DISTRICT APPROVED FLOW METERS

The water user shall select the proper size, pressure rating, and operating range (minimum and maximum GPM) for his or her water flow meter installation and properly install the meter in accordance with the Lower Loup NRD's requirements and the manufacturer's instructions.

1. All meters shall be warranted to register not less than 98% nor more than 102% of the actual volume of water passing the meter for all rates of flow within the meter size's range of flow.

2. The meter shall be equipped with a direct reading rate-of-flow indicator showing instantaneous flow in gallons per minute, or a sweep hand indicator for which rate-of flow can be determined by timing. The meter registry shall have a visual, volume-recording totalizer which shall record in acre inches.

3. The meter shall be located in such a manner as to measure the entire flow from the well, except when a single meter is installed in such a manner as to measure the combined flow from two or more wells, the meter shall then be installed to measure the combined flow prior to entering the distribution system.

4. The meter must also be installed in such a manner that there shall be a full pipe flow of water at all times while water is being pumped. Full pipe flow can be achieved by elevating a downstream section of pipe, constructing a “gooseneck” in the downstream pipe, or installing a control valve downstream of the meter to create back pressure. If your system is under pressure, you will normally have full pipe flow.

5. Pipe flow is influenced by valves, elbows, check valves or other obstructions or conditions which create turbulent or jetting flow. Minimums of unobstructed straight run of pipe upstream and downstream of the meter installation are needed to correct these flow problems. This straight run of pipe must be sufficient for turbulent water to settle down to smooth flow conditions.

6. There are two types of turbulent flows, jetting and non-jetting. Non-jetting flows occur downstream of turbine pump discharges, pipe elbows, cooling coils, etc. Jetting flows typically occur downstream of check valves but are also developed from pressure regulating valves and other in-pipe restrictions. Use of straightening vanes immediately upstream of a propeller meter (within 5 pipe diameters of the propeller) is recommended, the installation of vanes can be used to lessen the amount of straight pipe required. The piping requirements discussed below are in “pipe diameters”; for example, if the meter is installed in an 8 inch pipe, 10 pipe diameters are 80 inches.

7. All meters must have an anti-reverse feature and an overrun bearing assembly.

The Lower Loup NRD maintains a listing of water flow meters that meet District specifications, this list will be compiled on the basis of manufacturer's specifications provided. This is not an endorsement of the products, because a meter is not on the list does not indicate the meter doesn't meet specifications. If the meter a producer wishes to use is not on this list, please contact the Lower Loup NRD. After a review of manufacturer's specifications any meter which meets Lower Loup NRD guidelines may be added.

over

Lower Loup Natural Resources District
Approved Flow Meter List
January 2014

Geyser Propeller Flow Meters

McCrometer Propeller Flow Meters

Netafim

Sparling Propeller Flow Meters

All meters should be installed according to manufacturer's specifications.