

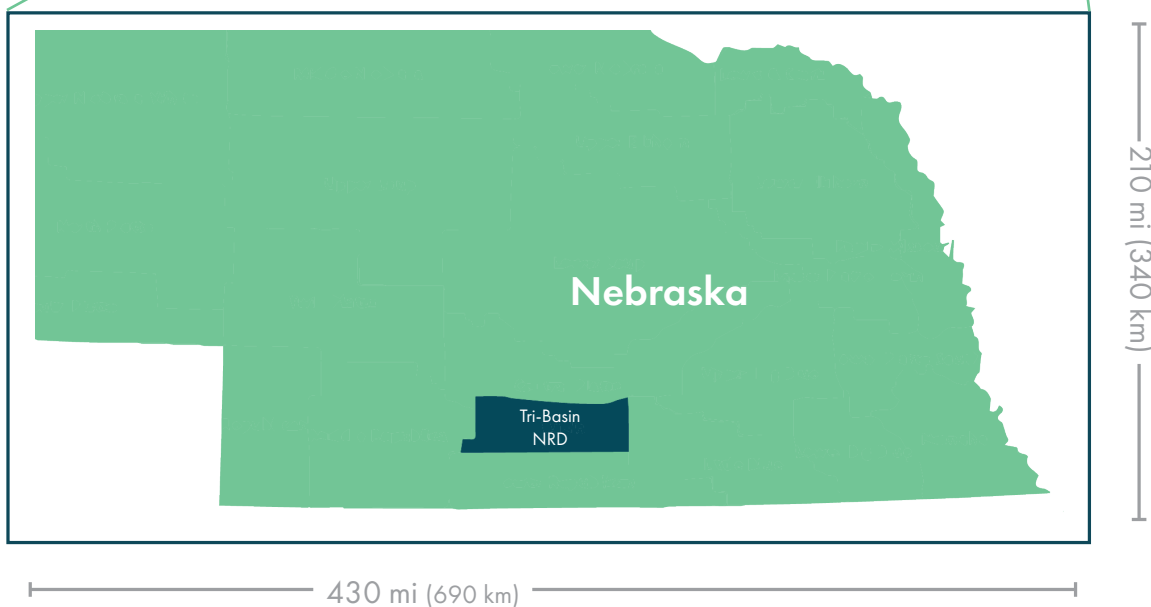
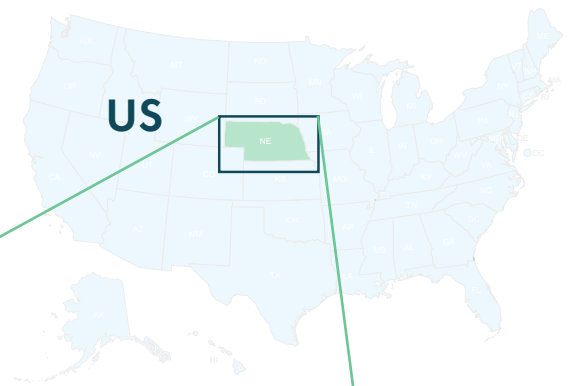
# TRANSFERRING GROUNDWATER IN THE HIGH PLAINS

Tri-Basin Natural Resources District, Nebraska



THE DAUGHERTY  
**WATER** *for* **FOOD**  
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- ▶ The Tri-Basin Natural Resources District (TBNRD) manages groundwater use for crop irrigation to ensure the long-term sustainability of its supply. The TBNRD is accountable for the impacts of groundwater pumping on streamflow governed by interstate compact. The district also seeks to prevent long-term groundwater depletion.
- ▶ Portions of the TBNRD fall into three different hydrologic basins, each with its own water issues. As a result, different parts of the TBNRD have different basin-specific rules and regulations. Among other things, TBNRD requires groundwater use reports, meters a portion of groundwater wells, has imposed a well drilling moratorium, and enforces a 3-year groundwater allocation in an area of the district experiencing significant decline in groundwater.
- ▶ Growers can formally transfer their groundwater pumping rights separately to land ownership. To be approved, groundwater transfers must be determined to have no net negative impacts on streamflow. Some adjustment to the amount of groundwater rights transferred may be needed to avoid any expected net impact resulting from the transfer.
- ▶ Formal groundwater transfers have a minimum transfer amount requirement. Transaction costs include fees associated with the formal transfer application and a property title search. Groundwater transfers are usually small and not very frequent. Transaction activity appears to be positively correlated with crop commodity prices.
- ▶ In TBNRD, informal groundwater transfers must be metered and they occur more frequently than formal transfers. There are two types of informal transfers. These arrangements allow for localized and restricted reallocation of groundwater pumping rights with very little administrative burden and no transfer of the property right.





## BACKGROUND

TBNRD, in south-central Nebraska, comprises portions of three different river basins: the Republican River, the Platte River, and the Little Blue River. The area receives an average of 22-24 inches of rainfall per year. There are 580,575 irrigated agricultural acres. Of these, 466,247 acres are irrigated solely with groundwater. Fewer than 20,000 acres are irrigated exclusively with surface water; the rest use a mix of surface water and groundwater. The main crops grown in the area are corn and soybeans. TBNRD sets a 3-year pumping allocation of 27 inches in Union Township to protect declining groundwater supply there. About 30% of wells in the Little Blue Basin and 20% of wells in the Platte River Basin are metered. All the wells located in the Republican River Basin are metered as a compliance condition for the interstate Republican River Compact.



## GROUNDWATER TRANSFERS

The administrative fee for a formal groundwater transfer is \$100. Formal transfers must be at least 3 acres. Typically, such transfers involve 10-15 acres. Formal groundwater transfers in TBNRD need to be agreed to by any land lienholders, approved by the Board of Directors, reported to county assessors, and certified by county clerks. There are usually about 8-10 formal transfers annually but there can be up to 30 transactions per year when corn prices are high. Most of those transfers are between irrigators. Groundwater transfers for cattle feedlots and industry also happen occasionally. Informal groundwater transfers occur frequently between irrigators. They require TBNRD's approval but don't need to be recorded at the clerk's office and there's no fee associated with them. These transfers are monitored via flowmeters. Agreements to pump water from a well onto neighboring property are popular throughout the district, especially where center pivots are located on two adjacent parcels. Informal transfers in Union Township allow growers to combine their groundwater allocation across multiple fields. In TBNRD, most transfer approval processes are river basin-specific.



## TRANSFER DIRECTION & BOUNDARIES

Groundwater can't be transferred between river basins in TBNRD. Within the Platte River Basin, there are restrictions on the purchase of water rights based on an assessment of sustainable irrigated area and transfers aren't allowed to some areas. If the transfer doesn't lead to higher streamflow depletion based on TBNRD's data, no adjustment is made to the amount of water transferred. Formal transfers from lower to higher streamflow depletion areas are discouraged and for them to be approved, the quantity of groundwater pumping rights transferred may need to be adjusted so that there is no net increase in stream impacts. The exact adjustment is determined on a case-by-case basis.

Within the Republican River and the Little Blue River basins, formal transfers can happen anywhere, except in a small number of townships where groundwater levels are on a long-term declining trend. Formal transfers can happen within each of those townships but groundwater pumping rights can't be transferred into these townships from other areas. For informal transfers in all river basins, impacts on streams are not accounted for.



## OTHER POINTS OF INTEREST

Growers who can legally irrigate with both groundwater and surface water ("commingled") on their property can transfer their water only to parcels that also have both groundwater and surface water with a condition to maintain their surface water contract. This is because diversion and use of surface water provides extra groundwater recharge. Informal groundwater transfers involving commingled water are valid until the end of the calendar year in which they were approved.

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**Transfer** means a change in the groundwater use location, purpose, or point of withdrawal.

A **formal transfer** is a transfer of a property right. In TBNRD, formal transfers are called the "reassigning of certified irrigated acres."

An **informal transfer** is a reallocation of water across space/time without transfer of a property right. Informal transfers, often called "pooling," allow joint operation of two or more irrigated tracts. In TBNRD, besides "pooling," which occurs only in Union Township, informal transfers are called "groundwater transfers," which allow landowners to pump groundwater from their well onto a neighboring parcel under different ownership.

**Transfer direction** must be considered when there are concerns about impacts of groundwater pumping on streamflow.

**Transfer boundaries** define the area within which groundwater can be transferred.

**Commingling** means that both groundwater and surface water are legally available for use on the same irrigated acres.