

# AFFIDAVIT

STATE OF WEST VIRGINIA,

COUNTY OF KANAWHA

I, Jesse Alden, P.E., being duly sworn, deposes and states as follows:

1. My name is Jesse Alden. I am a licensed Professional Engineer in the State of West Virginia, license number 22695. I am employed by The Thrasher Group, Inc. as a Project Manager. The Thrasher Group has acted as an engineering consultant for the Weirton Area Water Board (the "Board") since at least 2001. The Board requires engineering consultation on a continuing basis because of its various capital projects and environmental-related issues it has been involved with over the past 30 years, including to the water distribution system. For at least 10 years or more, the Thrasher Group also manages the Kentucky Pipe Hydraulic Modeling Software Program for the Board. This program maps various information about the Board's water lines (e.g., diameter, length, location, flow, pressure, pipe material, valves, tanks and appurtenances) into a program, which is used to analyze and examine the water distribution system from source to tap to identify vulnerabilities like contamination risks, infrastructure issues, and operational weaknesses.
2. An engineer from the Thrasher Group has physically attended almost every monthly meeting of the Board for the past 25 years or so (except during COVID).
3. The Thrasher Group and I are intimately familiar with the potable water treatment and distribution system operated by the Board.
4. Weirton's water system relies upon two raw water sources, a Ranney Collector Groundwater Well (the "Ranney Well") and surface water from the Ohio River. The maximum daily raw water production of the Ranney well is 2.0 million gallons per day (MGD) and the maximum daily raw water production of the Ohio River intake is 16 MGD, when both are working properly. On average, the Weirton Water Treatment Plant treats 3.2-3.6 MGD, with a current maximum production of 4.0 MGD. These raw water sources under normal operating conditions are blended in the raw water treatment process, though the Plant's treatment process allows for it to use just one water source and meet drinking water regulations. The Ranney Well, under normal operational conditions, contributes to the overall water supply, as the supply is blended at approximately 50% river water and 50% Ranney Well water.
5. The Ranney Well was outfitted with three (3) pumps intended to transfer water from the aquifer to the Water Treatment Plant (the "Plant"). These pumps were beyond their useful life expectancies and the Water Department was spending substantial time and money repairing the pumps over the years, sometimes unsuccessfully. The Ranney

Well had been taken totally offline to make pump repairs on two occasions in the past ten years or so, each time for about one year.

6. Moreover, in recent years the Plant has been operating excessive hours per day, and the Board's service area faces growth with the new Form Energy facility (which will need about 400,000 gallons of water per day, which the existing treatment plant cannot provide) and other commercial development in the area. The current Plant was at near capacity to provide additional water supplies to new customers, with only about 100,000 gallons in excess capacity.

7. As a result, in 2018, the Board initiated a \$44 million water plant upgrade and treatment project, West Virginia Infrastructure and Jobs Development Council Project No. 2019W-1795 (the "Project"). The Project will upgrade the Plant from a 4.0 MGD facility to an 8.0 MGD facility, doubling its capacity. The Project includes both reconstructing the Ranney Well due to its poor condition and declining production in recent years, with an expected raw water capacity of 4.0 MGD resulting, and adding new treatment processes.

8. About \$4.4 million or 10% of the Project's \$44 million dollar budget was allocated for Ranney Well repairs due to its severely deteriorated state.

9. The Thrasher Group has performed all design and engineering work relating to the Project, including the bidding process and construction schedule. I – along with numerous other civil engineers (including mechanical and environmental engineers) and architects at the Thrasher Group -- have been involved with the Project since 2019.

10. The Project's preliminary engineering report for the Project was reviewed and approved by the West Virginia Infrastructure and Jobs Development Council (IJDC), West Virginia Department of Natural Resources (DNR), U.S. Fish and Wildlife and the Board. The West Virginia Public Service Commission (PSC) has a representative on the IJDC board. The West Virginia Bureau of Public Health and United States EPA, among others, have also reviewed and approved Project's plans and specifications.

11. On July 17, 2024, the Project commenced construction.

12. On October 1, 2024, the Ranney Well was taken offline for major reconstruction and repairs. As of said date, two of the three pumps were completely inoperable and irreparable, having been out of service for many months. The remaining pump was barely operational, with widespread concern that it could fail permanently at any moment. In short, when the Ranney Well was decommissioned, it was in very poor condition, operating at a reduced capacity of about 800-900 gallons of water per minute (gpm), and urgently required intervention.

13. When the Ranney Well was idled, the Plant's blended water supply consisted of about 75-80% river water and 20-25% Ranney Well water, a significant departure from the targeted blend of roughly 50% river water and 50% Ranney Well water. This substantial reduction in Ranney Well water being used in the blend was directly due to

the well's operational deficiencies, including that only one of three pumps was (barely) functioning. Stated another way, the Plant could pump about 2.0 MGD from the Ranney Well when it is working properly, but in October 2024 --- and for many months prior --- it was only producing about 800,000 MGD, reflecting a 60% decrease in output.

14. Any claim that the Ranney Well was in good working order and arbitrarily taken out of service is untrue. Taking the Ranney Well offline was essential to perform extensive renovations to it and did not weaken the system's ability to maintain adequate water pressure. The decision to idle the Ranney Well on October 1 was made by the Thrasher Group after careful evaluation of engineering and construction considerations. These included the need to maintain an adequate water supply during the Project, raw water capacities, and the overall sequencing of construction activities, among others. It was also important to complete the Ranney Well repairs first, so that subsequent work could proceed on portions of the Plant that are necessary for treating surface water.

15. The Thrasher Group employs an engineer who acts as the full-time, on-site Construction Manager for the Project. This engineer's responsibilities includes overseeing daily construction activities, ensuring that contractors complete all work according to the Project's design and construction specifications and timeline, and conducting weekly meetings with contractors and Water Department operations staff to minimize disruptions to water facility operations. Additionally, the Construction Manager maintains daily communications with Water Department personnel, including Butch Mastrantoni, the Utilities Director. The Construction Manager operates out of the Thrasher Group's office in Weirton. I still attend the Board's monthly meetings and monitor construction activities for the Project.

16. The cold weather from December 2024 to February 2025 was the most severe and prolonged that the Board's service area had seen in over a decade, with temperatures not rising above 16 degrees Fahrenheit for a six day period, with temperatures falling as low as -7 Fahrenheit. This caused much deeper ground freezing than is typical. At the time of the extreme cold this past winter, the Ranney Well had been offline for about two months as planned with implementation of the Project. Consequently, the Plant was solely dependent on river water, as it has been before.

17. Treated water from the Plant is pumped to one or more water storage tanks before being distributed into the system. The water storage tanks are exposed to the ambient cold temperatures, which caused a decrease in water temperature. This would have occurred regardless of the raw water source in use.

18. The unusually high incidences of line breaks on the Board's distribution system was likely caused by unusually deep ground freezing due to the low temperatures experienced this winter.

19. I have reviewed the 2023 and most recent sanitary survey performed by the WV Dept. of Health and Human Resources (DHHR). Of course, a sanitary survey for water departments is a comprehensive evaluation of a public water system to assess its ability

to provide safe, clean drinking water and identify any potential risks or deficiencies. The sanitary survey shows that the DHHR found no significant deficiencies, no minor deficiencies, and made no recommendations with respect to observed conditions which have the potential to result in minor or significant deficiencies.

20. The Thrasher Group is the engineering consultant to many municipalities and public service districts in West Virginia regarding water service. In my experience, it is very uncommon for the DHHR in a sanitary survey to find no significant or minor deficiencies, and no recommendation regarding conditions which have the potential to result in minor or significant deficiencies.

21. The Board and Water Department's staff have always been responsive to any matters or issues relating to the water system brought to their attention by the Thrasher Group.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on this 7th day of April, 2025.


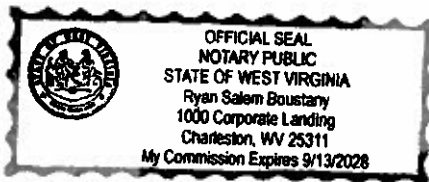


Jesse Alden, P.E.  
WV PE#22695

State of West Virginia,

County of Kanawha :

Acknowledged before me on April 7<sup>th</sup>, 2025, by Jesse Alden, P.E.

  
NOTARY PUBLIC

My Commission expires September 13, 2028