HAMLTON TOWNSHIP

WATER POLLUTION CONTROL

ANNUAL REPORT

2023

HAMILTON TOWNSHIP

DEPARTMENT OF WATER POLLUTION CONTROL

2023 Annual Report

January 2024

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Hamilton Township
Department of Water Pollution Control
2023 Annual Report

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share."

- Lady Bird Johnson

Mission

The primary mission of the Hamilton Township Department of Water Pollution Control (WPC) is to protect the public and the environment by providing high quality wastewater utility service. WPC is dedicated to serving the residents of Hamilton Township, Robbinsville Township and the commercial ratepayers of the WPC service area.

Facilities Overview

The Hamilton Township WPC was initially constructed in the late 1930's and underwent substantial upgrades in 1953, 1968, and 1975. WPC operates a regional wastewater treatment facility and collection system with an New Jersey Pollution Discharge Elimination System (NJPDES) permitted capacity of sixteen (16) million gallons per day (MGD), and a 2023 actual average daily flow of 7. 2 MGD. Wastewater treatment plants are also known as water resource recovery facilities. The utility has been in operation for over 80 years and is currently serving over 100,000 residents from three municipalities; namely, Hamilton Township (Mercer County), Robbinsville Township and a few specific facilities in West Windsor Township. The facilities in West Windsor include the Mercer County Community College, the adjacent park facility and related outparcels. The Hamilton Township wastewater collection system includes 350 miles of sewer pipes and 27 pumping stations in its 40-square mile service area. Additionally, there are 23 privately owned and operated pump stations in Hamilton. WPC also provides the licensing, and operational and maintenance responsibilities for the ten (10) Robbinsville Township pump stations and receives compensation from Robbinsville for this service. Refer to the Fast Facts on page 5.

The approved Mercer County Wastewater Management Plan (WMP) includes a chapter for Hamilton Township wastewater management. In 2019, Mercer County submitted the updated

draft of the WMP to the New Jersey Department of Environmental Protection (NJDEP). WPC's facilities reside in the Assunpink, Crosswicks and Doctors Creek Watershed. Wastewater cleaned by the treatment plant, also known as effluent, is discharged to the Crosswicks Creek. The plant produces secondary effluent using both trickling filter and rotating biological contactor processes. To reduce volume and thus save money, sludge is thickened, digested and then dewatered using belt filter presses. The sludge cake/grit/screenings are then hauled to the GROWS North Landfill located in Morrisville, Pennsylvania. Hamilton does not have a combined sewer system (CSS) in its collection system. A CSS occurs when stormwater and wastewater combine in the collection system before reaching the treatment plant.

WPC continues to be environmentally proactive by capturing methane to heat digesting sludge, replacing all lighting within the plant to energy efficient lighting and converting mowed lawn to natural vegetation.

Overall Progress

The wastewater industry is an essential service where employees are required to be on-site around the clock to operate and maintain the treatment plant and collection system.

The sewer rate study completed in 2022 concluded among other things, that it could more accurately predict rate increases when the Master Plan is completed. So in 2022, the Wastewater Master Plan was started and is expected to be completed in 2024. WPC infrastructure, operation and maintenance are funded almost entirely by sewer taxes plus a small amount received from connection fees. Before 2020, Hamilton's sewer service rate had not increased since 2008, yet still remains among the lowest in the region.

In 2023, WPC continued its efforts toward optimizing plant operations, performing capital improvements and fortifying asset management. WPC followed the recommendations established by the New Jersey Clean Water Council, which included a mandate for sustainable asset management by using the United States Environmental Protection Agency (USEPA) Capacity Assurance, Management, Operations and Maintenance (CMOM) approach to achieve this mandate. WPC continued to comply with the requirements of a large list of local, county, state and federal regulations; refer to page 16.

Like the rest of the United States relative to water and wastewater services, WPC faces the issue of an aging workforce and hiring personnel with suitable skills. Hamilton believes strongly in investing in jobs. With this in mind, WPC continues to provide career and annual safety training, foster a great-place-to-work environment, offer paid internships and examine succession planning alternatives. The Township works toward a diversified and inclusive workforce, with training to end harassment and discrimination in the work place.

Also like the rest of the United States, WPC faces aging infrastructure issues. With part of the plant and piping facilities still in operation since their original startup in the late 1930's, it is no wonder certain infrastructure needs to be replaced. While some have been replaced, it is time for some to be replaced again. The replacement or upgrade of aging infrastructure requires substantial money, thoughtfully planned over time, prioritizing our most critical needs first. Being proactive, is the safest and less expensive alternative. While emergency response is sometimes unavoidable, it is much more expensive, carries potential NJDEP fines and does not help instill public trust.

The master plan study or long-range capital plan, touched on earlier in this report, is slated to be completed in 2024. It will include not only thorough inspections of our facilities, but it will also produce an estimated cost for each upgrade/replacement anticipated to be needed over the next twenty (20) years, including the evaluation of alternatives.

TRAISR is one of the digitized tools WPC used daily to manage and map its assets, in addition to tracking work orders.

WPC infrastructure includes the piping collection system, some of it being over 80 years old. Age is only one factor used in prioritizing the need to repair, line or replace a pipe. Meanwhile, WPC continued to inspect, televise and test pipes to verify integrity.

WPC continued efforts to reduce spending where possible. This included improving labor efforts, reducing energy and chemical use when possible, and evaluating methods to reduce paperwork by conducting more work electronically. For the last couple of years, electricity consumption at the treatment plant continued to go down but the cost did not due to the increased electricity rates.

Using the extensive data submitted to the Delaware River Basin Commission (DRBC) over the past few years, the DRBC continued to refine their modeling analyses of the Delaware River and subsequent reports of findings and recommendations. The possible tightening of our NJPDES permit appears to pertain primarily to ammonia removal and is based on the on-going dissolved oxygen modeling of the Delaware River, and affordability studies, both by the DRBC. If or when more stringent permit limits are required, connection fees and user charges will be re-evaluated to confirm they include the costs related to capital improvements and wastewater utility operations and maintenance. This, while discussions about PFAS (per- and polyfluoroalkyl substances) regulations and associated treatment crisscross the country.

In order to comply with environmental regulations, all aspects of WPC plant operations must be continuously monitored. One aspect of this monitoring includes taking wastewater and sludge samples from critical locations throughout the treatment plant and analyzing them in-house. WPC continued to perform the required analyses to determine compliance with permit

requirements in addition to the daily process bench tests performed 365 days per year. Except for wastewater bioassays, metals, oil and grease, and sludge analyses, all other wastewater sampling and conventional pollutant analyses are completed at WPC in our State certified laboratory.

For projects within the 208-sewer service development areas, WPC continued to perform development reviews for new applications proposing to connect to the sewer collection system. This year, over 110 construction projects in the Township were reviewed for pump station and collection system capacity, estimated wastewater flow and their technical specifications, and if needed, NJDEP Treatment Works Approval submissions.

WPC received and responded to 320 Hamilton Township HamStat Q-Alerts and direct phone calls in 2023. This work included residential and main line sanitary sewer blockages, storm drainage issues, and a few odor concerns.

The Department of WPC is budgeted for 70 employees who are unionized and follow civil service requirements. Efforts continued to improve the skill level of the entire work force with a variety of technical and management training classes. WPC also continued its cross-training program to develop employees' knowledge in all work areas.

WPC efforts are divided into two (2) primary categories, "inside" and "outside" work tasks. "Inside" includes the operation and maintenance of the treatment plant. "Outside" includes the operation and maintenance of the pump stations and maintenance of the collection system (jetting, vacuuming and televising). Since Covid, "Stop – up" service to residential properties for blockages in their house laterals has continued to be suspended.

Safety continued to be a primary goal throughout the entire WPC Department. Safety meetings with supervisors were held regularly and periodically with individual groups in order to focus attention on the varying safety issues. In addition, safety suggestions were received from employees in the "safety suggestion box".

WPC continued its award-winning Educational Outreach Program in which environmental scientists from WPC presented a program on Water Pollution and the Environment to various Township schools, and conducted numerous on-site tours for a variety of community groups.

Refer to the Hamilton Township Department of Community Planning and Compliance for stormwater and flood mitigation initiatives and accomplishments. In recent years, Rutgers Cooperative Extension - Water Resources Program has made tremendous strides in developing and implementing solutions to flooding and storm water issues facing Hamilton Township.

FAST FACTS for 2023	
Hamilton Households & Commercial Users	30,766 (2023)
Robbinsville Households & Commercial Users	5,092 (2023)
Total Households & Commercial Users	35,858
Hamilton Permitted Industries	4
NJPDES Permitted Plant Capacity	16,000,000 gallons per day
Total Plant Average Daily Flow	7,183,000 gallons per day
Robbinsville: Average Daily Flow	1,497,000 gallons per day
Total Cumulative Flow Treated per Year	2,622,000,000 gallons
Hamilton: Collection System	350 miles of sewer pipe
Hamilton: Pump Stations	27
Hamilton: Manholes	8060
Robbinsville: Collection System	73 miles of sewer pipe
Robbinsville: Pump Stations	10
Robbinsville: Manholes	1,512
For Hamilton WPC:	
WPC Plant Electric Consumption	3,643,915 kilowatts
Pump Stations Electric Consumption	1,328,350 kilowatts
Sludge Cake Disposed	4903 tons
Grit & Screenings Disposed	91 tons
Approved Operating Budget – CY2023	$21,627,000
Approved Capital Budget – CY2023	$10,976,000
Acreage of Treatment Plant	35.9 acres
Acreage of Pumping Stations	7.9 acres
Number of Buildings	50
Number of Pumps	288
Number of Valves	974
Number of Motors	495
Number of Heating Systems	21

Wastewater Treatment Plant – Major Projects for 2023

In a continuing effort to maintain the efficiency of treatment operations and improve overall infrastructure condition, WPC has initiated and/or completed the following significant plant improvement projects during 2023:

Plant Wide Fiber Optic Network Backbone

This project has been placed on a temporary hold.

Grit Chamber Outlet Structure Rehabilitation

The construction contract for the rehabilitation of the deteriorated grit removal chamber outlet structure and isolation sluice gates was bid and subsequently awarded in late 2022. The project has been completed and full plant bypass pumping was removed. During the project, WPC took the opportunity to inspect the normally submerged pipes and chambers associated with the bypass and discovered areas in need of repair. The appropriate steps were taken to effect the necessary repairs while under bypass, resulting in substantial financial savings.

Replacement of Five Rotating Biological Contactors (RBC's)

The heart of the biological treatment employed at WPC are 48 Rotating Biological Contactors (RBC's). This is a fixed film biological process that employs 100,000 to 150,000 square feet of corrugated plastic, per contactor, mounted to a shaft that rotates within the wastewater stream. The plastic media acts as a surface for the growth of the biological film that treats the wastewater as it flows over the rotating contactors. In April of 2023 a resolution was adopted authorizing the Township to obtain financing through the New Jersey Water Bank (NJWB). Design was completed in the summer and in September the construction contract was awarded. A Preconstruction meeting has been held and shop drawing review is in progress as of the end of the 2023.

Sludge Dewatering Improvements

With the success of the pilot study to determine the feasibility of replacing the existing belt filter presses with screw presses, we have engaged the services of a consultant to perform a preliminary design report to focus the project scope in advance of soliciting proposals for design and construction services. We anticipate beginning this effort in the early part of 2024.

Master Plan

The development of a Master Plan, or long range capital plan, is part of best management practices for all critical infrastructure. After being awarded in the latter portion of 2022, the Consultant performed thorough condition assessments of the treatment plant and pumping stations. From this, a likelihood of failure was assigned to each pump station, and unit process

within the plant. This, in conjunction with a consequence of failure score, will be used to assign an overall risk score to each location which will be used to help prioritize capital improvements over a twenty-year planning horizon. As of the end of 2023, preliminary risk scores have been submitted to WPC for review and consensus before finalizing this portion of the evaluation and moving on to the assessment of unit process.

Pump Stations and Collection System – Major Projects for 2023

Efforts this year focused on pump station upgrades, piping repairs, and continued sanitary sewer gravity and force main condition inspections. In a continuing effort to maintain the efficiency of the pump stations and collection system and improve overall infrastructure condition, WPC has initiated and/or completed the following significant improvement projects during 2023:

Deutzville Pump Station Force Main Installation
The majority of the engineering design to replace the 1,950 linear feet of the Deutzville pump station force main that was not replaced in 2012 was completed in 2021. The location of the new force main crosses Green Acres property and other residential properties which required additional engineering design considerations and proposed property easements. The force main route had a minor modification in 2022. Securing easements for the new force main route continued in 2023.

NJDOT Pump Station Replacement
The existing NJDOT Pump Station on Kuser Road was installed originally to serve the low volume of wastewater flow from the NJDOT facility near Route 130. This pump station is at capacity. In order to serve projected new development in the area, the pump station and force main require replacement with ones that have more capacity. The engineering design and bid documents for the new station were completed 2023. Also in 2023, the project was bid, awarded to a contractor, and initial project activities, such as equipment ordering, were conducted.

Yardville-Groveville Pump Station Improvements
The rehabilitation of the pump station has been completed and the station has been running successfully since the fall of 2023. As of the end of the year, project closeout efforts were nearly complete.

Melody Estates and Middleton Drive Pump Station Replacements
In September of 2022 a resolution was adopted authorizing the Township to obtain financing through the New Jersey Water Bank (NJWB). Engineering design and contract document

preparation continued in 2023 for replacement of the Melody Estates and Middleton Drive Pump Stations.

Pump Station Emergency Generators
In 2023 engineering design and contract document preparation were completed, and the project bid and awarded. This project included three new pump station generators and one replacement. In addition, initial project tasks, such as ordering equipment and installing foundations were begun later in 2023.

Collection System Evaluation
A comprehensive evaluation of the collection system was initiated in 2023 by a consulting engineer to properly operate, maintain, and accommodate future growth for the next 20 years. This evaluation involves the review of existing data and mapping, rehabilitation work completed and planned, known and suspected sewer capacity issues, and future sewer needs in both Hamilton and adjoining Townships.

Sanitary Sewer Rehabilitation
A contract to line approximately one mile of smaller diameter sanitary sewer pipe was prepared and awarded in 2023. A summary of collection system piping projects since 1997 is shown on Page 10.

Asset Management
The TRAISR system, used for asset management and Geographic Information System (GIS) information, service requests, and work orders, continued to be enhanced each year with more data. These data include linking scanned lateral connection information, and completed collection system repairs and rehabilitations (lining/coating). The data collected from the gravity main inspections are directly linked to the TRAISR database which streamlines review and prioritization of necessary rehabilitation and/or repairs.

Routine Maintenance of Sanitary Sewer Lines
Routine maintenance of sanitary sewer lines continued in 2023. This included cleaning of sewer pipe with high velocity water jetting and root and grease cutting as needed.

Inspection and Cleaning of Sanitary Sewer Lines
In-house sewer cleaning and televising inspections (closed circuit TV/CCTV) were conducted on 727 pipe segments totaling over 137,000 linear feet, or 26 miles, of gravity pipe in 2023. Hamilton Township's jet-vac trucks, jet trucks and a CCTV truck were used to accomplish this.

Underground Infrastructure Repair Projects
WPC was required to make numerous repairs to underground sewer piping and manholes in need of repair. The projects completed in 2023 are shown on page 11.

Sanitary Sewer Connection Permits
A summary of the total number of sanitary sewer connection permits and fees since 2008 is shown on page 13.

Collection System Piping Projects Summary Since 1997				
Project Name	**Year**	**Approx. Linear Feet**	**Diameter of Pipe (in)**	**Manhole Rehab included?**
E. Park Ave Replacement	1998	2,500	48	
W. Park Ave Lining	1998	500	48	
S. Broad St Lining	1999	1,800	24-27	
Route 130 Replacement	2001	800	18	New
Bowhill-Schiller Replacement/Lining	2004	3,750	15-21	
Wilson Ave Replacement	2005	2,575	8	New
Emeline Ave Replacement	2005	370	24	
Arena Dr Replacement	2006	1,930	8	New
Independence-Emeline Lining	2006	3,600	48	
W. Park-Independence Lining	2010	3,000	48	Yes
I-195 Headworks Slip-Lining	2010	350	78-66	
Yardville-Groveville Force Main Lining	2010	4,000	18	
Nottingham Way-Hamilton Ave Lining	2010	6,000	24-36	
Various Lining	2010	5,000	8-24	
North Branch of Pond Run Slip-Lining	2011	5,200	42-36	
Wert Ave Lining	2011	7,400	48	Yes
Bowhill Ave Replacement	2012	1,500	8-12	Yes
Various-Phase I Lining	2013	2,800	8-15	
Various-Phase II Lining	2013	14,000	8-21	Yes
Park Ave Force Main Replacement	2014	2,000	6	
Various-Phase II Lining	2014	28,000	8-21	Yes (184 MHs)
Hamilton Ave Lining	2014	5,000	24-30	Yes
Newkirk Ave Lining	2014	5,000	42	Yes
Cedar Lane Lining	2014	1,000	12	
Church St Lining	2016	600	12	
Various Pipe Lining	2018	25,000	6-15	
Various Pipe Lining	2019	30,000	6-15	
Crestwood Force Main Replacement	2019	600	18	
Yardville-Groveville Force Main Replacement	2020	1,900	6	
Various Pipe Lining	2020	3,250	8-10	
	Total	**169,425**		

UNDERGROUND REPAIR PROJECTS COMPLETED IN 2023		
Date	**Location**	**Repair Activity**
1/3/2023	Klockner Rd	MH5972-Replace broken casting
1/5-1/6/2023	1536 Genesee St	Replace lateral
1/11/23-1/12/23	2770 S. Broad St	Lateral repair
2/9/2023	Estates Blvd	MH5104-Replace broken casting
2/10/2023	102 Homestead Ave	Replace lateral
2/14/2023	103 Homestead Ave	Replace lateral
2/15/2023	131 Fenwood Ave	Lateral repair
2/21/2023	103 Bentley Ave	Lateral repair
2/27/2023	334 Montana Ave	Wye repair-hole patched
2/28/2023	37 Jarvie Dr	Lateral repair
3/1/2023	916 Hughes Dr	Lateral repair
3/8/2023	69 Mark Twain Dr	Install clean out at curb-in house job
3/15/23-3/16/23	127 Hillhurst Ave	Lateral repair
3/21/2023	46 Mark Twain Dr	Clean out raised to grade-in house
4/10/2023	414 Fenwood Ave	Lateral repair
4/11/2023	135 Marshall Ave(Lalor)	Lateral/Wye replacement
4/11/2023	Kuser Rd/Whitehorse Ave	MH4660-Casting replacement
4/13/2023	86 Marshall Ave	Lateral/Wye replacement
4/19/2023	420 Fenwood Ave	Lateral replacement
4/25/2023	264 Watson Ave	Lateral repair
5/9/2023	67 McAdoo Ave	Lateral repair
5/10/2023	6 Olszak Ct	Lateral repair
5/11-5/12/23	8 Shelley Lane	Lateral replacement
5/15/2023	11 Shelley Lane	Lateral replacement
5/16/2023	27 Shelley Lane	Lateral replacement
5/18/2023	26 Shelley Lane	Wye/Lateral replacement
5/18/2023	29 Shelley Lane	Lateral replacement
5/19/2023	31 Shelley Lane	Lateral replacement
5/24/2023	45 Axford Rd	Lateral repair
6/5/2023	Montana Ave	Curb restoration
6/7/2023	7 Matthew Dr	Lateral repair
6/12/2023	Genesee St, Matthew Dr	Curb/sidewalk restoration
7/13/2023	100 Whitehorse Ave	Lateral replacement
7/26/2023	Church St-YG PS	Tree/brush clearing
8/8/2023	Church St-YG PS	Root removal-lift hole grouting-WPC
8/23/2023	334 Wilfred Ave	Lateral repair
8/28/2023	306 Wilfred Ave	Clean out Installation
8/29/2023	Wilfred Ave And Mary St	Main repair
8/31/2023	169 Wilfred Ave	Lateral repair

9/25/2023	150 Hobson Ave	Lateral repair
10/4/2023	Sweet Briar Ave	MH4948 casting replacement
10/5/2023	80 Marshall Ave	Lateral repair
10/6/2023	1540 Genesee St	Wye/Lateral repair
10/17/2023	4 Leese Ave	Lateral repair-in house
10/26/2023	45 Woodside Ave(Whitehorse)	Lateral replacement
10/27/2023	66 Woodside Ave(Whitehorse)	Lateral replacement
11/30/2023	44 Runyon Dr	Lateral repair
12/28/2023	72 Burnside Ave	Lateral repair

SANITARY SEWER CONNECTION PERMITS				
Year	Commercial		Residential	
	Count	Fees	Count	Fees
2008	52	$660,504	11	$27,500
2009	54	$246,975	32	$80,000
2010	27	$171,350	129	$322,500
2011	85	$212,500	31	$77,500
2012	21	$137,648	78	$195,000
2013	31	$266,853	179	$418,375
2014	34	$458,184	106	$265,000
2015	32	$665,650	97	$242,500
2016	32	$393,072	124	$308,250
2017	37	$278,811	11	$51,917
2018	21	$320,525	99	$169,500
2019	21	$282,850	54	$132,500
2020	21	$540,525	70	$191,875
2021	38	$475,279	74	$240,303
2022	26	$269,347	12	$58,325
2023	25	$329,274	80	$185,750

Wastewater Treatment Plant – Work Proposed for 2024

Replacement of Five Rotating Biological Contactors

Construction was awarded in the fall of 2023 and shop drawing review is under way. Anticipated project duration and equipment lead time puts project completion in the spring of 2025.

Sludge Dewatering Improvements

WPC will be working with consultants to prepare a preliminary design report to narrow the project scope prior to soliciting proposals for design and bid documents for the replacement of the existing belt filter presses and associated piping, sludge pumps, and cake conveyance systems.

Master Plan

Preparation of the Master Plan began at the start of 2023, with a physical condition assessment. Efforts will continue with an assessment of plant unit processes and operational procedures. With this information, the consultant will generate a twenty year horizon Capital Improvement Plan (CIP) broken into near term (0-10 years), long term (11-20 years), and event driven capital project prioritization. Budgetary cost estimates will be generated and projects will be logically grouped for construction phasing.

1968 Digesters

The digesters are in need of draining and cleaning to remove accumulated grit and rags that reduce volume and digestive capacity and cause pump clogging issues in the downstream dewatering process. Coincident with the tank cleaning we will be undertaking the replacement of the four valves that isolate the digester tanks from the downstream pumps and piping within the building. These valves are difficult to operate, rendering pump service challenging, and which require the tanks to be empty to facilitate replacement.

Chemical Tank and Process Pump Replacement

As tank, pump and other equipment reach their useful life, they are evaluated and replaced.

Pump Stations and Collection System – Work Proposed for 2024

Inspection and Cleaning of Sanitary Sewer Lines

WPC will continue its Capacity, Management, Operations and Maintenance (CMOM) efforts to accurately assess the overall condition of the collection system infrastructure through use of zoom and CCTV camera inspections, and from ongoing maintenance activities. This information

is linked to the Traisr GIS system, and used to document maintenance activities and prioritize capital projects.

Sanitary Sewer Rehabilitation
As WPC receives data from sanitary sewer inspections that are continuously completed in-house and by contractors. Defects within the system are then prioritized and put on lists based on category or type of work. WPC will continue to prioritize and issue contracts as needed for the excavation and repair of mains and laterals, and the rehabilitation of manholes and sanitary sewer piping. In 2024, a contract to rehabilitate via Cured-in-Place Pipe (CIPP) lining of approximately one mile of smaller diameter pipes will be completed.

Yardville-Groveville Force Main Rehabilitation/Replacement
An engineering evaluation and rehabilitation or replacement design for the remaining portion of the Yardville-Groveville Force Main is anticipated to be awarded in 2024.

Melody Estates and Middleton Drive Pump Station Replacements
It is anticipated that the final engineering design and contract award will be completed in 2024.

NJDOT Pump Station Replacement
This pump station replacement project is scheduled for completion and startup in 2024.

Deutzville Pump Station Force Main Installation
The engineering design and bid document preparation will be completed after obtaining the easements and resolving other property owner/Green Acres issues.

Pump Station Emergency Generators
It is anticipated that this project will be completed in 2024.

Klockner Road Pump Station Rehabilitation
Engineering design and bid document preparation was initiated in 2023. The scope of work will primarily include wet well and foundation concrete rehabilitation which requires bypass pumping of the station during the concrete work. It is anticipated that bids will be solicited and the project be awarded to a contractor in 2024.

Various Pump Station Wet Well Rehabilitation
In 2024 the evaluation and bid documents will be prepared for this project.

Collection System Evaluation
This evaluation is expected to be completed in 2024.

Regulatory Agency Review

WPC is a highly regulated facility and is subject to oversight by the following regulatory agencies and more.

1. US Environmental Protection Agency (USEPA)
    - Capacity Assurance, Management, Operations & Maintenance (CMOM)
    - Pretreatment
    - Sludge
    - Laboratory Certification
2. NJ Department of Environmental Protection (NJDEP)
    - Water Quality/NJPDES Regulations
    - Surface Water Quality Standards
    - Secondary Treatment Standards
    - Sludge Quality
    - Hazardous Waste
    - Air Quality
    - Lab Certification
    - Bioassay
    - Treatment Works Approvals
    - Underground Storage Tanks
    - Groundwater Monitoring
    - Backflow Preventer Permits
    - Pretreatment
    - Enforcement
    - Wetlands
    - Water Allocation
    - Stormwater
    - Site Remediation and Waste Management
3. NJ Integrated Water Quality Monitoring and Assessment
4. NJ Department of Health - Right to Know
5. NJ Department of Labor- Safety
6. NJ Department of Transportation - Road Opening
7. NJ Board of Public Utilities - One Call
8. Delaware River Basin Commission (DRBC)
9. Mercer County Soil Conservation District
10. Municipal Fire Inspections
11. Statewide Water Quality Management Plan
12. Interstate Environmental Commission
13. Federal Emergency Management Agency (FEMA)
14. Federal Highway Administration - CDL Testing
15. Federal Communications Commission
16. Nuclear Regulatory Commission

Workplace Safety

Because the WPC employees work in an industrial environment, workplace safety is of utmost importance. Proper training as well as the issuance of proper Personal Protection Equipment (PPE) is imperative for the safety of all workers. The operation and maintenance of wastewater treatment plants, pump stations and its associated collection system routinely include potential hazards such as pathogens, chemicals, confined spaces, hazardous atmospheric and environmental conditions, excessive heat, electrical voltage, moving parts, heavy machinery, traffic, and challenging weather.

Annual safety training, including, for example, confined space, forklift and Right-To-Know, is mandatory for all operation, maintenance and collection system personnel in order to review and simulate possible hazards. The identification of potential hazards and the review of the WPC proper safety procedures help in keeping all utility employees safe.

Management continues to regularly stress good safety practices to the plant and collection system supervisors and workers. These discussions facilitate the resolution of pending and previous safety issues and the monitoring of required training. In addition, they encourage an open dialogue between employees and management, as well as aid in lowering worker's compensation injuries. The following are types of safety training provided to WPC employees:

Types of Safety Training

- Personal Protective Equipment
- Right-To-Know
- Confined Space Training
- Lock Out/Tag Out
- Arc Flash Safety
- Forklift
- Back Safety and Proper Lifting
- Slips, Trips and Falls Avoidance
- Air Monitoring Equipment
- Self-Contained Breathing Apparatus
- Snow Removal Safety
- Supervisor Training for Commercial Driver's License Holders
- Traffic Safety
- Accident Reporting for Supervisors
- Job Safety Analysis
- Respiratory Fit Testing
- Respiratory Medical Testing
- Blood-Borne Pathogen Training
- Hepatitis Training and Vaccine

Technical Training

Operating the Hamilton Township wastewater utility requires being continuously updated in the knowledge of biology, chemistry, mechanics, computers, regulatory issues, health/safety and human resource issues. Training staff in proper operation and maintenance procedures, as well as compliance with our operating permit, is important to our success in a dynamic environment. Many employees in the department hold wastewater operating and collection system licenses which require that continuing education credits be earned during a three-year cycle. The Township endorses higher training/education for all employees. WPC is committed to providing the required continuing education credits for license holders in order for them to remain current with the NJ Department of Environmental Protection.

WPC encourages employees to undertake online technical training through the California State, University of Sacramento, Water Programs as an option for obtaining NJDEP operator licensing. Personnel organization continued to improve through promotions and out-of-title assignments to fill open positions and temporary work assignments.

WPC also continued to promote training for employees that work within the electrical trade. Courses are also recommended for supervisors and professional engineers. Additionally, WPC offered training in computer software, asset management and Geographic Information System/TRAISR programs.

In 2023, the utility resumed hosting training sessions on safety issues at the plant. WPC also provided individual training sessions via internet webinars which allowed employees to learn without the travel and registration expenses. In addition, WPC continued to reduce costs by using in-house employees and vendors with specific expertise to provide cross-training to employees. The following is a list of training offered during the year:

Training/Seminars in 2023

Month	Course Title	Trainer	Location
January	New Hire Safety Training	Certified Health	Off-Site
March	Technical Transfer	NJWEA	Eatontown
March	Variable Frequency Drives	Rutgers	On-Line
April	Forklift Training	Experience Safety	WPC Plant
May	Annual Conference	NJWEA	Atlantic City
May	Training for TV Operator	Cues	Off-Site
June	PACP Recertification	NAASCO	On Line
September	Technical Transfer	NJWEA	Eatontown
October	Confined Space & Lockout/Tagout	Certified Health	WPC Plant
November	Respiratory Fit and Bloodborne	Certified Health	WPC Plant
November	Annual Conference	AEA	Atlantic City
December	HAZWOPER 8 Hr. Refresher	OSHA	On Line

Educational Outreach

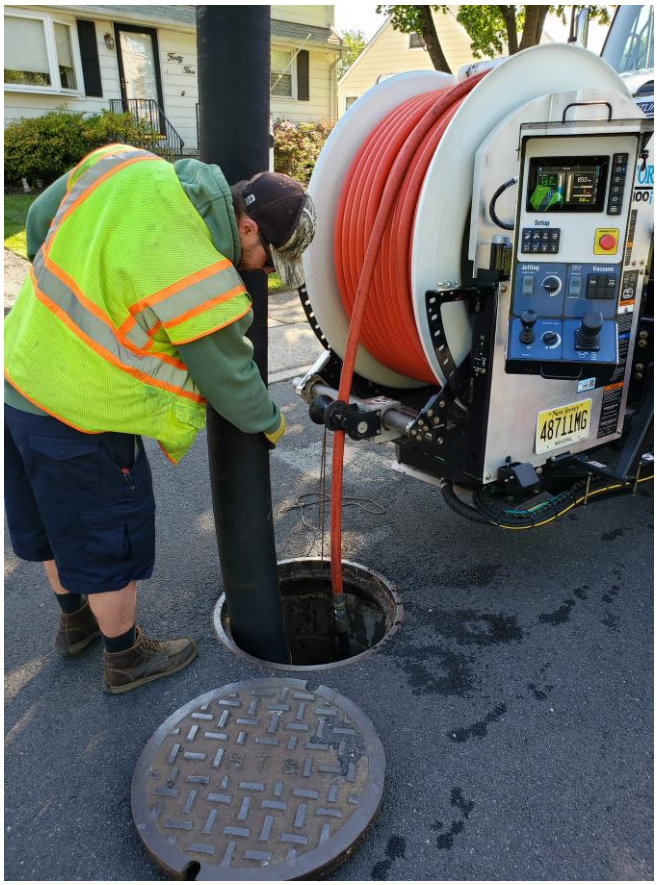
In 2023 and because the schools resumed in-person classes, WPC was able to present its award-winning Educational Outreach Program in which environmental scientists from WPC present a program on Water Pollution and the Environment to elementary, middle and high school students. The program, which consisted of a computer-enhanced multi-media presentation and visual demonstrations, motivated students to participate. By learning how wastewater is formed and treated, as well as how we can all help protect and preserve water quality, the students became an integral part of Hamilton's environmentally aware community.

In the recent past, WPC conducted numerous on-site tours for a variety of students and/or interest groups including but not limited to:

- Students from the Plumber Apprentice Class at Mercer County Vocational Technical School
- Regional High School Students
- New Jersey Department of Environmental Protection
- Association of Environmental Authorities
- Rider University Hydrology Students
- TCNJ Environmental Biology Students
- Hamilton Township Employees from Different Departments
- Local Fire Departments

Recent work showing the Wastewater Treatment Plant Headworks Flow Channel Rehabilitation project completed in 2023.

Newly purchased Jet/Vac truck (above) essential for responding to blockages and for preventative maintenance in the collection system. Vacuuming debris out of a manhole after cleaning a sanitary sewer pipe (below).



Employees of the Hamilton Township Fire Department/Rescue Team using off-line tanks at the treatment plant for specialized rescue maneuvers.