STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

IN THE MATTER OF THE
REVISION OF RATES FILED BY
PINELANDS WASTEWATER COMPANY

DIRECT TESTIMONY

OF

BRIAN F. CARR
VICE PRESIDENT - OPERATIONS

SEPTEMBER 2022

PINELANDS WASTEWATER COMPANY

STATEMENT OF THE DIRECTOR OF ENGINEERING

DIRECT TESTIMONY OF BRIAN F. CARR.

Q. PLEASE STATE FOR THE RECORD YOU NAME, OCCUPATION AND BUSINESS ADDRESS.

A. My name is Brian F. Carr. I am the Vice President – Operations of Pinelands Wastewater Company, (PWWC or the Company). I am also the Director of Engineering for Middlesex Water Company of which PWWC is a subsidiary. My business address is 485 C Route 1 South, Suite 400, Iselin, New Jersey.

Q. PLEASE STATE YOUR PROFESSIONAL AND EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. My professional qualifications and experience are set forth on Appendix A attached hereto.

Q. ARE YOU FAMILIAR WITH THE SERVICE AREA, SYSTEM FACILITIES, AND OPERATION OF PWWC?

A. Yes. I have been employed by Middlesex Water Company since 2010. Since that time, I have provided and continue to provide engineering and project management support services to PWWC on various projects and operations. In addition, as part of my responsibilities I have reviewed the books and records of PWWC's facilities and have inspected these facilities

in the field. I was recently appointed Vice President – Operations of Pinelands Wastewater Company.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony in this proceeding is to describe the wastewater system facilities and the operation of PWWC.

Q. WILL YOU BRIEFLY DESCRIBE THE FACILITIES OF THE PWWC?

A. PWWC collects and treats the sewerage from approximately 2,400 customers located in the communities of LeisureTowne and Hampton Lakes in Southampton Township, New Jersey as well as from the Vincentown section of Southampton Township under a separate tariff rate for bulk services. PWWC owns and operates a wastewater treatment plant (WWTP) in Southampton Township, New Jersey, which has the design capacity to treat 500,000 gallons per day of domestic wastewater. The wastewater treatment process includes aeration, primary sedimentation, aerobic removal of nutrients through rotating biological contactors, secondary settling, chlorination, and de-chlorination with discharge to a tributary of the Rancocas Creek. The collection system includes sanitary sewers and lateral service connections from individual homes, pumping stations and force mains that transmit the collected wastewater from the customers' homes to the treatment plant in Vincentown.

Q. ARE YOU FAMILIAR WITH THE UTILITY PLANT IN SERVICE (UPIS) FOR PWWC AS SET FORTH IN EXHIBIT P-1?

A. Yes. I am familiar with Exhibit P-1. These records set forth the original cost of the Wastewater Utility Plant classified in accordance with the Uniform System of Accounts prescribed for waste water utilities.

Q. ARE YOU FAMILIAR WITH THE CAPITAL PROGRAM FOR PWWC?

A. Yes. A Capital Program has been prepared and is under my responsibility. This is presented in Exhibit P-2. This exhibit includes the actual and estimated additions to Utility Plant in Service for the Test Year through December 31, 2022, and for estimated additions through June 30, 2023.

Q. WILL YOU PLEASE DESCRIBE THE MAJOR PROJECTS SET FORTH IN THIS CAPITAL PROGRAM THAT ARE INCLUDED IN EXHIBIT P-2?

A. The larger projects set forth in the Capital Program are equipment replacements of two of the rotating biological contactors (RBC) at the WWTP, the replacement of the plant drain pumps at the WWTP, the capital portion of the Arc Flash project that I describe in more detail later in my testimony, and enhancements to the Supervisory Control and Data Acquisition (SCADA) system.

Q. CAN YOU DESCRIBE THE REPLACEMENTS OF THE RBC UNITS AT THE WWTP?

A. For the WWTP's existing process units, the RBCs are undergoing replacements and upgrades. The units being replaced are comprised of mostly original equipment installed in the 1970s. Since PWWC's

acquisition of the WWTP in 1995, the Company has performed required maintenance on the units as well as unscheduled maintenance, repairs and equipment replacement on the RBC units. One of the four RBC units previously failed at the shaft and that RBC unit had to be replaced on a reactive basis. This resulted in a long outage of the unit and treatment issues for the wastewater process. This project will replace two of the three remaining original RBC units and upgrade the drive mechanisms improving reliability for operations. This will take advantage of a single opening of the new RBC building to replace the two units. Along with the new units, the controls and sensors will be upgraded.

Q. CAN YOU DESCRIBE THE REPLACEMENTS OF THE PLANT DRAIN PUMPS AT THE WWTP?

A. Yes. Scum and decant from the various plant systems collect in the plant waste tank. The drain pumps pump this liquid to the head of the plant via the equalization tank. The drain pumps were installed in 1973, have been inspected, and found to be in need of replacement. The existing pumps and valves will be replaced with new pumps of equal capacity.

Q. PLEASE DESCRIBE THE PLANNED IMPROVEMENTS FOR THE SCADA SYSTEM.

A. The SCADA improvements are for equipment on the Plant site. Sensors on the RBC units, chlorine injector pump, and digester are installed and reading locally but do not report to the SCADA panel. This project will

integrate the existing sensors at those locations into the existing SCADA network.

Q. PLEASE DESCRIBE THE CAPITAL PORTION OF THE ARC FLASH PROJECT.

A. The Arc Flash Project includes work to determine safety parameters of the existing electrical equipment at the various water facilities. As a part of the determination of safety parameters, a single line diagram is created. This is essentially an as-built of the electrical panels. This creation of the as-built condition is capitalized and represents 20% of the cost of the study.

Q. IN YOUR OPINION, IS THE CAPITAL PROGRAM REASONABLE AND NECESSARY, AND IN THE PUBLIC INTEREST?

A. Yes. The Capital Program sets forth the improvements necessary for the continued operation and maintenance of the system in a safe, proper and efficient manner.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

PROFESSIONAL QUALIFICATIONS OF

Brian F. Carr, P.E.

SUMMARY: Licensed professional engineer in practice for 25 years. Experience in designing, estimating, writing specifications and administering a variety of water and sewer capital improvement projects, Federal Civil Works projects and military projects. Management of all aspects of work operations including budgets, scheduling, personnel, clients, subcontractors, agencies and other principals. Supervision of technical and nontechnical personnel.

EXPERIENCE:

08/2022 Present — Vice President - Operations, Pinelands Water Company and Pinelands Wastewater Company, Iselin, NJ: Overall responsibility for utility operations of Water and Sewer Utilities serving approximately 2,400 customers in Southampton Township, NJ.

Projects of Note:

RBC Replacement Project
Retreat Road Forcemain Relocation
Well #2 Station Improvements

06/2010-Present — Director of Engineering, Middlesex Water Company:
Previously Manager of Engineering, Senior Project Engineer, Middlesex Water Company, Iselin, New Jersey:
Directly responsible for the management for the New Jersey Company's Engineering Department, Capital Program and Special Projects. This includes planning, design, and supervision of construction in order to continually optimize system expansion, operations and provide proper utility service.

- Management and approval of all functions of the New Jersey Engineering Department. This included direct supervision of engineers, inspectors, drafters, and support personnel.
- Management and oversight of the Capital Program including the 1 year Capital Budget and 5 year Capital Program.
- Engineering and Project management responsibilities of projects totaling over $50 million. Projects include facilities (mains) extensions, office buildings, pump stations, major transmission pipelines, wellfield improvements, treatment plant modifications and storage reservoir/tanks.
- Company representation and delivery of presentations at various regulatory, governmental, civic, industrial, and professional organizations.
- Preparation of applications support for regulatory (environmental and administrative) approvals.
- Review, analyses, and support on varied Company operations initiatives and projects.

Projects of Note:

CJO Plant Upgrade ($60M)
Western Transmission Main ($52M)
Park Ave Treatment ($50M)
RENEW Water Main Rehab Program (~$10 million/year)
Hatco 20” Main Relocation ($1M)
NJTA 12” Main Extension ($4M)

07/2001-05/2010 Project Manager CMX, Manalapan New Jersey

- Prepare Construction and Engineering cost estimates.
- Develop plans and specifications for water & sewer projects for the Water Resources Division
- Coordinate inspection on construction projects. Provide inspection on an as needed basis.
- Identify, estimate, negotiate and prepare contract modifications.
- Review project labor and material charges in preparation for invoicing
- Supervise Project Engineers on project design and admiration.

Projects of Note:

Ocean Acres WTP Ocean Acres Main Extension Phases 2-5B
500,000 Gallon Beachwood Elevated Tank, Ocean Acres 400,000 Gallon Elevated Tank
Clara Drive & Fawn Lakes Pump Station Rehabilitation

05/1992-06/2001 Technical Engineer/Project Engineer US Army Corps of Engineers, New York District, New York, NY & Fort Monmouth, NJ

Engineering Division 1992-1994

- Wrote and edited project specifications
- Investigated and assessed sites prior to project design
- Prepared plans and specifications for advertisement

Construction Division 1994-2021

- Performed quality control/quality assurance inspections of contractor's performance to ensure compliance with construction plans and specifications.
- Developed in-house designs to resolve field changes quickly, in order to keep projects on schedule.
- Independently prepared cost estimates for construction modifications to establish Government negotiating positions.

Projects of Note:

Greenbrook Flood Control Project Westhampton Emergency Breach Closure
Monmouth County Beach Erosion Control Projects – Manasquan to Sea Bright
Renovation of Dorm #100 & North Star Inn, Thule AB Greenland
Fort Monmouth Laboratory Renovation Fort Hancock Building & Battery Demolition

EDUCATION: B.S. Civil Engineering; Rutgers University, New Brunswick, NJ

PROFESSIONAL LICENSES: New Jersey Professional Engineer

AFFILIATIONS: American Water Works Association (NJ Section Past Chair & Trustee).

PINELANDS WASTEWATER COMPANY
UTILITY PLANT IN SERVICE - CLASSIFIED (101)

	UTILITY PLANT ACCOUNT	BALANCE AS OF 12/31/2021	ADDITIONS	RETIREMENTS	BALANCE AS OF 3/31/2022
	INTANGIBLE PLANT				
301	ORGANIZATION	970	-	-	970
303	OTHER INTANGIBLE UTILITY PLANT	5,208	-	-	5,208
	TOTAL INTANGIBLE PLANT	6,178	-	-	6,178
	LAND AND LAND RIGHTS				
311	PUMPING SYSTEM LAND	4,000	-	-	4,000
312	TREATMENT AND DISPOSAL SYSTEM LAND	106,498	-	-	106,498
	TOTAL LAND AND LAND RIGHTS	110,498	-	-	110,498
	COLLECTING SYSTEMS				
320	SERVICE CONNECT, TRAPS & ACCESS	89,889	-	-	89,889
321	COLLECTING MAINS AND ACCESS	2,678,855	143	-	2,678,998
323	FORCE MAINS	91,747	-	-	91,747
324	STRUCTURES AND IMPROVEMENTS	6,853	-	-	6,853
325	OTHER COLLECTING SYSTEM EQUIP	36,670	-	-	36,670
	TOTAL COLLECTING SYSTEMS	2,904,014	143	-	2,904,157
	PUMPING SYSTEMS				
330	STRUCTURES AND IMPROVEMENTS	350,264	-	-	350,264
331	ELECTRIC PUMPING EQUIPMENT	525,721	-	-	525,721
332	OTHER POWER PUMPING EQUIPMENT	80,065	-	-	80,065
333	MISCELLANEOUS PUMPING SYSTEM EQUIPMENT	46,906	-	-	46,906
	TOTAL PUMPING SYSTEMS	1,002,956	-	-	1,002,956
	TREATMENT & DISPOSAL SYSTEM				
340	STRUCTURES AND IMPROVEMENTS	1,337,633	7,295	-	1,344,929
342	SEDIMENTATION (OR CLARIFICATION) TANKS AI	929,584	-	-	929,584
344	SLUDGE & EFFLUENT REMOVING EQUIP	639,086	-	-	639,086
345	SLUDGE DIGESTION TANKS & ACCESS	574,787	-	-	574,787
346	SLUDGE DRYING & FILTERING EQUIP	134,235	-	-	134,235
347	SECONDARY TREATMENT FILTERS & ACCESS	1,217,000	-	-	1,217,000
349	OTHER SEWERAGE REMOVING EQUIP	14,908	-	-	14,908
350	CHEMICAL TREATMENT PLANT	36,211	-	-	36,211
351	CHEMICAL CONTACT TANKS	169,608	-	-	169,608
352	OUTFALL PIPES AND ACCESSORIES	83,345	-	-	83,345
353	OTHER DISPOSAL EQUIPMENT	145,625	-	-	145,625
	TOTAL TREATMENT & DISPOSAL SYSTEMS	5,282,022	7,295	-	5,289,317
	GENERAL PLANT				
390	STRUCTURES AND IMPROVEMENTS	549,509	4,788	-	554,297
391	OFFICE FURNITURE AND EQUIPMENT	108,038	-	-	108,038
392	TRANSPORTATION EQUIPMENT	206,905	-	-	206,905
394	TOOL AND SHOP EQUIPMENT	27,122	-	-	27,122
395	LABORATORY EQUIPMENT	37,198	-	-	37,198
396	POWER OPERATED EQUIPMENT	3,087	-	-	3,087
397	COMMUNICATION EQUIPMENT	278,843	73	-	278,916
398	MISCELLANEOUS GENERAL PLANT	28,591	-	-	28,591
	TOTAL GENERAL PLANT	1,239,292	4,862	-	1,244,153
	TOTAL UTILITY PLANT IN SERVICE	10,544,960	12,299	-	10,557,259

PINELANDS WASTEWATER COMPANY

PROJECTED UTILITY PLANT IN SERVICE

Description	U.P.I.S. at 3/31/2022	C.W.I.P at 03/31/22	Expenditures Actual April-June	Expenditures Projected Jul-Dec	**U.P.I.S at 12/31/22**	Post Test Year Projections Jan-June	**U.P.I.S. at 06/30/23**
UTILITY PLANT IN SERVICE AT MARCH 31, 2022	$10,557,259				**$10,557,259**		**$10,557,259**
CONSTRUCTION WORK IN PROGRESS							
Collection Systems							
Gravity Mains Blanket		-	-	8,500	8,500	-	8,500
Service Laterals Blanket		-	-	3,750	3,750	-	3,750
Manhole Blanket		-	-	20,250	20,250	-	20,250
Total Collection Systems		**-**	**-**	**32,500**	**32,500**		**32,500**
Pumping and Treatment Projects							
WWTP SCADA Enhancements		13,486	28,984	9,909	52,378	-	52,378
PWW WWTP RBC Replacements		12,449	16,759	931,100	960,309	10,000	970,309
PWW WWTP Plant Drain Pumps		141	1,805	59,500	61,446	-	61,446
Arc Flash Project		-	-	9,540	9,540	-	9,540
Pumping Equipment Blanket		3,371	3,371	27,000	33,742	-	33,742
Water Treatment Equipment Blanket		2,566	13,309	4,000	19,876	-	19,876
Production Structures Blanket		-	3,422	16,000	19,422	-	19,422
Total Pumping & Treatment Projects		**32,014**	**67,651**	**1,057,049**	**1,156,714**	**10,000**	**1,166,714**
Transportation, General Equipment and IT							
General Structures Blanket		-	29,038	5,000	34,038	-	34,038
General Equipment Blankets		381	1,504	10,100	11,984	-	11,984
Total General Equipment Projects	**-**	**381**	**30,542**	**15,100**	**46,022**	**-**	**46,022**
Subtotal Additions		**32,394**	**98,193**	**1,104,649**	**1,235,236**	**10,000**	**1,245,236**
RETIREMENTS							
Estimated / Actual Retirements		**-**	(500)	(80,750)	**(81,250)**	-	**(81,250)**
TOTAL	**$10,557,259**	**$32,394**	**$97,693**	**$1,023,899**	**$11,711,245**	**$10,000**	**$11,721,245**