

Guidance Document for Well Permit Applicants **In the Lower Platte South Natural Resources District**

If you plan to drill a new or replacement water well, or if you plan to modify an existing well to increase its pumping capacity, on land you own in the Lower Platte South Natural Resources District (the District), you may need a well permit. A well permit application must be submitted to the District **before commencing construction**. Whether or not you need a well permit depends on the location, pumping capacity, and intended use of the well. This guidance document can help you get started. It contains answers to common questions about well permits, a map showing the areas of the District in which different well permits are required, a flow chart for determining the type of permit you may need, and a technical guidance document for hydrogeologic professionals conducting aquifer tests.

Do I need a well permit?

If you own land in a Ground Water Reservoir (see map) and plan to construct a new or replacement water well that is designed to pump more than 50 gallons per minute, you will need a well permit. You will also need a well permit if you plan to modify an existing well that pumps 50 gallons per minute or less such that it will pump greater than 50 gallons per minute.

If you own land outside of a Ground Water Reservoir (the Remaining Area, see map) and plan to construct a new or replacement water well that is designed to pump more than 20 gallons per minute, you will need a well permit. You will also need a well permit if you plan to modify an existing well that pumps 20 gallons per minute or less such that it will pump greater than 20 gallons per minute. However, domestic wells or range livestock wells that will pump 50 gallons per minute or less are excluded – no permit is required.

If you think you may need a well permit, please see the flow chart in this document to determine which permit, if any, you will need. The map will help you decide if you are located in a Ground Water Reservoir or the Remaining Area.

Why are the well permits in the Remaining Area different than permits in a Ground Water Reservoir?

The quantity and quality of ground water in the Lower Platte South Natural Resources District is highly variable from place to place. In some areas, sand and gravel deposits in modern and ancient stream valleys can provide excellent sources of useable ground water. These areas, known as Ground Water Reservoirs, have been mapped at a coarse scale of resolution and are delineated using section lines (see map). In other areas, known as the Remaining Area (see map), bedrock formations may provide a source of water, but well yields are inconsistent, generally unpredictable without the aid of test hole information, and water quality conditions are complex. The well permit process is designed to take into consideration the fundamental differences between the Ground Water Reservoirs and the Remaining Area. Requirements are more stringent in the Remaining Area due to the limited availability of good quality water. Requirements are less stringent, but still applicable, to the Ground Water Reservoirs because good quality water supplies are abundant, but not infinite.

Why do I need a well permit for a replacement well?

In Nebraska, ground water law is governed by the correlative rights doctrine: Ground water is owned by the state, we all have equal rights to the ground water, and in times of shortage, we share. Ground water rights are not “grandfathered” in and “first in time” does not mean “first in right”. Even though your planned well may be replacing a currently existing well, it is possible that the new well may be drilled to a different depth, have a larger pumping capacity, or otherwise affect the ground water in ways that are different than the well that it is intended to replace. Therefore, a replacement well is still considered a “new” well – it is treated the same as all other wells requiring a well permit.

OK, I need a well permit. What do I do next?

- 1) Contact a well driller. If you are unfamiliar with the process of installing a well, or if you want to know whether it is reasonable to believe you have a ground water supply beneath your property, a well driller with experience in southeast Nebraska may be able to help you. For example, if you desire a well with a pumping capacity of 1000 gallons per minute, but existing wells in the area typically pump between 50 and 100 gallons per minute, you may want to re-consider your expectations. Or you may want the driller to drill a test hole on your property before deciding whether or not to apply for a well permit. No permit is necessary to drill a test hole, and a test hole is the best way to estimate how much a well may yield at that site.
- 2) Obtain a Preliminary Well Construction Permit and Well Permit Form. Contact the District directly, or download them from our website at www.lpsnrd.org. Carefully read the Preliminary Well Construction Permit. By signing it, you verify that you understand the requirements, limitations, and other factors involved in applying for a well permit. The Preliminary Well Construction Permit is also important because it gives your proposed well protection from encroachment of other permit sized wells for one year or until this spacing protection becomes permanent upon registration of the finished well. Fill out the first page of the permit form. You will need to provide an accurate location of the proposed well. District staff will inspect the location and take a Global Positioning System (GPS) reading of the site and determine whether the proposed location meets all setback requirements. If not, you may be asked to provide a new location for the well, if possible.
- 3) File the Preliminary Well Construction Permit and Submit the first page of the Well Permit Form. The District will review these forms and give you the preliminary go-ahead to proceed with the well permit application process.
- 4) Contact a well driller. The well driller should be experienced in the installation of wells in southeast Nebraska. There are unique geological conditions in this area that, if the well is not properly drilled and installed, could create problems with your well. Also, the driller should be able to make an informed decision about whether the well will be likely to draw salt water or not. After the test hole(s) has been drilled, you should discuss with your driller the potential implications of proceeding to the installation stage. It is possible that some wells, after they are installed, will be denied by the District if the water quality samples, hydrogeologic evaluation, or other reasons for denial are met (see below). There is some risk involved, but an experienced well Driller should be able to help you make an informed decision about proceeding with the installation of the well(s) to complete the well permit application.
- 5) Contact a hydrogeologic professional. If your permit requires an aquifer test or hydrogeologic analysis report, you will need to hire a registered professional geologist or professional engineer. In planning the pumping test, your hydrogeologist may want to coordinate with your driller because you will need at least one observation well, in addition to the proposed pumping well, for the test. You may be able to save time and money by having both wells installed at the same time. Your hydrogeologist should use the “Recommended Aquifer Test Procedures” guidance document when preparing the test and reporting the results (See Aquifer Test Procedures).
- 6) Conduct tests required for your well permit. If a water quality sample is the only requirement, a well driller should be able to collect it and submit it to an analytical laboratory. If a pump test is required, your well driller and/or hydrogeologic professional will need to coordinate, working together to plan and implement the pumping tests and/or water sampling.
- 7) Submit the Completed Well Permit Application. After your driller and hydrogeologist have collected the necessary data, all data and reports should be submitted to the District to complete the well permit application.
- 8) Finish the well. If the permit application is approved, your driller can finish constructing and equipping the well.

For what reasons might my well permit be denied?

The District has identified specific criteria for denying a well permit*. There are general criteria for all well permits and separate criteria for each class of permit. The criteria for denial are as follows:

- ❖ For all well permits:
 - the location or operation of the proposed water well or other work would conflict with any regulations or controls adopted by the District or of other applicable laws of the State of Nebraska;
 - the proposed use would not be a beneficial use of water for domestic, agricultural, manufacturing, or industrial purposes;
 - the applicant refuses to cooperate with the District in ground water monitoring activities;
 - an applicant refuses to equip the well with a water well flow meter;
 - in the case of a late permit only, that the applicant did not act in good faith by failing to obtain a timely permit.
- ❖ For a Class 1 Permit:
 - the total dissolved solids from a water quality sample taken at the end of a 24-hour pump test are 2500 parts per million or more, and an applicant does not choose to apply for a salt water well permit (an applicant shall have the option to apply for a salt water well permit prior to denial of the permit).
- ❖ For a Class 2 Permit:
 - the hydrogeologic analysis indicates potential short or long-term detrimental effects to the aquifer and/or if the drawdown cone as determined by an aquifer test would intersect a nearby well with a higher preference of use;
 - the total dissolved solids from a water quality sample taken at the end of a 24-hour pump test are 2500 parts per million or more, and the applicant does not choose to apply for a salt water well permit (an applicant shall have the option to apply for a salt water well permit prior to denial of the permit).
- ❖ For a Class 3 Permit:
 - the total dissolved solids from a water quality sample taken at the end of a 24-hour pump test are 2500 parts per million or more, and the applicant does not choose to apply for a salt water well permit (an applicant shall have the option to apply for a salt water well permit prior to denial of the permit);
 - if the well is located within 600 feet of an existing registered well with a higher preference of use, except for a well owned by the applicant, and the aquifer test indicates the potential short or long-term detrimental effects to the aquifer and/or if the drawdown cone would intersect a nearby well with higher preference of use.
- ❖ For a Class 4 Permit:
 - the total dissolved solids from a water quality sample taken at the end of a 24-hour pump test are 2500 parts per million or more, and the applicant does not choose to apply for a salt water well permit (an applicant shall have the option to apply for a salt water well permit prior to denial of the permit);
 - the hydrogeologic analysis indicates potential short or long-term detrimental effects to the aquifer and/or if the drawdown cone as determined by an aquifer test would intersect a nearby well with higher preference of use.
- ❖ For a Salt Water Well Permit:
 - the water quality samples indicate the potential for salt water intrusion.

*For an official copy of the District's Ground Water Rules and Regulations, contact:

Lower Platte South Natural Resources District

P.O. Box 83581

3125 Portia Street

Lincoln, NE 68501

Phone: 402-476-2729

www.lpsnrd.org