



Water Meter Specifications for Applicable Permit-Exempt Wells in the Walla Walla Watershed (WRIA 32)

Many new well users in the Walla Walla River basin are now required to install a meter to record and report their water use, as specified in the amended Walla Walla Water Resources Program rule effective Sept. 5, 2007 (WAC 173-532). The requirements apply to new permit-exempt wells accessing the gravel aquifer in high-density areas—those areas zoned for one or more residences per 10 acres.

Water use must be recorded monthly and sent to Ecology by December 31 of each year.

The following provides a general outline of meter, interface unit, and installation requirements. See contact list at the end for assistance.

Meter Specifications

- Meters must measure cold water flow in one direction only.
- Meters must use positive displacement technology.
- Meters must comply with:
 - American Water Works Association (AWWA) standard C700-latest revision.
 - AWWA and National Institute of Standards and Technology (NIST) standards for cold water meters, as tested under guarantee by the manufacturer.
- Meter must include an absolute encoder register that:
 - Conforms to AWWA standard C-707-latest revision.
 - Is compatible with a Neptune R900® Meter Interface Unit (MIU) for automatic meter reading.
- The meter manufacturer must be certified, or in process of being certified, as meeting ISO 9001 2000 standards.
- The meter design must include meter box specifications.

Meter Interface Unit (MIU) Neptune R900®

- The meter must include a Neptune R900® MIU meeting NIST standards for automated meter reading systems.
- The MIU must be compatible with a Neptune CE5320X handheld Data Collector.
- The MIU must interface with one of the following encoders:
 - Neptune ARB® III, IV, or V.
 - ProRead™ (ARB VI).
 - E-coder (ARB VII).
 - Sensus ECR® II or III.¹

¹ When programmed in ECR II 6-digit format absolute encoders registers via a 3-conductor wire without need for special configuration to the MIU.

- A lithium battery with capacitor must supply the power to the MIU. The battery must be field replaceable, and designed for at least a 20-year life expectancy.
- Manufacturer must be certified, or in process of being certified, as meeting ISO 9001 2000 standards.

Installation Specifications

- The meter must be installed according to manufacture specifications despite varying installation conditions. For example: variable pipe-fittings, pipe sizes, well locations, and landscape conditions.
- Meter installation must assure an even velocity profile. Installers must use straight sections of pipe before and after the meter, straightening vanes, or other flow conditioning devices as necessary to provide even flow through the meter.
- Meters will be installed 8 to 12 inches below the meter box lid, or as appropriate for location and geographic area. Field inspections may be conducted by Ecology staff: inspections must confirm proper installation, functioning, and adherence to specifications.
- It is the home builder's or well owner's responsibility to maintain the meter and meter box in good working order. If installation does not meet specifications or there are abnormal readings, the home builder or well owner must assure that equipment is reinstalled, repaired, or replaced as necessary.

For More Information or Assistance:

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