

Peekskill●



Peekskill
Wastewater Treatment Plant



Materials
Recovery Facility

2014 ANNUAL REPORT

Wastewater
Treatment

Ossining●

Solid Waste
Water Agency
Operations



Ossining
Wastewater Treatment Plant



Blau Brook
Wastewater Treatment Plant



Mamaroneck
Wastewater Treatment Plant

Port Chester●



Port Chester
Wastewater Treatment Plant

●Rye

●Mamaroneck

●Yonkers

●New Rochelle



Yonkers
Wastewater Treatment Plant



New Rochelle
Wastewater Treatment Plant

Westchester County Department of Environmental Facilities

2014 Annual Report

Water and Wastewater Operations Solid Waste Operations

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Anthony Della Valle	Director of Wastewater Treatment
Joseph Gibney, P.E.	Director of Wastewater Treatment
Michael J. Facelle, P.E.	Director of Maintenance
Jeffrey Bryant	Superintendent, Yonkers Joint WWTP
Nicholas Benevento	Superintendent, Mamaroneck WWTP
Alphonse Lepore	Superintendent, New Rochelle WWTP
Diane Barrowman	Superintendent, Ossining and Peekskill WWTP
Edmond Pellegrino	Superintendent, Blind Brook and Port Chester WWTP
Joseph LaBella	Superintendent of Maintenance
Russell Sorrentino	Superintendent of Maintenance
Michael Ferraro	Water Districts Superintendent
Mario Parise	Director of Solid Waste Operations
Marianne Petronella	Director of Resource Management

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INTRODUCTION

The County of Westchester's Department of Environmental Facilities is responsible for the operations of various facilities that deal with the environment. The Wastewater and Water divisions are responsible for the operation of seven wastewater treatment plants and their auxiliaries and two water districts. The Solid Waste Management division is responsible for the recycling and solid waste disposal programs for Westchester County.

The wastewater treatment plants are located in Yonkers, New Rochelle, Mamaroneck, Rye (Blind Brook Treatment Plant), Port Chester, Ossining and Peekskill. A map of the County sewer districts indicating the locations of these treatment facilities is on page 10. The water districts serve the cities of Yonkers, Mount Vernon and White Plains, the Village of Scarsdale and the Westchester County facilities at Grasslands.

The auxiliaries include forty-two pumping stations, two overflow retention facilities, twenty storm-flow regulating chambers, and about 194 miles of County-owned trunk sewers and force mains. They serve several municipal collection systems with locally maintained sewers and pumping stations.

On October 29-30, 2012 Superstorm Sandy moved through the area causing massive flooding due to an approximate 4 foot storm surge. Private homes, businesses and industries were effected, including several DEF facilities. The greatest damage due to flooding was at Yonkers Joint WWTP and North Yonkers, Alexander Street, Ludlow, Magnolia and Crotonville Pumping Stations. Due to widespread power outages from storm winds at least 20 pumping stations were on emergency generator power for up to 2 weeks.

As a result of the damages and need for emergency repairs the Board of Legislators approved 2-2012 Capital Budget Amendment's to fund the emergency work; SY043 for Yonkers Joint WWTP and SW005 for all other facilities. Although the facilities were for the most part back on line within days, and Yonkers Joint was meeting SPDES permit limits within 26 days, long term repairs are still underway. As a result of the storm, a 2013 Capital Budget Amendment for project SW006 funded Vulnerability Assessments at the 7 WWTP's and 31 of 42 wastewater pumping stations and 2 Overflow Retention Facilities (ORF). In 2014 work continued on Sandy recovery projects including two consultant design contracts at the Yonkers Joint WWTP, and design of the effluent building roof replacement at Mamaroneck WWTP.

Several new initiatives begun in 1999 and 2001 were continued in 2014 and are covered in the next section. Generally they include:

- Enhanced training
- Computerized Operation & Maintenance manuals
- Odor hotline and Odor reporting on the County Web site
- County-wide sewer rehabilitation program and Capacity Management Operations and Maintenance (CMOM) activities

- Computerized preventive maintenance has been upgraded from MP2 to Infor Datastream 7i system.
- Expansion of Safety Section and In-house Safety Training
- 5 year Capital Improvement Program.

Significant actions in 2014 were:

- Construction of the composite collection (Non-BNR) facilities at the New Rochelle Wastewater Treatment Plant began in 2010 and was substantially completed in 2014.
- Design of the BNR Facilities Upgrade at New Rochelle Wastewater Treatment Plant was completed in 2010 and submitted to NYSDEC on 12/21/10, fulfilling the County's Consent Order requirements. Notice to proceed with construction was given on July 1, 2011 with a completion date of June 30, 2014 as required by the 2008 Consent Order with NYSDEC. The Consent Order completion date was extended to July 30, 2014 and was timely met.
- Design to replace the Effluent Building roof at the Mamaroneck WWTP was kicked off with an anticipated completion at the end of 2013. The construction contract was awarded on December 4, 2014.
- Continued new sampling schedule for Croton Landfill and for Railroad I landfill.
- A Vulnerability Assessment of the departments 7 wastewater treatment plants and 31 of 42 wastewater pumping stations was kicked off in December 2013. The project will produce reports that identify various critical assets and estimate the possible extent of damage for each type of severe event and the cost of the proposed mitigation measures. Four consultants are preparing studies broken out as follows: Yonkers Joint; Mamaroneck and New Rochelle; Blind Brook, Ossining, Peekskill and Port Chester; Pumping Stations and ORF's. The final report for the pumping stations and ORF's was received on December 30, 2014. The other reports are expected in the second quarter of 2015.
- The Blind Brook Performance Maintenance III construction Notice to Proceed was given on 1/12/10 with project completion anticipated for 3/12/2011. The new anticipated completion date was 9/23/2012. Additional construction delays have further delayed the project and no completion date has been determined.
- Continued review of alternatives to provide UV treated water to County Water District No.1. During 2013 the USEPA and the USDOJ filed a lawsuit against the County for failure to provide water compliant with the Long Term Enhanced Surface Treatment Rule (LT2) for a significant portion of County Water District No. 1 (CWD #1). By the end of 2013, DEF on behalf of CWD#1 had settled on a permanent solution by deciding on two (2) UV facilities on City of White Plains pumping station sites. In 2014, design of these two sites proceeded with 60% plans received in January 2015.
- In reference to the status of the study of alternatives for a southern connection for CWD #1, the NYCDEP has offered CWD#1 another alternative source of water from in-city. During 2014, DEF continued to explore that alternative.
- Phase II construction bidding of the Yonkers HVAC was bid on December 19, 2014, with bids expected in the first quarter of 2015.

- Design for the replacement of the Emergency Generator at Yonkers Joint was completed 11/9/2011. Construction bids were received 2/8/2012. Construction Notice to Proceed was given 7/9/12 with construction completion anticipated 9/24/13. Delays in the approval of the new switchgear portion of the work resulted in a construction completion date of 11/1/14.
- Design of a NYPA sponsored ADG Engine Generator project was completed in 2010 and construction bids were received 6/3/11. Construction Notice to Proceed was given 7/26/12 with construction completion anticipated 11/7/13. Delays in the Emergency Generator project resulted in a new construction completion date of 11/1/14.
- Design for Upgrades to Highland Avenue Pump Station was completed in 2011, with construction programmed for 2012. Construction bids were received 6/5/13 and awarded 12/12/13 with Notice to Proceed to construction 3/3/14. Construction continued throughout 2014.
- A pilot project at Port Chester WWTP as outlined in the BNR Second Engineering Plan was designed in 2012 (5/25/12 to 1/24/13) and was bid for construction in 2013. Construction award date 4/11/13 and Notice to Proceed to construction 5/20/13 anticipated construction completion date 12/16/13. Construction delays due to unforeseen circumstances involving asbestos containing materials had extended the anticipated completion date. The RBC pilot operation began on August 27, 2014 and continued through the year.
- Design of RBC Replacement at Port Chester kicked off 5/25/12 with anticipated 100% design by 8/31/13. The consultant was then asked to divide the work into two phases and those contract documents were available in December, 2014.
- The Primary, Secondary, Heating and Chemical Upgrades at Mamaroneck WWTP kicked off 7/28/11 anticipated design completion 8/2/13. A delay due to energy reviews and owner reevaluation has resulted in a new anticipated 100% completion of 8/1/14. In July, 2014, 60% documents were received.
- The Alexander Street Pumping Station Influent Channel Repair project design was kicked off 5/20/11 and completed May 2012. Design for the second phase influent channel rehabilitation is nearing completion and construction funding was received in July 2013.
- Design of the upgrade of West Basin and Edgewater Point pumping stations began 2/14/13 with anticipated design completion 11/15/13. Design completion was delayed by Village residents concerns and meetings with residents. On August 11, 2014 100% documents were received. A submittal to WCDOH was made in late 2014.
- Design for CMOM work in Yonkers Sewer Districts kicked off 2/2/11 and continued through 2013. The 60% meeting occurred in June 2014.
- On August 22, 2013 the County entered a Consent Order with NYSDEC over the breaks that occurred on the Tarrytown force main in 2010 and 2012. The schedule of compliance required a schedule for design and construction of the force main replacement and pumping station upgrade. As a result the two designs were advanced on a parallel track. The first milestone in the approved schedule requires the final design documents to be delivered to NYSDEC for review and approval on 6/1/14. The first milestone was met on 5/27/14. On November 7,

2014 the project was advertised and bids were returned on January 14, 2015, meeting the second milestone. The project was awarded on February 12, 2015.



- Phase 2 design of the Yonkers Joint Cellular Bulkhead kicked off 3/19/12 and was completed 11/7/12. Construction Notice to Proceed was given 6/10/13. Construction proceeded through the summer and fall until the winter shutdown. Contractor remobilized in the Spring 2014 and continued working through the end of the year.
- Design for the upgrade of the Ludlow Street Pumping Station Piping and Forcemain Replacement kicked off 8/22/12 with an anticipated completion on 7/15/13. This station was flooded during Superstorm Sandy. The design was delayed by easement issues and the new design completion date is 6/30/14. Construction advertisement 7/25/14, bids returned 8/20/2014 and a Notice to Proceed was issued on 1/5/15.
- The Hutchinson Pumping Station design kickoff was 6/29/10 with actual design completion 4/8/13. Construction bid 5/8/13 with bids returned 6/12/13. Construction contract was awarded 9/26/13 with construction notice to proceed 12/23/13. Construction proceeded throughout the year.
- The Peekskill Mechanical Sludge Handling Upgrade project design was completed in October 2013 and advertised November 22, 2013 with the award on January 23, 2014 and Notice to proceed to construction on April 28, 2014. Construction proceeded throughout the year including a winter shut down.
- The Peekskill Secondary Process and Heating System Upgrade project will consist of two phases. The first phase is digester roof replacement and ancillary piping and equipment upgrades and phase two is the upgrade of the heating boilers and various aeration valve and piping. Phase I design began June 17, 2013 and 100% design documents were received on 12/23/14.

Environmental Management System

Management Review for the Westchester County Department of Environmental Facilities (DEF) Environmental Management System (EnvMS) was held on May 29, 2014 at the County Office Building in White Plains, New York. The purpose of Management Review is to ensure that Top Management (the Steering Committee) reviews and monitors the continuing suitability and effectiveness of the EnvMS and ensures progress towards continual improvement. The EnvMS is structured so as to conform to the ISO 14001 Environmental Management System Standard. At the time of Management Review, the scope of the EnvMS included those operations and activities occurring at the seven wastewater treatment plants. Those operations and activities of the New Rochelle department offices which are related to the treatment plants, solid waste, water and pretreatment are also included within the scope of the EnvMS. The review was performed in accordance with the EnvMS procedure for Management Review.

The 2014 EnvMS presentation is available in the electronic Operations and Maintenance (O&M) Manual.

The electronic Operations and Maintenance (O&M) Manual contains links to the EnvMS as well as the Preventive Maintenance System, Drawings, Standard Operating procedures

 Department of Environmental Facilities		
Headquarters O&M Manual		
<i>Solid Waste Division</i>	<i>Wastewater Division</i>	<i>Water Division</i>
Landfills O&M Manual <small>including: Sprout Brook, Croton Main, Ballfield, and Railroad 1</small>	WWTP O&M Manuals Blind Brook Mamaroneck New Rochelle Ossining Port Chester Peekskill Yonkers	Water District O&M Manual
Operations O&M Manual <small>including: Transfer Stations (White Plains, Yonkers, Mt. Vernon), MRF, H-MRF, Northern Tier Collection Site and Recycling</small>		
Recycling Office O&M Manual		
 <small>Certified to ISO 14001</small>	Pump Station O&M Manuals Hutchinson North Yonkers Tarrytown	Other EnvMS Links DEF Chemical File Prices/Contracts DEF EnvMS for County Departments DEF EnvMS for Contractors, Vendors & Consultants DEF Service Contracts
	Outside Maintenance O&M Manual <small>including: Rye Garage, Yorktown Garage, Welding Shop, Machine Shop, Hawthorne Manhole</small>	Emergency Contacts ISO 14001:2004 Standard
	Pretreatment O&M Manual	<small>First Environment, Inc.</small>

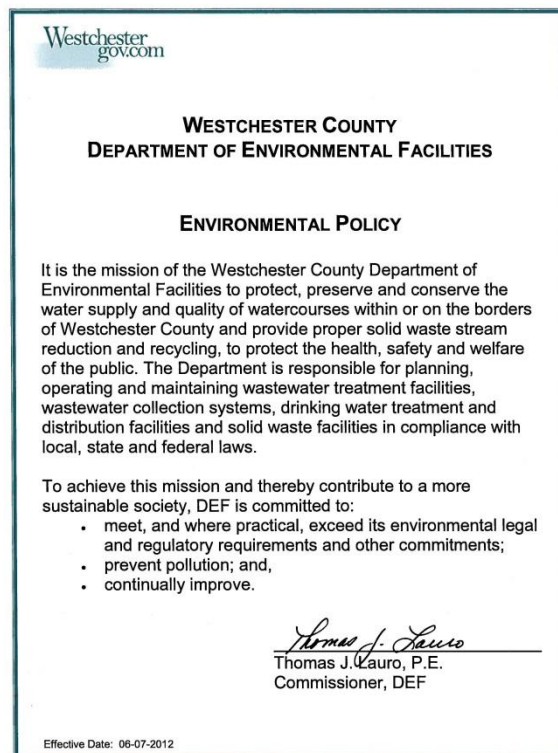
and Operational Guidelines. The links are updated as new information and electronic equipment manuals become available. The Datastream 7i Computerized Maintenance Management System is used for mechanical as well as environmental work orders.

In 2011 the EnvMS was implemented in all the DEF Divisions with the certification effective on December 5, 2011 through December 4, 2014. 2013 Compliance audits were

scheduled and completed at Peekskill WWTP, Ossining WWTP, North Yonkers Pumping Station and Outside Maintenance.

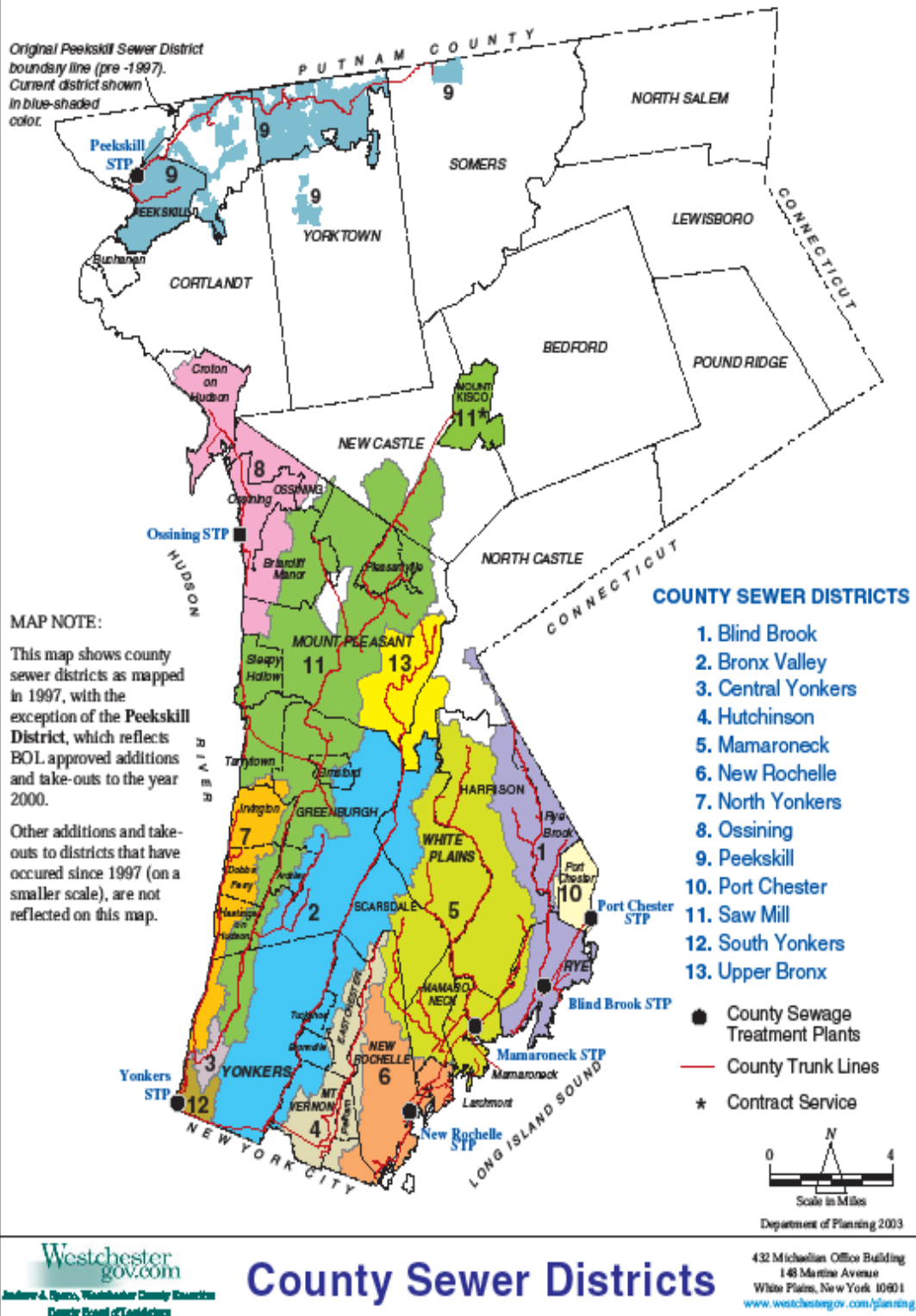
EnvMS Objectives for 2014 included:

- Increased surveillance by the Pretreatment Group at the County Airport and at Refined Sugars in Yonkers
- New control equipment at Kensico Dam for County Water District #1
- Optimization of sludge cake at Yonkers Joint WWTP
- Peekskill demand sharing



The Department is committed to the EnvMS and its goal of continual improvement.

WESTCHESTER COUNTY, NEW YORK



WASTEWATER DIVISION

The seven wastewater treatment plants generally operated well in 2014. The total flow treated by all seven plants averaged 127.4 MGD or a total of 46.5 billion gallons, which is a 7.1% decrease from 2013. Our overall efficiency was 94% for suspended solids and 95% for carbonaceous biochemical oxygen demand. Our average cost of operation was \$2.59 per 1000 gallons of sewage treated.

The Department initiated a number of programs during the year which should enhance our long term performance:

1. In 2011 DEF and WCDOH developed a Notification System for municipalities in the event of wastewater releases or bypasses. The system consists of three levels of notification from minor to major and a notification process and distribution for each. In 2012 the departments cooperated in this program, and began meeting in order to comply with the anticipated Sewage Pollution Right to Know Law. On May 1, 2013 the Sewage Pollution Right to Know Law went into effect. The IT Department provided an electronic form that notifies the regulatory community by email and simultaneously posts the required information on the County website which makes the department compliant with the notification requirements of the law.
2. An odor Complaint Hotline continued in 2014 to enable residents near the County's Treatment Plants to report odor complaints. Callers may dial (914) 231-2786 and will be instructed to press a certain number on their telephone keypad to reach the plant in their area. Phone calls will be returned during regular business hours. Odor complaints may also be sent in over the internet via e-mail and through the County's website. In 2014, there were a total of 15 odor complaints filed against Yonkers Joint.
3. Black & Veatch in 2001 performed an audit and evaluation of the department's safety program to assure compliance with regulations and improve the work environment. In 2014 the department continued to implement Black & Veatch's recommendations. All DEF field personnel receive OSHA required and other safety training including the 5 day Initial HazWoper and Confined Space course and annual 1 day refreshers. In 2012 Workplace Violence Prevention Training was added to the annual training requirement.
4. The department as part of its meetings with the Ludlow Park Citizens Advisory Committee developed an automated notification system for the neighborhood. If there is an event at the Yonkers Joint WWTP that could impact the neighborhood (i.e. odors, noise, construction, etc.) automated phone calls would be sent out to pre-subscribed households to describe the event. This procedure was continued in 2014.

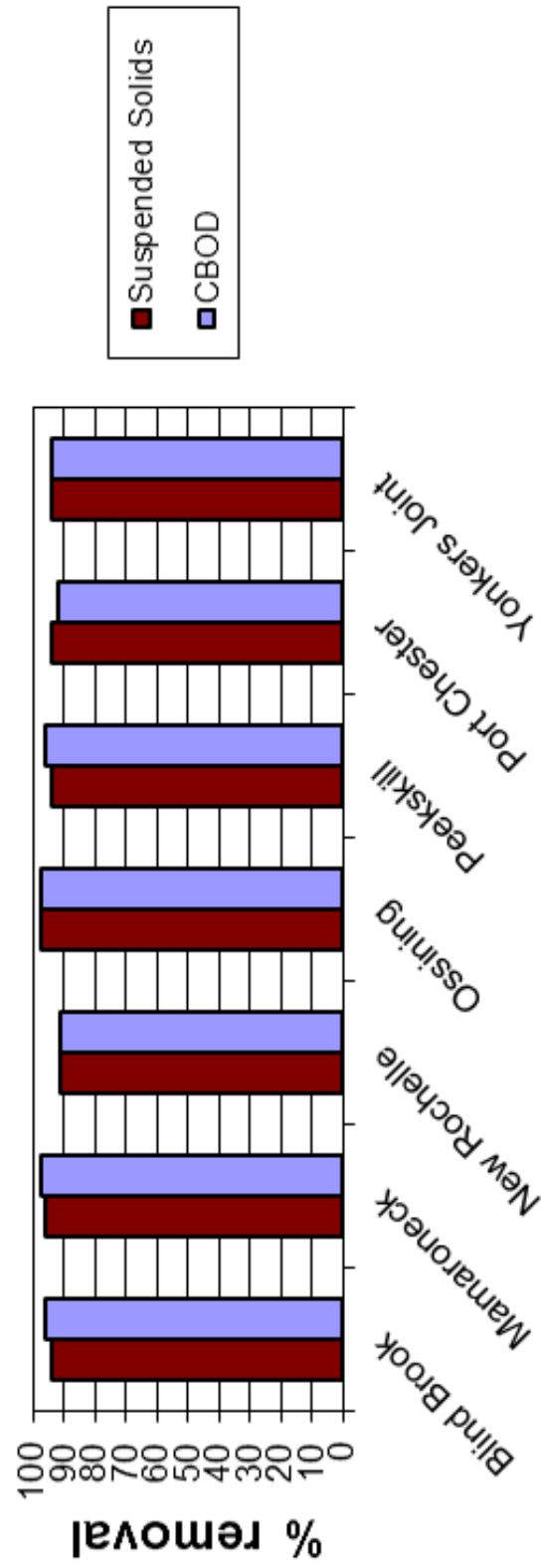
5. During 2007 a Comprehensive Odor Study Update to the 1991 Odor study was conducted at the Yonkers Joint WWTP. In 2008, a report was issued identifying the next steps to reduce odors at Yonkers Joint WWTP. Design commenced on Phase I in 2009 and Notice to Proceed with construction of Phase I was issued 1/9/2012. Construction continued throughout 2013 and is anticipated to be completed in 2014 and construction of Phase II is anticipated in 2014.

During 2014 the four treatment plants on Long Island Sound met the effluent nitrogen loading limit of 4,429 pounds per day, which represented the first reset of the limit from the interim limit of 5,085 pounds per day imposed in the 2008 Consent Order. The 2014 level was 2,876 pounds per day reflecting the startup and operation of the IFAS tanks at Mamaroneck WWTP as well as the continued operation of the MLE process at Blind Brook WWTP. Reduced nitrogen in the discharges helps reduce oxygen demand in the Sound by eliminating nutrients and minimizing hypoxia.

The number of authorized employees in the wastewater division Operations and Maintenance at 2014 year end totaled 255. This included 187 employees working in the seven plants, and 68 employees in pumping stations and collection systems.

Plant Efficiencies

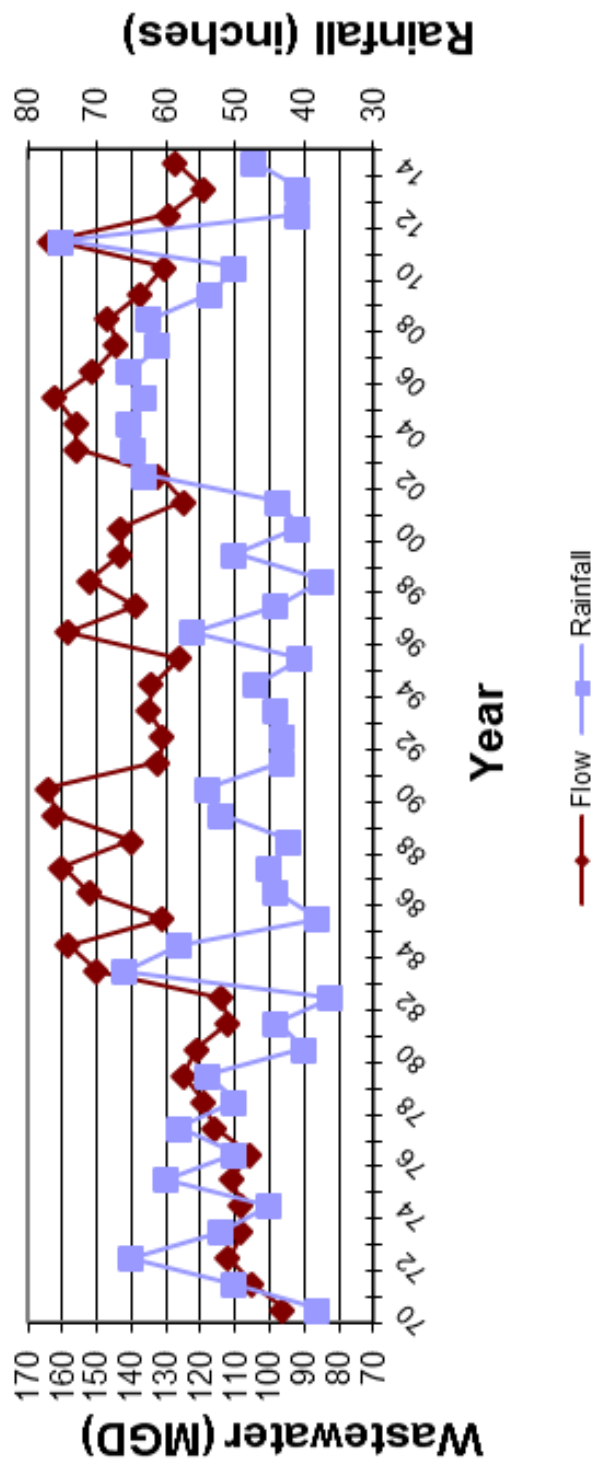
2014



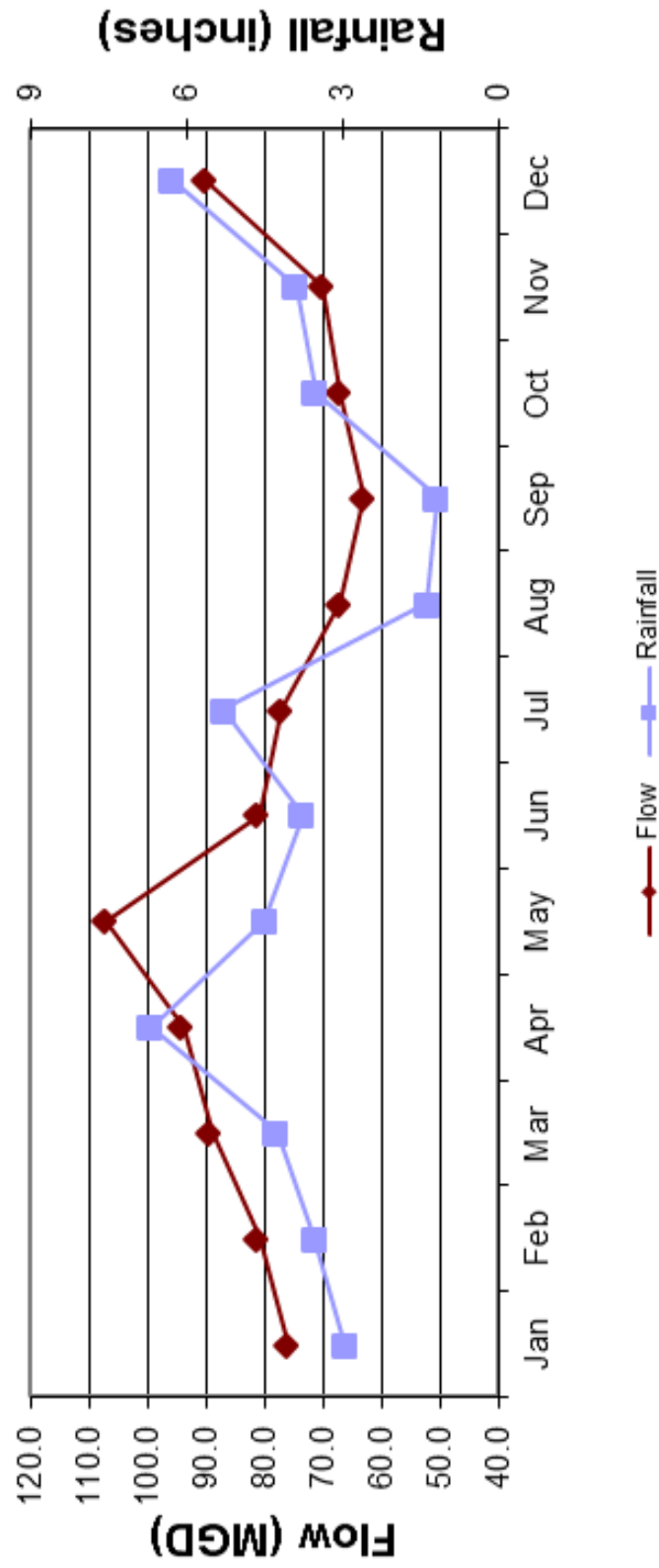
Average Flow and Precipitation									2014
Month	Blind Brook	Mamaroneck	New Rochelle	Ossining	Peekskill	Port Chester	Yonkers Joint	2013 Rainfall	2014 Rainfall
	MGD	MGD	MGD	MGD	MGD	MGD	MGD	inches	inches
January	3.2	14.6	14.1	4.5	6.7	4.2	76	2.45	2.95
February	3.4	15.5	15.1	4.7	6.3	4.5	81	2.50	3.54
March	3.8	18.3	16.0	5.4	7.7	5.0	89	3.13	4.28
April	4.0	19.0	16.5	5.3	7.8	5.3	94	1.52	6.70
May	4.2	20.4	18.1	5.8	8.4	5.6	107	5.55	4.49
June	2.9	13.7	13.8	4.4	6.7	4.5	81	9.33	3.77
July	2.4	12.1	13.1	4.5	6.7	4.0	77	2.82	5.30
August	2.1	10.5	10.8	3.7	5.9	3.7	67	2.81	1.36
September	2.0	9.8	10.4	3.6	5.8	3.5	63	2.60	1.18
October	2.2	10.7	11.4	3.6	5.8	3.7	67	0.45	3.52
November	2.4	11.8	12.0	3.7	5.8	3.9	70	4.11	3.89
December	3.7	19.2	16.3	4.5	7.1	5.3	90	3.60	6.27
Average	3.0	14.6	14.0	4.5	6.7	4.4	80	3.41	3.94
Maximum	4.2	20.4	18.1	5.8	8.4	5.6	107	9.33	6.70
Minimum	2.0	9.8	10.4	3.6	5.8	3.5	63	0.45	1.18
Permitted flow	5.0	20.6	19.2	7.0	10.0	6.0	120		
							TOTAL	40.87	47.25

Flow vs. Rainfall

All Plants



Yonkers Joint vs. Rainfall 2014



BLIND BROOK TREATMENT PLANT

TREATMENT PROCESS:	Screenings, grit removal, primary sedimentation, activated sludge process, final clarification, sodium hypochlorite disinfection. Blind Brook sludge is pumped to Port Chester for processing.
COUNTY TRUNK SEWERS:	23 miles
SITING ACRES:	3
MUNICIPALITIES SERVED:	City of Rye; Towns of Rye, Harrison, and North Castle; Westchester County Airport; State University of New York at Purchase.
TRIBUTARY POPULATION:	27,296
EMPLOYEES:	13
2014 EXPENDITURES:	\$9,068,520

<u>YEAR BUILT</u>	<u>CAPITAL COST</u>
1962 - Primary Treatment	\$ 1,500,000
1985 - Secondary Treatment	\$ 13,200,000

<u>FLOW CAPACITIES</u>	
2014 ACTUAL FLOW:	3.0 MGD
DESIGN FLOW:	5.0 MGD
HYDRAULIC CAPACITY:	15.0 MGD
PERMITTED FLOW:	5.0 MGD

<u>PUMPING STATIONS</u>	<u>DESIGN CAPACITY</u>	<u>ACTUAL FLOW</u>
Playland	4.32 MGD	0.361 MGD

BLIND BROOK 2014 HIGHLIGHTS:

- Performance Maintenance III upgrade project (Bar Screen) still on-going.
- Sludge Concentration tank and piping redesigned for emergency trucking of sludge in case of Force main failure.
- Internal inspection of Force main to Port Chester performed by Pure technologies and in house staff.
- Began vulnerability study.



Blind Brook Wastewater Treatment Plant

Month	Flow MGD	Suspended Solids			Carbonaceous Biochemical Oxygen Demand			Sludge to Port Chester	
		Influent mg/l	Effluent mg/l	Efficiency % removal	Influent mg/l	Effluent mg/l	Efficiency % removal	Gallons/ Day	Dry Tons
January	3.2	88	9	90	92	4	96	164,811	58
February	3.4	90	5	94	107	3	97	167,817	45
March	3.8	74	7	91	85	9	89	170,042	56
April	4.0	70	3	96	86	3	97	161,722	53
May	4.2	79	5	94	78	3	96	185,634	62
June	2.9	112	4	96	129	3	98	192,867	67
July	2.4	104	5	95	118	3	97	179,566	51
August	2.1	123	5	96	103	2	98	165,313	44
September	2.0	138	4	97	126	2	98	181,915	61
October	2.2	111	4	96	106	3	97	171,383	54
November	2.4	125	5	96	187	3	98	160,066	53
December	3.7	75	8	89	91	6	93	148,606	58
Average	3.0	99	5	94	109	4	96	170,812	55

Blind Brook Annual Performance Report 2014

Month	Sodium Hypochlorite	Fuel Oil	Water	Electric Usage	Screenings	Grit
	gallons	gallons	gallons	kWh	cubic feet	cubic feet
January	2,123	2,816	1,378,213	363,800	62	42
February	1,828	2,555	1,114,583	324,400	56	14
March	2,156	2,606	1,115,312	350,000	62	14
April	1,980	756	849,029	341,600	60	35
May	2,206	53	973,913	365,600	62	35
June	2,503	--	1,125,128	369,200	60	42
July	2,712	35	1,181,603	383,200	62	21
August	2,141	27	1,077,959	371,000	61	21
September	1,818	31	1,086,079	365,600	60	28
October	1,873	151	1,156,185	381,600	62	28
November	2,460	1,767	1,220,697	383,400	61	28
December	2,520	2,132	1,263,286	393,800	62	28
Total	26,320	12,929	13,541,987	4,393,200	730	336
Average	2,193	1,175	1,128,499	366,100	61	28
Daily Average	72	35	37,101	12,036	2	1

MAMARONECK TREATMENT PLANT

TREATMENT PROCESS:	Screening, Grit Removal, Primary Sedimentation, Activated Sludge, Final Clarification and Sodium Hypochlorite Disinfection. Sludge pumped to New Rochelle for processing.
COUNTY TRUNK SEWERS:	39 miles
SITING ACRES:	4
MUNICIPALITIES SERVED:	Cities of New Rochelle, Rye, and White Plains; Towns of Harrison, Mamaroneck, North Castle, Rye, and Scarsdale; Villages of Larchmont and Mamaroneck.
TRIBUTARY POPULATION:	90,884
EMPLOYEES:	18
2014 EXPENDITURES:	\$18,931,943

<u>YEAR BUILT</u>	<u>CAPITAL COST</u>
1929 - Original Screen Plant	\$ 700,000
1965 - Primary Treatment	\$ 3,800,000
1989 - Secondary Treatment	\$ 100,000,000

FLOW CAPACITIES

2014 ACTUAL FLOW:	14.6 MGD
DESIGN FLOW:	20.6 MGD/ 23.2 MGD*
HYDRAULIC CAPACITY:	90.0 MGD
PERMITTED FLOW:	20.6 MGD/23.2 MGD*

* Design flow was increased when the BNR upgrade was substantially completed

<u>PUMPING STATIONS</u>	<u>DESIGN CAPACITY</u>	<u>ACTUAL FLOW</u>
Beaver Brook	0.058 MGD	0.005 MGD
Cove Road	0.58 MGD	0.082 MGD
East Basin	2.88 MGD	0.297 MGD
Edgewater Point	1.73 MGD	0.108 MGD
Fenimore Road	1.87 MGD	0.189 MGD
Saxon Woods	0.52 MGD	0.060 MGD
Weaver Street	4.32 MGD	0.433 MGD
West Basin	5.80 MGD	0.689 MGD

MAMARONECK 2014 HIGHLIGHTS:

- Plant maintenance staff completed installation of 1" spacing on southeast bar screen 3.
- Plant maintenance staff completed installation of new cross collector chain and sprockets, new flights and shoes. This project will continue until all four primary tanks are complete.
- Twelve (12) plant tours were given to local schools and environmental organizations.
- All work on BNR project was completed and process is performing well.



Mamaroneck Wastewater Treatment Plant

Mamaroneck		Annual Performance Report							2014	
Month	Flow	Suspended Solids			Carbonaceous Biochemical Oxygen Demand			Sludge to New Rochelle		
		Influent mg/l	Effluent mg/l	Efficiency % removal	Influent mg/l	Effluent mg/l	Efficiency % removal	Gallons	Dry Tons	
	MGD									
January	14.6	85	3	96	91	3	97	22,227,800	213	
February	15.5	77	3	96	82	3	96	18,867,100	172	
March	18.3	91	4	96	85	3	96	22,494,300	208	
April	19.0	90	5	94	85	3	96	21,362,400	236	
May	20.4	86	4	95	67	3	96	22,573,700	211	
June	13.7	118	3	97	111	2	98	22,617,400	234	
July	12.1	129	3	98	119	2	98	20,478,000	231	
August	10.5	154	5	97	115	3	97	21,759,100	245	
September	9.8	167	3	98	123	2	98	22,259,500	244	
October	10.7	138	5	96	105	2	98	22,408,100	250	
November	11.8	128	8	94	126	4	97	18,373,500	204	
December	19.2	90	10	89	90	7	92	20,528,300	256	
Average	14.6	113	5	96	100	3	97	21,329,100	225	

Mamaroneck		Annual Performance Report				2014
Month	Sodium Hypochlorite	Fuel Oil	Water	Methanol, 25%	Electric Usage	Screenings
	gallons	gallons	cubic feet	gallons	kWh	cubic feet
January	9,623	--	247,500	72,801	758,400	1,215
February	6,886	22,316	252,600	61,902	710,400	1,134
March	8,504	--	269,400	60,648	792,000	972
April	9,724	--	278,500	55,207	753,600	1,053
May	9,628	--	240,600	52,940	720,000	945
June	6,499	--	334,200	54,943	624,000	1,107
July	7,439	--	373,700	61,787	657,600	1,188
August	10,181	--	428,700	69,916	667,200	756
September	8,792	--	391,700	58,690	662,400	945
October	10,955	--	437,600	86,711	686,400	1,026
November	9,705	--	319,100	76,324	710,400	459
December	13,372	16,036	333,700	92,265	854,400	1,242
Total	111,308	38,352	3,907,300	804,134	8,596,800	12,042
Average	9,276	19,176	325,608	67,011	716,400	1,004
Daily Average	305	105	10,705	2,203	23,553	33

NEW ROCHELLE TREATMENT PLANT

TREATMENT PROCESS: Screening, Primary Sedimentation, Pure Oxygen Activated Sludge, Final Clarification, Sodium Hypochlorite Disinfection, Gravity Thickening, Belt press dewatering, and sludge disposed for beneficial use by private hauler.

COUNTY TRUNK SEWERS: 10 miles

SITING ACRES: 14

MUNICIPALITIES SERVED: City of New Rochelle; Town of Mamaroneck; Villages of Larchmont and Pelham Manor.

TRIBUTARY POPULATION: 65,364

EMPLOYEES: 35

2014 EXPENDITURES: \$22,750,625

YEAR BUILT

1956 - Primary Treatment

1982 - Secondary Treatment

CAPITAL COST

\$ 4,100,000

\$ 18,000,000

FLOW CAPACITIES

2014 ACTUAL FLOW: 14.0 MGD

DESIGN FLOW: 13.6 MGD

HYDRAULIC CAPACITY: 54.0 MGD

PERMITTED FLOW: 13.6 MGD SPDES Permit, 19.2 MGD NYSDEC Consent Order

PUMPING STATIONS

Beach Avenue
Circle/Park Avenue
Fifth Avenue
Flint Avenue
Glen Island Administration
Glen Island Casino
Magnolia Avenue
Sutton Manor
Woodbine Avenue

DESIGN CAPACITY

0.72 MGD
1.31 MGD
4.90 MGD
5.80 MGD
0.70 MGD
0.25 MGD
1.44 MGD
0.52 MGD
1.44 MGD

ACTUAL FLOW

0.182 MGD
0.108 MGD
0.239 MGD
1.639 MGD
0.139 MGD
0.045 MGD
0.029 MGD
0.036 MGD
0.092 MGD

NEW ROCHELLE 2014 HIGHLIGHTS:

PHASE I (Non-BNR)

Primary Settling Tanks:

- Primary Settling Tank Nos. 1, 2, 3 and 4 were completely rehabilitated with all components replaced. All are operational.

Final Settling Tanks:

- Final Settling Tank Nos. 1, 2, 3 and 4 were completely rehabilitated with all components replaced. All are operational.
- New sluice gates were installed at the mixed liquor channel for flow control to the four Final Settling Tanks.

Control Building:

- Primary Sludge Pump Nos. 1, 2, 3, 5, 6 and 7 and piping and appurtenances were replaced.
- Primary drain pump No.4 and piping and appurtenances was replaced.
- Installed new service water (SW) skid and associated pumps, piping and controls in the Control Building basement.
- Installed new service water (SW) piping throughout the plant.

East Sludge Pump Station:

- Bypass pumping was set up and demolition performed at the East Sludge Pump Station. Two (2) RAS and two (2) WAS pumps and associated piping systems were replaced.
- Installed new sluice gates in the RAS / WAS splitter boxes for the East and West Sludge Pump Stations.
- Installed HVAC equipment, piping, ductwork and associated appurtenances.

West Sludge Pump Station:

- Installed new sluice gates in the RAS / WAS splitter boxes for the East and West Sludge Pump Stations.

Thickener Building:

- Installed the four new sludge recirculation pumps in the Thickener Building basement.
- Installed four (4) new belt filter press feed pumps in the Thickener Building basement.
- Installed new sludge suction and discharge piping in Sludge Storage Tank No. 1.
- Installed new Thickened Sludge piping, Combined Sludge piping, Fill & Overflow piping, etc., as well as new Effluent Water piping and Plant Service Water piping in various locations throughout the Thickener Building basement area, Tunnel area and Sludge Processing building.
- Installed HVAC equipment, piping, ductwork and associated appurtenances.
- Major electrical work includes: installation of VFD's for GBT and BFP pumps.

Sludge Processing Building:

- Installed four (4) new effluent water pumps in the Old Sludge Processing Building basement, with associated piping and appurtenances.
- Installed new effluent flushing water (EFW) piping throughout the plant.
- Installed two (2) new 3300 gallon polymer storage tanks and associated dosing / pumping skid in the Sludge Processing Building basement.
- Installed two (2) new 1000 gal. polymer aging tanks and associated BFP and GBT dosing / pumping skids in the Sludge Processing Building basement.
- Installed three (3) thickened sludge pumps and associated piping and appurtenances in the Sludge Processing Building basement.
- Installed four (4) new dewatered sludge bins and screw drives on the second floor of the Sludge Processing Building.
- Installed the three (3) Putzmeister DSL pumps and associated hydraulic units and control panels on the second floor of the Sludge Processing Building.
- Installed HVAC equipment, roof top units, piping, ductwork and associated appurtenances.
- Major electrical work includes; new 13.2 kVA Switchgear, new MCC-SP-1 and MCC-SP-3. Installed 125 VDC battery racks and DC distribution panels for the battery back-up system, installed LCP's for Belt Filter presses, and started-up and tested three standby diesel generators.

Sludge Process System is in service.

Oxygenation Tanks / Building:

- Set up four (4) new oxygenation mixers and monitoring instrumentation on new Oxygenation Tank No. 3.
- Major electrical work includes: set MCC-OB, set 480 V SWGR-OB. LCP panels and VFD's for oxygenation mixers.

Oxygenation System is in service.

Headworks:

- Performed demolition of the existing influent pumps and screening equipment.
- Installed five (5) new influent pumps, motors and associated piping and appurtenances.
- Installed three (3) new grit screening units and associated piping and appurtenances.
- Installed two (2) grit screw conveyors, drives and air diffusers in the Headworks grit tank.
- Installed two (2) grit classifiers and distribution screws in the Grit Loading Bay of the Headworks building.
- Installed HVAC equipment,
- Bar Screens, Rag Compactors and Grit System are in service.

Biofilters:

- Formed and poured concrete for three (3) Biofilter units.
- Biofilter is in service.

Wet Scrubber:

- Two (2) Wet Scrubber FRP vessels and three (3) blowers were delivered to the site. All of the foundation work was completed. Wet Scrubber is in service.

PHASE II (BNR)

Methanol System is in service.

Process Control Building:

- Reinforced Concrete slabs, walls, floors, columns and decks were formed and poured for the various levels of the Process Control Building.
 - Installed HVAC equipment, piping, ductwork and associated appurtenances.
 - Installed waste, drain and vent piping for the bathroom facilities.
 - Installed lighting and receptacles and main power feeds.
- Process Control Building is waiting for furniture and is complete.

BNR Facility:

- Reinforced Concrete slabs, walls, floors, columns and decks were formed and poured for the various levels of the BNR Facility.
- Installed lower air grid piping and upper and lower backwash piping in the N galleries.
- Installed upper and lower air grid piping and backwash piping in the DN galleries.
- Installed sluice gates in the N and DN backwash tanks.
- Nozzle slabs were installed at the N and DN facilities.
- HVAC ductwork was installed throughout the BNR facility.
- Lighting and receptacles were installed, delivered switchgear "NR" and set transformer.

BNR is in service.

Sodium Hydroxide Building:

- Reinforced Concrete slabs, walls, floors, columns and decks were formed and poured for the various levels of the Sodium Hydroxide Building.
- Sodium Hydroxide Building is in service.

UV Facility:

- Reinforced Concrete slabs, walls, floors, columns and decks were formed and poured for the various levels of the UV Facility.
- UV is in service.

Intermediate Pump Station is in service.



New Rochelle Wastewater Treatment Plant

New Rochelle			Annual Performance Report						2014
Month	Flow	Suspended Solids			Carbonaceous Biochemical Oxygen Demand			Sludge Removed	
	MGD	Influent	Effluent	Efficiency	Influent	Effluent	Efficiency	dry tons	% solids
		mg/l	mg/l	% removal	mg/l	mg/l	% removal		
January	14.1	94	9	90	130	10	92	441	18.6
February	15.1	80	14	83	110	15	86	344	19.7
March	16.0	72	17	76	95	16	83	414	20.9
April	16.5	72	10	86	79	16	80	400	23.7
May	18.1	103	6	94	105	5	95	465	22.0
June	13.8	118	7	94	132	9	93	457	21.8
July	13.1	110	5	95	126	5	96	415	24.1
August	10.8	130	5	96	115	7	94	406	24.3
September	10.4	108	9	92	84	7	92	427	21.5
October	11.4	94	4	96	74	6	92	447	21.7
November	12.0	104	4	96	138	14	90	433	23.8
December	16.3	90	3	97	121	7	94	390	21.2
Average	14.0	98	8	91	109	10	91	420	21.9

New Rochelle		Annual Performance Report						2014
Month	Sodium Hypochlorite	Natural Gas	Water	Electric Usage	Polymer	Potassium Permanganate	Oxygen Delivered	Screenings
	gallons	gallons	cubic feet	kWh	gallons	pounds	pounds	cubic yards
January	8,880	121,000	104,607	341,600	537	9,900	42,487	50
February	9,460	599,000	110,125	286,400	665	10,560	51,274	50
March	9,700	1,434,000	126,827	279,800	1,046	13,200	46,299	50
April	9,806	1,789,000	138,519	148,000	525	8,250	27,016	50
May	12,075	489,000	175,161	88,000	1,454	9,900	49,173	50
June	8,711	13,000	76,246	36,000	983	14,520	36,908	50
July	27,862	4,000	175,021	287,200	586	16,500	37,171	50
August	11,712	3,000	97,942	859,200	1,049	21,450	32,864	50
September	14,128	4,000	110,501	849,600	1,608	19,470	36,454	50
October	36,328	14,000	101,681	873,600	1,102	11,550	41,454	50
November	19,591	1,157,000	87,050	902,400	1,110	11,220	31,797	50
December	23,878	1,823,000	91,919	1,089,600	739	8,580	30,895	50
Total	192,131	7,450,000	1,395,599	6,041,400	11,404	155,100	463,792	600
Average	16,011	620,833	116,300	503,450	950	12,925	38,649	50
Daily Average	526	20,411	3,824	16,552	31	425	1,271	2

OSSINING TREATMENT PLANT

TREATMENT PROCESS:	Screening and Grit removal, Primary Treatment, Activated sludge, Final Clarification, Sodium Hypochlorite Disinfection, Sodium Bisulfite dechlorination, gravity thickening, disposal of liquid sludge by contract.
COUNTY TRUNK SEWERS:	8 miles
SITING ACRES:	4
MUNICIPALITIES SERVED:	Towns of Mount Pleasant and Ossining; Villages of Briarcliff Manor, Croton-on-Hudson, and Ossining.
TRIBUTARY POPULATION:	39,757
EMPLOYEES:	17
2014 EXPENDITURES:	\$4,729,549

<u>YEAR BUILT</u>	<u>CAPITAL COST</u>
1981 - Secondary Treatment	\$ 42,000,000

FLOW CAPACITIES

2014 ACTUAL FLOW:	4.5 MGD
DESIGN FLOW:	7.0 MGD
HYDRAULIC CAPACITY:	26.0 MGD
PERMITTED FLOW:	7.0 MGD

PUMPING STATIONS

Archville
Country Club Lane
Croton
Crotonville
Kemey's Cove
Croton Landfill (Ballfield)
Croton Landfill (Seeps)
Croton Landfill Station #1
Croton Landfill (Condensate)
Croton Landfill Station #2

DESIGN CAPACITY

0.14 MGD
0.10 MGD
5.30 MGD
13.40 MGD
2.02 MGD
0.27 MGD
0.19 MGD
0.56 MGD
0.075 MGD
0.79 MGD

ACTUAL FLOW

0.006 MGD
0.0009 MGD
0.647 MGD
1.004 MGD
0.235 MGD
0.0001 MGD
0.0020 MGD
0.009 MGD
0.000085 MGD
0.0667 MGD

OSSINING 2014 HIGHLIGHTS:

Capital Projects- The new Boiler, Generator, Air Conditioner and HVAC Project was bonded, but did not start in 2014. This was due in part to the Vulnerability Assessment that suggested not putting a new MCC in the basement.

New Equipment Installed- A new grinder, new influent flow meters on Aeration Tanks, new RAS pump.

Maintenance Staff did the following improvements-

1. Rebuilt grit removal cyclone
2. #1 barscreen overhauled with new drive shaft, rollers, motor and limit switches
3. Splitterbox cleaned out of grit and new air diffusers installed
4. Replaced skimmer blades on all Primary and Secondary Tanks
5. Balanced and repaired rakes on all Primary Tanks
6. New hypo chlorite injection points on Thickeners



Ossining Wastewater Treatment Plant

Ossining		Annual Performance Report										2014	
Month	Flow	Suspended Solids				Carbonaceous Biochemical Oxygen Demand				Sludge Removed			
	MGD	Influent	Effluent	Efficiency	Influent	Effluent	Efficiency	gallons	% solids	dry tons			
		mg/l	mg/l	% removal	mg/l	mg/l	% removal						
January	4.5	168	4	98	195	5	97	672,000	2.9	73			
February	4.7	142	3	98	171	4	98	511,000	3.2	63			
March	5.4	149	6	96	159	7	96	560,000	3.2	65			
April	5.3	150	3	98	163	4	98	560,000	3.1	66			
May	5.8	169	3	98	170	3	98	833,000	2.6	90			
June	4.4	216	5	98	211	5	98	854,000	3.5	126			
July	4.5	251	6	98	226	5	98	868,000	3.2	117			
August	3.7	205	8	96	141	5	96	805,000	2.2	61			
September	3.6	308	6	98	187	5	97	658,000	2.3	63			
October	3.6	238	10	96	157	5	97	420,000	3.1	46			
November	3.7	250	6	98	264	7	97	406,000	2.8	41			
December	4.5	172	6	97	204	6	97	707,000	2.9	82			
Average	4.5	202	6	97	187	5	97	654,500	2.9	74			

Ossining		Annual Performance Report				2014
Month	Sodium Hypochlorite	Water	Electric Usage	Natural Gas	Removed from Sewage	
	gallons	cubic feet	kWh	cubic feet	Screenings	Grit
					cubic feet	cubic feet
January	5,587	43,850	412,000	1,513	501	88
February	4,598	30,770	345,600	1,636	385	88
March	4,643	37,030	378,400	1,847	693	88
April	6,240	55,600	356,800	1,448	539	176
May	15,520	58,890	312,800	257	616	176
June	12,590	49,430	304,800	3	693	--
July	17,759	50,680	355,200	--	693	176
August	16,371	49,810	354,400	--	693	176
September	15,088	54,390	331,200	--	231	88
October	16,957	76,150	343,200	567	539	88
November	9,559	54,140	361,600	1,709	462	88
December	10,569	45,810	372,000	1,745	674	176
Total	135,481	606,550	4,228,000	10,725	6,719	1,408
Average	11,290	50,546	352,333	1,192	560	128
Daily Average	371	1,662	11,584	29	18	4

PEEKSKILL TREATMENT PLANT

TREATMENT PROCESS:	Screening and Grit removal, Primary Treatment, Activated sludge, Final Clarification, Ultraviolet Light Disinfection, Gravity Thickening and Anaerobic Digestion. Liquid sludge removed by contract.	
COUNTY TRUNK SEWERS:	15 miles	
SITING ACRES:	35.6	
MUNICIPALITIES SERVED:	City of Peekskill; Towns of Cortlandt, Somers and Yorktown.	
TRIBUTARY POPULATION:	45,097	
EMPLOYEES:	16	
2014 EXPENDITURES:	\$4,573,982	
<u>YEAR BUILT</u>	<u>CAPITAL COST</u>	
1953 - Primary Treatment	\$ 19,443,000	
1980 - Secondary Treatment	\$ 55,000,000	
<u>FLOW CAPACITIES</u>		
2014 ACTUAL FLOW:	6.7 MGD	
DESIGN FLOW:	10.0 MGD	
HYDRAULIC CAPACITY:	22.5 MGD	
PERMITTED FLOW:	10.0 MGD	
<u>PUMPING STATIONS</u>		
Mill Street	<u>DESIGN CAPACITY</u>	<u>ACTUAL FLOW</u>
	9.72 MGD	1.003 MGD
Water Street	10.15 MGD	2.411 MGD

PEEKSKILL 2014 HIGHLIGHTS:

1. Seven (7) scum troughs on the Primary and Secondary Clarifiers were replaced.
2. The Highland Ave Pump Station rehab was 95% complete the end of December, which included replacement of sewage pump motors, new sewage pump level control system, new piping and valves, new mechanical bar screen and washer/compactor, wet well rehabilitation.
3. The Mechanical Sludge project was 50% complete the end of December which included in the Primary Sludge Pump Building installation of all new pump motors, piping and valves.
4. Polymer system installed for the thickener by maintenance staff.
5. Sodium Hypochlorite line to the aeration tanks was rehabbed by maintenance staff.
6. Concrete work done by contractor on stairs outside Administration and Hypo Buildings and walkway outside Administration Building.
7. Received a new forklift



Peekskill Wastewater Treatment Plant

Annual Performance Report													2014	
Month	Flow	Suspended Solids			Carbonaceous Biochemical Oxygen Demand			Sludge Removed						
	MGD	Influent	Effluent	Efficiency	Influent	Effluent	Efficiency	gallons	% solids	dry tons				
		mg/l	mg/l	% removal	mg/l	mg/l	% removal							
January	6.7	119	12	90	180	7	96	399,000	2.8	42				
February	6.3	150	8	95	200	5	98	574,000	2.2	48				
March	7.7	133	11	92	165	7	96	581,000	1.7	38				
April	7.8	151	12	92	171	7	96	609,000	1.8	42				
May	8.4	165	11	93	153	10	93	735,000	2.2	60				
June	6.7	200	9	96	232	8	97	889,000	1.9	65				
July	6.7	176	10	94	207	7	97	994,000	1.7	63				
August	5.9	140	7	95	140	6	96	1,085,000	2.0	82				
September	5.8	170	10	94	173	5	97	1,036,000	1.9	75				
October	5.8	197	7	96	192	4	98	1,435,000	1.8	99				
November	5.8	168	8	95	227	7	97	931,000	1.9	66				
December	7.1	127	9	93	183	6	97	882,000	2.6	86				
Average	6.7	158	10	94	185	7	96	845,833	2.0	64				

Peekskill					Annual Performance Report					2014		
Month	Sodium Hypochlorite	Fuel Oil	Water	Electric Usage	Digester Gas		Removed from Sewage					
	gallons	gallons	cubic feet	kWh	Produced CF x 1000	Wasted CF x 1000	Screenings cubic feet	Grit cubic feet	Grease cubic feet			
January	886	1,529	4,144	302,400	1,630	--	414	340	--			
February	1,080	1,407	4,144	278,000	1,451	--	410	170	--			
March	16	1,074	12,968	307,200	1,694	--	417	340	78			
April	272	375	10,695	292,800	1,253	67	390	--	--			
May	380	--	19,251	326,400	1,271	179	424	340	156			
June	5,766	--	14,706	316,800	1,329	311	379	340	156			
July	5,931	--	21,524	326,400	1,310	410	402	170	156			
August	5,073	--	6,016	321,600	1,300	424	380	340	78			
September	6,402	--	11,230	312,000	1,046	240	384	340	234			
October	5,079	--	22,995	336,000	1,158	128	403	170	78			
November	3,013	404	67,112	307,200	1,353	--	388	170	234			
December	385	940	18,449	321,600	1,486	--	396	340	78			
Total	34,283	5,729	213,234	3,748,400	16,281	1,759	4,787	3,060	1,248			
Average	2,857	955	17,770	312,367	1,357	251	399	278	139			
Daily Avg.	94	16	584	10,270	45	5	13	8	3			

PORT CHESTER TREATMENT PLANT

TREATMENT PROCESS: Screening and Grit Removal, Primary Settling Tanks, Rotating Biological Contactors, Final Settling Tanks, Sodium Hypochlorite Disinfection, Gravity thickening and liquid sludge removed by contract

COUNTY TRUNK SEWERS: None

SITING ACRES: 3

MUNICIPALITIES SERVED: Town of Rye; Village of Port Chester.

TRIBUTARY POPULATION: 27,272

EMPLOYEES: 16

2014 EXPENDITURES: \$3,295,261

<u>YEAR BUILT</u>	<u>CAPITAL COST</u>
1989 - Secondary Treatment	\$ 43,100,000

FLOW CAPACITIES

2014 ACTUAL FLOW: 4.4 MGD

DESIGN FLOW: 6.0 MGD

HYDRAULIC CAPACITY: 13.4 MGD

PERMITTED FLOW: 6.0 MGD

PUMPING STATIONS

None

PORT CHESTER 2014 HIGHLIGHTS:

- 1) RBC #608 Replacement with High Density Media and Chemical addition and performance testing is on-going.
- 2) Began Vulnerability Study.
- 3) Inspection and repair of heavily damaged existing RBC trains (due to age of equipment) in order to meet permit regulations being done by in-house staff.



Port Chester Wastewater Treatment Plant

Port Chester												Annual Performance Report												2014	
Month	Flow	Suspended Solids				Carbonaceous Biochemical Oxygen Demand				Sludge Removal															
MGD		Influent	Effluent	Efficiency	Influent	Effluent	Efficiency	Gallons	% solids	Dry Tons															
		mg/l	mg/l	% removal		mg/l	mg/l				% removal														
January	4.2	104	13	88	168	25	85	847,000	4.2	133															
February	4.5	217	11	95	216	20	91	707,000	3.6	95															
March	5.0	204	10	95	203	19	91	826,000	3.9	121															
April	5.3	204	11	95	217	18	92	819,000	5.0	154															
May	5.6	183	11	94	170	17	90	826,000	5.3	164															
June	4.5	224	16	93	224	25	89	1,050,000	3.0	118															
July	4.0	124	13	90	235	22	91	1,015,000	3.9	148															
August	3.7	195	12	94	207	14	93	826,000	3.9	121															
September	3.5	291	11	96	244	11	95	1,001,000	3.3	124															
October	3.7	277	14	95	205	13	94	868,000	3.3	107															
November	3.9	244	10	96	278	15	95	798,000	4.5	135															
December	5.3	216	10	95	220	12	95	938,000	4.6	162															
Average	4.4	207	12	94	216	18	92	876,750	4.0	132															

Port Chester **Annual Performance Report** **2014**

Month	Sodium Hypochlorite		Natural Gas	Fuel Oil	Water	Electric Usage	Sewage Removals	
	Effluent, gallons	Thickeners, gallons					Screenings cubic feet	Grit cubic feet
January	2,903	4,935	1,074	7,449	25,021	427,200	266	364
February	2,637	3,752	41,653	4,568	22,169	377,600	294	294
March	3,159	4,695	759	8,163	26,829	423,200	308	322
April	2,958	4,320	295	1,374	26,724	378,400	322	280
May	3,415	4,926	27	192	24,690	371,200	308	280
June	3,103	8,640	9	180	30,346	320,000	322	280
July	3,207	7,053	6	40	21,072	347,200	308	280
August	3,221	6,180	6	146	22,494	336,800	308	224
September	3,032	4,588	7	231	22,743	318,400	350	224
October	2,999	6,168	40	66	23,542	336,000	336	168
November	2,475	5,357	605	5,741	23,921	383,200	308	168
December	3,193	5,696	739	6,389	25,818	433,600	350	336
Total	36,302	66,310	45,220	34,539	295,369	4,452,800	3,780	3,220
Average	3,025	5,526	3,768	2,878	24,614	371,067	315	268
Daily Avg.	99	182	124	95	809	12,199	10	9

YONKERS JOINT TREATMENT PLANT

TREATMENT PROCESS: Screening and Grit removal, Primary Treatment, Activated Sludge, Final Clarification, Sodium Hypochlorite Disinfection, dechlorination with sodium bisulfite, Gravity and Dissolved Air Flotation Thickening, Anaerobic Digestion, Dewatering by Centrifuge, sludge cake removed by contract for beneficial use, with a landfill as a backup site.

COUNTY TRUNK SEWERS: 100 miles

SITING ACRES: 27

MUNICIPALITIES SERVED: Cities of Mount Vernon, New Rochelle, White Plains, and Yonkers; Towns of Bedford, Greenburgh, Mount Pleasant, Mount Kisco, New Castle, North Castle; Villages of Ardsley, Briarcliff Manor, Bronxville, Dobbs Ferry, Elmsford, Hastings, Irvington, Pleasantville, Scarsdale, Sleepy Hollow, Tarrytown, and Tuckahoe.

TRIBUTARY POPULATION: 506,166

EMPLOYEES: 72

2014 EXPENDITURES: \$57,169,448 (Sewer Districts)
\$10,072,012 (Yonkers Joint WWTP)
\$1,848,870 (North Yonkers Pump Station)

<u>YEAR BUILT</u>	<u>CAPITAL COST</u>
1931 - Original Screen Plant	\$ 583,000
1961 - Primary Treatment	\$ 10,300,000
1979 - Secondary Treatment	\$ 84,800,000

FLOW CAPACITIES

2014 ACTUAL FLOW:	80.2 MGD
DESIGN FLOW:	120 MGD
HYDRAULIC CAPACITY:	330 MGD
PERMITTED FLOW:	120 MGD (12-month rolling average)

YONKERS JOINT (Continued)

<u>PUMPING STATIONS</u>	<u>DESIGN CAPACITY</u>	<u>ACTUAL FLOW</u>
Alexander Street	12.60 MGD	1.623 MGD
Briarcliff	4.90 MGD	0.399 MGD
Dobbs Ferry	0.29 MGD	0.0174 MGD
Hastings	1.44 MGD	0.203 MGD
Hutchinson	28.80 MGD	3.584 MGD
Irvington	11.23 MGD	1.536 MGD
Jackson Avenue	3.46 MGD	0.393 MGD
Ludlow Street	3.90 MGD	0.494 MGD
Main Street	8.10 MGD	0.717 MGD
North Yonkers	74.00 MGD	24.3 MGD
Sprain Lift	1.44 MGD	0.222 MGD
Tarrytown	26.00 MGD	2.39 MGD

Highlights for 2014:

- The Capitol Project for the ADG cogeneration engine is approximately 95% complete
- The Capitol Project for the Screen & Grit Building HVAC and Odor Control is approximately 99% complete
- The Capitol Project for the new emergency generator and switchgear is approximately 90% complete.
- A Capitol Project is ongoing to rehabilitate several sections of the Bulkhead approximately 70% complete
- Design of the Secondary Thickening Upgrade has begun
- Plant Staff with the help of Bob Cea have initiated a Centrifuge optimization project and have achieved better % solids on dewatered sludge saving trucking costs
- Plant Staff finished installing a new Automatic D. O. system



Yonkers Joint Wastewater Treatment Plant

Yonkers Joint Annual Performance Report													2014	
Month	Flow	Suspended Solids			Carbonaceous Biochemical Oxygen Demand			Sludge Removed			Removed from Sewage			
		Influent	Effluent	Efficiency	Influent	Effluent	Efficiency	wet	%	dry	Screenings	Grit		
	MGD	mg/l	mg/l	% removal	mg/l	mg/l	% removal	tons	solids	tons	pounds	cubic yards		
January	76	141	7	95	131	6	95	2,995	22.3	668	34,000	100		
February	81	135	9	93	131	8	94	2,483	23.2	575	44,000	100		
March	89	141	14	90	120	12	90	2,648	23.0	609	40,000	140		
April	94	132	8	94	117	7	94	2,811	24.5	687	42,000	120		
May	107	152	9	94	109	7	94	2,828	25.4	718	44,000	220		
June	81	164	6	96	151	6	96	3,002	25.4	763	42,000	140		
July	77	139	12	91	141	11	92	2,407	25.5	613	40,000	140		
August	67	158	8	95	122	6	95	2,477	25.8	640	36,000	120		
September	63	168	7	96	132	6	95	2,810	23.3	654	36,000	100		
October	67	164	6	96	129	5	96	2,958	23.2	686	36,000	120		
November	70	178	9	95	166	10	94	2,700	24.2	653	54,000	100		
December	90	131	7	95	117	7	94	2,902	24.5	712	58,000	140		
Average	80.2	150	9	94	131	8	94	2,752	24	665	42,167	128		

Yonkers Joint				Annual Performance Report						2014	
Month	Sodium Hypochlorite	Liquid Polymer Used	Potassium Permanganate	Sodium Bisulfite	Fuel Oil	Water	Electric Usage		Digester Gas		
							Used	Demand	Produced	Wasted	
											kWh
January	32,539	42,176	--	17,379	6,923	505,419	2,890,729	4,226	19,886	17,248	
February	30,477	36,644	--	13,871	16,628	454,441	2,591,147	4,291	18,924	16,413	
March	37,510	39,699	--	18,709	2,814	445,691	2,844,743	4,456	19,987	17,510	
April	32,708	39,030	--	17,033	662	496,124	2,596,904	4,456	2,851	--	
May	37,771	42,221	--	18,661	789	574,851	2,493,868	4,456	3,111	--	
June	35,077	39,819	--	17,860	--	497,750	2,545,773	4,456	3,188	--	
July	51,595	31,794	--	18,119	--	660,574	2,767,662	4,456	3,135	--	
August	50,995	35,154	--	17,903	--	670,860	2,854,552	4,456	3,060	--	
September	44,555	39,881	--	17,051	746	611,320	2,721,934	4,456	2	--	
October	36,599	41,916	--	14,511	219	626,589	2,637,587	4,456	367	--	
November	39,363	36,842	1,800	14,375	--	658,043	2,702,651	4,456	--	--	
December	49,022	35,278	1,800	15,446	--	607,689	2,759,961	4,456	--	--	
Total	478,211	460,454	3,600	200,918	28,781	6,809,351	32,407,511	53,077	74,511	51,171	
Average	39,851	38,371	1,800	16,743	4,112	567,446	2,700,626	4,423	7,451	17,057	
Daily Avg.	1,310	1,262	10	550	79	18,656	88,788	145	204	140	

MAINTENANCE SECTION

The Maintenance Section has 68 people in various duties. The Maintenance section is responsible for maintaining the County's sewage pumping stations, interceptor sewers and forcemains.

Pump Stations - 36 people

- A total of 42 pump stations and 2 Overflow Retention Facilities (ORF's) located throughout the County including the Croton Landfill are operated, repaired, and maintained by this section.
- Emergency generators have been installed at all Pump Stations, except for Beaver Brook, Circle Avenue, Country Club and the Croton Landfill stations. These stations will obtain emergency power from portable generators
- Pump Station Major Rehabilitation Program 2014 status: Woodbine and Magnolia were completed, and Hutchinson Pump Station is under construction. Tarrytown, East Basin, West Basin and Edgewater pump stations designs were completed and bid. Design for all five (5) Croton Landfill pump stations is complete and construction has been bid and awarded.

Outside Maintenance (Collection System) - 28 people

- Sewer maintenance: repair and clean all County sewers, manholes, regulators and air release valves as needed.
- Receives requests and performs markouts for the Dig Safely New York Program. (Formerly called the UFPO - Code 753). In 2014, there were a total of 30,978 Dig Safely New York requests that were received. A total of 1,035 requests required mark out by outside maintenance crews.
- Picks up garbage, rags and screenings from the seven Treatment Plants and the three major Pump Stations and transports it to the RESCO facility.
- Provide emergency hauling of sludge or Airport deicing fluid and transports it for disposal to the Hawthorne Receiving Manhole.
- Provide bypass trucking of sewage in the event of a sewer break or similar emergency.
- Specialized crews: Electricians, machinists, welders, and instrumentation mechanics, handling all those specialized crafts primarily at the pump stations.
- Operates and Maintains the Hawthorne Receiving Manhole for septage disposal by licensed private septage haulers.

Projects that were performed with County personnel in 2014 include the following:

- The outside maintenance and/or pump station crews were used for sewer overflow response at the following locations: at the Odell Avenue and Wells Avenue Regulators in the City of Yonkers, and at the Beaver Brook Trunk Sewer located on Boston Post Road in the Village of Mamaroneck and the Sheldrake Trunk Sewer located in the Village of Mamaroneck.
- The outside maintenance and pump station crews were used in conjunction with the County's Emergency Contractor for pipe breaks Woodbine Avenue PS force main and the North Yonkers 54" forcemain.

- Outside maintenance crews repaired the top of the Hutchinson Valley Macquesten Parkway Portal shaft, pouring new concrete at the top and replacing the access door with a new manhole frame and cover.
- Outside maintenance crews replaced a damaged frame and cover on the North Yonkers Alexander Street sewer as a result of the Phase IIIA C.M.O.M. project.
- The outside maintenance crews performed regular sewer cleaning and inspections at the following locations in 2014:
 - North Yonkers Hastings Low Level Sewer approximately every two months
 - Kinderogen Sewer approximately every six months
 - Brookdale Sewer in Rye approximately every month
 - Greenhaven Sewer in Rye approximately every month
 - South Yonkers Trunk Sewer Low Level from Pier Street Regulator to Ludlow Street Pump Station approximately every six months
 - Westlake Sewers in Mount Pleasant once per year.

Engineering - 4 people

- This section receives Dig Safely New York (Code 753) requests for utility markouts and processes the requests with the help of our Outside Maintenance Section.
- This section tracks and processes the sampling and data collection for the Hawthorne Receiving Manhole.
- This section monitors and compiles the data for the operation of the Combined Sewer Overflow (CSO) facility at the North Yonkers Pumping Station to satisfy all NYSDEC SPDES permit requirements for this operation.
- This section compiles, edits, and produces the Annual Report for this Department.
- This section performs review of plans and specifications for various Department projects, and new connections to the County Trunk Sewer System.
- To ensure compliance with the Best Management Practices and CMOM requirements, a software program has been developed to automate the Manhole Inspection Program. This program will also enhance the Dig Safely New York markout request lookup.
- Capacity, Management, Operations and Maintenance (C.M.O.M.) Program is ongoing. Digital mapping of all 3,500 County sanitary manholes and 155 miles of County gravity sewers using Global Positioning Satellites (GPS) was completed in 2009 and is currently being utilized by this section in its daily activities. The program of inspecting all County owned manholes continued in 2014. A total of 196 manhole inspections were performed.

Major Projects that were performed in 2014 include the following:

- Completed the design of an inverted siphon replacement on the Ossining North Interceptor sewer at the intersection of Water Street and Snowden Avenue. The inverted siphon has been a source of odor complaints by the surrounding businesses for a number of years. The replacement of the siphon with a relocated gravity sewer through Snowden Park was proposed with the Village of Ossining's input in order to reduce the impact of odors in the area. The design requires relocation of some underground Con Edison gas and electric lines. Con Edison is currently performing the required relocations, and the project is on hold pending the completion of the relocations.
- Continued with the design of repairs of pipe defects identified during the Phase I and Phase II CCTV work performed in the CMOM program. Project is currently at the 60% Design Phase.

- Currently at 90% design with a consultant to relocate the Playland Bathhouse sewer to a location outside the building through the parking lot.
- Utilized an outside contractor to perform an annual cleaning and television inspection on the Hutchinson Valley High Level Trunk Sewer in the Village of Scarsdale/ City of New Rochelle. This is the continuation of a flow monitoring project performed in response to complaints of recurring sewer backups during storm events in the Village of Scarsdale.
- Continued design of repairs of eroded areas along the North Yonkers Trunk Sewer in the City of Yonkers, Village of Hastings-on-Hudson and the Village of Dobbs Ferry. Our consultant is currently at 90% design on this project.
- Continued with a project to construct a new driveway access to the Sprain Lift Pump Station from Jackson Avenue. The current access to the station is the northbound left lane of the Sprain Brook Parkway. A consultant was been selected and design has progressed to the 90% phase.
- Continued Phase III of the C.M.O.M. CCTV work. Completed the first contract, Phase IIIA of this work, with an outside contractor who performed an internal CCTV, Sonar and 3D Laser profile of the 78" diameter Saw Mill Trunk Sewer Tunnel (total inspection approximately 9,700 feet). Additionally, the contractor performed a heavy cleaning and internal CCTV of the 20" and 24" diameter North Yonkers Low Level Trunk Sewer Section K along Alexander Street (approximately 2,460 feet of sewer). Approximately 133 tons of debris was removed and disposed from this sewer as a result of this work, increasing the available flow capacity in this line. With money that was left over in this contract, the vendor was able to clean and televise another 2,015 feet of 12" to 24" sewer located in the South Yonkers Sewer district. Approximately 14,175 feet of sewer was inspected and cleaned as needed under this completed contract.
- Bid and awarded Phase IIIB of the C.M.O.M. CCTV work. This work involves an Internal CCTV inspection of the Hutchinson Valley Trunk Sewer Tunnel (approximately 11,300 feet of 78" sewer), Hutchinson Valley Edgemont Trunk Sewer Tunnel (approximately 1,475 feet of 48" sewer) in the City of Mount Vernon and an Internal CCTV inspection and Heavy Cleaning of the Blind Brook Section J Trunk Sewer in the City of Rye (approximately 1,750 feet of 18" sewer).
- Utilized an outside contractor to raise to grade and place a new precast concrete slab and access manhole cover on the top of the Saw Mill Trunk Sewer Portal at the City of Yonkers Shade Tree Bureau on Nepperhan Avenue. The old removable precast slabs were buried and were found to be damaged during the Phase IIIA C.M.O.M. inspection.
- Utilized an outside contractor to replace a damaged precast slab and access hatch on the Lamartine High level regulator with a new precast slab and manhole access. This was done in response to a resident complaint about traffic noise from the existing damage access hatch.
- Bid and awarded a contract to replace two damaged access hatches on the Ashburton Low Level regulator with two new precast concrete slabs and access manhole covers; replace one damaged access hatch on the Wells Avenue regulator with one new precast concrete slab and access manhole cover. Additionally, two damaged access hatches at the South Yonkers Screen House and one damaged access hatch at the Blind Brook WWTP will be replaced with new access hatches under this contract.

North Yonkers		Annual Performance Report							2014
Month	Flow to YONKERS	Flow to CSO	Sodium Hypochlorite	Chlorine Residual	Grit	Fuel Oil	Natural Gas	Electric Usage	Water
	MGD	MGal	gallons	mg/L	cubic feet	gallons	cubic feet	kWh**	cubic feet*
January	13.2	1.07	646	3.5	--	6,116	1,521	O/S	O/S
February	22.3	--	--	--	540	9,053	1,544	O/S	O/S
March	25.1	7.14	2,702	7.1	--	4,000	1,665	O/S	O/S
April	28.7	--	--	--	540	0	514	O/S	O/S
May	31.0	36.34	8,027	5.2	1,620	0	166	O/S	O/S
June	26.4	--	--	--	540	0	2	O/S	O/S
July	25.1	19.04	1,362	4.3	540	0	0	O/S	O/S
August	22.4	--	--	--	540	0	0	O/S	2,407
September	21.9	--	--	--	540	0	0	O/S	2,735
October	25.0	1.07	497	3.5	540	0	205	O/S	3,126
November	24.2	1.16	382	4.0	540	0	916	O/S	1,342
December	26.0	20.29	2,952	3.5	--	4,000	1,226	O/S	1,493
Total	n/a	86.11	16,568	n/a	5,940	23,169	7,759	**	11,103
Average	n/a	12.30	2,367	4.4	660	1,931	647	**	2,221
Daily Average	24.3	n/a	45	n/a	16	63	21	**	74

*City Water meter broken during Main Pump upgrade and out of service as of 1/14/2009. Restored August 2014

** No Electric Reading for January Due to loss of utility power and electrical damage from October, 2012 storm

Pump Stations **Yonkers Joint Districts** **2014**

Month	Alexander St	Briarcliff	Dobbs Ferry	Hastings	Hutchinson	Irvington	Jackson Ave	Ludlow St	Main St	Sprain Lift	Tarrytown
	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day
January	2,086,838	290,877	12,909	207,483	4,306,451	1,525,806	266,745	196,870	461,845	162,677	2,363,226
February	2,842,714	320,872	16,761	203,892	2,875,161	1,677,071	350,694	349,165	721,114	190,285	2,480,429
March	2,782,219	386,515	17,456	142,258	5,390,321	1,837,129	407,881	373,497	857,961	207,096	2,645,419
April	1,569,480	504,231	18,005	183,677	4,950,000	1,861,322	539,767	491,965	853,238	258,870	2,898,933
May	1,513,103	544,502	19,722	229,354	4,110,000	2,185,354	690,771	502,114	718,180	408,967	2,840,484
June	1,264,560	412,230	22,206	162,300	3,540,000	1,156,200	411,718	513,513	801,870	241,900	2,327,533
July	1,368,754	422,181	12,708	171,580	3,390,000	1,464,806	218,756	552,900	631,322	211,741	2,403,871
August	1,009,701	345,618	19,292	234,483	2,710,000	1,200,322	378,145	877,450	699,677	146,516	2,158,548
September	1,403,820	337,710	19,704	177,100	2,480,000	1,127,580	354,600	646,570	654,240	144,900	1,971,000
October	1,253,148	336,054	17,307	228,677	2,380,000	1,187,387	352,161	458,739	710,709	152,129	2,214,065
November	1,038,840	377,286	14,890	251,300	3,290,000	1,372,066	387,900	449,635	698,240	148,900	2,015,067
December	1,337,458	507,251	17,636	248,903	3,590,000	1,842,645	351,145	512,816	792,851	390,870	2,358,774
Avg. GPD	1,622,553	398,777	17,383	203,417	3,584,328	1,536,474	392,524	493,770	716,771	222,071	2,389,779
Avg. MGD	1.623	0.399	0.0174	0.203	3.584	1.536	0.393	0.494	0.717	0.222	2.390

Pump Stations			Ossining & Peekskill Districts				2014
Month	Archville	Country Club	Croton	Crotonville	Kemey's Cove	Mill St	Water St
	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day
January	6,610	1,648	633,797	864,464	231,483	1,101,987	2,263,754
February	5,596	1,605	625,473	817,950	265,071	1,037,142	2,158,803
March	7,040	1,130	777,546	963,444	275,806	1,131,367	2,669,941
April	6,609	888	848,518	1,006,860	304,200	1,133,000	2,757,793
May	7,995	611	752,477	1,130,902	361,935	1,308,120	3,004,010
June	6,633	682	743,046	1,380,500	202,800	997,040	2,548,656
July	7,745	627	679,684	872,148	216,580	1,021,083	2,428,570
August	6,947	1,701	545,699	772,509	135,096	805,200	2,207,364
September	5,877	630	506,138	820,640	125,400	793,760	2,177,773
October	5,016	667	516,837	880,257	130,258	789,445	2,151,000
November	4,875	492	509,384	1,659,062	143,419	833,800	2,106,926
December	6,561	259	630,069	879,792	424,709	1,085,806	2,462,480
Avg. GPD	6,459	912	647,389	1,004,044	234,730	1,003,146	2,411,423
Avg. MGD	0.006	0.0009	0.647	1.004	0.235	1.003	2.411

Pump Stations			Croton Landfill Pump Stations			2014
Month	Ballfield	Seeps	Pump Station No. 1	Condensate	Pump Station No. 2	
	gal/day	gal/day	gal/day	gal/day	gal/day	
January	182	2,953	11,150	40	77,638	
February	121	2,575	10,584	33	52,070	
March	146	3,005	12,898	50	72,625	
April	113	2,484	10,349	62	72,842	
May	36	2,430	10,698	403	87,022	
June	38	675	8,075	343	58,075	
July	146	1,751	8,953	20	76,145	
August	36	470	6,146	0	61,854	
September	113	81	4,312	0	47,276	
October	146	1,359	6,070	10	50,443	
November	226	2,160	7,762	21	60,279	
December	146	4,337	10,774	40	83,610	
Avg. GPD	121	2,023	8,981	85	66,657	
Avg. MGD	0.0001	0.0020	0.0090	0.000085	0.0667	

Pump Stations Blind Brook & Mamaroneck Districts 2014									
Month	Beaver Brook	Cove Rd	East Basin	Edgewater	Fenimore	Playland	Saxon Woods	Weaver St	West Basin
	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day
January	8,001	69,209	266,322	107,860	216,487	387,096	70,827	402,967	625,548
February	4,506	67,092	256,500	99,514	232,955	414,285	66,304	429,107	688,628
March	5,383	116,695	316,935	134,825	250,405	487,096	88,629	560,612	841,083
April	5,334	100,275	387,400	126,468	274,664	473,333	82,476	508,200	954,880
May	6,230	86,530	479,322	154,370	304,703	535,483	69,363	925,548	1,148,960
June	3,048	59,820	273,400	87,469	170,716	336,666	50,796	414,000	608,800
July	2,787	81,687	256,935	92,392	129,291	270,967	45,987	299,612	525,522
August	2,386	44,264	250,258	84,658	91,951	277,419	34,943	224,419	451,354
September	2,028	48,190	116,200	83,592	76,271	173,333	36,000	206,100	427,840
October	3,269	59,380	252,387	93,332	102,582	209,677	40,169	364,645	452,748
November	4,968	80,660	280,700	88,560	131,417	266,666	54,756	333,300	503,320
December	10,188	175,456	430,838	143,896	283,391	503,225	75,495	529,258	1,035,251
Avg. GPD	4,844	82,438	297,266	108,078	188,736	361,271	59,645	433,147	688,661
Avg. MGD	0.005	0.082	0.297	0.108	0.189	0.361	0.060	0.433	0.689

Pump Stations				New Rochelle District					2014	
Month	Beach Ave	Circle/Park	Fifth Ave	Flint Ave	Glen Island Admin	Glen Island Casino	Magnolia	Sutton Manor	Woodbine	
	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	gal/day	
January	229,120	171,096	242,025	1,588,683	154,103	23,312	34,064	44,751	85,064	
February	210,977	117,870	251,838	1,571,271	135,870	11,845	33,857	32,848	78,214	
March	221,047	143,020	292,070	1,857,153	160,838	50,806	37,258	22,509	85,064	
April	239,682	134,100	313,593	1,608,860	168,600	59,970	37,700	40,608	90,100	
May	207,981	157,064	322,835	1,634,883	175,096	40,832	48,387	87,061	84,580	
June	163,142	81,500	234,616	1,535,160	162,000	68,449	21,600	34,290	75,600	
July	145,395	76,741	209,600	1,538,438	134,129	62,596	19,258	27,749	69,870	
August	148,890	52,838	169,974	1,653,483	135,870	62,108	12,580	14,527	71,806	
September	98,900	42,900	175,243	1,500,400	121,800	60,900	9,600	12,744	73,900	
October	133,993	65,032	183,216	1,748,361	141,096	69,387	15,290	17,245	122,032	
November	140,524	86,400	190,803	1,605,340	52,200	18,027	19,400	23,652	148,600	
December	242,936	162,381	277,458	1,831,328	129,483	17,761	60,677	78,073	121,354	
Avg. GPD	181,882	107,579	238,606	1,639,447	139,257	45,499	29,139	36,338	92,182	
Avg. MGD	0.182	0.108	0.239	1.639	0.139	0.045	0.029	0.036	0.092	

Sludge and Septage Disposal at Hawthorne							2014
Month	Sanitary Waste Disposal Contractors	Peekskill WWTP	Yorktown Garage	Other Green Tickets	Materials Recovery Facility, Yonkers	Sprout Brook	Westchester County Airport
	gallons	gallons	gallons	gallons	gallons	gallons	gallons
January	607,275	--	--	1,000	2,500	--	75,000
February	484,050	--	--	--	34,200	--	175,750
March	831,880	5,000	--	1,000	25,000	--	152,500
April	1,547,435	--	--	--	17,500	--	74,500
May	1,474,630	10,000	--	5,000	38,000	7,500	86,150
June	1,443,800	10,000	--	--	2,500	--	--
July	1,322,395	10,000	--	--	--	20,000	--
August	1,221,650	5,000	--	2,500	10,000	--	--
September	1,200,480	25,000	1,500	--	--	--	--
October	1,396,125	15,000	2,500	250	5,000	--	--
November	1,014,815	15,000	--	--	--	--	13,500
December	1,169,150	--	--	5,000	25,000	--	275,428
Total	13,713,685	95,000	4,000	14,750	159,700	27,500	852,828
Average	1,142,807	11,875	2,000	2,458	17,744	13,750	121,833
Daily Average	37,572	260	11	40	438	75	2,337

WATER DIVISION COUNTY WATER DISTRICT No. 1

TREATMENT PROCESS:	<p>Kensico Dam Facility - Disinfection using sodium hypochlorite, pH adjustment with sodium hydroxide (caustic soda) and corrosion control using orthophosphate.</p> <p>Shaft 22 Facility - Disinfection using gaseous chlorine, pH adjustment using caustic soda and corrosion control using orthophosphate.</p>
MUNICIPALITIES SERVED:	Cities of Mount Vernon, White Plains and Yonkers; Village of Scarsdale.
GENERAL INFORMATION:	<p>The Cities of Mount Vernon, White Plains and Yonkers and the Village of Scarsdale formed the District in 1964. The District purchased the 48" Kensico-Bronx pipeline from the City of New York, rehabilitated it, and built a metering and chlorination facility at the source inside New York City's Kensico Dam. An emergency connection to Shaft No. 22 of the Delaware Aqueduct in Yonkers was also constructed. Since 1978, this connection has been used full time to supply approximately half the District's water.</p>
EMPLOYEES:	4
2014 EXPENDITURES:	\$18,422,989

COUNTY WATER DISTRICT No. 1 2014 HIGHLIGHTS:

- Continued use of chlorine tablet systems at Shaft 22.
- Continued "in-house" design for replacement of all chemical feed pumps and control and monitoring systems for Kensico.
- Continued design for new UV treatment facilities for WD # 1.
- Fire Hydrant replacement project continued in 2014.

Kensico		Annual Performance Report					2014
Month	Flow	Raw Water Chlorination		Sodium Hydroxide	Turbidity		Orthophosphate
	MGD	Sodium Hypochlorite	Residual	gallons	Finished Water		gallons
		gallons	mg/L		NTU		
January	10.8	5,637	1.55	806	0.96		1,793
February	10.6	5,126	1.55	618	0.97		1,349
March	10.0	5,688	1.53	1,290	0.90		1,683
April	10.4	5,804	1.49	1,193	0.95		1,193
May	12.6	7,228	1.53	1,788	0.72		2,111
June	15.4	8,604	1.60	3,110	0.64		2,521
July	16.5	8,787	1.63	4,400	0.53		2,753
August	17.0	8,809	1.58	6,155	0.47		2,916
September	16.7	7,788	1.59	6,387	0.47		2,682
October	13.4	6,306	1.56	5,053	0.56		2,022
November	11.6	5,123	1.57	3,695	0.76		1,983
December	11.1	4,850	1.60	2,889	1.02		1,982
Total	n/a	79,750	n/a	37,384	n/a		24,988
Average	13.0	6,646	1.57	3,115	0.75		2,082
Daily Average	n/a	218	n/a	102	n/a		68

Shaft 22				Annual Performance Report				2014	
Month	Flow	Raw Water Chlorination		Sodium Hydroxide	Turbidity	Orthophosphate			
		Chlorine	Residual						
	MGD	pounds	mg/L	gallons	Finished Water	gallons			
					NTU				
January	13.4	5,885	1.44	15,712	1.11	12,080			
February	12.9	5,775	1.43	3,795	1.34	2,685			
March	12.9	6,975	1.44	4,942	1.22	3,021			
April	12.7	6,435	1.54	4,240	1.11	2,530			
May	12.5	6,160	1.47	4,770	1.01	2,680			
June	13.1	5,610	1.48	5,425	1.03	3,245			
July	12.7	5,940	1.52	6,695	0.84	3,414			
August	12.6	5,250	1.46	7,751	0.76	3,326			
September	12.0	5,005	1.39	7,735	0.78	3,370			
October	12.0	4,510	1.46	7,105	0.75	3,478			
November	10.8	4,341	1.50	4,920	0.90	3,279			
December	11.1	4,235	1.52	4,633	0.96	3,337			
Total	n/a	66,121	n/a	77,723	n/a	46,445			
Average	12.4	5,510	1.47	6,477	0.98	3,870			
Daily Average	n/a	181	n/a	213	n/a	127			

COUNTY WATER DISTRICT No. 3

TREATMENT PROCESS:	Disinfection using ultraviolet light and corrosion control using sodium hydroxide (caustic soda) and orthophosphate. Treated water is pumped to a 1.5 million gallon elevated storage tank that equalizes pressure within the distribution system.
POPULATION SERVED:	5,500 (per NYC water supply agreement). Serving over fifty separate County, State, and private facilities including: Westchester Medical Center, Westchester County Correctional Facility, New York Medical College, Fire Training Center, and the New York State Department of Transportation.
GENERAL INFORMATION:	The Gate of Heaven Pump Station connects via Commerce Street to the Delaware Aqueduct south of Kensico Reservoir and provides treated water to the Grasslands Reservation. In addition to the primary supply, there is one supplemental/emergency supply from the Town of Greenburgh.
EMPLOYEES:	2
2014 EXPENDITURES:	\$2,803,422

COUNTY WATER DISTRICT No. 3 2014 HIGHLIGHTS:

- The hydrant replacement contract continued. Replacing old lead jointed hydrants with new lead free brass hydrants.
- Lab analysis for bacteriological sampling changed from a present/absent test to the colilert method. As a result our lab results are returned to us in 24 hours as opposed to 48.
- Quarterly disinfection byproduct sampling results now reported to the DOH in the LRAA method as required.

Month	Flow from NYC	Raw Water Chlorination		Sodium Hydroxide	Turbidity	Orthophosphate
	Average MG per day	Sodium Hypochlorite	Residual	gallons	Finished Water	gallons
		gallons	mg/L		NTU	
January	0.61	285	0.83	51	1.00	32
February	0.56	241	0.83	37	1.30	28
March	0.53	255	0.86	32	1.25	31
April	0.58	263	0.76	30	1.12	32
May	0.65	312	0.74	35	1.00	37
June	0.68	354	0.69	47	1.00	38
July	0.76	393	0.70	56	1.00	43
August	0.74	391	0.70	58	0.83	48
September	0.71	398	0.70	42	0.78	37
October	0.64	338	0.77	54	0.85	39
November	0.57	273	0.84	36	0.89	31
December	0.56	286	0.85	36	0.93	31
Total	n/a	3,789	n/a	514	n/a	427
Average	0.63	316	0.77	43	1.00	36
Daily Average	n/a	10	n/a	1	n/a	1

SAFETY AND TRAINING

DEFs newly implemented internal I2P2 “Safety First” Emphasis Program continued in 2014. This Incident & Injury Prevention Program’s is centered on employee safety awareness through training efforts. It is important to mention DEF is still undergoing a significant level of infrastructural upgrades at the Wastewater Treat Facilities and Pump Stations. With all the construction & challenging weather patterns, DEF employees are experiencing even more obstacles when trying to get the job done. DEF relies heavily on its educated staff, who are encouraged to get involved and be aware of potential hazards. Involving employees in the process of maintaining a safe workplace, promotes safety-mindedness and results in cooperation with a sense of wellbeing.

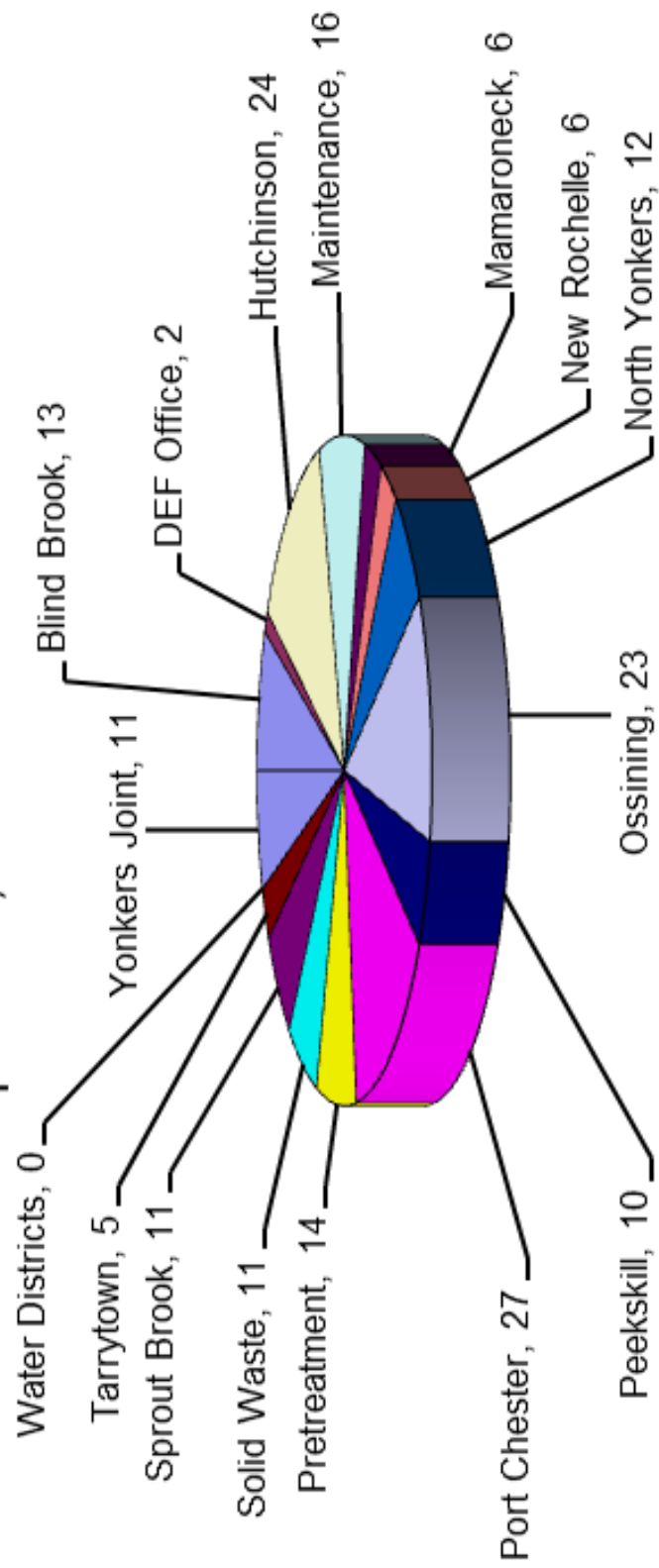
In addition to the OSHA-required training and medical surveillance provided to DEF employees, DEF continues on a path of Staff Development by offering outside technical and job-advancement training. A significant amount of employee turnover due to retirements and new hires has kept DEFs Training Division busy.

DEF recognizes its employees are its greatest asset. The Health & Safety Plan will continue to focus on the employees ability to problem solve and risk prevention, which are the key factors to maintain a safe work place.

Accident Summary							2014
Facility	Employees	Total Hours Worked	Injuries		Days Lost		
			number	per 100,000 hours	number	per 100,000 hours	
Blind Brook	13	23,660	3	13	3	13	
DEF Office	44	80,080	2	2	0	0	
Hutchinson	7	12,740	3	24	94	738	
Maintenance	28	50,960	8	16	25	49	
Mamaroneck	18	32,760	2	6	92	281	
New Rochelle	35	63,700	4	6	76	119	
North Yonkers	18	32,760	4	12	17	52	
Ossining	17	30,940	7	23	81	262	
Peekskill	16	29,120	3	10	66	227	
Port Chester	16	29,120	8	27	256	879	
Pretreatment	4	7,280	1	14	0	0	
Solid Waste	10	18,200	2	11	0	0	
Sprout Brook	5	9,100	1	11	2	22	
Tarrytown	11	20,020	1	5	0	0	
Water Districts	6	10,920	0	0	0	0	
Yonkers Joint	72	131,040	14	11	196	150	
Total	320	582,400	63	191	908	2,792	
Average			4	12	57	175	

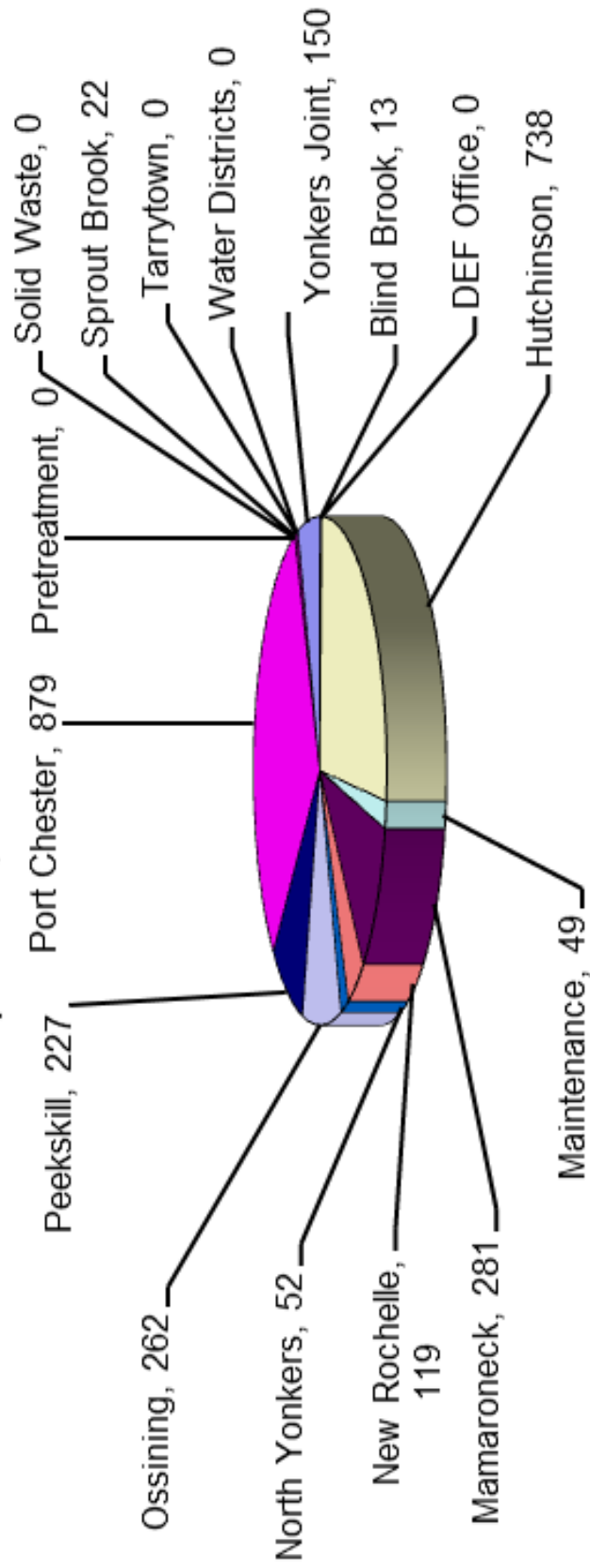
2014 Injuries

per 100,000 hours worked



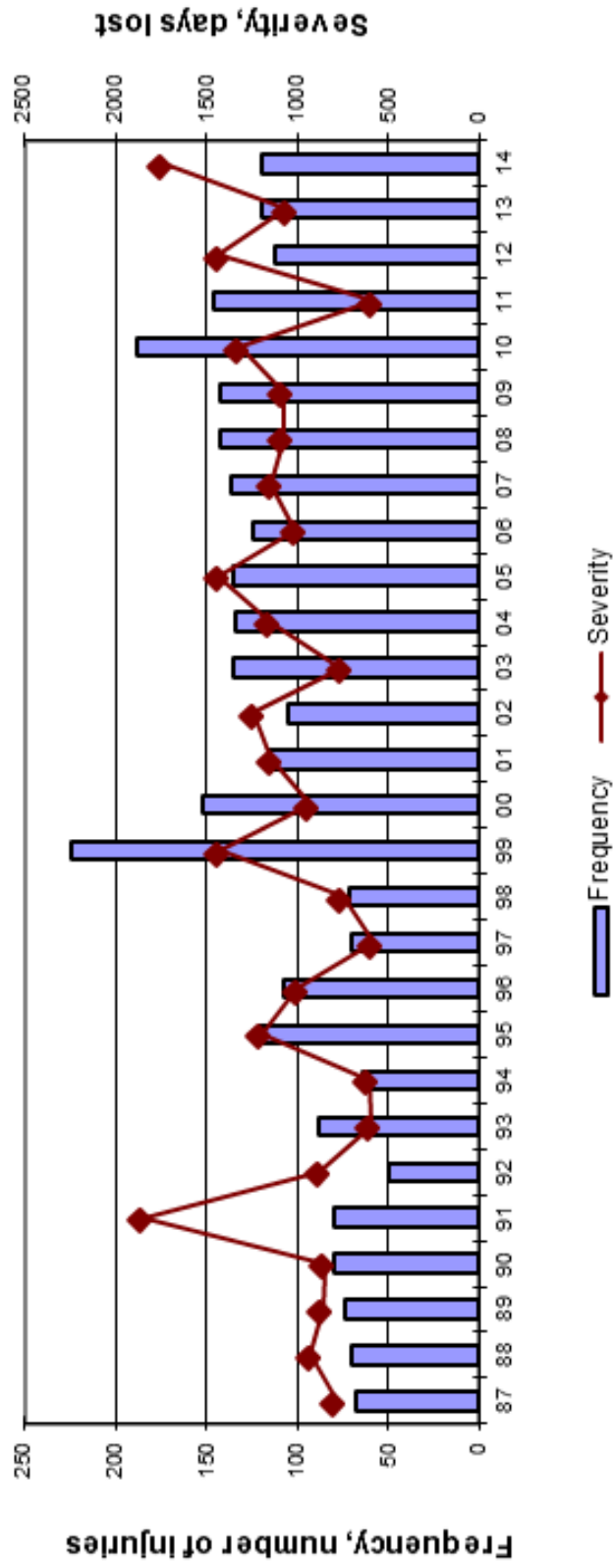
2014 Days Lost

per 100,000 hours worked



Annual Accident Statistics

per 1,000,000 hours worked



DEF Division of Solid Waste Management Annual Summary

Executive Summary

The Westchester County Department of Environmental Facilities (DEF) serves as the State's designated Planning Unit for Westchester's 43 municipalities and manages Refuse Disposal District (RDD) No. 1, to which 36 of the County's municipalities belong. DEF oversees several solid waste and recycling facilities, which handle about 90% of the residential waste stream, as well as several countywide recycling and waste reduction programs and services.

Over the past three decades, Westchester County has positioned itself in the vanguard of municipal waste management. In 2014, the County continued to demonstrate why it is considered a regional leader in the field of environmental management by posting a municipal (residential) recycling rate of 50% and an overall recycling rate of 48%, far outpacing the EPA national average of 34.5% and the New York State average of 36%. The County's recycling rate includes a wide variety of materials collected and diverted from the solid waste stream beyond cans, bottles and paper collected curbside, such as roadway millings, large bulk metals, construction debris, and composted organic waste.

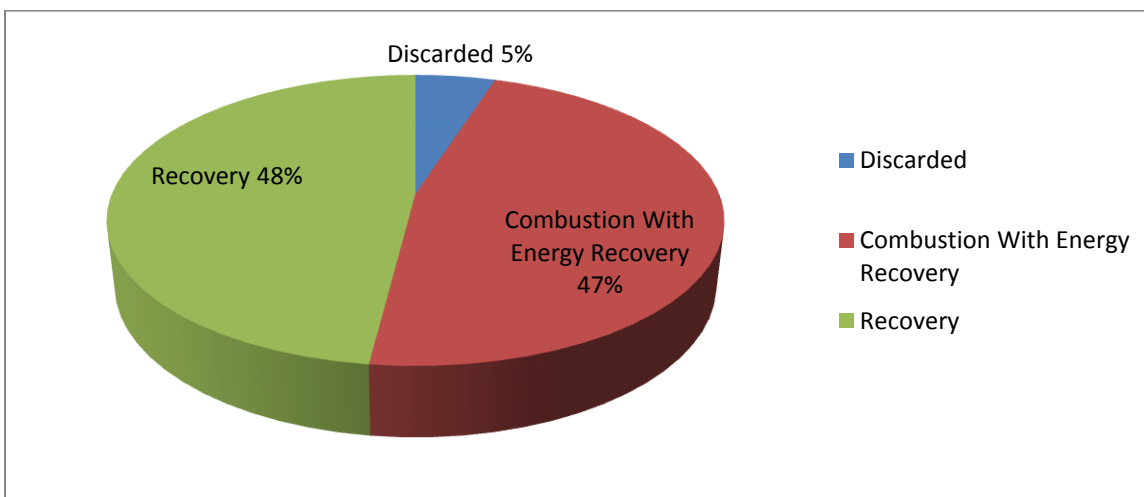
In December 2010, the New York State Department of Environmental Conservation finalized its Solid Waste Management Plan, which outlines a course of action for the next twenty years. The State's Plan, titled "Beyond Waste," identifies a new goal for all Planning Units to drastically reduce solid waste disposed (i.e., non-recyclable waste), eventually reaching 0.6 pounds per person per day ("PPD") by 2030. Westchester is working very hard to meet the State's goal. In 2014, the County's average of 3.75 PPD outperformed the New York State average of 4.1 PPD. Although the County rate is higher than the national average of 2.87 PPD (2012 rate), 54% of the waste generated in the U.S. ended up discarded in a landfill, while only 5% of Westchester's waste stream (garbage and recyclables combined) went to a landfill. In addition, 47% of Westchester's waste stream was diverted to a waste-to-energy facility, where it was used as a feedstock to produce clean energy; this constitutes 90% of the County's garbage after the separation of recyclables. In comparison, only 12% of the nation's waste stream was delivered to an energy recovery facility. (See the charts on the next page.)

Recycling in Westchester continues to make good sense economically as well as environmentally. In 2014, 73,013 tons of curbside recyclables were delivered to the Daniel P. Thomas Material Recovery Facility (MRF). County revenue from the sale of these MRF recyclables totaled \$5,548,717. In addition to the revenue from the sale of recyclables, taxpayers would have paid over \$6 million had these recyclables been processed as garbage. The total of recycling revenue plus the savings realized from not having to process this material as garbage was over \$11.5 million.

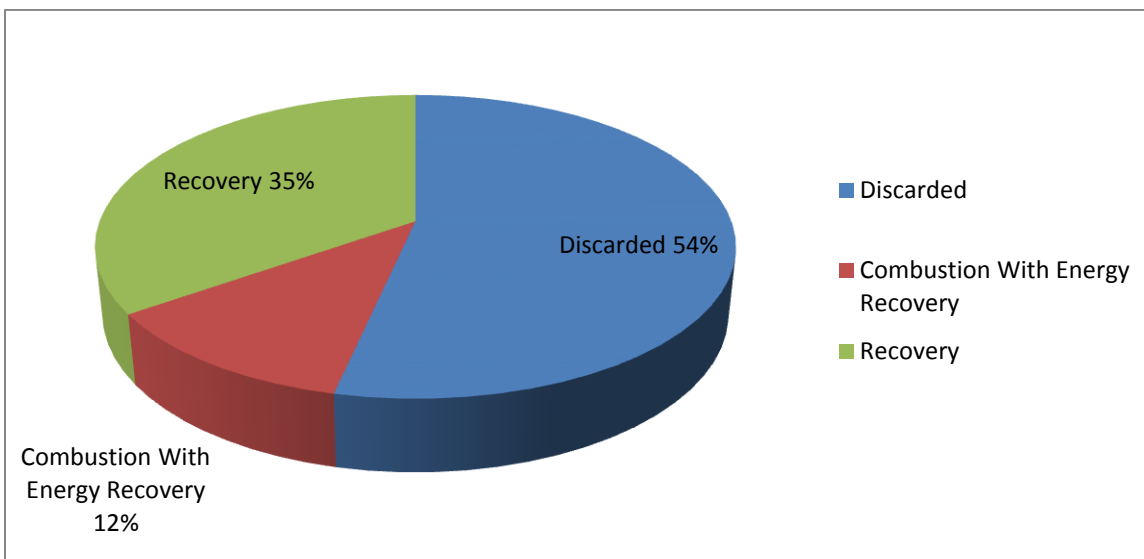
DEF believes that the environmental programs in place in Westchester County, including recycling enforcement activities, tours at the County's newly renovated Material Recovery Facility's Education Center, the recycling of municipally collected yard waste under the Organic Yard Waste Transfer Station IMA Program, operation of the Household-Material Recovery

Facility, the support of food rescue and diversion efforts, and other programs that will be discussed in this report, all contribute to Westchester’s excellent performance. The County, through the work of DEF, remains committed to serving as a leader in the environmental field in 2015 and beyond.

Management of MSW in Westchester County in 2014



EPA Reported Management of MSW in the United States (2012)



- Discarded** means waste disposed of in landfills.
- Combustion with Energy Recovery** means waste used in an energy recovery process, with energy recovered from waste converted into useable heat, electricity or fuel.
- Recovery** means waste recycled.

DEF/Recycling & Solid Waste Facilities

1. Material Recovery Facility (MRF):

The MRF, located in Yonkers, continues to serve as the primary recycling facility for the municipalities in the Refuse Disposal District. The items delivered and processed at the MRF, and sold to recycling markets include: aluminum (cans and foil), ferrous metals, plastics (coded 1–7), plastic boat wrap, newspaper, corrugated cardboard, and assorted paper, including office paper and paper collected by the County’s two Mobile Shredders.

In 2011, the MRF underwent a significant renovation, replacing the equipment that sorts metal, glass and plastic recyclables. The new equipment includes state of the art optical sorters, which allow the County to process all plastics coded #1–7. The previous commingled sorting system was equipped to handle only plastics coded #1–2. The new system also offers greater efficiency, capturing plastic material that was previously rejected as garbage under the old system. Following the retrofit, the quantity of plastics recycled and the revenue from those plastics increased by over 50%.



In 2014, 73,013 tons of recyclables were brought to the MRF and processed, generating more than \$5.5 million in revenue. In addition, in 2014 taxpayers saved over \$6 million by not having to dispose of these recyclables as garbage.

2. Charles Point Waste-to-Energy Facility:



Operated by Wheelabrator Technologies, the Charles Point Waste-to-Energy Facility, located in the City of Peekskill, processes up to 2,250 tons of household and commercial waste per day. Refuse collected from Westchester municipalities and commercial customers is delivered to this fully enclosed facility, where it is transferred to utility-type boilers that recover thermal energy in the form of high-pressure steam. The steam-powered turbines generate 63,000 kilowatts of electricity an hour — enough to power 67,000 homes. Additional steam not required for

electricity generation is marketed to a nearby commercial customer for use as a clean, reliable, and renewable energy source.

In 2014, the facility processed 684,929 tons of solid waste to generate electricity, while 12,193 tons of ferrous metal were extracted from the ash residue and properly recycled.

In 2014, RDD municipalities delivered 353,768 tons of solid waste to the facility, a 1.68% decrease from 2013. This marked the seventh consecutive year that the volume of RDD solid waste decreased (540,217 tons in 2008 to 353,768 tons in 2014).

3. County Transfer Stations:

Three County Transfer Stations located in White Plains, Mount Vernon and Yonkers offer RDD municipalities reduced costs for delivering the solid waste they collect by significantly reducing their travel time. The County provides transport of the waste from the transfer stations to the Charles Point Facility in Peekskill. In 2014, RDD municipalities in the northern part of the county delivered 73,490 tons of solid waste directly to Charles Point, while southern District municipalities delivered 280,333 tons of solid waste to these three transfer stations, which comprised close to 80% of the solid waste collected by RDD municipalities.

4. Household-Material Recovery Facility (H-MRF):

The H-MRF, located on the County's Grasslands Campus in Valhalla, opened in April 2012 to provide a geographically centralized location for residents to dispose of hard-to-get-rid-of household wastes, including hazardous chemicals, cleaning products, tires, rechargeable batteries, Freon-containing appliances, electronic waste, propane tanks, and expired or unwanted medications. The H-MRF also offers shredding of residents' confidential documents. Residents of the Refuse Disposal District (RDD) are able to use the facility at no cost, while Westchester County residents that do not reside within the RDD are required to pay a small fee based on the type and amount of materials they deliver. Whenever possible, materials collected at the facility are recycled; all other materials are disposed of in a safe and environmentally sound manner.



In 2014, 3,990 households visited the H-MRF and delivered a total of 372,927 lbs. of household wastes as follows:

- 55,744 lbs. of flammables
- 1,666 lbs. of oxidizers
- 14,735 lbs. of pesticides

- 15,109 lbs. of corrosive liquids
- 310 lbs. of mercury
- 6,432 lbs. of non-hazardous liquids
- 3,698 lbs. of fluorescent bulbs
- 232 lbs. of ballasts
- 1,544 lbs. of fire extinguishers
- 36,640 lbs. of bulk metals
- 10,980 lbs. of scrap tires
- 88,033 lbs. of electronic waste
- 1,344 lbs. of rechargeable batteries
- 136,460 lbs. of confidential documents for shredding

The H-MRF also accepts chemicals and fluorescent light bulbs from Conditionally Exempt Small Quantity Generators (CESQGs). This enables local schools, municipal and county departments and small businesses to dispose of these items properly. In 2014, 18 CESQGs delivered over one ton of hazardous waste and close to 4,000 fluorescent bulbs for safe and environmentally sound disposal.

RECYCLING PROGRAMS

5. Recycling Education:



The MRF Education and Conference Center allows visitors to observe the operation of a garbage and recyclable transfer station. MRF tours are free of charge, given on an appointment basis, and educate participants on the management of solid waste and recyclables in Westchester. Groups are taken to an observation tower to view equipment that separates, sorts, and prepares materials to be sold to third party recyclers. From an observation tower, visitors can see the tipping floor, where truckloads of recyclables are delivered. A brief presentation and educational video is shown to explain the benefits of recycling. Tours, given to students and persons of all age groups (kindergarten and above), typically last between 45 minutes to one hour. In 2014, DEF unveiled the Center's new *Recycled Material Art Gallery*, where art pieces made by Westchester County artists were created out of recycled and reused materials. The Education and Conference Center accommodates thousands of visitors yearly, including students from schools throughout Westchester. DEF staffs also conduct Collection Crew Info Sessions as requested for local municipal sanitation departments. The sessions review the provisions of the Source Separation Law and collection protocols.

6. Food Rescue and Diversion:

The New York State Department of Environmental Conservation (NYSDEC) estimates that 18 % of all garbage that is thrown away is comprised of food scraps. Nationally, only about 3 % of food waste is diverted from disposal by means of composting, 1.5% by food recovery initiatives to help feed the hungry.

Food recovery to help feed the hungry is one of DEF's top priorities. The County supports the distribution of untouched, fresh or packaged food to local houses of worship, food pantries and soup kitchens, through cooperative efforts with organizations like the Food Bank for Westchester and Rock & Wrap It Up!, Inc.

The Food Bank for Westchester estimates that 200,000 people, almost a quarter of Westchester County residents (primarily children and elderly) are hungry or at risk of hunger, while food waste makes up a significant portion of our waste stream. Freezers are crucial to food recovery efforts as unserved food oftentimes cannot be picked up immediately. In 2014, at the request of DEF, the County's Bureau of Purchase and Supply established a file price for freezers to make them accessible to our local public schools and municipalities. Food recovery organizations can then connect freezer host sites to organizations that serve and distribute food. DEF plans to purchase and loan an initial twenty freezers to qualifying food outlets. This investment is eligible for 50% reimbursement under a NYSDEC Waste Reduction and Recycling Grant program.

In 2014, DEF launched a new program to address food waste reduction in conjunction with the Arc of Westchester, the County's largest organization for people with developmental disabilities. In 2014, Arc of Westchester program participants partook in environmental education seminars organized by DEF. Topics included waste management, food rescue, composting, gardening, and green career opportunities. The seminars were conducted to prepare program participants on the operation of an in-vessel composting unit to be purchased by the County and installed at H-MRF in Valhalla in 2015. For this program, food waste will be collected from the Westchester Medical Center and Westchester Community College. The resulting compost will be utilized in community gardens as maintained by the Food Bank for Westchester and by the Department of Public Works for use on County grounds. This program involves two grants (a NYSDEC grant for 50% reimbursement of DEF's purchase of the in-vessel composting unit and related equipment; and a grant from the Westchester Community Foundation to subsidize the Arc of Westchester's expenses). The project will successfully divert food waste from the garbage, while turning it into a useable end product to benefit Westchester County. It is designed to educate residents, businesses, schools, and other institutions on technology available to divert food waste. Moreover, the project will train developmentally disabled individuals on useful job skills in the environmental industry. Program participants and contributors include: DEF, the Arc of Westchester, the Westchester County Department of Public Works, the Westchester Green Business Challenge, the Food Bank for Westchester, Westchester Community College, Westchester Medical Center, and Hilltop Hanover Farm.

7. Medication Take-Back Program:

Residents are able to drop off unwanted or expired medications at the H-MRF on the first Tuesday of every month. Following the close of business, Westchester County Department of Public Safety personnel supervise transportation of the collected medications to the Waste-to-Energy Facility in Peekskill for destruction. In 2014, 392 households disposed of 4,861 lbs. of medications at the H-MRF. In addition, a total of 25 Westchester County Police Departments participated in the Medication Take-Back Program by hosting MedReturn Units at their stations. These MedReturn Units allow residents to drop off unwanted medications confidentially and conveniently, 24/7. Of the 4,861 lbs. of medication collected in 2014, 3,583 lbs. were collected by Police Departments and brought to the H-MRF on the first Tuesday of each month.



8. Mobile Shredder Events:



In May 2014, Westchester introduced the first compressed natural gas (CNG)-powered Mobile Paper Shredder vehicle in North America. The CNG Mobile Shredder offers power similar to the diesel Mobile Shredder that DEF has been operating since 2007, but runs cleaner, much quieter, and with a reduction in fuel costs. In addition, DEF received 50% of the total cost of the vehicle (\$150, 000) through a NYS DEC grant.

In 2014, DEF continued to conduct Mobile Shredder events at various locations throughout the County. Residents are permitted to bring to the events up to four file-size boxes of personal papers to be shredded and recycled. In 2014, a total of 12,900 households utilized the Mobile Shredder and over 621 tons of paper were shredded and sold to recyclers.

9. Boat Shrink Wrap Recycling Program:

In 2014, Westchester County's Boat Shrink Wrap Recycling program collected 40 tons of plastic used to protect boats during the winter from participating Long Island Sound and Hudson River marinas. An average boat can use as much as 14 lbs. of recyclable wrap (low-density polyethylene or LDPE), which would normally be thrown away in the spring. The County sells the collected plastic to recyclers to generate revenue.



Each spring, marinas along Long Island Sound and the Hudson River bring the wrap to any of the twenty designated collection points along the waterfronts. DEF picks up and delivers the material to the MRF. In 2014, collected boat wrap was sold for about \$110 per ton.

10. Westchester County's Recycling HelpLine:

The County's Recycling HelpLine at (914) 813-5425 serves as an informational tool, assisting local residents and businesses by providing accurate answers to questions regarding waste management and recycling. The HelpLine is also the number to call for residents looking to make an H-MRF reservation over the phone. It is operated by staff from United Way trained to answer frequently asked recycling questions and to transfer more involved questions to appropriate DEF staff. The Recycling HelpLine also provides residents with information for participating in various County sponsored events such as residential shredding events featuring one of the Mobile Shredders. Additionally, the HelpLine assists residents with questions related specifically to their particular locale, since waste collection programs vary from one municipality to another. In 2014, the Recycling HelpLine handled 8,660 inquiries.

11. Electronic Waste Recycling Program:

DEF provides electronic waste (e-waste) collection containers at 27 RDD municipal sites, where RDD residents can dispose of their unwanted electronics. In 2014, the County diverted over 2,000 tons of e-waste from the solid waste stream through this program. Following enactment of the Electronics Manufacturer Responsibility Law in Spring 2011, the County has eliminated its e-waste disposal costs (which averaged about \$100,000 per month before passage of the law). In 2014, the County received about \$17,000 in revenue through the sale of e-waste to a qualified e-waste recycler.

12. Organic Yard Waste Transfer Station IMA Program:

Starting in 1998, the Westchester County Board of Legislators authorized the County to enter into 5-year Inter-Municipal Agreements (IMAs) with RDD municipalities to operate the Organic Yard Waste Transfer Station Program. The current contract period runs April 2013 to March 2018. Each participating municipality collects yard waste at a municipal depot. The County arranges for collection from the depot and transport to commercial composting facilities. As an economic incentive to divert yard waste from the solid waste stream, RDD member municipalities pay less per ton for collected yard waste than for municipal solid waste. The program allows participants to increase local recycling rates and to save money by diverting yard waste from the waste stream. In 2014, the program collected 130,955 tons of yard waste. Municipalities that currently host an Organic Yard Waste Transfer station are: Briarcliff Manor, Cortlandt, Croton, Eastchester, Greenburgh, Harrison, Irvington, Larchmont, Village and Town of Mamaroneck, Mt. Kisco, Mt. Vernon, New Rochelle, Ossining Village, Peekskill, Port Chester, Rye City, Scarsdale, Sleepy Hollow, Tarrytown, White Plains, and Yonkers. By hosting a site, these municipalities also agree to accept yard waste from neighboring municipalities.

-

13. Recycling Enforcement:

In 2014, DEF inspectors continued to inspect loads tipped at both private and municipal transfer stations located within Westchester, looking for improperly mixed loads of garbage and recyclables in violation of the Source Separation Law (SSL). They also continued to inspect businesses, schools, multi-tenant facilities, and other institutions throughout the County to ensure compliance with the SSL.

During 2014 they inspected 6,241 loads of garbage and recyclables delivered to transfer stations in Westchester County. The inspections consisted of 2,578 loads hauled by municipal haulers and 3,654 loads hauled by private haulers. In addition, DEF inspectors conducted 752 waste generator site inspections.



In 2014, DEF issued 107 Notices of Hearing to haulers and waste generators for recycling violations. Of the violations issued, 20 were issued to municipal haulers, 11 were issued to private haulers, and 76 were issued to waste generators.

In 2014, DEF collected a total of \$13,600 in recycling violation fines.

REFUSE DISPOSAL DISTRICT #1

14. Refuse Disposal District Advisory Board:

County law requires this board to be composed of 14 volunteers and 4 ex-officio members to advise the Solid Waste Division. It advises the RDD on solid waste issues and policy. Five of the County's cities are represented; seven members represent towns, and villages.

The 2014 board members were:

City Representatives:

1. Jesse Crell, P.E. - White Plains
2. George Mottarella, P.E. - City of Rye - Chair
3. Alex Tergis - New Rochelle
4. Thomas Meier - Yonkers
5. Curtis Woods - Mount Vernon

Town & Village Representatives:

1. Jeffery Coleman - Cortlandt
2. Benedict Salanitro - Town of Rye
3. Peter Sciliano - Mt. Pleasant
4. Peter Liguori - Greenburgh
5. Stephen Altieri - Town of Mamaroneck
6. Rocco Circosta – Village of Ossining
7. Michael Gunther – Hastings-on-Hudson

Attachment 1: Westchester County Recycling Rate 2014

MUNICIPALLY COLLECTED WASTE & RECYCLING IN TONS	
Curbside Commingled Containers and Mixed Paper	86,983
Yard Waste Recycled	184,843
Bulk Metal Recycled	14,542
Construction & Demolition Debris and Sewage Sludge Recycled	86,863
Other Recyclables: Tires, Electronics, Anti-freeze, Motor Oil, Vehicle Batteries, Textiles, and Deposit Beverage Containers	15,609
TOTAL RECYCLED WASTE	388,840
TOTAL DISPOSED WASTE	386,839
TOTAL RECYCLED & DISPOSED*	775,679
MUNICIPAL RECYCLING RATE	50%

PRIVATELY COLLECTED WASTE & RECYCLING IN TONS	
Source Separated Recyclables & Scrap Metal	139,666
Yard Waste Recycled	35,689
Construction & Demolition Debris (C&D) Recycled	150,865
Construction & Demolition Debris Disposed	133,945
Garbage Disposed	262,170
TOTAL RECYCLED WASTE	326,220
TOTAL DISPOSED C&D AND GARBAGE	396,115
TOTAL RECYCLED & DISPOSED*	722,335
PRIVATE HAULER RECYCLING RATE	45%

WESTCHESTER COUNTY TOTAL COLLECTED WASTE & RECYCLING IN TONS	
TOTAL RECYCLED WASTE	715,060
TOTAL DISPOSED WASTE	782,954
TOTAL RECYCLED & DISPOSED*	1,498,014
PPPD Recycled**	1.39
PPPD Disposed**	3.75
WESTCHESTER COUNTY 2014 RECYCLING RATE	48%

*Total solid waste generation (recycled and disposed waste combined) was reduced by 69,024 tons, or 4.4%, in 2014 compared to 2013.

**Pounds Per Person Per Day Recycled does not include repurposed or recycling tonnage attributed to yard waste, construction debris, bulk metal or sludge.

Attachment 2: Municipally Collected Waste & Recyclables

Municipality	Totals			
	Recycled Waste	Disposed Waste	Total Solid Waste Generated (Recycled & Disposed)	Percent Recycled (Total)
ARDSLEY	1,393	2,123	3,516	40%
BEDFORD	5,136	8,623	13,759	37%
BRIARCLIFF	4,195	2,961	7,156	59%
BRONXVILLE	6,280	2,250	8,530	74%
BUCHANAN	530	1,255	1,785	30%
CORTLANDT	7,019	14,528	21,547	33%
CROTON-ON-HUDSON	3,856	3,528	7,384	52%
DOBBS FERRY	1,932	5,030	6,962	28%
EASTCHESTER	9,190	7,888	17,078	54%
ELMSFORD	2,168	1,631	3,799	57%
GREENBURGH	19,611	16,613	36,224	54%
HARRISON	11,455	10,908	22,363	51%
HASTINGS-ON-HUDSON	1,955	3,410	5,365	36%
IRVINGTON	3,486	3,279	6,765	52%
LARCHMNT/M'MARNCK	13,146	8,078	21,224	62%
LEWISBORO	2,995	7,400	10,395	29%
MAMARONECK- VILLAGE	6,271	8,397	14,668	43%
MT. KISCO	3,052	3,898	6,950	44%
MT. PLEASANT	8,540	8,683	17,223	50%
MT. VERNON	17,965	28,519	46,484	39%
NEW CASTLE	11,833	6,119	17,952	66%
NEW ROCHELLE	27,662	29,253	56,915	49%
NORTH CASTLE	2,342	4,026	6,368	37%
NORTH SALEM	669	2,505	3,174	21%
OSSINING - TOWN	1,102	1,771	2,873	38%
OSSINING - VILLAGE	14,077	9,388	23,465	60%
PEEKSKILL	6,837	7,657	14,494	47%
PELHAM	3,727	2,895	6,622	56%
PELHAM MANOR	3,029	2,199	5,228	58%
PLEASANTVILLE	3,424	2,274	5,698	60%
PORT CHESTER	12,856	12,945	25,801	50%
POUND RIDGE	1,171	4,166	5,337	22%
RYE BROOK	8,174	2,984	11,158	73%
RYE CITY	7,901	5,382	13,283	59%
SCARSDALE	17,953	6,975	24,928	72%
SLEEPY HOLLOW	3,364	4,394	7,758	43%
SOMERS	3,381	8,252	11,633	29%
TARRYTOWN	2,908	4,265	7,173	41%
TUCKAHOE	4,217	2,649	6,866	61%
WESTCHESTER CO. PROGRAMS *	22,979	4,170	27,149	N/A
WHITE PLAINS	24,941	29,219	54,160	46%
YONKERS	55,413	83,391	138,804	40%
YORKTOWN	18,705	13,151	31,856	59%
TOTAL	388,840	386,839	775,679	50%

* Included are materials recycled in Westchester County but cannot be allocated between municipalities:
12,193 tons of metal from the Resource Recovery Facility (and extracted from the "Disposed Waste" column)
8,426 tons of sludge for beneficial reuse.