200 Bears Ln., Driftwood TX 78619-
Water Sources and Configurations

In an area of the country where water is often a limited resource, the water system at 200 Bears Ln. is designed for redundancy, flexibility, and water independence. The property has two distinct water sources, rainwater and well water. These sources can be configured to work exclusively or together in a flexible system.

Rainwater

The 30,000 gallon rainwater system was installed in May of 2022, and put into service September 2022. With approximately 3800 sf of collection area, water flow into the Pioneer tank is estimated at 2300 gallons per inch of rainfall.
The three stage filtration system (sediment, carbon, Viqua UV light), ensures water coming out of any tap in the house is drinkable without additional filtering. Rainwater is also extremely gentle on appliances.
Additionally, the catchment system features oversized gutters and downspouts that route rainwater away from the house and into the tank, protecting the home's foundation. A "first flush" system routes the initial runoff, which can contain dirt and organic material from the roof, to drain slowly into the eastern pasture, before allowing clean water to flow to the storage tank.*
Next to the driveway is a completely independent 1500 gallon system that captures rain from the west side of the garage. This system is unfiltered, and is connected to a pump next to the pool. It can be used to fill the pool, or for outdoor watering, without affecting the primary rainwater supply at all.

Well

The well is shared with the next door neighbor, and was the primary water source for many years, until the rainwater system was installed. There is a well house and a cistern located on the neighbor's property. The primary well pump and booster pumps were replaced in Spring of 2021, and the pressure tank was replaced Spring of 2023. Electricity, repair, and maintenance costs are shared 50/50 with the neighbor. While there is no whole house filtration or softening in place for the well water, there is a three stage filter under the kitchen sink for clean drinking water.

Configurations

The current configuration is to use rainwater for the main house and the guest apartment, while running well water to the outdoor spigots surrounding the house. This allows for outdoor watering, power washing, etc, without using up filtered rainwater.

However, it is possible to run everything off either the well or the rainwater. If there is an interruption in service from one source, you can quickly switch to the other. Changes are made with a few valve turns. Additionally, the main house and garage apartment can operate independently of one another, so you could run rainwater to the main house and well water to the apartment, or vice-versa. Note that the barn and garden spigots are always fed by well water and are not currently connected to any rainwater system.

*More Information About The First Flush System

The initial bit of rainfall during a rain event rinses things like dirt, bird droppings, pollen, etc. from the roof. With a first flush option, a T is inserted in the line between the house and the storage tank. Those initial runnings flow into the T and down a first flush pipe about fifty feet long. At the end of the pipe is a cap with a small nipple on the end. Once that pipe is filled, subsequent clean rainwater flows past the T and directly into the tank. The water in the first flush pipe then drains slowly out of the nipple, allowing the soil to absorb it and preventing flooding. This system helps ensure only clean water is entering the storage tank.

There may be periods when you have very small amounts of rainfall over the course of several consecutive days that you want to capture. Perhaps a tenth or two of an inch falls each day; enough rainfall to fill up the downspouts, pipes, and first flush, but not enough to make it into the tank. So each day, the water in the lines drains out the first flush nipple. For those instances, we've installed an optional bypass valve. After debris is rinsed off the first day, simply close the valve, allowing the water from rainfall on subsequent days to flow directly into the tank. This is totally optional, but allows for maximum capture during periods of drought when rainfall amounts are low.