Post-doctoral Research Fellow Position
Utah State University

Assessing the state of river ecosystem science for the Rio Grande / Rio Bravo del Norte

We seek a motivated and independent research scientist to assemble and review available monitoring and research reports and papers that concern riverine and riparian ecosystem science of the Rio Grande / Rio Bravo del Norte (RGB). The primary task of the researcher’s work will be to provide a synthetic overview of the state of ecological and ecosystem science that provides empowering scientific background information to a bi-national stakeholder meeting presently scheduled for late fall 2016.

The post-doctoral research fellow will be part of a team of hydrologists, geomorphologists, ecologists, and water resource engineers who are charged with developing an integrated state-of-river-science report and other background materials useful to United States and Mexican stakeholders in their consideration of restoration and environmental flows opportunities in the bi-national watershed. The overview of ecosystem science will be integrated with companion reports on the state-of-geomorphic science and the state-of-river modeling tools.

The successful candidate will have a strong background and training in in riparian ecology, aquatic ecology, and/or fish ecology that is complemented by familiarity and interest in geomorphology or engineering. Because much of this project constitutes an analysis of previously published work, the successful candidate should have strong quantitative skills that can be applied to meta-data analysis and modeling.

Strong written and oral communication skills are critical, and the successful candidate should be able to work well in an interdisciplinary team. There will be opportunities for publishing peer-review literature, and it will be strongly encouraged. Opportunities to gain teaching experience are available.

Term of appointment is one year with the potential for extension depending on funding. Preferred start date is October 1, 2015. Salary commiserate with experience (~ $50,000/yr + full benefits = ~$73,000). This is a competitive salary in Cache Valley, Utah, where living costs are relatively low. All local travel and professional travel costs will be covered. The position closes when filled. Scientist will be located in Logan at Utah State University in the Department of Watershed Sciences but will be expected to spend considerable time collaborating with partners located throughout the region. Interested candidates should send inquiries, letter of interest, curriculum vitae, and contact information to Phaedra Budy (phaedra.budy@usu.edu) and John C. Schmidt (jack.schmidt@usu.edu).
• PhD in related field. Fluency in Spanish desired but not required.

• Knowledge of and able to synthesize existing research results specific to riverine ecosystem science and identify critical uncertainties.

• Strong meta-data analysis skills.

• Academic background with good writing skills. Opportunities and efforts to publish peer-reviewed manuscripts associated with components of the project will be provided and encouraged.

• Excellent communication skills and ability to work effectively with bi-national, interdisciplinary team of scientists, ecologists, biologists, river managers, and NGOs.

Additional Background:

The RGB is one of two large drainage basins in North America whose stream flow is divided between Mexico and the United States. The RGB has two significant headwaters where unit runoff is high – the San Juan Mountains of Colorado and the Sierra Madre Occidental of Chihuahua, and stream flow subsequently crosses the Rio Grande Rift and the Basin and Range before reaching the Gulf Coastal Plain. The RGB is truly a bi-national river. Total watershed area is approximately 557,000 km² of which half is in the United States and half in Mexico. The river forms the border between the two countries for approximately 2034 km. Bi-national allocation of the RGB is defined by the Convention for the Equitable Distribution of the Waters of the Rio Grande (1906) and the Treaty for the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande (1944). Various Minutes between the US and Mexican sections of the International Boundary and Water Commission (IBWC) further define water allocation and quality of those shared waters. Within the US, the Rio Grande Compact (1938) defines the distribution of water among Colorado, New Mexico, and Texas along the RGB main stem, and the Pecos River Compact (1948) defines water allocation between New Mexico and Texas.

Despite pervasive change to the natural flow regime and associated channel and floodplain form alteration, long river segments with significant natural values or have potential for river rehabilitation. The bi-nationally protected Big Bend region is approximately 12,000 km² (Fig. 3). It includes the river segment between Las Junta de los Rios and Lake Amistad, and includes Big Bend National Park, Río Grande Wild and Scenic River, Big Bend State Park, state of Texas wildlife management units, Áreas de Protección de Flora y Fauna (APFF) Cañón de Santa Elena and Maderas del Carmen, APFF Ocampo, and Rio Bravo del Norte natural protected area.

In 2009, Mexican Secretary of the Environment Elvira Quesada and US Secretary of the Interior Salazar announced their commitment to trans-boundary
conservation efforts in the Big Bend region, and Presidents Obama and Calderón jointly declared the conservation value of the Big Bend region in 2010. In 2012, the Commission for Environmental Cooperation hosted a workshop in DF/Mexico that resulted in publication of a Conservation Assessment for the Big Bend-Rio Bravo Region.