FIRE HYDRANT MAINTENANCE

General Responsibilities

The Company Officer is responsible for the periodic maintenance inspection of each fire hydrant in the City of Fresno Fire Department’s (FFD or Department) area of responsibility. These inspections shall be conducted annually on a fiscal year starting July 1 to June 30 and as defined on page 8 of this section. All assigned hydrant inspections shall be completed by June 1st.

Additional types of inspections performed on fire hydrants are:

1. New Hydrant Inspections: Initial inspections performed on new fire hydrants.

2. Post Maintenance Inspections: Inspections performed after repair to confirm repair.

3. Unscheduled Inspections: Inspections performed in response to information received indicating the hydrant may be in need of maintenance or repair. This includes the Operational Hazard Report (4-3 sheet) verification inspection, which is documented on the Weekly Inspection Report (FD-11).

Maintenance of fire hydrants by the Department is generally limited to the following tasks:

1. Painting and numbering new fire hydrants.

2. Repainting and renumbering, as required.

3. Replacing hydrant outlet-cap gaskets as necessary and not to exceed one gasket per outlet.

4. Exercise of fire hydrant stem, butterfly valve, and gate valve.
5. Flushing all fire hydrants to remove accumulated sand in the water mains.

6. Inspecting hydrant for proper operation and flow.

7. Securing broken fire hydrants. (See page 6)

8. Removing weeds and shrubbery obscuring hydrant from view. A minimum 3 foot clearance shall be maintained around the circumference of each hydrant.

9. Installing reflective blue hydrant markers. These can be ordered through supply unit.


The majority of these tasks are grouped into specific programs assigned on an annual or as needed basis. These programs and additional maintenance subject areas are addressed on the following pages.

**Annual Hydrant Inspection Program**

Each hydrant will be inspected annually in accordance with schedules established by the hydrant program manager. Instructions regarding the entry of inspection schedules into Tiburon are in *Section 206.18* under Hydrant Inspection Documentation starting on page 2.

Hydrants located in the county areas are not inspected by the Department with the following exceptions:

1. Fire hydrants that are fed by City of Fresno water mains are to be maintained by City of Fresno Fire Department personnel.

2. Pursuant to a fire protection agreement with Fresno County Fire Protection District and Cal Fire, the Department will include county hydrants in its inspection program in the following areas:

   East of First Street,
   South of Dakota,
   West of Temperance, and
   North of California.
3. Fig Garden Fire Protection District.


County hydrants within these areas will be numbered, painted, and inspected the same as City hydrants.

When the FireGIS Specialist issues a hydrant number, the Tiburon records will reflect the water district and the city or county jurisdiction.

Company officers shall inspect all areas within the Department’s response areas, including new annexations, complexes, condominiums, and contracted districts to determine the existence of fire hydrants.

Due to new annexations and new construction, some public and on-site hydrants will be found that are not listed, numbered, or painted to Department specifications. Company officers shall note the location and description of such hydrants and notify FireGIS via email to firegis@fresno.gov and request directions for appropriate action. FireGIS shall be notified when a discrepancy exists as to locations of fire hydrants in the hydrant map books.

Private Hydrants

When defective on-site private hydrants are found, a "Notice for Correction" will be sent to the property owners or property managers citing the 2001 California Uniform Fire Code (CFC), Section 1001.5.1. Standard fire prevention procedures for correction of all on-site fire hydrant problems shall be followed. On-site private hydrants are numbered with the last two digits of 50 to 99.

If company officers cannot identify or contact a responsible person to issue the notice for correction, assistance from the Fire Prevention Division will be necessary.

1. Complete appropriate entry in Tiburon as per policy 206.18.

2. Send, via email to firehydrants@fresno.gov, a request to issue a "Notice of Correction" to the property owner.

   **Note:** An accurate location and address of the hydrant is necessary.

2. Fire Prevention will send a notice to the property representative, one copy to the requesting company officer, and one copy to firehydrants@fresno.gov where the process will be monitored.

3. The company officer shall schedule a re-inspection date to check compliance. Contact Fire Prevention if a second notice is
necessary.

4. The company officer shall schedule follow-up inspections until the hydrant is repaired and in service. At that time, "Completed" shall be marked on the "Notice of Correction" and routed to Fire Headquarters via inter-department mail.

5. Computer entries shall be made at each step.

Placing Hydrants Out of Service

The following steps shall be performed when placing a hydrant out of service:

1. Place the hydrant out of service by completing a Tiburon inspection record, being sure to select an “Issue”, selecting the “Out of Service” box, and entering a complete description in the “Comments” box.

2. Paint the 4.5-inch cap black to indicate an out-of-service hydrant.

Additional Information

Problems are experienced with the Apollo-type hydrant valves. These problems are partly due to age of these hydrants and their shutoff valves, and to over-tightening of the shutoff valves. The packing ring tends to stick to the point that the valve is unable to be opened with the wrench carried on FFD fire apparatus. Use care when closing these types of hydrant valves. Seat (or close) it gently so that it will not stick.

Particular attention shall be given to the opening and closing of hydrant valves. Valves on the Mueller hydrants tend to become corroded on the top threads. This causes the stem to become frozen in the operating nut within the first three or four turns when the hydrant is first opened. The Water Division has requested hydrant stems, when noted in this condition, not be operated. The hydrant will be placed out of service per the procedures stated previously.

A copy of the hydrant inspection procedures is carried in each hydrant kit (see page 8 of this section).

Every fire hydrant shall be flushed annually. Caution shall be used not to cause property damage or to create a danger to the public.

Great care shall be exercised by all members to ensure street gate valves are left in the open position after completion of each hydrant inspection.

A Tiburon inspection record shall be completed for each hydrant inspected. These
inspection record entries shall be performed at the conclusion of each shift.

Any hydrant inside the city (public or private) needing repairs shall be entered in the Tiburon record. Additionally, a "Notice of Correction" shall be issued by the company officer to the property owner or manager of private hydrants. If a responsible party cannot be identified, a request for a “Notice of Correction” to be mailed to the appropriate party along with all pertinent information shall be forwarded to the Fire Prevention Division via email to firehydrants@fresno.gov or other appropriate means.

Weed Removal

The area around hydrants shall be kept clear of weeds and other vegetation that is unsightly or can interfere with the operation of the hydrant. If landscaping plants, shrubs, bushes, or trees interfere with the operation of a hydrant, action shall be taken to correct the problem. Bushes and shrubs on parking strips that are overgrown and interfere with the hydrant can be trimmed back by Department members. Trees that have been planted will require notification of the Public Works Department if located on the public right of way, parking strips, etc. Plantings on private property will require the property owner or manager be notified and cited if necessary. A minimum 3 foot clearance shall be maintained around the circumference of each hydrant.

Cuttings shall be kept in the parking strip and particular attention paid to keeping stones and other debris out of the gutter to prevent damage to vehicles.

Hydrant Painting

Each in-service fire apparatus shall have a fire hydrant maintenance kit containing all the items listed in the inventory (see page 9).

Fire hydrants will be painted as needed to maintain their appearance.

Upon completion of painting and stenciling, the information shall be recorded on the individual hydrant computer record by the company officer.

1. Painting: Standard fire hydrants with both 4-1/2-inch and 2-1/2 inch outlets shall have the barrels of the hydrants painted chrome silver and the tops of the hydrants shall be painted the color corresponding to the size of the main.
<table>
<thead>
<tr>
<th>Main Size</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 inches and smaller</td>
<td>Red</td>
</tr>
<tr>
<td>6 inches</td>
<td>Yellow</td>
</tr>
<tr>
<td>8 inches and larger</td>
<td>Green</td>
</tr>
</tbody>
</table>

All Wharf hydrants and hydrants without 4-1/2-inch outlets shall be painted chrome-silver and the tops of the hydrants shall be painted red, regardless of the main size.

Identification numbers shall be stenciled on the hydrants. Only the last three digits of the seven-digit number shall be painted on the hydrant.

1. Decorative painting: Fire hydrants that have been painted by civilians, which conform to Department standards, will not be repainted unless, in the company officer’s opinion, the paint is in an unacceptable condition.

Department standards for decorative hydrants are as follows:

1. Identification numbers shall remain legible and in the proper location.

2. All hydrant tops shall remain painted according to adopted standards.

3. The barrels of the hydrants shall not be camouflaged to the extent that ready identification is impossible.

Installation of Reflective Blue Hydrant Markers

Each fire hydrant within the City of Fresno, both public and private, shall have its location identified by means of reflective blue markers exposed to the street. These markers shall be installed in accordance with the diagram at the end of this policy. If a particular hydrant installation does not appear in the diagram, company officers shall use their judgment in placing the reflective marker to best identify the location of the hydrant.

Broken Fire Hydrants

Company officers dispatched to the location of a broken fire hydrant shall stop the flow of water and make a note of any available information regarding the cause of the incident. The company officer will ensure the broken fire hydrant is safely secured against obstruction to vehicle and pedestrian traffic. Barricades shall be requested if
necessary from the Streets Division through the Communications Center. Broken hydrants shall be left at location for Water Division pick-up. A Tiburon entry shall be made and details added to the comments section of said entry. The company officer shall advise the Communications Center of the condition and location of the hydrant and request the proper agency be notified.

Upon return to quarters, the company officer shall complete a Tiburon inspection indicating the hydrant is out of service.

**Hydrant Detail Forms**

The *Administrative Manual* contains the following forms, which are relative to the hydrant program:

*Form FD-41, "Fire Flow Test Data Sheet"
Form FD-62, “Hydrant Assignment Form”*

**Supplies**

The following items are available from the Supply Unit:

1. Reflective blue hydrant markers and adhesive
2. Paint and lubricant
3. Stencil materials
4. Hydrant gaskets

**Verifying Hydrant Repairs**

1. At 0900 hours the system will email the captain(s) of any station with hydrants in their district that have been repaired the previous day.
   a. The hydrant(s) shall be inspected for completed repairs and proper operation.
   b. An appropriate Tiburon entry shall be made once the above inspection is complete.

2. Check the Operational Hazards Report in Tiburon every Sunday.
   (see below)
   a. Log-in on Tiburon
   b. Click on “Favorites”
   c. Click on “Operational Hazards Report (4-3 Sheet)”
HYDRANT INSPECTION PROCEDURE AS CONTAINED IN THE FIRE HYDRANT MAINTENANCE KIT:

1. Locate the hydrant to be maintained by using hydrant page and the Tiburon print out.

2. Clear any weeds or debris around the hydrant.

3. Brush off the hydrant with wire brush and whisk broom to prepare for paint.

4. Paint hydrant with the appropriate colors, as needed.

5. Stencil hydrant with appropriate numbers, as needed.

6. Install reflective blue dot hydrant marker if necessary.

7. If applicable, locate gate valve and remove casing cover. If necessary, correct hydrant list to nearest one foot.

8. Remove all hydrant caps, check gaskets, and replace if damaged. Lubricate threads and replace 2-1/2-inch caps. If hydrant has two or more outlets, leave 4-1/2-inch outlet open.

9. Close gate valve. If gate valve is difficult to operate, open and close until free. Do not force gate valve by using two or more members on key.

10. Open hydrant valve completely. Inspect seat and valve, nut and washer, on bottom of cage, if applicable.


12. Open hydrant valve and flush main. (per administrative directives)

13. Shut down hydrant and replace cap.

14. Make appropriate Tiburon entry if hydrant is out of service. Department members will be held responsible for the hydrant being left in operating condition.
FIRE HYDRANT MAINTENANCE KIT INVENTORY

The Fire Hydrant Maintenance Kit shall contain:

- Appropriate container for all required items.
- Silver spray paint.
- Green spray paint.
- Red spray paint.
- Yellow spray paint.
- Black spray paint.
- Blue spray paint (if maintaining high pressure hydrants)
- Graphite oil (pint).
- 1-inch stencils (complete set).
- Hydrant gaskets, 4-1/2".
- Hydrant gaskets, 2-1/2".
- Wire brush, long handle.
- Blue hydrant markers.
Reflective Blue Hydrant Marker Diagram:

TYPICAL FIRE HYDRANT MARKER LOCATIONS

REV. & REV.
AUG. 2002
CITY OF FRESNO
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