



Passaic Valley Water Commission

Stewardship | Vision | Performance

2024: Year in Review

Jim Mueller
Executive Director

January 24, 2025



Water For Future Generations

The Passaic Valley Water Commission (PVWC), owned by the Cities of Paterson, Clifton and Passaic, supplies high-quality drinking water to almost 800,000 people across four (4) counties in Northern New Jersey: Passaic, Bergen, Essex and Morris. The population served includes retail cities where PVWC operates and maintains the water distribution pipes in addition to supplying water; and 23 wholesale cities where PVWC supplies water, and the distribution systems are operated by independent entities. Since 1849 the company has provided high quality drinking water, at first as the *Passaic Water Company* and then as *PVWC*, and steadily expanded the reservoir, distribution and treatment systems to meet the needs of the growing population. Much of this original infrastructure is still in place, particularly the reservoirs and transmission systems that distribute treated water.

In 2023, PVWC developed a 5-year strategic plan that outlined the challenges facing the water industry in general and PVWC specifically. These challenges include: an aging workforce facing retirement; aging infrastructure reaching the end of useful life; compliance challenges as regulations evolve; diverse security threats including physical and cyber security; climate change and the need for robust planning and adaptiveness; and economic considerations for revenue, delinquencies, operating costs, and water rates. The *three-pronged strategy* to address these challenges is summarized below with details on progress provided in subsequent sections of this report

Investing in Our Infrastructure

PVWC has a 5-year capital budget of \$809M to address aging infrastructure, evolving regulations and mandates, and modernization of vehicles and equipment. The work is being prioritized and phased to ensure investments are staggered intelligently to limit financial impacts. The Executive Director, CFO and engineering teams are working closely with the State of New Jersey to maximize opportunities for *principal loan forgiveness* from the State Water Bank. This money does not have to be paid back which is a significant savings to water rate payers for much needed system improvements. ***Almost \$50M in principal loan forgiveness has been granted to or is being pursued by PVWC for the following projects: lead service line replacements; Levine Reservoir storage tanks; water meter replacements; and water main replacements.***

Investing in Our Employees

To keep pace with more advanced skills required to operate, engineer and administer one of the largest and complex water supply and distribution systems in the State of New Jersey, developing succession plans and a pipeline of qualified staff is critical. The creation of programs for co-op students, apprenticeships, internships and a formal summer help program has helped enhance the employee pipeline. In addition, insourcing work saves time and money rather than contracting out such as installing insertion valves to support emergency repairs; performing more complex drainage system improvements and water main replacements; and stabilizing the treatment process by installing complex equipment with inhouse staff normally requiring contractor support. ***Employees receive annual stipends for holding licenses and specialty certifications in recognition of the value added to PVWC.***

Investing in Our Communities

By partnering and planning with the cities we serve as they grow economically through new housing and commercial developments, we ensure our infrastructure replacement program will keep us ready to supply their water needs. The investment of capital in local infrastructure creates jobs for local businesses and residents. The hiring of local staff as full-time PVWC employees creates career opportunities through technical and managerial skills development for the benefit of PVWC and residents. ***Over 40% of our staff live in the owner cities and almost 67% live in Passaic County.***



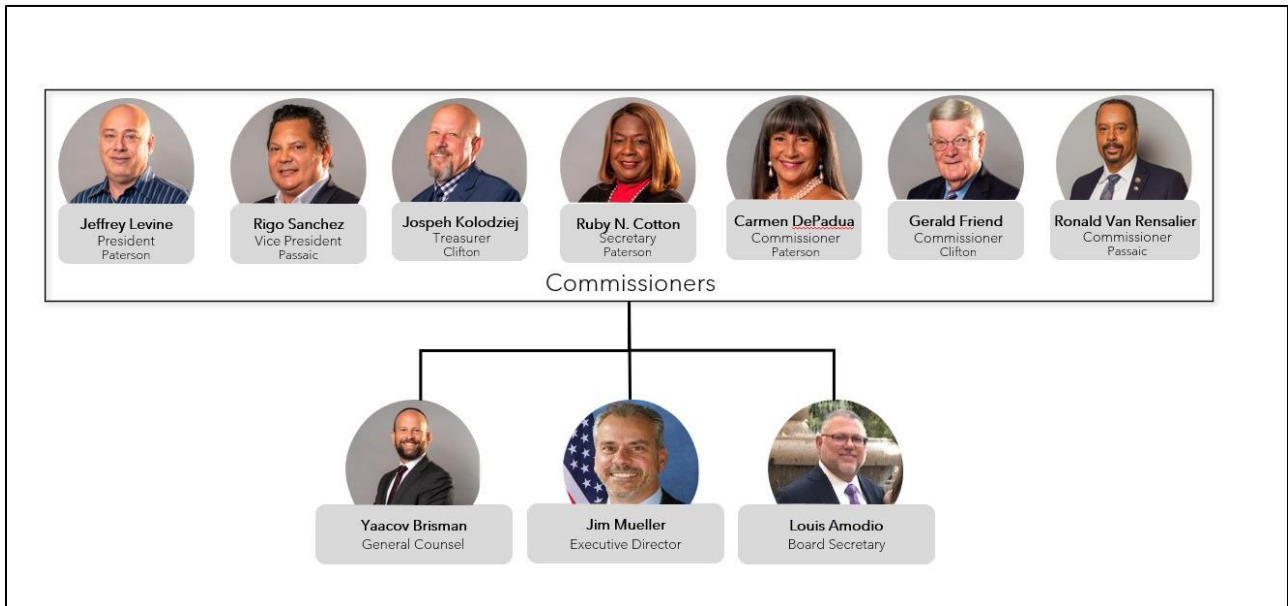
Organizational Structure

PVWC is governed by a Board of Commissioners with the following responsibilities, as detailed in the Articles of Agreement: defining the job duties and compensation of PVWC staff, setting water rates, signing and executing all contracts, approving all money disbursements, and developing and enforcing Commission policies. The Board of Commissioners is a seven (7) member Board with two (2) Commissioners appointed from Clifton and Passaic respectively, and three (3) from Paterson. Reporting directly to Board are the Executive Director; General Counsel; and Board Secretary. The 2024 composition of the Board and the reporting structure are detailed below.

2024 Board of Commissioners

Owner City	Mayor	Commissioners
Paterson	Andre Sayegh	<i>Ruby N. Cotton</i>
		<i>Carmen DePadua</i>
		<i>Jeff Levine</i>
Passaic	Hector Lora	<i>Rigoberto "Rigo" Sanchez</i>
		<i>Ronald Van Rensalier</i>
Clifton	Raymond Grabowski	<i>Gerald Friend</i>
		<i>Joseph Kolodziej</i>

2024 Reporting Structure

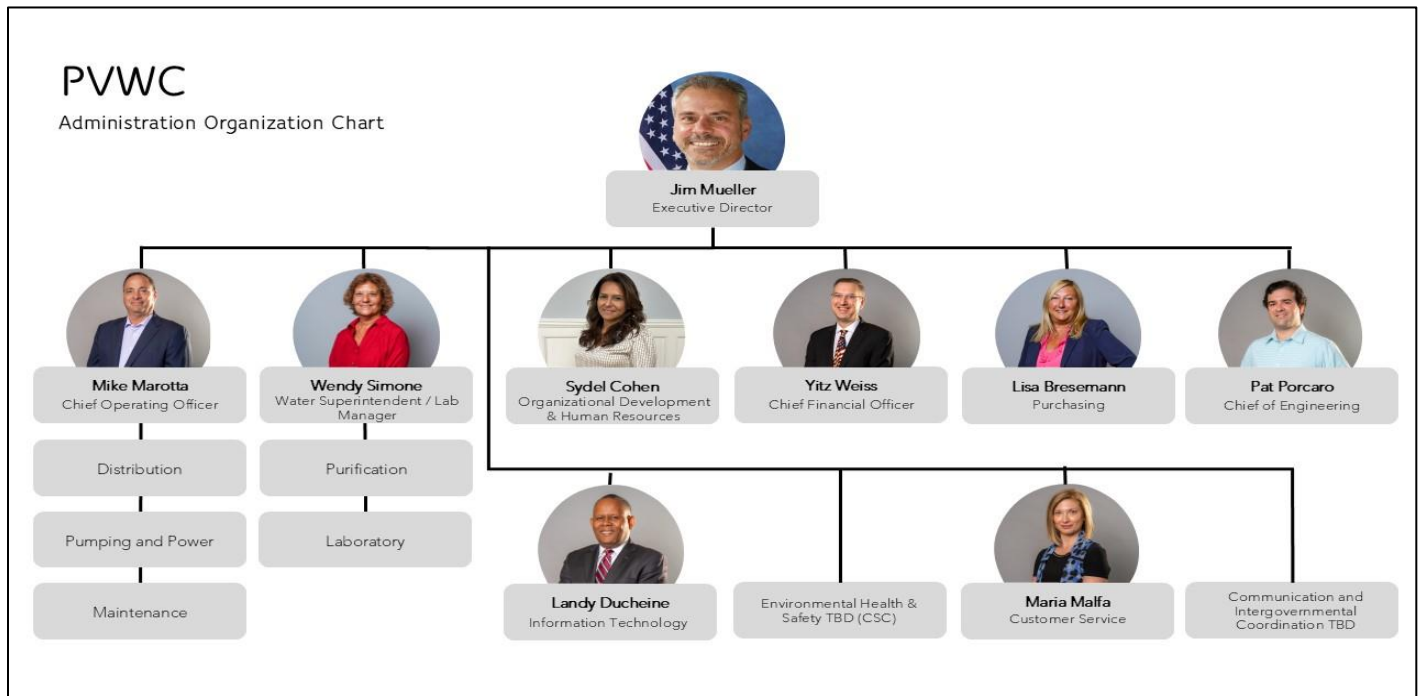


PVWC is also a partial owner (37.75%) of the NJDWSC. That entity was created by statute in 1916, with the authorization to “develop, acquire, and operate a water supply system for use by any municipality in the “North Jersey District” defined as the 12 northernmost counties of the State of New Jersey”. In 2024 PVWC paid **\$10.1M** to the NJDWSC to fund the annual budget, proportional to PVWC’s ownership share.



Table of Organization

One of the challenges facing many utilities including PVWC, is an aging workforce facing retirement leaving succession planning gaps in skills and experience. To begin to address this issue, we have focused on instituting a performance management program for all staff; hiring qualified individuals; measuring productivity and promoting capable people to supervisory positions. As of January 2025, PVWC is staffed by **245** full-time employees with over 67% serving in operational or maintenance roles and the balance serving in administrative/management roles. See below for the PVWC Administration organization chart.



Key Personnel Changes

Over the course of 2024 there were vacancies in department head positions in *Communications and Intergovernmental Coordination (CIC)* and *Environmental Health and Safety (EH&S)*. These vacancies will be filled through the civil service process. Until those civil service tests are called and vacancies filled, the following contract staff continue to excel in key rolls reporting directly to the Executive Director since August 2024:

- Francine Stafford, Sr. Advisor to the Executive Director for EH&S** has been focused on revamping and streamlining the Toxic Catastrophe Prevention Act (TCPA) management system to meet State regulatory requirements as well as developing overall EH&S metrics, standard operating procedures and reporting mechanisms company wide. In addition, Ms. Stafford has reinitiated quarterly safety meetings with union representatives and department staff to identify operational issues and mitigation strategies as well as training needs. Finally, Ms. Stafford has started to work with the Engineering department to review current EH&S contract specifications, identify gaps and recommend improvements in requirements to support the \$809M capital program. She will be finalizing an overall EH&S strategy for 2025 focusing on safety and environmental compliance monitoring, reporting, training and contract specifications.





- Lisa Iurato, Sr. Advisor to the Executive Director for Communications**, has been focused on spearheading the implementation and launch of PVWC's new public-facing website. The new website, which went live to the public on December 13, 2024, ensures that critical information about our organization is readily available and updated frequently for our customers, key stakeholders, members of the media and the public. Functional improvements include: a more professional presentation and easier navigation; improved customer service with easy access to make a payment; engineering construction project status updated quarterly; Board meeting material including minutes, approved resolutions and upcoming meeting schedules; and a PVWC Newsroom highlighting public outreach efforts. In parallel, Ms. Iurato launched an internal, company-wide SharePoint platform to facilitate effective employee communications, helped coordinate the organization's first Virtual Town Hall and is also focused on outreach for the mandated Levine Reservoir storage tank program. She will be finalizing an overall 2025 communications strategy to improve internal/external web platforms, engagement with schools, regulatory agencies and other utilities, and ongoing social media and press/TV focus.



Finances and Funding:

Preliminarily, as of year-end for 2024 total revenue collected was **\$125.87M** with almost half generated by retail metered service. The numbers will be finalized by March once all quarterly bills are reconciled through December 2024. Expenses for 2024 total **\$98.71M** through Dec. 31st and are distributed across

REVENUES	2024	%
Metered Service	\$ 61,435,048	49%
Sales-Wholesale	\$ 44,772,888	36%
Fire Line Service	\$ 7,267,274	6%
Misc Revenue	\$ 3,141,906	2%
Other Services and Repairs	\$ 2,555,827	2%
Delinquent Penalties	\$ 1,284,690	1%
Interest Income	\$ 5,412,456	4%
TOTAL REVENUES	\$ 125,870,089	100%

four (4) general categories as illustrated by the chart below.

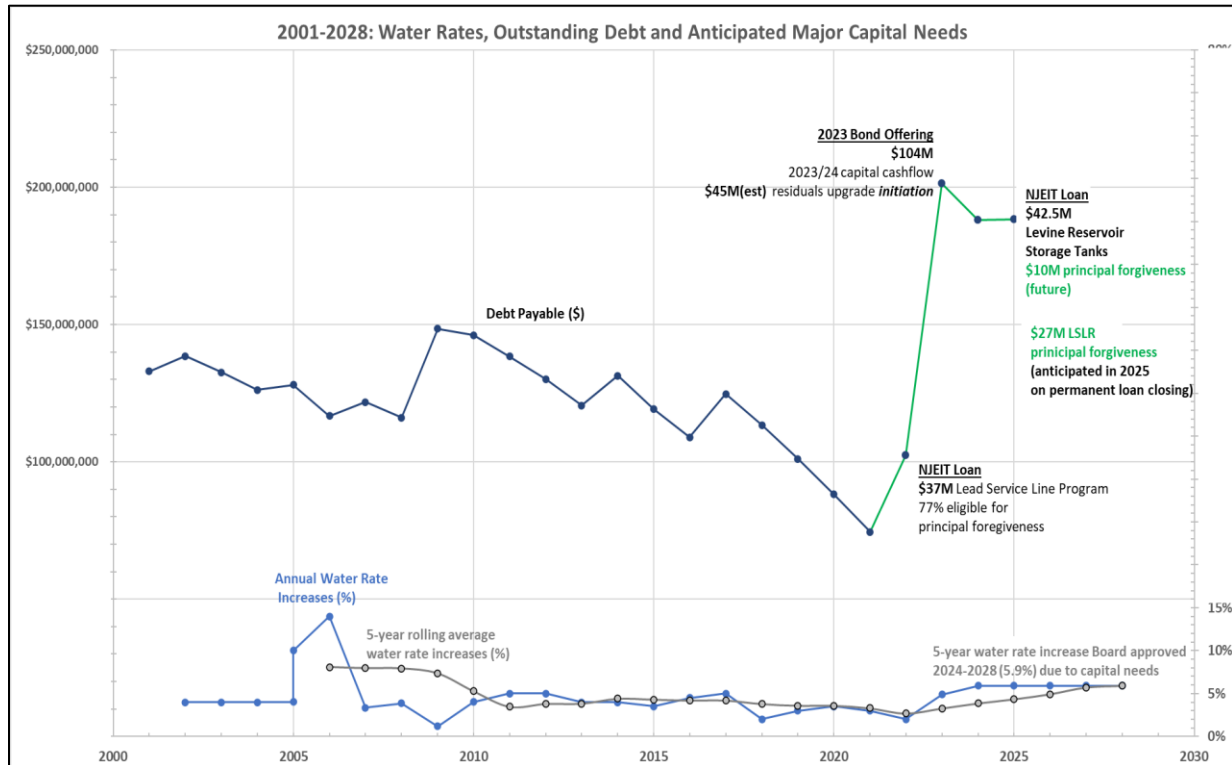
EXPENSES	2024	%
Administrative & General	\$ 30,701,428	31%
Dept OTPS (Chemicals/Equipment etc)	\$ 27,075,149	27%
Dept PS	\$ 24,366,405	25%
Insurance & Taxes	\$ 16,565,456	17%
TOTAL EXPENSES	\$ 98,708,438	100%

The largest expense category is General and Administrative Expenses that includes the annual payment to the NJDWSC which was \$10.1M. It also includes depreciation, bond reserve interest and bond interest expense. The second highest category is other than personnel services (OTPS) which includes chemicals, equipment, and energy. The third highest is personnel services (PS) and last is insurance and taxes. The surplus cash is used to pay for smaller capital purchases as well as increase operating cash on hand and reserves to maintain our high credit rating of *Aa3*. In 2024 we budgeted to spend **\$15M** in capital out of cash. As can be seen in the graph on the next page, water rates have been flat or trending down since 2010 which also coincides with the general decrease in PVWC's debt profile until 2022. This is when the lead service line replacement program began. While PVWC's debt has increased, we anticipate receiving **\$27M** of *principal loan forgiveness* when the permanent loan closes at the completion of the project which is incorporated into the debt forecast. The sharp increase in the debt profile in 2023 was due to the December 2023 bond offering of **\$104M** to pay for ongoing capital and planned projects. This was needed due to evolving regulatory mandates and state-of-good-repair needs due to the age and condition of the water treatment, storage and distribution system. Anticipated capital projects include: the Levine Reservoir Storage Tank project (awarded at **\$41.8M**); Residuals Handling Facilities Upgrade (**\$45M** estimated); as well as water meter replacements; water main replacements and other system



improvements. As a result of these capital needs, the PVWC Board of Commissioners approved a 5-year budget with associated rate increases of 5.9% starting in 2024. This is similar to the trend of other water utilities in Northern NJ where rates are forecasted to increase due to capital improvement priorities.

Debt Profile and Water Rates



Looking further out to 2050 there are significant regulatory and state-of-good-repair program needs. In the next 10 years there are forecasted projects such as the upgrade of the 125-year-old Main Pumping Station and pipes (**\$50-100M est.**); transmission main upgrades (**\$50-100M est.**); water main replacement projects (**\$50-75M est.**); and treatment upgrades at Little Falls for PFAS and other state-of-good-repair needs (**\$50-100M est.**). Longer term there are the mandated projects to cover Great Notch and New Street reservoirs with storage tanks that could cost an additional **\$200-300M (est.)** in addition to replacement cycle needs for water mains and treatment processes. Funding considerations will be a key factor in decision-making, and phasing work in a practical way will be a major focus.

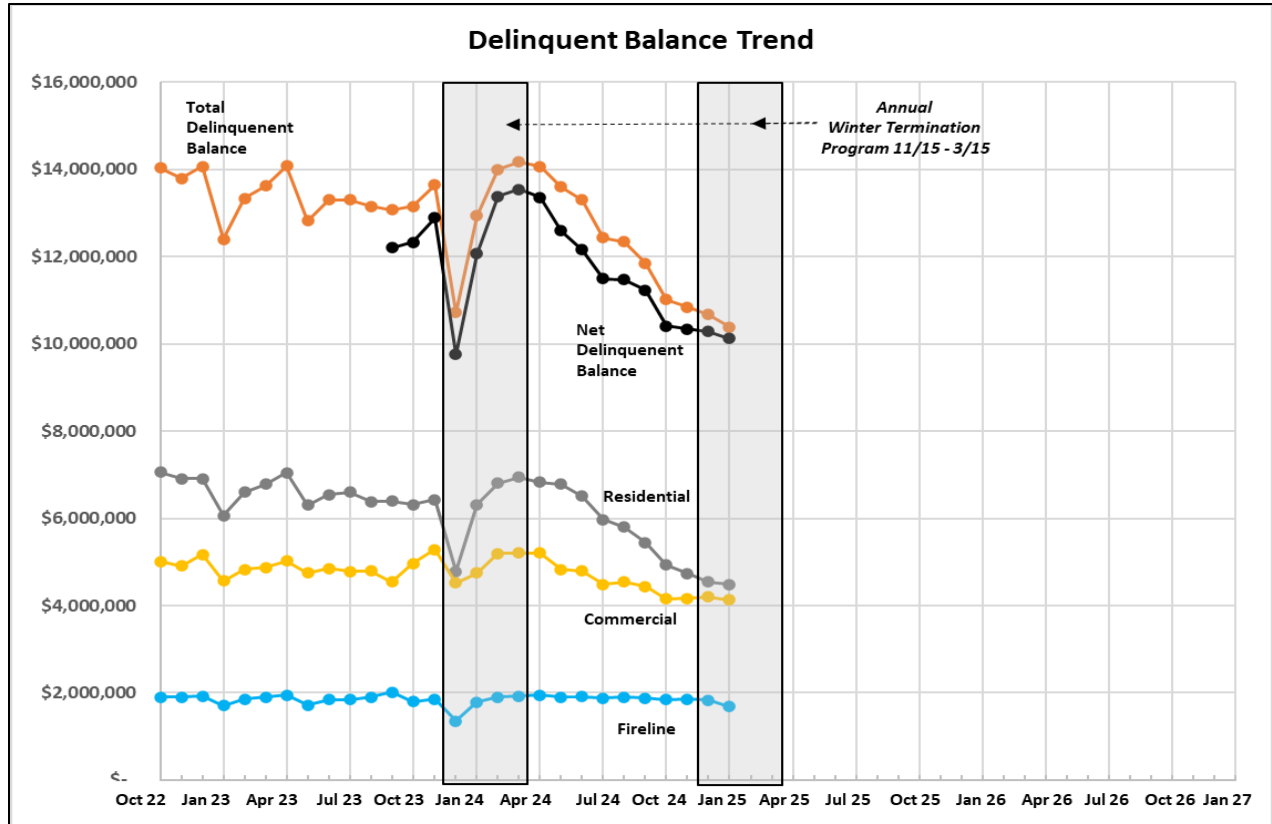
Funding

The Executive Director submitted the funding position paper entitled “Addressing Inequities in the New Jersey Drinking Water State Revolving Fund for Large Water Systems” to NJDEP on June 6, 2024. Some of the recommendations in the paper have already been adopted by NJDEP for SFY25 such as increasing *principal loan forgiveness* for the Levine Reservoir to **\$10M** (up from \$2M in SFY24); water meter replacement principal forgiveness up to **\$7M**; and an additional **\$4M** in principal loan forgiveness for other system improvement projects. The cumulative recommendations in the paper would double the annual principal forgiveness available to large water systems who rank highly on affordability criteria from **\$32M to \$65M**. Given the competing needs of regulatory mandates, state-of-good-repair requirements due to system condition and age, and increasing demands from development as well as climate change impacts, the proposed increase in funding opportunities is warranted. We continue to work closely with NJDEP to further discuss options to fund the ongoing PVWC capital improvement program.



Delinquent Accounts

There are over 77,000 residential, commercial, industrial and fireline accounts with PVWC and the majority of accounts are billed quarterly. Starting in 2020, during the Covid pandemic, utilities were prohibited from turning off residential customers for non-payment of bills. This moratorium was lifted during the Summer of 2022. During the moratorium PVWC delinquent accounts almost doubled to **\$14M** compared to the pre-Covid balance. To assist customers PVWC agreed to participate in the *Low Income Household Water Assistance Program (LIHWAP)* for those who met State eligibility requirements and were approved by the NJ Department of Community Affairs (DCA). The DCA started making payments to PVWC in September 2022 and the last payment was made in June 2024. A total of **297** customers participated with total *LIHWAP* payments equalling **\$427,365** towards delinquent balances.



Once the Covid moratorium was lifted, PVWC began sending out shutoff notices to delinquent customers with shut-offs resuming in late Summer 2022. Annually, the *State Winter Termination Program* prohibits residential shut-offs for eligible customers between Nov 15th – March 15th each year with specific rule changes introduced in 2023. We encourage all customers to continue to make payments and/or enter into *interest free* payment plans so their debt does not accumulate and compound. In March 2024, the net delinquencies peaked at over **\$14M** and has trended down significantly since then due to the success of account shutoffs as well as PVWC Customer Service outreach directly to delinquent account holders. As of the end of 2024 there were 5,680 delinquent accounts totaling **\$10.4M** with 290 of these accounts on interest free payment plans totaling over **\$257,000**. The *net delinquent amount* is **\$10.1M** as of the end of 2024, with **\$4M** collected this year.

We will be working with *NJ Futures* to pursue further subsidy opportunities for eligible households and also continue to offer interest free payment plans for customers to more easily bring accounts current. For older legacy delinquencies, PVWC is pursuing legal action. Currently there are **74** accounts being pursued totaling **\$1.7M** that are in various stages of the legal process with **\$52,937** collected to-date.



Emergency Response

Given the age and interconnectedness with other jurisdictions of PVWC’s system, as well as climate change impacts causing more frequent severe weather, the need for robust emergency response and organizational adaptiveness is critical. This applies to both *unplanned* infrastructure outages and weather events as well as *planned* outages to support maintenance and construction activities. Below is a summary of various emergency response events during 2024:

January

- *January 9th storm* – 3” of rain fell in less than 24 hours combined with a sudden increase in temperatures causing rapid snowmelt that threatened to overwhelm New Street Reservoir. PVWC



Incident Command was activated proactively and interim measures put in place including concrete barriers across from Barbour Pond; sandbags on the drainage channel around the reservoir; deployment of mobile pumping equipment to New Street; and isolating New Street by operating the crossover valve in a fixed position. These interim efforts

protected the reservoir from being compromised during the high intensity/long-duration storm and bridge the gap to the new permanent drainage system (see [September](#) highlight below).

- Due to extremely cold temperatures during the month, there were **24** water main breaks in January 2024 and the Distribution staff worked around the clock to minimize service disruptions to customers.
- *FEMA Reimbursement:*
 - *Ida Disaster:* All projects associated with FEMA Public Assistance Funding for Ida Disaster, DR4614 have been closed out. The Cities of Paterson, Passaic and Clifton are working directly with FEMA to seek reimbursements for all activities associated with assisting PVWC during the emergency event. We have received a total of **\$3,195,188.27** from FEMA.
 - *Covid:* All projects associated with FEMA Public Assistance Funding for Covid, DR4488 have been closed out. We have received a total of **\$65,962.68** from FEMA.

February

- *Actiflo Stabilization:* On February 20, 2024, the PVWC Maintenance Department initiated demolition of over 1000 settling tubes and installation of new tubes covering the entire floor (700 sq. ft.) of Train #2 of the *Actiflo* settling process at the Little Falls Water Treatment Plant. This was necessary due to the structural failure of the existing settling tubes preventing Train #2 from being kept in service. The confined working space, number of tubes and weight of some pieces



exceeding 1000 pounds added to the complexity and the in-house skill required. The tank was successfully upgraded and put back into operation on March 18, 2024 in advance of the summer peak flow period.

June

- *Low Street, Paterson -* On June 2nd there was a major leak on a 16" water main on Low Street between the Passaic River and 5th Ave in the Bunker Hill section of Paterson. It is suspected that the leak was caused by the response to the seven (7) alarm fire about a mile away on the night of June 1st into the day of June 2nd. The site was heavily contaminated with hazardous chemicals which complicated the repair. It took 2.5 weeks to isolate the leak and



another 2 weeks to fix due to the degraded condition of the pipe and difficulty of welding. Temporary pumping was set up at multiple locations for the month in the Bunker Hill section to ensure water pressure was maintained due to fire protection requirements and high demand exacerbated by excessive temperatures in June.

Note: The procedures have been changed with the fire departments to ensure that PVWC staff are on site in a support role for any response greater than 2 alarms.

- *21st Street, Paterson –* On June 19th there was a catastrophic failure on a 24" water main near St. Joseph's Hospital. PVWC Incident Command coordinated closely with hospital staff and assisted in avoiding evacuation of patients by maintaining water pressure to the hospital cooling system. A boil water alert was issued that impacted 50,000 people in Paterson and a small part of Clifton. This was lifted on June 21st. The water main remained isolated to facilitate other construction work in the area. The street was reopened in November.





September

- As part of a more permanent flood protection plan, inhouse staff from the PVWC Maintenance Dept began work to install drainage improvements at the New Street Reservoir. These



improvements included: enlarging two (2) existing stormwater retention vaults to significantly increase volume to 100-200% of the original size; constructing three (3) new retention basins to allow for pipe alignment transitions and connections of different pipe sizes; and placement of almost 500' of new 24" and 48" drainage pipes to route stormwater around the reservoir. The project was completed in October 2024.

November

- On November 4th NJDWSC requested that PVWC as well as other purveyors curtail their diversion due to construction on the Wanaque water treatment plant sedimentation basins. Construction was completed on November 22nd. During this period PVWC reduced its diversion from Wanaque to approximately 18-20 MGD down from 30-35MGD.

- On November 13th PVWC participated in a press event with Governor Murphy and NJDEP Commissioner LaTourette to support issuance of a drought warning for the entire state. All customers



and water providers were asked to voluntarily reduce water usage to preserve water. The PVWC Executive Director instituted a formal incident command structure to ensure all drought management assets are inventoried and assessed in the event we are called upon to activate more restrictive measures. Replacement equipment and material is on order and planned to be installed in the first quarter of 2025. All PVWC hydrant flushing operations have been halted until further notice due to the State-wide drought warning. We encourage each city to conserve water.

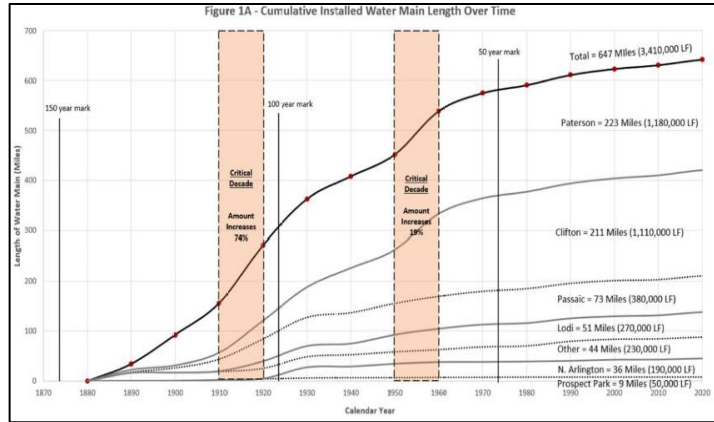
December

- Due to a sudden drop in temperatures for most of the month there was a drastic increase in water main breaks particularly the last week of the year during the holidays. In total there were **18** water main breaks and PVWC Distribution staff worked around the clock to minimize service disruptions.



Capital Program

Given PVWC’s long, rich history and large system, there are significant challenges in terms of aging infrastructure; compliance with more stringent regulations; and climate change impacts to existing facilities from severe weather. It has been 20 years since major upgrades were completed on treatment systems and 50 years since major distribution system upgrades were performed. By 2030 almost **60%** of the system-wide distribution pipes will be **100-150** years old. For cities like Paterson and Passaic over **70% of the pipes are in that age range**. The Main Pumping Station is also **125 years old**. The two emergency response incidents in



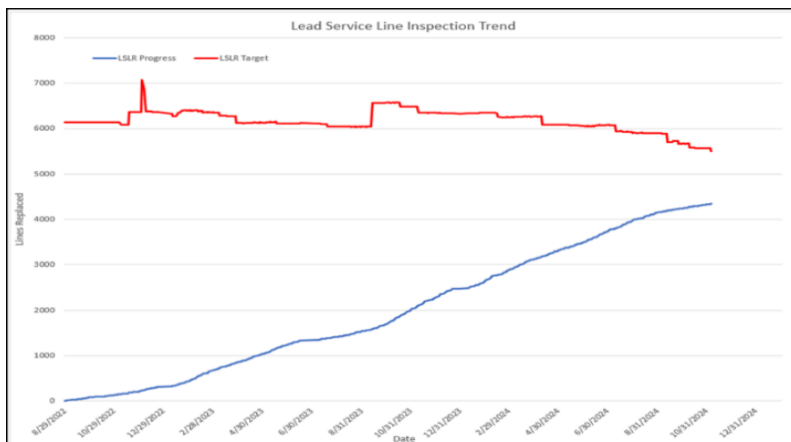
Paterson in June 2024 impacting areas with a combined 100,000 people living and working highlight the vulnerability of the distribution system. The age of these systems and evolving regulations requires PVWC to make major capital investments to keep the water system in a state of good repair, maintain compliance with State and Federal regulations, and continue to improve the level of service. To begin to address the challenges identified above, PVWC’s Board of Commissioners approved a 5-year capital plan of **\$809M** in 2024, the largest capital plan ever undertaken by the company. Presented below are key facets of the capital program covering ongoing construction as well as planning and design for the future.

Lead Service Line Replacement Program

The largest ongoing PVWC construction project is the **\$29.5M** contract, awarded in May 2022, for the **free replacement** of customer-owned lead service lines with copper lines to reduce the risk of lead poisoning in Paterson, Clifton, Passaic and Prospect Park.



These areas were prioritized due to the lack of corrosion control measures available because of algal concerns with the open-air, finished water reservoirs. This program is funded through the NJ Water Bank with over **\$27M** in **principal loan forgiveness** that does **not** need to be paid back by PVWC. This is a significant savings to water rate payers while also protecting public health.



Since 2022, over **4,500** lead lines have been replaced through this contract with a target completion in July 2025. The remaining 15-20% of the locations with lead service lines have been less responsive to program outreach efforts to schedule access for inspection and replacement. This is due to a variety of factors including vacant properties, delinquent accounts, rental tenants and absentee



landlords which make communication and scheduling extremely difficult. We continue to adapt to meet these challenges by contacting customers directly through PVWC customer service representatives, working with each City and holding press events to continue to get the word out about the free program. We are also evaluating options to apply fines if access to properties is not obtained as approved by each City Council in the 2022 ordinances authorizing the program. The overall success of this program in overcoming challenges and effectively executing the work is a model for the water industry. Other cities, including New York City and Baltimore, have begun reaching out to PVWC for guidance on lessons-learned and best practices as they look to replace hundreds of thousands of customer-owned lead service lines.

Fire Hydrant Replacement Program

The **\$11.5M** hydrant replacement contract, awarded in July 2022, to upgrade antiquated or out-of-service hydrants was completed on December 31, 2024. There are over 5,400 hydrants across all PVWC retail areas and 1,155 were replaced under this contract.



These upgrades help ensure that the fire department in each city can rely on the hydrants in the street to provide water when they need it to protect public health and property.

Location	# Replaced	System Total	% Replaced
Clifton	330	1,684	20%
Passaic	145	695	21%
Paterson	490	1,989	25%
Prospect Park	0	70	0%
Lodi	137	509	27%
North Arlington	53	373	14%
Transmission Mains	0	51	0%
High Crest	0	38	0%
Post Brook	0	26	0%
Total	1,155	5,435	21%

Levine Reservoir Storage Tanks

Construction bids were advertised on March 14, 2024, with an estimated construction cost of \$35M. On May 21st five (5) bids were received ranging from \$40 - \$50M. The three apparent lowest bidders each submitted at least one written letter or email to the PVWC arguing why the contract should be awarded to them. PVWC engineering and legal staff undertook a thorough evaluation of the bids and the bid challenges. On July 24, 2024, the construction contract was awarded to the second lowest bidder for **\$41.8M** due to the low bid containing at least one material, non-waivable, and non- curable defect. A stay of award was granted at the request of the low bidder and third-lowest bidder who both immediately filed formal complaints with the Court regarding the bid award. A hearing was held in September and the Court’s determination upheld PVWC’s decision to award to the second low bidder. An appeal was filed by the third-low bidder with the Appellate Court and the hearing held on December 17th. The Court’s final determination received January 10, 2025, upheld the initial determination and the construction contract can proceed as awarded. PVWC is in the process of loading in the final contract documents to the State system and will work with the I-Bank to finalize and move forward with the contract.



Note: The NJ Water Bank increased principal loan forgiveness for the project from \$2M to \$10M which is a significant savings to PVWC rate payers.



Little Falls Water Treatment Process: State-of-Good-Repair



Actiflo process – Lamella tubes

PVWC awarded a **\$2.3M**, 2-year construction contract for the rehabilitation of all four (4) trains of the *Actiflo* settling process to address structural issues and replace equipment past the useful life to prevent process treatment disruptions.

August 7, 2023 Main PS Catastrophic Valve Failure



A constructability review was initiated in August for the **\$45M** residuals handling upgrade scheduled to bid in January 2025. This project is part of the **\$104M December 2023 bond issuance**. This upgrade is



Existing Residuals Handling Facilities

necessary due to the age and unreliability of the existing system that was installed in phases in the early 1970's and in the early 1980's making it **40-50 years old**.

A **\$681,000** contract was awarded in March 2024 for replacement of filter media with the media delivered and installation expected to begin in January 2025. Designs are also progressing for the following projects at the treatment plant that are needed because of the antiquated systems: sulfuric acid tank replacement; upgrade of the oxygen

regulators on the ozone system; installation of stairs and platforms for various chemical systems; chemical feed line replacement and cone valve replacement at the 125-year-old Main Pumping Station. The site plan is being updated to reflect these various stages of construction over the next two (2) years.

IT Upgrades

In August 2024, the IT department completed the upgrade of key SCADA components totaling almost **\$3M** of equipment. The scope covered equipment upgrades across 40 sites including the Little Falls campus and Clifton headquarters impacting 63 asset groups such as pumping stations, storage tanks, chemical addition facilities and treatment processes. In addition, the IT department has instituted internal controls to monitor external email phishing attempts and increase staff awareness and training to guard against this vulnerability. Procedures are also being developed through our newly formed internal cybersecurity council to ensure proper protocols are in place along with training around our IT infrastructure and staff usage.

Water Main Replacement Program

PVWC staff and consultants finalized the rating methodology for the pipe criticality analysis and designs are advancing for high priority areas in Paterson, Clifton and Passaic. Phase 1 water main



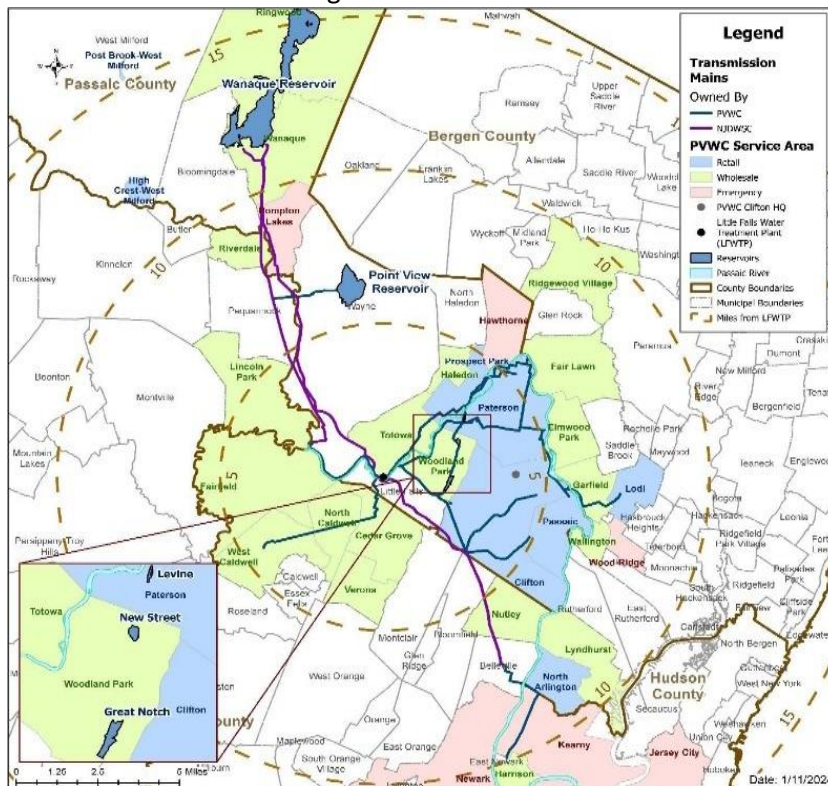
projects are targeted to bid in Q2 2025. Coordination was initiated with Passaic County and Woodland Park on Rifle Camp Road sewer and water main work as well as the concept of stormwater retention on County land across the street from New Street reservoir. A 20-inch cast iron pipe located in the Passaic River crossing from Paterson to Fairlawn was decommissioned which required extensive coordination between PVWC and our wholesale customers of Fairlawn and Ridgewood. A new 48-inch main, valves, hydrants and interconnection to convey water from the New Street to Levine gradient has been completed. The mains have been thoroughly tested, flushed and placed into service on October 15, 2024. The contractor is continuing with the installation of electrical and instrumentation controls for the SCADA system for communication of pressures and flows to the Pump Station. There is up to **\$4M** available for SFY 2025 for *principal loan forgiveness* for these projects.

Water Meter Replacement Program

PVWC determined that Neptune Metering Technology is the best option for the system-wide meter replacement program based on functionality, cost and funding eligibility due to build America, buy America requirements. Phase 1 bidding documents will be ready by early 2025 with up to 100% *principal loan forgiveness* up to **\$7M** targeting 27,000 meters in Clifton, Paterson and Prospect Park. This represents a significant savings for water rate payers.

Distribution and Storage Planning

On April 24, 2024, PVWC submitted a hydraulic analysis report to USEPA and NJDEP related to consent order dates for the covering of the New Street and Great Notch reservoirs. This report identified



fundamental distribution issues in the PVWC system that inhibit the ability to take New Street and Great Notch out-of-service for construction before other key distribution issues are addressed. PVWC will need to submit a facility plan to State and Federal regulators by **January 15, 2027**, that will identify all necessary projects that will bring PVWC into compliance with the LT2 Rule. On December 3rd a kick-off meeting was held for the **\$2.7M** planning contract that will produce the mandated facility plan for storage at New Street and Great Notch and required distribution projects needed to enable reservoirs being taken offline for construction of

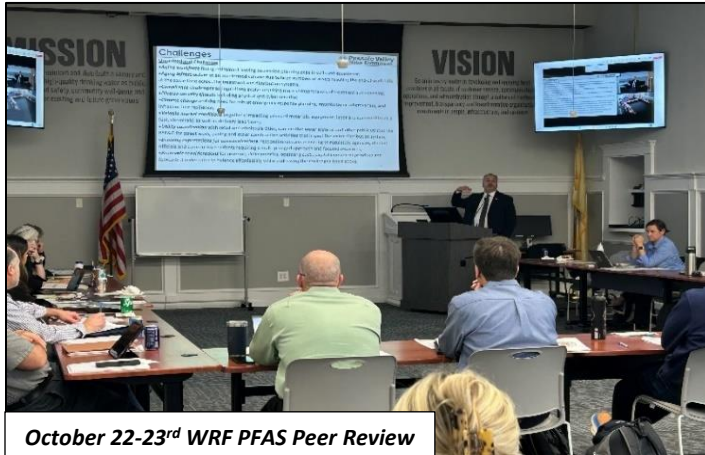
storage tanks. On December 4th NJDEP and the Newark Water Department visited PVWC in Little Falls to convene a meeting on resiliency coordination between PVWC and Newark to begin coordination on all work required for both jurisdictions to comply with the LT2 Rule.

Note: Additional opportunities for principal loan forgiveness through the State Water Bank for the final LT2 projects and pre-cursor projects will be a key factor in program implementation.



PFAS Program

New PFAS compliance limits take effect in 2029 per Federal regulations promulgated in April 2024. On May 8, 2024, the *PVWC PFAS pilot and basis of design* kickoff meeting was held with *Water Research*



October 22-23rd WRF PFAS Peer Review

Foundation (WRF) and our national peer review members as well as local and regional operational staff at various utilities. On September 12, 2024, an internal kick-off meeting was conducted for the **\$2M** PFAS planning contract. On October 22-23rd, PVWC staff led a two-day workshop on PFAS technologies at Little Falls with the *Water Research Foundation (WRF)* to peer review our ongoing pilot program and planning/basis-of-design effort. National water utilities that participated included *Cape Fear Public Utility Authority; Greater Cincinnati Water*

Works; Orange County Water District; American Water, Veolia, North Jersey District Water Supply Commission, Ridgewood Water, Aqua New Jersey; and NYCDEP. Lessons learned and best practices were shared and will be incorporated into PVWC planning efforts.

Facility Improvements

The **\$2.1M** architectural restoration was completed for two PVWC facilities located at the Great Falls National Park: the *Pump House* (built circa 1895) and the *Gate House* (built circa 1906). The Pump House



conveys up to 20 million gallons per day of clean drinking water to the citizens of Paterson and the Gate House is being reserved for potential future chemical addition facilities. The **\$1.2M** LFWTP stair enclosure and rehabilitation project is also nearing completion. A new contract was awarded for the **\$1.2M** roof replacement of multiple buildings at the LFWTP in November 2024. Specifications were finalized for the Clifton Distribution/Customer Service building

asbestos abatement and roof replacement and the lead abatement contract for Main Pumping Station.

Roadway and Concrete Restoration

There is an active **\$4.5M** contract for roadway paving that was awarded September 27, 2023 and expires September 26, 2025. There are two (2) active contracts for concrete restoration each worth **\$495,000 (\$990,000 total)**. Contractors completed concrete work in North Arlington and Lodi and roadway work was completed in North Arlington and moving on to Paterson. We achieved 40% completion for outstanding paving restoration locations system wide.





Community Engagement

- Six (6) municipal meetings were held with Clifton, Passaic, Paterson, Prospect Park, Lodi and North Arlington to discuss paving coordination, LSLR, capital work, illegal hydrant usage and site restorations for street and curb work.
- A company pamphlet was mailed to all customers highlighting PVWC’s history, system overview, and details on various ongoing capital construction programs related to lead service line replacements, Levine Reservoir, water main replacements and PFAS treatment.
- The annual *Consumer Confidence Report (CCR)* was issued in compliance with the Safe Drinking Water Act and mailed to all customers. This report highlighted various water quality parameters and PVWC compliance with State and Federal regulations.
- The Levine Reservoir Storage Tank project was awarded in July 2024 for \$41.8M and community communications efforts ramped up including door knocking to local residences and businesses and planning for a broader community meeting to introduce the project and the schedule of work.
- PVWC staff attended various local events including the following: *Passaic County Fair; Paterson Green Fair; Little Falls, Totowa and West Paterson Holiday Parade* and other public-facing events.
- The updated company website PVWC.com relaunched in December 2024 with a new, more user-friendly design and enhanced functionality for customers and stakeholders.
- A virtual town hall was held with our retail customers on November 12th where the Executive Director and other PVWC senior leaders presented an overview of operational initiatives and capital investments to improve level of service. This was PVWC’s first-ever Virtual Town Hall and garnered **25** live participants, **22** replays and **165** internal views.



Media Relations

- PVWC was mentioned approximately **500** times in 2024 (mostly TV and online print).
- There were **35** press releases published; coverage from *News12 New Jersey, NBC New York, Fox 5, ABC NY, WMBC, Tap Into Paterson, northjersey.com* and *NJ.com*.
- Feb. 2024: Hydrant training with the Prospect Park FD and Survey 123 software training with local FD.
- April 2024: *News12* exclusive on combatting PFAS.
- July 2024: LSLR Update Press Conference with Mayors from our owner-cities.
- Sept. 2024: PVWC joined the City of Paterson for the completion of the \$2.1M restoration of The Pump and Gate Houses at the Great Falls National Park.
- Nov. 2024: *News12* Exclusive on challenges and progress with the LSLR program; Jim Mueller joined NJ Gov. Phil Murphy and NJDEP Comm. Shawn LaTourette for a Virtual Press Conference for Drought Warning.
- Dec 2024: meeting with fire departments at Little Falls to discuss issues including optimization opportunities and areas to focus staff training to reduce risk of water main breaks.

Social Media

- Social media outreach garnered **326** Facebook posts, **298** Instagram posts, **294** X posts and **85** LinkedIn posts, totaling **1,003** social media posts.
- *PVWC Alerts* expanded and improved to provide notifications for main breaks, hydrant flushing, valve work and payment system maintenance (**206** alerts issued). As of the end of 2024 there are **4,342** people signed up for *PVWC Alerts*!



Employee Engagement

Creating engagement opportunities with all staff is a critical focus to assist in communicating the company direction, discuss issues employees are facing, and generate ideas for how to improve the workplace environment and overall efficiency. Throughout 2024 multiple efforts were undertaken for employee engagement including:

Diversity, Equity and Inclusion

Diversity is inherent in the wide variety of work we do, the challenges we face, and the broad range of skills needed to succeed every day. Diversity is also represented in our gender, ethnic backgrounds,

as of 9/16/24

Administration Demographics	All Retail Areas	PVWC # Staff	PVWC %	Average Time with PVWC (Yrs)
White/Caucasian	23%	96	39%	16.4
Hispanic/Latino	56%	86	35%	8.1
Black / African American	13%	55	22%	9.3
Not Defined/Other	1%	3	1%	1.2
Asian	6%	3	1%	1.0
Two Or More Nationalities	1%	2	1%	0.9
Total	100%	245	100%	11.4

experiences, characteristics and beliefs that shape who each of us are. While the hiring process remains focused on candidate qualifications, skills and capability it is worthwhile to understand the PVWC demographics and how they are changing over time. This understanding

will promote balance and ensure that there is an equitable and inclusive environment at PVWC. An analysis was completed in October of the current company demographic profile, years of service, new hires, promotions, and departmental staff distribution. The full analysis was distributed and discussed with the Board of Commissioners, the Department Heads and their direct reports as well as posted on the company-wide Share Point site for access to all staff.

Java with Jim

We held a series of small breakfast meetings called “*Java with Jim*” between the Executive Director and various groups of interested employees. In addition to getting to know people on a personal level, it was also an opportunity to have a two-way conversation regarding various organizational issues and get insight into individual visions for how to make the company better. Key issues discussed included: the capital program; quality-of-life and facility improvements at PVWC staff locations; professional licensing opportunities; salary equity and career planning. Staff also expressed interest in company-wide after-work activities as well opportunities to shadow other employees to learn more about each department’s function and the importance of the work. All employees expressed a sense of pride in working at PVWC in service to the communities we serve.

Internal Town Halls

There were three (3) meetings held throughout the year with all PVWC staff given an opportunity to attend either in-person or virtually via Teams. One (1) was held in Clifton and Little Falls on February 28th celebrating *Black History Month*. The other two (2) were held November 19th and December 2nd respectively in Clifton and Little Falls covering a variety of topics including: employee benefits updates; cyber security issues; EH&S reporting and compliance; incident reporting and a summary of employee engagement and feedback throughout the year.

Management Meetings with the Union

There are two (2) different quarterly meetings held between PVWC management staff and union staff that are staggered throughout the year. One is the *Labor Management* quarterly meeting between the Executive Director, Director of ODHR, Department Head staff (as-needed) and Legal (as-needed); and



the *Communications Workers of America (CWA)* representative and PVWC union shop stewards. The other quarterly meeting is an internal *Safety Committee* meeting held between the Executive Director, Director of EH&S (currently EH&S Sr. Advisor), Department Heads (as needed), union shop stewards and other departmental staff (as needed). All issues discussed are summarized with an issues and actions list and reviewed at the next meeting to ensure issues are being addressed and resolved.

Field Tour 2024

Beginning in September the Executive Director and Department Heads have regularly been performing site visits and ride-alongs with staff in the field to witness their daily accomplishments and discuss challenges. The goal is to make all the great work field staff perform transparent to the rest of the company and highlight accomplishments and/or areas that could be improved. More to come in 2025!

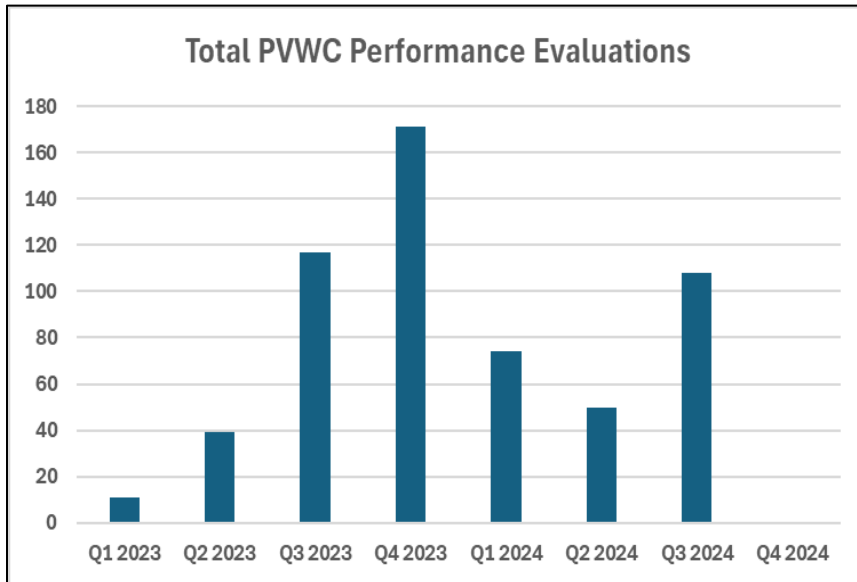


Employees-All Emails and Surveys

There were 59 mass communication emails to all employees distributing the monthly executive director report used to report company status to the Board of Commissioners; alerts regarding local or regional state-of-emergency during severe weather; diversity initiatives; professional recognition for staff; company awards; notices/invitations to employee engagement events as well as transmitting materials covered at those events. An employee engagement survey was also sent to all PVWC employees regarding additional opportunities for employee engagement. As a result of the responses, we are planning an *Employee Appreciation Day* as well as a multi-cultural celebration day in 2025.

Performance Management

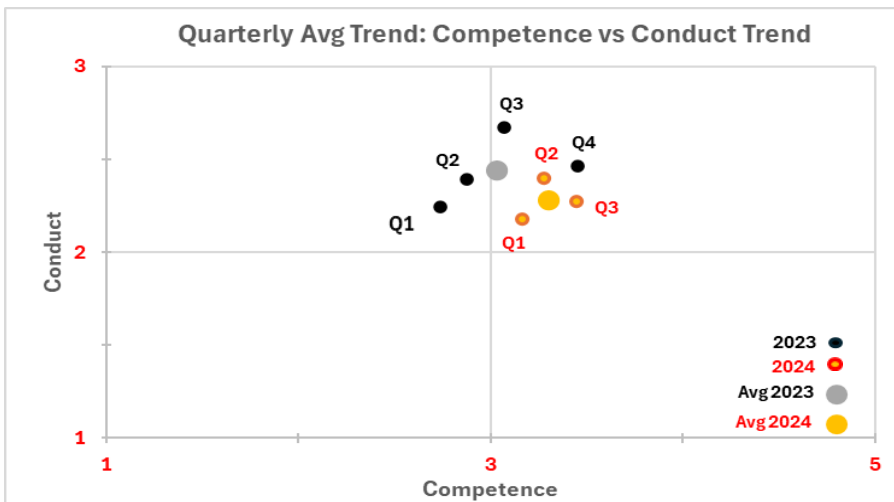
The performance management process is a key tool in creating transparency, fostering continuous improvement, and investing time and effort into people. In 2023 company-wide performance evaluations were rolled out for the first time in over 30 years starting with quarterly evaluations of *department heads* in the first quarter 2023 (Q1). In subsequent quarters throughout 2023 and into



2024 the evaluations were rolled out in a staggered manner based on the reporting hierarchy of staff. By the fourth quarter of 2023 the vast majority of PVWC staff had been given tasks and standards that the performance evaluations are based upon.

The evaluations are based on measures of **competence** which for supervisors include the following tasks: *developing SOPs, system optimization, supervision and*

teamwork, inter-departmental coordination, reporting, equal employment opportunity (EEO), and EH&S. For non-supervisors tasks include: *adhering to SOPs, work quality, work quantity, reliability, initiative and creativity, cooperation, attendance, EEO and EH&S.* Staff performance is rated on a **1-5 scale** (1 = Unsatisfactory; 2= Needs Improvement; 3= Meets Expectations; 4= Greatly Exceeds Expectations; 5 = Exceptional) for each task. Staff are also evaluated by **conduct** as defined by our nine (9) PVWC core values on a **1-3 scale** (1 =Rarely Exhibited; 2 = Sometimes Exhibited; 3 = Often Exhibited). Staff are given an opportunity to provide their self-assessment of competence and conduct and could submit comments in writing on their performance and the supervisor evaluation. The quarterly process and staggered rollout allowed for calibration of expectations and ratings evolution over time.



In general, expectations between supervisors and staff are becoming clearer and more aligned over time. This is part of the process of transparent communications. Focusing on measurable productivity continues to be emphasized as well as maintaining high standards of conduct. When there are productivity issues

identified, potential solutions include improving tools or resources inhibiting work production in addition to improving individual performance and accountability. When conduct issues are identified the initial goal is to raise awareness of the issues and discuss options to address them.

We will look to focus on supervision and leadership training as well as technical training and continuing education for staff in 2025. The evaluation process will move to an annual frequency except for instances where a performance improvement plan (PIP) is warranted. The PIP process is more frequent with measurable goals until performance improves, or other actions are pursued as warranted.



Succession Planning and Training

In 2022, PVWC began to formulate a 5-year strategic plan that was finalized in January 2023. This plan included the PVWC mission of public stewardship, the vision of industry leadership, and the goals of continuous improvement, transparency and investing in people, infrastructure, and systems. To achieve those goals, in addition to capital planning, the Executive Director has been working with each department and the Board of Commissioners to assess staffing, identify gaps and execute plans to address these gaps. Below is a summary of efforts to date.

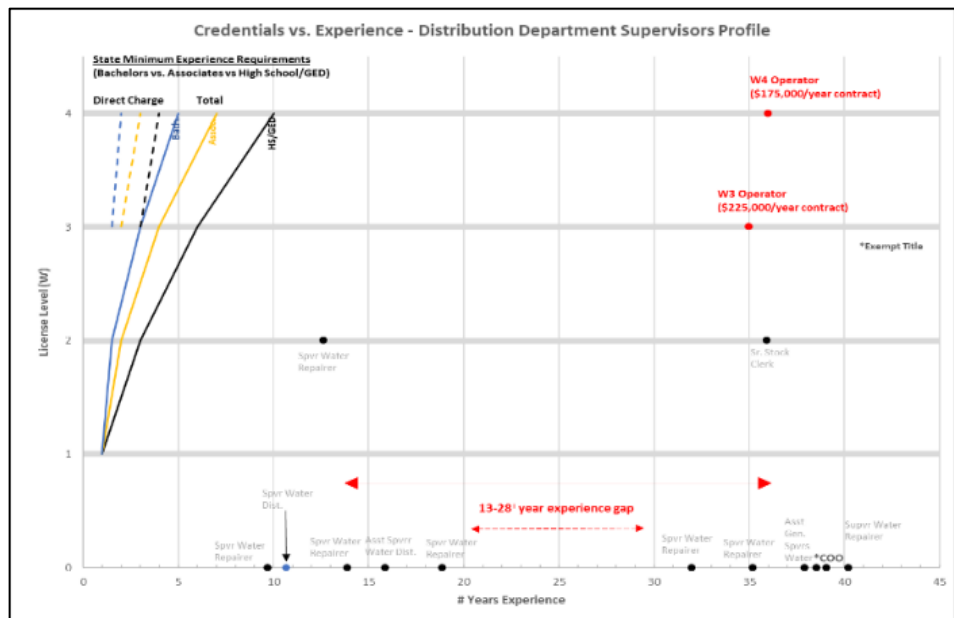
- *Distribution Department:* As of the end of 2024 there are **78** staff members in Distribution that serve the critical function of operating and maintaining almost 650 miles of water mains, 65,000 curb boxes, 5435 hydrants, and 77,000 water meters serving our eight (8) retail areas. The skills



June 28th Distribution Succession Planning Workshop

required are diverse and the needs of the system vary seasonally (e.g. hydrant flushing occurs during the summer; water main breaks usually spike in the winter). Given the size and complexity of PVWC’s Main System covering Paterson, Clifton, Passaic, and Prospect Park, a W4 licensed operator in the State of New Jersey is required to operate the system. Currently the highest licensed PVWC staff members in Distribution hold W2 licenses. One (1) W3 and one (1) W4 operator is contracted out to provide

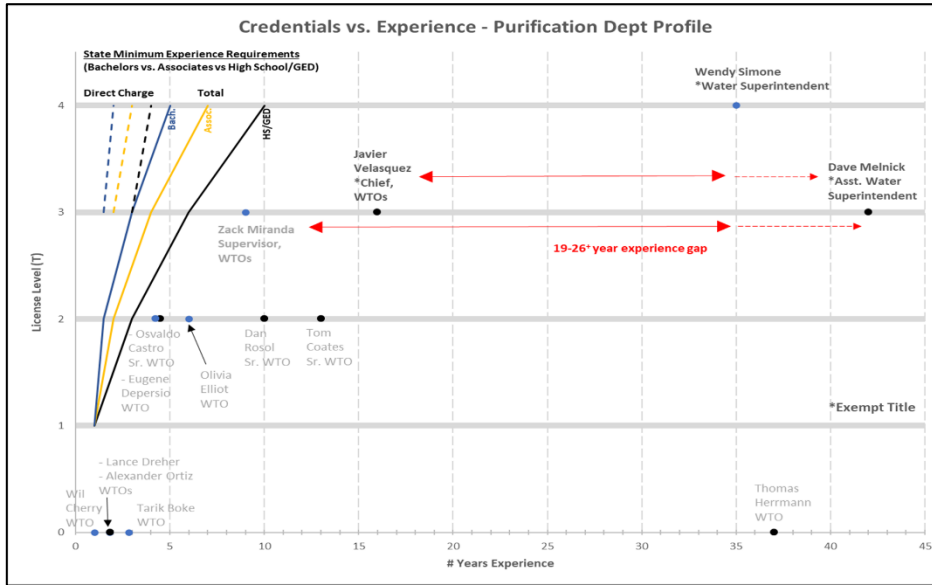
technical services required of the system. There is also a 10–15 year PVWC experience gap between supervisory staff who are retirement eligible and staff who are remaining due to a prolonged hiring freeze and past attrition. To address these issues we have pursued the following actions: hiring staff to



attempt to ensure a more robust staffing pipeline is in place to minimize experience gaps over the long term; promoting talent from within and incentivizing licensure tracks including prerequisite training; work force rotations to cross-train staff on different functions; and developing a career path handbook for the first 10 years of service to guide staff and supervisors in Distribution on training and expected skill progression through various job functions and titles.



- Purification Department:** As of the end of 2024 there are **17** staff members in Purification that serve the critical function of operating and maintaining the 80 million gallon per day (MGD) Little Falls Water Treatment Plant. This is a highly complex, high-rate facility that processes raw water from the Passaic River and includes two different granular activated carbon (GAC) filtration batteries. One battery was constructed in the 1960's and the other in the 1980's that are still in service today making them 60 and 40 years old, respectively. In 2004, the last major upgrade of the treatment plant was completed including modern instrumentation and a smaller site footprint with high-rate settling and ozonation.



Due to the plant complexity, a T4 licensed operator in the State of New Jersey is required to operate the facility. Currently, PVWC has one (1) T4 licensed operator on staff, three (3) T3 licensed operators, and five (5) T2 licensed operators. In addition, there are seven (7)

unlicensed water treatment operators on staff plus a Keyboard Clerk 1. The plant operates 24-hours per day, 7-days a week and is staffed by three 8-hr shifts daily.

There was a succession planning meeting held on January 16, 2024 with follow up meetings throughout the year. There is a 20-26+ year PVWC experience gap between staff who are retirement eligible and remaining staff due to a prolonged hiring freeze and past attrition. To address these issues, we have been hiring staff to attempt to ensure a more robust staffing pipeline is in place to minimize experience gaps over the long term; promoting talent from within and incentivizing licensure tracks including prerequisite training. A career path handbook for at least the first 10 years of service will be developed following a similar model that was developed by the *Distribution* department on training and expected skill progression through various job functions and titles.

- Maintenance Department:** As of the end of 2024 there are **47** staff members in the Maintenance department that ensure our plant, outlying stations, building equipment and vehicle fleet are in full working order while also maintaining the aesthetic appearance of all our facilities and properties. There are a broad range of skills in the department including two (2) licensed electricians, two (2) licensed boiler operators, one (1) licensed welder in addition to skilled diesel mechanics, carpenters, heavy equipment operators, security guards, custodial workers and keyboard clerks. There is also a 10–20 year PVWC experience gap between supervisory staff who are retirement eligible and staff who are remaining due to a prolonged hiring freeze and past attrition. To address these issues, we have been hiring staff to attempt to ensure a more robust staffing pipeline is in place to minimize experience gaps over the long term; promoting talent from within and incentivizing licensure tracks including prerequisite training; work force rotations to cross-train staff on different functions; and



developing a career path handbook for the first 10 years of service to guide staff. On July 19, 2024 a succession planning meeting was held with the Maintenance department in Little Falls to discuss career path planning and performance management. Follow up meetings will be held in 2025.

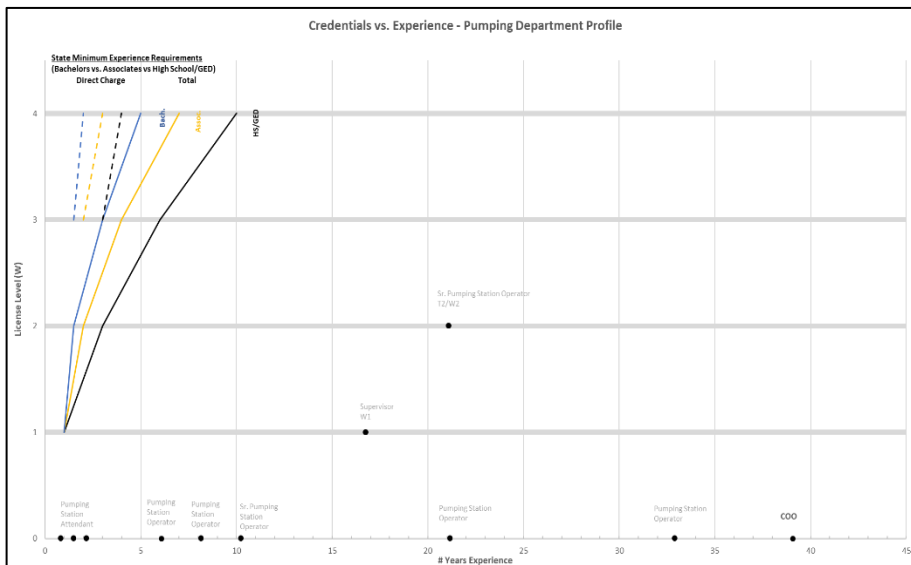
- Engineering Department:** The PVWC’s Board of Commissioners recently approved a 5-year capital plan of \$809M, the largest capital plan ever undertaken by the company due to regulatory mandates and the age and condition of the treatment, storage and distribution system. The capital program is predominantly managed by the Engineering department through planning, design and construction projects. As of the end of 2024 there are **23** staff members in Engineering that were reorganized into three (3) distinct groups in July: *Planning and Modeling*; *Distribution and Resiliency Project Delivery*; and *Treatment and Reservoir Project Delivery*.



Oct 29th Engineering “Lunch and Learn” Workshop

There are currently five (5) licensed professional engineers and one (1) licensed project management professional on staff. We are in the process of developing a career path guide similar to what has been done in *Distribution* and what is being developed for *Purification*. On October 29th we held a “*Lunch and Learn*” workshop where we reviewed the July 2024 engineering reorganization; departmental mission-vision-goals; career planning; the capital improvement program; and best practices and lessons-learned on specific projects like the *lead service line replacement* program, *Great Falls facility upgrades* and the *Kearney Multiples* highlighting the successful placement of in-situ lining for four (4) critical water mains that run under Passaic River.

- Pumping and Power:** As of the end of 2024 there are **10** staff members in the Pumping department that ensure potable water is delivered to our retail and wholesale customers to protect



public safety, allow proper sanitation and support a thriving and growing population for domestic, commercial and industrial use. Currently there is one (1) W1 licensed operator and one (1) operator that has both a W2 and a T2 license. Similar to other departments there are significant

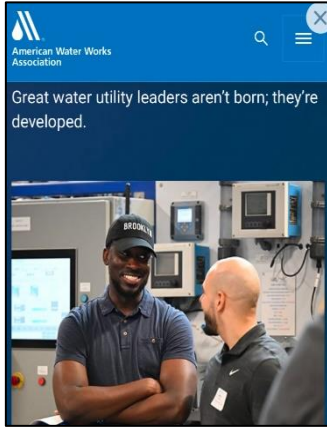
gaps in experience. Although not a State requirement to operate the pumping station, it would be beneficial for additional staff to pursue a licensure track. This will augment their technical knowledge and assist in understanding the interrelated operations of PVWC. We are planning more in-depth succession planning meetings with the Pumping department in 2025.



Other Departmental Training and Staff Development:

Throughout the year we support all departments with training for staff across multiple disciplines including safety, equal employment opportunity (EEO) regulations, and job-specific skills and continuing education credits to maintain licenses. Below is a summary of 2024 training activities:

- **Javier Hendricks, Sr. Engineer** was accepted into and successfully completed the AWWA



Transformative Water Leadership Academy (TWLA). The TWLA is national partnership between AWWA and WaterNow Alliance with grant funding from the USEPA. The “pillars” of the program are: *Diversity, Commitment, Action, Network, and Community Engagement*. He completed a 10-month curriculum including monthly virtual meetings and two (2) in person national sessions. The focus of the Academy is to develop skills in sustainability; integrated decision-making balancing social, environmental and financial concerns; and short- and long-term priorities.

- *Company-wide Training – EEO training* is being given to all PVWC employees by the *Legal* department and *ODHR* covering the rules and regulations governing the PVWC workplace and highlighting the proper processes and protocols to address EEO issues.
- *Purchasing Department* – Staff attended the *League of Municipalities* in November to participate in the following classes: *Principles of Public Purchasing 1; CEUs for QPA license; other purchasing related classes and seminars*. Staff also attended a vendor exposition on the *ESCNJ cooperative* to identify new products and/or companies who may be a good fit for PVWC work.
- *Laboratory*: PVWC supported staff in obtaining required college credits in Chemistry courses to be eligible for advancement into civil service positions in the *Chemist* title line of promotion. Through a partnership agreement with *Felician College*, PVWC provided use of the Little Falls laboratory to the college instructors and PVWC staff after work hours, and the college provided a generous discounted tuition rate paid by the five (5) staff that took advantage of the opportunity. Five (5) other staff also attended a seminar for regulatory and reporting updates on the Safe Drinking Water Act (SDWA).
- *Customer Service*: Coordinated with treatment and distribution operations to have staff members go into the field regularly throughout the year to see the hands-on work of the lab, purification and distribution departments. This background helps improve customer communications and problem solving with a more thorough understanding of PVWC technical work and people.
- *Finance Department*: Staff attended the *League of Municipalities* in November to participate in *CEUs for CFO license*. Other staff training included: *Harris Customer Training Center* for billing and accounting; *Neptune User Conference* for billing.



- *ODHR* - Staff attended the *PSHRA Conference* on best practices, regulations and innovative ideas in human resources. Staff also facilitated the following training for various departments:

Training	Total Attendees
Promoting Accountability	13
Making the transition from Staff Member to Supervisor	25
Worker's Comp	21
Communication Skills for Leadership	17
EEO	186

- *EH&S*: Training summary for 2024 is tabulated below. The information includes staff who attended multiple topics throughout the year (e.g. toolbox talks) as well as contractor staff that received site specific orientations as warranted.

Training	Total Attendees
Safety Orientation	26
JIF Training	10
Toolbox Talks	257
Contractor Orientation	46
HAZWOPER Refresher	16
CPR/First Aid Training	25
TCPA/DPCC Training	13
Other Safety Training	34

- *AWWA State and National Conferences* – Twelve staff from five (5) different departments attended the State conference to maintain CEUs for operator and professional engineer licenses; give technical presentations on ongoing PVWC projects; and potentially recruit new staff. Three (3) staff members attended the annual national conference and participated as panelists on the following technical seminars: *Linear Asset Management* and *Utility Perspectives on LSLR Challenges*. Three (3) staff members attended the one-day Fall Conference for CEUs related to professional licenses.
- *Communications*: Staff attended the *League of Municipalities* in November to participate in classes related to government process and procedures and network with other utilities. Staff also attended and presented the *Jersey Water Works Conference* on a panel for *Lead Service Line Replacements & Municipal Partnerships*.
- Legal staff also attended the *NJ State Bar Association Public Employment Conference*. Executive staff attended the *2024 Mid-Atlantic Utility Conference* and presented at the *Construction Management Association of America (CMAA)* dinner meeting on PVWC's Capital Program.

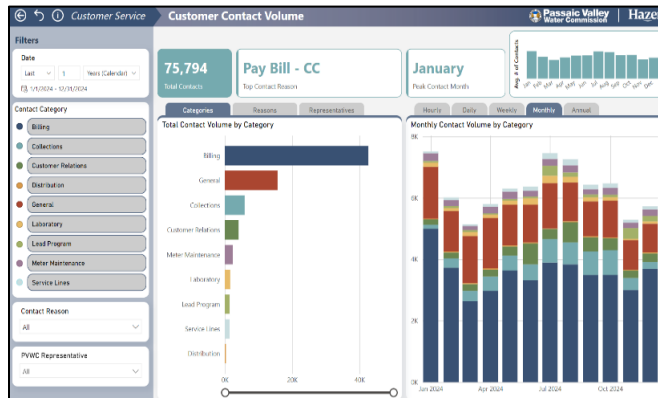


Optimizing Operations

At the heart of PVWC’s vision is a culture of continuous improvement and transparency based on data-driven decision making and the application of best practices across all facets of our operations. Over the course of 2024 the Executive office has continued to work with each department to develop operational metrics and initial visualization dashboards to make it easier to identify trends in areas of strong performance as well as areas that need improvement. Optimization opportunities are assessed across six (6) interrelated factors: *organization, culture, personnel, systems, business processes, and resources*. Below is a summary of each department for 2024.

Customer Service: In November 2024, the Executive office started rolling out data dashboards for Customer Service that provide more thorough, accessible and user-friendly analyses of customer engagement/feedback over time. By utilizing these transparent dashboards, the data capture is expected to improve over time and provide more insights into customer experiences, needs and complaints so we can enhance our level of service. A summary of the initial Customer Service dashboard results for 2024 is provided below.

Dashboard: Total Logged/Categorized Calls in 2024:



In 2024 there were a total of **95,104** calls received through Customer Service representatives however only **75,794** (80%) of the calls processed were able to be logged and categorized. Of these logged and categorized calls, the majority involved *billing and payment* with **42,566** calls received (56%). The most frequent reason for the calls was customer *credit card bill payment* followed by *account inquiry, balance inquiry and billing inquiry*.

Dashboard: Total Complaint-Based Logged/Categorized Calls in 2024



Based on the total calls received of **95,104**, we estimate that **7,513** (7.9%), were *complaint-based calls* as derived from a representative sample. However, only **4,307** of these estimated complaints (57%) were able to be logged and categorized. The top categorized complaint for the year was *discolored water* which accounted for **825** calls (1% of all categorized calls) followed by *high bill inquiries and estimated reading inquiries*.

The complaint-based call volume in June was driven by two water main breaks in Paterson that triggered *boil water advisories* due to loss of pressure. The call volume from July-October was driven by *discolored water* and *taste/odor complaints* due to increased concentrations of *MIB* and *geosmin*, predominantly from the *Wanaque* water source. These are harmless, naturally occurring compounds produced from algae that have a musty taste. Issues were also reported with increased chlorine taste due to hydrant flushing progress. As a result, chlorine dosages were reduced to minimize the taste/odor issues while still maintaining regulatory compliance.



Laboratory: During the summer of 2024, the Executive office started rolling out data dashboards for the PVWC Laboratory that provide more thorough, accessible and user-friendly analyses of system-wide water quality over time. A summary of the initial Laboratory dashboard results for 2024 is provided below.

Dashboard: Free Chlorine in 2024:

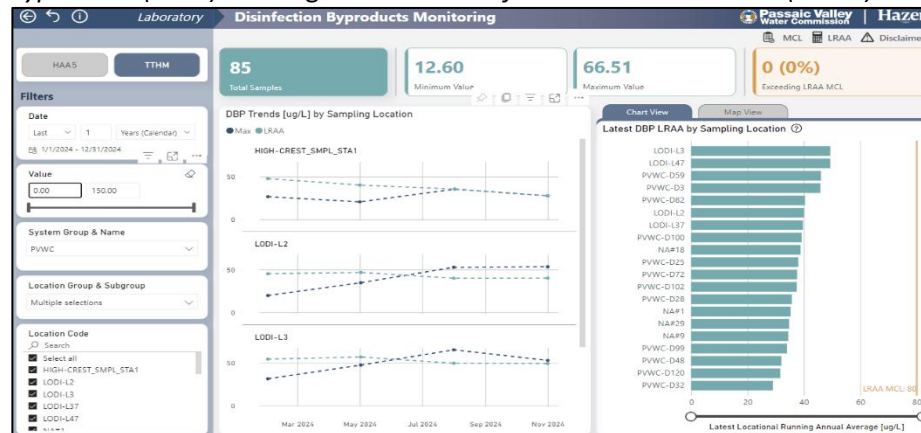
In 2024 there were **4,348 free chlorine** samples collected by PVWC water sample collectors regularly at various locations throughout the entire retail system and processed by the laboratory. This water quality parameter measures how chlorine remains available in the water distributed to customers to maintain the ability to kill pathogens and microorganisms throughout the water distribution system.



Currently, the NJDEP mandates that a minimum *free chlorine* concentration level of **0.2 mg/l** is maintained in all parts of the distribution system to ensure protection of public health. Based on the new NJ Legionnaires' Disease Law effective September 12, 2024 a new minimum of **0.3 mg/l** has been established with NJDEP and DOH expected to release best practices for water systems by **September 2025**. Water utilities will have six (6) months from that date, anticipated by **March 2026**, to implement these best practices as part of a water management plan and submit an annual certification to DEP. In recognition of this new mandate, PVWC has begun to assess locations against both the 0.2 mg/l and 0.3 mg/l *free chlorine* concentration levels. In 2024 there were 104 samples (2.4%) with *free chlorine* less than 0.3 mg/l and 35 samples (0.8%) were less than 0.2 mg/l. There were nine (9) samples (0.2%) less than 0.05 mg/l and heterotrophic plate count (HPC) coliform tests were performed, all with negative results. Local hydrant flushing was also performed as well as revisiting sampling protocols to ensure the line is flushed and is representative of water in the main. The maximum concentration for the year was 2.38 mg/l, below the mandated maximum of 4 mg/l.

Dashboard: Disinfection Byproducts in 2024:

Another key water quality parameter regularly sampled by PVWC water sample collectors is *disinfection byproducts (DBPs)* with regulated amounts for *total trihalomethane (TTHM)* **not to exceed 80 ug/l** and for



haloacetic acid (HAA) **not to exceed 60 ug/l** due to linkages to increased cancer risk with long-term exposure. There were **85** samples taken for *TTHM* in the retail system in 2024 with none exceeding the maximum amount. There were 42 samples taken in 2024 for



HAA with none exceeding the maximum amount. The ozone treatment process used by PVWC is the main reason for 100% compliance due to the destruction of raw water organic material that can lead to DBPs when mixed with chlorine.

Distribution and Maintenance: The Executive office is still in the process of developing data dashboards for these departments similar to what has been done for *Customer Service* and the *Laboratory*. The dashboards are expected to be rolled out in Q1 2025. Until these dashboards are available we have been gathering data each month in spreadsheets to give insight into workload and performance. The tabulated metrics for 2024 are presented below followed by a narrative summary.

Monthly Distribution Metrics										Monthly Maintenance Metrics	
Date	Hydrants			Main Breaks		Curb Boxes	Mark-outs		Meters	Work Orders	
	Flushed	Contractor Repaired	In-House Replaced/Repaired	In-house Repaired	Contractor Repaired	# Excavated	Total	Emergency	Replaced	Initiated	Completed
1/31/2024	-	34	31	21	3	28	1930	185	276	335	224
2/29/2024	1	21	17	18	2	36	2462	159	325	290	232
3/31/2024	85	47	17	4	1	37	2462	125	206	303	257
4/30/2024	216	47	11	3	-	45	2911	152	261	169	112
5/31/2024	730	60	14	4	-	80	2563	164	320	179	81
6/30/2024	283	44	15	8	2	78	2321	154	287	127	89
7/31/2024	234	-	15	2	-	100	2206	119	315	220	177
8/31/2024	488	-	15	2	-	135	2191	121	307	192	164
9/30/2024	639	12	20	7	2	111	1997	128	278	208	113
10/31/2024	669	-	20	7	-	132	2251	139	291	133	157
11/30/2024	475	-	18	12	-	98	1882	108	161	128	115
12/31/2024	-	12	-	17	1	70	1379	159	318	170	152
Total	3,820	277	193	105	11	950	26,555	1,713	3,345	2,454	1,873
Annual Metrics	70.3%	5.1%	3.6%	17.8		1.5%	6.1%		4.9%	76.3%	
Metric Description	% of System-wide Hydrants			Annual # Breaks/ 100 miles of pipe		% System Total	% Emergency < 4 hour response		% System Total	% Complete	

Annual hydrant flushing began to ramp up in March, however due to the water main breaks in Paterson in June and July, and the drought warning issued Statewide in November, flushing production was impacted resulting in **70%** of the hydrants being addressed. PVWC staff still performed quarterly flushing for select areas with chronic water discoloration issues caused by the age and material of the water mains. Almost **9%** of the hydrants required repairs mainly due to vehicular impact.

There were **116** water main breaks in 2024 with inhouse staff addressing over 90% of the locations. Contractor staff are called in if it is an extremely complex situation (e.g. the June 2024 water main breaks in Paterson) or if in-house crews cannot keep up with a high volume of concurrent breaks. As the Distribution department has staffed up, more work has been insourced, as warranted. Almost *two-thirds* of the breaks occur during the cold weather months due to low temperatures causing the ground to expand and metal pipes to contract increasing the pressure on old pipes by a factor of *2-10 times normal*. During warmer months there are some spikes observed in water main breaks mainly due to illegal hydrant usage associated with paving activities or authorized hydrant usage during street sweeping or fire emergencies that can cause breaks if the hydrants are not carefully shutdown after use. The average industry metric is **20-30 breaks/100 miles**. In 2024 PVWC had **17.8 breaks/100 miles** which tracks closely to the industry average. The value of the water lost due to hydrant flushing and water main breaks is estimated at **\$8M/year**. PVWC is ramping up a water main replacement program to begin to address issues with chronic breaks in certain areas as well as discolored water issues.



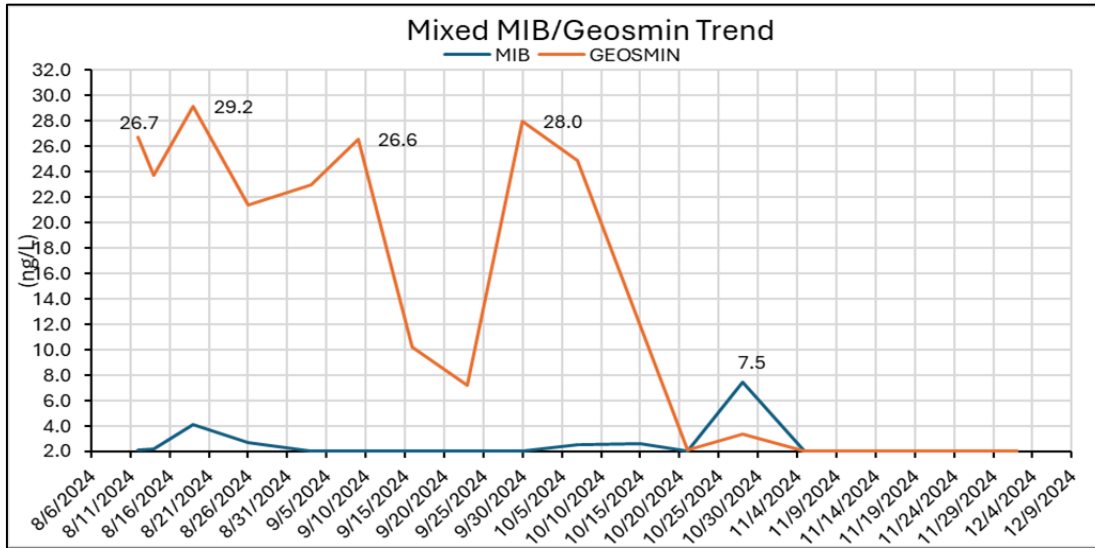
There are approximately **65,000** curb boxes on PVWC customer service lines that are used to isolate localized areas in the event of emergencies for water main breaks or fires; or for chronic delinquent account shutoffs and abandoned properties. Many of these boxes have been buried over the years through paving activities or other construction and are required to be excavated to function properly. In 2024 inhouse crews excavated **950** curb boxes to support fire departments and ongoing PVWC operations. In May, our production in excavating curb boxes doubled and tripled for the rest of the year compared to the first four months. This is due to the addition of a sixth (6th) crew to focus on the effort. Toward the end of the year a new Vactor truck was delivered that will further increase productivity allowing work to be accomplished in less than one (1) hour compared to a half-day that it currently takes due to the labor-intensive effort. This will free staff up for other activities related to hydrants and water mains and further insource work currently contracted out.

There were almost **27,000** mark outs of PVWC underground infrastructure performed by Distribution staff to support local development and street construction as well as protect PVWC assets. Over **1,700** (6.1%) of these mark outs were due to emergency work requiring a **4-hour** response time. The remaining 24,842 regular mark outs require a PVWC response within **three (3) business days**. The high volume of work, short response times, and weather impacts make this a challenging operation that generated 2,000 hours of overtime last year. There were also over **3,300** meter changes performed by staff in 2024 which is almost **5%** of the system-wide meters. At this annual production, the lifecycle of meters would be on the order of 20-25 years and many existing meters are already 10-20 years old. As a result, we will be advertising water meter replacement contracts to catch-up with older meter replacements as well as take advantage of *principal loan forgiveness* currently available through the State Intended Use Plan (IUP) estimated at **\$7M/year**.

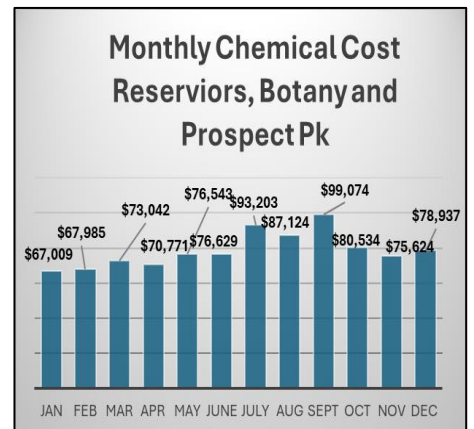
Finally, the Maintenance department initiated over 2,400 work orders for preventative and corrective maintenance in 2024 and completed almost 1,900 (**76.3%**). With the ongoing implementation of a new Computerized Maintenance Management System (CMMS) additional preventative maintenance work orders are being programmed to consolidate activities under Maintenance that were previously performed by other departments. This will ensure centralized accountability to get work orders addressed. This work order production is in addition to the project-specific work that was also accomplished by Maintenance for the construction of the improved drainage system at New Street Reservoir and the rehabilitation of the Lamella tubes in Train #2 of the *Actiflo* process at the Little Falls WTP.

Purification: PVWC continued to provide high-quality water in compliance with State and Federal regulations to all customers in 2024. The Executive office is still in the process of developing data dashboards for this department similar to what has been done for *Customer Service* and the *Laboratory*. The dashboards are expected to be rolled out in Q1 2025. Until these dashboards are available we have been gathering data each month in spreadsheets to give insight into workload and performance.

One issue that can occur during the summer as referenced in the *Customer Service* section, is the spike in complaints regarding a “musty” or “earthy” water taste in some areas. *MIB* and *geosmin* are naturally occurring compounds in source surface water that have an earthy taste and odor. Since August we have been experiencing higher concentrations in our mixed-supply, post-treatment due to the water provided by the Wanaque filtration plant. The plant does not have granular activated carbon and instead relies on treatment with PACL to remove suspended solids and turbidity. Due to above normal temperatures and drought conditions the high concentrations have lasted for several months causing a spike in taste, odor and color complaints. Since late October concentrations have trended down. PVWC staff had been meeting weekly with NJ American Water and NJDWSC staff to discuss ways to mitigate the situation.



Another impact from the unusually dry summer is the raw water quality in the Passaic River at the intake of the Little Falls treatment plant. The unusually low flow conditions result in more of the river water being generated by upstream wastewater discharges. This requires an increase in chemical dosages at the plant to remove higher solids which also increase sludge production and adds cost. This is something PVWC operations staff monitor closely and adjust chemicals and sludge hauling in real-time as warranted. Chemical costs are the largest operational expense at the treatment plant totaling **\$8.7M** in 2024 followed by sludge removal totaling **\$3.8M**.



Pumping and Power: The Executive office is still in the process of developing data dashboards for this department similar to what has been done for *Customer Service* and the *Laboratory*. The dashboards are expected to be rolled out as part of a next phase of development. Until these dashboards are available we have been gathering data each month in spreadsheets to give insight into workload and performance. The tabulated metrics for 2024 are presented below with a narrative summary.

There were no interconnection flows made in 2024. NJDWSC initiated construction on November 4, 2024 on their Wanaque water treatment plant sedimentation basins. PVWC curtailed flow from Wanaque to 20-30 MGD until construction was completed on November 22nd. We are in the process of replacing many analog components of the pumping system, which are increasingly difficult to source, with digital relays. A capital project for the cone valve replacement is also being initiated due to the age of the



station. Certain components are nearing 125 years old and we will be developing a plan for a replacement pumping station in the next few years.

Monthly Pumping & Power Metrics								
Date	Interconnection Flow (MG)	Total Monthly Volume (MG)	Daily Average (MGD)	Max Day Volume (MGD)	Wanaque Flow (MG)	Wanaque Daily Average (MGD)	Filter Plant Flow (MG)	Filter Plant Daily Average (MGD)
1/31/2024	-	2363	80	83	1170	38	1193	38
2/29/2024	-	2169	75	83	1123	39	1046	36
3/31/2024	-	2258	73	87	1170	38	1089	35
4/30/2024	-	2267	76	82	1120	37	1148	38
5/31/2024	-	2461	79	91	1082	35	1378	44
6/30/2024	-	2871	96	115	1219	41	1652	55
7/31/2024	-	3016	97	106	1208	39	1808	58
8/31/2024	-	2875	93	100	1136	37	1739	56
9/30/2024	-	2748	93	102	1149	38	1644	55
10/31/2024	-	2578	83	98	1112	36	1466	47
11/30/2024	-	2208	74	85	634	21	1574	52
12/31/2024	-	2,284	74	81	797	26	1,487	48
Total	-	30,099	82	93	12,921	35	17,223	47

Engineering: The Engineering department was reorganized in July 2024. The organizational changes being implemented are a result of a collaborative assessment of the Board-approved, \$809M 5-year capital plan - the largest capital program ever undertaken by PVWC. The goal of the reorganization is to optimize PVWC capital planning and budgeting efforts while continuing to focus on improving our project delivery capabilities. This will allow PVWC to focus staff resources and better meet the needs of the water supply, treatment and distribution systems to the benefit of the communities we serve. The following sections were created as direct reports to the Executive Director:

- 1) *Planning and Modeling Group:* focused on PFAS treatment at the LFWTP due to new Federal regulations with compliance by 2029; storage and distribution planning due to administrative consent order requirements; dam assessments; electrical system assessments; capital budgeting; GIS management; development and management of distribution and treatment models; developer permit applications review; and NJDEP permitting and water quality accountability act (WQAA) submittals.
- 2) *Capital Project Delivery – Treatment and Reservoirs:* focused on design, construction, construction management and commissioning of capital projects including the **\$41.8M Levine Reservoir Storage Tanks** and the **\$45M (estimated) Residuals Handling Upgrade** along with the other projects highlighted in the Capital Program section of this report.
- 3) *Capital Project Delivery – Distribution and Resiliency:* focused on the ongoing **\$29.5M** lead service line replacement project, capital water meter replacements, transmission and water main upgrades, resiliency projects for flood mitigation, contract site/paving restoration, and emergency contracts for on-call services for water main repairs.

The division of labor described above still operates within a collaborative, coordinated framework with each section working together. Given the scale and scope of the PVWC capital program the focus of each group on critical parts of the overall program will allow PVWC to get projects done. Through robust planning and efficient project delivery we will effectively drive PVWC capital investments. Preliminary dashboards for construction projects are already available on our website and will be further developed.



Information Technology: The Executive office has been working with the IT department to develop tracking dashboards for IT assets across 40 sites including the Little Falls campus and Clifton headquarters impacting 63 asset groups such as pumping stations, storage tanks, chemical addition facilities and treatment processes. The goal is to identify and mitigate system vulnerabilities and improve operations. In addition, we have assembled an internal cybersecurity council to develop policies and procedures including data governance; rolled out internal controls on user behaviors; initiated design standards for

Passaic Valley Water Commission		2024 Performance			
Department	Position	Position Title	Start Date	End Date	Status
Executive Office	Executive Director	Executive Director	01/01/2024	12/31/2024	Active
Executive Office	Assistant Executive Director	Assistant Executive Director	01/01/2024	12/31/2024	Active
Executive Office	Director of Administration	Director of Administration	01/01/2024	12/31/2024	Active
Executive Office	Director of Finance	Director of Finance	01/01/2024	12/31/2024	Active
Executive Office	Director of Information Technology	Director of Information Technology	01/01/2024	12/31/2024	Active
Executive Office	Director of Operations	Director of Operations	01/01/2024	12/31/2024	Active
Executive Office	Director of Regulatory Affairs	Director of Regulatory Affairs	01/01/2024	12/31/2024	Active
Executive Office	Director of Safety	Director of Safety	01/01/2024	12/31/2024	Active
Executive Office	Director of Training	Director of Training	01/01/2024	12/31/2024	Active
Executive Office	Director of Environmental Affairs	Director of Environmental Affairs	01/01/2024	12/31/2024	Active
Executive Office	Director of Public Affairs	Director of Public Affairs	01/01/2024	12/31/2024	Active
Executive Office	Director of Legal Affairs	Director of Legal Affairs	01/01/2024	12/31/2024	Active
Executive Office	Director of Human Resources	Director of Human Resources	01/01/2024	12/31/2024	Active
Executive Office	Director of Purchasing	Director of Purchasing	01/01/2024	12/31/2024	Active
Executive Office	Director of Compliance	Director of Compliance	01/01/2024	12/31/2024	Active
Executive Office	Director of Quality Assurance	Director of Quality Assurance	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Management	Director of Risk Management	01/01/2024	12/31/2024	Active
Executive Office	Director of Sustainability	Director of Sustainability	01/01/2024	12/31/2024	Active
Executive Office	Director of Security	Director of Security	01/01/2024	12/31/2024	Active
Executive Office	Director of Emergency Management	Director of Emergency Management	01/01/2024	12/31/2024	Active
Executive Office	Director of Records Management	Director of Records Management	01/01/2024	12/31/2024	Active
Executive Office	Director of Information Security	Director of Information Security	01/01/2024	12/31/2024	Active
Executive Office	Director of Business Development	Director of Business Development	01/01/2024	12/31/2024	Active
Executive Office	Director of Customer Service	Director of Customer Service	01/01/2024	12/31/2024	Active
Executive Office	Director of Marketing	Director of Marketing	01/01/2024	12/31/2024	Active
Executive Office	Director of Communications	Director of Communications	01/01/2024	12/31/2024	Active
Executive Office	Director of Public Relations	Director of Public Relations	01/01/2024	12/31/2024	Active
Executive Office	Director of Community Outreach	Director of Community Outreach	01/01/2024	12/31/2024	Active
Executive Office	Director of Government Relations	Director of Government Relations	01/01/2024	12/31/2024	Active
Executive Office	Director of Intergovernmental Affairs	Director of Intergovernmental Affairs	01/01/2024	12/31/2024	Active
Executive Office	Director of External Affairs	Director of External Affairs	01/01/2024	12/31/2024	Active
Executive Office	Director of Stakeholder Engagement	Director of Stakeholder Engagement	01/01/2024	12/31/2024	Active
Executive Office	Director of Strategic Planning	Director of Strategic Planning	01/01/2024	12/31/2024	Active
Executive Office	Director of Policy Development	Director of Policy Development	01/01/2024	12/31/2024	Active
Executive Office	Director of Research and Analysis	Director of Research and Analysis	01/01/2024	12/31/2024	Active
Executive Office	Director of Data Management	Director of Data Management	01/01/2024	12/31/2024	Active
Executive Office	Director of Analytics	Director of Analytics	01/01/2024	12/31/2024	Active
Executive Office	Director of Business Intelligence	Director of Business Intelligence	01/01/2024	12/31/2024	Active
Executive Office	Director of Project Management	Director of Project Management	01/01/2024	12/31/2024	Active
Executive Office	Director of Program Management	Director of Program Management	01/01/2024	12/31/2024	Active
Executive Office	Director of Portfolio Management	Director of Portfolio Management	01/01/2024	12/31/2024	Active
Executive Office	Director of Change Management	Director of Change Management	01/01/2024	12/31/2024	Active
Executive Office	Director of Organizational Development	Director of Organizational Development	01/01/2024	12/31/2024	Active
Executive Office	Director of Talent Management	Director of Talent Management	01/01/2024	12/31/2024	Active
Executive Office	Director of Employee Relations	Director of Employee Relations	01/01/2024	12/31/2024	Active
Executive Office	Director of Labor Relations	Director of Labor Relations	01/01/2024	12/31/2024	Active
Executive Office	Director of Diversity, Equity and Inclusion	Director of Diversity, Equity and Inclusion	01/01/2024	12/31/2024	Active
Executive Office	Director of Social Responsibility	Director of Social Responsibility	01/01/2024	12/31/2024	Active
Executive Office	Director of Corporate Governance	Director of Corporate Governance	01/01/2024	12/31/2024	Active
Executive Office	Director of Ethics and Compliance	Director of Ethics and Compliance	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Assessment	Director of Risk Assessment	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Mitigation	Director of Risk Mitigation	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Monitoring	Director of Risk Monitoring	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Reporting	Director of Risk Reporting	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Communication	Director of Risk Communication	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Culture	Director of Risk Culture	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Awareness	Director of Risk Awareness	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Training	Director of Risk Training	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Assessment	Director of Risk Assessment	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Mitigation	Director of Risk Mitigation	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Monitoring	Director of Risk Monitoring	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Reporting	Director of Risk Reporting	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Communication	Director of Risk Communication	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Culture	Director of Risk Culture	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Awareness	Director of Risk Awareness	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Training	Director of Risk Training	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Assessment	Director of Risk Assessment	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Mitigation	Director of Risk Mitigation	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Monitoring	Director of Risk Monitoring	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Reporting	Director of Risk Reporting	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Communication	Director of Risk Communication	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Culture	Director of Risk Culture	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Awareness	Director of Risk Awareness	01/01/2024	12/31/2024	Active
Executive Office	Director of Risk Training	Director of Risk Training	01/01/2024	12/31/2024	Active

use by capital projects; and begun outreach to other utilities to share best practices and lessons learned. We continue to work with the Dept of Homeland Security (DHS) and the NJ Cybersecurity and Communications Integration Cell (NJCCIC) to assess our systems and upgrade as warranted. Developing a strategic road map for our IT infrastructure will be a focus in 2025.

Purchasing: Towards the end of 2023 and continuing into 2024, the internal PVWC procurement process was changed to a centralized model with the Purchasing department controlling the entire process. Each department now supplies subject matter experts to have input on technical specifications and scopes of work and to participate on selection committees for professional services and competitive proposals. Concurrent with this change we have modified our scopes of work for consultant solicitations and introduced a more rigorous evaluation process to ensure equity. In addition, formal vendor and consultant performance evaluations have been ongoing to document good work and identify areas requiring improvement. All these organizational changes were needed to ramp up for the sharp increase in the capital program due to regulatory requirements and the age and condition of PVWC’s infrastructure. Purchasing tracks changing State rules and DCA requirements governing purchasing activities including conflict of interest; and small- or minority owned-business outreach. Finally, Purchasing staff work closely with each department on invoice control and billing with over **\$300,000** of errant bills corrected in 2024, a significant savings for PVWC. The department is getting more focused on key performance indicators and metrics in 2025 with dashboards to follow.

Organizational Development and Human Resources (ODHR): The goal for ODHR is to collaboratively develop PVWC as a modern water utility providing high levels of service by attracting, developing and retaining talent throughout the organization. Transitioning the organization to a different timekeeping system in 2023 continued to pay dividends in 2024 by streamlining the timesheet process and allowing data to be more easily accessed. PVWC has expanded full-time headcount from **210** in 2022 to **245** by the end of 2024. Based on an analysis done in the Spring of 2024, over 40% of our staff live in the owner cities and almost 67% live in Passaic County. The department is getting more focused on key performance indicators and metrics in 2025 with dashboards to follow.

Finance:

Over the last year the Finance department, in collaboration with the IT and Purchasing departments, has been focused on vendor selection to modernize PVWC’s payment processing system (currently an amalgamation of various vendors and systems) and the financial management system. These two distinct efforts involve different industry vendors due to the unique function of each system. The existing systems are obsolete and require capital investment for replacement and modernization. Vendors have been selected and contracts awarded for each effort and the development and implementation process will commence in 2025. Successful implementation will allow for much easier access to financial information along with dashboards for critical metrics on a regular basis.



Passaic Valley Water Commission 2023 Strategic Plan: Mission, Vision, Core Values

Mission

Safely and efficiently, maintain and distribute a secure and sustainable supply of high-quality drinking water as public stewards of health and safety, community well-being and economic growth for existing and future generations.

Vision

Be an industry leader in developing and applying best practices in all facets of customer service, communications, operations, and administration through a culture of continuous improvement, transparency and transformative organizational investments in people, infrastructure, and systems.

Core Values

- Safety:** We operate in a healthy, safe and environmentally responsible manner.
- Excellence:** We strive to be the best in everything we do.
- Teamwork:** We collaborate, support and trust each other for mutual betterment and optimal effectiveness.
- Respect:** We accept each other’s differences and perspectives and recognize how they can make us better.
- Commitment:** We dedicate our time and energy to overcome challenges to get the job done.
- Integrity:** We stay true to our responsibilities and pledge to do what is best to advance our mission.
- Accountability:** We are relied upon and held responsible to perform our work safely, effectively and efficiently.
- Intelligence:** We seek to acquire knowledge and skills to improve overall work performance.
- Diversity:** We are proud of our various backgrounds and experience; through equity and inclusion we accelerate creativity and innovation.

Diversity is inherent in the wide variety of work we do, the challenges we face, and the broad range of skills needed to succeed every day. Diversity is also represented in our gender, ethnic backgrounds, experiences, characteristics and beliefs that shape who each of us are.

Diversity is our Foundation
that all other core values are built upon.

Diversity enhances **intelligence**.
Intelligence fosters **accountability**.
Accountability builds **integrity**.
Integrity promotes **commitment**.
Commitment earns **respect**.
Respect strengthens **teamwork**.
Teamwork drives **excellence**.
Excellence ensures **safety**.

Living these **core values** transforms our mission and vision into reality.