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Alabama Fire College Athens, Alabama

Rural Water Supply Operations Seminar
2-hr Water Supply Drill
November 2, 2025
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 Steve Carter Leak City Training Center.
- 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 Limestone and Morgan Counties and the surrounding area.

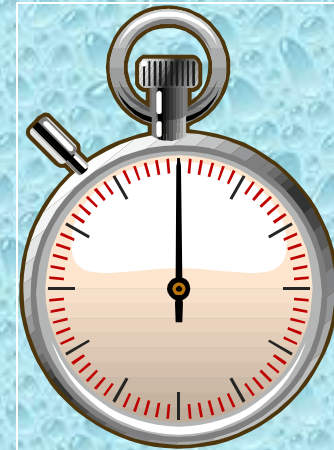
The 2-hour Water Supply Drill

- The tanker shuttle drill was held on November 2nd in Decatur, Alabama along the Tennessee River.
- 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	Dump Tank
Ardmore	Tanker 224	1500 gpm	2250 gal	2500 gal
Mud Tavern	Engine 4	1500 gpm	1000 gal	NA
Owens	Tanker 15	1250 gpm	3000 gal	3000 gal
Pleasant Grove	Tanker 18	1500 gpm	2000 gal	2100 gal
West Limestone	Tanker 22	1250 gpm	2000 gal	2100 gal
East Limestone	Engine 217	2000 gpm	1000 gal	NA
Flint City	Truck 1 (Tanker)	1500 gpm	2850 gal	2500 gal
Elkmont	Engine 111	2250 gpm	750 gal	NA

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

The Drill Begins



The drill started with crews executing a rural hitch operation using a 5" double-clappered siamese. Mud Tavern Engine 4 arrived on the scene and laid out 300-feet of 5-inch supply hose and went to work as the attack pumper. At the 4:00 minute mark, Flint City Tanker 1 (3000 gal) arrived and began supplying the rural hitch.

Rural Hitch Operations



Owens Tanker 15 was the next arriving tanker around the 5-minute mark and set-up to support the 500 gpm rural hitch operation by connecting to the other side of the siamese.

Dump Site Operations



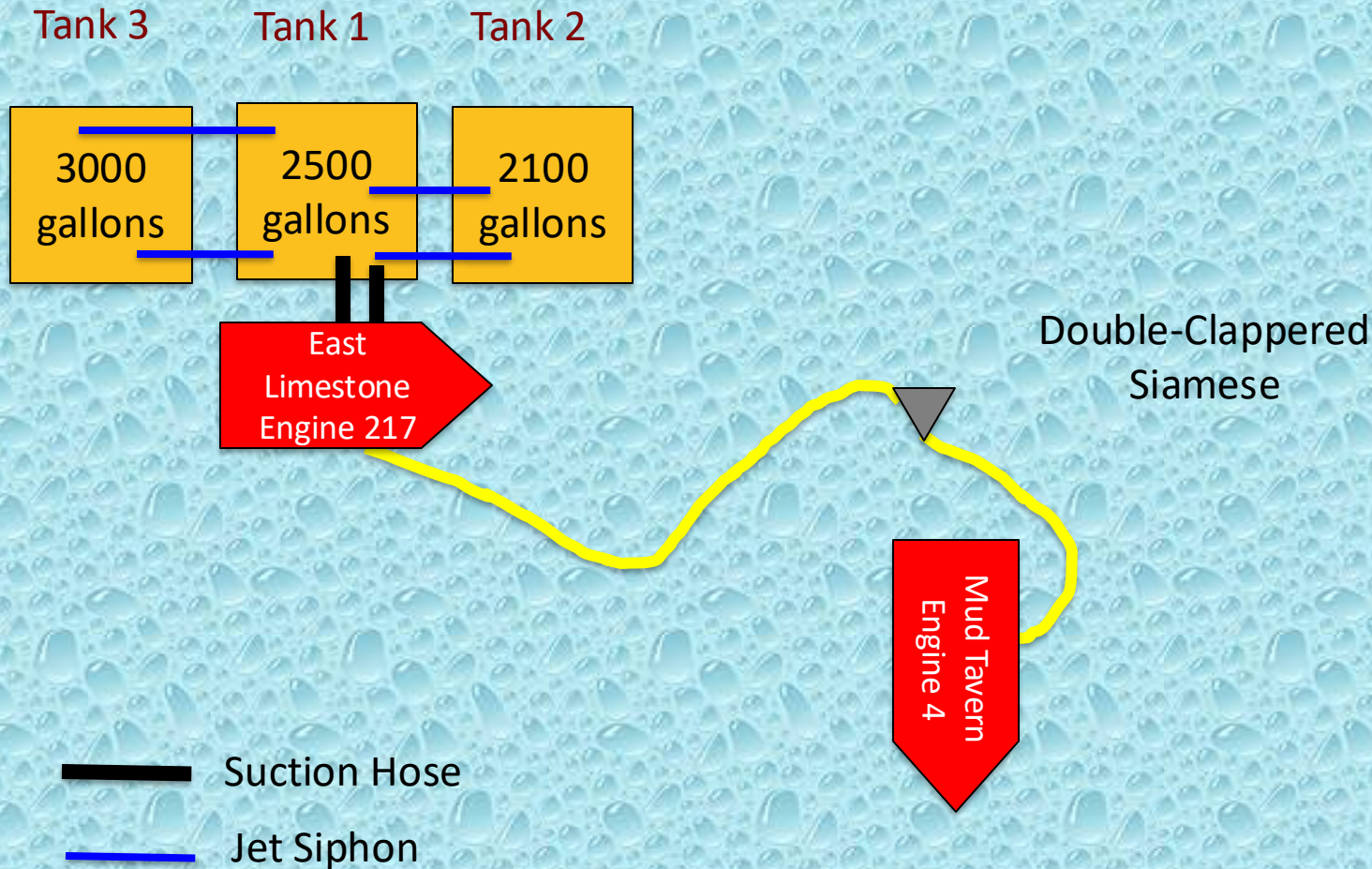
By the 24-minute mark, the operation had transitioned to a dump tank operation with East Limestone Engine 217 (2000 gpm) operating as the draft pumper. Flow was moved to 600 gpm around the 54-minute mark.

Dump Site Operations



A 3-dump tank operation was eventually used to support an 1,100 gpm flow for the last 30-minutes of the drill.

Dump Site Layout



The Fill Site

- For this drill – one fill site was used – a boat launch area along the Tennessee River.
- The fill site provided about a 1.5-mile round trip for the units hauling water.
- The site had ample water volume to support the drill and access was not a problem.
- A 2,250 gpm pumper was used at the fill site to load tankers.

River Fill Site



Elkmont Engine 111 (2250 gpm) drafted from the river at this boat launch and loaded tankers using 3-inch fill lines.

The Results

- The drill was stopped at the 90-minute mark.
- Water flow was interrupted once for about 2 minutes around the 29-minute mark.
- An estimated 55,600 gallons of water were flowed through the attack pumper during the drill producing an average flow rate of 662 gpm.
- For the last 30-minutes of the drill a flow of 1,100 gpm or greater 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 flawlessly.

The Lessons Learned

- As the flow increased, an additional suction line was added as was an additional dump tank.
- The use of a large body pump powered by sufficient motor horsepower at the dump site allowed one rig to supply the entire operation.
- The dump site pumper, Engine 217 was able to supply a peak flow of 1100 gpm to the simulated fire ground and feed water to four 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 the Alabama Fire College for sponsoring and the Steve Carter Leak City Training Center for hosting the seminar.



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