COMMERCE FIRE DEPARTMENT

Standard Operating Guidelines

Subject: Water Supply

Reference Number: 2.11

Effective Date: 4/3/2014 **Last Date Revised:** 4/2/2015

Approved By: Chief Kevin Dean

Purpose: This standard establishes the requirement that an adequate and reliable water supply is established at each incident.

Scope: This standard operating guideline shall apply to all members of the Commerce Fire Department.

General:

A. For firefighting efforts to be effective, an adequate and reliable supply of water must be available. The adequacy and reliability of potential sources of water are constantly changing due to weather, system demands, and many other factors beyond the department's control.

B. We shall be aware of the potential fire flow demands within our district and shall identify available options for developing a sufficient volume of water to adequately combat any fire that might occur.

Responsibilities:

A. The fire chief will serve as a liaison with City of Commerce Water Department or Jackson County Water Authority. He/she shall report any problems found with a fire hydrant.

B. The Incident Commander shall appoint a Water Supply Officer, when needed. The water supply officer shall:

1. Contact the appropriate water department when large amounts of water will be used at an incident.

C. All personnel shall be responsible for:

1. Knowing the location of fire hydrant areas and static water source within the fire district.
2. Reporting high grass, weeds, other hydrant obstructions, and other problems to the fire chief for correction.

Hydrant Color Codes:

A. Hydrants are color-coded in accordance with *NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants,* as follows:

Color	Flow
Red less than	500 GPM
Orange	501 - 1,000 GPM
Green	1,001 - 1,500 GPM
Blue	1,501 + GPM

*Each Engine will have a hydrant book in the cab to signify hydrant color-code in reference to the location of hydrant.

Operational Procedures:

A. Each engine company shall be responsible for providing its own uninterrupted water supply on the fire-ground. The ability to do so will be predicated on:

1. The required fire flow.
2. The available water supply.
3. The number of personnel available.
4. The numbers and types of available apparatus.

B. Calculations of required fire flow:

1. The following factors influence the required fire flow:
    a. Construction type
    b. Contents
    c. Occupancy
    d. Exposures
    e. The presence or absence of extinguishing systems.
2. Rule-of-thumb for calculated analysis of the fire flow shall use the following National Fire Academy (NFA) formula: gpm=Length x Width divided by 3.

The required fire flow may be reduced by 50 percent if an automatic fire sprinkler system is present.

C. Water supplies may be established by:

1. Booster tank operations
2. Supply lines
3. Tanker shuttle
4. Dump tank
5. Other available water sources

Fixed Water Supplies:

The availability of an adequate water supply is a top priority. As a general guideline, whenever the incident is within one thousand (1,000) feet of an adequate fire hydrant, a supply line should be established between the hydrant and the fire ground. Whenever the incident is farther than one thousand (1,000) feet from an adequate water supply, a second engine will be used to support the hydrant.

- Water supply to be established through the direction of the first arriving officer, by either (1) having the first-due engine secure its own water supply or (2) having the second-due engine secure a water supply and either forward or reverse lay to the first-due engine.
- A water supply officer should be established at all incidents that require a fire flow of greater than 1,500 GPM, at commercial fires where elevated and/or portable master streams are deployed, when there is a failure of the primary water supply, or at the discretion of the incident commander.