Section 1 - Introduction

This suggested operating guideline (SOG) has been established to provide guidelines for inspecting and testing fire hydrants within the boundaries of the Pacific Fire Protection District. These guidelines are consistent with the philosophy of the District. These guidelines are not all inclusive and may need to be deviated from by District personnel as the situation dictates. The SOG does not create rights or duties that are enforceable in court.

Section 2 - Purpose

Water supply is a vital component of firefighting operations. In areas where fire hydrants are present, it is of the upmost importance that these hydrants are in good working order. The purpose of this SOG is to establish the procedures that District personnel will use to ensure that all hydrants are in good working order and to determine the useable amount of water available from hydrants as deemed necessary.

Section 3 – Definitions

For the purpose of this SOG, the following definitions will be used:

3.1 – Hydrant Inspection – an annual check of each hydrant to ensure it is present at the marked location, clear of obstructions, is operatable, has water and to document any defects.

3.2 – Hydrant Flow Test – a test involving taking static and residual readings from a specified hydrant while flowing water from other hydrants to determine the available GPM.

3.3 – Minor defect – any defect that does not render the hydrant unusable but requires corrective action (leaks from the bonnet, stems that are hard to turn but operatable, missing gaskets, not draining, etc.)

3.4 – Major defect – any defect that takes the hydrant out of service (caps frozen on, stems that cannot be turned without damage, no water, will not shut off, etc.)

Section 4 – Hydrant Inspections

All hydrants within the Fire District that are accessible and would provide a strategic advantage to firefighting operations will be inspected at least once annually. Each Company Officer will be assigned a group of hydrants that they are responsible for inspecting. These hydrants will be grouped geographically as permits and the groups will be kept relatively similar in size. These groups will be rotated each year so that every officer eventually inspects every hydrant to maintain familiarity with the hydrant locations. It is up the officers on each shift to coordinate the switching of crew from station 2 to station 1 to complete the station 2 officer's hydrants. It is also up to the individual officers to determine which personnel and apparatus will ultimately inspect the hydrants however consideration should be given to the value of all personnel being familiar with the location of the hydrants. This section will outline the procedures of annual hydrant inspections.

4.1 – Verify the location of the hydrant is correct on the corresponding map page.

4.2 – Check the general appearance of the hydrant. The hydrant should be standing straight, facing the correct direction, the paint should be in good condition and all caps should be present.

4.3 – Note the clearance around the hydrant. There should be three feet of open space around the hydrant and 15 inches between the lowest outlet and the ground.

4.4 – Remove all caps from the hydrant, check the gaskets and ensure that the threads are secure in the outlet. If the threads are dirty, use water from the hydrant to cleans the threads on the outlet and inside the cap.

4.5 – Slowly open the valve and flush the barrel of the hydrant. Ensure that the stem turns and water discharges from the outlets. Be careful to not open the hydrant too far and cause erosion damage to the ground around the hydrant.

4.6 – Slowly close the valve and replace and tighten all caps.

4.7 – Open the hydrant fully. Ensure that the stem turns without excessive effort and comes to a stop. Check for water leaking at ground level or if any water is leaking from the hydrant itself once the hydrant is fully open.

4.8 – Close the hydrant completely. Ensure that the stem turns without excessive effort and comes to a stop.

4.9 – Loosen all caps, remove one completely and ensure that the hydrant is draining. Hand tighten all caps.

4.10 – Document all inspections and defects. Major defects shall be reported by phone to the owner immediately (City of Pacific or Public Water District), a work order should be entered, and the hydrant should be placed out of service in Emergency Reporting. Minor defects should be entered as a work order for the owner of the hydrant and will be compiled and forwarded to the owner when all inspections are complete.

Section 5 – Hydrant Flow Test

Hydrant flow test will be completed in a given area on a five-year rotating basis. The areas are broken down by map page and the test can be performed on any hydrant on the map. This section will outline the procedures for completing a hydrant flow test.

5.1 – Analyze the area in which the flow test is to be conducted. Consideration should be given to which hydrants will be being flowed to prevent property damage and limit traffic interference. All personnel involved in the test should have a radio (use 84 direct or the Admin. Channel). To prevent unintended water flow alarms, notify Central County and any businesses in the area with sprinkler systems prior to conducting flow tests in commercial areas.

5.2 – Determine which hydrant will be the test hydrant and which hydrant(s) will be the flow hydrant(s). Complete a hydrant inspection on all hydrants involved in the flow test.

5.3 – Attach a static test gauge to one 2 ½” outlet on the test hydrant. Fully tighten all remaining caps.

5.4 – Fully open the valve of the test hydrant. If the test gauge has a bleeder valve, bleed the air then close the bleeder valve. Once the needle on the test gauge comes to rest, record the static pressure.

5.5 – At each flow hydrant, remove one 2 ½" inch cap and attach a diffuser with a test gauge or use a pitot gauge. Tight all remaining caps.

5.6 – Stop traffic and protect property as necessary, then fully open the first flow hydrant. The desired drop in pressure at the test hydrant is 25% of the static pressure, if this is obtained from opening the first hydrant, no further flow hydrants are necessary. If a 25% drop is not obtained, stop traffic and protect property as necessary, then fully open the next flow hydrant. If a 25% drop is not obtained, a minimum of a 10 psi drop is acceptable to take readings from.

5.7 – Once an acceptable drop in pressure at the test hydrant is achieved, record the flow pressures at each flow hydrant and the residual pressure at the test hydrant.

5.8 – One at a time, slowly shut down the flow hydrants, shut down the test hydrant last. Remove all gauges and ensure the hydrants are draining, return removed caps and loosen remaining caps. Caps should be left hand tight.

5.9 – Enter all test data into Emergency Reporting.