

FY16 NM WRRI Research Progress Report Form

Report Due Date: September 8, 2015

1. **Project Title:** A Dynamic Statewide Water Budget for New Mexico
2. **Investigators:** *Principal:* Jesse Roach Ph.D., Tetra Tech Inc. *Unfunded Collaborators:* Vince Tidwell Ph.D., Sandia National Laboratories, Bruce Thompson Ph.D., University of New Mexico. *Other researcher:* Kenneth Peterson M.S., New Mexico State University
3. **Description:** The dynamic, statewide water budget (DSWB) is synthesizing water supply and demand information from across the state into a single, easily accessible location, and in such a way that users can view information at a variety of spatial scales. The overall objective of the project is a holistic view of water resources in the state to help support local and regional education and planning to improve stewardship of New Mexico's limited and critically important water resources.
4. **Methodology:** The DSWB is being built by pulling existing information from a variety of sources, predominately the New Mexico Office of the State Engineer / Interstate Stream Commission's Regional Water Plans (NM-OSE-ISC, 1999-2008), the New Mexico Office of the State Engineer's Water Use reports (Longworth, Valdez, Magnuson, & Richard, 2013) and USGS stream gage information.
5. **Results to Date and Work Remaining:**
 - a. Results from 2014-2015 work include development of a monthly timestep mass balance accounting of water stocks and flows in New Mexico by major river basins of the state from 1975 through 2013 as summarized in the final project report titled "A DYNAMIC STATEWIDE WATER BUDGET FOR NEW MEXICO: Phase I - MAJOR RIVER BASINS" submitted to WRRI June 30th, 2015.
 - b. Remaining work. The signed contract was obtained from WRRI on August 25th, 2015 and a chargeable account set up within Tetra Tech Inc. August 31st. No work has occurred, leaving the following tasks to be completed in 2015 – 2016:
 - Addition of Water Planning Region and County spatial scales
 - Quantification and display of uncertainty
 - Water energy nexus information
 - Graphic User Interface enhancements
 - Future base case scenario analysis
 - Outreach and support
6. **Student participation:** None
7. **Special recognition awards or notable achievements:** None.

8. References:

Longworth, J. W., Valdez, J. M., Magnuson, M. L., & Richard, K. (2013). *New Mexico Water Use by Categories 2010*. Santa Fe: New Mexico Office of the State Engineer.

NM-OSE-ISC. (1999-2008). *New Mexico Regional Water Plans*. Santa Fe: New Mexico Office of the State Engineer / Interstate Stream Commission.

9. **Progress toward uploading data to a common/standardized platform:** The model and report from 2014-2015 have been made available on the internet via the WRI website. We have open communication with Fereshteh Soltani at NMSU about the type of data the model produces. Generally, the output from the DSWB is available in Microsoft EXCEL file format.

10. **Provide two PP slides that provide summary information on your project appropriate for viewing by state legislators.**