



INSPECTION AND MAINTENANCE, FIRE HYDRANTS WORKSHEET

Date:	_____	Location:	_____
Hydrant ID #:	_____	Inspected By:	_____
Make & Model:	_____	Phone #:	_____
Year:	_____	Storz Nozzle:	_____
# of Nozzles:	<u>4 1/2"</u> - <u>2 1/2"</u>	GPS:	<u>x</u> _____ <u>y</u> _____

SIMPLIFIED INSPECTION CHECKLIST

- Visually inspect the area – 36" horizontal clearance on all sides.
- Visually check hydrant for visible damages. Locate isolation valve on hydrant run.
- Only use a hydrant operating wrench (DO NOT USE A PIPE WRENCH) on operating nut and nozzle caps. Make sure wrench is available.
- Check for cracks in hydrant barrel and traffic flange.
- Check for worn outlet threads.
- Check for worn hydrant operating nut.
- Clean and lubricate all stems, caps, plugs, and threads.
- Tighten caps, but leave one slightly loose, to allow air to escape during next step.
- Open hydrant **SLOWLY (one revolution every 5 seconds)** tighten cap and pressurize hydrant for inspection.
- Check for leakage. Leaks in outlets or at top of hydrant.
- Close hydrant **SLOWLY (one revolution every 5 seconds)**, loosen nozzle cap to allow hydrant to drain.
- Remove one cap and install a diffuser on nozzle or use ground protection.
- **SLOWLY (one revolution every 5 seconds)** open hydrant fully and flush water until all foreign material has cleared.
- Flow shall be maintained for not less than 1 minute.
- Reduce flow **SLOWLY (one revolution every 5 seconds)** and shut off hydrant.
- Hydrant shall be observed for proper drainage from the barrel.
- Full drainage shall take no longer than 60 minutes.
- Where soil conditions or other factors are such that the hydrant barrel does not drain within 60 minutes, the water in the barrel shall be pumped out.
- Remove diffuser and install cap, make sure all caps are slightly tighter than hand tight.

Comments:

PROCEDURE

Opening a hydrant rapidly can cause a negative pressure fluctuation. Hydrants should be opened slowly until fully opened. Closing the hydrant is more critical, and it must be done very slowly. Closing a hydrant rapidly causes a pressure surge, or water hammer, and this could cause damage to the distribution system. To prevent damage to the system, it is imperative that hydrants are opened and closed slowly.

As part of the inspection procedure, visually inspect the hydrant for any defects. Check the bolts and breakaway flange, the nozzle-caps and gaskets, and ensure the caps are tightened. A loose cap or damaged nozzle can blow off under pressure. Visible leaks shall be stopped, and defective elements shall be repaired or replaced.

1. Visually inspect the area around the hydrant.
 - Hydrants are required to have a minimum clearance of three (3) feet in all directions.
 - In order to protect landscape, yards, vehicles, etc., it may be necessary to use a diffuser or hose to direct water away from the surrounding area.
2. Visually check hydrant.
 - Remove all caps with a proper hydrant wrench and check the threads. Remove the first cap slowly to ensure there is no pressure on the hydrant. Clean threads with a wire brush. Lubricate the threads if necessary.
 - Inspect gaskets for defects.
 - Check for water or ice in barrel.
 - Replace caps.
 - If hydrant is equipped with safety chains, ensure the chains are loose and do not bind on the cap.
 - Check the breakaway flange for damage or loose bolts.
 - Lubricate the operating nut if required.
 - Some hydrants have a grease fitting on the operating nut that requires grease. Contact the manufacturer for specific instructions.
3. Open hydrant SLOWLY (one revolution every 5 seconds or longer) to fully open position with a proper hydrant wrench (do not use a pipe wrench to operate the hydrant) to pressurize hydrant for inspection.
 - Check for leakage at the flanges, operating nut, nozzles, and nozzle caps.
4. Reduce flow VERY SLOWLY (one revolution every 5 seconds or longer) and shut off hydrant.
5. Install hose or diffuser if necessary.
 - Replace caps on all but one outlet and attach a hose or diffuser if necessary to protect surrounding area.
 - Ensure caps are tightened. A loose cap can blow off under pressure.
6. Open the hydrant SLOWLY approximately 3 to 5 turns clockwise. Allow time for the air to escape from the hydrant barrel. Then SLOWLY (one revolution every 5 seconds or longer) open hydrant to the fully open position to check operation.
 - Allow the water to flow for a minimum of one minute to flush the hydrant and line. Flush until water is clear. 1 minute minimum.
 - Check water clarity with a solid white cup.
 - Once the water is clear, close down the hydrant VERY SLOWLY (one revolution every 5 seconds or longer).

Be aware that some hydrants may not seem to flow down when you turn them. This usually means the hydrant may slam (it will have some slop in the stem and may make a thump sound when closing). This causes water hammer and could cause major damage to the water distribution system. This is why it is imperative that hydrants are closed VERY SLOWLY. The owner or contractor will be held liable for any damage caused to the water distribution system due to improper operation of hydrants.

7. Reduce flow VERY SLOWLY (one revolution every 5 seconds or longer) and shut off hydrant.
 - After the hydrant is closed, back off on the operating nut about $\frac{1}{4}$ turn. This removes the pressure from the operating nut and stem. The main valve will remain closed.
8. Check for hydrant drainage.
 - Wait to make sure the hydrant stops dripping. It should not be necessary to close the hydrant with great force.
 - If the hydrant does not shut off completely, there may be debris stuck between the disc and seat. Over tightening of the hydrant can do permanent damage to the disc. Open the hydrant to flush the debris, and then close down the hydrant again. If the hydrant will not shut off completely, notify the water Dept at 219-996-4641.
9. Remove hose or fittings, replace cap.
 - Tighten the cap and then back off slightly. Caps should be tight enough to prevent removal by hand but loose enough to be removed with ease using a hydrant wrench.
10. Report any out-of-service hydrants to the Town of Hebron Water Department at 219-996-4641.