

WESTCHESTER JOINT WATER WORKS

Serving the Member Municipalities of the

VILLAGE OF MAMARONECK

TOWN OF MAMARONECK

TOWN/VILLAGE OF HARRISON

and portions of the

CITY OF NEW ROCHELLE

and the

CITY OF RYE

ANNUAL REPORT OF OPERATIONS - 2005

TRUSTEES

Valerie O'Keeffe Chairperson
Stephen Malfitano Vice-Chairperson
Philip Trifiletti Treasurer - Clerk

* * *

John G. Hock, P.E., Manager

Richard A. Ruge, General Superintendent

Paul J. Noto, Attorney



STORAGE ADDED TO SYSTEM

Storage tanks of the former Harrison Water District No. 1 became part of the merger which took place on January 1, 2005

Pictured above are the Park Lane Tanks, each of which is 80 feet high and 42 feet in diameter with a capacity of 829,000 gallons.

The Woodside Tank (right) holds 815,000 gallons and is 120 feet high and 34 feet in diameter.



WEATHER BENEFITS SALES

A hot summer extending through September with relatively low amounts of rainfall contributed to a significant increase in retail sales. Only 18.12 inches of rain fell on 38 days during the 6-months of April through September compared to 41.32 inches on 59 days in the comparable 2004 period. Sales in the Village of Mamaroneck, up 56 mg or 7.0% over 2004, were the highest since 2001. Sales in the Town of Mamaroneck were up 85 mg or 16.4% over 2004, the highest since 1999. Harrison sales were up substantially, but include sales to the former Harrison Water District No. 1, which was merged into the Water Works system effective January 1, 2005. Harrison sales, unadjusted for the merger, were 595 mg or 52.3% over 2004 levels.

Precipitation is measured at the Larchmont Plant on Weaver Street in the Town of Mamaroneck.

HARRISON WATER DISTRICT NO. 1 MERGED INTO THE WATER WORKS

Harrison Water District No. 1 (HWD) was a separate entity which served that portion of the Town/Village of Harrison sometimes known as West Harrison or Silver Lake since 1910. Geographically, this included the area west of I-684 and north of the Cross Westchester Expressway or I-287. The Town of Harrison concluded an analysis in 2004 that determined it would be in the best interest of customers of HWD for that district to be merged into Harrison's Water District No. 2, that part of Harrison that has been supplied by the Westchester Joint Water Works since 1927. After passing the necessary resolutions, HWD was abolished by the Town of Harrison effective December 31, 2004, and it was merged into the rest of the Harrison water system operated by the Water Works.

As of January 1, 2005, the Water Works officially commenced operation of the combined systems. Included in the transfer of physical plant to the Water Works were the following:

- Lake Street Pump Station - 3.3 mgd capacity (with no reserve)
- Booster Station at Lake Street - 2 pumps at 1,000 gpm capacity each
- Silver Lake Well - 0.40 mgd reported capacity (currently inactive)
- Woodside Tank - 815,000 gallon capacity
- Park Lane Tank* - 829,000 gallon capacity
- 32.64 miles of pipeline ranging in size from 2" to 16"
- 313 hydrants
- 1,866 customers

*A second 829,000 tank and a transfer booster station at the Park Lane Tank site was not yet accepted by the Water Works as of December 31, 2005 pending correction of certain deficiencies.

Along with the physical plant, four employees were transferred to the Water Works as described in the Personnel section of this report.

During 2005, the former HWD system continued to be operated as a separate entity taking its supply at the Lake Street connection to Rye Lake. The engineering firm of Dolph Rotfeld Engineering P.C. was engaged to design a 16-inch main that will connect the WJWW system to the former HWD system in 2006. As recommended by Hazen and Sawyer, that main will be used to deliver water from the WJWW Rye Lake Station, through its baffled Purchase Tanks and Upper High Service Booster Station across I-684 to the Park Lane Tanks and the former HWD distribution system.

In early 2005 the existing WJWW SCADA system was expanded to include reporting on flows, levels, pressures, continuous chlorine residual and turbidity at the active former HWD facilities.

CAPITAL IMPROVEMENTS - JOINT PROJECTS

VALVE REPLACEMENT PROGRAM

Gate valve No. 41 on Pleasant Ridge Road between Woodlands Road and Sterling Road was replaced with a 16-inch butterfly valve. Additionally, two new 16-inch butterfly valves were installed on Pleasant Ridge Road at Haviland Road (No. 3550) and at West Street (No. 3544), all in the Town of Harrison.

CAPITAL IMPROVEMENTS - LOCAL PROJECTS

WATER MAIN INSTALLATIONS

VILLAGE OF MAMARONECK

The existing main on Nelson Street between Warren Avenue and Travers Avenue, installed in 1977 and 1979, had experienced three failures in recent years. This main consisted of 382 feet of 6-inch PVC pipe and was replaced with a like amount of 6-inch ductile iron pipe.

The existing 6-inch cast iron main on Lawn Terrace was installed prior to 1928. This main also had a history of failures and was located off the road, making repairs difficult. This main consisted of 622 feet of pipe and was upgraded to 8-inch ductile iron pipe to provide better carrying capacity for fire protection.

In conjunction with the replacement of the Mamaroneck Avenue bridge over the Sheldrake River, Westchester County had its contractor replace a 75 foot portion of 10-inch cast iron pipe with the same amount of 10-inch ductile iron pipe.

TOWN OF MAMARONECK

The existing main on Normandy Drive was installed prior to 1928. It had experienced two costly failures in the past four years. The existing main consisted of 400 feet of 6-inch cast iron pipe and was upgraded to 8-inch ductile iron pipe to improve fire protection and to provide increased reliability of supply.

In conjunction with the development of a property at 1275 West Boston Post Road, a small amount of 2-inch, 4-inch, 6-inch and 8-inch pipe was installed. The 2-inch pipe was installed to eliminate an existing dead end serving just one customer.

TOWN OF HARRISON

The existing 6-inch main on Valley Ridge Road was installed in 1929. Flow tests performed in 2003 indicated that the available fire flow should be increased to improve fire protection to this area. The main from Pleasant Ridge Road to the intersection of Valley Place was replaced and upgraded with 410 feet of 8-inch ductile iron pipe. In conjunction with this project, a new hydrant was installed on this main.

A June 21, 2004 report on Harrison Water District No. 1 by Dolph Rotfeld Engineering, P.C. recommended a significant number of distribution system improvements, particularly the replacement of 4-inch pipe. Based on the recommendations set forth in that report, the Water Works undertook the first phase of a program to replace 4-inch cast iron mains. On Lakeview Avenue from Jefferson Street to Harrison Street 2,326 feet of new 12-inch ductile iron pipe replaced a like amount of 4-inch pipe, greatly improving the fire flows and reliability of service to the area.

The existing 8-inch cast iron main on Oakland Avenue from Halstead Avenue to Haviland Street was installed in 1929. Due to re-grading of the street over the years, this main was excessively deep. A Town of Harrison rehabilitation project on this street provided the opportunity to replace the main at a depth of 4 feet using 8-inch ductile iron pipe. The two (2) hydrants on the main were relocated to provide easier accessibility.

A major improvement project at the Harrison Municipal Complex at the Nike Access Road off Park Lane to provide a Highway Maintenance/Sanitation Building, Fire Training Center, Salt Dome and a complete improvement of the entire complex was begun in 2005 by the Town of Harrison. Phase 1 of the improvements included the installation of 212 feet of 10-inch ductile iron pipe and a fire hydrant relocated for easier accessibility.

New developments required the installation by developers of 219 feet of main on Bliss Farm Road; 1,004 feet of main on Brookview Lane; 2,921 feet of main on Forest Lake Drive; and 791 feet of main on Castle Brook Road. All of these mains consisted of 8-inch ductile iron pipe.

MAPS AND RECORDS

An additional 8 intersections were surveyed, plotted and drafted bringing the total surveyed and plotted to 1,787 out of a total of 1,965 in the system. None of the 178 intersections added to the system as a result of the HWD merger have been completed to date. Much of the Engineering Department's time was devoted to the assimilation of the HWD system into the Water Works during 2005.

LEAK SURVEY AND UNACCOUNTED FOR WATER

Heath Consultants was utilized to survey 145 miles of pipe, and 10 leaks were reported, confirmed and repaired. The loss of water from these leaks was estimated at 78 gallons per minute or over 112,000 gallons per day. The estimated annualized savings to the Water Works resulting from the repair of these leaks was over \$41,000.* Additional leaks were detected in-house using newly acquired data loggers and their associated computer, resulting in further savings.

Unaccounted for water for 2005 was 463 mg compared to 423 mg in 2004. See the graph of Unaccounted for Water by Year in the Appendix to this report. The water loss in the system decreased to 5,063 gpd per mile of pipe in 2005 from 5,307 gpd per mile in 2003.

CROSS CONNECTION CONTROL PROGRAM

Backflow prevention devices are in service on 711 premises, compared to 304 at the end of 2004. With minor exceptions, all such devices were tested in 2005.

Reduced Pressure Zone (RPZ) devices were in service on 400 premises. Double Check Valves were in service on 334 premises. Some customers have both types of devices, depending upon the hazard.

ELECTRONIC REMOTE METER CONVERSION PROGRAM

The conversion of meters from generator register to electronic register remote units, begun in 1995, continued actively in 2005 including the installation of radio-read MXU meters, throughout most of the system. However, in the Purchase section of the Town of Harrison, radio-equipped MXU meters were installed to expedite reading in this area of relatively long distances between accounts. The installation of radio-read meters is expected to be expanded in 2006.

*Based upon an average cost of water of \$1,004.96/mg, consisting of purchased water (including excess per capita charges), power and chemicals, and excluding all other cost components and overhead.

Of the 14,368 domestic, seasonal and Class A fire line meter-equipped customers, 14,075 or 98.0% are equipped with remote readers. Of these 8,125 are electronic readers and 5,950 are the older generator-register type. Included in the electronic readers are 6,080 Sensus electronic register meters, 1,696 Neptune ARB meters (all in the former HWD area) and 349 Sensus MXU radio-equipped meters. Electronic remote readers, including 245 of the radio-equipped meters, are in service at 1,503 of the 1,540 meters located in pits. See Table VII for further details on remote-equipped customers, broken down by district.

PERSONNEL

EDUCATION AND TRAINING

In 2005, Distribution Superintendent Donald DeFalco gave fourteen safety talks on various subjects dealing with construction and its hazards.

An Air Monitor class on the Operation of Thermo Gas Tech equipment was given by its representative Peter Pepe. Employees from the Service Department, Plant and Engineering Departments participated. This class was organized by George Belsito, Safety Coordinator.

A Perma Loss Control Evaluation was completed in August of 2005. This evaluation serves as one of the factors used in determining the discount earned by the Water Works on its Workers' Compensation benefits contribution. This evaluation assigns points to various elements of a loss control program. Again in 2005 the Water Works received a rating of 545 out of 630 points. Therefore, the Water Works achieved a full discount on its Workers Compensation contribution.

STAFFING CHANGES IN 2005

Four former employees of Harrison Water District No. 1 joined the Water Works on January 1, 2005 as part of the merger agreement. Matthew Girillo, Water Maintenance Worker Grade I, Kevin Magee, Water Maintenance Worker Grade II, and Frank Arcara, Laborer, joined the Distribution Department. Maria Schloat, Intermediate Typist, joined the office staff.

Foreman Ralph Faga retired on June 10 after completing over 26 years of service with the Water Works. Water Maintenance Worker Grade I Dan Roeder was promoted to fill Ralph's position on June 27. Because of the additional workload in the Distribution Department due to the addition of Harrison Water District No. 1, a second position of Motor Equipment Operator was created, and Dan Coppola was selected to fill that post on January 27.

The resignation of Natasha Sackey on February 22 necessitated the hiring of Intermediate Clerk Cathy Moore on July 6. The retirement of Arlene Pampel on July 30 resulted in the hiring of Doris Lechner as Intermediate Account Clerk-Typist on August 29.

An additional position of Water Service Worker was created and filled by promoting Taranson Thomas on September 26. Donald Sencen was hired on November 28 to fill the Meter Reader vacancy that occurred as a result of this promotion.

SERVICE AWARDS

Service awards were earned by the following employees in 2005:

Lionel Mariette	15 years
Terrence O'Neill	15 years

FINANCIAL STATEMENTS

The accounts of the Water Works were audited by the Bennett Kielson Storch DeSantis Division of O'Connor Davies Munns & Dobbins, LLP, Certified Public Accountants, and have been found in good order. The Appendix to this report includes a copy of the balance sheet and statement of income from their report.

ENGINEERING DEPARTMENT**George Belsito
Engineering Technician****MAIN INSTALLATIONS**

During 2005 a total of 10,271 feet of water main was installed in the system ranging in size from 2 to 12 inches in diameter. The following table summarizes the installations by municipality and pipe diameter. Table I in the Appendix provides the details of each installation. Table IV in the Appendix provides a summary of the total footage of pipe in the system.

<u>Municipality</u>	<u>Length in Feet</u>						<u>Total</u>
	<u>2"</u>	<u>4"</u>	<u>6"</u>	<u>8"</u>	<u>10"</u>	<u>12"</u>	
Village of Mamaroneck	-	-	394	610	75	-	1,079
Town of Mamaroneck	135	19	51	403	-	-	608
Town of Harrison	-	-	30	6,016	212	2,326	8,584
City of Rye	-	-	-	-	-	-	-
<u>City of New Rochelle</u>	-	-	-	-	-	-	-
Total	135	19	475	7,029	287	2,326	10,271

MAIN RETIREMENTS

A total of 4,882 feet of water main was retired during 2005. The following table summarizes the retirements by municipality. Table II in the Appendix provides the details of each retirement.

<u>Municipality</u>	<u>Length in Feet</u>					<u>Total</u>
	<u>4"</u>	<u>6"</u>	<u>8"</u>	<u>10"</u>	<u>12"</u>	
Village of Mamaroneck	-	992	-	69	-	1,061
Town of Mamaroneck	-	400	-	-	-	400
Town of Harrison	2,340	1,111	-	-	-	3,451
City of Rye	-	-	-	-	-	-
<u>City of New Rochelle</u>	-	-	-	-	-	-
Total	2,340	2,503	-	69	-	4,912

FIRE HYDRANTS

Six (6) public fire hydrants were added to the system in conjunction with the installation of water mains in the following developments: Bliss Farms, Brookview Estates, Forest Lake Drive and Castle Brook Lane, all in the Town of Harrison. Additionally, nine (9) hydrants were installed under authorizations which apply to relocations, improvements and new hydrants only. See Table III in the Appendix for further details.

PLANT DEPARTMENT

**Richard Ruge
General Superintendent**

PRODUCTION AND SALES

Total production or purchase of water increased by 21.8% or 943.9 million gallons and sales increased by 21.7% or 845.4 mg when compared to 2004. Unaccounted-for or non-revenue water increased by 40.9 mg, reflecting the increase in the size of the system due to the inclusion of the former HWD. Unaccounted-for water includes water used for municipal purposes, fire fighting, loss through leakage and breaks, unmetered sales, flushing and under-registration of meters. ⁽¹⁾

The following table shows the quantity of water produced by source and the quantity of water sold for both 2004 and 2005.

<u>Source of Supply</u>	<u>PRODUCTION, mg</u>	
	2005	2004
Shaft 22 Delaware Aqueduct	2,774.8	2,609.4
Rye Lake	1,994.5	1,713.6
Lake Street	497.4	-
Aquarion Water Company of NY	-	-
United Water New Rochelle	0.5	0.3
Total Production	5,267.2	4,323.3

	<u>SALES, mg</u>	
	2005	2004
Retail	3,342.2 ⁽²⁾	2,531.2
Wholesale	1,461.5	1,369.5
Total Sales	4,803.7 ⁽²⁾	3,900.7

Average daily production was 14.4 mg including wholesale sales, or 10.4 mg excluding wholesale sales. The maximum daily demand of 26.42 mg (including wholesale sales) occurred on Wednesday, August 3, 2005.

PRECIPITATION

A total of 53.14 inches of rain fell on 83 days in 2005 compared to 59.17 inches on 103 days in 2004.

(1) The Appendix includes a graph of unaccounted-for water for the years 1972 to 2005.

(2) The retail sales include the January 2006 quarterly sales in the former HWD area in order to provide for four quarters of sales in calendar year 2005. These billings were for 57.6 mg, resulting in the total 4,803.7 mg.

DISTRIBUTION DEPARTMENT**Donald DeFalco
Distribution Superintendent****Maintenance, Repairs and Replacements**

The following tabulation summarizes the major maintenance, repair and replacement projects performed by Distribution Department personnel in 2005 with comparison to 2004.

	<u>2005</u>	<u>2004</u>
Water Main Leaks and Breaks Repaired	41	33
Service Line Leaks and Breaks Repaired	63	81
Service Lines Replaced	31	31
Water Service Taps Made	60	34
Valves Inspected	291	214
Valves Repaired	12	8
Valves Replaced	11	7
Valve Boxes Raised or Repaired	49	25
Hydrants Inspected - Comprehensive	68	618
- Winter	1,045	694
Hydrants Flushed	18	1,471
Hydrants Replaced	53	17 ⁽¹⁾
Hydrants Painted	387	502 ⁽²⁾
Hydrants Repaired	99	79
Curb Boxes Raised or Repaired	59	35

(1) Excludes hydrants relocated or upgraded in lateral size from 4" to 6" and new installations.

(2) Includes 340 hydrants in the Town of Harrison and 47 other hydrants throughout the system.

CUSTOMER ACCOUNTS

**Peter Cooper
Office Manager**

In 2005 the net number of customer accounts increased by 1,929 consisting of 1,912 new domestic accounts, four (4) new seasonal accounts, seven (7) new fire services, one (1) new fire district customer and five (5) new private hydrants. These totals include the transfer of 1,866 customers from the former Harrison Water District No. 1.

Municipality	<u>CUSTOMER ACCOUNTS AS OF 12-31-05</u>					
	Domestic	Seasonal	Fire Service	Fire Hydrant ⁽¹⁾		Total
				Public	Private	
Village of Mamaroneck	4,338	59	147	1	9	4,554
Town of Mamaroneck	3,102	25	33	1	7	3,168
Town of Harrison	6,051	153	102	4	31	6,341
City of Rye	342	35	1	1	2	381
City of New Rochelle	71	0	0	0	0	71
Wholesale	9 ⁽²⁾	0	0	0	0	9
Total	13,913	272	283	7	49	14,524

(1) Public Hydrant customers consist of each municipality and fire district billed; each of these customers is billed for the actual number of public hydrants (ranging from 27 to 478) in the municipality or district. Harrison Fire District No. 1 with 274 hydrants was added as a customer in 2005. Each private hydrant is counted as a separate customer, even though more than one hydrant may be billed to the same customer name.

(2) Consists of two (2) United Water New Rochelle accounts, four (4) Village of Larchmont accounts and three (3) Aquarion Water Company of New York accounts.

SERVICE DEPARTMENT**Angela Pepe
Water Service Supervisor**

Field testing of large meters was done by Toomey Water Services, Moore and Kling, Inc. and Optimum Controls Corp. Acceptance tests of new meters, check-testing and special tests continued to be made in-house.

The number of remote reading meters installed totalled 1,007 compared to 725 in 2004. A total of 14,075 meters have been equipped with remote reading devices, of which 4,822 are Electronic Communications Registers (ECRs), 1,258 are TouchRead PitLids (TR/PLs), 1,696 are Automatic Read and Billing (ARBs) and 349 are radio-equipped Meter Transceiver units (MXUs).

A total of 711 customers have backflow preventers installed and in service. Of the devices in service on customers' premises 400 are RPZ's and 334 are DCV's.

<u>ACTIVITY</u>	<u>2005</u>	<u>2004</u>
Total Meters Set	1,089	837
Total Meters Removed	1,037	805
Seasonal Meters		
Set	1	10
Reassembled	223	232
Total Set and Assembled	224	242
Removed	3	3
Dismantled or turned off for season	221	239
Total Removed and Dismantled		242
	224	
Remote-Equipped Meter Installations		
New Customers	98	59
Conversions	909	666
Total Remote Installations	1,007	725
Meter Changes Made (Principal Reason Given*)		
Routine - Due to age	5	7
- Frozen	27	65

*Meters changed for reasons other than Conversion to ECR and TR/PL Remotes were also removed (if not previously removed); generator register meters were converted to ECR or MXU remotes.

SERVICE DEPARTMENT (continued)

<u>ACTIVITY</u>	2005	2006
Meter Changes Made, continued		
Defective - Stuck	14	21
- Noisy	9	3
- Leaking	5	16
- Otherwise Damaged	0	65
Change of Size	1	2
Request for Special Test	17	6
Conversion to Remote	909	66
<hr/>		
Total Changes Made	987	851
Meters Tested		
Westchester Joint Water Works ⁽¹⁾	223	215
 <u>Outside Contractors</u>		
Toomey Water Services	16	23
Moore and Kling, Inc. ⁽²⁾	4	4
Optimum Controls, Corp.	3	0
North American Testing	3	3
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Sub-Total, Outside Contractors	26	30
Total Tests	249	245
New Meters Purchased	559	1,436
Old Meters Scrapped	411	907
Year End Meter Inventory	471	980
Hydrant Use Permits Issued	16	14
Hydrants Called Out of Service	148	69
Sub-Total, Outside Contractors		

See Appendix, Table VI for the total number of meters in service by size, and Table VII for the number of remote-equipped meters in service as of year-end.

- (1) Of the 223 meters tested by the Westchester Joint Water Works in the shop, 136 were acceptance tests of new meters and 87 were special tests made at customers' and Manager's request.
- (2) Field testing of master meters owned by Westchester Joint Water Works and its wholesale customers.

APPENDIX

TABLE I
WATER MAIN INSTALLATION PROJECTS
2005

AUTH	MUNICIPALITY	LOCATION	LENGTH		TYPE
			Ft.	In.	
1213 (L)	Village of Mamaroneck	Mamaroneck Ave @ Sheldrake Bridge	75	10	DI
1217 (L)	Village of Mamaroneck	Lawn Terrace	610	8	DI
			12	6	DI
1218 (L)	Village of Mamaroneck	Nelson Street	382	6	DI
1219 (L)	Town of Mamaroneck	Normandy Drive	400	8	DI
1220 (L)	Town of Harrison	Valley Ridge Road	410	8	DI
1221 (D)	Town of Harrison	Bliss Farm Drive	219	8	DI
1223 (D)	Town of Harrison	Brookview Lane	1,004	8	DI
1228 (D)	Town of Harrison	Forest Lake Drive	2,921	8	DI
1233 (D)	Town of Harrison	Castle Brook Road	791	8	DI
1235 (L)	Town of Harrison	Lakeview Avenue	2,326	12	DI
			30	6	DI
1236 (L)	Town of Harrison	Oakland Avenue	671	8	DI
1237 (L)	Town of Harrison	Harrison Complex	212	10	DI
1240 (D)	Town of Mamaroneck	1275 W. Boston Post Road	3	8	CI
			51	6	CI
			19	4	DI
			135	2	Copper
TOTAL			10,271		

NOTES:

- (D) Developer Project
- (L) Local Project
- (J) Joint Project
- CI Cast Iron (this pipe was converted from a former service line)
- DI Class 52 Ductile Iron, Cement Lined

TABLE II
WATER MAIN RETIREMENT PROJECTS
2005

AUTH	MUNICIPALITY	LOCATION	LENGTH		TYPE
			Ft.	In.	PIPE
1213 (D)	Village of Mamaroneck	Mamaroneck Avenue	69	10	CI
1217 (L)	Village of Mamaroneck	Lawn Terrace	610	6	CI
1218 (L)	Village of Mamaroneck	Nelson Street	382	6	PVC
1219 (L)	Town of Mamaroneck	Normandy Road	400	6	CI
1220 (L)	Town of Harrison	Valley Ridge Road	440	6	CI
1235 (L)	Town of Harrison	Lakeview Avenue	2,340	4	CI
1236 (L)	Town of Harrison	Oakland Avenue	671	6	CI
Total Length Retired, All Sizes			4,912		

NOTES:

(L) - Local Project

(J) - Joint Project

(D) - Developer

CI - Cast Iron

PVC - Polyvinyl Chloride Plastic

TABLE III

FIRE HYDRANT INSTALLATIONS AND IMPROVEMENTS⁽¹⁾

2005

AUTH.	HYDRANT NO ⁽²⁾	FIRE DISTRICT	LOCATION	INSTALLATION
1218 (L)	1102		Nelson Street	American
1219 (L)	2194		Normandy Road	Mueller
1220 (L)	3342	2	Valley Ridge Road	American
1221 (D)	3333	2	Bliss Farms Road	American
1223 (D)	3537, 3538	4	Brook View Lane	Mueller, American
1228 (D)	5219	1	Forest Lake Drive	Mueller
1235 (L)	5110, 5013, 5014, 5015	1	Lakeview Avenue	Mueller
1236 (L)	3065, 3201	2	Oakland Avenue	Mueller
1237 (L)	5318	1	Harrison Municipal Complex	Mueller
1240 (D)	2285		W. Boston Post Road	American

NOTES:

- (D) Developer Projects
- (L) Local Projects
- (J) Joint Project

- (1) The above list includes those hydrants installed under authorizations which apply to relocations, improvements and new hydrants only. Hydrants replaced under routine maintenance procedures are not included.
- (2) The 1000 series hydrants are in the Village of Mamaroneck. The 2000 series hydrants are in the Town of Mamaroneck. The 3000 and 5000 series hydrants are in the Town of Harrison. The 4000 series hydrants are in the City of Rye. P- Hydrants are private hydrants.
- (3) Hydrants 2194, 5219, 5110, 5013, 5014, 5015, 3065, 3201 and 5318 were replacements of existing hydrants made in conjunction with system improvements.

TABLE IV
SUMMARY OF PIPE IN SERVICE

DIAMETER Inches	LENGTH Feet 12-31-04	FROM HWD NO. 1 ⁽¹⁾ 01-01-05	2005		LENGTH Feet 12-31-05
			INSTALLATIONS Feet	RETIREMENTS Feet	
1	1,273				1,273
1½	7,080				7,080
2	16,504	236	135		16,875
4	19,646	29,828	19	12,485 ⁽²⁾	37,008
6	525,102	28,042	475	2,503	551,116
8	240,494	77,001	7,029		324,524
10	55,728	9,487	287	69	65,433
12	114,860	19,493	2,326		136,679
14	1,016				1,016
16	90,930	8,261		200 ⁽³⁾	98,991
20	28,129				28,129
24	19,694				19,694
30	27,870				27,870
36	3,539				3,539
TOTAL	1,151,865	172,348	10,271	15,257	1,319,227
	or				Or 249.85
	218.16				Miles
	Miles				

- (1) Pipe added to the system from the former Harrison Water District No. 1 resulting from the merger that took place effective 01-01-05.
- (2) Of the 12,485 feet of 4-inch pipe listed, 10,145 is an adjustment of pipe erroneously overstated in prior years. This adjustment corrects that error.
- (3) The 200' of 16" pipe listed is an adjustment of an overstated amount of such pipe in the City of Rye.

TABLE V

SUMMARY OF HYDRANTS IN SERVICE

<u>Municipality</u>	<u>As Of 12-31-04</u>	<u>From 01-01-05 HWD No. 1</u>	<u>Additions</u>	<u>Removals</u>	<u>As Of 12-31-05</u>
Village of Mamaroneck	398	-	1	-	399
Town of Mamaroneck	341	-	1	-	342
Town of Harrison:					
Fire District 1	0	273	-	-	273
Fire District 2	476	-	2	-	478
Fire District 3	27	-	-	-	27
Fire District 4	235	39	2	-	276
North Castle	0	1	-	-	1
City of Rye	49	-	-	-	49
Private	44	5	-	-	49
Water Works Hydrants	8	-	-	-	8
Totals	1,578	318	6	0	1,902

TABLE VI
METERS IN SERVICE BY SIZE

AS OF 12-31-05*

<u>Size</u>	<u>Number</u>
5/8"	10,597
3/4"	2,081
1"	1,131
1½"	201
2"	200
3"	16
4"	15
6"	5
8"	4
10"	1
<hr style="width: 100%; border: 0.5px solid black;"/> TOTAL	14,251

* This table includes all Water Works-owned meters in service at the end of the year including 193 5/8" meters installed on bypasses around fire line detector check valves.

TABLE VII
REMOTE READER EQUIPPED CUSTOMERS

As of 12-31-05

District	Number Of Accounts*	Remotes In Service					Percent Accounts Remoted	
		ECR	TPL	ARB	MXU	R-2		Total
1	4,495	1,659	292	0	3	2,439	4,393	97.7
2	3,142	1,330	160	0	0	1,626	3,116	99.2
3	6,282	1,643	714	1,696	346	1,724	6,123	97.5
41	378	152	91	0	0	129	372	98.4
42	71	38	1	0	0	32	71	100.0
TOTAL	14,368	4,822	1,258	1,696	349	5,950	14,075	98.0

Of the 14,075 remoted accounts, 8,125 or 57.7% of the total are non-generator type registers, compared to 46.3% at the end of 2004. These include 4,822 electronic communication registers (ECR) on interior meter settings and 1,258 touch read pit lid (TPL) registers on pit settings, both Sensus or Invensys make. Of the 1,866 Harrison Water District No. 1 accounts transferred to the Water Works on January 1, 2005, 1,696 remain equipped with Neptune ARB type remote readers. The pilot program of installation of radio-equipped meters (MXU type) began in 2004, was continued in 2005 and 349 accounts are now so equipped. The remaining 5,950 accounts still have the generator-type Rockwell or Sensus (R-2) meters in service.

*Public and private hydrants, Class B fire lines and wholesale customers are excluded from the total number of accounts listed in this table. This column includes only domestic, seasonal and Class A fire line customers.