The Development of a Sustainable Water Master Plan for Burbank Water and Power

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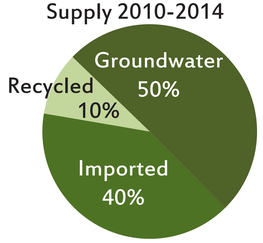
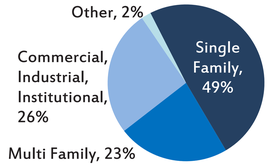
Burbank Supply & Demand

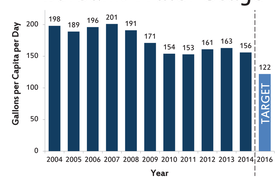
Burbank Water Supply 2010-2014



2014 Demand, by sector



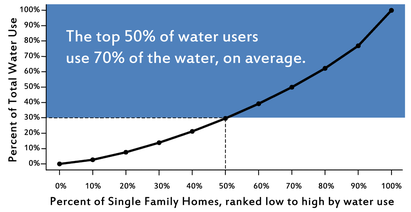
Burbank Water Usage



Analyses and Results

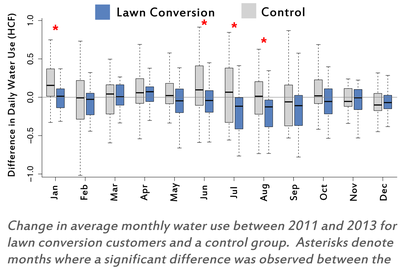
Customer Demand Assessment

Different water efficiency opportunities exist because homes have large variations in water use. These opportunities can be maximized in an equitable way by using a porfolio of information, incentives, rates, and regulations.



Statistical Analysis of Outdoor Water Efficiency

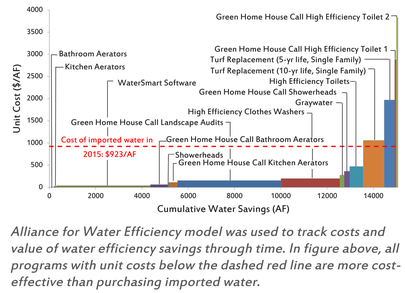
BWP currently estimates 43.8 gallons per square foot (gpsf) of water savings annually for lawn conversion. A more accurate estimate is 35.0 gpsf.



Change in average monthly water use between 2011 and 2013 for lawn conversion customers and a control group. Asterisks denote months where a significant difference was observed between the change in water use for the two groups.

Cost-Benefit Analysis

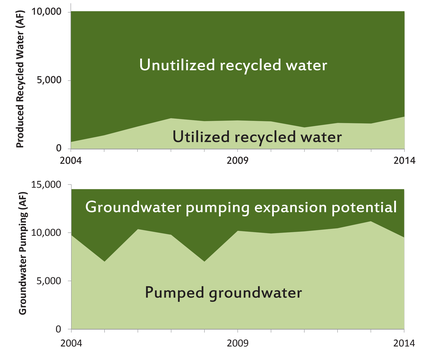
Cost-benefit analysis of water efficiency devices and programs showed that almost all are cost-effective compared to the increasingly expensive price of imported water.



Alliance for Water Efficiency model was used to track costs and value of water efficiency savings through time. In figure above, all programs with unit costs below the dashed red line are more cost-effective than purchasing imported water.

Water Supply Analysis

Significant quantities of local water supplies are currently unutilized.



California's Water Issues

Price volatility and significant reductions in the reliability of imported water pose a challenge to BWP's ability to provide sustainable water service.

State Water Project

The Sacramento-San Joaquin Delta is threatened by:

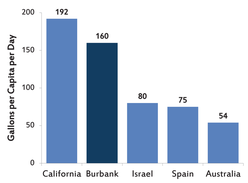
- Decreased snowpack
- Seismic risk
- Sea level rise
- Rapid ecosystem decline

Colorado River Aqueduct

The Colorado River Basin faces:

- 15 years of drought in the Southwest
- Lake Mead, the largest reservoir in the country, is at less than 50% capacity
- Conveyance costs are increasing

High Consumption



Drought

"Today we are standing on dry grass where there should be five feet of snow. This historic drought demands unprecedented action...As Californians, we must pull together and save water in every way possible."

-California Governor Jerry Brown, 4/1/2015

Key Opportunities for Increased Water Sustainability

Regulations

- Implement efficiency-oriented rate structures.
- Strengthen irrigation requirements to maximize water savings from lawn conversion.
- Make current City drought restrictions permanent.

Incentivizing Demand Reductions

- Prioritize water efficiency programs with lowest cost and highest water savings.
- Improve customer engagement in water efficiency programs through a data-driven analysis of demand.
- Expand funding and outreach of Green Home House Call program to increase customer engagement.
- Incorporate spatial analysis and visualization by combining smart meter network and GIS.
- Focus on minimizing water waste from over-irrigation.
- Identify high-volume efficiency opportunities for Commercial, Industrial, and Institutional water users.

Increasing Use of Local Water Supplies

- Increase recycled water use to satisfy local potable and regional non-potable demand.
- Engage in stormwater infiltration or indirect potable reuse to replenish San Fernando Basin groundwater levels.
- Increase the ratio of local groundwater to pre-treated imports in the potable supply.
- Focus on high-volume rain barrels and customer education.
- Provide financial support and educational outreach to develop a residential greywater program.

Acknowledgements

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