

May 2, 2013

Mayor Pavia:

The Turn of River Fire department has had a new tanker in capital projects for more than 10 years. For the 13 years I have submitted the capital projects I have always submitted a long term plan to minimize any unexpected capital expenditures in the future.

Currently the city fire departments have been experiencing problems with their HME fleet of fire apparatus. In hindsight these apparatus aren't going to last as long as expected. TRFD has always been biased toward a "custom" fire truck versus a "commercial" one. Unfortunately the previous administration went with HME (commercial), which has left us in the predicament we are now facing.

Our tanker has served this city since 1984. It has 3700 gallon tank and a 9 speed manual transmission. It lacks side dumps, and the pump has failed its pump test. The tank has shifted out of position. It is now best used as a water shuttle device only. It will not pull a draft, nor would I trust the pump to operate at a fire.

Recently there was some discussion at a Board of Finance meeting regarding what size tanker would suit this city best. There was some discussion that 2000-2500 gallons would be sufficient. I would argue that those opinions are wrong. Prior to our current tanker, TRFD had a 2000 gallon tanker. It couldn't do the job, which is why we went to double the size of what we had. (Our current tanker was built as 4000 gallon tank but had to be baffled smaller due to weight concerns).

There was an additional argument made that a smaller tanker would be easier to drive. This may be true, but a 3500-400 gallon tanker would be no bigger than our ladder truck. It's not the size that limited our drivers; it was the 9 speed, manual, split shift transmission that was the limiting factor. Any new tanker purchased would be a fully automatic transmission.

Another option that we are exploring is what they call a vacuum tanker. This allows us to get water out of standing water that is as shallow as 2 inches deep. Another benefit to a vacuum tanker is that it can pull water from a pond that is over 100 feet away. A traditional drafting tanker does not have that reach capability. One other advantage to this type of tanker, it can load and dump 1000 gallons of water in 1 minute, which is a fraction of the rate a traditional tanker is capable of.

These are statistics from our most recent fire at Pinewood:

| | |
|---------------------------------|---------------------|
| T68 - 5 loads 3750 x5 = | 18,750 gallons |
| T78 - 5 loads 3000 x5 = | 15,000 gallons |
| Pound Ridge - 2 loads 3500 x2 = | 7,000 gallons |
| Norton FD 1 load | 2,000 gallons |
| Total tanker water used | 42,750 gallons used |

Even with 5 tankers in the rotation we still ran out of water 3 times. 400 feet of 5 inch hose was used from the portable dump tank to the engine at the fire. 5 inch hose holds 1 gallon per foot. So if we were to get a 2000 gallon tanker filling the hose would use 20% of the water. A few years ago there was a fire on Rock Rimmon Rd. I believe close to 1000 feet of hose was needed to get water from the fire to the dump tank. As you are aware driveways in North Stamford are much longer than in the rest of town. Homes are also larger in North Stamford than downtown. The house on Pinewood was $\frac{1}{4}$ the size of the Rock Rimmon home. The larger the home, the larger the fire can be, the more water is needed.

With regards to ISO ratings, they have something called a "hard water score". They want to see a minimum capacity of 250/gpm for 2 hours for a class 8 rating (see Appendix I for more ISO information). On Pinewood we couldn't maintain 150gpm during the whole fire. Ideally in a fully involved house fire you would want to have the capacity to flow over 1000gpm. In speaking with the ISO mitigation people if we were to drop our tanker size, our score would be reduced, which could result in a lower rating. This would cause insurance rates to go up in the city.

For these reasons and more is why TRFD needs at least a 3500 gallon tanker. It wouldn't be wise to try and save a few dollars by cutting down the capacity of the tanker. The tankers expected life would be at least 20 years if not 25 years. If you were to look at the cost per year to have that apparatus if is far cheaper than any other apparatus the city operates.

I would hope that dollars don't get in the way of safety. If the city were to purchase a smaller tanker it would be equivalent to the city purchasing additional commercial fire apparatus to replace the ones failing now.

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Assistant Chief
Turn of River Fire Department

CC. Board of Representatives
Board of Finance (via L Gilden)
Director Jankowski
Chief Conte

Appendix I

To determine your fire department's eligibility for recognition of a tanker shuttle, ISO needs to understand the delivery capability of each apparatus. ISO considers:

- fire-site pump capacity
- drop-tank capacities
- distance of responding apparatus from the fire station to the fire site
- distance of responding supply pumper to supply site
- distance from the fire site to the supply site
- amount of water carried by apparatus
- discharge rate of water-supply apparatus
- fill rate of water-supply apparatus
- quantity of water available and the rate available from the supply source
- set-up times

The procedure for determining your system's capability involves running a time-line analysis. ISO considers apparatus arrival times, travel times, discharge rates, fill rates, fire flow at the fire site, wait time for apparatus to fill or discharge their water supply, and supply delivery capability.