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# Datasets used to map the potentiometric surface, Mississippi River Valley alluvial aquifer, spring 2018

View 

## Dates

Publication Date :

2020-05-07

## Citation

McGuire, V.L., Seanor, R.C., Asquith, W.H., Nottmeier, A.M., Smith, D.C., Tollett, R.W., Kress, W.H., and Strauch, K.R., 2020, Datasets used to map the potentiometric surface, Mississippi River Valley alluvial aquifer, spring 2018: U.S. Geological Survey data release, <https://doi.org/10.5066/P992HD1R>.

## Summary

A potentiometric-surface map for spring 2018 was created for the Mississippi River Valley alluvial (MRVA) aquifer, which was referenced to the North American Vertical Datum of 1988 (NAVD 88), using most of the available groundwater-altitude data from wells and surface-water-altitude data from streamgages. Most of the wells were measured annually or one time, after installation, but some wells were measured more than one time in a year and a small number of wells were measured continually. Streamgages were typically operated continuously. The potentiometric-surface map for 2018 was created as part of the U.S. Geological Survey (USGS) Water Availability and Use Science Program to support investigations that characterize the MRVA aquifer. The potentiometric contours ranged from 10 feet to 340 feet above NAVD 88. The regional direction of groundwater flow was generally towards the south-southwest, except in areas of groundwater-altitude depressions, where groundwater flows into the depressions, and near rivers, where groundwater flow generally parallels the flow in the rivers.

There are large depressions in the potentiometric surface in the lower half of the Cache region and in most of the Grand Prairie and Delta regions.

## Child Items (5) -

- [a\\_GroundwaterPts](#) Groundwater-altitude data, from monitoring-networks wells, considered for the potentiometric-surface map, Mississippi River Valley alluvial aquifer, spring 2018
- [b\\_Surface\\_WaterPts](#) Surface-water-altitude data, from streamgages, considered for the potentiometric-surface map, Mississippi River Valley alluvial aquifer, spring 2018
- [c\\_Pot2018Contours](#) Spatial dataset of the potentiometric-surface contours, Mississippi River Valley alluvial aquifer, spring 2018, in feet
- [d1\\_Pot2018RasterFt](#) Potentiometric surface, Mississippi River Valley alluvial aquifer, spring 2018, raster format, in feet
- [d2\\_Pot2018RasterM](#) Potentiometric surface, Mississippi River Valley alluvial aquifer, spring 2018, raster format, in meters

## Contacts

Originator :

[Virginia L McGuire](#), [Ronald C Seanor](#), [William H Asquith](#), [Anna M Nottmeier](#), [David C Smith](#), [Roland W Tollett](#), [Wade Kress](#), [Kellan R Strauch](#), [Nebraska Water Science Center](#)

Point of Contact :

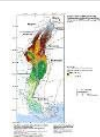
[Virginia L McGuire](#)

Data Owner :

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## Attached Files -

Click on title to download individual files attached to this item.

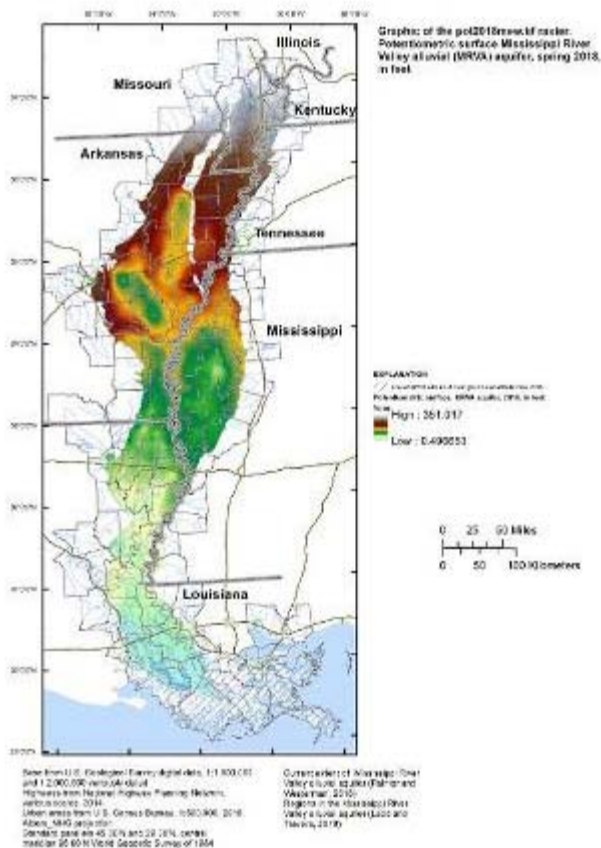
<input type="checkbox"/> <a href="#">MRVA_POT2018_raster_ft_graphic.jpg</a>		2.55 MB
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## Purpose

The purpose of this study was to prepare and present a potentiometric-surface map for the MRVA aquifer using groundwater-altitude data or daily mean groundwater altitude from wells measured generally in spring 2018, which is after water levels have generally recovered from pumping in the previous irrigation season and before pumping begins for the current irrigation season, and using the altitude of the top of the water surface in rivers in the area, hereinafter referred to as "surface-water altitude," generally on April 10, 2018 from streamgages in the area. In this report, the maps the MRVA aquifer's uppermost surface are termed potentiometric-surface maps as opposed to a water-table maps because although the MRVA aquifer generally exhibits characteristics of

unconfined conditions, where surface-water features may or may not be hydraulically connected, it also exhibits characteristics of confined or semiconfined conditions in some areas at least during part of the year, however, the location of these areas is not well understood or defined.

## Preview Image



## Map

## Spatial Services

ScienceBase WMS :



## Communities

- USGS Data Release Products
- USGS Lower Mississippi-Gulf Water Science Center \*

## Associated Items

- *related* [Water-level change, Mississippi River Valley alluvial aquifer, spring 2016 to spring 2018](#)
- *derived* [MRVA\\_d2w2018\\_wlc2016-18](#)

[View Associated Items](#)

## Tags

Harvest Set : [USGS Science Data Catalog \(SDC\)](#),

USGS Scientific Topic Keyword : [Hydrology](#), [Water Resources](#),

## Provenance

## Additional Information

### Identifiers

Type	Scheme	Key
DOI	<a href="https://www.sciencebase.gov/vocab/category/item/identifier">https://www.sciencebase.gov/vocab/category/item/identifier</a>	doi:10.5066/P992HD1R

## Item Actions

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