

Prince George's County, Maryland
Rural Water Supply
Drill

2-hr Tanker Shuttle Exercise
April 20, 2008
Summary Report



Overview

On April 20, 2008, the Baden, Brandywine, Clinton, and Marlboro Volunteer Fire Departments (Prince Georges County, Maryland) hosted the 2008 Spring, Rural Water Supply Drill of the Maryland State Fireman's Association's *Rural Water Supply Committee*. This presentation is a summary of the drill.



The Purpose

- The purpose of the rural water supply seminar was to allow the companies in the Southern Prince Georges County area to practice a large-scale tanker shuttle operation in a realistic, response area environment.

The Goals

- To deliver water in an efficient and effect manner.
- To replicate the ISO 2-hour Water Delivery Test.
- 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 April 20, 2008, in Baden VFD's first-due area at a former NIKE site.
- 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 Drill

- There are three critical time segments of the ISO 2-hour Test:
 - 0:00 to 5:00 minutes
 - 5:01 to 15:00 minutes
 - 15:01 to 120:00 minutes



The Drill: 0:00 to 5:00 Minutes

- A drill site is selected and the units due to respond on the first-alarm assignment for that site 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 when the 5-minute mark is reached.



The Drill: 5:01 to 15:00 Minutes



- At the 5-minute mark, a flow of at least 250 gpm must begin and 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, whatever the flow rate is at that time, that rate must be maintained for the remainder of the 2-hour test.

The Drill: 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.
- Most of these ISO drills include the simulation of mutual aid response and allow additional water supply units to arrive and assist in the delivery process as they would on a real incident.



The Participants

The participants for the Prince Georges County drill were from seven Maryland counties and were representative of the type of water supply support that would respond to a fire in the southern Prince Georges County response area.

The Drill Begins



Baden VFD's engine arrives on the scene and the clock starts ticking.

The Drill Begins



At the 5:00 minute mark, water starts flowing through an 1-3/4 inch attack line.

The Drill Begins



Crews work to coordinate the initial water supply effort until the dump site operation is up and running.

The Drill Begins



Brandywine Rescue Engine 840 starts to set-up the dump site while also pumping its water to supply the initial attack engine.

Dump Site Set-up



Crews work to coordinate how the dump site will be set up

Dump Site Set-up



A decision is made to draft using Rescue Engine 840's front intake and 6-inch suction hose.

The First Tanker Arrives



PGFD Tanker 845 (3,000 gallons) arrives on the scene and is directed to support the attack engine.

The Second Tanker Arrives



Forestville Tanker 823 arrives next and is directed to begin supporting the dump site operation.

Dump Tank Drop-off



In order to expand the dump site operation, Tanker 845 drops off its dump tank so that the site can transition to a two tank operation.

Supporting the Attack



Tanker 845 supports the attack operation by off-loading water directly to the attack engine.

The Third Engine Arrives



Brandywine Engine 840B arrives and immediately begins to pump off its water to the attack engine.

Dump Site Operation



Tanker 823 dumps its water into the first tank so that the drafting operation can commence.

The Dump Site is Ready



With the tank full – RE840 begins drafting through the front suction and supplies the attack engine through dual, 3-inch lines.

The Third Tanker Arrives



Prince Frederick Tanker 2 arrives on the scene and the dump site is expanded to a second dump tank.

Tanker 2 Offloads



Tanker 2 offloads from the rear.

Water Transfer Operations



A jet siphon is put into operation and water transfer operations are started at the dump site.

More Tankers Arrive



Charles County Tanker 5 arrives and dumps its water.

A 2nd Dump Site Is Set-up



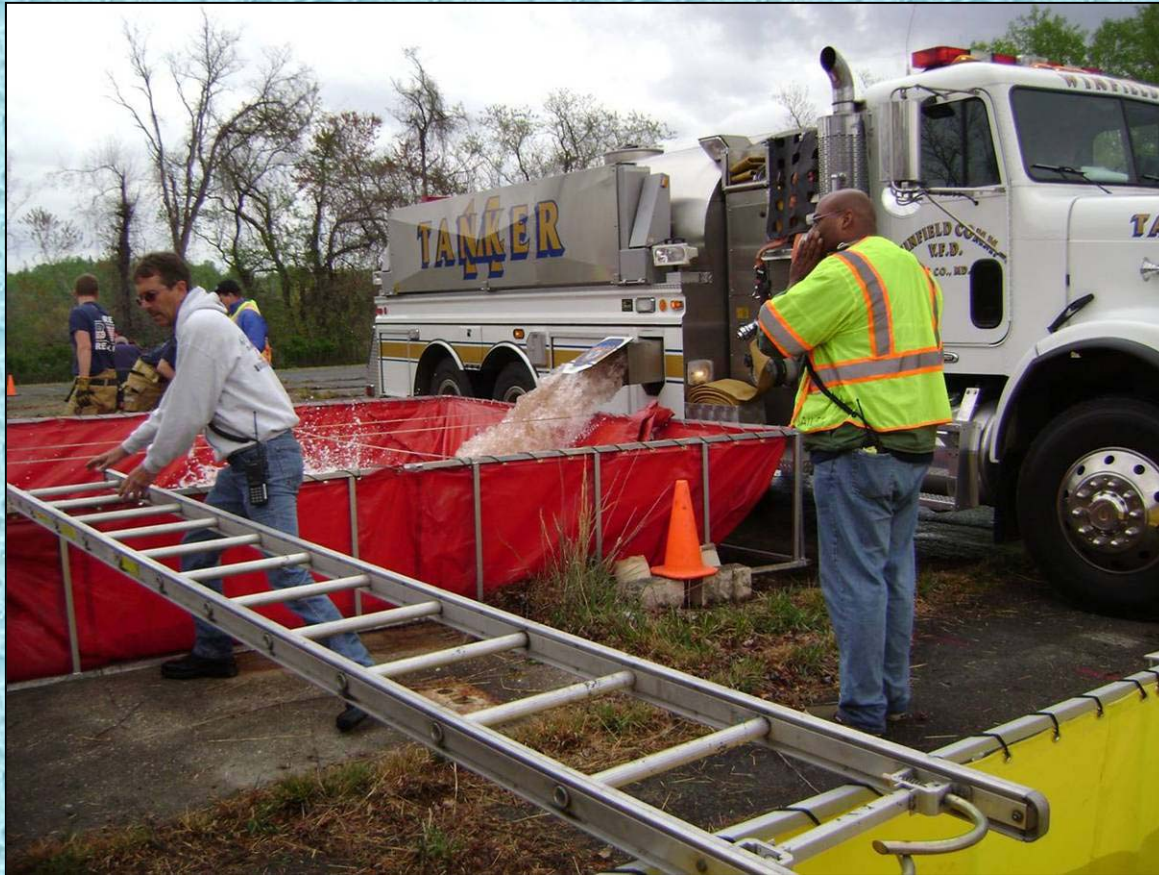
With a fire flow increase expected, a second dump site is set up to support the operation. Winfield Tanker 14 is shown here getting in position to offload its water.

Drains



Drains tied up on the exterior of a dump tank often prove problematic. Best practices have the drain secured inside the tank so that the pressure of the water helps keep the drain closed when the tank is full.

Dump Site Expansion



Crews work to expand the second dump site so that more tankers can offload at the same time if needed.

Tanker 14 Offloads



Winfield Tanker 14 offloads its 3,500 gallons at the second dump site.

More Jet Siphons Put to Work



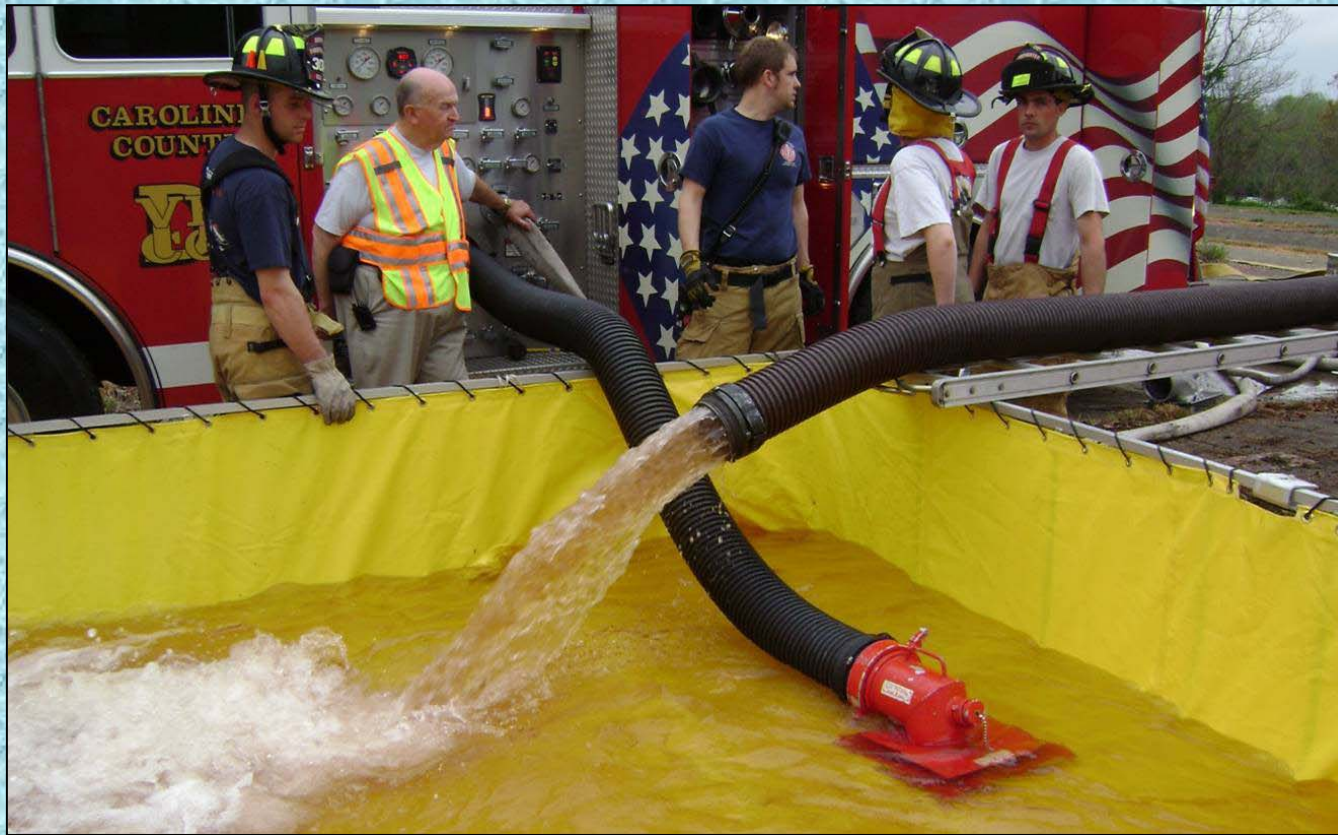
A homemade jet siphon is put into operation at the second dump site.

Denton Engine 304 Drafts



Denton Engine 304 (Caroline County) operates as the dump site engine at the second dump site – which is a three dump tank operation.

Water Transfer



The ability to transfer water to the primary drafting tank is very critical when running a multiple tank operation. This photo shows an excellent stream coming from a jet siphon fed suction hose.

Separate Engine for Jet Siphons



Laytonsville E717 is brought in to operate the jet siphons at Dump Site #2. This allows the drafting engine to concentrate solely on supplying the attack engine.

Tankers Offload at 1st Dump Site



With both dump sites operational – tankers continue to dump and run.

Mechanicsville Tanker 2



Mechanicsville Tanker 2 offloads its water through a rear dump into the tank at Dump Site #1.

Keeping Up At Dump Site #2



Crews work hard to keep the tanks full at Dump Site # 2 and it looks like things are working well.

Denton E304 Supports the Attack



Denton E304 is shown here pumping both a 4-inch and a 3-inch line in support of two attack engines which are now operational.

2nd Attack Engine



Mechanicsville Engine 21 is being supplied by the second dump site and is supporting a master stream operation.

All Dump Sites Operational



After about 30-minutes, both dump sites are operational and two master streams are put into service.

The Fill Sites

- There were four fill sites used for this drill.
- Each fill site presented a somewhat different set-up.
- Two of the fill sites used a marine fire fighting vessel to supply water for filling tankers.
- One site used a dry hydrant at a pond.
- One site used engines drafting off of bridge.

Fill Site #1



Winfield Tanker 14 is shown here getting filled through 5-inch hose.

Fill Site #1



The use of LDH manifolds allow for a “loader” to control the flow of water and also provides a large, built-in draining method for draining off the water in the hose once the tanker is full.

Fill Site #1



Charles County Fireboat 8 sets up just off shore in the Patuxent River and takes suction with its 750 gpm pump.

Fill Site #1



This 740 gpm fireboat is pumping to an LDH manifold via a 4-inch hose line connected directly to the pump discharge outlet.

Fill Site #1



Pleasant Valley Special Unit 6 (1,500 gpm) is also working at this fill site. This rig is drafting through its front and side intakes and pumping back to another LDH manifold to fill additional tankers.

Fill Site #1



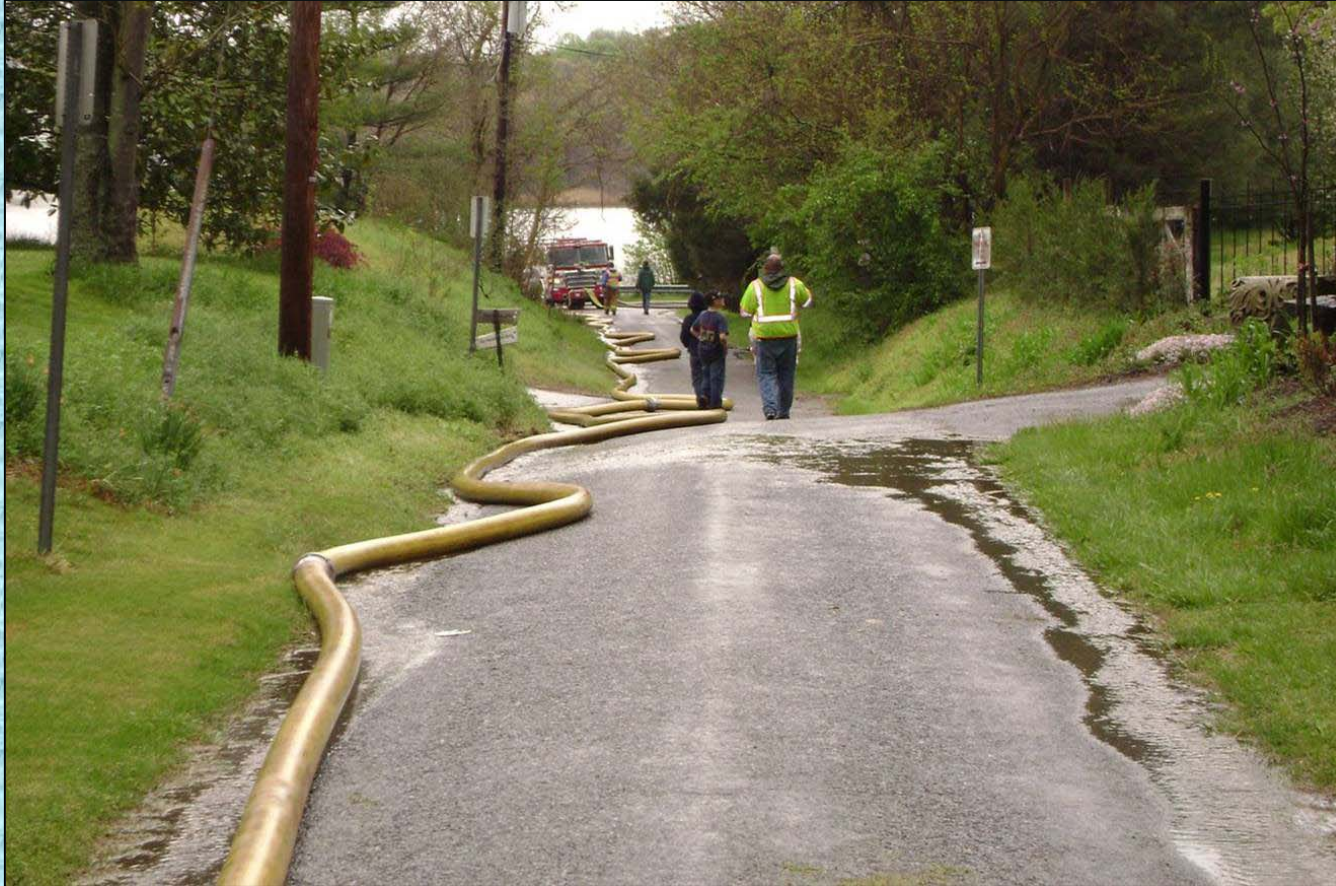
Special Unit 6 takes suction through two intakes using Kochek floating strainers.

Fill Site #2



One of Clinton VFD's engines operates at Fill Site #2. It is being supplied by another Clinton engine and Solomon's fireboat.

Fill Site #2



Looking back towards the river where the second Clinton engine is drafting and supplying water via this 5-inch hose.

Fill Site #2



This engine is taking in two, 3-inch lines being supplied by Solomons VFD Fireboat 3.

Fill Site #2



Six lengths of suction hose are needed to reach the river.

Fill Site #2



Fireboat 3 is moored at a pier and is taking suction with its 750 gpm pump

Fill Site #2



The fireboat is supplying two, 3-inch lines. One through the fixed monitor on the bow and one through a pump discharge outlet.

Fill Site #2



Fireboat 3 pumping a 3-inch line via its bow monitor.

Fill Site #2



A close-up view of Fireboat 3's 750 gpm fire pump.

Fill Site #2



Another shot of the Clinton pumper supplying the 5-inch line.

Fill Site #2



The crew at Fill Site #2 works to fill tankers in between torrential downpours. Once again, the use of an LDH manifold and 5-inch hose makes the “Loader’s” job much easier.

Fill Site #2



Potomac Heights VFD Tanker 76 getting filled up.

Fill Site #3



Potomac Heights VFD Engine 73 drafts from a pond in order to supply water for Fill Site #3.

Fill Site #3



Three sections of 6-inch hard suction were needed in order to reach the dry hydrant suction head. Water was then fed back to an LDH manifold out on the road.

Fill Site #4



Two engines draft from this bridge in order to supply water at Fill Site #z

Fill Site #4



Tenth District VFD's E8-2 (2,000 gpm) takes suction via 6-inch suction hose and supplies a 5-inch hose for filling tankers.

Fill Site #4



Laytonsville Tanker 717 (3,500 gpm) getting filled at Fill Site #4

The Results

- The drill concluded after 120-minutes of operation.
- Water flow was interrupted for about four minutes early in the operation when tankers were delayed in arriving.
- A total flow was not available due to a heavy rain storm that arrived and got all of the documentation very, very wet!!!

Summary

- In spite of the interruption in flow, the drill was still a success. It showed the value of having large tankers available early in the response and the value of using multiple-dump tanks.
- All of the crews worked very well together and most all of the apparatus proved quite capable of delivering water.
- Many thanks all of the folks the organized the drill.
- In addition, many thanks to the Baden VFD for hosting the program and providing an excellent facility for the briefings and refreshments.
- Finally, thanks is in order to the MSFA Rural Water Supply Committee for providing support for the drill.



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