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Dorchester County Firefighters Association
East New Market VFD

Rural Water Supply Operations Seminar
2-hr Water Supply Drill
March 22, 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

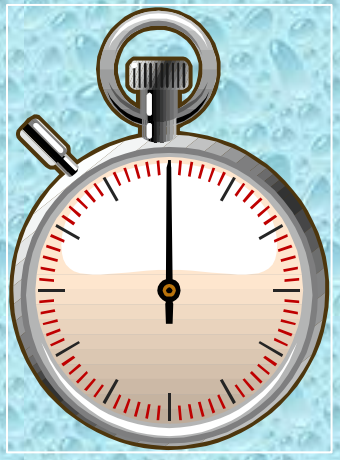
- The 2-day seminar started with a 4-hour classroom session to review the basics of rural water supply operations.
- The review session was held at the East New Market VFD fire station.
- Once the classroom part was over, the seminar continued with 8 hours of practical work on fill-site and dump site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

The 2-hour Water Supply Drill

- The tanker shuttle drill was held on March 22nd on a rural road in nearby Linkwood, MD.
- 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**
East New Market	Tanker 21	1250 gpm	4000 gal	NA
East New Market	Engine/Tanker 21	1500 gpm	1500 gal	NA
Preston	Engine/Tanker 201	1500 gpm	2800 gal	NA
Cordova	Engine 52	1250 gpm	1000 gal	NA
Eldorado	Tanker 26	1250 gpm	3000 gal	NA
Church Creek	Tanker 46-1	1500 gpm	3000 gal	3000 gal
Church Creek	Engine/Tanker 46-1	1500 gpm	2500 gal	NA
Secretary	Engine/Tanker 16-1	1500 gpm	2000 gal	NA
Secretary	Rescue Engine 16	1250 gpm	1000 gal	NA
Taylors Island	Rescue Engine 66-1	1500 gpm	1000 gal	NA
Taylors Island	Tanker 66-1	1500 gpm	3500 gal	3000 gal
Hurlock	Engine/Tanker 62	2000 gpm	2500 gal	NA
Hoopers Island	Engine/Tanker 51	2000 gpm	1500 gal	NA
Linkwood	Engine/Tanker 61-1	2000 gpm	3000 gal	NA
Easton	Tanker 61	1250 gpm	6000 gal	NA

- *The participants for the drill were from several different fire departments in the Dorchester 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 East New Market area.*

The Drill Begins

The drill started with Linkwood Engine 61-1 assuming the attack pumper role and with East New Market Tanker 21 becoming the attack tanker. Water flow was started at 250 gpm. A 5-inch supply line to the attack engine was laid by the next arriving engine/tanker.

Attack Tanker Operations

The attack tanker concept has the first-arriving tanker co-locating with the attack pumper as quickly as possible in order to provide as much water as possible for the initial attack.

Rural Hitch Operations

Secretary Engine/Tanker 16-1 was the second-arriving tanker and began supplying water to the attack pumper using the double-clappered Siamese (rural hitch). Flow was moved to 500 gpm at the 15-minute mark.

Rural Hitch Operations

As additional tankers arrived, they too supported the rural hitch until transition to dump tank operations occurred - which was around the 1-hr mark

Rural Hitch Operations

Easton Tanker 61 (6000 gal) arrived around the 36-minute mark and took up a position to supply the rural hitch.

Rural Hitch Operations

With Tanker 61 now in position, additional tankers pumped off their water into Tanker 61 who then supplied the rural hitch. Flow was moved to 750 gpm.

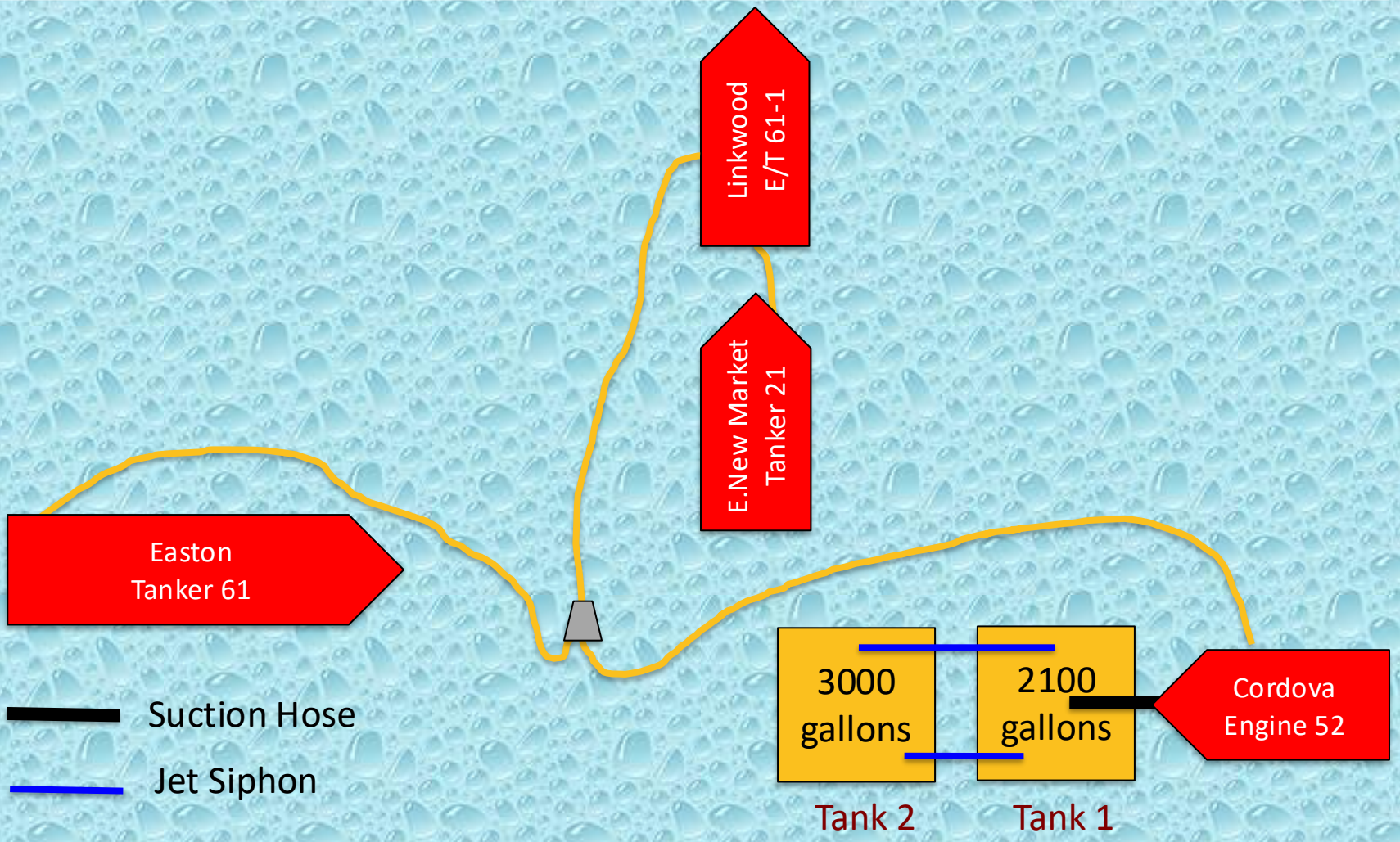
Dump Site Operations

Tanker 61 is outfitted for supply from either side using the special built TFT siamese on each side of the trailer tank. The tanker's 1250 gpm pump is then used to supply the attack pumper.

Dump Site Operations

A 2-dump tank operation was brought on-line shortly after the 60-minute mark and flow was sustained at 750 gpm for the remainder of the drill.

Dump Site Layout



The Fill Sites

- For this drill – two fill sites were used – one on the Transquaking River and one at Higgins Mill Pond.
- The fill sites both provided about a 4-mile round trip for the units hauling water.
- Both sites had ample water volume to support the drill, and access was not a problem.
- A 1250 gpm pumper and a 1500 gpm pumper were used at the fill sites to load tankers.

River Fill Site

Secretary Engine 16-2 (1250 gpm) drafted from the river at this boat launch and supplied an LDH manifold which supported the tanker loading station.

River Fill Site

The fill site crews loaded tankers using twin, 3-inch lines outfitted with quick-connect fittings.

The Results

- The drill was stopped at the 90-minute mark.
- Water flow was interrupted a couple of times.
- An estimated 51,000 gallons of water were flowed through the attack pumper during the drill producing an average flow rate of 622 gpm.
- For the last 50-minutes of the drill a flow of 750 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.
- The tractor-trailer tanker was used as it would be in a real-life scenario and proved very helpful in supporting the rural hitch.

The Lessons Learned

- When supplying water to an engine from a tanker, it is best to run that supply directly to the pumper's fire pump in lieu of any direct tank fill. If the direct tank fill is used, then the pumper is limited to the flow capacity of the rig's tank-to-pump line.

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 Dorchester County Firefighters Association for sponsoring and the East New Market VFD for hosting the seminar.

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This program was developed by
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