

Peer Review Plan

Date: 10/26/2017

Source Center: U.S Geological Survey (USGS)
California Water Science Center
6000 J Street, Placer Hall
Sacramento, CA 95819

Title: Rio Grande Transboundary Integrated Hydrologic Model and Water-Availability Analysis, New Mexico, Texas, USA, and Northern Chihuahua, Mexico

Subject and Purpose: The purpose of this report is to document the development of an integrated hydrologic-flow model capable of simulating the use and movement of water across the landscape, surface-water network, and groundwater, to assess the conjunctive use of surface water and groundwater in the Transboundary Rio Grande (TRG) region. The hydrologic-flow system of the TRG includes the basins of the Rio Grande, Palomas, Mesilla, and Conejos-Medanos. The Lower Rio Grande Project of the Bureau of Reclamation supplies irrigation water under an operating agreement to local irrigation districts and to Mexico under the Treaty of the Rivers. The water is conveyed through canals and irrigation drainage systems to irrigation districts in New Mexico and Texas, USA, and to Mexico. The effects of increased demand and climatically variable supply have increased withdrawals from the interconnected water system in the TRG. Groundwater discharge to and seepage from the surface-water network and the combined effects of climate variability, surface-water and groundwater use and reuse are changing water availability owing to changing land use, irrigation practices, and crop distributions. The primary focus of the report is the simulation and analysis of conjunctive use. Included in the report are discussions of pertinent background information on the hydrology of the study area, integrated modeling procedures, and results of historical simulation for the period 1940 - 2014. The product will be released in one of the USGS publication series.

Impact of Dissemination: This information product is considered by the USGS to be Influential Scientific Information.

Timing of Review (including Deferrals): August 2017 - November 2017. Deferrals are not anticipated.

Manner of Review, Selection of Reviewers and Nomination Process: This review will be conducted via individual letters. USGS will select the peer reviewers pursuant to requirements in U.S. Geological Survey Manual chapter 502.3 -Fundamental Science Practices: Peer Review (<http://www.usgs.gov/usgs-manual/500/502-3.html>).

Expected Number of Reviewers: Three reviewers are anticipated.

Requisite Expertise: Hydrology, Hydrogeology (with an emphasis on knowledge of Southern New Mexico and/or Southwest Texas), and Integrated Hydrologic Modeling.

Opportunity for Public Review: No opportunity for public comment is formally incorporated for this product.

Agency Contact: peer_review_agenda@usgs.gov.