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East Alabama Training Association
Alexander City, Alabama

Rural Water Supply Operations Seminar
2-hr Water Supply Drill
October 13, 2024
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 Betty Carol Graham Technology Center at Central Alabama Community College.
- 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 Tallapoosa County and the surrounding area.

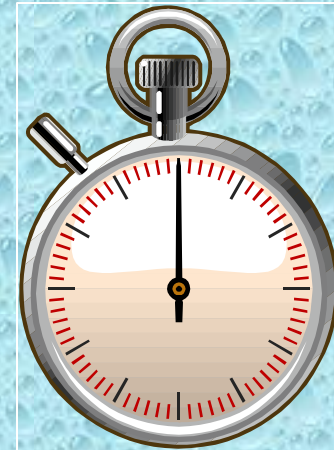
The 2-hour Water Supply Drill

- The tanker shuttle drill was held on October 13th on the college campus.
- 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



Event Summary

Tanker Shuttle Exercise
Alexander City, Alabama
10/13/2024

Participants

Department	Unit	Pump Size	Tank Size	Dump Tank
Dadeville	Engine 22	1500 gpm	1500 gal	NA
Dadeville	Engine 7	2000 gpm	1500 gal	NA
Dadeville	Tanke 23	1250 gpm	3000 gal	3000 gal
Alexander City	Engine 15	2000 gpm	1000 gal	NA
Stillwaters	Tanker 410	750 gpm	2000 gal	NA
Our Town	Tanker 1210	1250 gpm	2000 gal	2100 gal
Union	Engine 106	1500 gpm	1000 gal	NA
Union	Tanker 116	500 gpm	2000 gal	2100 gal
Union	Tanker 118	500 gpm	1850 gal	2100 gal
Paces Point	Tanker 1	750 gpm	2000 gal	3000 gal
Firovac (demo)	Tanker 1	1000 gpm	3000 gal	(2) 3500 gal

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

The Drill Begins



Alexander City Engine 15 arrives on the scene and drops a 5-inch supply line in preparation for going to work as the attack pumper at this drill.

Dump Site Operations



Dadeville Tanker 23 (3000 gal) was the first tanker to arrive on the scene and the crew went to work setting up and supplying a “rural hitch” operation.

Dump Site Operations



Union Tanker 116 (2000 gal) was the second tanker to arrive at the dump site and the crew set up to support the rural hitch operation.

Dump Site Operations



Dadeville Engine 7 (2000 gpm) arrived on the scene around the 12:30 minute mark and began setting up for a dump tank operation. Meanwhile, tankers continued to arrive and pump off their water to the rural hitch.

Dump Site Operations



The dump site crew works to get the first dump operational and take over supplying water to the attack pumper.

Dump Site Operations



Around the 21-minute mark the first dump tank is up and running and flow is moved to 500 gpm.

Dump Site Operations



The first dump tank deployed was equipped with an ETT Water Shark suction strainer and sidewall flange.

Dump Site Operations



Around the 44-minute mark flow was moved to 800 gpm using Engine 15's deckgun and then again to 1000 gpm around the 84-minute mark.

Dump Site Operations



The dump site eventually was built out to a four, dump tank arrangement that supported the 1000 gpm operation for the remainder of the drill.

Dump Site Operations



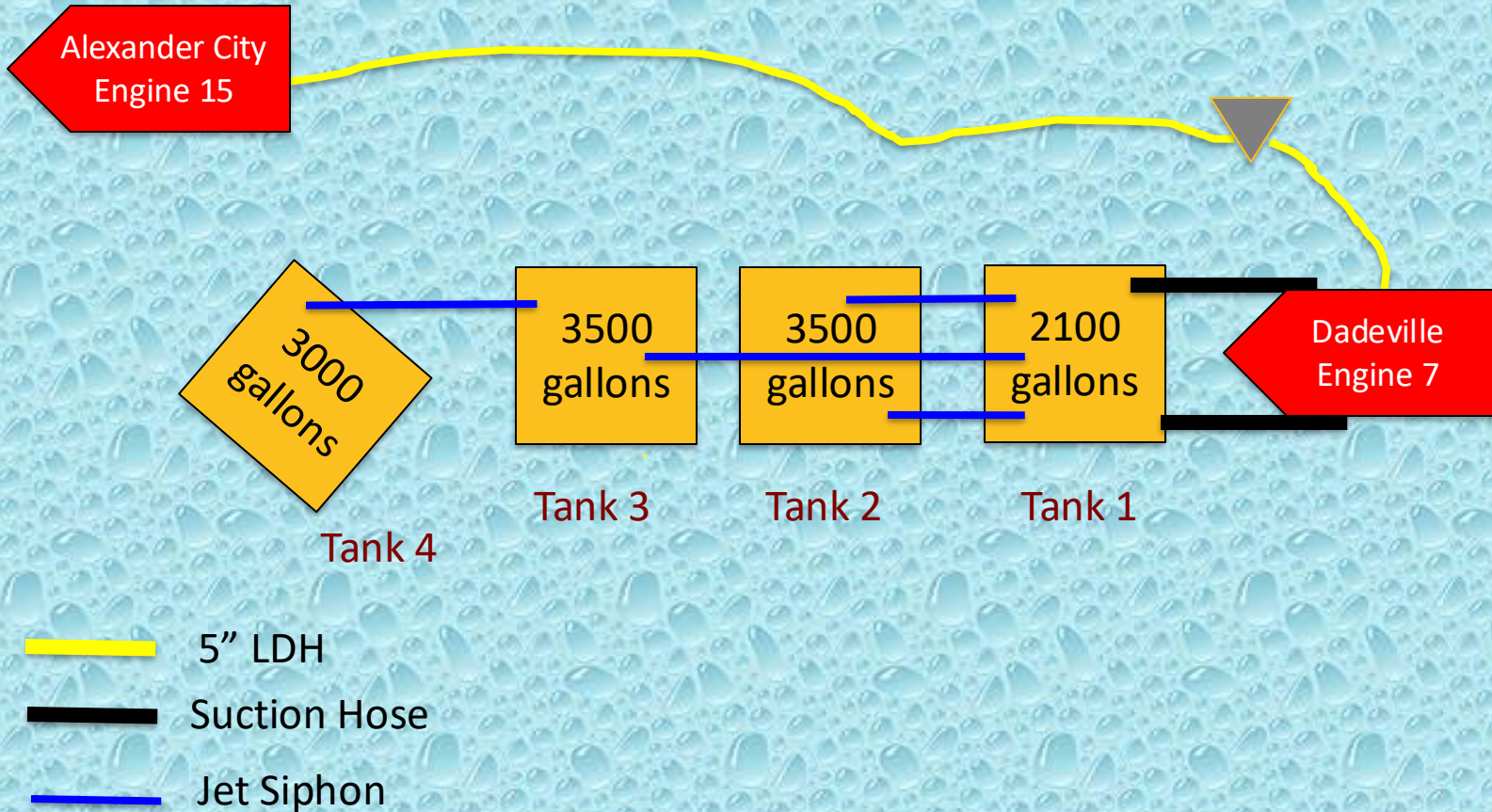
Four jet siphon transfer devices were used to support the operation. Engine 7 placed two suction lines in service and was able to support the 1000 gpm flow and run the four jet siphons.

Dump Site Operations



Many thanks to Fireovac for bringing their new demo 3000-gallon vacuum tanker to the drill. The rig performed quite well as expected and hauled plenty of water without ever needing a pumper to load it.

Dump Site Layout



The Fill Sites

- For this drill, three fill sites were used; both at the lake on the college campus.
- The lake fill sites provided around a 1.5-mile round trip for the units hauling water.
- The sites had sufficient water to support the operations.
- A 1500 gpm pumper was used at two of the fill sites and no pumper was used at the vacuum tanker fill site.

Dry Hydrant Fill Site



Union Engine 106 (1500 gpm) established a water supply using the dry fire hydrant and loaded tankers using twin 3-inch fill lines equipped with camlock fittings.

Lake Fill Site



Dadeville Engine 22 (1500 gpm) used a traditional drafting set-up to establish a tanker fill site. The crew loaded tankers using 3-inch fill lines equipped with camlock fittings.

Vacuum Tanker Fill Site



The vacuum tanker fill site was pretty simple. No fill site pumper or crew was needed to support the operation which is the key component in vacuum tanker efficiency.

The Results

- The drill was stopped at the 2-hr mark.
- Water flow was interrupted once at the 80-minute mark when one of the suction strainers popped up and out of the dump tank.
- An estimated 86,800 gallons of water were flowed during the drill producing an average flow rate of 780 gpm.
- A peak flow of 1,000 gpm was sustained for about 50-minutes.

The Lessons Learned

- At this drill, crews chose to implement a rural hitch operation that supplied water to the attack pumper for the first 21-minutes of the drill.
- The rural hitch was executed without incident and water flow was never interrupted during that process.

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, just about every tanker loaded using 3-inch camlock connections which made the loading operation very efficient.

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.
- The “bundling” of water hauling mutual aid resources has proven successful in many drills. The tanker task force concept again proved to be an effective process for requesting and using additional rural water supply resources.

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.

Summary

- Many thanks to the East Alabama Training Association, Alexander City Fire Department, Dadeville Fire Department, Union Volunteer Fire Rescue, and Stillwaters Volunteer Fire and Rescue for sponsoring the seminar.
- Many thanks to Emergency Equipment Professionals, NAFECO, and Commissioner John McKelvey for sponsoring lunches.



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