



## **WELLS AS A WATER SOURCE**

If your seller's source of potable water is a well, HB 07-1156, as of January 1, 2008, requires a copy of the permit to be supplied to your purchaser on residential property including FSBO and apartment property. This law requires the Real Estate Commission's listing contract, contract of sale or seller's property disclosure to disclose the source of potable water for the property as well as a formal disclosure statement giving the name, address, web site, phone number of the provider. The Commission approved contract currently requires the well permit number listed on the contract. This **disclosure statement suggests the purchaser check with the provider to determine the long-term sufficiency of the provider's water supplies.**

Wells are classified by the State of Colorado as either **exempt** or **non-exempt**. **Exempt** wells are limited to 15 gallons per minute maximum pumping rate and the permit may limit the total acre feet annually the well may extract from an underground aquifer. Usually the permit holder has a two year window in which to construct the well apparatus. Exempt wells usually are employed on residential property for strictly indoor use or permitted outside irrigation up to one acre of landscape or for non-commercial livestock. An exempt well is usually outside of Colorado's Prior Appropriation Doctrine (unless decreed; thereby, receiving benefits and obligations awarded by the water court).

A **non-exempt** well may be a higher producing well (more than 15 GPM) which may serve commercial, municipal, subdivision, irrigation or industrial purposes. Usually the permit is issued with a one-year window in which to build the well apparatus. If an owner of a non-exempt well wants the benefit of the Prior Appropriation Doctrine applying to a subject well, the owner must apply for a decree from the Water Court in the water division in which the well is located (Colorado has seven water divisions and water courts).

The benefits of adjudicating a well, in addition to increasing value and future marketability, include:

- o **Court confirms well will not injure others and will not be shut down to protect senior rights as a plan of augmentation will probably be required**
- o **Court protects against future legislation which may decrease pumping rates**
- o **Court creates certainty regarding priority, pumping rates, location and allowed uses**

When wells are permitted, the approximate depth of the well is identified and, in some cases, identifying the specific aquifer from

which the water is to be abstracted. If the well is drilled into a **tributary aquifer**, the water from that well is subject to surface water rights. In addition, the well owner will be subject to a court-approved plan of augmentation in which the well owner needs to find a source of "replacement water" if senior surface water right owners are damaged in the future when the well owner takes "out-of-priority tributary groundwater." **When purchasing a well with an augmentation plan, it is important to check the permit for approved uses as well as to check with the State Engineer's Office to make sure there is current compliance with the plan.** Wells access the following types of aquifers:

- o **Tributary or alluvial groundwater which by definition joins surface flow and is subject to surface water rights (surface and tributary groundwater are administered together under the Prior Appropriation Doctrine)**
- o **Designated groundwater which lies within the eight designated water basins where water well permits and associated water rights are granted through the Colorado Groundwater Commission or the State Engineer's office**
- o **Non-tributary groundwater which by definition does not join surface flow and is not subject to surface water rights (non-tributary groundwater outside of the eight designated basins is not governed by the Prior Appropriation Doctrine and the court may decree rights according to overlying land ownership, a hundred year aquifer life and a withdrawal rate not to exceed one per cent per year)**
- o **Not non-tributary groundwater which by definition lies outside the eight designated basins but within the Denver Basin**

If the well is drilled within one of the eight **designated basins**, the Colorado Groundwater Commission or the State Engineer's office will issue permits and determine water rights. This groundwater is not adjacent to a continuously flowing stream.

If the well is drilled in a **non-tributary aquifer**, the permit will identify the period in which the well must be constructed, approximate depth, pumping rate and permitted uses. If it is an adjudicated well, the decree will state the approximate well depth, the amount of water available for withdrawal, the saturated materials within the water, the location of the well, the appropriation date and the permitted beneficial uses.

Finally if the well is drilled into a **not non-tributary aquifer**, the

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permit will be identifying the aquifer (as in the Upper Dawson versus the Lower Dawson), the time in which the well is to be constructed and permitted uses. Not non-tributary wells access groundwater which by definition is located outside the eight designated basins but within the Denver Basin and the withdrawal rate will deplete the flow of a natural stream at an annual rate of greater than one-tenth of one percent.

For the Front Range readers from Colorado Springs to Greeley and East to Limon, The Denver Basin has four aquifers that are baskets of water stacked upon one another:

- ❑ The **Dawson** Aquifer (0-600 feet in depth and 1200 square miles in size)
- ❑ The **Denver** Aquifer (600-1400 feet in depth and 3000 square miles in size)
- ❑ The **Arapahoe** Aquifer (1400-1800 feet in depth and 4300 square miles in size)
- ❑ The **Laramie-Fox** Aquifer (2200-2500 feet in depth and 6300 square miles in size)

When granting a decree in the Denver Basin, the court will identify the lower or upper portions of a specific aquifer and determine whether the well is sourcing tributary or non-tributary groundwater and the water will be allocated to the overlying land owner; thereby, determining whether an augmentation plan is necessary or not. The name of the apparatus, sectional location description, annual pumping rates, the acreage necessary to produce the decreed amount of groundwater, the appropriation date, permitted beneficial uses and the applicants names are also facts disclosed on the decree as well as the court reserving "retained jurisdiction allowing future review of the decision if the decision is found to damage senior water rights.

From a geological perspective and a well driller's perspective, there are three aquifer types:

Type I: **Confined** in consolidated sedimentary rock under pressure and saturated

Type II: **Confined bedrock** in volcanic and crystalline rock

Type III: **Alluvial and colluvial** in unconfined or unconsolidated rock not completely saturated

In State law, a legal formula has been set out to determine how much water can be pumped from an aquifer (one-tenth of 1% per year) and thereby assuring the sub-terrain water will last 100 years and to prevent unreasonable aquifer depletion commonly called the "100 year-rule". **Experts now alert real property owners that the 100 year-rule does not represent a 100-year water supply.** In January of 1996 the State Engineer ordered a warning put on all new municipal and subdivision well permits that draw water on aquifers, noting that the aquifer is a **non-renewable resource** and might not last 100 years **due to anticipated water level declines.**

Water in most aquifers is our legacy from the ice age and is not considered a renewable resource. In The Gazette (Colorado Springs), geologist Bob Reynolds, who is a research associate with the Denver Museum of Nature and Science, sent a sobering message that these aquifers are being depleted at an alarming rate and the museum's research has recently forced the State to slash by one-third its estimate of water in the basin. In addition, **recent discovery shows the groundwater does not lie in homogenous bands of sandstone just waiting to be pumped but rather it is water trapped between crevices, cracks and curves of sand and gravel.**

A purchaser should always follow these axioms as it relates to a well:

1. No permit means **no** well exists for purposes of buyer due diligence
2. If actual use does not match permitted use, consider **no** well exists for purposes of buyer due diligence
3. If there is an abandoned well, make sure the well has been properly abandoned through the State Engineer's Office for purposes of buyer due diligence (form GWS 09)
4. If a well was built before May, 1972 and is not registered with the State, make sure the seller has the well registered before purchase (form GWS 12) with the Division of Water Resources
5. Once registered, the purchaser must file a change in ownership form (form GWS 11) with the Division of Water Resources

Good questions a buyer should ask about a well:

1. How old is it?
2. Is it registered with the Division of Water Resources?
3. What are the water use restrictions?
4. What is the current pumping rate?
5. What is the current water quality?
6. Is the well physically located on the property?
7. Does well location allow for easy access and for repair and maintenance?
8. Does the well appear to be in good sanitary condition?
9. Is ground surface around the well sloped away from the well to allow drainage away from the well?
10. Is the well casing above ground?
11. Is the seal weather tight?
12. Is the well casing above ground made of steel?
13. Are there any abandoned wells that remain open or unplugged?