STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. _____

Petition of Woodstock Aqueduct Company for a change in rates pursuant to 30 V.S.A. § 225 et seq.	

DIRECT TESTIMONY OF WITNESS
JIREH BILLINGS
ON BEHALF OF WOODSTOCK AQUEDUCT COMPANY

April 1, 2024

Mr. Billings' testimony supports Woodstock Aqueduct Company's rate request and explains the major factors that are driving the need to increase rates in this case, including devastating flood damage suffered in 2023 flooding events, deficiency mandates required by the Department of Environmental Conservation, necessary operational costs driven by the retirement of long-time water managers, and the potential transfer of the water system to the Town of Woodstock. Mr. Billings explains how the rate change was determined in this case and sponsors known and measurable documentation and exhibits that support the Rate Year revenue requirement.

Exhibits

Exhibit WAC-JSB-1	-	Cost of Service & Rate Change Determination
Exhibit WAC-JSB-2	-	Elm Street Crossing Costs
Exhibit WAC-JSB-3 & 3A	-	December 2023 Preliminary Engineering Report
Exhibit WAC-JSB-4	-	DEC Approval Letter re PER
Exhibit WAC-JSB-6	-	SCADA System Costs
Exhibit WAC-JSB-7	-	Professional Services Costs

DIRECT TESTIMONY OF WITNESS
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1. Q. Please state your name, occupation, and business address.

A. My name is Jireh Billings. I am the President of the Woodstock Aqueduct Company ("WAC" or the "Company"), a publicly regulated water utility located at 16 Elm Street, Woodstock, Vermont.

2. Q. Please describe your background and experience.

A. I received a BA from the University of Vermont in 1980. In 1981 I became President and General Manager of F.H. Gillingham & Sons Inc., my family's general store in Woodstock, Vermont, a position I still hold today. In 1984 I was elected President of Woodstock Aqueduct Company Inc. and I still hold that position today. In the mid-1980s I had become a licensed operator of Class 2 Vermont water systems. This is the license needed to be able to be an operator of the Woodstock Aqueduct water system. I have taken all the necessary continuing education needed to keep my license active today.

3. Q. Have you previously testified before the Vermont Public Utility Commission (the "Commission")?

A. I have represented WAC before the Commission on several occasions, including a financing request submitted in Case No. 22-5462-PET and WAC's last tariff filing request filed in 2015 for a rate increase, rate design changes, and revisions to WAC's rules and regulations in Docket No. 8462. Most recently, I testified in Case No. 23-2798-PET in support of the

Commission's approval of an expedited financing request that enabled WAC to fund necessary repairs after devastating flooding caused significant damage to WAC's water system in the summer of 2023.

4. Q. What is the purpose of your testimony?

A. My testimony supports WAC's Petition for a change in rates, which is necessary to continue to provide safe and reliable water service and address a confluence of operational challenges that we face in the coming Rate Year and beyond. This rate request results in a significant change to our rates and is driven by three major factors: (1) extensive system repairs that are needed to address the severe damage to our water system that occurred last summer; (2) significant system upgrades that are mandated by the Department of Environmental Conservation ("DEC"), including over $4 million in system upgrades to address DEC deficiencies; and (3) the transition of the water company's ownership and operational management, resulting in increases in salaries and wages. In my testimony, I discuss each of these issues in more detail.

My testimony begins with some basic background about WAC. This is followed by a discussion of the three major factors that are driving the Cost of Service for the Rate Year. I then explain in more detail how we determined the Cost of Service and explain each of the operational expenses and other changes from the Test Year, which is the Calendar Year 2023. Finally, I will discuss how the Rate Year Cost of Service will impact the Base Charge, Variable Charge, and Hydrant Charge. I also sponsor a series of supporting exhibits, including **Exhibit WAC-JSB-1**, which provides the Cost of Service and identifies both the individual Rate Year adjustments and rate change determination.

4. Q. Please provide some general background about the Woodstock Aqueduct Company.

A. Woodstock Aqueduct Company ("WAC") was formed in 1880 to provide water access to the citizens of Woodstock. While there were several attempts to have the Town of Woodstock build the water system, WAC was ultimately started by a group of local businesspeople that advanced the development of a public water system under private ownership. The Company has been under the guidance of private shareholders since its inception. There are currently 35 individual shareholders, most or all of whom are descendants of the original stockholders and inherited their interest over the passage of time and generations.

While WAC is technically a privately owned company, it is not a typical business enterprise. I am not aware of any period where WAC has earned a rate of return on equity or paid its shareholders any significant profit. Instead, the Company has been run more like a community service enterprise, functioning like a non-profit where proceeds are maintained only to support the ongoing operation of the water company. The operation of the water company has also benefited from legacy management. My family has been involved in the company since its inception and my involvement in the management of the water company stems more from family tradition than professional ambition or revenue generation.

WAC currently has approximately 777 connections serving commercial, residential, and municipal buildings throughout the Town of Woodstock. The geographical area includes properties in Woodstock Village, West Woodstock, East Woodstock, and along Route 106 and Route 12. Water service is provided through a network of water mains and distribution pipes, including four different 8" river crossing mains. We have two wells that supply water to the system; one on Route 12 and the other just off Pomfret Road. Water is pumped through the

distribution system to customers' homes and businesses. The wells also supply water to our million-gallon, glass on steel, water tank in West Woodstock. When high water demand exceeds production from the wells, water supply from our tank is used to serve customers using the same distribution system. The tank is at a high elevation which creates pressure in our system. The pressure in our system at the lowest points is between 110 psi and 120 psi.

We currently have a manager, a part-time manager, one full-time and one part-time field employee, one part-time meter reader, and one part-time administrative office employee. The Company has two Licensed Water Professionals. As the primary steward of the Company, I have been engaged in discussions with DEC regarding regulatory compliance and upgrade issues and we have also been actively pursuing the potential for the Town of Woodstock to take over the operation and ownership of the water system, which I discuss in more detail later in my testimony.

6. Q. What are the major factors that WAC is addressing in this rate request?

A. WAC's rate request in this case is driven by (1) flood repairs required following devasting 2023 flooding, (2) significant system upgrades that are required by DEC, and (3) the water company's transition from essentially a legacy family-owned business that we've operated more like a non-profit, to either municipal ownership or other professional management that will require market-based wages and salaries to manage the operation of the water company.

(1) Flood Damage

I'll start with an explanation of the flood repairs. As I discussed in testimony recently filed in Case No. 23-2798-PET, WAC experienced devasting water system damage during Vermont's Summer 2023 flooding, which also affected many other Vermont cities and towns.

This event resulted in the loss of two 8" river crossing mains and severely reduced the amount of water available to move through our system and our ability to maintain water levels sufficient to provide adequate service. We acted promptly to pursue emergency financing with Mascoma Bank for a loan of up to $150,000, which was approved by the Commission in Case No. 23-2798-PET.

As a result of the flood damage, we incurred both emergency repair costs for temporary fixes to keep the water system operating as well as long-term investments to restore the system. The major drivers of related costs that impact this rate request include the increased debt costs associated with the $150,000 loan discussed above, which has enabled us to partially recover from the flood damage and restore the East Side crossing using directional drilling as discussed in Case No. 23-2798-PET. While this funding was essential to navigating last summer's emergency, we also need to act quickly to implement a permanent solution for the Elm Street line crossing.

Over the summer, we explored whether we could implement a similar remedial approach for the Elm Street line crossing using horizontal directional drilling, however, the riverbed conditions in this location are not conducive to drilling due to a rock ledge under the river. Accordingly, we have been exploring alternatives for this crossing while maintaining the temporary crossing I described in Case No. 23-2798-PET. We have now determined that a new 8" line in this location will need to be hung from the bridge. We have also solicited construction estimates that demonstrate the cost of this work will be approximately $665,000. See **Exhibit WAC-JSB-2**.

WAC does not have the capital needed to make an investment of this magnitude and will need to finance this flood repair. As a result, this rate case reflects increases to our annual debt

costs that we have already incurred from the emergency funding. The annual debt cost for the $150,000 Mascoma loan increased costs by about $8,400. To finance the Elm Street Crossing construction, we will need to further increase our annual debt expense by $62,000 in the rate year and obtain approval to finance approximately $665,000 for the Elm Street crossing.

Thus, in total, the Vermont Summer 2023 flooding event caused significant and acute short term funding challenges for WAC that we are still navigating. One of the biggest hurdles is sourcing the funding for this work because we do not have access to capital and our ability to increase our debt is limited without implementing rate changes that are sufficient to fund Rate Year debt expenses. We need to more than double our annual debt expense to fix the flood damage and secure related financing. So, the flood damage is the first major factor that is driving Rate Year costs.

(2) Department of Environmental Conservation Deficiencies

The second major driver of costs in this case relates to system upgrades that are mandated by the Department of Environmental Conservation ("DEC"). WAC is regulated as a Public Water System under DEC's Drinking Water and Groundwater Protection Division. In Case No. 22-5462-PET, the Commission approved WAC's financing through the Vermont Water & Wastewater Revolving Loan Fund to undertake a lead line inventory and a Preliminary Engineering Report ("PER"). As explained in more detail below, the PER identified the need for $4,398,980 to address fire flow deficiencies in the system that are necessary to comply with the DEC's Water Supply Rule.

WAC has about 96 fire hydrants that service Woodstock. In 2022, DEC issued a deficiency letter identifying non-compliance with the Vermont Water Supply Rule. Specifically, some hydrants connected to the system cannot produce 500 gallons per minute without dropping

the pressure below 20 psi anywhere in the system, which is the regulatory standard in the Water Supply Rule. As explained in the PER, "This issue is exacerbated further when the wells are not running, and water is only entering the system from the water storage tank." **Exhibit WAC-JSB-3A** pt. 1 at 2.

Following Commission approval in Case No. 22-5462-PET, WAC commissioned the PER. Otter Creek Engineering has completed its review of the deficiency and issued an extensive analysis of our system and alternatives for bringing the system into compliance with the Water Supply Rule. As discussed in the PER, addressing the deficiency will require upgrading the transmission main that comes down from the water storage tank. This involves 3,700 feet of transmission main replacement. In addition, approximately 6,900 feet of replacement will be required down Route 4. Exhibit WAC-JSB-3A pt. 1, Alternative No. 1B at 22. Total cost of this project is $4,398,980. Exhibit WAC-JSB-3A pt. 1 at 37.

This rate request is needed so that WAC can pursue the funding to commence this project and have adequate cash flow to fund an annual debt expense of approximately $292,759. This assumes that we can obtain a 20-year loan from the Vermont Economic Development Authority ("VEDA") at a low interest rate of 3%. We have already submitted documentation to VEDA to obtain this funding and anticipate that WAC will be able to pursue Commission approval for at least the initial $4.3 million investment as soon as possible. Based on our current rate structure and annual revenues, we will not be able to obtain this funding without an increase in rates that provides this level of revenue at a minimum. If we are unable to fund this project with a VEDA loan, the cost of debt or equity (which we are unable to raise in any event), would likely be much higher. In this case, the revenue needed to pursue this project is reflected in a significant change to WAC's hydrant charge.

We currently have 96 hydrants for which WAC collects an annual fee of $360 per hydrant. These charges are not billed directly to customers. Instead, the fire hydrant charge is billed to the Town of Woodstock and funded through the fire department's budget based on the prior consensus that WAC's fire hydrants benefit the larger community—not just WAC customers. Because project costs associated with this upgrade are needed to bring fire hydrants into compliance with the Water Supply Rule, we have allocated all project costs to the fire hydrant charge, which increases the annual fee per hydrant to about $3,800. Exhibit WAC-JSB-1. The rate determination and further explanation about each Rate Year adjustment is provided in more detail below.

(3) Management and Ownership Transition

The third major factor driving this rate request is the need to support a transition in the ownership and operation of WAC, which can hopefully be achieved through a successful transfer of ownership and control to the Town of Woodstock (the "Town"). As I have discussed in other recent Commission cases referenced above, we have been actively pursuing a transfer of the system to the Town for over two years. In the fall of 2023, the Selectboard of Woodstock appointed a study group to address whether the Town should buy the Company. In a written report issued in December 2023, the study group recommended that the Town should proceed with an acquisition of WAC.

More recently, the Town and the Company have signed a letter of intent ("LOI") for the Town to hire a consultant to analyze a potential sale. This will allow WAC and the Town to begin serious discussions about the terms and conditions of such a transfer. Additionally, the Company has agreed, in the LOI, that if this rate increase goes into effect, the Company will include funds collected under this proposed rate structure in the transfer to the Town at the time

of the sale. Accordingly, because our rate request includes no return on equity, and all revenues will be available to support the Town's acquisition and operation of the system, this rate request effectively puts the Company on a footing needed to successfully transfer the system to the Town. If the Town and WAC can reach an agreement on a proposed transaction, it will then go to the voters for a special vote.

Thus far, these discussions have been positive, and we are pleased with the progress we are making toward Town ownership of the water system. This rate request supports a successful transfer to the Town by putting WAC in a financial position that reflects the realities of sustainably operating this system as a municipal endeavor. This means implementing a rate change that not only reflects the necessary investment in the system, such as remediating the fire hydrant deficiencies (which will be borne by the Town regardless of whether a sale is approved), but also reflecting increased operational costs. Currently, I manage the Company with my brother Frank Billings. While our exit from the operation of the Company will reduce wages and salaries by about $60,000, there are no circumstances under which the Company or the Town can hire a replacement without a significant increase in salary and wages. As discussed in more detail below, we anticipate that successfully recruiting a water utility manager will require a $125,000 salary. While the Town may be able to leverage other positions to reduce overall costs, we are also mindful that a successful transaction with the Town is not certain in the Rate Year.

Based on impending retirements, coupled with the acute challenges and significant capital projects that lie ahead for WAC, we have determined that WAC will not be able to provide safe and reliable service without securing a viable succession plan—either through Town ownership or professional management, and likely both. Accordingly, while the Town may be in a position to reduce system costs following a transaction, the costs necessary to operate the

utility in the Rate Year include significant increases in salary and wages to secure a stable operational future for the Company and its customers. Pursuing a professional water management team is also necessary because it will be required in the Rate Year and successive years regardless of whether a successful transfer to the Town is negotiated. Such a transition will not only take time, but our customers also need to be assured that, in the absence of a successful transfer, the Company will have adequate revenues to continue to provide reliable service while addressing the devasting system damage caused by last summer's flooding and significant system upgrades required by DEC.

7. Q. Please explain the specific Cost of Service adjustments that are included in this rate request.

A. In this case, we have used Calendar Year 2023 as the Test Year. Notably, based on Test Year expenses alone, we have a significant revenue deficiency in the Rate Year. As set forth in Exhibit WAC-JSB-1, Test Year expenses total $544,390 and current debt expenses are approximately $90,000 (without our Mascoma flooding loan or DEC deficiency deft) while forecasted revenue in the Rate Year is only $446,225. As a result, we are facing a revenue deficiency of about $190,000 even before we account for several of the major operational deficiencies discussed elsewhere in my testimony. To understand how we developed the full revenue requirement for the Rate Year, the following provides background on the Test Year costs and the associated known and measurable adjustments that we have made in the Rate Year. This explanation tracks the itemized operating and administrative expenses detailed on Exhibit WAC-JSB-1.

Operating Expenses in the Rate Year have been adjusted by approximately $238,000, reflecting increases in salaries and wages, pipe replacement recommended by DEC, a reduction in Test year flood damage expenses, and other matters detailed below:

- **Salaries and wages:** As discussed above, salaries and wages in the Test Year increase to fund a new professional management position and advance necessary succession planning. Accordingly, the Test Year expenses listed under Administrative and General for officer salary, payroll taxes, and benefits are reduced to zero in the Rate Year and salaries and wages under operating expenses are increased to approximately $138,000. In addition to $125,000 for a professional manager salary, this also reflects a 10% increase in wages for other employees of the company to keep their pay competitive in the Woodstock job market.

- **Payroll taxes and employee benefits:** These adjustments flow from changes to our salaries and wages.

- **Equipment Rental:** The Company leases a long-bed pick-up truck to transport all the tools needed to fix problems in the field. The lease term is three years, and a new lease started in August of 2023 at a higher rate, which is reflected in the approximately $1,000 increase in this category during the Rate Year.

- **ANR Required Planned Pipe Replacement:** In addition to the fire hydrant project discussed above, DEC has expressly signaled that WAC needs to begin "developing a replacement plan and schedule to address the aged and undersized distribution system." **Exhibit WAC-JSB-4**. Over 66% percent of WAC's distribution system has exceeded its useful life, 31% of water is estimated to be unaccounted for, and 48% of water mains are undersized. "A substantial portion of the water distribution system is original and approaching the end of its useful life. The pipe sizes range between 1½-inch and 16-inch in diameter and consist of pvc, galvanized iron, ductile iron, steel, and copper piping. The distribution system material, age, pipe

orientation, and diameter have presented operational challenges for the WAC, and a long-range capital investment plan should be developed." Exhibit WAC-JSB-3 A pt 1. at 8.0, page 46**.** To address these needs, we have developed a plan to replace approximately 428 feet of pipe per year beginning in the Rate Year. This is another increase in costs that will be incurred by the system nearly indefinitely as the system includes over 17 miles of water main and 777 service connections. Based on current construction costs, the cost per foot is expected to be $350.00 per foot in the earlier years of this endeavor. Accordingly, the Rate Year includes $150,000 for pipe replacements consistent with DEC recommendations.

- **Flood Damage Repairs and Maintenance:** While pipe replacement costs increase in the Rate Year, there is a corresponding reduction of approximately $146,000 in the Rate Year, as we incurred these expenses in the Test Year in response to 2023 flooding and have financed the cost as discussed above. Rather than reflecting this as an ongoing expense in the Test Year, these repair costs are reflected in our debt expense at $8,340. Exhibit WAC-JSR-1 at 2.

- **SCADA System Replacement:** The Company uses a Supervisory Control and Data Acquisition ("SCADA") system, which the water system operations team uses to control the Company's two wells remotely, view the volume of flow to and from the water storage tank, and monitor the well levels and water flows in the main well. Two years ago, the company we currently rely upon announced that it would discontinue its service as of 2025. Accordingly, we have been working with Champlin Associates to identify an alternative solution. The quoted cost to implement a replacement SCADA system is $45,000. **Exhibit WAC-JSR-5.**

Administrative and General Expenses in the Rate year have been reduced by approximately $7,500 in the Rate Year as detailed below:

- **Officer Salaries, Payroll Taxes, Employee Benefits:** As discussed above, these expenses have been removed from the Rate Year to reflect our succession planning and the associated increase in salaries and wages reflected in Operating Expenses. The officers have managed both the office and field responsibilities. These responsibilities will be shifted to the new manager and the officers will become unpaid officers and Directors of the company.

- **Professional Service:** Our need for professional services in the Test Year is increasing substantially because we are facing significant accounting needs as we manage both financing requirements and negotiations with the Town of Woodstock over the transfer of the water system. In addition to increased reliance on accounting professionals, we will incur legal costs associated with regulatory compliance; both in proceedings before the Commission as well as DEC. We are also incurring costs associated with transferring the water company to the Town, or in the alternative, seeking some other transactional solution if that effort stalls. Accordingly, our professional services expenses are increasing by $40,000 in the Rate Year. **Exhibit WAC-JSR-6.**

8. Q. How are the Rate Year changes you describe above incorporated into the proposed rate change?

A. The Rate Year revenue requirement as discussed above reflects a significant increase in operating costs during the Test Year. As set forth on Page 1 of the Cost of Service (Exhibit WAC-JSR-1), the Rate Year expense, including annual debt expense, is approximately $936,253. This does not account for the debt expense needed to fund the DEC deficiency project which, as discussed above, is more than $4.3 million. Accordingly, we determined the rate change in two steps as shown on Page 3 of Exhibit WAC-JSR-1 and explained below.

First, our Test Year rates include a (1) Base Charge, which is assessed per meter, (2) a Variable Charge, which is assessed based on a customer's excess water usage, (3) a capacity charge, which is also a usage-based charge, and (4) a Hydrant Charge which, as discussed above, is billed to the Town of Woodstock. To determine the Rate Year charges for each category, we first implemented a proportional adjustment to each charge based on the change in revenue requirement. We eliminated the "capacity charge" because it is more or less duplicative of the Variable Charge. As shown in the Contribution Adjustments row, 53% of the revenue requirement is recovered through the Base Charge, 39% is recovered through the Variable Charge (assuming the same volume of usage in the Test Year), and 8% of the revenue requirement is recovered through the Hydrant Charge. In the first step of our rate determination, we adjusted rates proportionally based on the Cost of Service Revenue Requirement of $936,253. As a result, the Base Charge and Variable Charge basically double in the Rate Year.

Second, we implemented the DEC deficiency requirement separately so that it does not have an impact on customers' Base Charge and Variable Charge. As discussed above, this makes sense because the DEC deficiency requirement is a mandate driven by the Water Supply Rule as it relates specifically to the fire hydrants. In other words, in the absence of fire hydrant requirements, these investments would not be mandated by DEC. This investment should therefore be borne by the customers that benefit from the system upgrades that we will implement to come into compliance with the DEC requirements. As shown on Page 3 of Exhibit WAC-JSR-1, the Hydrant Charge will increase annually to over $3,800.

9. Q. When does WAC propose for this rate change to take effect.

A. We need to implement this rate change as soon as possible in order to make progress on the work discussed above. Accordingly, we are proposing that this rate change take effect 45 days from today, April 1, 2024, which would be May 16, 2024. We understand that the Department of Public Service and Commission may determine that the rate change should be suspended in accordance with the requirements of 30 V.S.A § 225 et seq. We welcome whatever process is required for the Department, Commission, and general public to understand, evaluate, and consider this important request and will work to advance the Commission's review and approval as soon as that is feasible.

10. Q. Does this conclude your testimony?

A. Yes.

DECLARATION OF JIREH BILLINGS

I declare that the above statements are true and accurate to the best of my knowledge and belief. I understand that if the above statements are false, I may be subject to sanctions by the Commission pursuant to 30 V.S.A. § 30.

April 1, 2024
Date

/s/ Jireh Billings
Jireh Billings