Part 2: Ground Water Not Connected to Surface

As stated in Part1, there is an Abundance of Unused Ground Water in Montana. A large portion of Montana's ground water resources are found in confined or semi-confined aquifers that are not directly connected to surface water!

The DNRC has presented a simplified view of underground water that does not correspond with reality. Their position is that underground water exists completely in one giant barrel with surface water in direct contact with all aquifers. This is far from the truth and not based on solid science. Some scientific definitions that apply are:

- 1. An aquifer is an underground formation which yields water in sufficient quantity to be economically useful. Aquifers can be unconfined or confined.
- 2. Unconfined aquifers are open to the surface and connected to surface water. They may fluctuate as the surface water fluctuates, as with rain or snow melt.
- 3. Confined aquifers are isolated from the surface by impermeable formations (acquitards – clay, rock). They are confined with greater than atmospheric pressure. This means the static water level in a well from a confined aquifer will rise higher than where it is encountered. Some of these wells will flow at the surface!!

The surface water in Montana amounts to about 5% of the total water – 95% of Montana's water is found underground. Conservatively, 60 – 70% of this ground water is found in confined aquifers. The water will be of different age, different temperature, different chemical nature, as well as being fed from high mountain snows and rain that generally will not become part of surface water in the foreseeable future.

The DNRC wants to define confined aquifers as surface water and to give the water in these confined aquifers to downstream out of state users! The only way to accomplish this redefinition is to change Montana's law. Billions of gallons of water are locked into Montana's confined aquifers which are not directly connected to surface water. This would result in a huge loss to Montana's landowners and economy.

Montana law defines usable ground water as: "underground water that is not immediately or directly connected to surface water " The DNRC is currently preparing several bills to submit to the legislature that will change this definition - attaching all underground water to surface water including water found in confined aquifers. One bill completely stops all drilling of wells for domestic use and does not allow any new appropriation of ground water. It encourages landowners to trade in their surface water rights for ground water. This idea (called augmentation) encourages farm and ranch owners to subdivide their land. This bill if enacted would decimate the economy of a large portion of Western Montana, especially agricultural land and new housing. Private land would become worthless, because Montana citizens could not provide water for any use.

The legislature needs to clarify the statute so that underground water that is not immediately or directly connected to surface water can be identified and used to promote Montana's economy. Montana and its citizens should be allowed to use their underground water which is an extremely valuable resource to our economy.

One other consideration seems to have been lost in the process. For example: Where does this water go that Montana's citizens put to use? The answer to this is simple, most of the water returns into the ground. The hydrological cycle does not destroy water – the only water lost to the State of Montana is what flows down the rivers rivers..