

**BEFORE THE  
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,**

**Complainant,**

**v.**

**CASCADIA WATER, LLC,**

**Respondent.**

**DOCKET UW-240151**

**WATER CONSUMER ADVOCATES OF WASHINGTON, INTERVENOR**

**Direct Testimony of Harry L. Palmer**

**FIRE PROTECTION AND RESPONSE**

**FIRE FLOWS**

**Exhibit HLP-1T**

**November 20, 2024**

1 **Q. Please state your name and address.**

2 A. My name is Harry L. Palmer. I live at 2229 Goodell Road, Freeland, WA 98249.

3 **Q. Please summarize your employment history regarding fire protection and response.**

4 A. **2010-2022 Fire Chief**

5 South Whidbey Fire/EMS, Freeland WA.

6 **2006-2010 Fire Chief**

7 Jackson Hole Fire/EMS, Jackson, WY.

8 **2004-2006 Deputy Fire Chief, Prevention & Administration**

9 Jackson Hole Fire/EMS, Jackson, WY.

10 **1991-2004 Deputy Fire Chief, Fire Marshal**

11 Jackson/Teton County Fire Department, Jackson, WY.

12 **1985-2004 Director**

13 Teton County Emergency Medical Services, Jackson, WY.

14 **1986-1991 Fire Inspector**

15 Jackson/Teton County Fire Department, Jackson, WY.

16 **1985 – 1998 EMT-I**

17 Jackson Hole Air Ambulance, Jackson, WY.

18 **1976-1986 Firefighter**

19 Jackson / Teton Co. Fire Department, Jackson, WY.

20 My resume provides a more detailed overview of my experience. Exh. HLP-1.

21 **Q. Please summarize the training and certifications– you have received regarding fire**  
22 **protection and response.**

1 A. I have over 5000 hours of training over my career in the areas of:  
2 fire service operations, disaster preparedness and response, Emergency Medical Services,  
3 code development and enforcement, hazardous materials, wildfire prevention and  
4 firefighting, fire and arson investigation, and fire service management and administration.  
5 My professional credentials are as follows:  
6 **Executive Fire Officer**, National Fire Academy  
7 **National Fire Academy Course Instructor**, National Fire Academy  
8 **Fire Officer III**, NFPA 1021  
9 **Fire Inspector III**, NFPA 1031  
10 **Fire Investigator**, NFPA 1033  
11 **Fire Service Instructor I**, NFPA 1041  
12 **Public Fire Educator I**, NFPA 1035  
13 **Fire Department Safety Officer**, NFPA 1521  
14 **Hazardous Materials Technician**, NFPA 472  
15 **Uniform Fire Code Inspector**, International Conference of Building Officials  
16 **International Fire Code Inspector**, International Fire Code Institute  
17 **Citizen Emergency Response Team Instructor**, States of WY and WA.  
18 **Emergency Medical Technician I**, State of Wyoming EMS  
19 **Advanced Cardiac Life Support Provider**, American Heart Association  
20 **Peer Counselor**, WYO ASSIST Critical Incident Stress Debriefing System  
21 **Wyoming Trauma Life Support Instructor**, State of Wyoming EMS  
22 **Emergency Medical Technician I Instructor**, State of Wyoming EMS  
23 **EMS for Children Instructor**, State of Wyoming EMS

1           **Emergency Medical Technician Course Evaluator**, State of Wyoming EMS

2   **Q.    What parts of Whidbey Island are within the South Whidbey Fire/EMS District?**

3   A.    All of the area south of and including Bush Point, Hwy 525 and Mutiny Bay Road, and E.  
4        Sealawn Rd. and S. Honeymoon Bay Rd. The district serves a total of 66 square miles  
5        and a population of approximately 16,000.

6   **Q.    Does the District include the neighborhoods served by the following water systems**  
7        **now owned by Cascadia: CAL Waterworks, TEL Company #1, TEL Company #2,**  
8        **TEL Company #3, TEL Company #5, TEL Company #6, TEL Company #6, TEL**  
9        **Company #10, TEL Company #11, W&B Waterworks, Del Bay, and Mutiny Bay**  
10       **Waterworks?**

11   A.    Yes.

12   **Q.    Did those water systems meet fire flow requirements during your tenure as chief?**

13   A.    No.

14   **Q.    Did the neighborhoods served by those Cascadia water systems have working fire**  
15        **hydrants during your tenure as chief?**

16   A.    No, not that the department was aware of.

17   **Q.    Are hydrants required by law in those neighborhoods?**

18   A.    No. I am not aware of any of the smaller systems on the south end of Whidbey that were  
19        required to place hydrants. Few did so voluntarily.

20   **Q.    As a practical matter, are fire hydrants needed to effectively fight fires in those**  
21        **neighborhoods?**

22   A.    No. The fire department developed a water tender shuttle system to provide water to  
23        fight fire. That system will produce approximately 500 gallons a minute for 2 hours,

1 depending upon how far water tenders are required to travel back and forth to a hydrant  
2 system to refill. That quantity of water exceeds the standard established by WAC 246-  
3 293-640 and Island County Code 13.03A.100 which require that new and expanded water  
4 systems provide minimum fire flows of 500 gallons a minute for 30 minutes. The most  
5 convenient water supply is a hydrant system capable of providing required fire flows.  
6 The large majority of residential neighborhoods on south Whidbey do not provide such  
7 systems. The majority of hydrant systems exist in areas with commercial structures.

8 **Q. How does South Whidbey Fire plan for responding to fires in neighborhoods which**  
9 **do not provide fire flow capacity and hydrants?**

10 A. The department conducts a comprehensive risk assessment to identify potential hazards  
11 and vulnerabilities within a neighborhood. Based on the risk assessment, the department  
12 develops a plan that outlines the resources and response times needed to effectively  
13 respond to all identified hazards.

14 **Q. Please describe how the Department fights fires in neighborhoods without fire**  
15 **hydrants.**

16 A. First, the department has dispatch protocols under which ICOM radio transmits  
17 predetermined dispatch tones indicating the apparatus (e.g., engines and tenders) and  
18 firefighters to be mobilized based upon the type of 911 call they receive. In  
19 neighborhoods without fire hydrants, for fires reported with smoke or flame showing, the  
20 first alarm dispatch is for 3 engines and 2 water tenders. Engines carry between 750 and  
21 1000 gallons of water, depending upon the ones dispatched. Water tenders carry between  
22 2800 and 3000 gallons of water depending upon which are dispatched. A second alarm

1 will send one additional engine and 3 additional tenders depending upon the nature and  
2 size of the fire.

3 **Q. Is it unusual for community water systems on South Whidbey to not provide fire**  
4 **flows?**

5 A. No. Approximately 10% of the systems provide needed fire flows to the community.  
6 Generally, only larger systems such as Freeland, Langley, Clinton, Useless Bay Colony,  
7 and the Holmes Harbor subdivision consistently provide fire flows. At last count,  
8 approximately 4 years ago, the department recorded just over 320 fire hydrants on south  
9 Whidbey. The majority of those were in the 5 systems listed above. While there are some  
10 small residential systems that provide fire flow, the majority do not.

11 **Q. What infrastructure must a water system have in order to meet fire flow**  
12 **requirements where those requirements are applicable?**

13 A. Generally, the minimum fire flow for a single-family residence up to 3500 square feet is  
14 500 gpm at a residual pressure of 20 psi. The minimum flow for homes larger than 3500  
15 square feet should be a minimum of 1000 gpm at a residual pressure of 20 psi. An  
16 additional factor that affects necessary fire flows in residential areas is the separation of  
17 structures. In essence, the closer homes are, the more fire flow is needed to not only fight  
18 fire, but also to protect adjacent homes.

19 Many water systems on south Whidbey consist of 4" pipe, which was the standard many  
20 years ago for water systems. Systems with 4" pipe may produce fire flows nearing 500  
21 gpm, but the age, condition and restrictions within the pipe (such as rust) affects flow. In  
22 order to provide minimum fire flows, 6" pipe is generally required and can produce fire  
23 flows up to 1100 gpm, provided the pump supplying the water from the reservoir is

1           capable of such flows. No matter the size of the pipe, if there are no hydrants, the  
2           department cannot use reservoir water to fight fire.

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**LIST OF EXHIBITS**

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Exh, HLP-2   Resume of H.L. "Rusty" Palmer