

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
	<b>Rural Water Operations</b>	Effective Date: March 6, 2025  Revised Date:

**I. SCOPE**

This policy applies to all Queen Anne's County Fire and Emergency Service personnel.

**A. PURPOSE**

Establish a guideline for best practice in rural water operations for Queen Anne's County.

**B. RESPONSIBILITY**

All personnel affiliated with a Queen Anne's County Fire Department will be responsible for ensuring strict adherence to this policy.

**C. DEFINITIONS**

1. Dump Site - A location for Shuttle apparatus to dump their water. Typically, a nurse tanker will be set up at this location to supply water to the attack engine.
2. Fill Site - A location for shuttle apparatus to be filled with water for transport to the dump site. Typically, an engine will be set up at this location, either at draft or at a hydrant.
3. Relay Operation - A process utilizing two or more engines to supply the fire attack engine directly from a water source through a supply line.
4. Shuttle Operation - A process utilizing tankers and/or engines to move water from a specified water source to the dump site (incident scene).
5. Shuttle Route - A course of travel developed by the Water Supply Officer to maximize safety and minimize travel time between the Dump Site and the Fill Site.
6. Tanker - Mobile water supply apparatus with a minimum of 2,500 gallons capacity.

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
	<b>Rural Water Operations</b>	Effective Date: March 6, 2025
		Revised Date:

7. Nurse Tanker – A tanker that is in position to supply the incident scene and for other units to unload their water into.
8. Tanker Task Force - A group of units dispatched to support water supply operations, consisting of two engines and four tankers.
9. Water Supply Group - Units assigned the function of assisting with the movement of water to support fire attack operations.
10. Water Supply Officer (WSO) - A member assigned by the Incident Commander who identifies available water sources and calculates and coordinates water supply operations.

#### **D. BACKGROUND**

The standard dispatch for a structure fire in a rural area is four engines, two aerial units, one rescue squad, three tankers, one BLS unit, two County PM units, and Command Officers.

The fundamental principles of fire suppression in the rural environment are no different than those in the urban environment. What changes in the rural environment is that it takes much longer to develop a sustainable water supply. This reality means that personnel must be exacting and judicious in their water application, ensuring that all the available water lands on burning surfaces.

Rural water supply operations are limited to a **500 GPM fire flow**. When the needed fire flow is expected to exceed 500 GPM, the Incident Commander (IC) should consider enhancing the water supply by using either an on-site water source, dump tank operations, or relay operations.

Rural water supply operations are complex, take time to build, and are resource-intensive. The IC must consider assigning a water supply officer (WSO) as soon as practical. Also, assign the WSO and all water supply units to a separate talk group.

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
		Effective Date: March 6, 2025
	<b>Rural Water Operations</b>	Revised Date:

NOTES: Units arriving on a scene where a large diameter hose (LDH) is deployed should move the LDH to the side of the road, driveway, etc., before charging the line.

Other options for water supply plans: using a circle driveway for tanker shuttles, large lots like on farms give you options to turn tankers around, if the house next door is close, use that driveway for water supply, leaving the main driveway for the truck or tower.

## II. POLICY

### A. INITIAL ALARM

#### 1. **First Arriving Engine**

**Unit:** Initiate the water supply process by laying a supply line. This hose lay should begin at the driveway entrance to the involved structure or from the nearest area suitable for dump site operations (for example, an intersection or the beginning of a court). The location of this site must be identified in the unit's on-scene report. If the first engine does not lay a supply line, the second engine must complete this task.

**Unit Officer:** Determine and advise whether a tanker shuttle or relay operation will be implemented for the water supply. Advise the water source for the dump tank or relay operation so the third arriving engine can position there and establish a fill site or relay water source.

NOTE: If the water source is accessible and located within 3000 feet of the first engine's layout, a relay operation is the preferred water supply option.

Direct other incoming engines and tankers to support the initial attack until a dump tank or water relay is developed.

**Crew:** Advance a hand line to the fire floor and begin fire attack/confinement actions.

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
		Effective Date: March 6, 2025
	<b>Rural Water Operations</b>	Revised Date:

## 2. Second Arriving Engine

**Unit:** Position the engine to allow the first tanker and the first aerial unit to position close to the structure while best positioning either for dump site or relay operations, as directed.

**NOTE:** As the second due engine positions, the crew may need to move the supply line(s) from the middle of the road or driveway.

**Crew:** Advance a hand line and back up the first due engine.

## 3. Third Arriving Engine

**Unit:** Locate in an uncommitted position. The unit may be directed to assist with suppression activities, establish a fill site from a static water source, or begin laying supply lines for water relay operation.

**Unit Officer:** Quickly assess the availability of a water source, e.g., a swimming pool or a pond near the involved structure.

## 4. Fourth Arriving Engine – RIT/RIC

**Unit:** Locate in an uncommitted position. The unit may be directed to assist with the water supply.

**Unit Officer & Crew:** Report to the IC and advise them that you are the RIT. Unless specifically ordered otherwise, assume the operations of the RIT.

- Secure an additional hose line.
- Determine the location of the fire and its progression.
- Monitor all critical operational talk groups.
- Observe fire conditions, note fire attack progress, and know the location of crews working in the building.
- Determine the occupancy type and building construction.

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
		Effective Date: March 6, 2025
	<b>Rural Water Operations</b>	Revised Date:

## 5. Fifth Arriving Engine

**Unit:** Locate in an uncommitted position. The unit may be directed to assist with the water supply.

**Unit Officer & Crew:** Report to the IC unless directed before arrival. Incident actions may include assisting with the water supply plan.

## 6. First Arriving Tanker

**Unit:** Position the unit either near the first arriving engine and connect it to the supply line of the tanker or at the end of the driveway and connect it to the supply line of the first arriving engine using a large diameter siamese. Supply the first arriving engine with tank water and transition to supplying water from the dump site or relay source as one becomes established. Try to maintain a full tank of water in case the water supply is interrupted.

**Crew:** Assist the driver with water supply operations.

## 7. Second Arriving Tanker

**Unit:** The primary responsibility of this unit is to support the fire attack by immediately pumping the supply line and continuing to pump until it runs out of water. If necessary, the tanker will leave its folding tank, and all appropriate appliances will be used to develop dump site operations. Immediately proceed to the established fill site.

**Crew:** Assist the driver with water supply operations.

## 8. Third Arriving Tanker

**Unit:** Support the fire attack by pumping the supply line until the dump site operates. If the second arriving engine is in position to begin development of the dump site, the third arriving tanker should be positioned to set up the folding tank. Immediately proceed to the established fill site.

**Crew:** Assist the driver with water supply operations.

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
		Effective Date: March 6, 2025
	<b>Rural Water Operations</b>	Revised Date:

## 9. First Arriving Aerial Unit

**Unit:** Position on Side A or the highest priority area to accomplish rescue operations. Provide roof access/egress or deploy a defensive, elevated stream. If this location impedes incoming water supply units, position the unit elsewhere, e.g., in an adjoining driveway.

**Crew:** Perform duties such as:

Ventilation - Coordinate ventilation with the initial interior attack line. Do not create additional openings until the interior attack line officer reports that the water is on the fire.

Tasks - Initiate obvious rescues for people in immediate danger and visible from the exterior of a structure.

- Assist with forcible entry as needed.
- Ensure ladders are placed for egress and/or rescues.
- Conduct interior searches.
- Check for and report on the extension, and confine the fire as much as possible.
- Conduct salvage and overhaul operations.

## 10. Second Arriving Aerial Unit

**Unit:** Position on the main road or in a location that does not impede the access/egress of tankers. If Side Charlie is available without hindering water supply operation, the 2nd aerial device should be positioned there or in a position to effectively operate.

**Crew:** Perform duties such as Ventilation - Coordinate ventilation with the initial interior attack line. Do not create additional openings until the interior attack line officer reports that the water is on the fire.

Tasks - Initiate obvious rescues for people in immediate danger and visible from the exterior of a structure.

- Ensure ladders are placed for egress and/or rescues.
- Report to the Incident Commander.

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
	<b>Rural Water Operations</b>	Effective Date: March 6, 2025  Revised Date:

## 11. First Arriving Rescue

**Unit.** Position on the main road or in a location that does not impede the access/egress of tankers. Assist with RIT/RIC.

## 12. Second Arriving Rescue

**Unit and Crew:** Position on the main road or in a location that does not impede the access/egress of tankers. Report to the Incident Commander.

## 13. EMS Units

**First Arriving Unit:** Position for transport. Report to the IC/CP with stretcher and equipment. Prepare for rehab.

**Second Arriving Unit:** Position out of the way and be prepared to transport as needed.

### **B. TANKER TASK FORCE**

It will consist of two additional engines and four additional tankers.

#### **1. First Arriving Tanker Task Force Engine**

**Unit.** Report to and develop a fill-site location as directed by the IC.

**Crew.** Assist with set-up to fill tankers at a rate of 1,000 GPM through LDH that wyes (gated wye) into two (2) 3-inch hoses with 3-inch Storz fittings.

- Tankers carry the LDH wyes and 3-inch Storz fittings
- Between 50 and 100 psi on the fill line.

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
	<b>Rural Water Operations</b>	Effective Date: March 6, 2025  Revised Date:

## 2. Second Arriving Tanker Task Force Engine

**Unit:** Report to and assist with fill-site operations as directed by the IC.

**Crew:** Assist with set-up to fill tankers at a rate of 1,000 GPM through LDH that wyes (gated wye) into two (2) 3-inch hoses with 3-inch Storz fittings.

- Tankers carry the LDH wyes and 3-inch Storz fittings
- Between 50 and 100 psi on the fill line.

## 3. First Arriving Tanker from Tanker Task Force

**Unit:** Support the fire attack by supplying the clapped Siamese, dumping water into the nurse tanker (if available), or dumping water into the portable tanks at the direction of the WSO. Drop off the portable tank and water as directed. Proceed to the fill site and drop off appliances and equipment as required at the fill site.

**Crew:** Assist the driver with water supply operations.

## 4. Second Arriving Tanker from Tanker Task Force

**Unit:** Support the fire attack by supplying the clapped Siamese, dumping water into the nurse tanker (if available), or dumping water into the portable tanks at the direction of the WSO. Drop off the portable tank and water as directed. Proceed to the fill site and drop off appliances and equipment as required at the fill site.

**Crew:** Assist the driver with water supply operations.

## 5. Third Arriving Tanker from Tanker Task Force

**Unit:** Support the fire attack by supplying the clapped Siamese, dumping water into the nurse tanker (if available), or dumping water into the portable tanks at the direction of the WSO. Drop off the portable tank

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
	<b>Rural Water Operations</b>	Effective Date: March 6, 2025  Revised Date:

and water as directed. Proceed to the fill site and drop off appliances and equipment as required at the fill site.

**Crew:** Assist the driver with water supply operations.

#### **6. Fourth Arriving Tanker from Tanker Task Force**

**Unit:** Support the fire attack by supplying the clappered Siamese, dumping water into the nurse tanker (if available), or dumping water into the portable tanks at the direction of the WSO. Drop off the portable tank and water as directed. Proceed to the fill site and drop off appliances and equipment as required at the fill site.

**Crew:** Assist the driver with water supply operations.

### **C. RESPONSIBILITIES**

#### **1. Water Supply Officer**

- a. Manages the water supply group.
- b. Establishes a shuttle route that is suitable for the area.
  - Ideal is a two (2) to four (4) mile round trip or shorter.
  - The longer the route, the more tankers.
  - Limit the backing of tankers/apparatus.
- c. Establish two (2) fill sites when six (6) or more tankers are in the shuttle.

#### **2. Nurse Tanker Dump Site**

Recommended three (3) personnel.

- One Water Supply Officer (WSO)
- Two firefighters are responsible for hooking and unhooking the supply hose.

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
		Effective Date: March 6, 2025
	<b>Rural Water Operations</b>	Revised Date:

- a. Establish a nurse tanker at the incident scene with the attack engine or at the beginning of the large-diameter hose (LDH) supply hose.
- b. If available, use a large-diameter Siamese (or another appliance with the same function) to supply the nurse tanker.
  - Place Siamese on the supply hose if the nurse tanker is at the scene. This allows for all other tankers to be in the shuttle operation.
- c. Use the appropriate discharge to unload your tank water. Large diameter discharge for 4- and 5-inch hose. A 2.5-inch for 3-inch hose.

### 3. Draft Fill Site

Recommend five (5) personnel:

- One (1) officer/manager
  - One (1) driver/engineer
  - One (1) firefighter to operate the gated wye.
  - Two (2) firefighters for hose management.
- a. The goal is to fill tankers at a rate of 1,000 GPM through LDH that wyes (gated wye) into two (2) 3-inch hoses with 3-inch Storz fittings.
    - Tankers carry the LDH wyes and 3-inch Storz fittings
    - Between 50 and 100 psi on the fill line.
  - b. Use the pump's side steamer to pull the primary draft when at the draft.
    - Additional drafts can be established later through other suction ports to increase the flow of the drafting engine.
    - Have tankers drop off additional items needed to expand your operation.

	<b>Queen Anne's County Fire &amp; EMS Commission Operations Manual</b>	No. 02.12
		Effective Date: March 6, 2025
	<b>Rural Water Operations</b>	Revised Date:

#### 4. Hydrant Fill Site

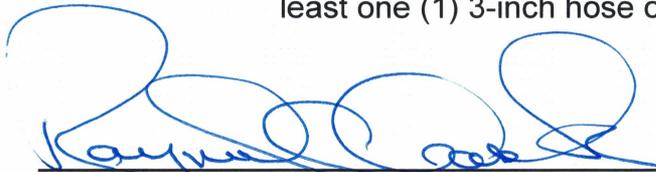
Recommend five (5) personnel

- One (1) officer/manager
- One (1) driver/engineer
- One (1) firefighter to operate the gated wye.
- Two (2) firefighters for hose management.
- 

a. The goal is to fill tankers at a rate of 1,000 GPM through LDH that wyes (gated wye) into two (2) 3-inch hoses with 3-inch Storz fittings.

- Tankers carry the LDH wyes and 3-inch Storz fittings.
- Between 50 and 100 psi on the fill line.

b. Hook the supply engine to the hydrant steamer with LDH and at least one (1) 3-inch hose off the side 2.5-inch connection.




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Raymond Aaron, Chairman  
Queen Anne's County Fire & EMS Commission