

Union County Standard Operating Guidelines  
**Fireground Operations**

**Fireground Operations SOG 3.11**  
**WATER SUPPLY OPERATIONS**

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1. Intent and Purpose

Adequate water supply during fire attack operations has a critical impact on fire control outcomes. A good water supply and adequate GPM flows from attack lines result in good outcomes. Delayed or limited water supply and inadequate GPM flows lead to delayed fire control, increased risk to fire fighters and victims, and greater fire loss. The use of excessive amounts of water, leaking couplings or nozzles may increase loss inside the structure.

2. Hydrant Water Supply

First due companies approaching the scene with any evidence of a working fire in a structure should lay their own supply line. There should be few exceptions to this guideline (i.e., obvious critical rescue requiring a full crew, unsure of actual fire location etc.).

3. Pumped Water

- a. Pumped water supply (4-Way Valve Operation) is necessary when large volumes of water are required on the fire ground. This normally occurs later in the attack operation when engine-mounted master streams, ladder pipes, or multiple high GPM attack lines are in operation.
- b. Generally, first alarm companies should lay their own supply lines to cover all critical tactical positions before pumped water is considered. Most initial attack operations, including engine-mounted master stream operations can be adequately supplied without pumped water.
- c. In most cases, the need for pumped water occurs late in the first alarm assignment, or as the second alarm companies arrive. Command should address the need for pumped water as ladder pipes or multiple engine-mounted master streams are ordered into operation and assign engine companies to pump lines. When pumped water is initiated, command should maintain control of key hydrants and order pumped water on a priority basis.

4. Rural Water Supply

a. Level 1 Water Supply:

A single 5" (or 3") supply line is stretched between the attack engine and tender, could be engine or tanker. During this level of water supply the tender supplements the attack engine. The default initial pressure for supplying 5" hose will be 50 PSI and 100 PSI for 3". The attack engine operator will communicate changes from the default based on water usage. It is recommended to use a Level 1 water supply when it is estimated to utilize less than 2,000 gallons of water.

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- b. **Level 2 Water Supply:**  
A supply line (5" or 3") is stretched with a wye that is connected near access of the tenders. 3" lines will be connected to each side of the wye. As tenders approach, they connect to an available line. As one tender completes pumping off its load, the valve on the wye will be turned to allow for the "standby tender" to begin pumping. This should be done quickly, so that little or no loss of water is noticed by the attack engine. Once the empty tender leaves, the "nest tender" takes its place and the cycle is repeated. It is recommended to use a Level 2 water supply when the estimated use of water is between 2,000 to 10,000 gallons.
  
- c. **Level 3 Water Supply:**  
A supply line (5" or 3") is stretched from the attack engine to an engine that will utilize dump tanks to draft water. It is recommended to use a Level 3 water supply when the estimated use of water will be more than 10,000 gallons.
  
- d. During tanker shuttle operations, tankers are required to operate on roadways and in close proximity to firefighters, pedestrians, and civilian traffic. Tanker operators should use caution when approaching and departing fill & dump sites, using slow speeds that will allow them to stop suddenly if necessary. When tankers are traveling to and from the fill and dump sites they should be either completely full or completely empty.
  
- e. The location of the dump site should be as close to the fire scene as possible but should not interfere with other firefighting crews and apparatus arriving to the scene. The dump site should be positioned to allow easy/safe approach and departure of tankers. Any area that would require a tanker to operate in reverse should be avoided.
  
- f. Vacuum tankers utilize a vacuum pump to create a negative or positive pressure in the water tank and can draft quicker and at a longer distance than conventional tankers. It may be of a greater advantage to send vacuum tankers to an alternate fill site to take advantage of their quicker fill rates.