal**	**0**	
E7654	**Young Avenue SSO**	**Sal**	**0**	
E7655	**Phelps**	**V. Esy**	**4**	**1**
E7660	**Dixon Hills**		**1**	
Oak Orchard Service Area		**Municipal Owner**	**Alarm Callouts**	**Overflow**
F701	**Euclid**	**Cla**	**16**	
F702	**Henry Clay**		**43**	
F703	**Caughdenoy Rd.**		**9**	
F704	**Fishers Landing**	**Cla**	**4**	
F705	**Plum Hollow**	**Cla**	**10**	
F706	**Cherry Estates**		**24**	
F709	**Gatewood**		**9**	
F721	**Northtown**		**10**	
F727	**Schuyler**	**Cic**	**4**	
F729	**Thompson Road**	**Cic**	**3**	
F730	**Totman**	**Cic**	**5**	
F731	**Hiller Park**	**Cic**	**7**	
F7320	**Lawton Valley Hunt**		**8**	
F73300	**Route 11 Corridor**	**Cic**	**0**	
F73301	**Cicero Comm. Campus**	**Cic**	**2**	

Table 9.9 Pump Station Alarm Callouts & Overflow Calls 2002				
Wetzel Road Service Area		**Municipal Owner**	**Alarm Callouts**	**Overflow**
G701	**Sawmill**		**10**	
G702	**Gaskin**		**12**	
G703	**Chris's Crossing**	**Cla**	**3**	
G704	**Bel Harbor**		**33**	
G7050	**Moss Creek**		**5**	
G710	**Heritage**	**Cla**	**4**	
G714	**Irongate**		**6**	
G716	**Maltlage**		**11**	**1**
G719	**Monteray**		**15**	
G732	**Woodard**		**5**	
G733	**Longbranch**	**Sal**	**9**	
G7650	**Bayberry Circle SSO**	**Cla**	**9**	
Non Consolidated Facilities		**Municipal Owner**	**Alarm Callouts**	**Overflow**
Z7010	**Feeder Bank**	**V. Cam**	**0**	
Z7020	**West Phoenix**	**Lys**	**1**	
Z7360	**Platt Road**	**Mar**	**5**	

CITY:

Syr = City of Syracuse

TOWNS:

Cam = Camillus
Cla = Clay
Cic = Cicero
Dew = Dewitt
Ged = Geddes
Lys = Lysander
Man = Manlius
Mar = Marcellus
Ono = Onondaga
Sal = Salina
Van = Van Buren

VILLAGES:

V. Esy = Village of East Syracuse
V. Cam = Village of Camillus
V. Fay = Village of Fayetteville

9.5 Stream Maintenance

This section's primary function is to inspect, clean and maintain some 40 miles of streams and brooks and four flood storage basins in the special County districts. A second function of this section is to support the work of the other four sections of the Division in such areas as snow removal, physical improvements and specific maintenance work. At present, Stream Maintenance consists of 13 full time employees. described above.

Figure 9.2 shows graphically and in summary form, distribution of hours by drainage district, supervision required, section equipment and facility maintenance and Consolidated Department support. The data contained in the table and figure represent eleven (11) months activity, with a projection to twelve (12) months.

Meadowbrook Drainage Basin at Meadowbrook Drive and Broad Street

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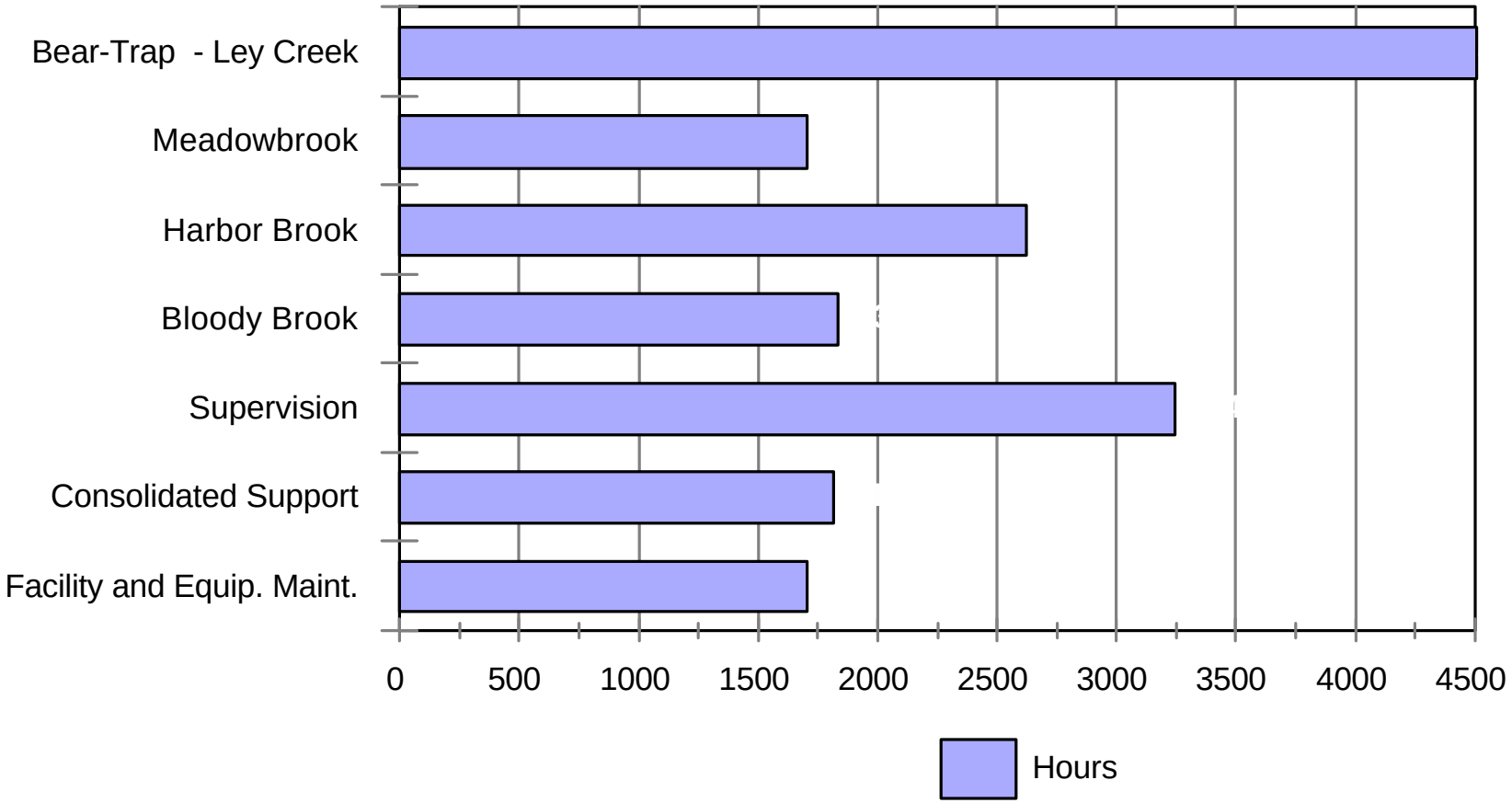
Table 9.10

Stream Maintenance Workload Distribution 2002

2002 Year End Totals	Total Hours	Cleaning Grit Chambers	Grounds Maint.	Removal Trees/ Debris	Assist Maint.	Facility Improve.	Training& Seminars	Equipment Maintenance
Flow Control Support								
Pump Stations	986		910	68	8			
Suburban North	57		21		36			
Suburban South								
Syracuse	314		49		265			
Flow Control Support Total	1,357	0	980	68	309			
Consolidated Support								
Davis Rd PS								
Metro WWTP	1,597		574		826	6	191	
B'ville WWTP	16				16			
Harbour Brook WWTP								
Wetzel Rd WWTP	20				20			
Meadow Brk WWTP	8				8			
Oak Orchard WWTP	6				6			
Ley Creek PS	121		36		69	16		
Brewerton WWTP	44		44					
Consolidated Total	1,812		654	0	945	22	191	
Flood Control Drainage Districts								
Beartrap	593		104	489				
Bloody Brook	1,834		548	1,120	27	89		
Harbor Brook	2,619		783	1,465	255	116		
North Ley Creek	1039		9	1,030				
South Ley Creek	1,527		731	796				
Meadowbrook	1,700	995	679		26			
Saunders	684		166	518				
Teall Brook	940		375	565				
Flood Control Total	10,936		3,711	6,712	282	231		
Year to Date Total	14,105		5,345	6,780	1,536	253	191	
Equip. Maintenance	1,699							1,699
Supervision	3,234							

Table 9.10 indicates the hourly distribution of workload to the various work responsibilities described above.

Figure 9.2
Stream Maint. Hour Distribution 2002



9.6 Engineering and Technical Services

The majority of functions performed by the engineering section of the Flow Control Division have traditionally included classical civil engineering duties related to the transport of wastewater to County wastewater treatment plants and flood protection. Specifically, those duties include design review of sewer systems and pump stations, troubleshooting of sewer system components, odor control studies and design of odor abatement systems, evaluation of sewer system capacities/hydraulics, and oversight of capital (sewer) improvement projects. Similar to many other technical sections of the Department, the overall engineering duties of the Flow Control section have grown during recent years. The primary reasons for additional work are the Amended Consent Judgment (ACJ) and aging infrastructure. To an extent, the additional work is in keeping with duties historically performed by the Section. However, the work mandated in the ACJ as it relates to the treatment (floatables capture, solids removal, and disinfection) of combined sewer overflows via new treatment facilities, has diversified the role of the engineering section in recent years. Moreover, the Flow Control Division continues to provide engineering and technical assistance to other sections of the Department. The major engineering and technical highlights for the Flow Control Division for the 2002 calendar are as follows:

A. Bloody Brook Drainage District Improvements

Bloody Brook drains approximately 2,450 acres of watershed benefiting portions of the Town of Salina and Clay, along with the Village of Liverpool. The project involves improvements to three sections of the Bloody Brook Drainage Channel as outlined below:

Section I: This portion of Bloody Brook is located east of Onondaga Lake Parkway and terminates at Onondaga Lake. Approximately 450-feet of dry masonry wall lining the east and west banks of the channel has collapsed. The collapsed section shall be rehabilitated to match the existing appearance and conveyance capacity. The remainder of the wall is in poor condition; missing stones are to be replaced with ones of similar size and texture.

Section II: This segment of Bloody Brook is located between Sunflower Drive and Old Liverpool Road. The main channel walls shall be rehabilitated using filter-fabric and medium stone fill to provided stabilization and erosion control. In addition, the south branch shall be realigned to create a smooth transition into the main channel.

Section III: This is the southern portion of Bloody Brook from Chestnut Hill Drive to Electronics Parkway, including a section of open land east of Chestnut Hill Drive. Improvements involve re-shaping and stabilizing the open channel sections, protecting erosion prone areas with rip/rap and increasing the conveyance capacity of the culverts. In addition, a 10-acre-foot storm water detention pond, providing roughly 3.5 million gallons of storage, shall be constructed on the property east of Chestnut Hill Drive.

The project is in design phase; the start of construction is scheduled for 2003.

B. Meadowbrook Drainage District Channel/Culvert Improvements

With an approved engineering design in place for constructing channel improvements to Meadowbrook within the Meadowbrook Drainage District, construction commenced in July. This project is close to 50% complete with 3 of 6 culvert replacements done and 4,000' of channel improvements constructed. Completion is scheduled for October 2003.

Meadowbrook Drainage District Improvements, 2002

C. Harbour Heights Station and Trunk Sewer Pump

Engineering design for this project was completed in May. Construction was started this fall and will be completed in October 2003. This project includes demolition of the existing Harbour Heights Wastewater Treatment Plant, construction of a new Harbour Heights Pumping Station adjacent to the WWTP, and construction of a new sewage pumping station on Canton Street in the Village of Baldwinsville. Mechanical piping consists of the installation of 8" and 10" sewage force main and 15" and 18" gravity sewer pipe.

Work that was completed this fall includes: clearing, grubbing, excavation for gravity sewer pipe placement, and directional boring for certain sections of force main installation.

D. Jamesville Penitentiary Pump Station and Force Main

Design for the replacement of the Jamesville Treatment Plant and new gravity sewage force main was completed in August 2002. Construction is scheduled to start in 2002 and be completed in October 2003. The project generally consists of demolition of portions of the existing treatment plant, construction of new headworks /aeration facilities and installation of a 6" gravity pressure sewer. The new facility will connect to an existing sanitary trunk sewer on Nottingham Road.

E. Replacement of Four Pump Stations

Design is complete for each of the pump station improvements. The construction phase will commence in 2003. The projects generally consist of the following:

The new Bel Harbor Pump Station will be constructed to replace the existing pump station located on Bel Harbor Drive. The existing station was constructed in the early 1960s. Due to the age and antiquated design of the station, it is maintenance intensive and difficult to service. There is no backup emergency power at this site. The new station will perform the same function as the existing station and will consist of a new above-grade structure designed to blend aesthetically with the existing neighborhood. The new station will also have a means of standby power in case of a power failure.

The new First Street Pump Station will be constructed to replace the existing pump station on First Street. This station was constructed in the late 1960s and is no longer suitable for long term continued operation. The new station will continue to perform the same function as the existing station but will

consist of a new above grade structure designed to blend aesthetically with the existing neighborhood. In addition, seasonal odor concerns for neighbors of the facility will be addressed.

The existing Brooklawn Pump Station will be upgraded by installing a new pumping system and emergency generator. In addition to various other electrical and HVAC upgrades, alarm capabilities will also be added. The Brooklawn Pump Station was constructed in the 1950s and has an above grade masonry structure with centrifugal pumps and extended shafts to motors at grade level. This project is intended to eliminate confined space entry and safety concerns, provide backup power, and improve long term operation and maintenance.

A complete upgrade of the Liverpool Pump Station Chemical Feed System is required to provide a safe and easy method to operate and maintain the facility, and to meet codes. All components of the chemical feed system (including both tanks) will be replaced. For installation and removal of new tanks, a knockout panel will be installed in a non-bearing wall in the chemical room.

F. Liverpool Pump Station/Service Area Improvements

Subsequent to the Wetzel Road Facilities Plan, improvements to the Liverpool Pump Station were designed to eliminate sewer surcharging and flooding within the service area, and to prevent sanitary sewer overflows into Bloody Brook. The project consists of the following improvements:

The construction of a diversion manhole, gravity influent sewer and a 400-gallon per minute submersible wastewater pump station (Floradale Pump Station) at Floradale Drive, adjacent to Bloody Brook and the Bloody Brook Trunk Sewer.

Approximately 2,100 linear feet of 6-inch diameter force main to convey flow from the Floradale Drive Pump Station to the existing storage tank at the Liverpool Pump Station.

A 1,300-gallon per minute submersible wastewater pump station (LSPR Pump Station) at the Liverpool Pump Station, adjacent to the existing manhole.

Approximately 300 linear feet of 10-inch diameter force main from the LSPR Pump Station to the existing Liverpool Pump Station storage tank.

The construction of a 2-million gallon, wire wound pre-stressed storage tank east of Hiram Avenue and west of the CSX railroad.

An 18-inch diameter interconnecting sewer between the existing storage tank and the new 2-million gallon storage tank.

The project is currently under design; construction is scheduled for April 2003 with completion in spring 2004.

G. Computer Automation

Erie Boulevard Storage System, Control Panel

The Flow Control Division developed an Access billing program in 2001 to conduct annual billings related to pump stations, suburban sewer maintenance, Dig Safely New York requests, and service calls. Over the past year, the Department has been involved in developing a Computerized Maintenance Management/Inventory Control System (CMMS) and a Computerized Operations and Maintenance Manual (COMM) for all County treatment plants and pumping stations. Through MAXIMO, a CMMS system, the Department is able to manage the following: equipment, work orders, preventative maintenance, job plans, resources, labor, calendars, purchase requisitions, purchase orders, inventory, safety, application set-up, purchase quotations, invoice matching, assets catalogs, work manager dispatch and planning, and much more. It is anticipated the MAXIMO system will replace the Access program in 2003 to prepare annual billings. Department staff has been undergoing training on the MAXIMO system throughout 2002. It is anticipated that all aspects of the CMMS/COMM system will be fully functional early in 2003.

H. Geographical Information Systems (GIS) Development

Over the previous year, the Flow Control Division worked with the Syracuse Onondaga County Planning Agency (SOCPA) on transferring Onondaga County sewer mapping into a computer Geographical Information System. The Department has integrated the GIS mapping project with the aforementioned CMMS/COMM system. With this integration, a work order can be generated through a ‘call center', which gathers both caller and work request information. Maps can be launched to display the area surrounding problem addresses. Once a map of the problem area is launched, any parcel, pump station, manhole, sewer segment can be selected and a work order for the selected item can be created, tracked, and updated. Maps can also be printed out and attached to memos, reports, work dispatches etc. The integration of the GIS and CMMS/COMM offers the Department a centralized, comprehensive and efficient means of managing all its assets.

I. New Flow Control Facilities

Butternut Floatable Control Facility

As a result of the plan for controlling Combined Sewer Overflow (CSO) discharges required by the Amended Consent Judgement, several new combined sewer overflow abatement facilities have been put into service within the last few years. At this time, Flow Control personnel maintain, operate, monitor, and prepare performance reports for the Erie Boulevard Storage System (EBSS), Butternut and Burnet Floatable Control Facilities (FCF's), Maltbie Street FCF, Harbor Brook FCF, Teall Brook FCF, and the Hiawatha Regional Treatment Facility (RTF). These facilities have been designed to provide for storage and/or treatment of CSO during wet weather events, benefitting Onondaga Lake and its major tributaries. A list of the aforementioned and their operational status, along with future CSO abatement facilities can be found in the Lake Improvement Section of this annual report.

Detailed below is a description of one of the new floatable control facilities for which the Flow Control Division has taken operational responsibility for during the summer of 2002.

J. Harbor Brook Floatable Control Facility

Erie Boulevard Storage System, Control Building

The Harbor Brook FCF is installed in Harbor Brook itself, allowing the capture of solids and floatables from the entire cross section of the stream. The FCF is a floating structure designed to rise in the water column as flows increase during wet-weather events.

The FCF consists of a stainless steel structure with foam filled pontoons on both sides. The stainless steel structure is covered with fiberglass reinforced plastic (FRP) grating encasing three netting sacks. The three in-line sacks have 0.5-inch spacing, and are attached to the structure via a net-cassette system. Ahead of the floating components is a fixed bar rack, designed to capture large debris.

Flow Control personnel are responsible for removing debris from the fixed bar rack and changing fully contaminated netting sacks. The Harbor Brook facility has experienced several storms since its installation in July 2002, however none of the rain events have met the design flow requirement of 150 cfs. This facility remains under performance period, and is monitored closely for floatables volume capture and netting sack failures.

K. Westside SSES

As with many municipalities throughout the country, OCDWEP is continually confronted with concerns of aging sewer system infrastructures. Excessive amounts of infiltration and inflow (I/I) and limitations in hydraulic capacity to meet demands of future community growth are two major problems commonly encountered. The Department recognizes that a critical component in properly addressing such concerns is comprehensive sewer system evaluations. The Sewer System Evaluation Survey performed in the mid-1970s for the entire Metro Service area identified sources of excessive I/I and recommendations were put forth to reduce extraneous flow. In response to the 1970's evaluation, the Department targeted the Westside Sewer Service Area, which includes the towns of Camillus, Geddes, and Onondaga as well as the villages of Camillus and Solvay, for a comprehensive evaluation.

The investigation included a preliminary sewer system survey, and I/I analysis, and a sanitary sewer system survey. The Final Report was received in March 2002, with a Draft Addendum submitted in April 2002. Final documents are to be circulated to all affected municipalities, subsequently the Department shall evaluate the recommendations for implementation.

L. Syracuse and Geddes Conveyances Improvements Project

As mentioned previously, the Flow Control Division of OCDWEP has enacted a maintenance program which includes, among other things, systematic and proactive measures designed to prevent major failures of critical sewer system components. Portions of four (4) combined trunk sewers within the City of Syracuse (the Fayette trunk, Genesee Trunk, Onondaga Trunk and Tompkins Trunk) and Haywood and Hillcrest Pump Stations were rehabilitated as part of this project and work was completed by December 2002.

M. Meadowbrook-Limestone POTW Service Area and Infiltration and Inflow Study

For reasons similar to those identified in the section describing the Westside SSES, the Division undertook an Infiltration and Inflow Study for the Meadowbrook-Limestone POTW. The study, completed in 2001 included the following services:

- An update of the plannimetric mapping of the Meadowbrook-Limestone service area,
- Identification of the existing flow capacities for all pump stations and major tributary sewers with the service area,
- An Infiltration and Inflow Analysis to identify excessive flows within the conveyance system, and quantifying the amount of Rainfall Induced Infiltration (RII).
- Additional flow monitoring was performed in the spring of 2002 to further identify excessive inflow and infiltration. The Division has since proceeded with the following additional work as part of the project:
    - Phase One Infiltration Source Investigations: Performed Manhole Inspections, Sewer Cleaning/Televising, and Smoke Testing. Field services completed fall 2002.

- Hydraulic Capacity Evaluation for the Meadowbrook-Limestone WWTP: Determined the maximum hydraulic treatment capacity of the WWTP relative to its ability to meet the State Pollutant Discharge Elimination System (SPDES) permit. Findings are compared to projected wet-weather WWTP influent flows to identify the feasibility of preventing future SPDES violations due to excessive wet-weather inflow and infiltration rehabilitation, and/or the need for off-line storage systems. A Final Technical Memorandum summarizing findings was received in November 2002.
- Aerobic Digester Storage Feasibility Evaluation – In accordance with results from the WWTP Hydraulic Evaluation, the feasibility of utilizing the former Meadowbrook-Limestone WWTP aerobic digester for off-line storage is to be identified. The evaluation was initiated in late November 2002. Following the completion of the Digester Feasibility Evaluation, findings and recommendations put forth in the aforementioned work items shall be compiled to formulate a thorough infiltration and inflow reduction plan.

N. Technical Support

The Technical Assistant is available to Division Management for a variety of routine, repetitive tasks plus specific assigned projects of a fiscal nature within the Division. In addition, the position provides support on other projects throughout the Department relating to budget analysis, sewer maintenance costs, utility rate and cost management, operational survey and cost reduction projects. A partial list of duties is as follows:

· Annually review categories and fees to towns and villages for contract services

· Prepare preliminary Flow and Flood Control Budgets

· Develop new fees as applicable

· Review monthly reports of Pump Station operation and maintenance costs and take action as necessary

· Review Stream Maintenance monthly reports and revise percentage allocations to Drainage Districts as needed on an annual basis

· Assist in managing Department utility rate program and taking action on other utility matters as requested by various Department staff

· Code and perform a cursory review of monthly utility bills, coordinate questions with the Fiscal section.

· Continue to plan and outline improvements to cost recording procedures for Sewer Maintenance Sections

· Develop detailed breakdown of annual expense budget by object and sub-object codes, to assist in improved management of Flow and Stream Maintenance available dollars

· Review Purchase Order Requests

· Assist in periodic review of annual expense and capital budgets

· Coordinate and develop Flow Control and Stream Maintenance section of Department Annual Report

· Assist Supervisors in equipment purchase requirements and paperwork flow, based on budget allocations

- Develop statistics and costs for inclusion in various wastewater surveys, to include operation and maintenance of Department facilities
- Provide such assistance to Division Management as required to relieve workload peaks and other special projects.

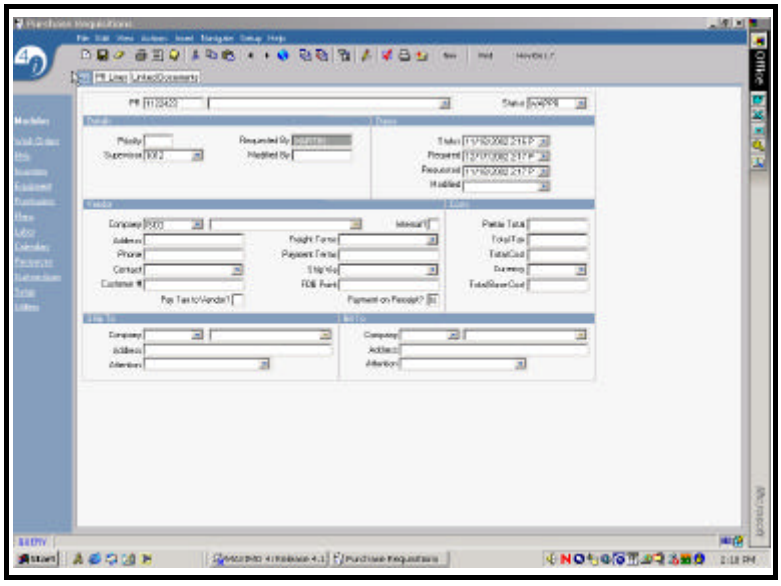
9.7 Storeroom - Ley Creek

The Flow Control storeroom is located at the Ley Creek facility on Seventh North Street. Its purpose is to satisfy the many requirements of the employees who work in Suburban North and South, Syracuse, Flood Control and Pump Stations.

Safety items, tools, maintenance and repair parts, as well as many seasonal items, are stocked. Issuing stock items can be a difficult task as the Pump Station crew alone has 121 stations to keep in operating condition. The Suburban Sewer Maintenance crews have two Dig Safely New York locators clearing nearly 19,000 calls per year and two House Call teams answering over 4,000 calls per year.

It has been a productive year in the Ley Creek Storeroom. Summer help was available and a full time assistant was transferred in July. Early in 2002, the data entry of over 3,000 items for use with the MAXIMO inventory system was accomplished. The MAXIMO system for issuing items from the storeroom was then implemented. In May, implementation of requisitions and purchase orders on MAXIMO took place.

The Datasplice system has been established for physical counts. Counting, weighing and sorting of approximately 145 assorted sizes of fasteners was accomplished. While doing this, a very useful order form for future labeling use was developed.



Apparently 1,200 items were reorganized for easier accessibility, also the reorganization of the inventory in Cage II, four cabinets and counter area was done. In addition, sorting and labeling approximately 700 items in the Ley Creek Tool Crib took place.

The following were updated: contract books and contract listings, vendor files, MSDS books, and archived documents. Also, new procedures such as "To Order" system, errand prioritizing, e-mail file, opening and closing parameters, and issuing guidelines were implemented.

While setting all of the above in motion, the stockroom staff still processed 198 orders in the amount of $354,840, instituted the use of the County credit card system for smaller orders and processed 50 orders in the amount of $5,100. Staff entered all orders into MAXIMO and into Buyspeed and maintained monthly and quarterly reporting.

Utilizing our summer help, a complete listing of items in the storeroom by "bin" number and alphabetically was accomplished. This list is a great help to the supervisors when trying to locate a certain item and it will be an invaluable tool when it is time for us to move in 2003.

All in all, the Ley Creek storeroom had a very productive year in 2002. In 2003, planning a move to new facilities will be a priority.