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New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301

Re: DW12-085, Aquarion Water Company of New Hampshire

Dear Commissioners,

I am writing this letter of opposition to the proposed Aquarion water system rate hikes as a resident of Hampton and a residential customer of Aquarion. Specifically, I am opposed to the current and future rates that are charged for residential and commercial occupancies that are equipped with automatic fire sprinkler systems. I have considerable experience with the code requirements and operation of fire sprinkler systems, having spent 34 years in the fire service, including ten (10) years as the fire chief for the Town of Salem, twelve (12) years as the New Hampshire State Fire Marshal, and most recently ten (10) months as the interim fire chief for the City of Somersworth. I am the former chair of the National Fire Protection Association *Fire Code* (NFPA 1) technical committee and a former steering committee member of the non-profit Home Fire Sprinkler Coalition.

As is customary for most municipal water utilities, Aquarion charges special connection fees and usage fees for automatic fire sprinkler systems. This type of fee system actually penalizes property owners who have made the investment in a system that significantly reduces fire risk in their buildings and, for all intents and purposes, eliminates the need for large capacity water mains and fire hydrants to extinguish a fire in their respective properties. These property owners are further penalized by the fact that they are still paying for fire hydrant availability through their property taxes, even though it is highly unlikely that they will ever need the use of those hydrants.

When a fire occurs in a home that is protected by an automatic sprinkler system, the nearest sprinkler head detects the fire, opens, and sprays water directly on the source of the fire while the fire is still in its incipient stage. At the same time, an alarm is transmitted to the fire department. Contrary to what is seen in the movies, all of the sprinkler heads do not activate. Statistically, 90% of fires in sprinklered homes are extinguished or controlled with just one sprinkler head (*Environmental Impact of Automatic Fire Sprinklers*, FM Global, March 2010). The fire is under control or extinguished by the time the fire department arrives, and the smoldering remains can

usually be completely extinguished (if even necessary) with a hand-held fire extinguisher. Fire apparatus can be placed back in-service, mutual aid is not needed, the nearest fire hydrants have not been needed, and the building can be re-occupied immediately with very little clean up.

When a fire occurs in a home that is NOT protected with an automatic fire sprinkler system, the scenario and the outcome change dramatically. Even if the fire department receives prompt notification of the fire, it is likely that the fire will have involved the entire room of origin by the time apparatus is positioned and hose lines are placed in operation. An initial attack line will flow approximately 125 gallons per minute (gpm), and it may not be possible to apply the water directly on the seat of the fire due to heavy smoke and lack of visibility. Firefighters will be required to ventilate the building by breaking windows and/or cutting a hole in the roof. It may also be necessary to cut open walls and ceilings to check for fire extension. Two or three more fire attack lines may also be necessary, each flowing at least 125gpm. Fire, smoke and water damage will be considerable throughout the entire building. Mutual aid from surrounding communities will be called, and one or more fire hydrants will be needed to provide adequate water supplies. During the winter months, public works crews are called in to sand the roadways in the neighborhood of the fire because of the water run-off. After the fire, Aquarion maintenance crews must service each hydrant that has been used. Fire crews are often committed to the fire scene for many hours in this type of a scenario.

Perhaps most importantly, the occupants of a sprinklered home will be able to escape the fire because the sprinkler head has severely limited the spread of fire and smoke. The same cannot be said for fires in non-residential homes, which accounts for the 2,590 residential fire deaths and 12,910 civilian fire injuries that occur in the United States each year (*source*: National Fire Protection Association).

For a typical house fire in a non-sprinklered home, the fire department may flow anywhere from 1,000 to 10,000 gallons of water (or more). According to a report by the Scottsdale, Arizona Fire Department, a fire in a sprinklered home is extinguished with an average use of 341 gallons, while a fire in a non-sprinklered building requires an average of 2,935 gallons of water. Most of that excess water becomes run-off that is contaminated with the products of combustion, such as hydrogen cyanide, dioxin, and petroleum products from the decomposition of synthetic furniture, clothing and building construction materials. This run-off is absorbed into the ground or into the municipal storm sewer system and creates a long-lasting environmental threat.

According to a research project conducted by FM Global and the Home Fire Sprinkler Coalition, the environmental advantages of using automatic fire sprinklers are dramatic. In controlling fires with sprinklers, greenhouse gas emissions are reduced by 98%; fire damage is reduced by up to 97% (resulting in less waste material in landfills); and water usage to fight a house fire is reduced by as much as 91% (*Environmental Impact of Automatic Fire Sprinklers*, FM Global, March 2010).

I believe that it is more appropriate to establish a water rate structure that establishes an *incentive* for property owners to install and maintain automatic fire sprinkler systems in their buildings. Owners should not be required to pay exorbitant connection fees and annual maintenance fees for a system that improves safety, reduces community risk, and reduces demand on the use of the water system for catastrophic fires. Property owners who are already paying their share of the municipal fire hydrant

rental charges should not be expected to pay additional fees for their automatic fire sprinkler systems.

There is considerable precedent for establishing cost reduction incentives using the example set by other utilities in New Hampshire that are regulated by the Public Utilities Commission. In recent years, electric utilities have offered incentives for reduced energy use and for the installation of more efficient lighting fixtures. "Smart" electric meters will soon enable customers to take advantage of off-peak rates. Several years ago, my family received a rebate from the gas utility for installing a new, high efficiency heating system.

Providing an adequate fire protection water supply system for the community is a costly proposition. Aquarion is responsible for providing storage capacity, water works pump capacity, monitoring systems, large diameter water mains, looped piping systems, fire hydrants, and a year-round maintenance plan to ensure that all components are fully functional at all times. Buildings that are equipped with automatic sprinkler systems dramatically reduce the demand on the fire protection system. As a matter of public and corporate policy, sprinkler systems should be encouraged and supported as much as possible. Eliminating the special connection fees for fire sprinkler systems is an excellent way to implement such a policy.

I respectfully request that the Public Utilities Commission take the following steps:

- 1) Deny the request of Aquarion Water Company to increase the charges associated with automatic fire sprinkler systems;
- 2) Order Aquarion to restructure its rate schedule to eliminate all special charges for automatic fire sprinkler systems.

I strongly believe that the elimination of special fees for automatic fire sprinkler systems is very much in the public interest. The advantages of fire sprinkler systems are well documented and have been proven time and time again. These advantages include, but are not limited to:

- Saves lives (building occupants and firefighters)
- Minimizes property damage from fire
- Significantly reduces fire department operational demands
- Reduces/eliminates the need for mutual aid
- Prevents the loss of tax dollars (property is not destroyed)
- Significantly reduces the demand on the municipal water system and fire hydrant system
- As documented by tests and analyses performed by FM Global for the Home Fire Sprinkler Coalition, the environmental impact of a residential house fire is minimized by a fire sprinkler system

I am more than happy to provide the PUC staff with additional supporting documentation concerning the performance of automatic fire sprinklers.

Thank you for taking my concerns and recommendations under consideration during your review.

Sincerely,

A handwritten signature in blue ink that reads "Donald P. Bliss". The signature is written in a cursive style with a small dot at the end.

Donald P. Bliss