

ATTACHMENT G

**Lake Powell Pipeline Project No. 12966
Economic Analysis
(Applied Analysis, January 16, 2019)**

January 16, 2019

Utah Division of Water Resources
1594 West North Temple
Salt Lake City, UT 84116

and

Washington County Water Conservancy District
533 E. Waterworks Dr.
St. George, UT 84780

RE: Lake Powell Pipeline

Dear Ladies and Gentlemen:

Please find enclosed an Economic Analysis we prepared to respond to financial comments submitted to the Federal Energy Regulatory Commission during the Lake Powell Pipeline Ready for Environmental Analysis comment period. We appreciate the opportunity to assist the Utah Division of Water Resources and the Washington County Water Conservancy District with this important undertaking and stand ready to assist further, if needed.

Respectfully,



Jeremy A. Aguero
Principal Analyst

Economic Analysis

Introduction

Some have filed comments with FERC that call into question the economic viability of the Lake Powell Pipeline (LPP). It is apparent upon review of those comments that most of the individuals and entities are unfamiliar with the current, extensive and publicly available financial analysis. That analysis has been the subject of recent briefings provided to the state Executive Water Finance Board established by Governor Herbert in June 2017.

The following response is designed to ensure that the Commission and all interested parties have the most up-to-date financial data for LPP. Prior submissions by Applicant, when considered in tandem with the information below, clearly demonstrate that: (1) LPP is affordable; (2) the return on investment is substantial; and (3) conclusions to the contrary are not well founded.

LPP is Affordable

Study Report 10, as filed with FERC in April 2016, provided an extensive amount of information related to the socio-economic impacts of LPP, including information related to project costs and the ability of Applicant and project beneficiaries to repay those costs. This Report was supplemented with the Applicants Response to FERC's August 11, 2017 Additional Information Request. That Response contained updated information on the financial feasibility of the project, including a discussion of the role of the state of Utah, e.g., adoption of the 2006 Lake Powell Pipeline Development Act¹ and the creation of the Water Infrastructure Restricted Account (WIRA), and information showing the "repayment capacity" of the local project beneficiaries. Since the AIR response was filed, updated LPP water supply and demand information has become available, i.e., state numbers on gallons per capita per day (gpcd) usage and population growth projections. This new information is reflected in the information discussed below.

The Kem C. Gardner Policy Institute at the University of Utah, in collaboration with the Utah Governor's Office of Management and Budget, estimates that Washington County's population will increase by approximately 170 percent through 2060. The Washington County Water Conservancy District (WCWCD or District) currently supplies approximately 45 percent of all municipal and industrial water in the region. That portion is expected to grow to approximately 75 percent by 2060 given most local public water providers have already maximized their available water resources. WCWCD is under contractual obligation to increase its supply to meet this significant water supply gap for its municipal customers constituting approximately 95 percent of Washington County residents. See Supply/Demand comments. To do so, WCWCD must develop the currently-approved renewable water projects that would increase the water supply by about 12 percent, while also achieving conservation goals, and building the LPP. The cost of each such undertaking has been assumed in the financial analysis.

The math underlying the financing of this future infrastructure is not overly complicated. Project cost will be spread over a growing user base throughout a an initial 50-year period. This is a fiscally reasonable and responsible approach given the incremental increases in demand, the ever expanding

¹ Utah Code Ann. Section 73-28-101 *et seq.* This statute sets forth the LPP repayment framework.

revenue sources, the useful life of the underlying assets, and the benefits inherent in diversifying the region's water portfolio. Importantly, WCWCD has developed a general capital project funding strategy as opposed to a specific financing plan. This strategy will phase-in water rates, impact fees and ad valorem (property) tax increases in a manner that produces sufficient revenue streams while remaining mindful of policy considerations, such as conservation pricing, generational equity, and ability to pay.

The ultimate approach to project financing will appropriately allocate the costs of new projects according to the direct and indirect benefits received by residents and businesses and reflect economic and market realities at the time each project is to be funded. That said, the current capital funding strategy calls for roughly 75 percent of the required funding to be sourced to impact fees, placing a majority of the burden of constructing new water infrastructure on the new connections that directly benefit from new water projects. The remaining capital costs will be funded by both new and existing residents through increases in water rates and property taxes. Existing residents and businesses benefit from new projects through the economic vitality and stability associated with the availability of reliable water resources for decades to come.

The combination of population growth and inflation mean that the water rates, impact fees, and/or property taxes are expected to generate significant revenues through 2060. The WCWCD Board of Trustees has approved a capital funding strategy that phases in additional rates in support of the district's capital infrastructure program. The Board approved wholesale water rate increases of 10 cents per 1,000 gallons each year up to an additional \$3.00 per 1,000 gallons over the base wholesale rate (\$0.84 base rate for a total wholesale rate of \$3.84), the proceeds of which are specifically earmarked for capital projects. An increase of only 10 cents per thousand gallons per year, up to an additional \$3.00 per thousand gallons, would translate into approximately \$1.75B in incremental wholesale water rate revenue through 2060, taking into account price elasticity² and anticipated conservation achievements.

In addition, WCWCD's Board has approved an annual increase to impact fees of \$1,000 per year through 2025.³ Given Washington County is expected to add more than 295,600 new residents by 2060, this increase will produce approximately \$2.96B in revenue through 2060. Current impact fees are approximately 2.4 percent of the price of a new home. The Board has taken into account that keeping these fees under 4.0 percent of new home costs would maintain a reasonable balance between acquiring funds for necessary infrastructure and continued market price competitiveness.

Finally, the third source of revenue to fund LPP is through the collection of property taxes. The District is currently authorized to impose a property tax rate of up to 0.1 percent of assessed valuation. Its 2018 levy was 0.0648 percent. Factoring in anticipated population growth and property appreciation, aggregate assessed value is projected to increase from approximately \$15.8B in 2020 to more than \$86B in 2060. Incremental property tax revenue during this period would be approximately \$1.41B assuming the maximum rate is utilized during that period (see Table 1 below).

² Price elasticity is a measure of the responsiveness of water demand to changes in water rates that claims water demand decreases as rates increase.

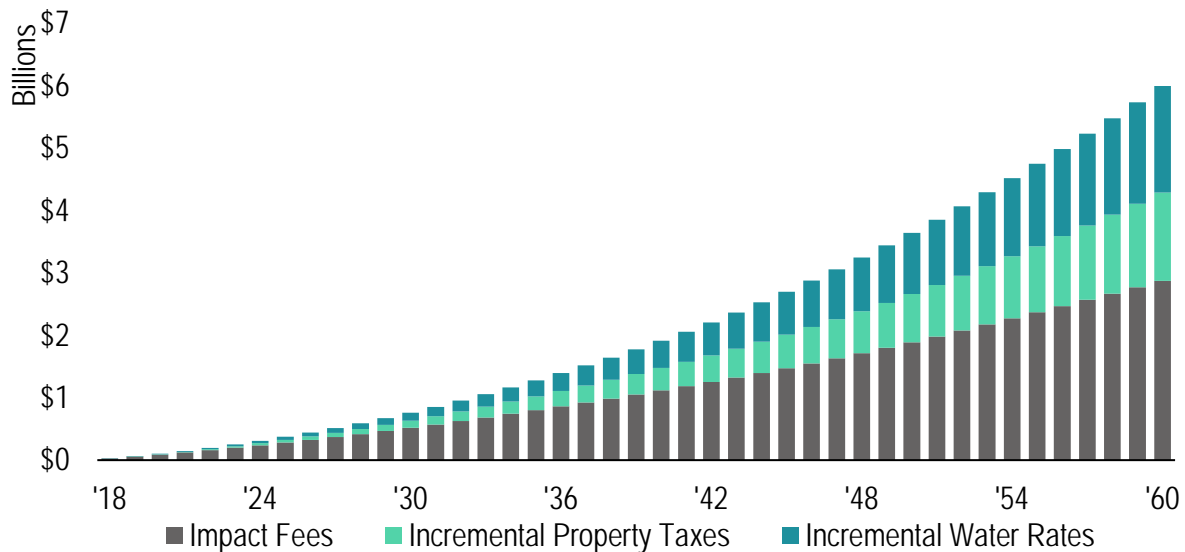
³ WCWCD, Impact Fee Facilities Plan, 2017

Table 1: Incremental Revenue Capacity by Source

Source	Revenue Driver	Total Revenue Capacity
Impact Fees	138,162 Additional ERCs	\$2.96 B
Water Rates	730.4 B Gallons Delivered	\$1.75 B
Property Taxes	\$1,851.2 B Taxable Value	\$1.41 B
Total		\$6.12 B

As demonstrated, this capital funding strategy is projected to generate an additional \$6.12B in revenue through 2060 for infrastructure projects, including LPP. Obviously, a project financing plan⁴ will need to be predicated on final project design, development timing, actual conservation achievements over time, and the financing environment, e.g., current borrowing rates. That said, an adequate amount of revenue will be available to repay financial obligations associated with the construction and operation of LPP without imposing undue financial burden on ratepayers and taxpayers.⁵

Figure 1: Cumulative Revenue by Source



LPP Produces a Significant Return on Investment

The LPP supplies are estimated to support the generation of an additional \$11B in sales tax revenue through 2060. Similarly, additional state personal income taxes associated with residents served by LPP water are estimated to generate nearly \$9.4 B through 2060. These dollars can be used to build roads, fund schools, provide for public safety, and fund other public initiatives. Stated another way, within

⁴ See UBWR’s October 19, 2017 FERC filing, *Response to FERC August 11, 2017 Additional Information Request Schedule A*, for additional discussion on timing of project financing plan.

⁵ LPP Study Report 10 contained detailed information on economic conditions in the Washington County service area including data on per capita income, employment trends, and home valuation. It clearly indicates ratepayers and taxpayers could absorb the costs of LPP without any appreciable adverse socio-economic impacts.

Washington County, for every dollar of public investment in water infrastructure, a total of \$13.46 is generated in return by way of sales and income taxes through 2060.

Figure 2: Incremental Sales Tax Revenue Supported by the Lake Powell Pipeline

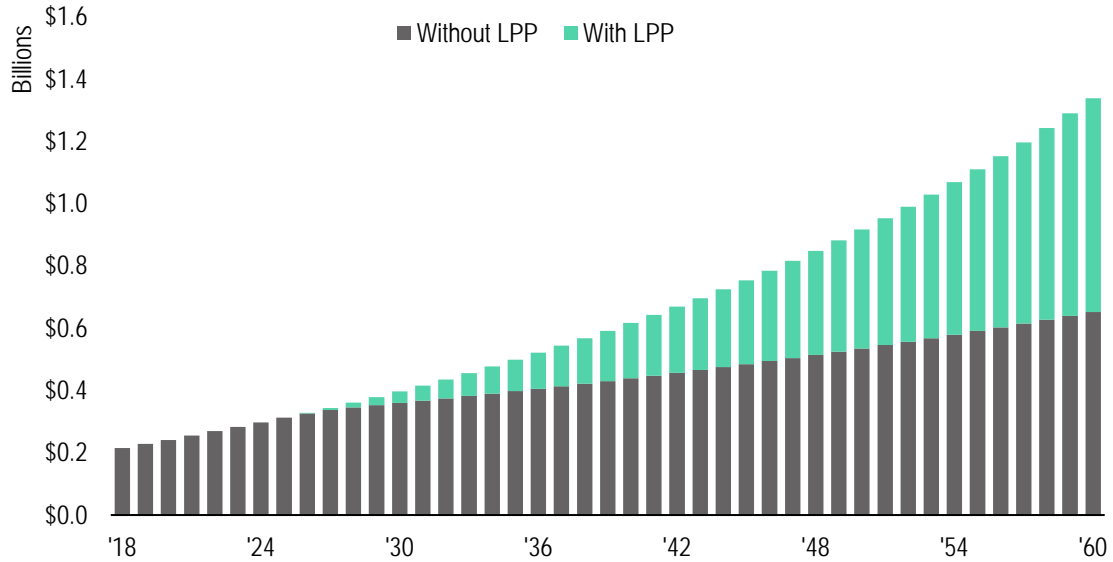
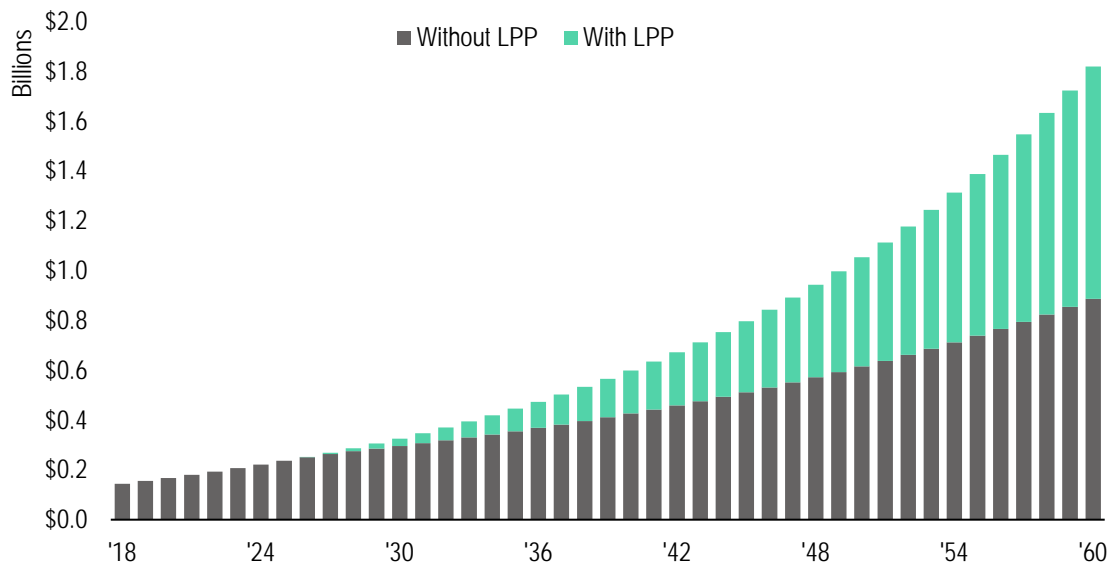


Figure 3: Incremental Income Tax Revenue Supported by the Lake Powell Pipeline



Prior Criticisms are Not Well Founded

Some commenters have continued to express concern over the financial feasibility of LPP based on work performed by certain university professors, although information rebutting significant elements of their analysis has previously been provided to project opponents and others, including through the FERC

public comment process. The fundamental errors identified that invalidate the professors' analysis, include, but are not limited to, use of:

- a misleading and inconsistent price of water in the calculations;
- flawed assumptions concerning the impact of elasticity of demand upon future water use and amount of revenue generated;
- flawed assumptions regarding whether ample alternate sources of water exist; and
- assumptions ignoring the significance of utilizing the repayment approach outlined in the Lake Powell Pipeline Development Act, such as accelerating the payment timeline.

Table 2: Inaccuracies of University Professors’ Financing Claims

University Professors’ Claim	Claim Inaccuracies
Lake Powell Pipeline construction costs begin to be incurred in 2015	<u>Erroneous time frame, disconnect</u> Repayment of debt is assumed to start more than a decade too early, creating a disconnect between the cost and the base population who will pay for it. LPP debt payments will not commence prior to 2026.
Repayment cost for the LPP would be as much as \$258 million per year	<u>Assumes straight line amortization</u> Assumed LPP is financed like a home (i.e., straight line amortization), an oversimplification. Ignores the repayment terms of 2006 Lake Powell Pipeline Development Act as well as the realities of major capital project financing. ^a Prior amortization scenarios also contained calculation errors.
Repayment of the LPP through water rates would require an increase up to 2,000 percent	<u>Underestimates current water rates</u> Used inaccurate wholesale water rates and marginal water prices ranging from \$0.45 to \$1.00 per 1,000 gallons instead of an actual average retail rate for residential customers of approximately \$2.50 per 1,000 gallons. <u>Overstates WCWCD water delivery</u> Assumed WCWCD provided 100% of water (actual was 45%). <u>Exaggerates needed rate increases</u> These assumptions led to an exaggerated water rate increase of 2,000%, which would equal \$52.50 per 1,000 gallons if applied to the current average rate.
WCWCD fails to consider price elasticity of demand in its evaluation	<u>Price elasticity is included in WCWCD evaluation</u> WCWCD’s calculations used a price elasticity of water demand of approximately -0.5, applied to the total retail water price.
Applying price elasticity of demand eliminates need for LPP	<u>Incorrect price elasticity calculation</u> Used inaccurate water rates in price elasticity calculations, which exaggerated the reduction in demand caused by rate increases.
The WCWCD’s LPP plan creates a large subsidy funded by state taxpayers	<u>Unfounded assumptions</u> Ignored statutory requirements ^b that the Districts repay the preconstruction and construction capital costs with interest.

Notes

^a A financing plan specific to the LPP will be developed when final information is available for the project, respecting existing economic and market conditions.

^b Utah Code Ann. Sections 73-28-402(4) and 403(1)