Achieving New Water Quality Standards

2023

ANNUAL REPORT

NPWA NORTH PENN WATER AUTHORITY

CHAIR'S MESSAGE

As the Chair of the Board of Directors, I am pleased to share with you our 2023 Annual Report on the theme of water quality. This is a way of life daily for our organization and industry, but also a topic of paramount importance to the well-being of humanity and our planet.

Throughout history, civilizations have thrived or faltered based on their access to clean, safe water. The progress and advances in understanding, monitoring, and improving water quality have been instrumental in shaping modern society.

Advances in water quality management have been driven by various factors, including scientific discoveries, technological innovations, regulatory frameworks, and societal awareness.

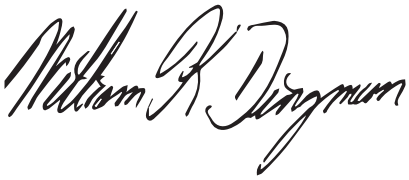
In recent years, water quality has been in the headlines due to several factors, including lead and the Flint, Michigan water crisis, train derailments and other disasters involving hazardous chemicals, and the discovery of PFAS, commonly referred to as forever chemicals. Due to these and other developments, the federal EPA has enacted the most stringent water quality standards in history.

At North Penn Water Authority, we consistently meet all federal and state drinking water standards. Thanks to the foresight of our predecessors at NPWA and our Forest Park Water Treatment Plant, we are confident that we will meet any future regulations set forth by Pennsylvania's Department of Environmental Protection or the EPA.

On another side of the business, the financial reports of North Penn Water Authority continue to be strong. Revenue is utilized for operating expenses, debt reduction, investment in maintaining and upgrading Authority systems, and capital improvements. Because of planning and good cost management, the Authority has been able to direct a significant amount of funds into maintaining and improving its infrastructure.

I want to thank my fellow board members who volunteer their time to serve the North Penn Water Authority and their respective communities. On behalf of the entire Board of Directors, I want to thank all our management team members and staff for their commitment and the work they do every day to meet the Authority's most critical mission of delivering the highest quality drinking water to customers, at the lowest cost possible.

The North Penn Water Authority employees and board members are fully committed to this mission. As a result, the Authority's customers and municipalities can rest assured that their community's water supplier is leading the way to being among the best in the industry.



William K. Dingman
CHAIR

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Achieving New Water Quality Standards

Since the dawn of humankind, finding a clean water source has always been a priority for civilizations. As time progressed, that became more difficult as the Industrial Revolution in the 18th and 19th centuries began to cause widespread pollution from improper disposal of hazardous waste and the spread of disease, until the 20th century when water quality testing and treatment developed.

Since then, water quality has been continuously studied and regulations have rapidly expanded. As of this publication in 2024, the federal Environmental Protection Agency (EPA) has regulated about 90 contaminants in drinking water. North Penn Water Authority (NPWA) and Forest Park Water Treatment Plant (FPW) currently have state-of-the-art technology that treats our drinking water to the highest standards.

At NPWA, we consistently meet all federal and state drinking water standards and are confident that we will continue to meet any future regulations established by Pennsylvania's Department of Environmental Protection (PA DEP) or the EPA. As a nonprofit, municipal authority, ratepayer dollars go directly back into the system. This ensures we are up to date on regulations and have funds available to treat our water to the best of our ability, thus providing a safe, reliable product to all of our customers. Since 1994, FPW has been in operation using ozone, making it one of the most advanced water treatment plants in the country. In 2007, the plant was updated with membrane filtration, a cutting edge treatment technique. Forest Park was built to not only meet the current need in terms of water supply and treatment, but with the foresight that EPA standards for drinking water safety would become more and more stringent, which indeed they have over the years.

To fully understand how far water quality and drinking water regulations have come over time, we should reflect on the past:

Civilizations have always settled around water. Some utilized groundwater wells, collected rainwater for daily use, or pulled water out of streams or rivers. Water treatment originally focused on improving the aesthetic qualities of drinking water. As early as 4000 B.C., Ancient Sanskrit and Greek writings recommended water treatment methods such as filtering through charcoal, exposure to sunlight, boiling, and straining to improve drinking water.

NPWA's laboratory was established in 1981. The state accredited laboratory is located at FPW.

Egyptians reportedly used the chemical alum as early as 1500 B.C. to cause suspended particles to settle out of water. [I]

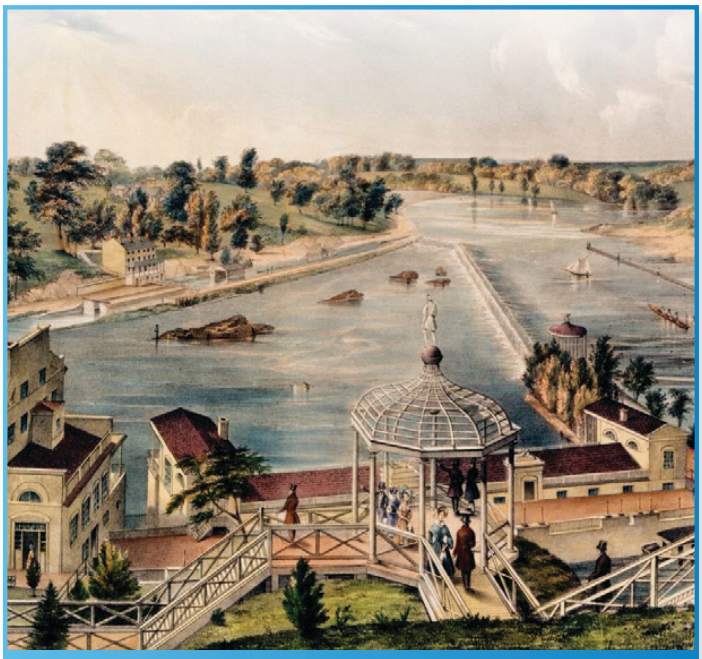
Another recognizable example of water-related construction are the aqueducts built by the Roman Empire that would transport water by gravity in open concrete channels from springs far outside the city to fountains within the city. The Tiber River was polluted, so without another water source, the empire was restricted from growth. The first aqueduct of the Roman Empire was built in 312 B.C. and aqueducts would continue to be built for another 500 years. [II]

Filtration was discovered during the 1700s as an effective way to remove particles from water, and by the early 1800s, slow sand filtration was used regularly in Europe. As for the U.S. Colonies, delivering water to a growing population was a big challenge. In 1754, Hans Christopher Christiansen began engineering the Bethlehem Water Works for the Moravian colonists in Bethlehem, Pennsylvania. Houses in town were supplied with water from a spring, which was pumped by a hydraulic machine and forced through pipes to the homes. It's believed that this was the first pump used for a public water supply in America. Similar hydraulic machines were set up along rivers, pumping water to residents, sometimes miles away, across the colonies. [III]

The Restored Bethlehem Water Works

The Philadelphia Water Department first began providing water to citizens in 1801. Although there were already several private water companies established in other cities, it is worth noting that Philadelphia was one of the first in the U.S. to take on the water supply as a municipal responsibility. Water was piped throughout the city, with paying customers served by direct lines to businesses and homes, and free water provided through public hydrants to anyone with a bucket to carry it. [IV]

Philadelphia began construction on its first Water Works in 1799 at the site that is now City Hall. As the city rapidly grew, Philadelphia needed to expand in order to accommodate the growth. In 1811, the City of Philadelphia began construction on the Fairmount Water Works at the edge of the Schuylkill River. Water was pumped up to reservoirs where the Philadelphia Museum of Art currently sits. Gravity delivered water through pipes to the city. In the mid-to late-1800s, industrialization along the Schuylkill polluted the water, leading to the spread of diseases such as cholera and typhoid fever. [V]



Fairmount Water Works in Philadelphia

Around this time, Dr. John Snow, an obstetrician and anesthesiologist in London was investigating their local cholera epidemic. [VI] By talking to local residents, Snow identified the source of the outbreak as the contaminated public water pump on Broad Street. He did this by mapping the deaths from cholera, and noted that they were mostly people whose nearest access to water was the Broad Street pump. His studies of the pattern of the disease were convincing enough to persuade the local council to disable the well pump by removing its handle. This action has been credited with contributing significantly to the containment of the disease in the area. It was later discovered that the water for the pump was polluted by sewage contaminated with cholera from a nearby cesspit.

I U.S. EPA's The History of Drinking Water (https.epa.gov)
II National Geographic (https://education.nationalgeographic.org/resource/roman-aqueducts/)
III, IV Water History PHL (https://waterhistoryphl.org/articles/philadelphia-water-department-water-and-drainage-history-course/)
V Philadelphiaencyclopedia.org
VI ncbi.nlm.nih.gov

In 1950, for the first time, test results were able to reveal the effects of minute quantities of organic chemicals in water supplies

Meanwhile, in 1881 in St. Louis, MO., the American Water Works Association (AWWA) was founded for the exchange of information pertaining to the management of water-works, for the mutual advancement of consumers and water companies, and for the purpose of securing economy and uniformity in the operations of water-works. [VII]

Standard Methods for the Examination of Water and Waste Water (Standard Methods) was first published in 1905. Currently in its 24th edition, *Standard Methods* represents the effort of generations of specialists in documenting and standardizing hundreds of analytical techniques for determining water quality.

The widespread use of disinfectants in water treatment started when physician John Leal and sanitary engineer George Warren Fuller began using chlorination at the Boonton Reservoir in Little Falls, New Jersey in 1908. The use of chlorination became widespread throughout the nation, and their work is credited with eliminating typhoid fever and other waterborne diseases. [VIII]

To alleviate water-borne diseases and treat contaminated water from the Delaware and Schuylkill Rivers, Philadelphia installed five, slow sand water filtration plants in the city between 1901 and 1912. Filtration combined with chlorination of water starting in 1914 resulted in a dramatic decrease of water-borne diseases. [IX]

Post World War II, there was a higher degree of public interest and concern about the environment and public health. Public and private initiatives began to reduce pollution, better protect public health, and seek greater understanding of contaminants in water. Several noteworthy events occurred, leading to sweeping federal mandates.

The Federal Water Pollution Control Act (FWPCA) of 1948 was the first major U.S. environmental law specifically aimed at improving water quality by reducing pollution. The act directed all states to develop water quality standards and mechanisms to fund the construction of water treatment facilities across the country.

In the early 1950s, a group of scientists at the Robert A. Taft Center in Cincinnati conducted a series of tests that examined organic compounds in drinking water, the Ohio River, and surface water from lakes near petroleum refineries. For the first time, test results were able to reveal the effects of minute quantities of organic chemicals in water supplies.

Organic chemicals were studied to determine the causes of objectionable tastes and odors in water, industrial waste contamination in streams, pollution caused by growth and decay of aquatic plants and animals, and possible biologic or toxic effects on humans or animals.

By the 1960s, private research was making progress in understanding contaminants in water. The implementation of chlorination in public water systems had swept the country, and the idea that water quality mattered to everyone was becoming more widely accepted.

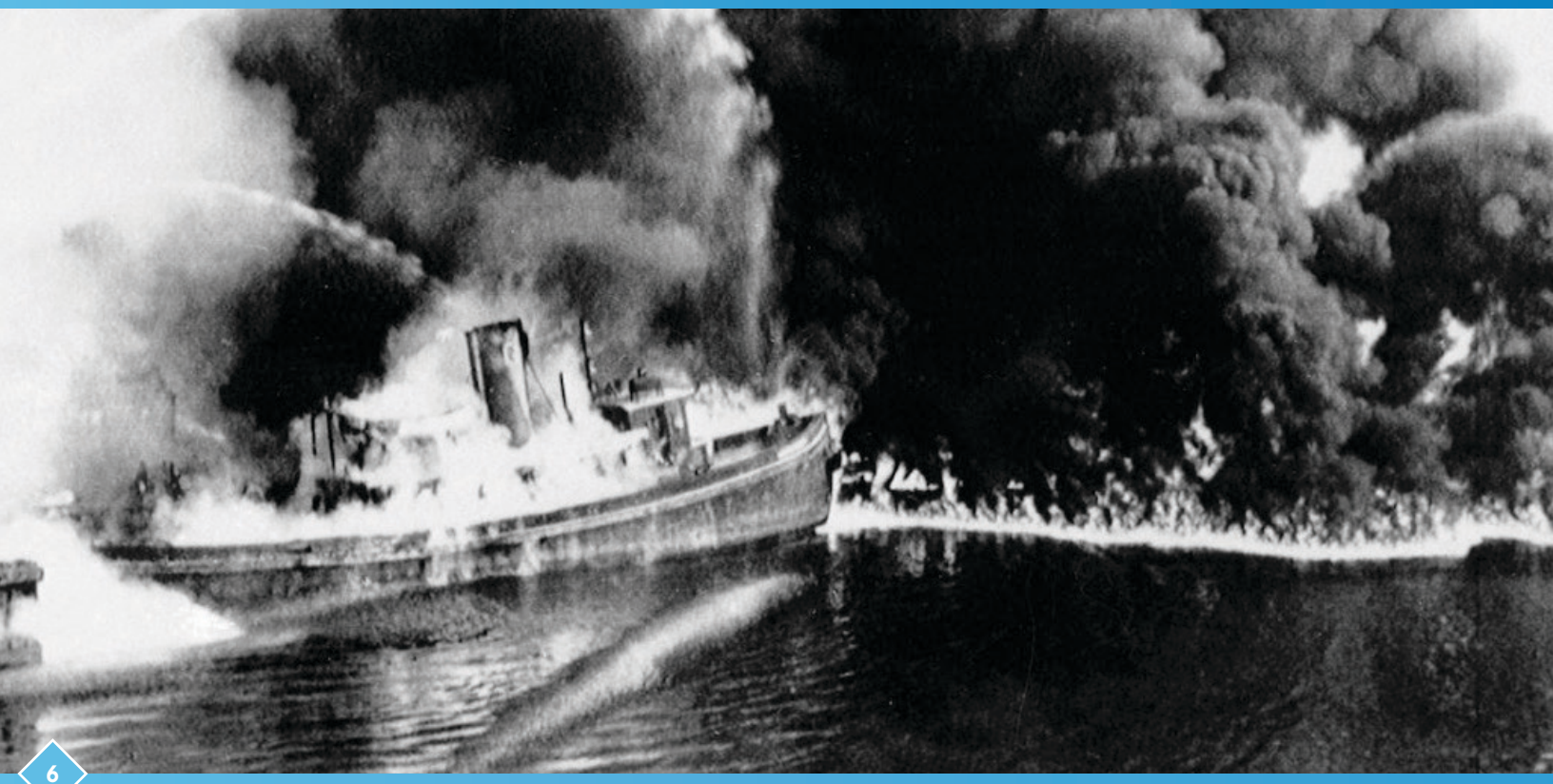
Over the next two decades, the Environmental Protection Agency (EPA) would be established and massive reforms in federal legislation would shape the water industry.

In 1965, the Water Quality Act (WQA) was passed by congress to address the shortcomings of the FWPCA of 1948 by enforcing the requirements for all states to develop water quality standards for waterways. This goal was accomplished by 1970.

Lyndon B. Johnson signs the Water Quality Act of 1965

In June of 1969, the Cuyahoga River in Ohio caught fire when sparks from a train ignited an oil slick that had formed on the surface of the river. The fire burned for nearly thirty minutes with flames reaching heights of a five story building. This was the result of untreated waste that industrial centers in Cleveland, Ohio discharged directly into the river. The incident sparked a national debate about pollution which became one of the driving factors for the environmental laws we know today. National media coverage of the event led to four cornerstone pieces of legislation over the next five years, including the formation of the EPA.

The Cuyahoga River, on fire, in 1969. This incident became one of the driving factors for the many environmental laws that soon followed



Concern was growing over the effect pollution was having on the environment, and President Richard M. Nixon charged Congress with the goal of providing more funding, research and stricter standards. He also worked to ensure federal programs and agencies made environmental impact a priority.

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970, creating a new agency responsible for these environmental goals. NEPA's basic policy was to ensure that all branches of government considered the impact on the environment prior to undertaking any major federal action.

Richard Nixon signs NEPA

The first EPA administrator, William Ruckelshaus, began his duties on December 4, 1970. One of the first major pieces of legislation for the newly formed EPA to enforce was the Clean Water Act of 1972, which addressed wastewater treatment requirements. This marked the beginning of the separation of water legislation by Congress into wastewater and drinking water. [x]

William Ruckelshaus is sworn in as administrator of the new Environmental Protection Agency as President Richard Nixon looks on at the White House on December 4, 1970.

The Safe Drinking Water Act in 1974 began a new era in the field of public water supply and set minimum standards for tap water for all regulated contaminants. Subsequent to the passage of the Safe Drinking Water Act 50 years ago, there have been numerous additional regulatory standards and new legislative requirements imposed on the public drinking water industry, by both the federal and state governments. Some of the more noteworthy legislations are listed on the timeline adjoining this article. The public water supply system has become one of the most highly regulated industries in the nation. The performance standards have continuously been ratcheted up higher and higher with each passing year, making water quality regulations more stringent than ever. The water quality criteria that was considered acceptable many years ago is no longer considered acceptable today.

These new water quality standards have targeted a host of additional parameters, including volatile organic compounds (VOC's), heavy metals, pesticides, lead, copper, microbial bacteria, radon, arsenic, disinfection byproducts, trihalomethanes, and nitrates, to name just a few. The latest regulation is the EPA's new standard for Per- and poly- fluoroalkyl substances (PFAS). As the number of regulated contaminants has grown, the quantifiable standards for acceptable levels has also gotten much more stringent. These standards, known as Maximum Contaminant Levels (MCL's), were originally measured in levels of parts per thousand, but have now been refined down to parts per million, and parts per billion, and even parts per trillion. To put these values in perspective, one part per billion is the equivalent of one second in 32 years, and one part per trillion is the equivalent of one second in 32,000 years, which is an infinitesimally small quantity. As laboratory measurement technology has become more sophisticated over the years, the ability to detect the presence of substances at increasingly low levels has continued to advance.

NPWA Water Quality Specialist tests NPWA water samples

How has the North Penn Water Authority responded to these increasingly stringent water quality regulations over the past 50 years? Each time the standards became more strict, the Authority responded by ensuring that appropriate treatment systems were installed and system operations were adjusted accordingly. Back in the 1970's and 1980's, 100% of the Authority's source of water was groundwater. Thus, air strippers were installed on the wells to ensure compliance with the regulations for the removal of VOC's. As the regional population continued to grow and the capacity of the groundwater wells became more limited, a new water source had to be found that could provide more quantity and better quality for the area's growing demands.

Continued on Page 10...

Timeline of Water-

1899
Rivers and Harbors Act (RHA) was the first law protecting US water of any kind. RHA made it unlawful to discharge any sewage to navigable US waters as well as to alter the course of flowing waters.

1905
Standard Methods for the Examination of Water and Waste Water (Standard Methods) is now in its 24th edition but was first published in 1905 and represents the effort of generations of specialists in documenting and standardizing hundreds of analytical techniques for determining water quality. *Standard Methods* began in the 1880's as a movement within the chemical section of the American Association for the Advancement of Sciences (AAAS).

1908
The use of chlorine became widespread throughout the nation. Chlorination helped eliminate typhoid fever and other waterborne diseases.

1925
The American Water Works Association (AWWA) joined with the American Public Health Association (APHA) to publish the 6th edition of *Standard Methods*.

1936
Federation of Sewage Workers, renamed Water Environment Federation (WEF), joined with APHA and AWWA to publish the 8th edition of *Standard Methods*.

1948
The Federal Water Pollution Control Act (WPCA) was the first major US environmental law specifically aimed at improving water quality by reducing pollution.

1951-55
A group of scientists at the Robert A. Taft Center in Cincinnati conducted a series of tests that examined organic compounds in drinking water, the Ohio River and surface water from lakes near petroleum refineries.

1965
The federal Water Quality Act (WQA) enforced water quality standards from the WPCA of 1948.

1969
The Cuyahoga River in Ohio caught fire, sparking a national debate about pollution, becoming one of the driving factors for the many environmental laws that soon followed.

1970
The National Environmental Policy Act (NEPA) was signed into law creating the federal Environmental Protection Agency (EPA).

1972
The Clean Water Act, addressing wastewater treatment requirements, marked the beginning of the separation of water legislation by Congress into wastewater and drinking water.

1974
The Safe Drinking Water Act (SDWA) started a new era in the field of public water supply and set minimum standards for tap water for all regulated contaminants.

1975
Interim Primary Drinking Water Standards.

1976
Toxic Substances Control Act and Resource Conservation and Recovery Act (RCRA) which regulated ground water at industrial facilities.

1980
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund, regulated groundwater at abandoned industrial waste facilities.

1985
National Primary Drinking Water Standards.

1986
Safe Drinking Water Act Amendments.

1989
Surface Water Treatment Rule (SWTR) required public water systems to filter and disinfect surface water sources used for drinking water.

Related Milestones

1989 (continued)
Total Coliform Rule (TCR) – coliform bacteria are a group of microbes that can indicate water contamination by feces of humans or animals.

1989-1994
Chemical Contaminant Rules.

1991
Lead and Copper Regulations dealt with lead and copper leaching through interior plumbing.

1996
Safe Drinking Water Act Amendments established more stringent requirements for drinking water treatment.

Information Collection Rule.

1998
Interim Enhanced Surface Water Treatment Rule (SWTR).

Stage 1 – Disinfectants and Disinfection By-Products (D-DBP) Regulation.

Drinking Water Contaminant Candidate List.

1999
Unregulated Contaminant Monitoring Regulations.

2000
Radionuclides Rule – radioactive forms of elements are called radionuclides. Some occur naturally in the environment, while others are man-made.

Lead and Copper Rule addressed contamination caused by interior building plumbing systems.

2001
Filter Backwash Recycling Rule enhanced standards for water treatment plants.

2002
Long Term 1 Enhanced Surface Water Treatment Rule (SWTR).

Unregulated Contaminant Monitoring Regulations (UCMR).

2005
Drinking Water Contaminant Candidate List 2.

2006
Long Term 2 Enhanced Surface Water Treatment Rule (SWTR) focused on the removal of microbial contamination in surface water sources.

2006 (continued)
Ground Water Rule set more stringent standards for groundwater wells.

2009
Drinking Water Contaminant Candidate List 3.

2014
Revised Total Coliform Rule (RTCR).

2021
Lead and Copper Rule revisions required sampling and testing at interior building taps and replacement of lead service lines.

2024
EPA establishes Maximum Contaminant Level (MCL) of 4 parts per trillion (PPT) for certain PFAS chemicals in drinking water.

NPWA NORTH PENN WATER AUTHORITY

The North Penn Water Authority partnered with the North Wales Water Authority to construct the Point Pleasant Pump Station and the Forest Park Water Treatment Plant, which since its inception in the early 1990's has been treating surface water stored in Lake Galena at Peace Valley Park in New Britain Township. The water in the lake is supplemented with water pumped from the Delaware River about six months per year, during the high demand times. Originally, Forest Park Treatment Plant was designed with sand filters and ozone to treat the water. The plant capacity was expanded in 2007, at which time the treatment process was upgraded significantly to include plate settlers and membrane filters as the water quality regulations became more stringent. Membrane filtration technology is considered the best available in the water industry, and has the ability to remove a wide variety of contaminants to the lowest levels possible. The treatment plant, which operates on a 24/7 basis, delivers water that is among the highest quality that can be found anywhere in the nation, or even the world. Even the new EPA standard of 4 parts per trillion for PFAS chemicals is being met without difficulty at Forest Park.

As of this writing, NPWA has shut down all of its groundwater wells, and now 100% of our supply is surface water that is treated at Forest Park.

In addition, as our neighboring municipalities evaluate the cost of installing new treatment equipment on their groundwater wells that might exceed the new standard for PFAS, it is anticipated that Forest Park will be relied on more than ever, as the plant could help serve as a solution for a wider geographic region that is required to meet these new standards.

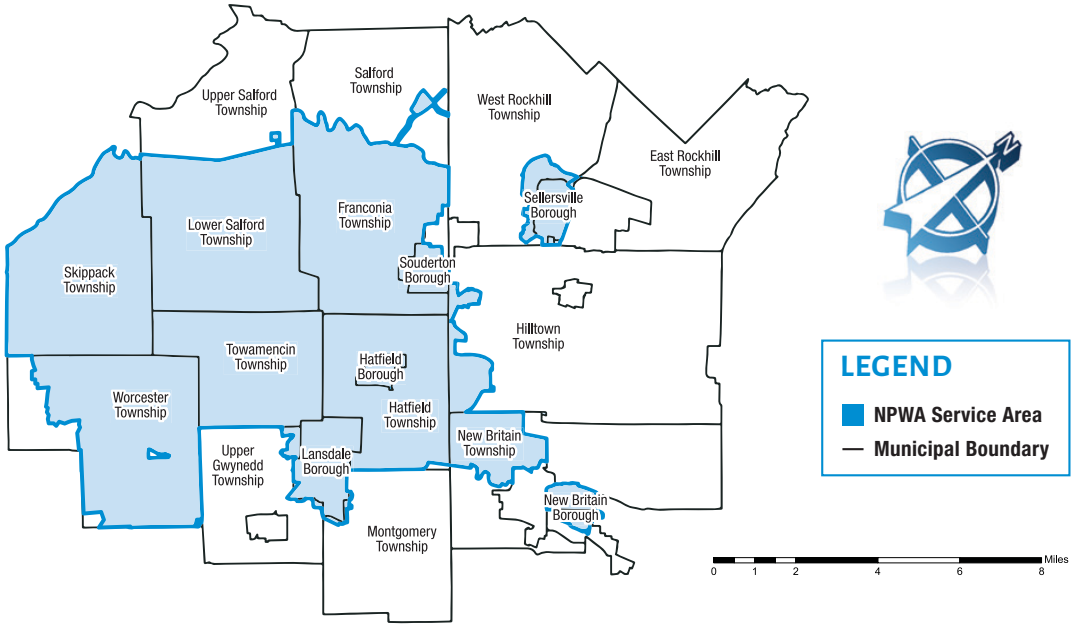
North Penn Water Authority is proud of its excellent track record of continuously meeting all of the most stringent new water quality regulations, year after year, with no violations and no boil water advisories. That's the way it's been throughout our past history, and we are confident that we will continue that success into the future. All customers served by NPWA can rest assured that they are receiving the highest quality water available at the lowest possible cost.

System Infrastructure Capital Improvements for 2023

The Authority spent over $8.1 million on capital improvements in 2023. These expenditures included over $5 million for the installation, replacement, and servicing of portions of more than 597 miles of water main throughout the Authority's service area. That cost also included more than $1.1 million directly allocated toward the Forest Park Water Treatment Plant with the remaining amount funding storage tank improvements, hydrant, valve and service renewals, work on wells and booster stations, and installation of new and replacement meters. Together, this work ensures Authority customers will continue to receive a reliable, high-quality water supply. More details are provided in the Water System Capital Improvement Expenditures chart.

Municipality	Location	Cost
	Water Main Infrastructure	
Franconia Township	309 Connector, Phase 2 Main Relocation	$136,676
Lansdale	8th and 9th Street Main Replacement	$153,209
Lansdale	West 8th Street Main Replacement	$241,838
Lansdale	Lansdale High Service Area Tie-in	$220,745
Lansdale	5th Street Main Replacement	$134,543
New Britain Township	Ferry Road Transmission Main	$2,001,145
Sellersville	Church Street Main Replacement	$264,275
Sellersville	Broadway Avenue Main Replacement	$318,648
Sellersville	E. Walnut Street Main Replacement	$324,858
Sellersville	E. Church Street Main Replacement	$426,518
Souderton	Walnut Avenue Main Replacement	$319,135
Souderton	Highland Avenue Main Replacement	$158,079
Souderton	4th Street Main Replacement	$132,539
Souderton	Lincoln Street Main Replacement	$150,359
West Rockhill	Almont Road Main Extension	$113,489
	Other Capital Infrastructure Projects	
Various Locations	Storage Tank Improvements	$11,306
Forest Park Water Treatment Plant	Capital Improvements and Engineering	$1,198,982
Various Locations	Misc. Hydrant, Valve and Service Renewals	$803,653
Various Locations	New Meters and Replacements	$646,377
Various Locations	Well and Booster Station Improvements	$118,674
Various Locations	Project Development and Closeout	$240,756
		$8,115,804

NPWA Service Area



North Penn Water Authority

Statements of Net Position - December 31, 2023 and 2022

	2023	2022
Assets		
Current Assets		
Cash and cash equivalents	$15,307,919	$17,741,944
Accounts receivable - customers	2,168,310	2,182,694
Accounts receivable - PECO Energy Company	375,000	400,000
Accounts receivable - other	546,867	30,492
Lease/assessments receivable (current portion)	306,893	296,553
Unbilled revenues	2,502,712	2,771,496
Materials inventory	1,503,633	1,167,083
Other	250,649	244,085
Total Current Assets	**22,961,983**	**24,834,347**
Restricted Assets		
Cash and cash equivalents	13,589,826	15,319,024
Utility Plant		
Property, plant and equipment, net	144,415,893	142,014,219
Investment in Forest Park Water, net	36,378,728	36,676,522
Total Utility Plant	**180,794,621**	**178,690,741**
Other Assets		
Lease receivable (non-current portion)	2,557,576	2,152,229.00
Assessments receivable (non-current portion)	12,976	12,976
Total Other Assets	**2,570,552**	**2,165,205**
Total Assets	**219,916,982**	**221,009,317**
Deferred Outflows of Resources		
Derivative instrument, rate swap	**36,293**	**143,058**
Liabilities		
Current Liabilities		
Accounts payable	1,037,877	723,423
Main extension deposits	2,721,430	3,022,905
Other	824,064	793,161
Current liabilities payable from restricted assets:		
Accrued interest on bonds	312,393	325,504
Current portion of bonds payable	5,225,000	5,630,000
Total Current Liabilities	**10,120,764**	**10,494,993**
Non-Current Liabilities		
Derivative instrument, rate swap	36,293	143,058
Long-term debt - bonds payable	32,520,000	38,955,000
Unamortized bond premium, net	4,362,153	4,466,239
Total Non-Current Liabilities	**36,918,446**	**43,564,297**
Total Liabilities	**47,039,210**	**54,059,290**
Deferred Inflows of Resources		
Deferred charge of refunding	2,388,348	1,674,407
Deferred inflows of resources, leases	2,717,886	2,363,566
Total Deferred Inflows of Resources	**5,106,234**	**4,037,973**
Net Position		
Net investment in capital assets	149,058,674	140,935,389
Unrestricted assets	18,749,157	22,119,723
Total Net Position	**$167,807,831**	**$163,055,112**

North Penn Water Authority

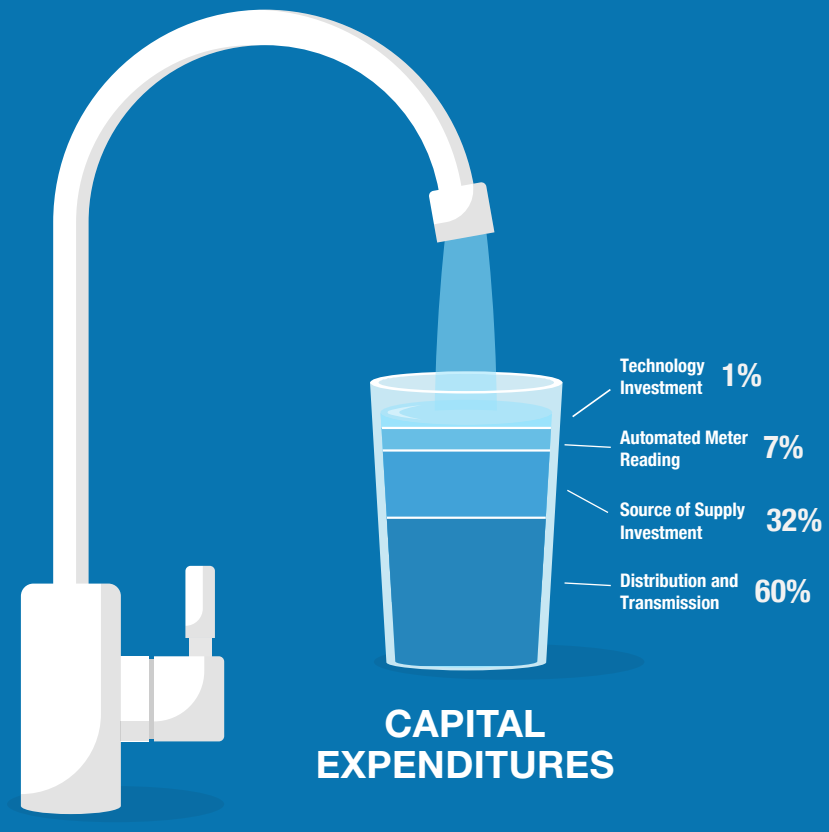
Statements of Revenue, Expenses and Changes in Net Position

Years Ended December 31, 2023 and 2022	2023	2022
Operating Revenues		
Metered sales	$21,436,888	$21,055,596
Unmetered sales	634,034	606,980
Other revenues	56,355	47,528
Total Operating Revenues	**22,127,277**	**21,710,104**
Operating Expenses		
Water collection system	2,540,209	2,559,093
Purification system	89,513	84,475
Laboratory costs	455,512	422,842
Pumping system	575,022	507,832
Metering and customer service	360,639	383,474
Distribution system	1,075,621	935,429
Information technology	957,002	920,390
Administration and engineering	2,179,792	2,039,825
General expenses	3,852,405	3,306,915
Total Operating Expenses	**12,085,715**	**11,160,275**
Operating Income	**10,041,562**	**10,549,829**
Non-operating Income	**3,961,568**	**3,858,066**
Income Before Debt Service Costs and Depreciation and Amortization	**14,003,130**	**14,407,895**
Debt Service Costs		
Interest on bonds	1,598,547	2,072,654
Bond issuance costs	228,255	-
Amortization of bond discount and premium	(455,994)	(430,693)
Total Debt Service Costs	**1,370,808**	**1,641,961**
Income Exclusive of Depreciation and Amortization	**12,632,322**	**12,765,934**
Depreciation and Amortization		
Property, plant and equipment	5,639,837	5,572,963
Forest Park Water	2,239,766	2,281,417
Total Depreciation and Amortization	**7,879,603**	**7,854,380**
Change in Net Position	**4,752,719**	**4,911,554**
Net Position, Beginning of Year	**163,055,112**	**158,143,558**
Net Position, End of Year	**$167,807,831**	**$163,055,112**

Customer Connection Counts

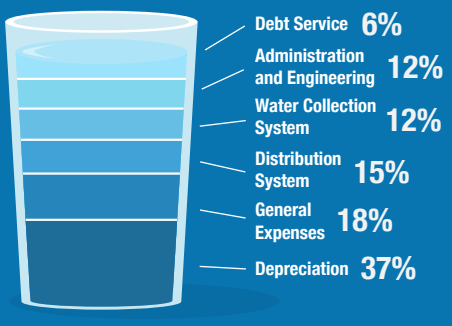
By Municipality & Customer Class As Of January 4, 2024

Municipality	COMMERCIAL	DOMESTIC	INDUSTRIAL	PUBLIC	UTILITY	TOTAL
Chalfont Borough	0	0	0	0	1	1
Franconia Township	81	3,399	40	32	0	3,552
Hatfield Borough	60	929	16	7	0	1,012
Hatfield Township	488	4,637	145	27	0	5,297
Hilltown Township	89	122	6	3	2	222
Lansdale Borough	399	5,215	66	41	0	5,721
Lower Salford Township	144	3,760	39	35	1	3,979
Montgomery Township	5	62	0	1	1	69
New Britain Borough	40	217	0	7	0	264
New Britain Township	38	965	13	11	2	1,029
Perkasie Borough	0	7	0	0	0	7
Salford Township	2	222	0	2	0	226
Sellersville Borough	58	1,819	4	15	0	1,896
Skippack Township	71	3,198	9	30	3	3,311
Souderton Borough	160	2,211	6	16	0	2,393
Telford Borough	0	1	0	0	1	2
Towamencin Township	184	4,816	43	53	1	5,097
Upper Gwynedd Township	10	270	0	4	1	285
Upper Salford Township	19	0	0	0	0	19
West Rockhill Township	35	116	0	7	0	158
Worcester Township	33	1,605	3	16	1	1,658
Total	**1,916**	**33,571**	**390**	**307**	**14**	**36,198**

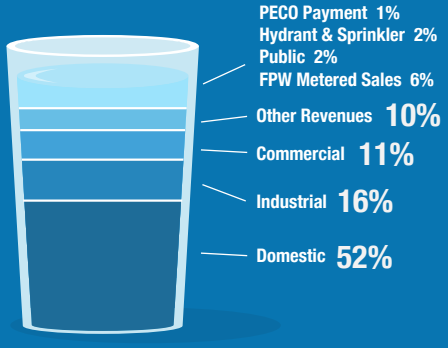


CAPITAL EXPENDITURES

EXPENSES



REVENUE SOURCES



Total Footage in System by Size (feet)

Combined Laterals and Pressurized Main by Size and Township

Township	2'	4'	6'	8'	10'	12'	16'	18'	20'	24'	30'	36'	TOTAL
Chalfont Borough	6	1	62	310	0	51	3,179	0	0	10	2,069	3,841	9,529
Franconia Township	527	2,917	25,035	221,495	25	80,536	15,279	0	0	11,884	0	0	357,698
Hatfield Borough	289	515	13,251	37,413	9	1,668	7,294	0	0	0	0	0	60,439
Hatfield Township	5,847	5,174	86,483	257,135	2,790	86,625	46,415	0	50	29,285	0	0	519,804
Hilltown Township	1,161	136	2,772	21,227	0	14,384	16,547	0	0	417	0	0	56,644
Lansdale Borough	2,181	16,144	72,152	150,257	0	30,910	22,249	0	0	284	0	0	294,177
Lower Salford Township	1,128	2,190	31,936	246,896	37	100,049	50,499	0	0	0	0	0	432,735
Montgomery Township	0	7	574	2,609	0	497	0	0	0	0	0	0	3,687
New Britain Borough	231	759	5,301	17,051	0	702	0	0	0	189	0	0	24,233
New Britain Township	209	816	18,508	39,206	5,156	14,411	23,839	0	214	4,405	17,278	0	124,042
Perkasie Borough	0	0	480	0	0	0	0	0	0	0	0	0	480
Salford Township	115	7	455	7,970	0	14,074	0	0	0	0	0	0	22,621
Sellersville Borough	683	3,083	14,798	59,948	1,293	13,156	0	0	0	0	0	0	92,961
Skippack Township	1,064	1,557	26,904	154,990	5	90,850	33,591	0	0	17	0	0	308,978
Souderton Borough	1,105	12,026	17,115	69,490	0	15,256	475	0	0	0	0	0	115,467
Towamencin Township	1,901	15,209	74,805	241,186	1,125	69,212	29,464	0	0	214	0	0	433,116
Upper Gwynedd Township	201	621	5,475	20,208	0	10,661	18	0	0	0	0	76	37,260
Upper Salford Township	11	0	96	1,320	0	2,265	0	0	0	0	0	0	3,692
West Rockhill Township	118	869	4,062	17,319	2,706	3,180	1	570	0	0	0	0	28,825
Worcester Township	317	1,607	14,229	136,236	0	52,249	25,572	0	0	0	0	0	230,210
Total	17,094	63,638	414,493	1,702,266	13,146	600,736	274,422	570	264	46,705	19,347	3,917	3,156,598

As of December 31, 2023, total length in the NPWA system is 597.84 miles.

Growth Statistics

	2022	2023	% Change
Water Purchased from Forest Park [MGD]	10.76	10.88	1.12%
Daily Pumpage Authority Wells [MGD]	0.60	0.52	-13.33%
Average Daily Sendout [MGD]	11.36	11.41	0.44%
Peak Day Sendout [MGD]	15.26	15.26	0.00%
Number of Wells****	6	4	-33.33%
Pumping Capacity Wells [MGD] ***	1.58	1.11	-29.75%
Purchased Capacity [MGD]*****	17.50	17.50	0.00%
Average Daily Sales [MGD]	9.61	9.78	1.77%
Number of Customers*	35,809	36,198	1.01%
Storage Totals [MG]	15.85	15.85	0.00%
Number of Fire Hydrants	3,801	3,845	1.16%
Miles of Main	597	598	0.17%
Metered Ratio**	85.10%	85.63%	0.62%

* Number of Customers is the number of service connections
** Metered Ratio is the ratio of total water sold to customers divided by the total water pumped from sources
*** Capacity based on active production wells only
**** Number reflects active production wells only
***** Additional Plant Capacity of 1.5 MGD reserved due to plant expansion
Bucks County Water & Sewer Authority reserved 4 MGD of capacity

NPWA Employees

As of December 31, 2023

Executive Director
Anthony J. Bellitto, Jr., P.E.

Director of Finance and Human Resources
Ami L. Tarburton

Director of Information Technology
Daniel P. Pearce

Director of Asset Management and Strategic Initiatives
Daniel C. Preston, P.E.

Director of Operations and Field Services
Jonathan C. Hartzell*

Administration & Public Relations
Lindsay J. Hughes, Administration and Public Relations Manager
Shana Constanzer
Barbara Jackson

Customer Service
Christopher Norris, Meters, Customer Service, and Systems Control Manager*
Alicia K. Vona, Customer Service Supervisor
Amy J. Payer
Karen Karamitros
Carol Penney

Engineering
Julie Black, Engineering Supervisor
Kevin Sessa
Helene J. Dunn – PT

Equipment Maintenance
John W. Boyce

Finance
Kane Guill, Accounting Supervisor
Justin Salyer
Tashanna Brown-Dacres
David Morasco

Human Resources
Nicole Peck

Information Technology
Henry Virkler
Mark J. Wensel
Christopher Kelly

Meter
Steven J. Reber, Meter Supervisor*
David L. Galluppi*
Thomas J. Hughes, Jr.
Rob LoMeli
Wes Paskewich*

Operations
James P. Sharayko, Construction Superintendent*
William R. Hoffman, Jr., Maintenance Superintendent*
Stephen A. Fretz, Jr.

Daniel M. Beiler, Crew Leader*
Robert Averitt*
Cody Clemens*
Nicholas Hale*
Tyler Kelvy
Brody Minor

Bryan S. Reimel, Crew Leader*
John L. Dickinson, III*
Angelo V. Cosentino*
Brandon Mininger*
Zachery Harwanko*

Systems Control
Michael J. Bush, Systems Control Superintendent*
James C. Lengel*
Erwin G. Hunsberger*
Kevin Buschmann*

Water Quality
Heidi L. Palmer, Water Quality and Environmental Compliance Manager
Bruce W. Sandstrom
Katherine H. Schulze

* Certified Water Works Operator
PT – Part-time

Management Team - 2024

(Front row- left to right)
Daniel C. Preston, P.E., Director of Asset Management and Strategic Initiatives
Anthony J. Bellitto, Jr., P.E., Executive Director
Ami L. Tarburton, Director of Finance and Human Resources

(Back row- left to right)
Jonathan C. Hartzell, Director of Operations and Field Services
Lindsay J. Hughes, Manager of Administration and Public Relations
Christopher J. Norris, Manager of Meters, Customer Service and Systems Control
Heidi L. Palmer, Water Quality and Environmental Compliance Manager
Daniel P. Pearce, Director of Information Technology

2024 STAFF

A dedicated, professional workforce committed to providing the community with a safe, reliable, and economical water supply.

300 Forty Foot Road, Lansdale, PA 19446
(215) 855-3617 • After Hours Emergency Number: (215) 855-9945 • npwa.org