January 5, 2024

Karen Buckley, Executive Secretary
Public Service Commission
201 Brooks Street
Charleston, WV 25323

Re: Case No. 23-0796-PWSD-DU
City of Paden City and Paden City Municipal Water Works

Dear Ms. Buckley:

Enclosed herewith for filing please find the Direct Testimony of Joshua Billiter, Superintendent, Water Department, the Direct Testimony of Daniel Ferrell, P.E., and Direct Testimony of Sheila Ervin, City Recorder in the aforementioned case.

A copy has been served upon all parties of record.

Very truly yours,

SNYDER & HASSIG

Carolyn G. Flannery

CGF/r/ib
Enclosures
PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

CASE NO. 23-0796-PSWD-DU

CITY OF PADEN CITY AND PADEN MUNICIPAL WATER WORKS, Wetzel and Tyler Counties, West Virginia
Staff Petition Asking the Commission to Establish a Proceeding to Determine whether the City of Paden City and the Paden City Municipal Water Works is a Distressed or Failing Utility.

DIRECT TESTIMONY OF
JOSHUA BILLITER

January 5, 2024
Please state your name and business address.

My name is Aaron Joshua Billiter. My business address is 208 W, Main Street, P.O. Box 211, Paden City, West Virginia 26159.

Where are you employed and in what capacity?

I am currently employed as the Superintendent of Paden City Water Department. I have been employed as the Superintendent since 2014. From December 1, 2010, through 2014, I worked as a maintenance laborer for City of Paden City. I have maintained a Class I water operator's license since September, 2011. I attended the Class II water operator's course in April, 2012 and passed, but I was unable to obtain a Class II water operator's license based upon a lack of hours worked in a Class II Water Plant. This year I intend to retake the Class II water operator's course to become certified as a licensed Class II water operator to treat for the identified primary contaminant of PCE.

What are your principal duties and responsibilities as the Superintendent for the Water Department?

I am responsible for the day-to-day operations of the City's municipal water works system and sewer system. This involves overseeing all aspects of the water distribution system and the management of water and sewer department employees. I ensure that the water system operates in accordance with federal and state requirements. I also spend time in the field with other employees of the water department performing maintenance and repairs.

Have you previously testified before the Public Service Commission of West Virginia (the "Commission")?
A. No, I have not testified before the Public Service Commission of West Virginia.

Q. Would you please describe the operations of Paden City water system?

A. The City of Paden City provides water service to approximately 1187 customers. Paden City’s water distribution system is made up of one air stripper chlorination water treatment plant, two (2) water storage tanks, one (1) primary and one (1) reserve booster stations, and approximately twenty (21) miles of water main lines. The water treatment plant has the capacity to treat approximately two (2) million gallons of water per day.

Q. Would you please describe City’s water treatment plant?

A. Paden City’s water treatment plant is situated along the Ohio River. The facility has a maximum design capacity of approximately two (2) million gallons per day. The average production at the water treatment plant is approximately 350,000 gallons per day with an average operating time of approximately 8 hours. In 2019 and 2020, the City designed, permitted, and constructed a six (6) tray styled air stripper system to replace three (3) hydraulic venturi air strippers installed in 2001.

Q. Aside from the installation of the new air stripper system at the water treatment plant, what other improvements has the City made to its water system?

A. The City has installed approximately three (3) miles new of water mains, new valving, and new fire hydrants. Approximately four (4) miles of ABS piping has been removed from the system. An electrical back-up system is being installed to allow the new air stripper system to operate off of the water treatment plant.
generator during power outages. The City has also purchased a valve exerciser to maintain the existing valves and fire hydrants previously installed. The City is also preparing for Phase II of the Water Treatment System Upgrades.

Q. How many water employees does Paden City employ?

A. The City employs eight (8) full-time employees, which includes two (2) certified water operators and two (2) office employees.

Q. When did the City first detect the volitive chemical compound Tetrachloroethylene ("PCE") in its water distribution system and what actions if any were taken at the time?

A. The City first detected trace amounts of PCE in its water distribution system in 2010. At the time, the PCE was well below the maximum contaminant level ("MCL") of 5 parts per billion. In 2013, there was a noticeable spike in PCE in the City's raw groundwater. Although the PCE remained below the MCL, the City decided to test all four (4) water wells to determine which wells had the worse PCE contamination. This led to Well #2 being shut down completely. Since that time, the City cycles between Wells #1, #3 and #4 to limit the amount of groundwater drawn from the worse PCE contaminated areas.

The City consulted with West Virginia Rural Water and the West Virginia Department of Health and Human Services, Division of Environmental Protective regularly to seek guidance the PCE contamination. From 2010 to 2018, all treated water samples taken from the City's water distribution system were below the MCL for PCE. In the last quarter of 2018, treated water samples exceeded the MCL for PCE and a Notice of Violation was issued by the ("BPH"). With the
help of West Virginia Rural Water and West Virginia Division of Environmental Protection, the United States Environmental Protection Agency ("EPA") offered assistance to the City. In 2019, the EPA drilled test wells in various locations throughout the City to locate the source of the PCE contamination. The City was able to determine that the former Band Box Dry Cleaners was the primary source of the PCE contamination. The City was placed on a quarterly monitoring schedule, but also tested more often when necessary due to increased levels.

In 2016, the City retained the services of Thrasher Engineers to develop and design a water improvement project to make upgrades to the City's water distribution system including the installation of a new air stripper system designed specifically to remove PCE from the City's water distribution system.

From 2010 through mid-2018, the PCE in the City's water distribution system remained below the MCL of five (5) ppb.

Q. What changed in 2018?

A. In the last quarter of 2018, the PCE in the City's water distribution system exceeded the MCL. The City was issued a Notice of Violation by the West Virginia Department of Health and Human Resources, Bureau of Public Health ("BPH"). The City, with the help of volunteers, immediately took steps to supply drinking water to its residents by bringing in seven tractor trailers of bottled water and a water tanker truck. Volunteers in the community were diligent to ensure that citizens had access to safe drinking water.

The Notice of Violation enabled the City to obtain emergency funding through an Emergency and Imminent Community Water Assistance Grants Program.
Thrasher Engineers designed, permitted, and constructed the installation of a new six (6) tray styled air stripper system to remove the PCE from the City's water distribution system. The City worked closely with Thrasher Engineers on short term fixes in an effort alleviate the infiltration of PCE in its water distribution system until the new air stripper system was put into service in July of 2020. The City's new air stripper system effectively removed PCE from the water distribution system as evidence by water monitoring samples whereby PCE was either non-detectable or only showed trace amounts.

Q. What happened that caused the City to receive a second Notice of Violation on July 31, 2023?

A. In June of 2023, there was a major power outage in the area which caused a power surge in the air stripper building resulting in a mechanical failure of the air stripper system. As soon as it was discovered, the City immediately contacted an electrician to assess and repair damage to the air stripper caused by the power surge. Due to low levels of water in the City's storage tanks, fire protection became a concern in the event of a major fire. The decision was made to open a bypass value for a brief period of time to allow untreated water to bypass the air stripper and replenish water in the City's storage tanks. Once the storage tanks had sufficient levels of water, the bypass value was closed while repairs continued to be made to the air stripper system. When the air stripper system was repaired and placed back in service, the City began flushing its water distribution system to dilute and remove any PCE that may have infiltrated the

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On July 31, 2023, the City received notice that it exceeded the PCE MCL. Upon receiving notice, the City began flushing approximately 900,000 gallons of water through the system and investigating the cause of contamination. After diligent efforts, the City discovered the bypass value on the unit malfunctioned causing untreated water to mix with treated water from the air stripper system. To correct the issue, the bypass value was completely removed from the unit so that untreated raw water could no longer bypass the new air stripper system. Within a week of receiving notice of the violation, the City had discovered and resolved the mechanical issue that cause the PCE contamination to exceed the MCL. The City complied with directives from local, state, and federal agencies which included notices to the public, flushing its water distribution system and changes in the monitoring locations and schedules.

Q. What actions has the City taken and will be taking to ensure that future mechanical issues do not result in untreated water entering the public water supply?

A. The City is in the process of placing the new air stripper system on the same electrical circuit as the high service pumps which run off of the water treatment plant and generator. The City has already replaced the automatic transfer switch on the generator and relocated the air stripper control panel to a less humid environment. The City is also exploring different options to notify all members of
Q. Does this conclude your direct testimony?
A. Yes, it does.
CASE NO. 23-0796-PSWD-DU

CITY OF PADEN CITY AND PADEN MUNICIPAL WATER WORKS, Wetzel and Tyler Counties, West Virginia
Staff Petition Asking the Commission to Establish a Proceeding to Determine whether the City of Paden City and the Paden City Municipal Water Works is a Distressed or Failing Utility.

DIRECT TESTIMONY OF
DANIEL FERRELL, P.E.
THRASHER GROUP

January 5, 2024
Q. Please state your name and business address.
A. My name is Daniel Ferrell. My business address is 600 White Oaks Blvd., Bridgeport, West Virginia.

Q. By whom are you employed and in what capacity?
A. I am employed as a Project Manager and Principal of the Thrasher Group ("Thrasher"). I have been a licensed Civil Engineer for more than thirty (30) years.

Q. What is your educational background and what licenses do you hold?
A. I hold a Bachelor of Science degree in Civil Engineering from West Virginia University and a Master of Science degree in Civil Engineering from Old Dominion University. I am a registered professional engineer in good standing licensed in the States of West Virginia, Pennsylvania, and Virginia.

Q. Would you please describe your professional and work experience?
A. I have over thirty (30) years of experience in project design and management in the public utility sector in both potable water and sanitary sewer projects ranging from small municipalities to large scale implementations. I have served as Director of Public Works and City Engineer for the City of Bridgeport West Virginia. I have been the Principal-in-Charge and Project Manager for numerous water projects including, but not limited to: Hamrick Public Service District Water Plant Upgrades and Extensions; City of Bridgeport Charles Pointe Development Water Distribution Lines and Booster Pump Station; River Road Public Service District Water Line and Tank Replacement; City of Phillippe Water Tank...
Replacements; Midland Public Service District Water Extension Project; and, City of Bridgeport Route 131 Water Line Replacement.

I have also served as Principal-in-Charge and Project Manager on numerous sewer projects, including but not limited to: Malden Public Service District I&I Reduction and Wastewater Treatment Plant; City of Bridgeport Wastewater Improvement; City of Clarksburg Long Term Control Plan and Wastewater Treatment Plant Upgrades; City of Ripley Sewer Evaluation and Improvements Project; City of Romney Wastewater Treatment Plant and Life Station Upgrades; Canyon Public Service District Treatment Plant Upgrades and Line Extensions; Tennerton Public Service District Sanitary Sewer Line Extension and Elimination of Septic Systems; City of Cameron Combined Sewer Overflow Elimination Project; and Central Hampshire Public Service District Sewer Line Extensions and System Expansion.

For the Thrasher Group, I am responsible for the daily management of water and wastewater projects. I work on the planning, coordination, design, and construction of utility projects to meet the expectations and needs of my clients. I have experience in environmental engineering, civil engineering, wastewater collection, storm water conveyance, and water distribution systems, as well as wastewater and water treatment plants and storm water pollution control. My duties have included line layout, hydraulic analysis, pump and booster station designs, water storage tank design, pressure reducing station design, and plant layout and design. I also have vast experience in dealing with funding and regulatory agencies.
Q. Have you previously testified before the Commission?
A. I have not testified before the Commission in a Distressed or Failed Utility case, but I have testified in Certificate cases.

Q. Would you please describe your relationship with the City of Paden City and the Paden City Municipal Waterworks.
A. I have served as the Project Engineer on several projects for the City of Paden City for more than nine (9) years. These include a Sanitary Sewer Collection System Improvements Project in May of 2014 and Emergency Water Treatment Plant Upgrades in April of 201, a Water System Improvements Project in November of 2019, and a Sanitary Sewer System Improvements Project in July of 2021, funded through grants from the U.S. Army Corps of Engineers, the Infrastructure and Jobs Development Council, the City of Paden City, the Tyler County Commission and the Wetzel County Commission.

Q. When did the City first detect the chemical contaminant Tetrachloroethylene ("PCE") in its groundwater source and what steps were taken by the City after it was detected?
A. It is my understanding that trace amounts of PCE was first detected in the City's groundwater in 2010 during the monitoring for Volatile Organic Compounds ("VOC"). Once the PCE was detected, the City began monitoring PCE levels quarterly. Since 2010, the level of contamination has continued to rise. In 2013, after a noticeable spike in PCE, the City tested all four of its groundwater wells and shut down one of its groundwater wells due to high levels of PCE contamination. Since that time, the City has cycled between the three remaining
wells to limit the amount of groundwater drawn from suspected contaminated areas. From 2010 through 2018, the City continued to monitor for PCE contamination.

In 2016, the City, with the assistance of Thrasher, began the development of a water system improvement project that included the installation of a new air stripper system designed to effectively remove PCE from the City's water distribution system. The City's water treatment plant was built in 2001. It included three (3) hydraulic venturi air strippers which helped to maintain PCE levels below the MCL. By 2016, only two (2) of the three (3) hydraulic air strippers were operational. Due to pressure constraints, only one hydraulic stripper could be operated at a time. The City was unable to effectively remediate the PCE in the raw water based upon the extent of the contamination and the condition of the old air strippers.

During the latter part of 2017 through 2018, the Mid-Ohio Valley experienced prolonged excessive precipitation. It is believed that the excessive precipitation led to an infiltration of PCE in the City's raw groundwater source. At the time, the City's existing infrastructure was unable to effectively remediate the PCE infiltration. The City violated the MCL of PCE in the fourth quarter of 2018 with an average PCE level of 5.97 ppb and received a formal Notice of Violation by the West Virginia Department of Health and Human Resources, Bureau of Public Health ("BPH").

Q. What actions did the City take as a result of the Notice of Violation?
A. The Notice of Violation enabled the City to fast-track an emergency upgrade to
the water treatment plant with the installation of a new air stripper system
capable of removing PCE from the City's water distribution system. The City
applied for and received an Emergency and Imminent Community Water
Assistance Program grant through USDA Rural Development. Thrasher
developed, designed, and permitted an emergency improvement project that
enabled the City to remove the old existing hydraulic venturi air strippers and
replaced them with a new six (6) tray EZ Tray 1000 GPM Air Stripper system.
The new air stripper was designed to treat the highest influent levels of PCE
experienced at the water treatment plant with an added factor for safety.
The emergency air stripper project was designed, funded, permitted, constructed,
and placed in service by July of 2020. From the last quarter of 2018 until July of
2020, Thrasher worked with the City, local and state officials, on possible short-
term solutions in efforts to maintain the PCE contamination below the MCL.

Q. Are you familiar with the events that occurred in mid-2023 that led to the
City receiving a second Notice of Violation from the DEP that it exceeded
the maximum contaminate level ("MCL") for PCE?

A. Yes, I am familiar with the events. It is my understanding that in mid-June of
2023, the City experienced an area power outage which resulted in an electrical
power surge in the new air stripper building. The power surge triggered an
electrical failure that damaged the control panel on the new stripper system
causing it to malfunction. Since the City’s water tank storage levels were low, the
City opened a bypass valve to divert untreated water into the water storage tanks
long enough to replenish levels for fire protection. The bypass valve was then closed while the City finished the repairs to the air stripper. Once the air stripper became operational, the City immediately began flushing the water distribution system to dilute and remove any PCE contaminants. Unbeknownst to the City, the bypass valve was broken and did not close properly. This allowed untreated raw water containing PCE to infiltrate and mix with water treated through the air stripper system. As a result, the City exceeded the MCL for PCE and was issued a Notice of Violation by BPH. The City investigated the cause of the PCE contamination and discovered the defective bypass valve. The bypass valve was completely removed from the unit so that all untreated raw water entered the air stripper system before entering the public water supply.

Q. What actions are the City taking as a result of the recent mechanical failures at the water treatment plant?

A. The City is in the process of re-wiring and re-configuring the air stripper system to operate on the same electrical circuit as the high service pumps, which run off the water treatment plant generator. This would also include the replacement of the automatic transfer switch on the generator. In the event there is another power outage, the new air stripper system will automatically be transferred to the generator and continue to run during any future power outages. The City intends to relocate the air stripper control panel to a less humid environment to minimize potential issues due to humidity. The City continues to explore other possible solutions which may include determining whether there are other groundwater sources that can be utilized outside the PCE pollution plume. The City continues
to explore other failsafe options to improve its water distribution system to ensure
the public water supply meets or exceeds all local, state, and federal water
quality standards.

Q. **What water improvement projects has City recently completed?**

A. The Emergency Water System Improvement Project was completed in July of
2020. The 2019 Water Systems Improvement Project, Phase I has been
substantially completed.

Q. **Is the City currently planning any water or sewer improvement projects?**

A. The City is in the final design stages of a second Sanitary Sewer System
Improvement Project. Discussions have begun for the second phase of the Water
Systems Improvement Project.

Q. **Does this conclude your direct testimony?**

A. Yes, it does.
PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

CASE NO. 23-0796-PSWD-DU

CITY OF Paden CITY AND Paden Municipal Water Works, Wetzel and Tyler Counties, West Virginia
Staff Petition Asking the Commission to Establish a Proceeding to Determine whether the City of Paden City and the Paden City Municipal Water Works is a Distressed or Failing Utility.

DIRECT TESTIMONY OF
SHELIA ERVIN, CITY RECORDER
FOR THE CITY OF Paden CITY

January 5, 2024
Q. Please state your name and business address.

A. My name is Shelia Ervin. My business address is 208 W. Main Street, Paden City, West Virginia.

Q. By whom are you employed and in what capacity?

A. I am employed as the City Recorder for the City of Paden City. I have been employed as the City Recorder for the past eight (8) years.

Q. Does part of your job duties include ensuring that the City meets all of its financial obligations as it relates to the City's water distribution system and sanitary sewer system?

A. As the City Recorder, it is my duty and responsibility to ensure that all of the City's financial obligations, including those related to the City's water distribution system and sanitary sewer systems, are met. During my tenure as City Recorder during the past eight (8) years, the City has timely paid all its financial obligations, including, but not limited to, federal and state tax obligations and its bond payments to the West Virginia Water Development Authority, the United States Department of Agriculture, and other bondholders. The City has also maintained any required debt service reserves and submitted audits if required by its bond, loan documents and state law. While serving as City Recorder, the City has never failed to timely pay any of its financial obligations related to the City's water distribution system or sanitary sewer system.

Q. Does that complete your direct testimony?

A. Yes, that completes my direct testimony.
CERTIFICATE OF SERVICE

CASE NO. 23-0796-PWSD-DU
CITY OF PADEN CITY
AND PADEN CITY MUNICIPAL WATER WORKS

I, Carolyn G. Flannery, Counsel for the City of Paden City and Paden City Municipal Water Works, do hereby certify that a copy of the foregoing “Prepared Direct Testimonies of Joshua Billiter, Superintendent, Water Department, and Daniel Ferrell, P.E., Thrasher Group” has been served upon the following parties of record by First Class, United States Mail; postage prepaid this 5th day of January, 2024.

Robert F. Williams, Esq.
Director
Consumer Advocate Division
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Charleston, WV 25301

Eric H. Vincent, President
Tyler County Commission
P.O. Box 66
Middlebourne, WV 26149

The Honorable Sandy Hunt
Mayor, City of New Martinsville
191 Main Street, Municipal Bldg
New Martinsville, WV 26155

Heather Rice
City Recorder
City of Sistersville
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