

Peer Review Summary Document

(5/20/2019)

Peer Review Plan

<https://www.usgs.gov/media/files/peer-review-plan-rio-grande-transboundary-integrated-hydrologic-m> [51 KB PDF].

Title and Authorship of Information Product Disseminated

Rio Grande Transboundary Integrated Hydrologic Model and Water-Availability Analysis, New Mexico, Texas, USA, and Northern Chihuahua, Mexico, By R.T. Hanson, A.B Ritchie, S.E. Boyce, A.E. Galanter, I. Ferguson, L.E. Flint, and W.R. Henson. **Note:** This information product is will be disseminated as a USGS Scientific Investigations Report (SIR) publication series information product that supersedes a previously disseminated USGS Open-File Report (OFR) publication series product of the same title.

Peer Reviewers Expertise and Credentials

The three reviewers for this SIR product are the same reviewers as those selected for the previously released OFR product as described in that peer review summary document dated 5/29/2018 available at <https://pubs.er.usgs.gov/publication/ofr20181091>.

Reviewer #1 holds an M.S. in geoscience and has substantial expertise in numerical simulation of groundwater and surface-water flow and surface-groundwater interaction, as well as assessing model sensitivity to system state observations and other parameters.

Reviewer #2 holds a Ph.D. in bioresource engineering and has varied research experience, including in groundwater flow and transport, geothermal energy, geostatistical methods and stochastic analysis. The reviewer specializes in the development of methods and tools for analysis and simulation of groundwater and heat flow in the subsurface, particularly in the volcanogenic terrains.

Reviewer #3 holds an M.S. in geology/hydrology and has an extensive background in surface- and ground-water hydrologic characterization and numerical modeling. The reviewer's focus has been on issues relating to water management and irrigated agriculture in the arid southwest, including subsidence, saline groundwater, and artificial recharge.

Charge Submitted to Peer Reviewers

The reviewers were asked to objectively evaluate the study methods, results, and conclusions described in the manuscript. The model discussed in this SIR product was previously presented in the published OFR product (<https://pubs.er.usgs.gov/publication/ofr20181091>), and the modifications made to create this SIR product were limited to revising some of the input data, recalibrating for the model, and amending the results and discussion to align with the new calibration results. The reviewers were specifically asked to evaluate the logic of the changes made.

Summary of Peer Reviewers Comments

All the reviewers found the work to be technically sound and had no concerns regarding the methods employed or the findings. One reviewer suggested changes in the presentation of one table so that it would be easier to follow. The reviewers provided minor constructive editorial comments, suggestions, and corrections as well as cautioned that care be taken when updating the figures and tables because the information was so similar to the OFR product.

Summary of USGS Response to Peer Reviewers Comments

The author revised the text to address all reviewer comments and to ensure that readers could logically follow the updated model and modeling process. The table was modified and the figures were carefully corrected and reviewed. The reviewers' meticulous evaluation and suggested corrections in the text, tables, and figures were helpful.

The Dissemination

The published information product will be released as a USGS Scientific Investigation Report series publication and will be available at <https://www.usgs.gov/products/publications/official-usgs-publications>.