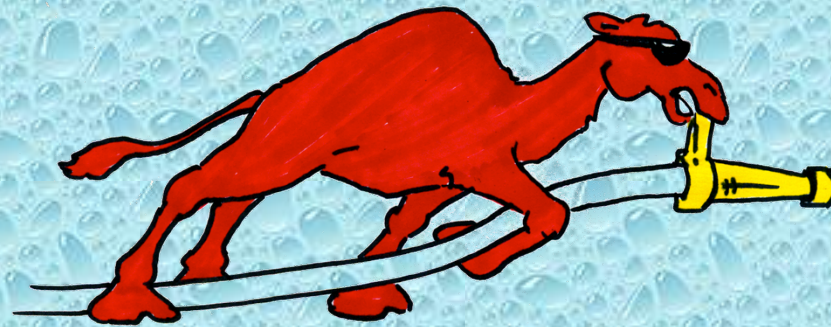


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# MSFA Rural Water Supply Committee

Fall 2010 Water Supply Drill  
Lewistown, Maryland  
September 26, 2010

Content provided by Doug Alexander, MSFA Rural Water Supply Committee Chairman

# Overview

- On September 26, 2010, the Lewistown Volunteer Fire Company (Frederick County, Maryland) hosted the 2010 Fall, Rural Water Supply Drill of the Maryland State Fireman's Association's *Rural Water Supply Committee*. This presentation is a brief summary of the drill.

# The Purpose

- The purpose of the rural water supply drill was to allow the companies in the central part of Frederick County to practice a large-scale tanker shuttle operation in a realistic, 1<sup>st</sup> due response area environment.
- In addition, the Lewistown VFC had recently taken receipt of a new, 3,000-gallon tanker and this drill provided a good opportunity to train on the new rig.



# The Goals

- To deliver water in an efficient and effect manner.
- To replicate the ISO 2-hour Water Delivery Test by sustaining at least a 500 gpm flow for 2-hours.
- To utilize different types of water supply set-ups at the tanker fill sites.
- To verify apparatus, equipment, and communications interoperability capabilities.

# The Drill

- The water supply drill was held on September 26, 2010, in Lewistown VFC's first-due area.
- The target hazard was the fire company's social hall which is a large structure immediately adjacent to the fire house.
- The drill replicated the 2-hour Water Supply Delivery Test used by ISO in their evaluation of fire department water supply capabilities.
- The ISO 2-hour test is a reasonable standard by which fire departments can compare their water supply operations.

# The ISO Test

- There are three critical time segments of the ISO 2-hour Water Supply Delivery Test:
  - 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



- The 88 participants for the drill were from 7 counties and two states and brought 22 pieces of apparatus to help move water during the drill.*



# The Dump Site



Two pumpers and a quint were assigned to the dump site to flow water. Three dump tanks were used and water was pumped through 300 feet of 5" supply from the dump site engine to the relay pumper and then on to the quint. The quint's master stream nozzle was equipped with a flow meter so that flow could be monitored.



# The Dump Site





# The Dump Site

Relay Pumper



# The Dump Site



Quint



# Fill Site Operations

- For the drill, there were only two fill sites that could be used and both were streams.
- Two pumpers and an off-road capable unit were sent to each fill site on the water supply dispatch.
- One of the fill sites had approximately a 3-mile round trip, and the other approximately a 5-mile round trip.

# Fill Site Operations

- Unfortunately, stream levels at both fill sites were very low due to a long, dry summer.
- The folks at the two fill sites used extraordinary means to maximize the available water: they dammed the stream, created “holes” for strainers, alternated suction so that strainers could be cleared of leaves and debris, and used low level strainers on plywood pads.



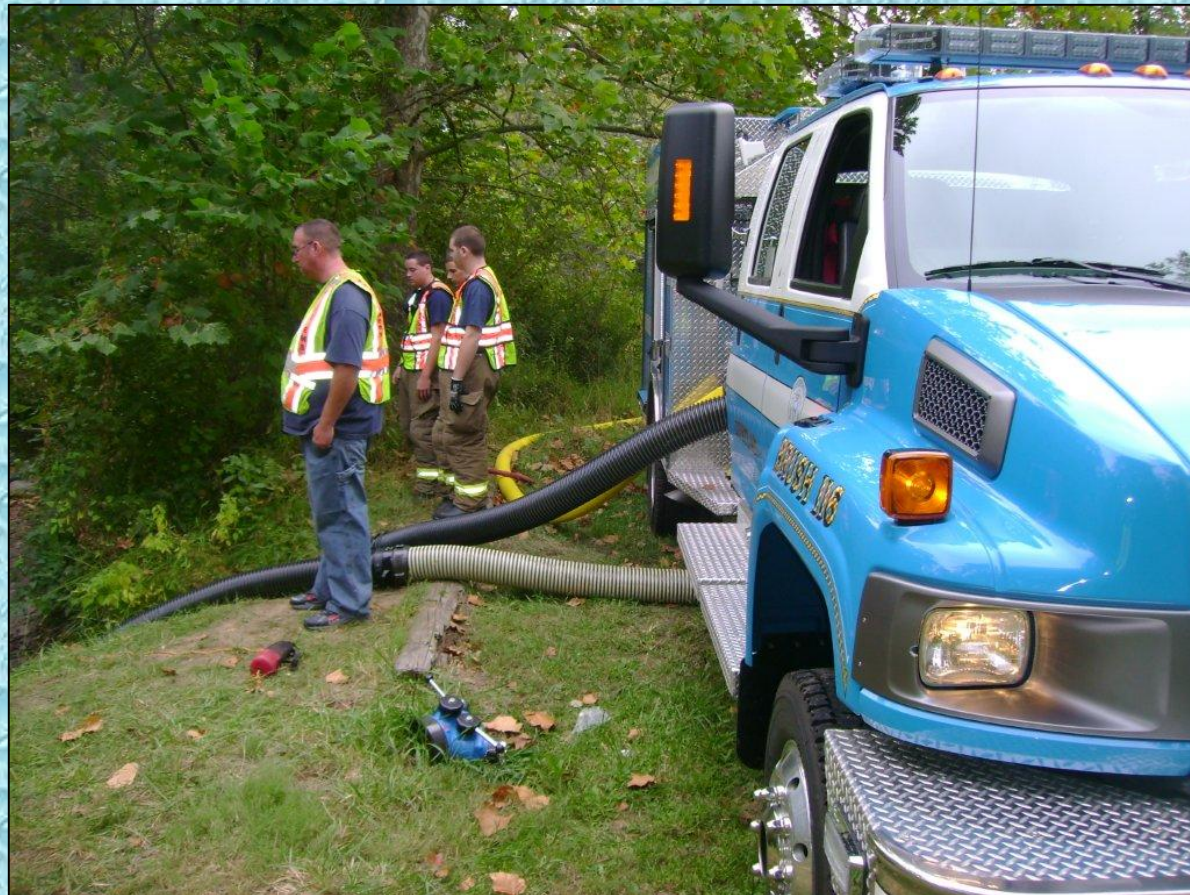
# Fill Site Operations



A new meaning to "low level."



# Fill Site Operations





# Fill Site Operations





# Fill Site Operations





# Fill Site Operations





# Fill Site Operations



# Fill Site Operations





# The Results

- Approximately 83,000 gallons of were flowed through the quint during the two-hour time period
- At the end of the drill, both fill sites had their water sources pretty much exhausted and flow could not have been maintained much longer.

# The Results

- During the drill, the maximum flow was slightly over 800 gallons per minute for about 39 minutes.
- The average flow for the two-hour period was 690 gallons per minute.
- Water flow was interrupted for about 5 minutes when some issues arose at the dump site.



# The Results

- After the drill, lunch was provided by the fire company and a post drill analysis was held where information was shared on the positives and negatives experienced during the drill.
- Committee members Buddy Sutton and Robert Small assisted with the drill, and committee vice chair Greg Dods handled most of the planning and preparation for this drill but could not attend.



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*For more information contact us at  
[thebigcamel@gotbigwater.com](mailto:thebigcamel@gotbigwater.com)*