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DEMHS Region 2
Seymour, Connecticut

Rural Water Supply Operations Seminar
2-hr Water Supply Drill
August 30, 2026
Summary Report

The Purpose

- The purpose of the seminar and drill was to review the basics of rural water supply operations and to practice water supply operations in a non-hydranted setting.
- The drill also allowed mutual aid companies to work together in a real-life training situation.



The Seminar



- The 2-day seminar started with a 4-hour classroom session to review the basics of rural water supply operations.
- The review session was held at the Great Hill Hose Co fire station.
- Once the classroom part was over, the seminar continued with 8 hours of practical work on fill-site and dump site operations.
- The program concluded with the 2-hr ISO tanker shuttle exercise and program review.
- Seminar participants were from Seymour and surrounding fire departments.

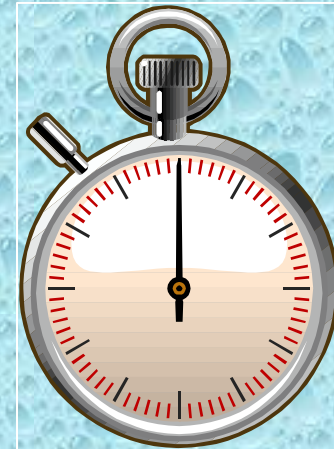
The 2-hour Water Supply Drill

- The tanker shuttle drill was held on August 30th at the Seymour High School.
- The drill attempted to replicate the 2-hour Water Supply Delivery Test used by ISO in their evaluation of fire department water supply capabilities.
- While ISO no longer uses the physical demonstration of water supply delivery, the 2-hour test is still a reasonable standard by which fire departments can compare their water supply operations.
- *ISO now uses computer modeling to predict tanker shuttle flow capabilities.*



The ISO Test

- The ISO 2-hour Water Supply Delivery Test has three critical time segments:
 - 0:00 to 5:00 minutes
 - 5:01 to 15:00 minutes
 - 15:01 to 120:00 minutes



ISO Test *0:00 to 5:00 Minutes*

- A drill location is selected and the units due to respond on the first-alarm assignment are dispatched.
- Time starts when the first engine arrives on the scene and comes to a complete stop.
- There is no requirement to flow water during the first 5 minutes, but the crew must be prepared to flow water once the 5-minute mark is reached.



ISO Test *5:01 to 15:00 minutes*



- At the 5-minute mark, a flow of at least 250 gpm must be started - and it must be sustained.
- During the next 10-minutes, crews can work to further develop their water supply and increase their flow, however...
- At the 15-minute mark (5+10), whatever amount of water is flowing at that time must be maintained for the remainder of the 2-hour test.

ISO Test *15:01 to 120:00 minutes*

- Once the 15-minute mark has been reached, the remainder of the 2-hour test is really just about ***sustaining*** the flow.
- The ISO test includes the simulation of automatic mutual aid response and allows additional water supply units to arrive and assist in the delivery process as would happen on a real incident.
- The real advantage of the ISO test is that it gives a fire department the chance to see where improvements can be made in their water supply delivery process.



It is one thing to say that your fire department can deliver 500 gpm for two hours – it is another thing to prove it in a real-life drill scenario!

Water Supply Drill Participants

Participants			
Department	Unit	Pump Size	Tank Size
Seymour	Tanker 19	500 gpm	3000 gal
Seymour	Engine 16	2000 gpm	1000 gal
Seymour	Engine 11	1250 gpm	1000 gal
Wallingford	Tanker 7	500 gpm	2000 gal
Shelton	Tanker 35	1500 gpm	2000 gal
Southbury	Tanker 11	1000 gpm	2800 gal
Bethany	Tanker 82	500 gpm	3000 gal
Bethany	Engine 83	2000 gpm	1000 gal
Oxford	Tanker 53	500 gpm	2000 gal
Oxford	Tanker 43	500 gpm	2000 gal

- The participants for the drill were from several different fire departments in the Seymour region and the water hauling apparatus was representative of the type of water supply support that would respond to a structure fire in Seymour.*

The Drill Begins



Seymour Truck 14 was pre-deployed before the start of the drill and 100 feet of 5-inch LDH was laid out in preparation for the supply. The drill timer started when Seymour Engine 11 arrived on the scene .

Rural Hitch Operations



Seymour Tanker 19 took a position to supply the rural hitch, which was the initial supply to Truck 14. At the 6-minute mark, Tanker 19 started a 400 gpm flow to the tower. Meanwhile, other crews worked to begin dump tank setup at Engine 11.

Dump Site Operations



Around the 15:00 minute mark, dump tank operations were ready and the switch was made from the rural hitch. Flow was moved to 500 gpm.

Dump Site Operations



Additional tankers began arriving and by the 29-minute mark, two dump tanks were up and running and flow was move to 800 gpm.

Dump Site Operations



By the 52-minute mark, three dump tanks were in operation and work was underway to move the flow to 1000 gpm.

Dump Site Operations



Engine 11 (1250 gpm) used twin, 6-inch suction lines to help increase flow capacity.

Dump Site Operations



Three jet siphon devices were used to support the dump tank operation: one Kocheck Holley Pipe and two, traditional suction jet siphons.

Dump Site Operations



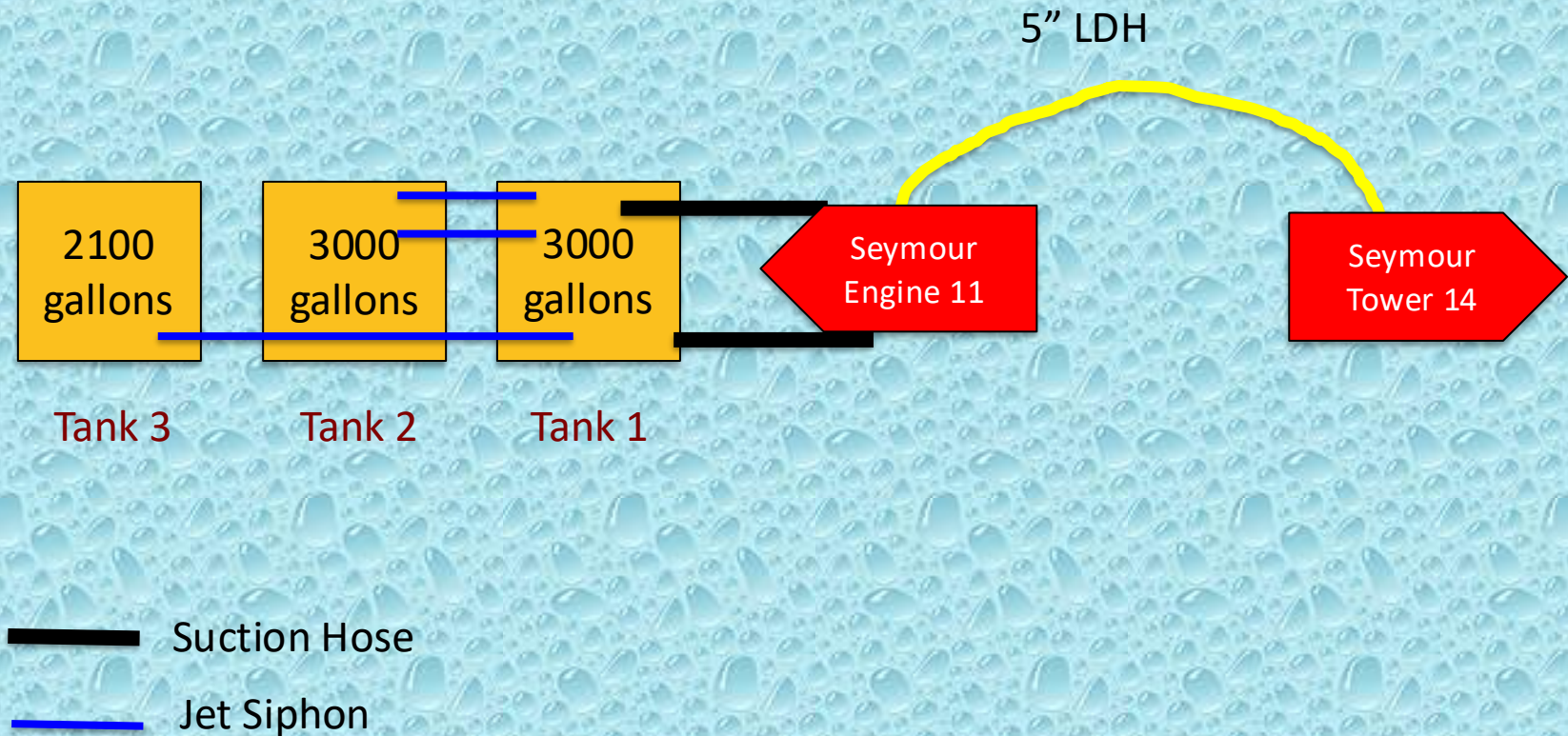
Flow was moved to 1000 gpm around the 53-minute mark and was sustained there for the rest of the drill

Dump Site Operations



A fourth dump tank was set-up but never placed in operation. There were not enough tankers hauling water to support the fourth tank.

Dump Site Layout



The Fill Sites

- For this drill – two fill sites were used – each one used a fire hydrant as the water source.
- The sites provided about a 3.5-4.0-mile roundtrip for the units hauling water.
- Both sites had ample water volume to support the drill, and access was not a problem.
- A 2000 gpm pumper was used at each site.

Firehouse Fill Site



Seymour Engine 16 (2000 gpm) loaded tankers on the front apron of the Great Hill Hose Co fire station. 5-inch LDH was used to supply the loading appliance. Some of the tankers were loaded using 5-inch LDH directly.

Firehouse Fill Site



Space was available at the fire station to get two tankers positioned for loading....if needed. That occurred a couple of times; however, only one tanker was loaded at a time.

Firehouse Fill Site



The fire hydrant provided plenty of water for the operation and the loading crew did a nice job of getting rigs loaded and back on the road.

Davis Fill Site



Bethany Engine 83 (2000 gpm) operated the second fill site which was located at the intersection of Davis Road and Blueberry Lane.

Davis Fill Site



Engine 83 supplied two, 5-inch LDH lines which fed two loading stations. The fire hydrant provided plenty of water and tankers were loaded at the 1000 gpm target fill rate.

The Results

- The drill was stopped at the 88-minute mark.
- Water flow was never interrupted once it got started at the 6-minute mark.
- An estimated 64,100 gallons of water were flowed through the aerial tower during the drill producing an average flow rate of 782 gpm.
- For the last 36-minutes, a flow of 1000 gpm was supplied.

The Lessons Learned

- At this drill, crews chose to use a rural hitch operation to get things started.
- Using the rural hitch gave the crews time to get a dump tank set-up without the added pressure of having to draft and flow water right away.
- Once the first dump tank was up and running, the operation ran smooth.

The Lessons Learned

- As the flow increased, additional suction lines were added...as were additional dump tanks.
- The dump site pumper, Seymour Engine 11 (1250 gpm) was able to supply a peak flow of 1000 gpm to the aerial tower and feed water to three jet siphons.

The Lessons Learned

- A tanker fill-site needs to run like a NASCAR pit stop. Anything that slows down the loading of tankers is going to reduce the efficiency of the tanker shuttle.
- At this drill, there was some variance in how the tankers loaded – meaning the fill connection. Had fill connections been the same for every tanker, flow most certainly could have been higher at the dump site.

The Lessons Learned

- Jet siphons, suction hose, and dump tanks are needed at most every dump tank operation – therefore, it is wise to carry those items on every tanker – as well as adaptors.

Drill Videos

**Be sure to watch videos from
the drill on the
GotBigWater
YouTube Channel.**

Summary

- The drill was a success. For the new folks, they got to see how dump tank operations work.
- For the older, experienced folks, it was a chance to practice their “craft.”
- The success of the drill showed the importance of mutual aid response practices and procedures – and the importance of mutual aid interoperability.
- Many thanks to DEMHS Region 2 for sponsoring and the Seymour FD for hosting the seminar.



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