I. PURPOSE:
The purpose of this procedure is to establish guidelines for the care and maintenance of all hose carried on apparatus. This will improve the safety, appearance, and service life of the Department's hose inventory. This procedure will assign responsibility and set forth time periods for scheduled testing, cleaning, and maintenance of all fire hose.

II. SCOPE:
This procedure applies to all CCFD personnel and all hose owned and used by CCFD.

III. PROCEDURE:

1. Annual fire hose testing is conducted to provide a reasonable level of safety for users and a reasonable degree of assurance that the hoses and couplings will perform as designed. Annual fire hose testing is required in NFPA Standard 1962, *Care, Use, and Service Testing of Fire Hose, including Couplings and Nozzles*. All Department fire hose (1 1/2", 1¾", 2½", 3" and 5") will be pressure tested annually.

2. Testing and cleaning schedule:
   2.1. The inspection, pressure testing and cleaning of fire hose will occur during the months of April, May, and or June. All hose and pressure testing will occur at Fire Station 1, Alan Mickelson Fire Training Center or an area approved by the Operation Chief.

3. Responsibilities:
   3.1. The Fire Hose Custodian will:
      3.1.1. Coordinate the scheduling of annual hose testing.
      3.1.2. Manage the inventory, testing, repair and cleaning records of all fire hose. Annual reports will be entered into Firehouse detailing the results of all prescribed testing and maintenance.
      3.1.3. Test all fire hose annually. All new hose will be tested within 90 days after placing it into service.
      3.1.4. During testing, the shift captain will assume the role of "Testing Officer." This member will be responsible for ensuring that all safety rules and procedures are followed. The personal safety of all members present will be the primary goal during all testing evolutions.
      3.1.5. Repair or replace defective hose as required.
      3.1.6. Re-test all repaired hose before placing it in service.

   3.2. Engine Company Personnel:
      3.2.1. Arrive on time at the approved location on the day scheduled for hose testing and maintenance.
      3.2.2. Lay out all hose under the direction of the station captain or the shift captain.
      3.2.3. Once a hose testing evolution has begun, keep all untrained members clear of the testing area.
      3.2.4. When testing is complete and testing area is deemed safe by the Testing Officer, roll and remove all cleaned hose from testing area and load tested and/or cleaned hose onto assigned apparatus.

4. Visual Inspection:
   4.1. All hose shall be visually inspected prior to being pressure tested or cleaned. Any section of hose that fails inspection shall be removed from service, repaired, recycled or designated for disposal. Hose shall be inspected for damage from chemicals, burns, cuts or abrasions. Hose that is excessively worn or deteriorated due to age will be determined to have failed the visual inspection.

   4.2. During the testing phase, all couplings will be visually inspected. Any leaking coupling will first be tightened. If the coupling still leaks, the gasket will be replaced. After replacing the gasket, if the coupling cannot be tightened enough to stop leaking, it will be determined to have failed the test. Additionally, couplings shall be inspected for the following:
      4.2.1. Damaged threads
      4.2.2. Corrosion
      4.2.3. Slippage on the hose
      4.2.4. Out-of-round
      4.2.5. Swivel not rotating freely
      4.2.6. Missing lugs
      4.2.7. Loose external collar
      4.2.8. Internal gasket

5. Cleaning of fire hose:
   5.1. All fire hose will be cleaned using a pressure washer. The spray tip shall be kept at least 12" from the hose jacket at all times. This will prevent damaging the outer jacket from the high pressure being used. The use of strong degreasers or cleaning chemicals is prohibited. The use of such chemicals will remove the protective coating from the hose, and can weaken the integrity of the jacket fibers. Only mild detergents are to be used if necessary for extremely soiled hose. The station captain will make the determination whether to use detergent.

6. Hose testing:
   6.1. Due to the inherent risks associated with pressure testing hose, all safety rules and testing procedures must be followed. Failure to follow these rules and procedures can result in death or serious injury in the case of catastrophic failure during testing.

   6.2. Safety Rules:
      6.2.1. There must be at least two trained personnel available to conduct a service pressure test.
      6.2.2. All personal vehicles will be removed from the testing area.
      6.2.3. No personnel will be allowed in the testing area once a test begins.
      6.2.4. Once the pressure exceeds 45 psi during a test and until the termination of a test where the pressure is completely relieved, all personnel will remain at least 15' to the side of the hose.
      6.2.5. Be alert to the possibility of sudden ruptures.

6.2.6. Staff must be present at the pump panel at all times when lines are pressurized during a pressure test.
6.2.7. When conducting a pressure test, remove all air from the hose before the bleeder valve or nozzle is closed.
6.2.8. Only one size of hose may be tested at a time.
6.2.9. Each length of hose to be tested simultaneously shall be of the same service test pressure, and collectively, shall be considered the hose test layout. The total length of any hose line in the hose test layout shall not exceed 300'.
6.2.10. Hose that has been repaired or recoupled shall be tested one length at a time.
6.2.11. All 5" hose shall be pressure tested while lying flat.

6.3. Test Steps:
6.3.1. Lay out hose in as straight a line as possible.
6.3.2. Visually inspect hose for damage and missing ID numbers.
6.3.3. Tighten all couplings.
6.3.4. Connect hose to engine being used for testing.
6.3.5. Slowly open valves on pump panel to reach static pressure.
6.3.6. With pressure at 45 psi, mark all couplings with a line behind the coupling, and check for leaks.
6.3.7. Bleed all air from all hose(s) in the testing layout.
6.3.8. Gradually increase pressure to service test pressure and allow it to stabilize for three minutes. Refer to NFPA 1962 to determine the correct service test pressure.
6.3.9. After service test pressure stabilization period, conduct the test for a period of five minutes.
6.3.10. After service pressure test period and at service test pressure, visually inspect hose test layout for leaks.
6.3.11. Terminate test, relieve pressure, and drain all hose.
6.3.12. Inspect all couplings for damage to threads, gaskets, or bowls.
6.3.13. Submit hose-testing data to fire hose custodian.

7. Hose replacement:
7.1. Hose will be removed from service and replaced when it fails a visual inspection, service pressure test, or has exhausted its designated service life. If during service in the field a defect in performance or materials is noticed, that section of hose will be removed from its assigned apparatus. Any defects in the hose should be indicated with a large black marker, such as a circle drawn around a hole. A repair tag should be attached to the hose indicating the following:
7.1.1. Unit ID
7.1.2. Member ID
7.1.3. Length and size of hose
7.1.4. Description and location of defect