Technical Data Information Report

RID Number	Transmitter	Transmitter Organization	Receiver	Receiver Organization	Keyword 1
8276.00	Klenke	Nye County	QARC	Nye County	GWE

Document Date	11/2/2022	General Document Type	QA Program Doc	Keyword 2	MWL
Entry Date	12/12/2022	Detail Document Type	Data Packet	Keyword 3	Measurements

Document Title/Subject
GWE Manual Water Level Measurements from July 1, 2019 through June 30, 2020

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Data Description
GWE Manual Water Level Measurements from July 1, 2019 through June 30, 2020. Data package includes Nye County's Regional Groundwater Elevation Database (RGED V. 6.0_063020.accdb) containing Ground Water Evaluation Program (GWE) manual water level measurements, from July 1, 2019, through June 30, 2020, field forms, hydrographs (available on request) and exported data from database - posted to Nye County and Nye County Water District websites as rid8276.xlsx and meta8276.pdf.

Data Collection Method
Manual water level measurement data collected using standardized electric water level sounders in accordance NCWD Work Plan-10 Rev. 0 (3/16/15), Groundwater Level Monitoring and Evaluation, and NCWD Technical Procedure 9.9 Rev. 0 (3/16/15), Measurement of Groundwater Levels Using Electric Well Sounders.

Data Collection Location
GWE Wells: NC-GWE-2P, NC-GWE-33PA, NC-GWE-8PA, NC-GWE-Felderhoff-25-1PA, NC-GWE-GF-3PA, NC-GWE-GF-3T, NC-GWE-GF-4, NC-GWE-GF-4PA, NC-GWE-GF-4PB, NC-GWE-OV-1, NC-GWE-OV-2, NC-GWE-PV-1, NC-GWE-PV-2, NC-GWE-PV-3, NC-GWE-PV-4, and NC-GWE-PV-5. Specific locations for each well are included in Access database RGED v.6.0 and in GPS Location RIDs 7838, 7838.02, 7838.03, and 7838.04 at: http://www.nyecounty.com/GWE/GWE_WE1_data.htm

Data Collection Period
7/1/19 – 6/30/20

Data Sources
1) NWRPO derived latitude and longitude for well location and elevation data for ground elevation; 2) Depth to groundwater measured with electric water level sounders as recorded on the NWRPO Water Level Measurement Field Form (Form TP-9.9 Rev 4, dated 8/6/09) or field scientific notebook (SNB); 3) Wellhead diagrams as established with engineers steel tape and recorded in scientific notebook showing casing type, diameter, and measuring point stickup above land surface. 4) NWRPO approved Well Completion Diagrams for each GWE well for casing type, diameter, and measuring point stickup (as established with engineers steel tape and recorded in Scientific Notebooks).
Supporting Data: GWE Pumping and Sampling SNB #178, GWE Drilling SNBs #179 & #180, and metadata from prior submittals of manual water level measurements in GWE wells. See Data Collection Location above, and : http://www.nyecountywaterdistrict.net/page5.php

Data Censoring
No data were censored for the period of this submittal.

Data Processing
Routinely, data processing consists of calculations made in the Access database (RGED V6.0 accdb) and exports made from the database to MS Excel. Additionally, data are evaluated through the use of hydrographs to determine whether anomalous data exist. Anomalous data are investigated (through scientific notebooks, earthquake records, etc.) to determine the source of the anomaly. If the anomaly cannot be explained, the data are censored.

Data Limitations
Estimated horizontal GPS coordinate accuracies from Trimble Pathfinder Office V5.0 are 8.8 cm (3.46 in) for NC-GWE-8PA, NC-GWE-Felderhoff-25-1PA; 16.3 cm (6.42 in) for NC-GWE-PV-3; 16.6 cm (6.54 in) for NC-GWE-GF-3T; <5.715.cm (<2.25 in) for NC-GWE-GF-3T; <5.715.cm (<2.25 in) for NC-GWE-PV-1, NC-GWE-PV-2; 18.2 cm (7.17 in) for NC-GWE-OV-2; 18.4 cm (7.24 in) for NC-GWE-GF-3PA, NC-GWE-GF-4, NC-GWE-GF-4PA, NC-GWE-OV-1; 25.4 cm

(10.00 in) for NC-GWE-PV-4, NC-GWE-PV-5; and 26.7 cm (10.51 in) for NC-GWE-2P, NC-GWE-33PA. Estimated vertical GPS coordinate accuracies from Trimble Pathfinder Office V5.0 are 16.3 cm (6.42 in) for NC-GWE-PV-3; 16.6 cm (6.54 in) for NC-GWE-PV-1, NC-GWE-PV-2; 18.2 cm (7.17 in) for NC-GWE-OV-2; 18.4 cm (7.24 in) for NC-GWE-GF-3PA, NC-GWE-GF-3T; <5.715.cm (<2.25 in) for NC-GWE-GF-3T; <5.715.cm (<2.25 in) NC-GWE-GF-4, NC-GWE-GF-4PA, NC-GWE-OV-1; 38.25 cm (15.06 in) for NC-GWE-PV-4, NC-GWE-PV-5; and 40.5 cm (15.76 in) for NC-GWE-8PA, NC-GWE-Felderhoff-25-1PA, NC-GWE-2P, NC-GWE-33, for NC-GWE-GF-3T, NC-GWE-GF-3T <5.715.cm (<2.25 in). See RIDs 7796.01, 7798.01, 7801.01, 7803.01, 7805.02, 7807.01, 7902, 7903, 7905.01, 7906, 7907, 7908, 7909, & 7910 for more information.
NC-GWE-GF-3T Water levels appear to have equilibrated sometime in summer of 2016 for this low transmissivity well. Pumping was conducted previously in this multiple completion well on 6/6/13 and 7/9/13 – 7/11/13. See RID 8091 for more information.
NC-GWE-OV-1 is a flowing artesian well and water levels (potentiometric heads) may be above the top of the casing during some of the winter months. When elevated water levels do occur, a casing extender of 1.85 ft is added to measure the true water level, and results in a negative reading (i.e. above the top of the original unextended casing) for the depth to water. Negative readings are indicated in the “Depth to Water Below M.P.” column of the accompanying Excel spreadsheet.

The following 2 GWE piezometer strings apparently experienced sudden changes in water levels between the July 2019 and October 2019 water level readings. These changes are believed to be responses to seismic events and presumably the Ridgecrest earthquake sequence of July 4th and 5th, 2019.
GWE-GF-3PA The water level in this well declined -0.57 feet between the 7/1/19 reading (2279.50 ft), and the 10/2/19 reading (2278.93 ft), and remained near this lower elevation for the 6/9/20 reading (2278.98 ft). This well is 166 ft deep and screened from 76 ft to156 ft BGL, across a fat clay layer. The water level changes may possibly be the result of seismic events.
GWE-GF-3T The water level in this well increased 3.57 feet between the 7/1/19 reading (2300.12 ft), and the 10/2/19 reading (2303.69 ft), and rose an additional 0.39 ft by the 6/9/20 reading (2304.08 ft). This well is 469.1 ft deep and screened from 210.4 ft to 310.9 ft, and 361.4 ft to 461.9 ft BGL (see RID 1845).The water level changes may possibly be the result of seismic events

Governing QA Docs: NCWD WP-10 Rev. 0, and NCWD TP-9.9 Rev. 0

Frequency of Transmittal: Biannually or as required by PI

Direct Questions About Data To: QA Records Center