

		<p>MUKWONAGO FIRE DEPARTMENT</p> <p>OPERATING PROCEDURES</p>	
Proper Procedures for Conducting Service Testing of Fire Hose		Approved by: Chief Jeffrey A. Rolfe	
SOG #4	Draft Date: 02-01-01	Revision Date: 03-14-10	Effective Date:

PURPOSE: The purpose of this procedure is to establish requirements for safely conducting service testing of fire hose.

SCOPE: This procedure is to be followed by all officers and members of this department. Authority to deviate from this procedure rests with the officer in charge of the incident who will be responsible for the results of any deviation.

A. Hose testing shall be completed annually and in conjunction with the guidelines set forth in NFPA 1962, *Standard for the Care, Use, and Service Testing of Fire Hose Including Couplings and Nozzles*.

B. DURING TESTING, ALL PERSONNEL SHALL WEAR THE FOLLOWING SAFETY EQUIPMENT:

- **Fire Helmet** – to provide head, eye and face protection
- **Fire Gloves** – to provide hand protection
- **Fire Bunker Boots** – to provide foot, ankle and shin protection

C. Lengths of hose to be tested shall be of the same service test pressure.

1. Hose manufactured prior to July 1987 shall follow the test pressures outlined in the following table and not the test pressure stenciled on the hose jacket (*per NFPA 1962 7.1.1.1 - 7.1.1.2*).

	Size	Jackets	Acceptance Test Pressure (psi)	Service Test Pressure (psi)
Lined Fire Department Hose	1 ½ - 2 ½	Single	300	150
	1 ½ - 4 ½	Single	400	250
	1 ½ - 2 ½	Single	500	250
	1 ½ - 4	Multiple	400	250
	1 ½ - 4	Multiple	600	250
Relay Supply	3 ½ - 5	Single	400	200
	5 - 6	Single	500	150
Pump Supply (soft suction)	4 - 6	Multiple	400	200

- Hose manufactured after July 1987 shall be tested according to the test pressure stenciled on the hose jacket (*per NFPA 1962 7.1.2 – 7.1.3*).

D. Service Testing

- Lay out hose to be service tested. The total length of any hose test layout shall not exceed 300 feet.
- Connect hose to discharge outlet of hose testing apparatus. Attach a test cap with a bleeder valve or nozzle with a non-twist shutoff to the opposite end of the test lay.
- Examine the hose jacket for defects, couplings for damage, and gaskets for wear/defects. If any of these are present, the hose shall be taken out of service immediately.
- Complete Hose Record Log to indicate hose involved in testing.

5. Gradually raise pressure in hose to 45 psi.
 - a. Ensure that all air has been exhausted from lengths of hose prior to increasing pressure to test pressure.
 - b. Close test cap or nozzle
6. Secure hose directly in back of test cap or nozzle this is to avoid whipping or other reactions.
7. With hose at 45 psi, check each coupling for leakage and tighten as necessary.
8. Mark a black line around the hose jacket where it meets the coupling on both ends of all sections of hose to be tested.
9. **ALL PERSONNEL OTHER THAN NECESSARY TO COMPLETE PROCEDURE SHALL CLEAR THE TEST AREA.**
10. The pressure in the hose lays shall be raised at a rate not to exceed 15 psi per second until service test pressure is attained.
 - a. Allow hose to stabilize at a rate of one (1) minute per 100 feet of hose in the test layout. Pressure boosts may be used to maintain pressure.
 - b. After stabilization period, the hose layout shall hold service test pressure for three (3) minutes without further pressure boosts.
11. While hose is at service test pressure it shall be inspected for leaks. If personnel walk the test layout to check for leaks, the following shall be observed:
 - a. Personnel shall be a minimum of 15 feet to the left of the nearest layout.
 - The left side shall be defined as that side that is to the left when facing the free end from the pressure source.
 - b. Personnel shall never stand in front of the free end of the hose, on the right side of the hose, closer than 15 feet on the left side of the hose, or straddle a hose in the test layout.
12. If the test layout does not hold service test pressure for three (3) minutes, terminate the test and remove the affected length/s of hose. Restart the test at item #3.
13. After completion of three (3) minute test, open each test cap or nozzle to drain layout.

14. Inspect the marks placed on mating area of the hose and coupling for slippage. If the coupling has slipped, the hose will have failed the service test. Remove the hose from service immediately.
15. Enter all results of the service test into the appropriate electronic data storage application (i.e. Fire House Software, Phoenix).