



Want to build

Many choices and decisions with lasting impacts need to be made when developing a property from a bare landscape.

Considering those decisions prior to purchasing property will minimize surprises. Buying the property is the easy part—after that the real work begins.

You are responsible for acquiring any and all state, county, and other permits specific to your project.

Water

Water is limited in Wyoming and affects vegetation growth and animal and domestic use. The state of Wyoming owns all water within its boundaries. Water is permitted with the State Engineers Office, seo.wyo.gov/home, for its intended use, such as domestic use, irrigation, municipalities, etc.

Just because water is there, doesn't mean it can be used. For example, if an irrigation ditch runs through a property, the property owner has to possess the associated water rights to legally use that water.

For more information on water and irrigation rights, please see the University of Wyoming Extension bulletin *Wyoming Small Acreage Irrigation*, bit.ly/wy-irrigation.

Rural water suppliers provide treated water in some areas of Wyoming. If this is an option, the company will provide a tap to the main line, and the owner is responsible for running the water line from the main line to all desired buildings and locations

If the property lacks a tap with a rural municipal water source, the next best options are drilling a well or hauling water to store in a cistern. Drilling a well can be expensive depending on the depth and is not always a guarantee that quality and ample water will be found. The State

Engineers Office can provide reference information regarding drilling wells for most areas. Drilling companies that have previously worked in an area can also provide anecdotal information. Hauling water provides a reliable, high-quality source of water; however, there is a significant time commitment. Commercially hauled water is possible at an additional expense.

Test any source of water prior to use, especially for domestic use. Private laboratories within Wyoming and neighboring states can provide a water quality analysis. Local water





on new property? Do your due diligence!

treatment companies can also provide expertise to the specific water in question and may provide water quality analysis. Wells should be strategically placed a safe distance from septic tanks (minimum 50 feet), leach fields (minimum 100 feet) and livestock corrals. Please see this Wyoming DEQ publication bit.ly/wellhead-protection.

For more detailed information on drinking water quality, please refer to the Centers for Disease Control and Prevention, bit.ly/cdc-drinkingwater, and the Environmental Protection Agency, bit.ly/epa-water-contaminants.

Utilities

Outside utility sources will be needed unless the establishment is designed for off-the-grid living. Utilities can include electric, gas (propane or natural gas), communication, sewer lines, and water lines. It is common for utilities to be installed with the most direct path as possible to save costs. In certain situations, the most direct placement can limit future development of the property

(buildings, landscaping, etc.). Proper planning of utilities can alleviate future problems. Always contact One Call of Wyoming at 811 prior to digging.

The main electrical power source can be installed overhead or underground. Usually, the landowner is responsible for trenching, conduit, and other specifications for installing underground. Electrical lines can share a trench with gas and communication utilities but not with water, sewer, or other drainage lines. Contact your individual electrical power company for specific details for the project.

If a natural gas provider has a pipeline in the area, then it can be trenched into the property. Natural gas lines are installed by the company to the meter location. Gas lines that run from the meter to the buildings are the owner's responsibility. A propane tank is the next option if there are no gas utilities in the area. The local propane company will provide a tank, connect it to the residence, and provide filling services.

Septic systems, sewer lines, and other drainage lines (sump pumps) are the responsibility of the owner. It is highly recommended that all trees, shrubs, and vines be planted a minimum of 10 feet away from all utilities, especially leach fields, sewer, water, and drainage lines.

Buildings and Structures

Stunning views and aesthetics are important with most properties and structure layouts. Don't forget other considerations such as ease of road access, orientation to prevailing winds, and location to utilities for outbuildings, shops, and garages. See this *Barnyards & Backyards* magazine article bit.ly/plan-to-build.

Structure orientation to prevailing winds can impact heating and cooling costs. Cross breezes can decrease cooling costs by helping air more efficiently flow through a structure. Drifting snow can potentially be eliminated around structures with the correct orientation or kept from drifting around dwelling entrances, sidewalks, or driveways. Plan for the



worst season and the most consistent prevailing winds during that season when considering prevailing winds.

Roads

Access to and within a property is important. If the property does not have direct access to a public road, then easements need to be established across neighboring properties to gain access to a public right-of-way. All private road construction, maintenance, and service is the responsibility of the property owner.

Many roads are two tracks or a graveled surface (usually gravel just spread on the surface) at best. These roads can suffice but can be prone to flooding, mud, and drifting snow. An improved road, which is crowned and ditched, can alleviate some of these problems. The crowning of a road allows excess water to run off the road surface, faster drying, and will also keep snow blown off the top of the road surface when possible. Please see this *Barnyards & Backyards* article bit.ly/crowned-roads.

The contour and geography of a property should also be considered when establishing a road. It is typically recommended roads are established on high points and if possible not constructed through dips or low spots.

Corrals

Corrals should be constructed in an area to prevent contamination of surface water (creeks, rivers, ponds, etc.) and wells. It is recommended corrals, like septic systems, are a minimum 100 feet away from domestic wells and down gradient of the well. If possible, a vegetation buffer strip should be maintained between surface water areas.

Shelter belts

Shelter belts are a row of trees planted for the purpose of providing protection from wind, erosion, and drifting snow to a specific area. Here in Wyoming, drifting snow is one of the main considerations of a shelter belt. In addition to control drifting snow, shelter belts can block the view of undesired buildings and property features or used to enhance aesthetics. More information related to shelter belts for snow can be found here bit.ly/living-snowfence.

Fences

Wyoming is a fence out state with regard to cattle and domestic bison; interestingly, it is a fence in state for sheep. Wyoming law, Statute 11-28-102, designates that a lawful fence should be built, which consists of a three- or four-wire fence. This

specifically means the landowner is responsible for building a fence to keep any neighboring cattle off their property or building a fence to keep sheep on their property. Wyoming is also a fence in state for all other animals including swine, sheep, llama, alpaca, and goats.

The construction, repair, and maintenance of fences are the responsibility of the landowner, besides boundary fences, which should be joint ownership with a neighbor. Tips and methods for talking with neighbors on this topic can be found in UW Extension publication #B-1194, "Avoiding a Border War," bit.ly/good-fences.

Wildlife friendly fences allow wildlife to move freely across properties with minimal fence damage or wildlife death. The Wyoming Game and Fish Department suggests a three- or four-wire wildlife friendly fence. A top wire should be no higher than 42 inches, smooth bottom wire set 16 inches off the ground, and one to two evenly spaced wires in between the top and bottom wire. For more information and ideas on wildlife friendly fences, refer to bit.ly/wildlife-fences, and bit.ly/wyo-fencing-guide.

Conclusion

Building your dream home will not be as stressful with proper planning and understanding. A well-planned property can mitigate many problems, allowing for the enjoyment and convenience you dreamed of. Now roll-up your sleeves and make your dream come true!

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 We think **Jeremiah Vardiman** has probably fielded a question or two about developing a rural property. He is a University of Wyoming Extension educator in Park County and can be reached at (307) 754-8836 or at jvardima@uwyo.edu.