



## Assessment of the Flow Measurement Capabilities of Diversion Works in the Rio Grande Project Area

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Releases from Rio Grande Project storage are made on demand for diversion into Elephant Butte Irrigation District (EBID) canals and laterals through the Percha, Leasburg, and Mesilla Diversion Dams and are charged against EBID annual allocations. As the State of New Mexico implements active water resource management in the Lower Rio Grande Water Master District, involving conjunctive management of surface water and groundwater, it is essential to have a high degree of confidence in the measurements of water diverted from the Lower Rio Grande (LRG). Allowable groundwater diversions are a function of annual surface water allocations made by the U.S. Bureau of Reclamation and calculation of a comprehensive LRG water budget for administrative purposes necessarily depends on accurate diversion data for both surface water and groundwater.



The New Mexico Interstate Stream Commission (NMISC) hired WEST Consultants, Inc., to inspect diversion works and flow measurement facilities in the Rincon and Mesilla Valleys. In addition, WEST assessed the current physical condition of these structures and of adjacent channel controls at each site. WEST will provide to the NMISC its professional opinion on 1) the quality of flow data that may be obtained from each site, 2) limitations on the calibration of each structure, including a review of historical calibration data, and 3) the feasibility of improving the primary measurement structures (e.g., installation of fixed devices such as flumes to provide more accurate flow measurement).

Primary diversion works considered in the assessment are: 1) the Arrey Canal heading at Percha Dam, 2) the Leasburg Canal heading at Leasburg Dam, 3) the Leasburg check structure, and 4) the Eastside Canal, Westside Canal, and Del Rio Lateral headings at Mesilla Dam. In addition to the primary diversion works, there are approximately nineteen drains and twenty-eight waste ways that at various times discharge metered flows to the New Mexico

portion of the Rio Grande Project. While an assessment of individual structures is beyond the scope of work, a conceptual-level assessment of the flow measurement capabilities at these sites will be included, based on inspection of a representative sampling of sites.

### **Project Owner:**

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