

Flow Testing and Color Coding Fire Hydrants

By Russ Topp, Circuit Rider

Over the last couple of months I have had several requests from water systems to use our fire hydrant flow gauges. I thought it might be a good time for a refresher course on hydrant flushing and color-coding. Color-coding just might help prevent a collapsed water main or a piece of water main from being sucked into a \$200,000 fire truck. It seems the fire truck manufacturers just keep making those new trucks bigger and better every year. Some of these trucks can pump up to 1500 gallons per minute or more. The problem is that most of the water mains in our towns across the state are the same mains that used to supply trucks that were lucky to pump 100 gallons per minute.

Here are some suggested steps to take for fire flow testing. You will need a hydrant flow gauge and a hydrant pressure gauge. If you don't have a flow gauge, give us a call and we can loan you one. A pressure gauge can be made from an old hydrant cap that is tapped to accept a pressure gauge.

1. Flush the hydrant you want to test to get rid of the rust, sand, iron and manganese and any other foreign material. This will prevent the pressure gauges from becoming fouled.
2. If you want to record the residual pressure on a hydrant downstream you will need a helper. A set of two-way radios is very helpful.
3. Put the flow gauge on a hydrant to be flow tested.
4. Put the residual pressure gauge on a hydrant downstream.
5. Open the hydrant with the residual pressure gauge and record the static pressure.
6. Open the flow hydrant and record the flow.
7. While the flow hydrant is flowing have your partner record the remaining residual pressure on his pressure gauge.

8. Slowly close the flow hydrant. And remove flow recorder.
9. Close residual pressure hydrant and remove pressure gauge.
10. Record readings on the hydrant card.

Now that you have gone to all the trouble to fire flow your hydrants, it would be a great time to color-code them. Don't forget to educate your local fire department as to how to identify approximately how much water they could expect to get from each fire hydrant.

The American Water Works Association (AWWA) recommends to color-code them as follows.

Class	Flow	Color of Bonnets & Caps
AA	1,500 gpm or greater	Blue
A	1,000 gpm or greater	Green
B	500 – 1,000 gpm	Orange
C	Less than 500 gpm	Red

Firefighters can pick from available hydrants the one with the best flow, using a traffic light scheme for ease of memory. Green means go, the hydrant flow will be over 1,000 gpm; Red means stop, the flow is less than 500 gpm; Orange means caution, the flow is between 500 and 1,000 gpm. Blue means 1,500 gpm or greater.

If you need help flowing your hydrants or need a flow gauge please give us a call.