

APPENDIX D: TECHNICAL STANDARDS AND OPERATING PROCEDURES FOR HYDRANT AND HYDRANT METER EQUIPMENT USE

[SFPUC Rules and Regulations for Hydrant Use, Rule 7.1]

SUMMARY AND BACKGROUND

Rule 7.1(d) of the San Francisco Public Utilities Commission's (SFPUC) Rules and Regulations Governing Hydrant Use for Temporary Water Supply (Regulations), adopted by Commission Resolution No. 25-0171, on December 9, 2025, as may be amended from time to time, provides that any Person that receives a Permit and Hydrant Meter Equipment from the SFPUC to connect to and draw metered water from a Hydrant for the purpose of temporary water supply (Permittee) shall ensure that the Hydrant Meter Equipment is properly connected to the Hydrant during use and disconnected from the Hydrant when not in use.

Rule 7.1(d) further provides that any connection to and drawing of water from a Hydrant with Hydrant Meter Equipment shall be conducted in accordance with these *SFPUC Technical Standards and Operating Procedures for Use of Hydrants and Hydrant Meter Equipment for Temporary Water Supply* (Standards), which are incorporated within the Regulations as Appendix D.

The purpose of these Standards is to provide Permittees with technical knowledge and understanding of how to correctly operate Hydrants and Hydrant Meter Equipment, both to protect and ensure the health and safety of San Francisco residents and businesses, and to protect and ensure the proper operation and maintenance of the SFPUC's water system and all connections to the water system.

All Permittees are required to watch the SFPUC's instructional video "*How to Connect to a Hydrant*," which is available on the SFPUC website at <https://www.sfpuc.gov/accounts-services/service-installations/fire-hydrant-request-temporary-use>, and to follow all instructions in that video as well as those in these Standards. Permittees shall also refer to **Diagrams A, B, C, and D** within these Standards for illustrations of the Hydrant Meter Equipment and how to properly connect to and operate Hydrants using this equipment.

Any non-compliance with the specific instructions provided in these Standards, or other requirements of the Regulations, by a Permittee may result in the suspension or revocation of a Permit; the confiscation of Hydrant Meter Equipment; the issuance of Citations; the imposition of administrative fines and penalties; the forfeiture of the Permittee's deposit; and the denial of future Applications for Permits, as provided in the Regulations.

Any questions about these Standards may be directed to the SFPUC Meter Shop, 1990 Newcomb Avenue, San Francisco, CA 94124, (415) 550-4969 (Monday to Friday, 7:30-11:30am, 12:00-3:00pm, except City holidays), SFWDHydrantMeters@sfgwater.org. Please also visit www.sfpuc.gov for updated contact information and business hours.

1.0 AUTHORIZED HYDRANT METER EQUIPMENT

1.0 The SFPUC provides each Permittee a hydrant meter equipment kit that includes the following items listed below. Images of the items can be found in Diagram A:

1. Hydrant Female Connection
2. Flex Hose
3. Meter Male Connection
4. Hydrant Meter
5. SFWD Backflow Prevention Check Valve
6. Two Washers
7. SFWD Spanner Wrench
8. Permit Posting (Public Notice) attached to A-Frame Barricade resting over hydrant meter

1.1 The Hydrant Meter Equipment that the SFPUC provides to each Permittee is the ONLY equipment that may be used to connect to or draw water from a Hydrant at any time. No non-SFPUC-issued equipment, such as any wrench other than the SFPUC-provided Spanner Wrench, and no hard-pipe plumbing of any form shall be used.

2.0 FLUSHING THE HYDRANT

The Permittee shall:

- 2.0 Slowly remove the Hydrant's **lower** outlet nozzle cap using the Spanner Wrench issued by the SFPUC and ensure that the cap is stored safely while the Hydrant is in use.
- 2.1 Never remove the upper outlet nozzle cap of the Hydrant, as Permittees are prohibited from accessing water from the Hydrant via the upper outlet nozzle.
- 2.2 Slowly open the Hydrant outlet at the **lower** Hydrant spindle, using the Spanner Wrench issued by the SFPUC, in order to release water. The Permittee shall make sure that water does not flood adjacent private property or street drainage and flush until the water runs clear.
- 2.3 After the water runs clear, slowly and fully close the lower Hydrant outlet.

3.0 POSITION OF HYDRANT METER

The Permittee shall:

- 3.0 Place the Hydrant Meter flat on the ground next to the Hydrant with the dial of the Hydrant Meter facing up and the dial's protective lid closed.
- 3.1 Ensure that the side of the Hydrant Meter that has the Backflow Prevention Check Valve with a "male" connection point for the Permittee's spout or hose is facing away from the Hydrant, and the arrow on the body of the Hydrant Meter is pointing away from the Hydrant in the direction that the water will flow.
- 3.2 Place a riser (e.g., wooden board(s) or plank(s)) underneath the Hydrant Meter to provide stable support for the Hydrant Meter when it is in use. Ensure that the riser has enough height to make the upper end of the Flex Hose level with the Hydrant's lower outlet nozzle, once it is connected, and not bear any weight.

4.0 CONNECTION TO HYDRANT

The Permittee shall:

- 4.0 Slowly remove the Hydrant's **lower** outlet nozzle cap using the Permittee's hands, or the Spanner Wrench, and ensure that the cap is stored safely while it is removed.
- 4.1 Never remove the upper outlet nozzle cap of the Hydrant, as Permittees are **prohibited** from accessing water from the Hydrant via the upper outlet nozzle.
- 4.2 Insert a Washer into the "female" Hydrant adapter side of the Flex Hose and connect that end of the Flex Hose to the Hydrant's lower outlet. The Permittee shall tighten the connection by hand, most but not all of the way.
- 4.3 Insert a Washer into the second end of the Flex Hose and connect that end to the inlet side of the Hydrant Meter, opposite the side with the Backflow Prevention Check Valve. The Permittee shall tighten the connection by hand, most but not all of the way.
- 4.4 Confirm that the riser is placing the Hydrant Meter in the correct position, flat on the ground and on the same level as the upper end of the Flex Hose. If it is not, the Permittee shall adjust the height of the riser until the Hydrant Meter is in the correct position, never allowing it to tilt or dangle without support.
- 4.5 Use the Spanner Wrench to further tighten both (1) the Flex Hose's connection to the Hydrant's lower outlet nozzle and (2) the Flex Hose's connection to the Hydrant Meter.
- 4.6 Never hold onto the vertical section of the Flex Hose when connecting (or disconnecting) the Hydrant Meter Equipment to the Hydrant, as it might break.
- 4.7 Connect the Permittee's own spout or hose (which is not a part of the Hydrant Meter Equipment) to the Hydrant Meter's check valve to enable use of water from the Hydrant once it is open and in operation.

5.0 OPERATION OF HYDRANT AND HYDRANT METER EQUIPMENT

The Permittee Shall

- 5.0 Use the Spanner Wrench to slowly open the Hydrant's **lower** valve spindle (which is opposite the lower outlet nozzle where the upper end of the Flex Hose is connected) by turning it in the counterclockwise direction and start to release water out of the Hydrant. Slowly opening and closing the lower valve spindle will protect the Hydrant and prevent any surges.
- 5.1 Check for leaks at connections and tighten connections as necessary.
- 5.2 Never open the upper valve spindle, as its operation by Permittees is **prohibited**.
- 5.3 Keep the Hydrant's lower spindle valve open fully at all times that the Hydrant is in use, as partial opening of the spindle valve may cause chattering and water hammers.

- 5.4 Keep the Spanner Wrench attached to the lower valve spindle at all times that the Hydrant is in use, so it may quickly be used to open or close the Hydrant in the event of an emergency.
- 5.5 Regulate the flow of water from the Hydrant through the Hydrant Meter Equipment at all times that the Hydrant is in use.
- 5.6 Ensure that there are no leaks at any connection point when the Hydrant and Hydrant Meter Equipment are in use. The Permittee shall immediately stop operation of the Hydrant and Hydrant Meter Equipment in the event of any detected leak and report the leak to the SFPUC Meter Shop at 415-550-4969.
- 5.7 Never leave the Hydrant Meter Equipment unattended at any time that it is connected to the Hydrant and in use.

6.0 TURNING OFF HYDRANT

The Permittee shall:

- 6.1 Turn off the flow of water from the Hydrant whenever the Permittee does not need to access the Hydrant for water supply.
- 6.2 Turn off the flow of water from the Hydrant by slowly turning, in the clockwise direction, the lower valve spindle on the Hydrant, using the Spanner Wrench, until it is in the fully closed position. Ensure that no water is leaking, or “weeping,” from the Hydrant once it is turned off.

7.0 DISCONNECTION OF HYDRANT METER EQUIPMENT

The Permittee shall:

- 7.0 Disconnect the Flex Hose from the Hydrant and the Hydrant Meter using the Spanner Wrench, whenever the Permittee does not need to access the Hydrant for water supply, including at the end of each day when work stops and during times of each day when no work is in progress.
- 7.1 Reattach the Hydrant’s lower outlet nozzle cap once the Flex Hose is disconnected, to protect the nozzle’s threads, and secure the cap tightly using the Spanner Wrench.
- 7.2 Keep the Hydrant Meter Equipment in a safe and secure place when it is not in use, handle it with care during transport and storage, and promptly return it to the SFPUC at the end of the Permit term as required in the Regulations.

Diagrams

The SFPUC provides the following diagrams to support proper use of fire hydrants. Please refer to Diagrams A, B, C, and D below and watch the SFPUC Meter Shop’s instructional video “How to Connect to a Hydrant” on the SFPUC website at <https://sfpuc.gov/accounts-services/service-installations/hydrant-meters>.

Diagram A: Diagram

Photo image of the Hydrant Meter Equipment that the SFPUC provides to each Permittee for use includes the following:

Diagram B: Photo image of proper way to connect to hydrant using SFPUC provided hydrant meter equipment

Diagram C: Photo images 1) of proper way to connect to hydrant using SFPUC provided hydrant meter equipment with specific instructions, and 2) SFPUC provided spanner wrench.

Diagram D: Photo image of hydrant meter connection, showing proper and improper connections. Only SFPUC wrench may be used. Permittee is required to review images prior to use.

Photo diagrams A – D as described above on the proceeding pages.

Diagram A – SFWD Hydrant Meter Kit

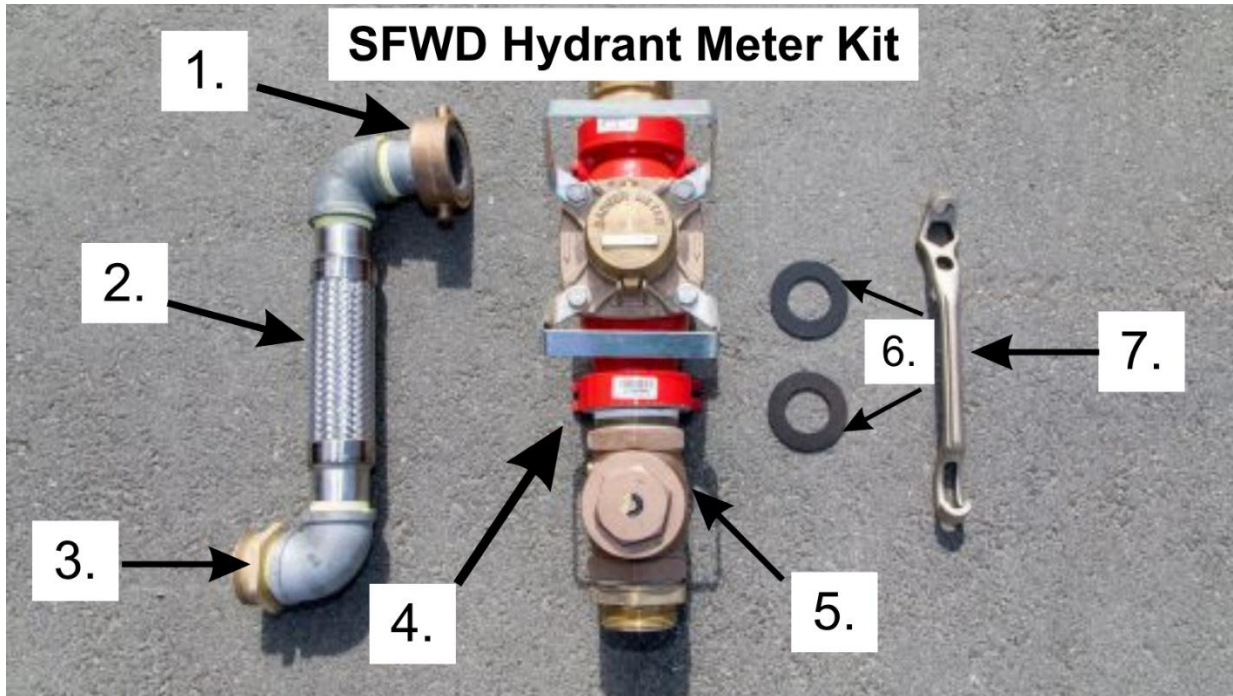


Photo of the SFWD hydrant meter kit and its contents.

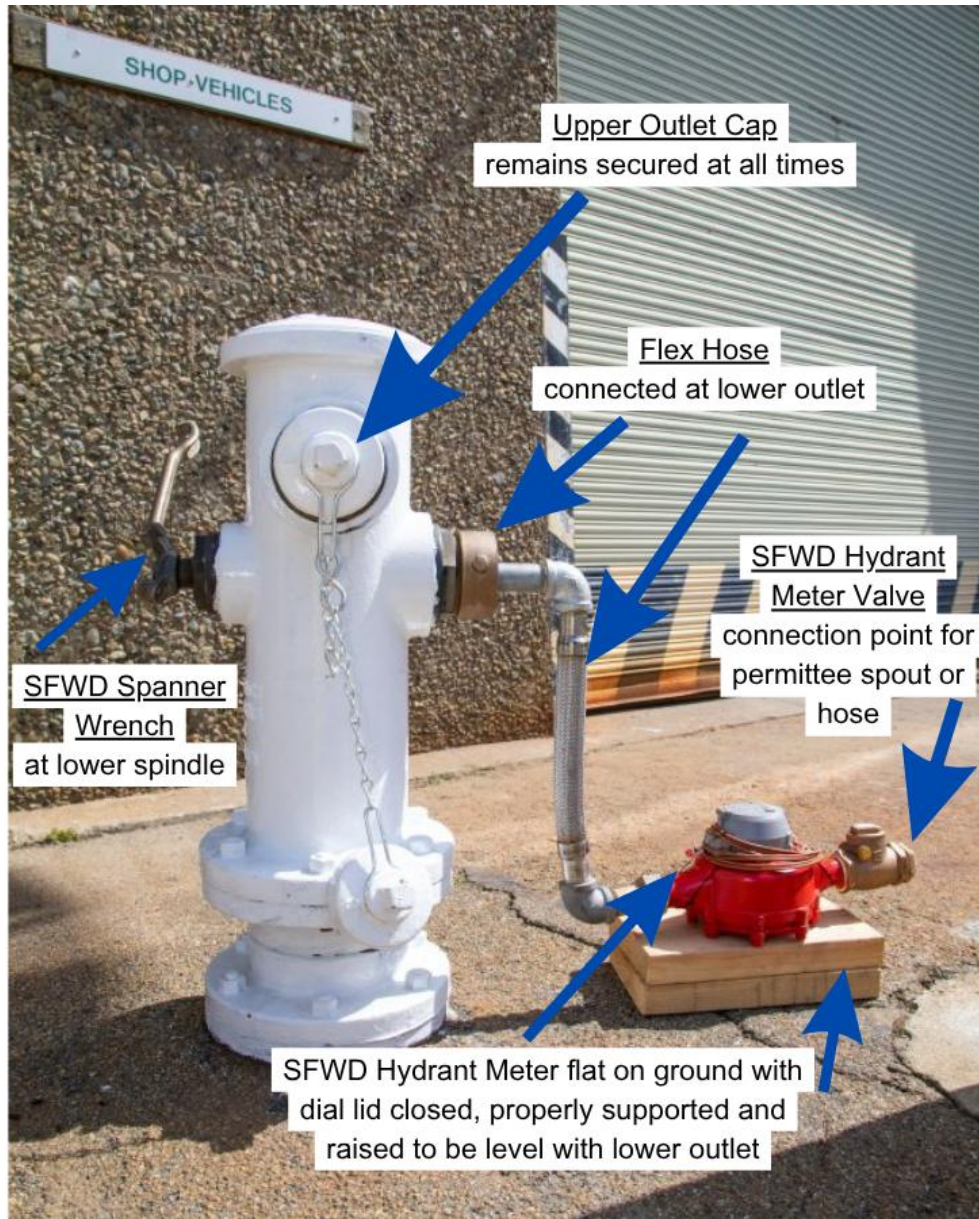


Permit posting (public notice) attached to a-frame barricade.

Diagram A Key

1. Hydrant Female Connection
2. Flex Hose
3. Meter Male Connection
4. Hydrant Meter
5. SFWD Backflow Prevention Check Valve
6. Two Washers
7. SFWD Spanner Wrench
8. Permit Posting (Public Notice) attached to A-Frame Barricade resting over hydrant meter

Diagram B - Demonstrates Proper/Correct Connection Set Up of Hydrant Meter



Picture that demonstrates proper/correct connection set up of hydrant meter.

(*IMPORTANT NOTE - Damage to hydrant nozzle may impede emergency firefighting response if rescue crews are unable to connect fire hoses to the fire hydrant due to stripped nozzle threads caused by improper or unpermitted hydrant connections).

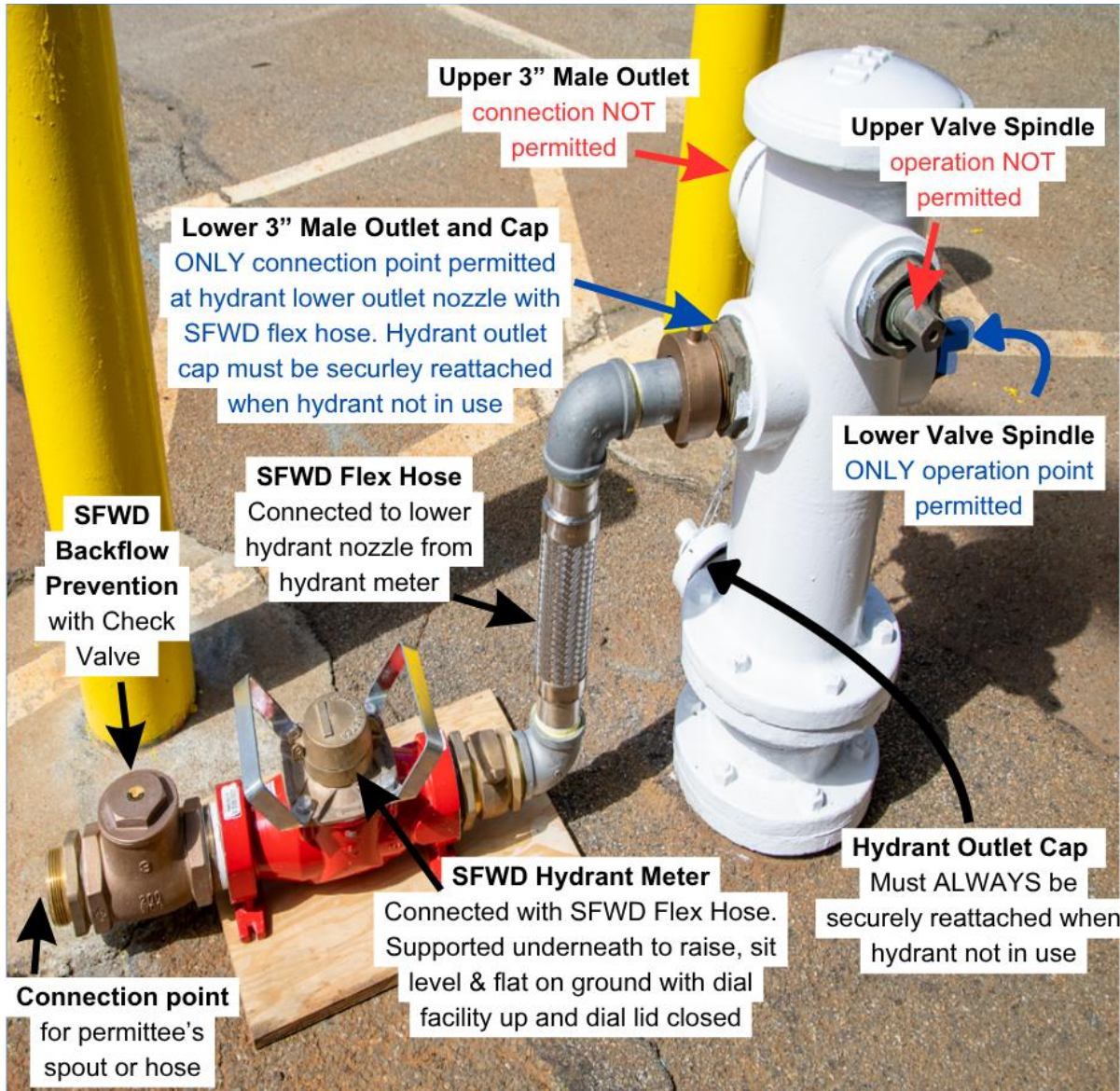
Diagram C - Properly Connected Hydrant and Hydrant Meter Equipment to SFWD Fire Hydrant

Diagram C Key

Red = Reserved for SFFD use only. Permittees never allowed to use Hydrant's upper spindle or outlet.

Blue = Hydrant Permittees may only use Hydrant's lower spindle and outlet, and SFFD's Spanner Wrench.

Black = Names of SFFD Hydrant Meter Equipment and Hydrant parts.



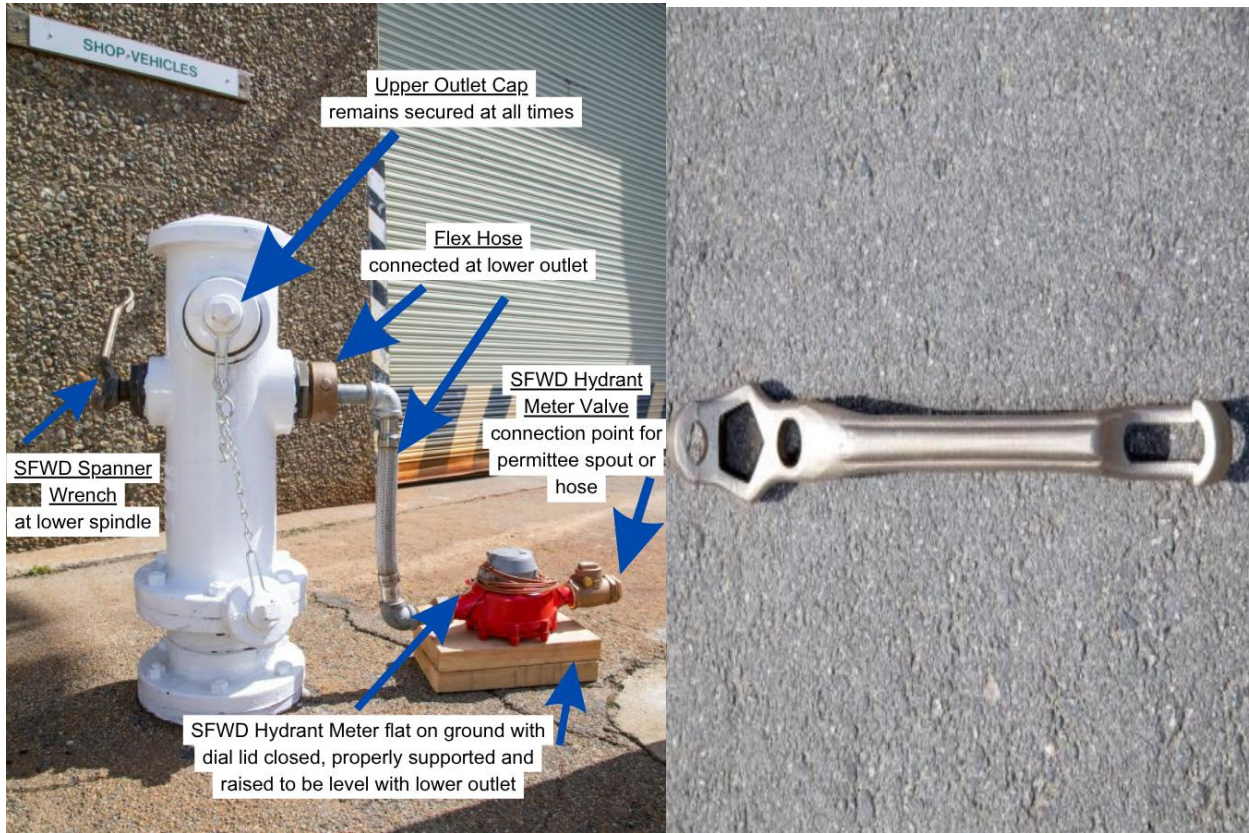
Demonstration of all parts of the hydrant and hydrant meter equipment properly connected to SFWD fire hydrant.



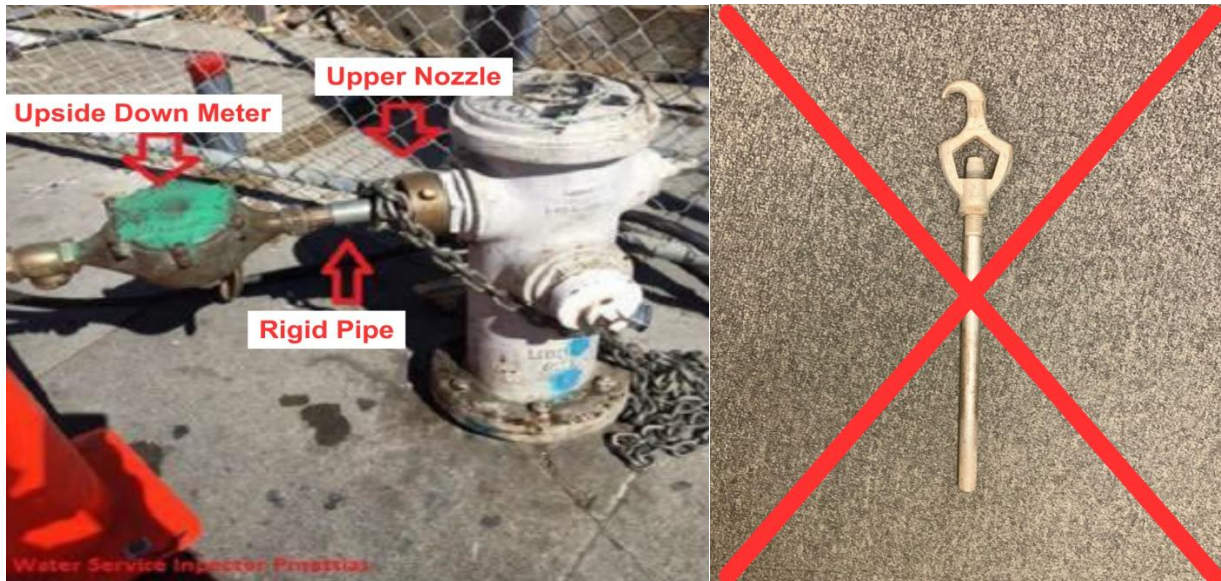
SFWD spanner wrench the ONLY permissible wrench for operation of hydrant valve spindle.

Diagram D Hydrant Meter Connections

Only Permissible SFWD Hydrant Meter Connection



Proper/correct connection set up of hydrant meter. SFWD spanner wrench.



INCORRECT connection of hydrant meter. Non-SFWD approved wrench (never permitted).