

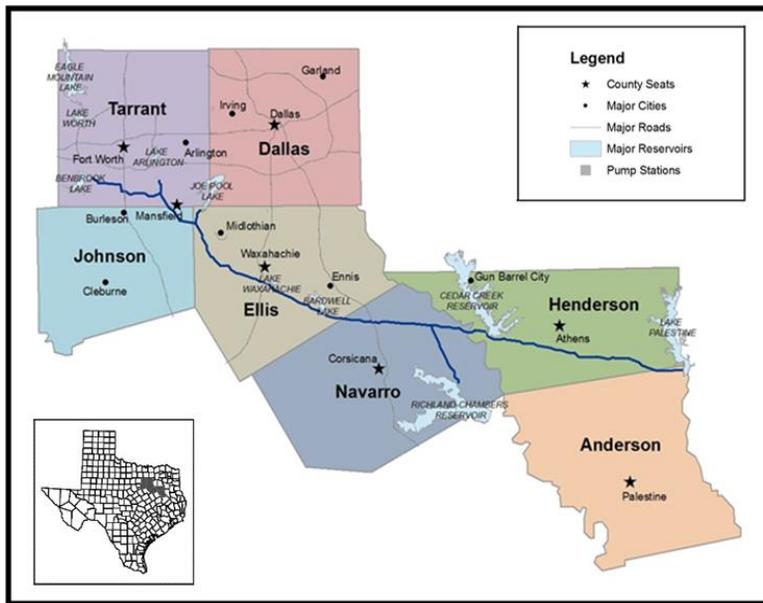
# Paper Number: 2118

## Resourcing Future Generations: Economic Impacts from Construction of a Raw Water Pipeline

Johnson, B.L.<sup>1</sup>

<sup>1</sup>Texas Christian University, PO Box 298830, Fort Worth, Texas 76129, becky.johnson@tcu.edu

The population of the Dallas-Fort Worth (DFW), Texas Metroplex (16 counties [1]) is expected to approach 13 million people by the year 2060 [2]. To meet the water demands from the projected population and economic growth, a combination of conservation and significant new infrastructure construction is essential for the DFW Metroplex [3]. The projected supply of approximately 1.8 million acre-feet per year ( $\approx 1,600$  MGD) will not meet the 2060 projected demand of 3.2 million acre-feet per year ( $\approx 2,900$  MGD), resulting in an unmet need of approximately 1.5 million acre-feet per year ( $\approx 1,300$  MGD). To address the resultant demand for additional water supplies, the Tarrant Regional Water District (TRWD) and the city of Dallas Water Utilities (DWU) have partnered to design, build, and operate a raw water infrastructure system, the Integrated Pipeline (IPL) Project, to take advantage of existing raw water resources within the state of Texas. This project will enable TRWD and DWU to transport water from Lake Palestine, Cedar Creek Reservoir, and Richland-Chambers Reservoir through 150 miles of pipelines and pump stations, ultimately delivering up to 392,048.27 acre feet per year (350 MGD) to North Texas (Fig.1). The seven counties impacted by IPL construction (listed east to west) are: Anderson, Henderson, Navarro, Ellis, Dallas, Johnson, and Tarrant.



The economic impacts of this project, as well as the detrimental impacts of insufficient water supplies, are significant for the North Central Texas region. By examining the economic impacts of the project during the planning and design stage of the IPL, TRWD and DWU will be well-positioned to promote both the short-term and long-term benefits of the project for their constituents. Texas Christian University (TCU) modeled the estimated economic impacts generated from the \$2.3 billion IPL project to establish a baseline of economic impacts on the seven counties.

Figure 1: Proposed Route of the IPL

The aggregated total economic impact of the IPL is projected to result in an economic output (total value of all goods and services produced from IPL project) of \$2,359,576,224 and 32,724 jobs over the 20 year construction of the IPL project. Eighty-eight percent expenditures remain within the study area (only 125 leaves as supply chain impacts).

*References:*

[1] The 16 counties include: Collin, Cooke, Dallas, Denton, Ellis, Freestone, Fannin, Grayson, Henderson (partial), Jack, Kaufman, Navarro, Parker, Rockwall, Tarrant, and Wise.

[2] Texas. Texas Water Development Board. "2016 Regional Water Plan--Population Projections for 2020-2070." Region C. Austin: Texas Water Development Board, January 2015. Web. 15 April

[3] Weinstein, Bernard L. and Michael Seman. Water and Economic Development: Why the Integrated Pipeline Project (IPL) is Critical for the Future Growth of the North Texas Region. Prepared for the Tarrant Regional Water District (TRWD). Dallas, TX: Southern Methodist University, 2015. Print.

