

This document addresses frequently asked questions about household water pressure regulators. For more information, contact Heard County Water Authority at 706-675-3358.

**Q1: What is the function of a water pressure regulator?**

A1: A household water pressure regulator reduces the water pressure from potentially high pressure of a public water main to a pressure that is usable by the customer and compatible with normal household plumbing and fixtures. It also helps prevent pressure surges from entering the household plumbing from the public water main. High water pressure can result in dripping faucets and damaged water pipes, and it can damage fixtures and appliances. Sometimes, however, the device itself can develop problems. The repair will often require a new regulator, but knowing what kind of problems can occur with this equipment can help users to minimize the cost of the eventual collapse.

**Q2: How does a pressure regulator work?**

A2: A pressure regulator is a spring-loaded automatic valve that regulates pressure on the downstream (house) side of the valve. Altering the spring compression changes the downstream pressure.

**Q3: Where should the pressure regulator be installed?**

A3: The pressure regulator should be installed just downstream, (on the house side) of the water meter.

**Q4: How do I know if the pressure regulator is working?**

A4: The best way to know if the pressure regulator is working is to install a pressure gauge on each side of the regulator. If the upstream gauge reads higher than the downstream gauge, then the regulator is probably working. If there are no gauges, you might notice symptoms of pressure regulator malfunction. These include sustained or initial bursts of unusually high pressure at faucets and showerheads and water being discharged from the relief valve of your water heater.

**Q5: Can I adjust and repair my pressure regulator?**

A5: Yes. A homeowner or a plumber can use manufacturer's instructions for adjustment. The adjustment mechanism is usually a screw on top of the regulator. Turning this screw changes the spring compression. Generally, turning the screw clockwise increases house water pressure and turning the screw counter-clockwise reduces house pressure. Repair kits for rebuilding pressure regulators are usually available from the manufacturer.

NOTE: Do not adjust your regulator if pressure drops or rises until you have checked your plumbing system and/or contacted the water utility.

A drop in pressure could be caused by the utility main or a leak in your plumbing. Contact the utility company about a possible pressure drop on the lines in your area and check your plumbing or have a qualified professional check your plumbing. Increasing your regulator setting could be harmful to your plumbing once the system has been restored to normal operations.

A rise could be caused by water expansion due to the water heater. A pressure rise may not be regulator failure. Have your plumbing checked by a qualified professional.

**Q6: To what pressure should I adjust my pressure regulator?**

A6: This is partly a matter of owner preference. Most homeowners set their pressure at approximately 50 pounds per square inch (psi).

Note: According to the theory, the rate of leakage through a hole in a pipe is proportional to the square root of the pressure, determines how pressure affects leak rates. However, using measurements in real water distribution systems it has been found that pressure has a much greater effect on the leakage rate

than the theory predicts. To illustrate this point, doubling the pressure in a pipeline will increase the theoretical rate of leakage by approximately 40 %. However, in practice the real increase in the rate of leakage is typically 100 %, and increases as high as 570 % have been reported. So lower settings will help conserve water and prolong plumbing and fitting life while higher settings will have the opposite effects.

**Q7: Are pressure regulators required?**

A7: Yes. The Heard County Water Authority requires the customer to install a pressure reducing valve (PRV) on the customer’s side to prevent high pressure-related damage to household plumbing, fixtures and equipment. The HCWA is not responsible for regulating pressure beyond the meter.

**Q8: Why must I have a pressure regulator if the water pressure at the public main is low or moderate?**

A8: There are two reasons: 1.) Most public water mains are supplied by pumps or pressure reducing valves. This equipment may produce temporary high pressure surges, which can be transmitted to household plumbing. A properly operating household pressure regulator will help prevent these surges from entering your plumbing. 2.) Your municipality might increase the pressure in the main that supplies your house.

**Q9: Who is responsible for installing and maintaining the pressure regulator?**

A9: The property owner is responsible for installing and maintaining the pressure regulator, as well as any and all damage associated with the failure of it. The property owner is also responsible for any and all damage caused if there is no regulator.

