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F125-03.04

Mr. Stephen P. Kemna, P.E.
Public Service Commission Engineer
Public Service Commission of Wisconsin
Division of Water, Telecommunications and Consumer Affairs
610 North Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

Re: Allocating Public Fire Protection Costs
PSC Docket 5-WI-104

Dear Mr. Kemna:

We propose that the Public Service Commission of Wisconsin consider an alternative method of determining the cost for a water system to provide fire protection (fire flows). The alternative method would use the incremental cost to expand the capacity of the water system to provide fire flows as the cost to provide public fire protection. The cost to provide fire protection would be directly determined by the incremental cost for expanding the water system to provide fire flows. There would be no need to determine a "fire flow" for the water system and there would be no need to have a "public fire protection" customer class.

Allocation of incremental cost for a typical water system is shown in Table 1. Typically supply and treatment facilities are designed to meet maximum day demands. They have no fire flow component. Storage facilities such as elevated storage tanks and ground storage reservoirs are designed to provide operating storage, equalizing storage to meet demands in excess of the average demand on the maximum day, fire flow, and in some cases emergency storage. In a typical water system, an incremental cost to provide fire flow would be in the range of 25 percent (%) of the cost of the storage facilities. Water distribution mains are typically one or two sizes larger than they need to be if they were designed to meet peak hourly demand. The incremental cost for providing larger distribution would be in the range of 30%. Water transmission mains are typically designed to meet maximum day flows. In large water systems, 16-inch and 20-inch mains would be considered distribution mains. Fire hydrants, hydrant leads, and auxiliary valves are directly related to providing fire flow so 100% of the cost would be allocated to providing public fire protection.

Table 1 Typical Incremental Costs for Expanding a Water System to Provide Public Fire Protection

Water System Component	Basis of Design	Incremental Cost Percentage for PFP
Supply Facilities	Max Day	0
Treatment Facilities	Max Day	0
Storage Facilities & Booster Pumping Facilities(2)		
operating storage	(1)	0
equalizing storage	Max Day	0
fire flow storage	fire flow	25
emergency storage	(1)	0
Booster Pumping Facilities(3)	Max Day plus fire flow	20
Distribution Mains		
small system 6" - 12"	fire flow	30
large system 6" - 20"	fire flow	30
Transmission Mains		
small system 16" - 20"	Max Day	0
large system 24" and larger	Max Day	0
Fire Hydrant, Lead, and Auxiliary Valve	fire flow	100

(1)Unique to Water System

(2)Booster Pumping Facilities associated with ground storage reservoirs

(3)Booster Pumping Facilities not associated with storage facilities providing fire flow

We believe this method will be much more representative than the current method and we believe it would be much better than the class adsorption method. The cost for fire protection would only change as the value of the water system changed. The cost for fire protection would be much easier to determine. The actual cost of the components in the water system would be used in the calculation.

The information presented in this letter is a preliminary concept. Please let us know if you would like to pursue this alternative in more detail. We would be very interested in working with the PSC staff to refine this alternative.

Sincerely,

KAEMPFER & ASSOCIATES, INC.



Christopher Kaempfer, P.E.

CK:jlb

cc: Mr. Patrick S. Planton, P.E., SEH
Attorney Lawrie J. Kobza, Boardman & Clark LLP