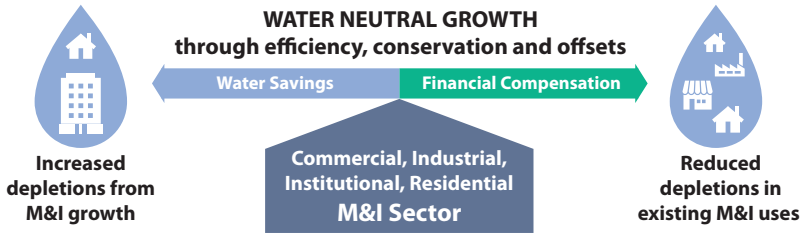
Limiting Municipal and Industrial Water Use Growth

February 8, 2023

Efficiency and conservation in new and existing M&I water use creates savings for future growth and can also conserve water to be delivered to Great Salt Lake.

Summary

Policies for water-smart M&I growth financially incentivize high water-use efficiency in new development. Policies can require that conservation savings partially or fully offset new water demand in existing M&I uses. Offsets can be tailored to meet local community needs and facilitated by water providers. These efforts reduce market pressures for "buy-and-dry" agriculture-to-urban water transfers and increase the ability to lease or purchase agricultural water for Great Salt Lake. Water-smart growth implemented now helps deliver ongoing, long-term water use reductions and avoids future water conservation costs. More aggressive implementation of water-smart practices (up to considering water-neutral growth) could secure water demand offsets over the next 30-40 years.



Key facts and insights

- **Growth** – Utah is projected to grow by 2.2 million people between 2020 and 2060, exceeding the 1.8 million people it added between 1980 and 2020. About 85% of projected population and employment growth will occur in Great Salt Lake Watershed.
- **M&I water depletions** – Depletions will potentially increase 80,000 AF between 2020 and 2060 due to projected population growth, climate warming, and diminishing returns on conservation and efficiency gains.
- **Water demand offset policies** – Successfully implemented nationally, these policies create ways to estimate water demand in new developments, calculate savings of water efficiency measures, and verify conservation savings and return on investment from water use offsets. Offset ratios can be structured to accelerate savings and also secure some water for Great Salt Lake in the near term.
- **Programmatic investments** – Water efficiency and conservation are realized through educational, incentive, and regulatory approaches. Accelerating water demand management will require public and private investments in institutional programs to implement change across all M&I uses.

Policy options and tradeoffs

Effective and equitable water-smart M&I growth requires existing M&I users to create water conservation savings. It also needs new development to meet the highest water efficiency standards when using those savings offsets. Combinations of on-site and off-site efficiency measures ensure new and redeveloped construction uses less new water in overall developments. Policy options include those listed to the right.

Expert Assessment Scorecard Results

	Low				High
Benefits					
Water brought to the lake	**1**	2	3	4	5
Air quality improvements	**1**	2	3	4	5
Biological health	**1**	2	3	4	5
Costs, Challenges, and Adaptations	Low				High
Financial cost*	1	**2**	**3**	4	5
Agriculture changes	**1**	2	3	4	5
Extractive industry changes	**1**	2	3	4	5
Cultural shift	1	2	3	**4**	5
Feasibility	Low				High
Speed of implementation	1	2	3	**4**	5
Legal/regulatory feasibility	1	2	3	4	**5**

Note: Water potential estimate results from avoiding 80,000 acre-feet/year of depletion from developing new water supplies to meet anticipated growth in demand.
Source: Great Salt Lake Strike Team

Policy options

- Water offset policies and tools in the M&I sector
- More aggressive state water conservation goals and limits on new large M&I uses in Great Salt Lake Watershed
- Integrated land use and water planning for water smart growth
- Highest current water efficiency standards for new and redeveloped construction
- Fixture/appliance replacements and landscape conversions for existing M&I users
- M&I rate increases
- Advanced metering infrastructure to support transparent billing and conservation tracking

Tradeoffs

- Adjusting expectations from drought adaptation to climate change resilience
- Acceptance of new urban forms (increased residential density, low water landscapes)
- Equity of implementation across communities (rationale for state-level policy action)
- Scaling up water smart growth policies for watershed-scale implementation
- Transaction costs
- Ability to secure water demand offsets declines over time