

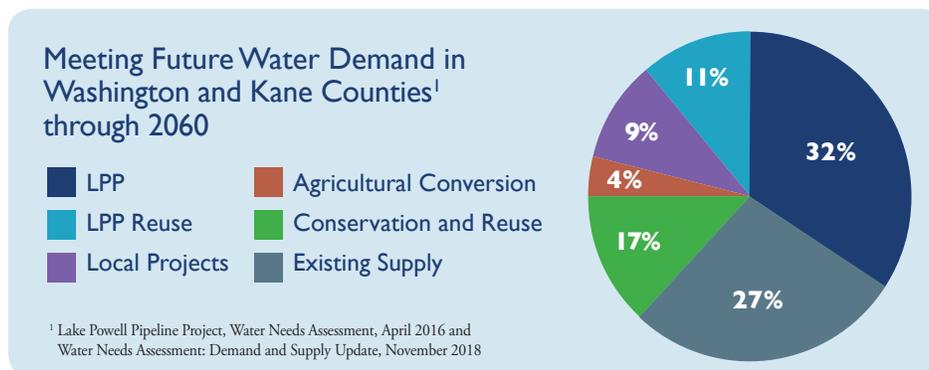
## The Lake Powell Pipeline Project: The Big Picture

### *How LPP is part of a long-term water supply plan*

Water conservation is an important part of southwest Utah’s comprehensive long-term water supply plan. Other key elements include:

- water reuse
- projects to maximize use of local water supplies
- agricultural water conversions
- Lake Powell Pipeline (LPP)

To eliminate any of these components of the portfolio adds risk and vulnerability of shortage.



To deny the need for a second water source for Washington County and place a singular focus on the reduction of water demands, i.e., conservation, is to ignore the “big picture” issues associated with the development of a comprehensive, long-term water supply plan.

## How LPP Achieves Other Planning Objectives

The LPP, as proposed, is necessary to meet the identified future water needs of Washington and Kane counties and achieve these other prudent planning objectives:

### **Provide for System Diversity/Reliability:**

Washington County is currently wholly dependent upon the Virgin River basin as a source of water supply. That supply

has associated water quality problems<sup>2</sup> and is vulnerable to natural events such as forest fires that will exacerbate water supply issues in the future. In addition, water supply models designed to project future flow scenarios in the Virgin River under differing climate regimes call into question the annual reliability of the quantity of water available from this source, particularly in the crucial summer months. Water delivered

<sup>2</sup> Utah Board of Water Resources, Lake Powell Pipeline Water Needs Assessment, April 2016

## How LPP Achieves Other Planning Objectives con't.

from the Colorado River via the LPP would alleviate these concerns.

**Provide for System Redundancy:** Pumps, pipelines, storage and treatment facilities are all essential components of a reliable water supply system. Over time, both system failure, e.g., due to aging infrastructure and natural or human-induced disasters, e.g., earthquakes, rockfalls, or operational errors, may interrupt essential water deliveries. To the extent there exists only one water source and one water delivery system, the community remains at risk. LPP provides needed system redundancy.

**Account for Climate Variability:** Prudent planning demands both the incorporation of additional sources of supply to meet demands in times of drought, as well as access to storage facilities that will capture water when it's available for use when water isn't obtainable. LPP provides this buffer.

**Account for Long-Term Uncertainty:** Water supply cannot be treated as a commodity, like factory-produced widgets that can be “manufactured” or delivered on a real time basis. Water supply projects take years, if not decades, to plan, permit and construct. System customers require a clean, reliable supply of water each day, including peak demand days, under a host of potential environmental and socio-economic conditions. Water shortage, much less unavailability, is not an option. Should demand not develop as quickly as originally estimated, that is acceptable, for the community will continue to grow as time passes. Those who have implemented a long-term vision, including the implementation of conservation measures, will be well situated to meet an essential community need.

**Protect the Environment:** Another compelling reason for the development of a small portion of Utah's Colorado River allocation through withdrawals at Lake Powell is the

avoidance of environmental degradation associated with the alternatives. Leaving water in the Colorado River system as it flows down to Lake Powell, rather than diverting it immediately below Flaming Gorge Reservoir as legally allowed, is a true win/win situation, i.e. detriments to endangered fish species will be avoided by maintaining flows.

Of equal importance, should the Washington County Water Conservancy District (WCWCD) find itself in a position of having to rely in the future on the Virgin River as its sole source of surface water supply, additional adverse environmental impacts may occur:

- Greater diversions from the Virgin River system may result in the loss of valuable riparian zone vegetated areas that were previously inundated, while existing pollutant loadings would be concentrated due to the loss of dilution flows.
- Greater reliance upon reuse and other conservation practices in order to meet water demands could result in diminished beneficial in-stream flows, a loss of wetland buffer areas, and the introduction of greater levels of pollutants due to run-off from increased impervious surface areas.

**Ensure Regulatory Compliance:** State regulatory requirements established by the state Drinking Water Board pursuant to the state Safe Drinking Water Act, and the Utah Administrative Code Rule 309-510, establishes “minimum sizing requirements,” with specific reference to “minimum quantities and flow rates that shall be used in the design of new systems and in the evaluation of water source, storage facility, and pipeline capacities” absent the approval of alternate sizing requirements. Water providers like WCWCD must plan and design facilities that are “reliably capable of supplying adequate quantities of water which consistently meet applicable drinking water quality requirements and do not pose a threat to general public health.”