The precarious plan for the Lake Powell Pipeline

Officials in Utah's fastest-growing county are obscuring details of what a high-stakes project will cost taxpayers.

Nearly a decade ago, Gabriel Lozada, a man with a wiry frame and waves of steel-gray hair who looks exactly like the mathematician he is, set out to answer what he thought was a relatively simple question: Could Utah's proposed Lake Powell Pipeline — a plan to ferry Colorado River water to southern Utah — live up to the state's rosy forecasts of growth and prosperity? Or was it more likely to tank the economy of a small but lively retirement community in the southwestern Utah desert?

Lozada, a theoretical mathematician at the University of Utah and a pro bono consultant for the Utah Rivers Council, suspected that government officials were overstating the pipeline's benefits and ignoring its potential costs. So he began building a mathematical model of its possible impacts on southern Utah residents. While proponents argued that the project was necessary to stave off water shortages, Lozada warned that it might trigger an economic crisis.

But how could he be sure? Even today, more than a decade after it was first proposed, no one seems to know what the pipeline — with 140 miles of buried pipe and five pumping stations between Lake Powell and the town of St. George — is going to cost, much less how it will impact local water rates. Communications from within Utah's state water agencies, obtained during this investigation, suggest officials purposefully withheld those details from

the very taxpayers who might ultimately be saddled with the bill. Federal officials also seem wary of the state's scanty financial information. In September, the Federal Energy Regulatory Commission declined to take action that would have exempted the state from more rigorous financial scrutiny. Despite this, the state Division of Water Resources "remains fully committed to this project," according to Division Director Eric Millis.

As pressure mounts over the project's fate, Lozada has been consumed with trying to discern how the pipeline will impact the residents of Washington County, the intended recipients of its water. And in the process, he's made enemies. His research has become mired in a back-and-forth with Jeremy Aguero, a rival economist in Las Vegas whom the Washington County Water Conservancy District hired to conduct its own cost analysis. His conclusions are very different from Lozada's. Where Lozada predicted a 500 percent increase in water rates — amounting to about $370 more per person, per year — Aguero originally promised Washington County could fund the pipeline for just $25 per person per year, an increase of less than 27 percent.

Aguero pointed out errors in his rival's math, which Lozada corrected; he now believes the water districts' plan to triple its water rates — potentially increasing residents' costs by more than $300 per year — may, just barely, pay for the pipeline. But he doesn't believe residents will pay such prices without buying dramatically less water, negating the need for the pipeline.

And he has grown increasingly frustrated by the county's unwillingness to reconcile the two models and publish a single accurate number. And though Lozada has released his work, Washington County has not released the details behind Aguero's analysis. "Who knows what else is wrong with the model?" says Lozada. "They're not transparent about it, so I can't see what's wrong."

Gabriel Lozada, mathematician at the University of Utah, believes that the proposed Lake Powell pipeline could trigger an economic crisis.

Lisa Potter/University of Utah Communications

Aguero has also been reluctant to stand by his conclusions. In June 2016, when a state records committee forced him to release a PowerPoint presentation created for the water district regarding his $25-a-year model, he disowned it. The $25 figure, he said, was merely a placeholder in an interactive exercise intended to spur discussion about how the public would prefer to pay for the pipeline. The real model, he claimed, did not exist in a format that could be released. He later told local journalists the average residents' water bill would increase by just $52. Aguero did not respond to multiple requests for comment for this article.

It's not just the cost that is obscure; it's also unclear who will pay the bills. Historically, water projects of this scale were constructed with federal funds. But those dollars have largely dried up, and residents of northern Utah — who continue to outnumber their southern counterparts by a wide margin — oppose a state subsidy for the project. That would leave still-small Washington County to pay for a billion-dollar-plus pipeline essentially by itself.

County officials believe the expense will be worth the risks once they realize their vision for a more vibrant community with jobs and a quality of life that will keep their children nearby. But it's those very descendants who could end up saddled with billions of dollars in debt should the increased cost of water cause local growth to stall.

Washington County is currently one of the fastest-growing communities in the nation. In recent decades, it's been discovered by Californians looking for a warm climate with a lower cost of living, and northern Utahns seeking affordable land with milder winters. The quiet desert town of St. George is now a bustling retirement community with a thriving tourism industry. That rapid growth has become Utah's justification for building a pipeline to provide water, despite a nationwide drop in water use in the last decade, suggesting that a growing population won't necessarily need more, and Lozada's anticipation that local residents won't pay.

Before the population explosion, state leaders envisioned the Lake Powell Pipeline as a way to use Utah's share of the Colorado River to spur economic development in Washington County. Abundant water, they hoped, would attract exciting new economic opportunities that would inspire local youth to build lifelong careers at home in the rural West. But by now, it's clear that the pipeline is no longer needed to achieve that vision; Washington County began transforming in the 1980s and '90s.

Amid the growth of the budding county, the Utah Legislature agreed in 2006 to build the Lake Powell Pipeline — with certain conditions. According to the terms of the Lake Powell Pipeline Development Act, the state will pay for the construction of the pipeline, but only if the recipients of the water, Kane and Washington counties' water conservancy districts, enter into a contract to purchase it. According to the state statute, the water will be sold at a price that enables the state to reclaim the costs associated with designing and building the pipeline, with interest, over 50 years.

David Clark, now retired, is the state legislator who originally introduced plans for the pipeline. The development act authorizing it assumed that the state would play a large role in financing the project. Here, Clark makes a presentation to the Executive Water Finance Board.

Nick Adams for High Country News

According to David Clark, the now-retired state legislator who originally introduced the Lake Powell Pipeline Development Act, the law was designed to emulate the way the Bureau of Reclamation financed large water projects in the past. But since federal dollars are harder to come by today, the act assumed that the state would play the role of the federal government. The act does not, however, Clark said, authorize a state subsidy for the project.

Outside analyses, though, have since raised doubts about Washington County's ability — or plans — to pay for the pipeline in full.

Tied to promises that new residents will foot the bill, local leaders have hatched a complicated scheme to raise funds for it. But their plan relies heavily on the county's continued growth, presenting a nebulous moving

target as the pipeline's costs become increasingly unclear.

Water districts have the authority to levy property taxes, and so tax increases to help pay for the pipeline are already planned in Washington County, according to Ron Thompson, a proud descendant of pioneer settlers and the general manager for the Washington County Water Conservancy District. The cost of fees associated with new development in the county will roughly double, and the price of purchasing water from the district — a water wholesaler that sells to the surrounding cities — is expected to triple.

Many of these changes have already begun to take effect. Water rates alone will increase enough to generate about $2 billion in revenues, Thompson said, and that by itself could cover the projected $1.1 billion-to-$1.8 billion cost of construction.

Critics like Lozada say that Thompson's figures don't take into account numerous complicating factors, such as the fact that the water district is also on the hook for the state's development and permitting expenses, which have already cost Utah tens of millions of dollars and will likely cost even more, given a recent federal ruling that will subject the pipeline to additional government scrutiny. Nor does it take into account interest rates, or the possibility that local growth and demand for water could slow if costs soar.

If growth slows, the water district's projected revenues will fall, potentially trapping the county in a negative feedback loop that could make it impossible for it to repay the debt. Then Utah's taxpayers will be left holding the bag.

But local officials dismiss fears that growth will stall. The price of the average house in Washington County has increased 12 percent in the last year, Thompson said, and people are still moving in. If the average home price has gone up $25,000 in one year, he doesn't see how adding $8,000 in development fees over the next decade is likely to slow growth.

Jon Pike, the mayor of St. George, is similarly unconcerned that the pipeline

would cause growth to stagnate. He believes that, even if water rates increase, current residents will be willing to pay. “The measure I look to is, who are the people electing? And they are electing people who are pro-Lake Powell Pipeline,” Pike said. “Anti-pipeline people are not getting elected.”

New luxury housing construction pushes up against a pasture.

Nick Adams for High Country News

Critics of the project fear the public is making decisions based on false promises. As steep as the current price increases may seem, even Lozada’s figures assume the state’s estimated construction cost of just under $1.4 billion is accurate. But email communications from within the Utah Division of Water Resources, obtained by High Country News through state records requests, indicate that it is not.

MWH Global, an international water and natural resources consulting firm that has since merged with Stantec, originally put the cost of the pipeline at around $1.3 billion in 2009. But in late 2015, the consulting firm drew up a new estimate that concluded construction costs had escalated by several hundred million dollars during the intervening years.

Though the original 2015 estimates have not been released, a revised version of the December 2015 report predicted that the project would cost about $1.5 billion, and possibly as much as $1.9 billion. That potential escalation has not been communicated to the public. Instead, public officials often insist that there are currently no cost estimates available for the project.

Email exchanges between the project leadership team at the Division of Water Resources and the Washington County Water Conservancy District show that local water managers repeatedly pressured the state and its contractors at Stantec to revise their projections of how much each element of the pipeline would cost. One extended argument, for example, involved the cost of bringing in soil to bury the 140 miles of pipe — Thompson, the leader of the Water Conservancy District, was certain he could find cheaper dirt than

what Stantec anticipated paying.

After several months of discussion, the contractors begrudgingly agreed to reduce the estimate to a range of $1.1 billion to $1.8 billion — despite the fact that all parties also quietly added some $140 million in extra features to the project during the same timeframe, according to a memo circulated in early 2016.

Officials with the Washington County Water Conservancy District were particularly persistent in their requests that the state and its contractors reduce the amount they planned to hold in reserve in case of unforeseen costs, which initially accounted for nearly 4 percent of the overall estimate. Despite the lead contractors' repeated warnings that the large contingency fund would be necessary "based on our experience performing other large water resource programs throughout the U.S.," state officials ultimately sided with the water district and reduced the contingency fund by 75 percent.

Slashing that fund decreased the reported price of the pipeline by tens of millions of dollars and reduced the overall amount Washington County has to prove it can raise. But it also increases the chance that the actual cost will exceed what the county is able to pay — potentially leaving taxpayers statewide on the hook should some aspect of the pipeline prove more expensive than planned.

Emails exchanged between state engineers and Stantec staff also show the parties used "significant input and feedback" from the water district to create a carefully crafted picture of Washington County's costs should the pipeline not be built. Initial drafts suggested constructing the pipeline could cost more than the conservation and "mitigation" efforts that would be required in its absence. Subsequent analyses greatly increased the cost of "mitigation" in the event the pipeline was not built.

Washington County Water District Manager Ron Thompson believes that the state has been overestimating the cost of the pipeline, and that it can be completed under budget.

Nick Adams for High Country News

But as internal emails show, even state employees questioned the accuracy of some components of the new revisions, such as the anticipated cost of using special soil-coating compounds as ground cover if the county didn't have enough water to support growing thirsty lawns.

The capriciousness of the pipeline project has begun to alienate some of its most important allies. Thompson, who sent numerous emails to the state and its contractors demanding revisions to the cost estimates, said he felt the state was biased toward overstating the cost of the project. But he still believes that, with careful management, the Washington County Water Conservancy District can complete the pipeline under budget. Mayor Pike, on the other hand, said he has long suspected that it will cost more than state and county officials have let on. Even if the state's figures are in the ballpark, Pike said, inflation and other delay-related costs continue to pile up.

Washington County officials originally hoped to break ground in 2020, but that timeline was removed from the water district's website after an abrupt series of decisions by the Federal Energy Regulatory Commission introduced months of unanticipated delays — and increased the rigor of the analysis the project will undergo at the federal level. Construction costs have also dramatically increased in the state of Utah in recent years — the cost of hiring laborers alone jumped 6 percent between 2015 and 2017, according to state data.

Washington County may be able to raise $2 billion dollars by tripling its water rates. But officials' ongoing game of cost-estimate hot-potato suggests that even $2 billion may not be enough.

Because of so many lingering questions about Washington County's ability — or intent — to repay the state for the pipeline's ultimate cost, Utah Gov. Gary Herbert created an Executive Water Finance Board in 2017 to vet the project. The board's work has only just begun, and its members are reluctant to weigh

in on the pipeline's feasibility. But their current projections suggest that the state's entire tax base may be insufficient to fund it — risking an $80 million annual shortfall that could spur significant tax increases throughout Utah.

Despite the funding quagmire, proponents of the Lake Powell Pipeline continue to believe that it's worth the risk. For all their expressed desire to secure economic prosperity for their children, there is reason to believe it's not just the fate of Washington County that is at stake. Unlike the states in the Lower Colorado River Basin, Upper Basin states like Utah aren't entitled to a finite amount of water under the Colorado River Compact. Rather, Utah is entitled to a proportion of the water that is left over after the Lower Basin states — California, Arizona and Nevada — take their share. But given the ongoing aridification of the Colorado River region, it's not actually clear how much entitlement Utah has left.

"The amount of water available in the state of Utah is not known," said Jack Schmidt, who holds the Janet Quinney Lawson endowed chair in Colorado River Studies at Utah State University. "And when reference is made to unused allocated water, one cannot assume that water is actually available to be developed."

The possibility that water deliveries from the Lake Powell Pipeline could be cut off or curtailed by shortages on the Colorado presents yet another issue inside the financing conundrum: Washington County is expected to repay the state of Utah by purchasing pipeline water. If there is no water available for sale, Utah does not get paid.

But that reality hasn't tempered the desire of Washington County officials to see their little community grow. Development benefits everyone, said Pike, the mayor of St. George. Pike hopes his community will attract a tech boom of its own with the promise of plentiful water. "Some people say they want the good old days," Thompson agreed, "but that's not what I want."

But as state and local officials wrangle over the specifics of who might

eventually foot the bill, there's still a chance that Washington County residents could avoid paying it. Under Utah's Lake Powell Pipeline Development Act, it's the state — not the county — that will end up doing so, should Washington County's efforts to pay fall short.

Is that unfair? Washington County Water District Manager Thompson doesn't think so. Growth in Salt Lake City was once made possible by large, expensive water projects funded by a nationwide tax base. If Utah writ large has to raise taxes to pay off multimillion-dollar budget deficits, then so be it, he says. In his mind, it's Washington County's turn.

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