

Maximum Annual Yield Determinations

OWRB FACT SHEET

Groundwater in Oklahoma belongs to the land surface owner and may be used subject to reasonable regulation by the OWRB. State law provides for the OWRB to conduct hydrologic investigations of “groundwater basins” (distinct underground bodies of water under contiguous land having substantially the same geological and hydrological characteristics and yield capabilities) and to determine amounts of water permitted users may withdraw. The maximum annual yield (MAY) of a groundwater basin is a term used to describe the total amount of fresh groundwater that can be withdrawn while allowing a minimum 20-year life of the basin. Once the MAY has been established, the amount of water allocated to each permit applicant will be proportionate to the amount of land owned or leased by that applicant. This is referred to as the landowner’s “equal proportionate share.”

Certain factors must be considered in the determination of the MAY of a major groundwater basin: total land area overlying the basin, the amount of water in storage in the basin, the rate of recharge to the basin and total discharge from the basin, transmissivity of the basin, and the possibility of pollution from natural sources. Furthermore, for a sensitive sole source groundwater basin, the MAY will ensure that the natural flow of water from springs or streams emanating from the basin will not be reduced.

Hydrologic Investigation

The first step in determining the MAY of a major groundwater basin is to conduct a hydrologic investigation, which is usually performed by the OWRB or an outside expert agency or institution such as the U.S. Geological Survey. To obtain the necessary information to evaluate the MAY, hydrologists require information on the geology and the hydrogeologic framework. Hydrologic information on precipitation, evaporation, surface water runoff, water level, and geochemical data are used to analyze the movement of groundwater through the system. Many investigations entail the construction of a digital groundwater flow model to evaluate impacts of water withdrawals on the aquifer.

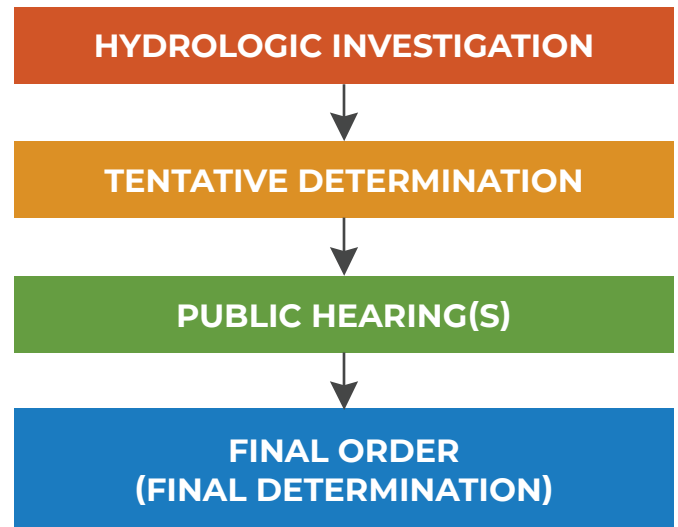
Tentative Determination

After a hydrologic investigation is complete, the OWRB makes a tentative determination of the MAY of the basin.

Public Hearing

Results of the investigation are made available for public review and one or more hearings are scheduled so that

MAY Determination Process



citizens can present evidence supporting or contradicting the evidence behind the tentative determination.

Final Order

Following the hearings, the OWRB issues a “final order” containing findings of fact and conclusions of law. Thereafter, based on the newly calculated equal proportionate share, regular permits are issued to holders of existing temporary permits and to applicants for new permits.

At least every 20 years after issuance of the final order determining the MAY, the OWRB is required to review and update the hydrologic investigations, if necessary.

Equal proportionate shares have yet to be determined on many major groundwater basins in the state. For those aquifers, “temporary” permits are granted to users allocating two acre-feet of water per acre of land per year for one year at a time and must be revalidated annually.

A [map showing groundwater basins with a final order](#) and more information on hydrologic investigations can be found on the [OWRB website](#).



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