

Fire Hydrant Servicing in Local Government Areas

This document is intended to assist fire crews and other interested parties in the procedure for servicing fire hydrants. With very few if any exceptions all fire hydrants will be the below ground type.

Fire hydrants spend most of their time unused and ignored, yet they are called upon in a moment's notice to provide fire flow for the protection homes and



business's. They are an indispensable aspect of the overall fire protection of the urban rural environment but useless unless regularly maintained. Also as they need to be located easily the location identification marking should be kept in good repair so that firefighters can quickly identify their location.

Fire Hydrant Ownership and Use

In 2012 the ownership of fire hydrants was transferred from DFES in gazetted fire districts and local governments in all other areas where fire hydrants are installed on public water mains throughout Western Australia. There are approximately 85,000 installed on these mains throughout Western Australia and approximately 6,000 of these are located in areas outside of a gazetted area where local governments play a greater role in local fire protection.

Although fire hydrants are often used for other purposes, their primary function is to supply water for fire protection. Any other use is considered of secondary importance and rigorously controlled for the protection of the water distribution system. Water Corporation have asked that fire crews **DO NOT** show water whilst servicing fire hydrants

Hydrant Servicing

Street main hydrants are to be serviced at least once every 18 months to ensure identification of location and operational performance.



Servicing Standard

- Inspect hydrant visually for leaks
- Check bolts on the hydrant are in place and not excessively corroded
- Ensure spindle and clutches are in good order
- Remove roots/debris from hydrant box. Dig out excess sand to level below clutches.
- Fit standpipe to check lug clearance.
- Lubricate spindle packing gland (SEW Hydrant spindles only)
- Paint the top of the clutches, spindle and hydrant lid

- Check RRPM or paint road marking
- Check the pole markers and replace as required

Servicing Standard

Do Not Show Water. The unnecessary opening of hydrants during servicing is contrary to community water conservation attitudes and can result in turbidity within water mains.

Hydrants are still to be flushed prior to connection to a fire appliance to ensure debris does not enter the tank or pump.)

Water Dynamics

When carrying out the annual servicing of fire hydrants it is important that fire crews are mindful of several important concepts that must be understood to avoid causing damage to the hydrants and to the water system.

Water Hammer

Water hammer is caused by an abrupt change in the velocity of flowing water. It is most often the result of shutting down a valve or hydrant too quickly. Imagine driving into a brick wall at high speed the energy of your momentum has to be transferred somewhere. In this example it is shared, though unequally, by you, the car, and the brick wall. Water is incompressible; it will not absorb ANY of the energy it gives off by being forced to suddenly decelerate. Therefore, the system, pipes, hydrants, and ground have to absorb all of the energy. If a hydrant is shut down too quickly, the weak link in the system will go first, wherever this is it can result in a leak or discoloured water.

Discoloured Water

Discoloured water is a common complaint received by Water Corporation from householders. This may be caused by several things. One of them being a sudden change in the amount of flow in water main, such as when operating a fire hydrant. During normal conditions, water flows through the centre portion of a water main. Because of friction between water and the wall of the pipe it is easier for the centre portion to flow than the outer portion. As the average velocity increases, so too will the velocity of the water close to the wall of the pipe. As this water moves faster, it begins to stir up sediment that usually stays at the bottom of the pipe. This sediment doesn't settle until the velocity slows.

For More Information

<http://extranet/sites/volunteers/members/SharedRepository/opsresources/Ops%20Resources%20%20Administrative%20Procedures/SAP%203.3.B%20-%20Hydrant%20Servicing.pdf>

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