

# Memorandum

To: Pappio-Missouri River Natural Resources District Programs Projects and Operations Subcommittee  
From: Philip Paitz, Groundwater Management Engineer  
Date: October 30, 2023  
Re: Groundwater Monitoring Joint Funding Agreement with USGS

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The purpose of the Platte and Elkhorn River Integrated Water Monitoring study was to gain a better understanding of the interaction between the Platte River, the Elkhorn River, and the alluvial aquifer between them. Objectives of the study were to quantify gains or losses from each river, determine the capability of the Elkhorn River to receive groundwater flow, and better estimate a timing of flow between the two rivers. The published report from USGS is available at:  
<https://pubs.er.usgs.gov/publication/sir20195048>.

Recommendations from the study suggested that groundwater monitoring across the valley continue to improve understanding of timing and water movement between the Platte and Elkhorn River. The location of the six existing groundwater monitoring sites is shown in Figure 1.

Data from these six groundwater monitoring sites is being used in the NRD's annual reporting for our IMP, Basin-Wide Plan, and Drought Contingency Plan. It is becoming increasingly important that a continuous groundwater level record be maintained throughout the year to better understand the periodic highs and lows, annual recharge, and potential drought impacts.

A Joint Funding Agreement between the USGS and the District has been prepared to have USGS continue the operation and maintenance of these six groundwater monitoring sites and is attached. A detailed cost breakdown for each site is also attached for reference. The total cost for all six sites is \$18,570 and the USGS would provide cooperative funding of \$4,370. The District's total for this year's agreement is \$14,200. These costs are nearly the same as the last year which was a total of \$18,090 and District contribution of \$13,720. The duration of the agreement is for one year, from Oct. 1, 2023 to Sept. 30, 2024.

**Staff recommends that the subcommittee recommend to the Board of Directors that the General Manager be authorized to execute a Joint Funding Agreement with U.S. Geological Survey for a total cost to the District of \$14,200 for the continuation of groundwater monitoring in the Platte and Elkhorn River valley, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.**