

Salix drinking water from ^{Missouri River} Alluvial aquifer, utilizing active shallow wells in sand and gravel deposits, tapping in at roughly 140 feet. It is a highly productive, unconfined sand and gravel aquifer found in the floodplains of the river. Ranging from 50 to 150 feet in depth, it is primarily recharged directly by the Missouri River and precipitation. There is a direct, dynamic relationship between groundwater and the river's stage. Because pumping induces flow from the river into the aquifer, the extracted groundwater closely mirrors the chemical quality of the Missouri River. Portions of the aquifer frequently exhibit fluctuating reducing and oxidizing conditions, which can lead to elevated naturally occurring trace elements such as arsenic, iron, and manganese. Because of its shallow, unconfined system, trace amounts of agricultural chemicals (like atrazine) have been detected in some parts of the aquifer.

U.S. Geological Survey

Missouri Department of Natural Resources

An unconfined aquifer is an underground body of saturated rock, sand, or gravel that is not trapped beneath impermeable layers. The top of the saturated zone is the water table, rises and falls

54, 104 10000

directly in response to local weather, rain, and droughts. Unlike confined aquifers (which are sandwiches between impermeable rock or clay), unconfined systems lie directly beneath permeable soil. Because they are exposed to the atmosphere, the water in them is not under pressure. If you drill a well, the water level in the well will exactly match the depth of the water table. Because there is no protective lid of clay or rock, pollutants from the surface (like pesticides, road salt, or fertilizers) can easily filter down into the water. Without the buffer of a confining layer, these aquifers respond quickly to dry seasons. Over-pumping or prolonged droughts can drop the water table significantly, causing shallow wells to run dry. The earth naturally filters out many impurities, often producing high-quality drinking water. Because they are open to the surface, they often refill rapidly after a good rain.

- 1) Where does the data center intend to get their water? From Saliv or some other municipalities?
- 2) Does the data center intend to drill new wells? If so where?

3) What types of pollutants will the data center introduce to the water?

4) How much water will be extracted from the aquifer?

5) How will water that has been utilized through the process be discharged? Where discharged?

6) Will there be established discharged permits? Who prepares permits? Who regulates and enforces that permits are being complied with?

7) What type of facility is being proposed?

8) Endangered species, critical habitat