

GUIDE TO RESIDENTIAL WATER SUPPLY DEVELOPMENT

STEVENS COUNTY LAND SERVICES PERMIT CENTER

APRIL 2010

Customer Service Bulletin # **B-7**

Developing a water supply for residential use is a crucial part of the development process. Water is both a necessity for development, and a valuable resource. Water sources intended for domestic use must meet certain criteria for quality and quantity. The following is the regulatory requirements that relate to the development and protection of your residential water supply.

1. WATER SUPPLY INFORMATION REQUIRED FOR BUILDING PERMITS. The Stevens County Building Department will require, by state law (RCW 19.27.097), proof of adequate and potable water *prior* to issuance of a building permit for a new home, manufactured home or commercial structure.. This can be demonstrated through a certification process for a private water source or by a letter from the owner/operator of an approved community water supply system that authorizes your hook-up.

2. PRIVATE WATER SUPPLY. A private water supply is one water source that serves only one single family residence. To get a building permit, you need to submit a "Potable Water Certification Form" together with the requested water quality and quantity information. The following represents the minimum standards for water quality, quantity, well location and construction for private water supplies.

QUALITY: Water testing for **coliform bacteria, nitrate, lead and arsenic.** The tests must be performed by a laboratory certified by the Washington State Department of Health. A list of certified laboratories is available from the Building Department. To be acceptable, your water's test results must be less than two years old and comply with the following minimum requirements:

- | | |
|------------------|--------------------------------|
| • Total Coliform | None present |
| • Nitrate | Less than or equal to 10 mg/L |
| • Lead | Less than or equal to .05 mg/L |
| • Arsenic | Less than or equal to .05 mg/L |

QUANTITY: In order to be considered adequate for domestic use, a water system must be able to **produce a minimum of 800 gallons per day.** This is a minimum quantity and does not include water needed for fire protection, irrigation or other uses. Documentation required for quantity can include any of the following:

- A well log showing quantity. If you have an existing drilled well, but no copy of the well log, you may obtain a copy at the Washington State Dept. of Ecology (DOE) Water Resources Office [(509) 329-3400]. Well drillers are required to file a well log with DOE after they drill a well. To get a copy, you will need to provide DOE the legal description of the property and owner's name at the time the well was drilled. You can also go online to the DOE website to search for a well report at www.ecy.wa.gov. Click on the Water Resources link, then Wells and select well log report search.
- A pump test, air test or bailer test, independently performed by a well driller, pump dealer or other party qualified to perform such a test. A property owner may perform the pump test but must document how the amount was obtained. See the handout on pump test procedures for further information or contact a water system professional.
- If the property owner has obtained a water right from the state Department of Ecology that shows the source is approved for **domestic** supply, it would document that the water source meets the requirement for adequate water (but not potable water).

WELL LOCATION: The location of a water source can have a major impact on the quality of your water. For that reason, the well must meet these location requirements identified in Chapter 173-160 WAC Minimum Standards for Construction & Maintenance of Wells.

- The well shall be located away from possible sources of contamination; well design shall consider permeability of the soil, adjacent land uses, and local ground water conditions. Wells shall be at least 100 feet from a sewer line, sewage or manure lagoon or pipeline.
- Wells and springs shall not be located in areas where surface water may pond or flow around it, or in areas that are prone to flooding.

It is recommended that a radius of at least 100 feet around your well or spring should be under your ownership to prevent sources of contamination (sewage systems, stock pens, fuel tanks, etc.) from affecting the water source.

WATER SOURCE TYPE: A drilled well is preferable for source protection and reliability. Surface waters or springs are often prone to a variety of contaminants and may not be acceptable without treatment. The development of surface water or spring as a water source may also require a water rights permit from Dept. of Ecology. A spring source may be encased as a dug well to provide sufficient storage to meet required minimum standards. Dug wells supplied by ground water must be sealed in accordance with requirements identified in Chapter 173-160 WAC Minimum Standards for Construction and Maintenance of Wells (see portion attached).

3. **BELOW STANDARD/ALTERNATIVE PRIVATE WATER SUPPLIES.** If the private water source does not comply with the minimum water quality standards, the system may require treatment. Environmental Health staff can help the property owner determine appropriate treatment. A recorded affidavit may be required that references the water system does not comply with the minimum standards established for private residential water supplies and will identify the method to correct and/or treat the system. A water source that does not meet quantity standards may be approved by the building official depending on supplemental documentation provided.

4. **PUBLIC/COMMUNITY WATER SYSTEMS.** A community water supply is one water source that will serve two or more residences, or a public/commercial building. The Washington State Department of Health (WSDOH) is responsible for approving community water supplies. If you are connecting to an existing system, you will need to provide a letter from the water system owner/operator stating that the system is capable of providing water and will provide it to your property. Be sure the letter includes the water system's identification number assigned by the WSDOH. If you have questions about an existing community system, you can contact WSDOH at (509) 456-3115.

A well serving two residences is eligible for a waiver from Class B water system requirements. Identify the two party connection on the water certification form. Generally, the well needs to produce a minimum of 1600 gallons per day (or about 2 gallons per minute) and if a new well, comply with the water quality standards.

If you intend to develop a community water system (to serve 3-15 residential units) for your project, you will need to submit a Group B Water Packet to WSDOH, located in Spokane. The packets are available at either WSDOH or the NE Tri-County Health District, Environmental Health Dept. in Colville [contact (509) 684-2262]

5. **HOW DO I START THE WATER SUPPLY CERTIFICATION PROCESS?** If you are building a home that will be served by a private or 2-party water supply, request or download from the Land Services webpage the water certification packet from the Building Department at the same time you obtain the other building permit or sewage system application forms. You can also start the process as soon as you have the well drilled on your property; just remember that when you apply for a building permit, the test results for water quality submitted with the water certification must be less than two years old. It is common practice for your well driller to draw the water samples and send them to the lab, once the drilling process is complete. Ask your drilling company about this service. Be sure the well is cleaned thoroughly before the tests are drawn to limit the potential that coliform bacteria will be present.

6. **HOW LONG DOES IT TAKE FOR WATER SYSTEM APPROVAL?** Since the review/approval processes differ for private or public water systems, time frames vary also. For community water systems, please contact WSDOH. The time frame for county Building Department review and approval of a private water system is based on the information and test results submitted with the "Potable Water Certification".

- If the water system clearly complies with the minimum standards for water quality, quantity, well location and type of construction, then approval will occur automatically.
- If the system does not comply with the minimum standards, then system approval is delayed until either satisfactory results are submitted, or county staff has determined that an affidavit attesting to the lack of compliance with the minimum standards is appropriate, the applicant has submitted the affidavit and it has been recorded with the County Auditor's office.
- If incomplete information is submitted, approval of your building permit for a new residence or manufactured home will be delayed until complete information is submitted.

When you contact the various labs that are certified to perform the required tests, ask about their time frames and fees.

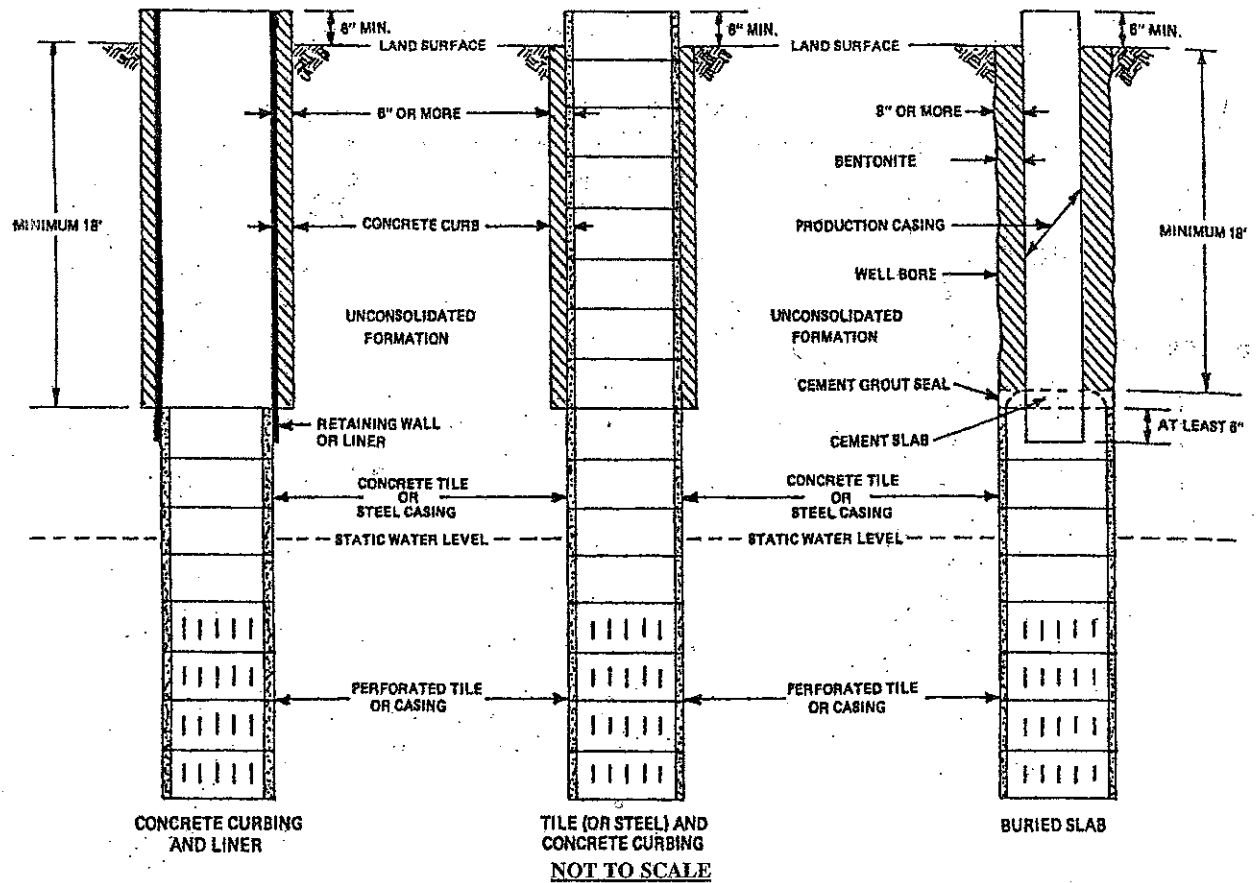


Figure 3. SEALING OF DUG WELLS

WAC 173-160-261 How do I seal dug wells? The surface seal of all dug wells shall be constructed to effectively seal the annular space between the undisturbed native material of the upper well hole and the well curbing, which may consist of (concrete tile, steel pipe or liner). The seal depth shall be at least eighteen feet from land to surface or to within three feet of the bottom in dug wells that are less than twenty-one feet in depth. Dug wells may be sealed with cement, neat cement, bentonite, or cement grout. A cap shall be placed on all dug wells. Except during maintenance, the cap shall remain in place. The cap shall prevent entry of pollutants, insects, and mammals into the well. See Figure 3.

[Statutory Authority: Chapter 18.104 RCW and RCW [43.21A.080](#). 98-08-032 (Order 97-08), § 173-160-261, filed 3/23/98, effective 4/23/98.]