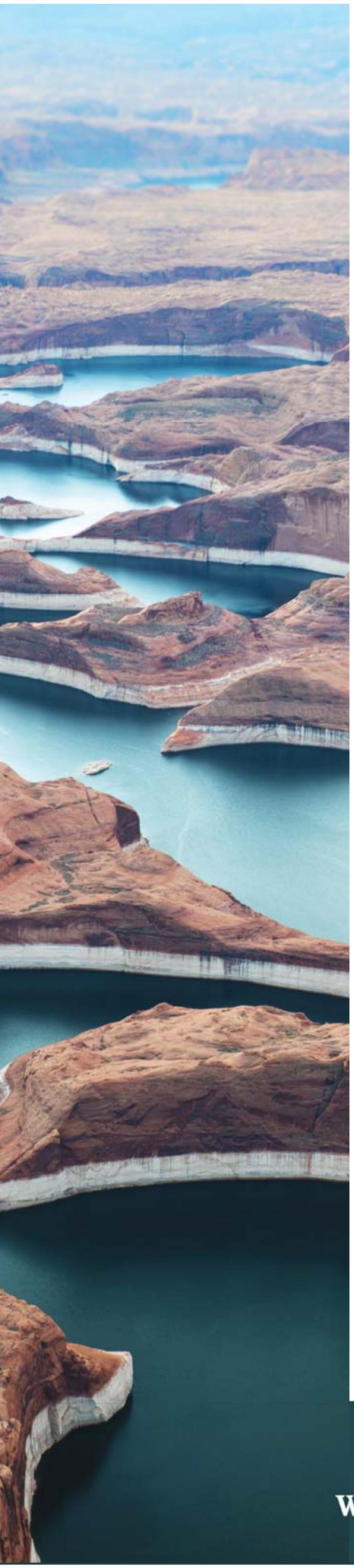

THE LOCAL WATERS ALTERNATIVE

to the Lake Powell Pipeline

The Local Waters Alternative is a solution to meet the future water needs of Washington County, Utah, by relying on local water supplies such as water conservation, water reuse, and agricultural water transfers. It demonstrates that the proposed Lake Powell Pipeline, a project that would pump water from Lake Powell to Washington County, is unnecessary. The Local Waters Alternative relies on water supplies that can be developed incrementally as needed, at a fraction of the cost of the Pipeline.

The Pipeline would deliver 69,000 acre-feet of water from Lake Powell – a reservoir on the Colorado River – across 139 miles to Washington County, Utah. This project would expose current and future Washington County residents to unnecessary costs and risks. According to the U.S. Bureau of Reclamation, demand for water in the Colorado River Basin – which includes Washington County – began to exceed water supply in 2000. This trend is expected to continue well into the future.[1] New pipeline diversions and long term drought are likely to exacerbate this imbalance.

As proposed, this pipeline may not be able to deliver the anticipated water supply; yet it would still pose a significant financial risk for Washington County water users. University of Utah economists estimated that the annual debt for the pipeline could be more than four times the current annual (net) revenue generated by the Washington County Water Conservancy District.[2] It would likely fall to Washington County residents to repay the debt

Fortunately, there is a better solution. The Local Waters Alternative provides a pathway for Washington County to meet projected water needs in a reliable, flexible, and cost effective manner through the year 2060.

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1 U.S. Department of the Interior, Bureau of Reclamation. 2012. Colorado River Basin water supply and demand study. Study Report. pg SR-36. http://www.usbr.gov/lc/region/programs/crbstudy/finalreport/index.html

2 Blattenberger, G. et al. 2012. Letter to Speaker Lockhart, President Waddoups, and Senator Bramble. Minutes of the Revenue and Taxation Interim Committee. October 17, 2012. Retrieved February 25, 2013. http://www.le.utah.gov/Interim/2012/pdf/00002633.pdf

WESTERN RESOURCE ADVOCATES

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ACRE-FEET PER YEAR (AFY) IS A COMMON FORM OF MEASUREMENT FOR WATER PROVIDERS. DEPENDING ON USAGE RATES, 1 AFY CAN MEET THE NEEDS OF 2-4 HOUSEHOLDS PER YEAR.

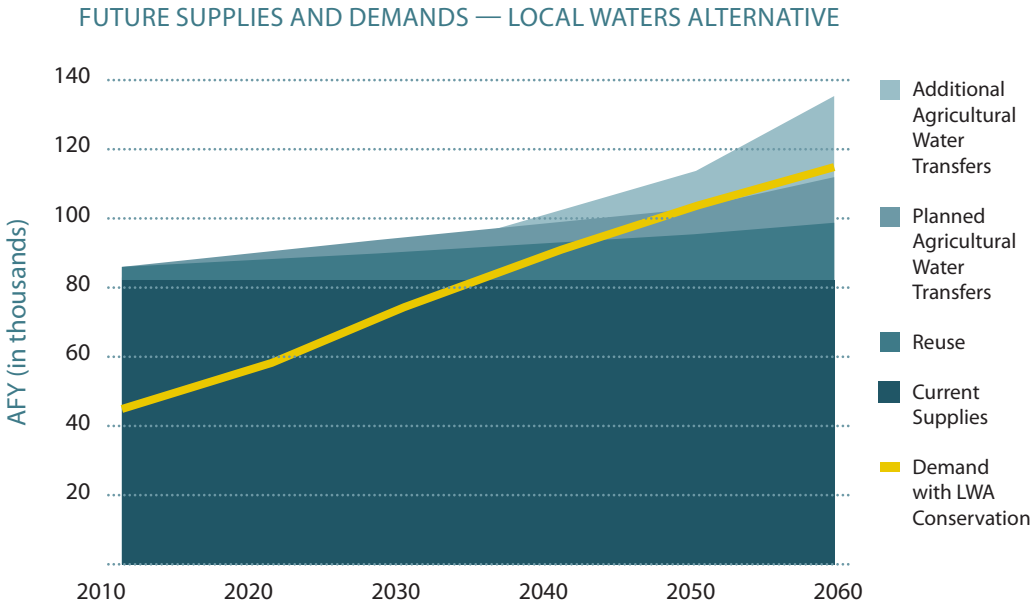


FIGURE 1. The Local Waters Alternative shows that water conservation will minimize future water demand (yellow line), and new, local supplies like reused water and agricultural water transfers will meet Washington County's water needs through 2060 and beyond. Water volumes are shown in acre-feet per year (AFY).

THE LOCAL WATERS ALTERNATIVE

The Local Waters Alternative demonstrates that increased levels of water conservation, along with local water supplies from reused water and agricultural water transfers, can provide more than enough water for Washington County's growing population through 2060 and beyond. The County population is expected to grow from 140,000 to 580,000 residents by 2060.[3] Washington County currently plans for only minimal levels of water conservation through 2060, despite the tremendous potential for water efficiency in this arid region.

Driving Down Demand: Conservation

The key feature of the Local Waters Alternative is its emphasis on a meaningful and achievable water conservation goal. Under the Local Waters Alternative, Washington County and local utilities would invest in conservation measures that reduce per capita water use by 1% per year, based on each preceding year's per capita water use. Meeting this conservation goal would result in a system-wide rate of water use of 176 gallons per capita per day (GPCD) in 2060.[4]

Washington County currently uses more water per capita than almost all of its western neighbors. Potable water use data is more readily available than total water use (potable and non-potable), and thus is used here for comparison. In 2010, Washington County's potable water use was 241 GPCD (Figure 1). With a yearly 1% conservation rate, Washington County could reduce potable use to 115 GPCD by 2060.

Photo credit: Erika Rogers

3 Utah Governor's Office of Planning and Budget (GOPB) population projections released December 2012.

4 System-wide GPCD is a common metric for measuring rates of water use in a community. It is calculated by summing all water used (potable and non-potable) by all sectors in a community, and dividing by the number of residents.

SYSTEM-WIDE WATER USE RATES (POTABLE ONLY) IN CITIES ACROSS THE WEST

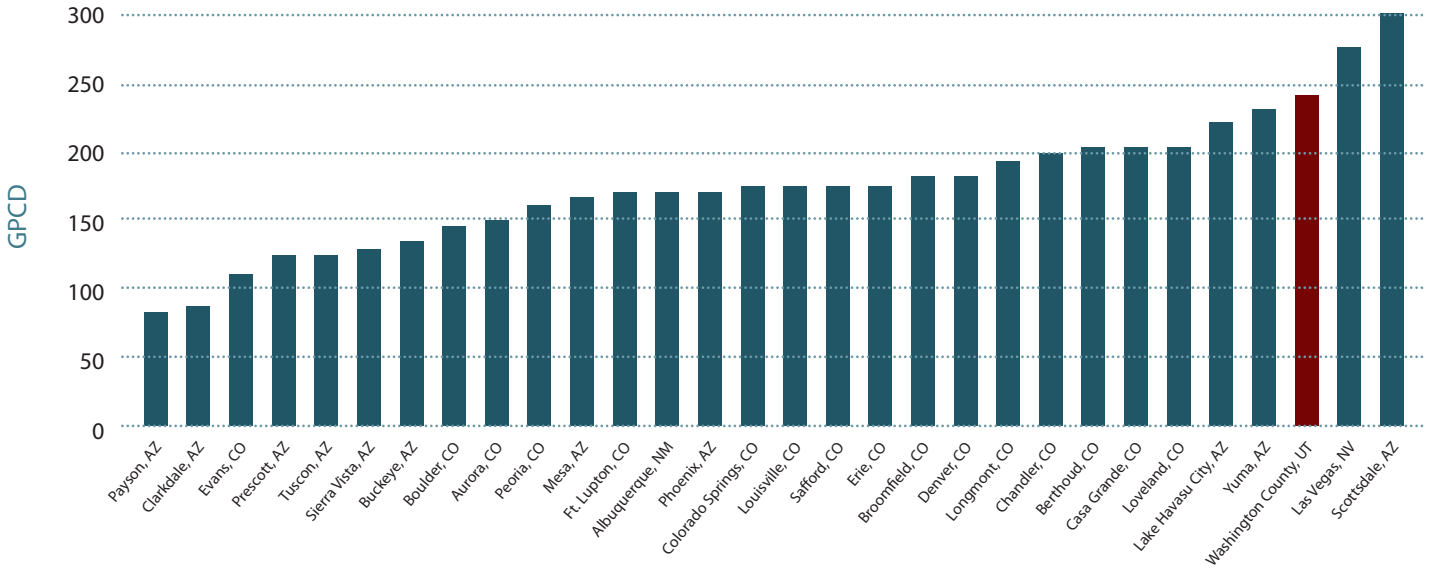


FIGURE 2. Washington County's current average system-wide potable water use (241 gpcd) is among the highest of 30 communities in the West.[5] These rates of water use are measured in gallons per capita per day (GPCD) and represent potable water used across the residential, commercial, institutional and industrial sectors.

Under the Local Waters Alternative, total county-wide water demands would amount to 115,000 AFY in 2060. This is significantly less - 42,500 AFY – than the amount of water that would be needed otherwise. This conserved water represents about 60% of what the Pipeline is proposed to deliver.

THE GOVERNOR HAS SET A NEW, ACCELERATED GOAL TO REDUCE PER CAPITA WATER DEMANDS 25% BY 2025. THIS WOULD RESULT IN A VERY SIMILAR PER CAPITA WATER USE RATE IN 2025 AS PROPOSED BY THE LOCAL WATERS ALTERNATIVE.

Is a 1% reduction per capita per year reasonable and achievable? Recent trends and analyses indicate it is. A recent survey of 100 cities and water agencies in the Colorado River Basin showed that that "the majority of people receiving water from the Colorado River basin live in areas where per capita deliveries dropped an average of at least one percent per year from 1990 to 2008."[6] In fact, Washington County already reduced per capita demands by more than 1% per year between 2000 - 2009, but future water plans are much less ambitious.

Washington County and local water utilities currently have conservation programs– such as appliance replacement incentives and education efforts - but much more is needed for a comprehensive conservation strategy. The Local Waters Alternative recommends these additional conservation measures to help Washington County reduce its future water demands:

1 | Implement conservation-oriented water prices, which keep costs low for all basic water uses and increases with nonessential uses;

2 | Meter all water, including culinary and secondary water, so that providers can document and track water use more effectively;

3 | Embed water efficiency into existing public spaces and new residential and commercial developments;

4 | Implement smart growth principles – such as denser growth patterns – to better prepare for population growth.

5 Beckwith, D., Figueroa, J. 2010. Arizona water meter: a comparison of conservation programs in 15 Arizona communities. Western Resource Advocates.

6 Cohen, M. J. 2011. Municipal Deliveries of Colorado River Basin Water. Pacific Institute. pg. iii

Shoring Up Supply: Reuse & Agricultural Water Transfers

Reused, or recycled wastewater, is water that has been treated to meet secondary water standards and is typically used for industrial purposes or outdoor irrigation. Water reuse is not new to Washington County; the county currently reuses about 3,900 AFY and is planning for much more. The Local Waters Alternative estimates that 16,900 AFY of reuse water will be available by 2060 based on future population projections and the proposed conservation plan. Reused water would come from communities such as St. George, Washington, Santa Clara, and Ivins.

Agricultural water transfers occur when agricultural water-rights holders sell or lease their water rights to other water users, such as municipalities. Agricultural water sales have occurred in Washington County for decades. Many western communities are now pursuing flexible water leases, rather than permanent sales, through rotational fallowing agreements or dry year leases. The Local Waters Alternative posits that at least 13,600 AFY will become available by 2060 through agricultural water transfers. As the urban population expands, it is likely that even more water will become available. The Local Waters Alternative estimates that as much as 35,200 acre-feet of water could be transferred from agricultural lands through sales or leases by 2060 (and at least 50% of existing agricultural lands could remain in production).

DOLLARS AND SENSE: COST ANALYSIS

The Local Waters Alternative is estimated to be significantly less expensive than the proposed Lake Powell Pipeline. The low-end cost estimate of the pipeline is $1.5 billion for Washington County, which includes construction, operation, and maintenance.[7] In contrast, the Local Waters Alternative could be implemented for as little as one-third of the cost of the pipeline. The estimated conservation costs include water utility administration, rebates, educational programs, and customer expenses associated with purchasing water-efficient appliances or materials. Reuse costs include the construction, operation, and maintenance of a reuse water treatment facility, and water distribution costs. Agricultural water transfer costs reflect the cost to purchase water rights.[8] By investing in these local supplies, Washington County would maintain the flexibility to pursue additional water supplies in an incremental fashion, which is less financially risky than investing in one single, large Pipeline project.

LOCAL WATERS ALTERNATIVE	LAKE POWELL PIPELINE
$510 million	$1,513 million

TABLE 1. The cost of the Local Waters Alternative could be as low as 1/3 the cost of the Lake Powell Pipeline.

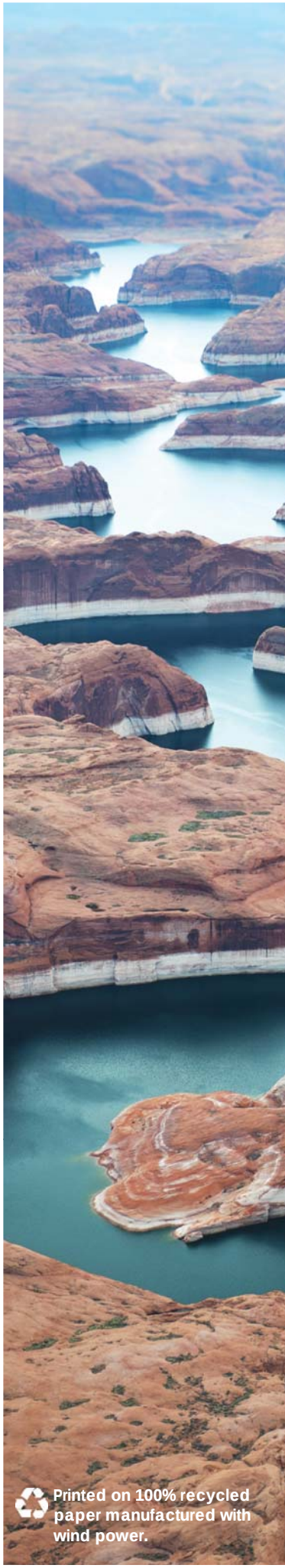
A BETTER ALTERNATIVE

The Local Waters Alternative provides a flexible and cost-effective pathway for Washington County to meet water needs through the year 2060. Water conservation is the key component of this alternative; when combined with increased reuse agricultural water transfers, it will result in a more sustainable water supply for generations to come. This is no substitute – it is the solution for securing Washington County's future water needs.

7 Utah Board of Water Resources. Modified Draft Study Report 10. Socioeconomics and Water Resource Economics. February 2012.

8 Purchasing water rights is more costly than leasing water rights, and, thus, is a high-end estimate. However, additional infrastructure may be needed, and those costs are not assessed.

This document is a summary of the full report, "The Local Waters Alternative to the Lake Powell Pipeline," authored by Amelia Nuding, Water/Energy Analyst at Western Resource Advocates. For more information, go to:WesternResourceAdvocates.org/water/powell.php



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