



VILLAGE OF MOUNT PROSPECT - PUBLIC WORKS STANDARD OPERATING POLICIES & PROCEDURES

DOC NUMBER: WS-09

REVISED DATE: 12.01.2018

CATEGORY: Water / Sewer Division

EFFECTIVE DATE: 12.01.2016

FIRE HYDRANT FLUSHING AND INSPECTION PROGRAM

DESCRIPTION

The Fire Hydrant Flushing Program is a preventative maintenance activity designed to improve the quality and potability of water carried through our distribution system. Fire hydrants act as a point where stale water can be expelled and increased velocity levels will remove biofilm and other unwanted materials which have accumulated within the water mains.

During the Fire Hydrant Flushing Program, staff inspects fire hydrants using the recommended procedures that are outlined in the American Water Works Association (AWWA) M17, 4th edition. Staff conducts checks on each fire hydrant for the following issues:

Fire Hydrant Checklist	
1. Caps	7. Leakage
2. Chains	8. Ease of Operation
3. Paint / Appearance	9. Flange Leaks
4. Breakaway Devices	10. Outlet Leaks
5. Drainage	11. Packing or Seal Leaks
6. Presence of Foreign Materials	12. Overall Operation

Issues identified on the fire hydrant checklist result in the annual repair or scheduling for replacement of 25 fire hydrants that are seasonally inspected. Inoperable fire hydrants are bagged and the Fire Department is notified.

TARGET (2017)

1. Blue Section on the Fire Hydrant Flushing & Inspection Map.

GOAL

1. Operate and inspect all Village-owned fire hydrants accessible to Water/Sewer personnel (with the exception of the (a) Randhurst Shopping Center, (b) City Beverage, and (c) Bosch private fire loops) on a 4-year cycle in this program.



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OBJECTIVE

1. Operate and inspect +/- 600 fire hydrants (or 25% of the system) of the Village-owned fire hydrants over a 10-week period per year.

BENCHMARK

1. Operate and inspect fire hydrants at an average rate of twenty (20) per day.

PERFORMANCE MEASURE/INDICATOR

1. **Indicator:** The number of fire hydrants operated and inspected in each calendar year.
2. **Measure:** The number of hours spent operating and inspecting fire hydrants in each calendar year.

LABOR

- One (1) Maintenance Worker
- One (1) Seasonal Part-Time Maintenance Worker

VEHICLE/EQUIPMENT

Vehicle:

- One (1) Pickup Truck with Arrow Board

Equipment:

- Two (2) Flush boards
- Two (2) Hydrant Wrenches
- Two (2) Flashlights
- Two (2) Safety Vests



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SCHEDULE

This schedule represents the time frame required to complete tasks associated with the Fire Hydrant Flushing and Inspection Program:

Schedule											
January	February	March	April	May	June	July	August	September	October	November	December

REFERENCES

Exhibit 1 – Fire Hydrant Inspection Worksheet (pg. 4)

Exhibit 2 – Fire Hydrant Flushing & Inspection Map (pg. 5)



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EXHIBIT 1 – FIRE HYDRANT INSPECTION WORKSHEET

The Fire Hydrant Inspection Worksheet provides an example of the form that is used to routinely record data on the fire hydrants that are inspected in this program. During the inspection, all ports are lubed, the hydrant is flowed to a scouring rate, and the hydrant body is checked for deficiency. The results are transferred to work orders in the Hansen Infor AMMS. Any issue found per the inspection worksheet is resolved under a separate work order, including hydrant replacement (if needed).

Fire Hydrant Inspection Worksheet

Date		Time:	
Crew			
Hansen Hydrant ID			
Main Size			
Location			
Watermain Material	Cast Iron	Ductile Iron	
Aux valve	Yes	No	
Aux valve	Open Left	Open Right	
Hydrant Bonnet Color	Red - 6"	Orange - 8"	Green - 10"+
Hydrant Manufacturer	Mueller	TCIW	
Hydrant Type or model			
Bury depth (feet, inches)			
Hydrant Flag	Yes	No	
Hydrant marker post	Yes	No	
Main Valve (inches)	4 - 1/2"	5- 1/4"	
Inlet Coeff.	Rounded 0.9	Square 0.8	Projecting 0.7
Hose outlet size (inches)	2 - 1/2"	Other:	
Operating Nut Shape	Square (4)	Pentagon (5)	Octagon (6) Hex (8)
Operating Nut - size	2"	Other:	
Operating Nut- turns			
Flow gpm >440gpm <665gpm			
Water used (gal= gpm flow x minutes)			
Condition of water			
Scouring Flush duration (minutes) hydrant depth + hydrant lead length			
line static pressure (psi)			
pH		Temperature:	
Cl ² residual		Free:	Total:
ATP test			
Condition	Good	Bad	Comments
Paint			
Side ports			
Center port			
Chains			
Cap			
Top nut			
Visible aux.valve			
Remarks			
Inoperable	Yes	No	
Bagged	Yes	No	

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EXHIBIT 2 – FIRE HYDRANT FLUSHING & INSPECTION MAP

The Fire Hydrant Flushing & Inspection Map provides an overview of the area that will be serviced in 2017.

