HAMILTON TOWNSHIP
WATER POLLUTION CONTROL

ANNUAL REPORT

2020

HAMILTON TOWNSHIP

DEPARTMENT OF WATER POLLUTION CONTROL

2020 Annual Report

January 2021

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Hamilton Township
Department of Water Pollution Control
2020 Annual Report

The only way forward, if we are going to improve the quality of the environment, is to get everybody involved. - Richard Rogers

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 2020 actual average daily flow of 7.1 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 28 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 Assunspink, Crosswicks and Doctors Creek Watershed. Cleaned water from the plant, also known as effluent, is discharged to the Crosswicks Creek. The wastewater treatment plant produces secondary effluent using both trickling filter and rotating biological contactors 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

In 2020, the coronavirus was an ever-present force imposing itself on how WPC employees worked and interacted. The wastewater industry was an essential service where employees were continuously needed at the facilities to keep them operating. Easy it was not but WPC worked hard and performed well.

A sewer rate study began later in 2020 to confirm whether or not a sewer rate increase is needed, and if so, what it would look like. WPC infrastructure, operation and maintenance are funded almost entirely from sewer taxes plus a small amount received from connection fees. Before this year, Hamilton's sewer service rate had not increased since 2008, yet still remains among the lowest in the region. The resolution of issues with Robbinsville Township is also important and seem to be centered around payments and updating the contract.

In 2020, 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 15.

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 training, foster a great-place-to-work environment, offer paid internships and examine succession planning

alternatives. The Township works toward a diversified and included 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.

To help in evaluating infrastructure, a master plan study or long-range capital plan is slated to begin in 2021 and will take about a year to complete. 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 uses 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, and therefore costs, have continued to go down.

Using the extensive data submitted to the Delaware River Basin Commission (DRBC) over the past two years, the DRBC continued to refine their modeling analyses of the Delaware River. 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 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 all costs related to capital improvements and wastewater utility operations and maintenance. This, while discussions about PFAS (per- and polyfluoroalkyl substances) regulations and increased 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. Due to Covid, The New Jersey Department of Environmental Protection reduced the frequency of monitoring of a few certain laboratory parameters. 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. Over 100 projects were reviewed for sewer pipe and pump station capacity, estimated wastewater flow and technical specifications, and if needed, NJDEP Treatment Works Approval submissions.

WPC received and responded to over 199 Hamilton Township HamStat Q-Alerts in 2020. This work included residential and main line sanitary sewer blockages, storm drainage issues, and a few odor concerns.

The Department of WPC includes 60 employees who are unionized and follow civil service rules. 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). Unfortunately, due to Covid, the Township suspended the "Stop – up" service to residential properties for blockages in their house laterals.

Safety continued to be a primary goal throughout the entire WPC Department. Safety meetings with supervisors were held monthly and periodically with individual groups on specific topics in order to focus attention on the varying safety issues of each group. 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 to 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 the past six years, Rutgers Cooperative Extension - Water Resources Program has made tremendous strides in developing and implementing solutions to flooding and storm water quality issues facing Hamilton Township.

FAST FACTS for 2020	
Hamilton Households & Commercial Users	30,437 (2020)
Robbinsville Households & Commercial Users	5,140 (2020)
Total Households & Commercial Users	35,577
Hamilton Permitted Industries	5
NJPDES Permitted Plant Capacity	16,000,000 gallons per day
Total Plant Average Daily Flow	7,100,000 gallons per day
Robbinsville: Average Daily Flow	Approx. 1,400,000 gallons per day
Total Cumulative Flow Treated	2,592,500,000 gallons
Hamilton: Collection System	350 miles of sewer pipe
Hamilton: Pump Stations	28
Hamilton: Manholes	8060
Robbinsville: Collection System	72 miles of sewer pipe
Robbinsville: Pump Stations	10
Robbinsville: Manholes	1,512
For Hamilton WPC:	
WPC Plant Electric Consumption	3,556,692 kilowatts
Pump Stations Electric Consumption	1,134,490 kilowatts
Sludge Cake Disposed	4,586 tons
Screenings Disposed	64 tons
Approved Operating Budget – CY2020	$18,655,062
Approved Capital Budget – CY2020	$10,502,000
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 2020

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 2020:

Structural and Mechanical Repairs to Scrubbers #2 and #3
This project has been completed and both scrubber systems are operating.

Gravity Thickener and 1954 Digester Rehabilitation Engineering
The design and contract documents were completed and the project bid in late summer 2019. Due to a bid protest, bid award and notice to proceed were delayed until spring, 2020.

Sodium Hypochlorite Bulk Storage Tank Replacement
WPC maintains two (2) bulk storage tanks, each 12,500 gallons, for liquid sodium hypochlorite used for disinfection of wastewater prior to discharge to the receiving waters of the Crosswicks Creek. Both old storage tanks were replaced to maintain our ability to disinfect in accordance with NJPDES permit requirements.

Sludge/Filtrate/Supernatant Tank Cleaning
The three-sludge storage, mix, and aeration tanks outside of the dewatering building were drained and cleaned by an outside contractor. This cleaning removes excess grit and debris from the tanks that would otherwise pass through downstream equipment, resulting in potential blockages and downtime, and unnecessary wear and premature failure.

SCADA System Improvements
WPC personnel have replaced existing outdated brain boards in 23 SCADA Input/Output (I/O) panel locations in support of an effort to migrate the existing SCADA system from serial communication to Ethernet. This will allow our SCADA hardware and software to be updated to modern, supported versions that are not currently compatible with our existing, outdated communications protocol.

Pump Stations and Collection System – Major Projects for 2020

Efforts 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 2020:

Crestwood Pump Station Force Main Projects
A new force main pipe that serves the Crestwood Pump Station was installed from the pump station in Sharps Lane Park to the intersection of Ashwood Road and Bolton Road. The force

main discharge location was also moved from Roslyn Road to a manhole on Hempstead Road. The original force main pipe is still in-place and available for backup use if needed.

Church Street-Doctors Creek Bridge Pipe Replacement

The Mercer County Doctors Creek Bridge replacement project on Church Street in Yardville is in progress and should be completed in 2021. The new sanitary sewer piping crossing the bridge has been installed and is complete.

Sanitary Sewer Rehabilitation

A sanitary sewer rehabilitation contract was awarded in 2018 for cured-in-place pipe (CIPP) lining, manhole to manhole, of about 50,000 linear feet of sanitary sewer pipes. The pipes are located throughout the Township and range in diameter from 6 to 15 inches. About half of the manhole-to-manhole lining contract was completed in 2018, the majority of the remaining CIPP lining was completed in 2019, and the final 3,000 linear feet of lining was completed in 2020. A summary of collection system piping projects since 1997 is shown on Page 9.

Roof Replacement at Various Pump Stations Check Steve's version

Roofs at Pond Run, Park Avenue, and East State Street Pump Stations were replaced to preserve the integrity of the building envelope and protect the pumping equipment.

Pump Station Personnel Hoist Davit Base Installation

A project to install hoist davit bases at the remaining pump station locations was designed, bid, and started construction in 2019. Installed davit bases are necessary and helpful for safe and easier personnel entry and retrieval. This project was completed in 2020.

Asset Management

The TRAISR system, used for service requests, work orders, Geographic Information System (GIS) information and asset management, continues to be enhanced with more data entered in 2020. These data include equipment inventory, 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 sewer lines historically would include cleaning every sewer pipe in an area with high velocity water jetting whether it needed it or not. To help maintain the sewer system more efficiently, equipment was purchased in July 2020 that sends sound waves through a pipe from one manhole to another. After the sound in one manhole is sent to a receiver in a manhole at the other end of the pipe, a score is given as to how well the sound was received which can indicate how much debris or roots might be in a pipe. Each pipe "test" only takes a few minutes. The score tells us whether the pipe needs to be cleaned or not. This same equipment is used after initial cleaning to confirm the pipe is clean or if it needs to be cleaned more. The use of this equipment helps conserve resources like personnel, water, and

large jetting/vacuuming trucks, which allows for maintenance of more of the collection system each year.

Inspection and Cleaning of Sanitary Sewer Lines
In-house sewer cleaning and televising inspections (closed circuit TV/CCTV) were conducted on 380 pipe segments totaling over 80,000 linear feet or over 15 miles of pipe in 2020. Several Hamilton Township owned jet-vac trucks, jet trucks and a CCTV truck were used for this purpose.

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 2020 are shown on page 10.

Sanitary Sewer Connection Permits
A summary of sanitary sewer connection permit total number and fees since 2008 is shown on page 11.

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 Drive 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 to 66	
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 to 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
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	2018	25,000	6-15	
Various	2019	30,000	6-15	
Various	2020	3,250	8-10	
	TOTAL	**160,925**		

EMERGENCY UNDERGROUND PROJECTS COMPLETED IN 2020

Date	Location	Repair Activity	
1/24/2020	261 Marshall Ave (Mercerville)	Lateral Repair	
1/29/2020	Azalea Way	Casting Replacement	
1/31/2020	30 Reeves Ave	Lateral Repair	
2/3/2020	Clarendon Ave	Casting Replacement	
2/12/2020	407 Wilfred Ave	Lateral Repair	
2/20/2020	110-112 Norway Ave	Lateral Repair	
3/5/2020	16 Central Ave	Lateral Repair	
3/11/2020	16 Ann Marie Dr	Lateral Repair	
4/7/2020	119 and 124 Sherwood Ave	Main-Lateral Repair	
4/20/2020	164 Fenwood Ave	Lateral Repair	
4/30/2020	5 Brampton Way	Lateral Repair	
5/20/2020	162 Chapman Ave	Lateral Repair	
5/21/2020	Linton Ave	Main Repair	
5/22/2020	27 and 29 Fenwood Ave	Lateral Repair	
5/26/2020	209 Fenwood Ave	Lateral Repair	
5/27/2020	8 Trenton Ave	Lateral Repair	
6/1/2020	33 Blairmore Dr	Lateral Repair	
6/2/2020	323 and 324 Montana Ave	Lateral Repair	
6/3/2020	336 Montana Ave	Lateral Repair	
6/4/2020	330 and 337 Montana Ave	Main-Lateral Repair	
6/17/2020	3106 S. Broad St	Lateral Repair	
6/26/2020	202 Elmore Ave	Lateral Repair	
7/9/2020	239 Mason Ave	Lateral Repair	
7/15/2020	36 Mason Ave	Lateral Repair	
7/22/2020	719 Lily St	Lateral Repair	
8/19/2020	Sheridan Rd,Norcross Circle	Casting Replacement	
8/24/2020	5 Bearbranch Rd	Lateral Repair	
9/9/2020	72 Mapleshade Ave(Whitehorse)	Lateral Repair	
9/11/2020	71 Mapleshade Ave(Whitehorse)	Lateral Repair	
9/18/2020	Magnolia Lane, Copperfield & Prospect Aves	Casting Replacement	
10/20/2020	2526 Liberty St	Lateral Repair	
11/9/2020	706 Atlantic Ave	Lateral Repair	
11/13/2020	715 Atlantic Ave	Lateral Repair	
11/20/2020	2779 Kuser Rd-NJDOT Force Main	Force Main Repair	
11/23/2020	28 Kino Blvd	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

Wastewater Treatment Plant – Work Proposed for 2021

Gravity Thickener and 1954 Digester Rehabilitation Construction

The construction contract was awarded in May of 2020. Submittal reviews and equipment ordering is complete. Mobilization is scheduled for January 2021. Final completion is anticipated for June, 2021.

Aerated Grit Chamber Outlet Structure Rehabilitation Engineering

The grit removal chamber outlet structure exhibits concrete and reinforcement deterioration due to hydrogen sulfide attack, and microbial induced corrosion. This chamber requires structural rehabilitation that requires bypassing the entirety of plant flow for the duration of construction. Engineering design and bid document preparation services will be procured with the goal of starting construction in 2021.

RBC Replacement

WPC has budgeted for the replacement of three Rotating Biological Contactor's (RBC's), which are at the core of the biological treatment utilized at the treatment plant. Engineering design and bid document preparation services will be procured in the spring of 2021 with the goal of procurement/installation contract bid award in the fall.

Digestion Evaluation

This study will be a cost-benefit analysis of the processes related to sludge digestion and the alternatives. Considering the aging infrastructure and the possibility of scrubber requirements on the methane burners, it is prudent to consider the alternatives at this juncture.

SCADA System Improvements

WPC will continue efforts to upgrade the existing SCADA system by beginning the migration from serial communication to Ethernet, and updating SCADA hardware and software to modern, supported versions.

Chloromat Building Rehabilitation/Replacement

The Chloromat Building is where liquid sodium hypochlorite is stored and dosed into the wastewater stream to provide NJPDES required disinfection prior to discharge to Crosswicks Creek. Liquid sodium bisulfite is also stored there, but dosed downstream of disinfection for dechlorination purposes. A preliminary engineering evaluation has revealed that the building concrete and structural steel have experienced significant deterioration. Engineering final design and bid document preparation services will be procured in the spring of 2021 for the necessary rehabilitation or replacement of the building and equipment.

Master Plan

The Master Plan, or long-range capital plan, is slated to begin in 2021.

Pump Stations and Collection System – Work Proposed for 2021

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, including the new pipe sound testing equipment. This information is linked to the Traisr GIS system, and used to document maintenance activities and prioritize capital projects that will be performed in 2020 and beyond.

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 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.

Yardville-Groveville Pump Station Improvements

Final engineering and design are being completed for the Yardville-Groveville Pump Station. The primary improvements include replacing the existing two pumps with a 3-pump system with new controls and variable frequency drives, replacing the roof, and installing a station emergency bypass system. WPC anticipates bidding and awarding the construction phase of this project in 2020 with work starting in the fall and continuing into 2021.

Melody Estates and Middleton Drive Pump Stations Replacement

Design and contract document preparation services are to be awarded for replacement of the Melody Estates and Middleton Drive Pump Stations. The project scope includes replacement of the existing, below grade can ejector stations with above grade enclosures with new pumps and controls. This will improve reliability while providing safer working environments for station maintenance personnel by eliminating permit-required confined space entry.

Kuser Hollow Pump Station Elimination

Kuser Hollow Pump Station is scheduled to be eliminated in 2021. New sanitary sewer lines installed as part of the Vintage at Hamilton housing development will allow the flow from the few houses the pump station serves to flow by gravity through the sewer system without going through the pump station.

NJDOT Pump Station Replacement

The existing NJDOT Pump Station on Kuser Road was installed originally to serve the low volume of wastewater flow from NJDOT facility near Route 130. This pump station is at capacity. In order to serve new development in the area, the pump station and force main need to be replaced with one that can handle more wastewater. The engineering design has begun for a new station. It is anticipated that construction of the new pump station will begin in 2021 and be completed in 2022.

Pump Station Force Main Inspections

The oldest force main pipes serving four pump stations, namely, Green Village, Hamilton Square Park, E. State Street, and Groveville, will be inspected using very specialized equipment that flow through the pipes and collect data on leaks and gas pockets while the pipe is full.

Deutzville Pump Station Force Main Installation

The portion of the Deutzville pump station force main that has not yet been replaced is scheduled to be completed in 2021. This project will include engineering, permitting, bid contracts, and construction required to install approximately 1,950 linear feet of 74 years old pipe. Approximately 2,000 feet of new force main pipe was installed in 2012.

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 2020 and due to Covid, the utility hosted limited 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 2020

Month	Course Title	Trainer	Location
March	Technical Transfer	NJWEA	Eatontown
April	Pipeline Assessment Recertification	NAASCO	On-line
May	Time Management	Rutgers	On-line
May	Discharge Monitoring Reports	Rutgers	On-line
September	Confined Space & Lockout/Tagout	Certified Health	WPC Plant
November	Annual Conference	AEA	On-line
December	NEC 10-hour Code & Law Update	Alan Chech	On-line
May-Dec.	Handling Covid-19 in NJ	AEA	Conf. Calls

Educational Outreach

Due to the closing of all Hamilton schools during the Covid-19 pandemic, WPC was not able to present its award-winning Educational Outreach Program in which environmental scientists from WPC presented 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
- Hamilton Township Employees from Different Departments
- Local Fire Departments

Klockner Pump Station's 1960 emergency generator being removed from building.

The new generator being lifted and placed inside the Klockner Pump Station.

New sanitary sewer pipe across the new bridge on Church Street being temporarily supported until the bridge deck is built.

Photographs above show the new force main pipe and valves that serve the Crestwood Pump Station, (left) and the force main discharge manhole (right)..