

# Montana Aquifer Tests layer - Data Dictionary

Prepared by

## The Montana Department of Natural Resources and Conservation Water Sciences Bureau



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**Table 1:** List of fields, data types, and definitions in the Montana Aquifer Tests layer.

Alias	Data Type	Definition
GWIC ID Production Well	Text	Unique identifier for the production well from the Groundwater Information Center (GWIC).
Water Right Number	Text	Basin code and unique identification number for the original water right associated with the aquifer properties and aquifer test.
County	Text	Montana County where the well of the aquifer properties is located.
Latitude	Double	Latitude of the production well location in decimal degrees. Based on GWIC location, if unknown, the water right point of diversion location is used.
Longitude	Double	Longitude of the production well location in decimal degrees. Based on GWIC location, if unknown, the water right point of diversion location is used.
Derived By	Text	Identification of who derived the aquifer property values.
Aquifer Test Date	Date	Date the pumping test began.
Pumping Duration (hr)	Double	Entered value of the pumping phase duration, excluding the background level collection and recovery phase.
Average Pumping Rate (gpm)	Double	Entered value of the average pumping rate.
Aquifer Test Solution Method	Text	Method(s) used to estimate aquifer properties (transmissivity and storativity) from test data. If multiple methods were used to generate an average of aquifer properties, all solution methods are listed.

Analysis Phase	Text	Phase (e.g., drawdown and recovery, drawdown, recovery) of aquifer test used for aquifer property analysis.
Transmissivity (ft <sup>2</sup> /day)	Double	Derived value of the capacity of the assumed stressed aquifer thickness to transmit water.
Storativity	Double	Derived or textbook value of the capacity of the aquifer to release water.
Estimated Hydraulic Conductivity (ft/day)	Double	Calculated value of the ability of the aquifer material to transit water using the transmissivity and assumed stressed aquifer thickness values.
Total Well Depth (ft)	Double	Entered value of the production well depth below ground surface. If unknown in GWIC database, taken from other available documents.
Static Water-Level (ft)	Double	Entered value of the production well static water level from the measuring point prior to the aquifer test. If no measurement was taken prior to aquifer test, the value represents the static water level in the GWIC database or other available documents.
Assumed Stressed Aquifer Thickness (ft)	Double	Entered or calculated value based on well completion details including 1.5x the perforated interval length for wells with screened intervals in confined aquifers, assumed thickness of 10 ft for wells without screened intervals in confined aquifers, or static water level depth minus the total depth or bottom of perforated interval for all wells in unconfined aquifers.
DNRC Assigned Aquifer Code	Text	Alphanumeric identifier for the production well which identifies the geologic unit.
DNRC Assigned Aquifer Code Description	Text	Description of the aquifer code assigned to the production well.
Report Link	Text	Link to reports used to derive aquifer properties (e.g., DNRC aquifer test reports, MBMG studies, USGS studies, consultant reports).
Form No. 633 Link	Text	Link to Form No. 633 file that provides the aquifer testing data used to derive aquifer properties.

Water Right Scanned Documents	Text	Link to DNRC scanned water right documents associated for that water right. Recent provisional permits will not have scanned documents uploaded yet.
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