October 17, 2017

Mr. John Dougall
Utah State Auditor
East Office Building, Suite E310
Utah State Capitol Complex
Salt Lake City, UT 84114

Dear Auditor Dougall,

I am writing to express our concerns and request an opinion from your office regarding the appropriateness of conduct during legislative testimony by several Utah government agency representatives in their quest to procure $1-3 billion in Utah taxpayer spending at an official and publicly-noticed legislative committee meeting. Chief among our concerns is whether it is a violation of Utah law for a representative of a Utah government agency to knowingly and intentionally misstate information and existing data known to them to a committee of the Utah Legislature.

This complaint documents this disconcerting line of false and/or misleading communications from these Utah agency representatives that are in direct contradiction to previous statements and communications made by these same representatives to other parties. We do not file this complaint lightly. We understand the gravity of this revelation, yet considering the billions of dollars at stake for Utah taxpayers and the debt implications to Washington County residents, we believe a review by your office into these falsehoods around the Lake Powell Pipeline is strongly warranted.

The agencies in question are the Utah Division of Water Resources (the Division), the Washington County Water District (the District), and the Kane County Water District (Kane Water). At the Legislative Water Development Commission meeting on August 22, 2017, representatives of these agencies misstated well-known financial and/or water supply data previously reported to credit rating agencies, federal permitting agencies, the Utah Legislature, the public and other parties.

These water agencies are seeking to convince the Utah Legislature to initiate $3+ billion in new state spending on the 140-mile Lake Powell Pipeline and these agencies have spent millions of dollars on marketing and lobbying activities over the last several years to advance the project. To date, $32+ million of Utah taxpayer money has been spent on the Pipeline.

According to state code section 36-11-303, *Prohibition on Communicating False Information to a Public Officer*, such conduct is against Utah law:

> *"A person may not intentionally communicate to a public official any false information materially related to a matter within the responsibility of the public official."*

These misstatements are documented as follows:

1. **Deceiving Legislators About the Need to Spend $1-3 Billion**

In their efforts to convince Utah Legislators that Washington County needs water from the proposed Pipeline, both the Division and the District misstated the amount of water being used in Washington County at the August 22 meeting in an apparent attempt to deflect potential criticism from a Utah Legislator and help procure financial support from the Utah Legislature.

The amount of water a community is using is the cornerstone of demonstrating future water needs and future spending required to serve these water needs. Accurately determining the amount of water used by a community is therefore vital to determining whether future spending is required. Exaggerating future or existing water use is no different than a government representative intentionally exaggerating the number of constituents needing services, or the amount of services an agency claims to deliver to said constituents.

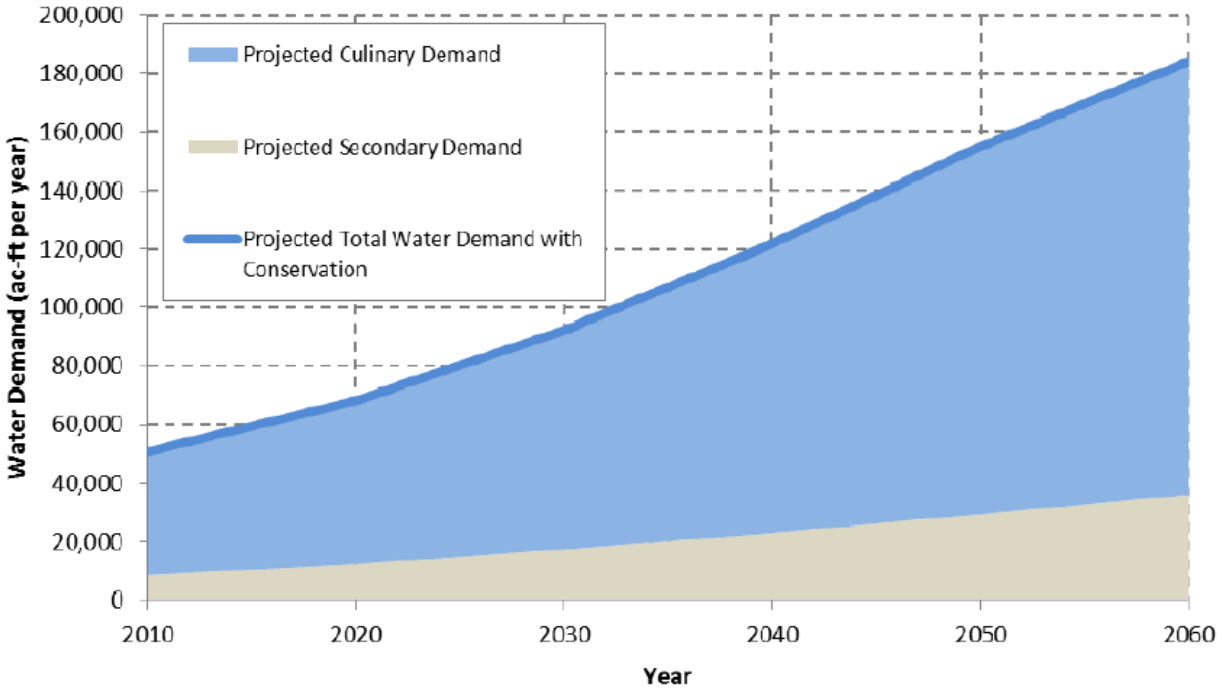
In their official document submissions to the Federal Energy Regulatory Commission (FERC) to receive federal permits for the proposed Pipeline, the Utah Division of Water Resources clearly indicated that Washington County residents are using far more water than the U.S. average or Utah average. On page 45 (3-5) of the April 2016 *Final Lake Powell Pipeline Water Needs Assessment* submitted by the Utah Division of Water Resources to FERC, Washington County residents used 325 gallons of municipal water per-person per day.[1]

Table 3-3 WCWCD Total M&I Water Demand Forecast

Year	Population	Per Capita Use with Conservation (gpcd)	Total Projected Water Demand with Conservation (ac-ft/yr)
2010	138,530	325	50,380
2020	196,480	311	68,450
2030	279,270	295	92,220
2040	369,370	295	122,010
2050	468,990	295	154,940
2060	576,850	285	184,250
Source: DWRe 2014c			

The Division calculated future water needs using this water use figure of 325 from the year 2010, because they sought to demonstrate to FERC that Southwestern Utah needs the Lake Powell Pipeline. This can be plainly seen in the April 2016 *Final Lake Powell Pipeline Water Needs Assessment* which includes the following water demand chart showing the long term water 'needs' of Washington County, based on this water use figure of 325 gallons.[2]

Figure 3-4 WCWCD Projected Demand

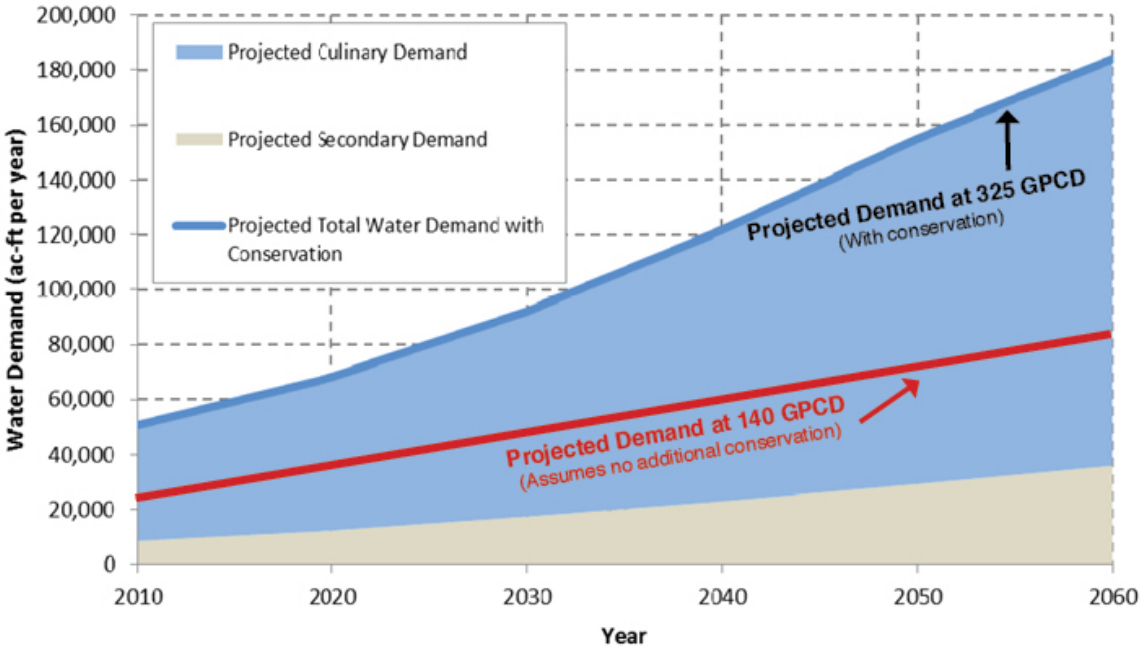


This water use figure of 325 has received immense criticism from Legislators, the public and the media since it is more than twice the national average and significantly higher than the per person water use of most Western U.S. cities. Perhaps that's why on August 22 at the Water Development Commission, Ron Thompson, General Manager of the District, testified to the Commission that Washington County residents are using just 140 gallons of water per person per day:

> *"So we're about, with some second use, which is an estimate, we're in the 140 gallons per capita per day."* (Audio minute 2:16:51)

This 140 gallon figure is less than half the 325 gallon per day water use figure presented to FERC by the Division. Yet Mr. Millis did not act to correct Mr. Thompson in his testimony or in the subsequent question and answer section provided in this official committee. If indeed Washington County residents are using just 140 gallons per person per day, then there is no need for water from the Lake Powell Pipeline, which may explain why Mr. Millis didn't correct Mr. Thompson. The water demand graph below and the line in red shows future water needs based on the District's claim that Washington County residents are using just 140 gallons of water per day.

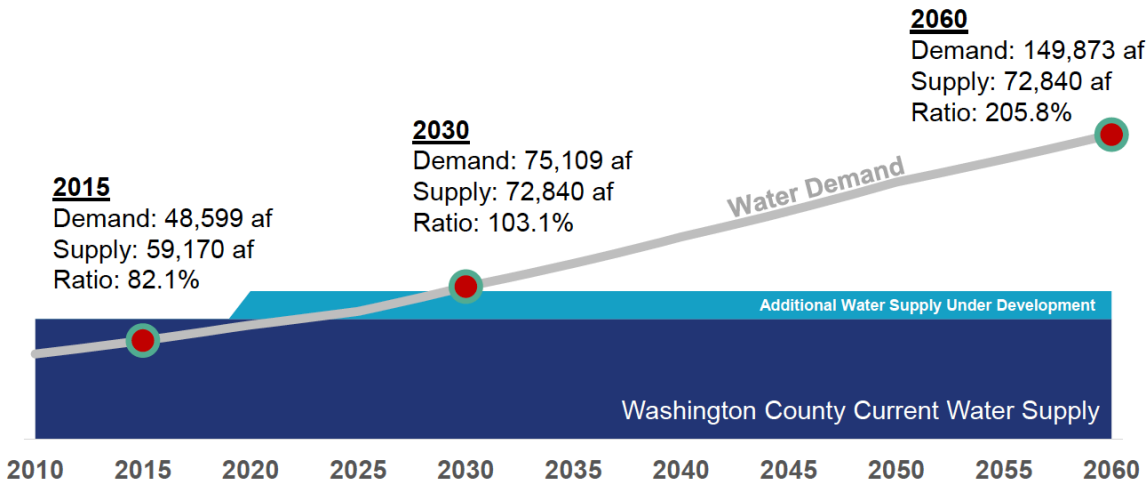
Figure 3-4 WCWCD Projected Demand



The graph above demonstrates that the District's current water supply is enough to sustain growth beyond the year 2060 without water from the Lake Powell Pipeline. If Washington County residents are using 140 gallons of water a day, as presented by the District's representative, then this is great news for Utah taxpayers because it means the District is not running out of water and there is absolutely no need to spend $3 billion on the Lake Powell Pipeline. This contradictory information is extremely disconcerting as it implies a concerted effort to misinform the Utah Legislature or FERC or both.

Incredibly, the District representative also presented data to the Committee, which contradicts his own testimony regarding water use and future water needs.

Washington County Water Supply and Anticipated Demand



Accompanying a slide of the above graphic, the District's General Manager testified at the August 22nd Committee meeting that Washington County had nearly 50,000 AF of water demand in 2015:

> *"The blue line here is current developed water supply within the County some of that is District water some of that is municipal. Our current demand in 2015 was about 50,000 acre-feet of water. By 2030 we project a demand of 75,000 acre-foot and by 2016, 149,000 acre foot. That's assuming our population grows during that time frame to about a half a million people. That's also assuming that we will have achieved a 35% per capita reduction by the 2060 time frame."*[3]

The District presented population data for the years cited in the above slide, 2015, 2030, and 2060. This makes it easy to calculate per person water use by dividing the Water Demand presented in this graph by the population numbers presented to the Committee by the District, which shows the per person water use is 289 in 2015, 268 in 2030 and 267 in 2060. Clearly these water use figures differ markedly from the 140 gpcd number the District representative testified to on August 22. Not only does the data presented on the slide contradict statements about water needs, it also contradicts water conservation goals, as summarized on page 7 and 8 below.

Moreover, a comparison with the water use of other southwestern communities indicates the District drastically overstated future water demand to Legislators. The table below should help to put the water demand in the District's graph above in perspective. The District claims that 149,873 AF of water will be needed to provide water for ~500,000 residents in Washington County by the year 2060. However, this is roughly twice the amount of water than is currently needed to serve over 600,000 people in Albuquerque, New Mexico.[4]

City	Water Authority	Year	Water Usage (af)	Number of Users	GPCD
Albuquerque, NM	Albuquerque Bernalillo County Water Authority	2015	86,319	606,780	**127**
Phoenix, AZ	City of Phoenix	2014	298,500	1,500,000	**178**
Tucson, AZ	Tucson Water	2016	87,160	722,000	**117**
Las Vegas, NV	Las Vegas Valley Water District	2016	319,027	1,400,000	**203**
Washington County, UT	Washington County Water Conservancy District	2010	50,380	138,530	**325**
			Southwest Cities Average GPCD		**156.16**

It is hard to imagine the District is not aware of the water supply and demand of other southwest communities leading one to assume the agency misrepresented future demand to convince Legislators the Lake Powell Pipeline is a necessary taxpayer expenditure.

2. Hiding Information About Surplus Water Sources Presented to Bond Rating Agencies

Apparently seeking to justify spending for the Lake Powell Pipeline in the August 22nd meeting, the Washington County Water District representative testified that most of the agency's water supply is currently being used and the region is on the verge of running out of water within a decade without receiving water from the Lake Powell Pipeline.[5] However, the District is providing quite a different picture about their water supplies to credit rating agencies than it is providing to the public and Utah Legislators.

In April of 2017, Fitch Ratings released a rating determination for the District presumably based on information provided by the District. This opinion indicated the District had an ample water supply because of a large surplus of water. Fitch noted that the District possessed a surplus of water representing 45 percent of the District's water supply:

> *"AMPLE WATER SUPPLY: Approximately 55% of district water rights are allocated for sale under take or pay contracts and a regional water sales agreement. The remaining rights will support future growth. Minimum charges from the existing sales are sufficient to support operations and debt costs."*[6]

Even more remarkable, according to Fitch:

> *"About 28% of the district's 32,000 acre feet (af) per year of water sources is surplus and will be used to serve future growth and another 13,900 af will come online in the next few years….. The district is operating a groundwater recharge program that currently provides access to 100,000 af of stored water and will ultimately provide up to 300,000 af."*[7]

This is a startling statement and a very large quantity of water that was not disclosed to the Legislative Committee. Clearly, the District has access to far more water than the 72,800 acre-feet of future water supply presented to Utah Legislators and the public.

3. Misstating Districts' Population Served and Ignoring Other Available Water Sources

Information presented at the August 22nd meeting regarding the population served and additional supplies held by local communities is inaccurate and misleading. Mike Noel, General Manager for the Kane County Water District (Kane Water) testified at the August 22nd meeting. Mr. Noel is also a member of the Water Development Commission, a member of the Utah House of Representatives and the House Rules Committee Chairman. Although Mr. Noel was effectively lobbying for the proposed Pipeline at the Utah Legislature, Mr. Noel is not required to register as a lobbyist.

At the August 22nd meeting, Mr. Noel cited Kanab City's growth to illustrate growing demand for water in the area and a need for water from the Lake Powell Pipeline. However, according to the 2016 *Lake Powell Pipeline Water Needs Assessment*, Kanab City doesn't receive any water from Kane County Water:

"While the entire county is considered part of KCWCD's service area, the district currently only serves residences in the Johnson Canyon sub-basin and areas between Kanab City and Johnson Canyon."[8]

Additionally, Kanab City currently has an abundant existing water supply to provide for its own future growth. In fact, the 2011 *Water Needs Assessment* confirmed this surplus of water inside Kane County when it noted:

"The difference between the projected KCWCD 2060 demand of 5,850 ac-ft/yr and the existing supply of 4,040 ac-ft/yr is 1,810 ac-ft/yr. For all four subbasins, a combination of existing and new ground water supplies is sufficient to meet all future needs within the planning horizon. Thus based strictly on water need, LPP supplies are not needed in the KCWCD service area within the 2060 planning horizon."[9]

Not only do the Division's reports document Kane County has no need for water from the Pipeline, the Kane County Water District is estimating demand for Pipeline water based on the entire population of Kane County, rather than the amount of people they actually deliver water to or the need for water among the incoming people expected to come to Kane County. This is entirely inappropriate since the Kane County population has enough water for its own growth needs. These discrepancies between broader population areas and actual Kane County Water District customers is disturbing and reveals a pattern of intentional misinformation.

Both the Division and the Kane County Water District are ignoring the fact that many Utah municipalities have their own water supplies to meet future demand. It is equally disappointing that this intentional malfeasance was clearly identified as a problem in the 2015 Legislative Audit on page 47:

"(The) Division's projections understate Utah's future water supply by only identifying the new water to be provided by four water conservancy districts…. By excluding this added water supply, the (Division's) projections accelerate the timeframes for developing costly, large-scale water projects."[10]

According to Auditors:

"As a result, the (Division's) charts appear to overstate the supply deficits and predict that the state's developed water supply will be exhausted sooner than it would be if it had included the local growth in supply."[11]

Legislative Auditors interviewed local water managers across Utah who said they had water supplies they plan to tap in the future to provide more water to their communities as they grow. However, several years after this Audit was presented, the Division of Water Resources continues to ignore the abundance of water available inside Utah, in apparent attempt to fleece

Utah taxpayers into unnecessary spending. This misuse of this information merits a closer look in order to protect the interests of Utah taxpayers.

4. Exaggerating Water Conservation to Procure Funding

In the same August 22nd meeting, the District representative testified that residents of Washington County have reduced per-capita water use 30% from the year 2000 water use, under questioning from Representative Briscoe:[12]

> Rep. Briscoe: "*In a previous earlier slide I think you indicated that Washington County had been quite aggressive with water conservation and had achieved a 30% reduction?"*
>
> Ron Thompson: "*We have*."

Yet according to the April 2016 *Final Lake Powell Pipeline Water Needs Assessment*, the District's per-person water use in the year 2010 was 325 gallons per day.[13] According to Division reports, Washington County used 446 gallons per person per day in the year 2000.[14] A 30% reduction from this number would mean Washington County is using about 313 gallons per person per day, but in the same conversation with the same Legislator, the District claimed they are using just half that much at 140 gallons per person per day. This would represent a much greater water use reduction, which is extremely perplexing given the findings of the Legislative Auditor General's office.

In the 2015 Legislative Performance Audit conducted on the Division of Water Resources, the Auditors found the District had much less ambitious water conservation goals than several nearby communities in other states and that the District's goal was to reduce per-person municipal water use to 292 gallons per day by the year 2060.[15] According to Auditors:

> *"The Southern Nevada Water Authority, which serves the Las Vegas region, has a goal to reduce water use to 199 by 2035. In contrast, the communities in Southwestern Utah, which have a climate similar to that of Southern Nevada, have a goal to reduce water use to 292 gpcd by the year 2060."*[16]

Casting even further doubt on these numbers is the fact that the audit revealed abundantly that no data exists to document water use in the year 2000, so all these numbers being used by the District and the Division could simply be made up on the spot. According to Auditors:

> *"Division staff were unable to document their methodology or provide source documentation for the data used in their baseline 2000 M&I report."*[17]

In their written response to Auditors, the Division noted they agreed with all of the findings contained in this Legislative Audit. Since the Division agreed with the Auditors in this regard, we openly question why they subsequently claim the Auditors effectively got this data analysis wrong. Once again, the amount of water actually used and conserved in Washington County is vital to determining whether the proposed Pipeline is necessary. And once again it appears

that both the District and the Division are presenting water use numbers and proclaiming conservation achievements that are inaccurate and cannot be documented.

Water conservation data is not a marketing campaign; it is a financial determination about whether a government agency is wasting a public resource. The fact that so many other government water suppliers outside Utah are using their public resources so much more efficiently and are more financially conservative than the District and the Division, is telling. This water district is being extremely wasteful with a public resource and when the District was questioned by a Legislator about this, its representative apparently misled the Legislator about how much water is wasted by claiming the District only uses half the amount of water that they told federal regulators. Such unsupported public testimony is disingenuous at best and we seek to know whether such fabrications represent a violation of Utah code.

5. Ignoring Inexpensive Sources of Water to Procure Funding

In the August 22nd meeting, the Division of Water Resources drastically understated the amount of inexpensive water that will be made available for the future as growth occurs. As future urban development replaces former agricultural lands, a surplus of water supply is created that was formerly used to irrigate crops. This growth in municipal water was documented in the 2015 Legislative Audit on Water in Chapter 4, titled *Growth in Future Water Supply Should Be Reported to Policy Makers*:

> "*The state's municipal water supply routinely grows each year. The main source of additional supply for M&I will come from converting agriculture water to municipal use, however, some water providers also have the ability to expand their current capacity."* [18]

This Chapter is pivotal to findings by the Auditors that the Division of Water Resources staff have intentionally been ignoring this growth in water supply occurring as irrigated farmlands are developed into urban lands:

> *"The division has not attempted to identify the incremental growth in supply that will occur as municipalities develop additional sources of water. That additional supply will mainly come from agriculture water that is converted to municipal use as farmland is developed*."[19]

This ignorance is costly to Utah taxpayers as Auditors noted on page 47 of the Audit. Moreover, the pie graph shown to Legislators on August 22 showed only 4% of Washington County's future water supply coming from agricultural conversions by the year 2060, while 34% will come from the proposed Lake Powell Pipeline.[20] This is a drastic understatement of future water sourcing, apparently created to misinform Legislators into believing the proposed Pipeline is essential.

The 1993 Water Plan for the Virgin River Basin prepared by the Utah Division of Water Resources, including Washington County, notes that there are 87,800 acre-feet of the

agricultural diversions in the basin occurring in Washington County.[21] According to the 2012 USDA Census of Agriculture, this irrigated agriculture is occurring on approximately 14,781 acres of lands in Washington County.

Yet the Division is underestimating this growth in municipal supply from agricultural water conversion to justify large scale spending for the Pipeline, as was identified in Chapter IV of the 2015 Legislative Audit. Additionally, table 4-6 in the Division's 2016 *Lake Powell Pipeline Water Needs Assessment* claims that Washington County can only expect to convert 10,080 acre-feet of agricultural water for M&I needs.[22] However, Table 10-6 of the 1993 Plan implies, using linear interpolation, that there will be a reduction of 27,100 acre-feet of irrigated cropland water diversions from 2011 to 2040.[23]

The 2015 Legislative Audit found that "the state engineer typically approves the conversion of 100 percent of agricultural water to municipal use"[24] and thus Washington County can expect much more than 10,000 acre-feet of water to be available from agricultural conversions. Keeping in mind that the proposed project, according to the Division, is intended to meet the demands of a rapidly growing population in Washington County, are we really supposed to believe that Washington County will quadruple its population and somehow keep most of its agricultural lands in production? Before one is led to believe this mythology, he/she should contemplate how much farmland remains in Salt Lake County today after decades of population growth.

A far more likely scenario is that Washington County will follow the trend of growing population centers across Utah, where nearly all irrigated cropland has been urbanized. If all of the agricultural water in Washington County became available for municipal water use in the future that would be about 87,000 acre-feet, almost the exact amount of water that would be supplied by the proposed Lake Powell Pipeline and nearly ten times as much water as the Division and the District testified to Legislators. By ignoring the large amount of water that will be converted from agricultural supplies, the Division misinformed Legislators and the public, thereby creating the perception of a future water supply shortage to justify billions in new spending for the Pipeline.

6. Ignoring Agency-Documented Risks From Expected Water Supply Shortage Declarations

At the August 22 meeting the Division presented a slide to Legislators claiming the Pipeline will draw water from a secure water source because Utah's Colorado River allocation is 1.4 million acre-feet (MAF) of average annual reliable supply. This claim is misleading because the Colorado River Compact does not guarantee Utah 1.4 MAF of water from the Colorado River, it guarantees Utah a share or percentage of the water left for the Upper Basin States after water deliveries to the Lower Basin states and Mexico are provided.

Utah's share of the Upper Colorado River Basin's water is 23%, with Colorado receiving 51.75%, New Mexico receiving 11.25% and Wyoming receiving 14%. The Division's misleading testimony incorrectly assumes the Colorado River's average annual flow is 15 MAF. However, according to the USGS, the agency that measures the river's flows, the river's average annual

volume is 12.4 MAF, not 15 MAF.[25] That means the Upper Basin is left with approximately 3.4 MAF and Utah's share would be approximately 800,000 acre feet or a little more than half as much water as the Division testified to Legislators.

Even if we take the Division's 15 MAF claim at face value, the agency is still ignoring the significant reductions in Colorado River flows that are expected to occur as a function of climate change and warmer air temperatures. In stark contrast to the head-in-the-sand behavior of the Division, other water suppliers on the Colorado River are paying close attention to climate change projections and working hard to prepare their cities and states for a future where there is less water to go around in the Colorado River Basin.

Using the long-term projections from the Bureau of Reclamation's 2012 *Colorado River Basin Water Supply and Demand Study*, the Southern Nevada Water Authority's (SNWA) planning documents show they are expecting a 3.2 MAF per year deficit in Colorado River supply and demand by the year 2060.[26] According to the SNWA's 2015 *Water Resources Plan*, the agency expects a wide range of impacts to follow including extended durations of low Lake Mead elevations and possible reductions in Colorado River resources.[27]

LAKE MEAD WATER LEVEL	NEVADA SHORTAGE	ARIZONA SHORTAGE
1,075 - 1,050 FT.	13,000 AFY	320,000 AFY
1,050 - 1,025 FT.	17,000 AFY	400,000 AFY
BELOW 1,025 FT.	20,000 AFY	480,000 AFY
	RECONSULTATION	

FIGURE 2.2 **Interim Guidelines Shortage**

Modeling shows that there is a 60-70% chance of a shortage declaration in the coming years that will directly impact the SNWA as well as water suppliers in Arizona.[28] The above table from the SNWA's plan shows the quantity of those shortages based on Lake Mead water elevations.

When the risks associated with Colorado River supply are not presented to Legislators it misinforms the discussion about whether the Pipeline is a good investment for Utah taxpayers. Surely Division staff wouldn't be this reckless if one of their personal investments were this risky. Imagine if a contractor building your new house told you there is a 60-70% chance of the house collapsing by 2060, would you still pay them hundreds of thousands of dollars to build it regardless?

The Division's testimony is very disconcerting as the agency misinformed Legislators about the amount of water Utah can count on from the Colorado River and the many risks associated with gambling on a water source that that will be significantly diminished by 2060 because of climate change. A more truthful testimony to Legislators would have explained the reality that Utah may not have water for the Pipeline in the future after spending billions of dollars in taxpayer money and indebting Utahns for several generations. Instead, the Division painted a rosy

picture of Colorado River water supply to Legislators to initiate billions in new spending for the Pipeline. Is this the fiscally conservative governance Utah prides itself on?

If the water source proves not to be reliable in the future and the Colorado River's flows decline due to climate change, Utah may be forced to choose whether to provide water to the Central Utah Project and its customers or to the Lake Powell Pipeline, because of the seniority of water rights associated with each project. The Pipeline salesmen who testified at the August 22 legislative committee meeting intentionally did not present these risks associated with this endeavor to Utah Legislators and we find this very disturbing.

7. Hiding the Districts' Inability to Repay Utah Taxpayers

The Washington County Water District and the Division of Water Resources presented a slide to Legislators in the August 22nd meeting claiming the District can and will repay Utah taxpayers for all costs of the multi-billion dollar Pipeline. However, in contrast to these unsubstantiated statements, a series of extensive economic analyses by economists at several Utah universities has revealed a far more disturbing picture. As you may be aware, these economists have been examining the repayment obligations of the proposed Pipeline based upon its official costs as identified by the Utah Division of Water Resources. Through extensive research, these economists have determined that the Pipeline cannot be repaid by the recipients of the water in Washington County without draconian increases in water rates, impact fees and property taxes.

In fact, the economists determined that in order for Utah taxpayers to be repaid for the costs of the Pipeline with interest, as is required by Utah law, water rates in Washington County would have to be increased at least 500 percent, impact fees would have to be increased at least 120 percent and property taxes would have to be increased to their maximum level. The General Manager of the District claimed this study was wrong and that they could repay the construction costs of the Pipeline without these increases.

After years of careful and comprehensive study, the economists also found that because the District and the Division were not mindful of repaying Utah taxpayers for the Pipeline's costs, the District and the Division were proposing that Utah taxpayers pay 72 % of the cost of the Pipeline, with recipients of the water repaying just 28 % of the Pipeline's costs.

Numerous questions still remain about the purported need for, economic feasibility and taxpayer liability of the $3+ billion Lake Powell Pipeline and these questions have yet to be thoroughly vetted by Utah lawmakers. When agency representatives use contradictory or false information, it has major implications for Utah taxpayers, both now and in the future. This gives us great concern, as we believe the proposed project should be judged by its true merits and impacts to taxpayers, rather than false claims and fear mongering made by special interests seeking to benefit from billions in taxpayer spending.

To inform good state policy, the public and its decision-makers need reliable and accurate data reporting by government officials, especially when billions of dollars in taxpayer spending is at stake. Agency leaders shouldn't misinform the Utah public and Utah Legislators just because it

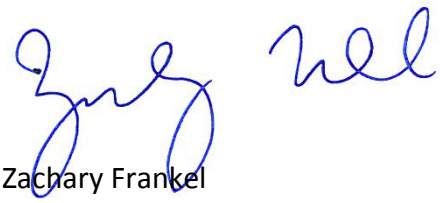
helps make a sale of public tax expenditures. We all support investing in a clean water supply for future generations, but we also seek to be fiscally conservative with precious taxpayer funds and to make decisions based on truthful statements rather than manufactured fiction.

For this reason, we request that your office conduct an audit to determine the accuracy of the Division of Water Resources,' the Washington County Water District's and the Kane County Water District's testimony to Legislators.

We greatly appreciate your service to the Utah taxpayer and are grateful to you for your dedication to good governance. Thank you for your consideration of this matter.

Please give me a call if you would like to discuss any aspect of this letter.

Sincerely,



Zachary Frankel
Executive Director

[1] Utah Division of Water Resources. *Final Lake Powell Pipeline Water Needs Assessment*, April 2016, sec. 3.2.1, pg. 42
[2] Utah Division of Water Resources. *Final Lake Powell Pipeline Water Needs Assessment*, April 2016, figure 4-6, pg. 45.
[3] Audio from the Legislative Water Development Commission meeting August 22, 2017, audio minute 2:04:50, http://utahlegislature.granicus.com/MediaPlayer.php?view_id=2&clip_id=21769&meta_id=741495
[4] Amount of water users, 2nd bullet point (http://www.abcwua.org/Your_Water_Authority.aspx)
[5] Power point presentation to the Legislative Water Development Commission, August 22, 2017, slide 17-18.
[6] *Fitch Upgrades Washington County Water Conservancy, UT's Water Revs: Affirms GOs*, Fitch Ratings, April 18, 2017, pg. 2.
[7] *Fitch Upgrades Washington County Water Conservancy, UT's Water Revs: Affirms GOs*, Fitch Ratings, April 18, 2017, pg. 4.
[8] Utah Division of Water Resources. *Final Lake Powell Pipeline Water Needs Assessment*, April 2016, section 2.2.2, pg. 25.
[9] Utah Division of Water Resources. *Kane County Water Needs Assessment*, 2011, pg. ES-24
[10] Office of the Legislative Auditor General. *A Performance Audit of Projections of Utah's Water Needs*, May 2015, Page 47. http://le.utah.gov/audit/15_01rpt.pdf
[11] Office of the Legislative Auditor General. *A Performance Audit of Projections of Utah's Water Needs*, May 2015, Page 51. http://le.utah.gov/audit/15_01rpt.pdf
[12] Audio from the Legislative Water Development Commission meeting August 22, 2017, audio minute 2:16:00, http://utahlegislature.granicus.com/MediaPlayer.php?view_id=2&clip_id=21769&meta_id=741495
[13] Utah Division of Water Resources. *Final Lake Powell Pipeline Water Needs Assessment*, April 2016, figure 5-4, pg. 95
[14] Utah Division of Water Resources. *Municipal and Industrial Water Supply and Uses in the Kanab Creek/Virgin River Basin*, December 2000. Table 15, page 39.
[15] Coleman, Behunin, Cabulagan and Parrish. *A Performance Audit of Projections of Utah's Water Needs* (Report #2015-01). Salt Lake City, UT: State of Utah Office of the Legislative Auditor General, 2015. Page 29.
[16] Office of the Legislative Auditor General. *A Performance Audit of Projections of Utah's Water Needs*, May 2015, Page 29. http://le.utah.gov/audit/15_01rpt.pdf
[17] Office of the Legislative Auditor General. *A Performance Audit of Projections of Utah's Water Needs*, May 2015, Page 19. http://le.utah.gov/audit/15_01rpt.pdf
[18] Office of the Legislative Auditor General. *A Performance Audit of Projections of Utah's Water Needs*, May 2015, Page 49. http://le.utah.gov/audit/15_01rpt.pdf
[19] Office of the Legislative Auditor General. *A Performance Audit of Projections of Utah's Water Needs*, May 2015, Page 47. http://le.utah.gov/audit/15_01rpt.pdf
[20] Power point presentation to the Legislative Water Development Commission, August 22, 2017, slide 19.
[21] Utah Division of Water Resources. *Utah State Water Plan, Kanab Creek/Virgin River Basin*, August 1993. Page 10-14.
[22] Utah Division of Water Resources. *Final Lake Powell Pipeline Water Needs Assessment*, April 2016, figure 4-6, pg. 74
[23] Utah Division of Water Resources. *Utah State Water Plan, Kanab Creek/Virgin River Basin*, August 1993.
[24] Office of the Legislative Auditor General. *A Performance Audit of Projections of Utah's Water Needs*, May 2015, Page 54. http://le.utah.gov/audit/15_01rpt.pdf
[25] USGS. *Climatic Fluctuations, Drought and Flow in the Colorado River Basin*. Page 4.
[26] Southern Nevada Water Authority. *2015 Water Resource Plan*. Chapter 2, page 14. https://www.snwa.com/ws/resource_plan.html
[27] Southern Nevada Water Authority. *2015 Water Resource Plan*. Chapter 2, page 14. https://www.snwa.com/ws/resource_plan.html
[28] Southern Nevada Water Authority. *2015 Water Resource Plan*. Chapter 2, page 12. https://www.snwa.com/ws/resource_plan.html