2014-15 Bren School Group Project Proposal
Title: The Development of a Sustainable Water Master Plan for Burbank Water and Power

1. Contact Information

The contact for this proposal is Kapil Kulkarni, Marketing Associate at Burbank Water and Power (BWP). His contact info is below:

   Customer Service and Marketing Division
   Burbank Water and Power
   164 W. Magnolia Blvd.
   Burbank, CA 91503
   818-238-3792
   kkulkarni@burbankca.gov

2. Proposal

   1. Objectives

   The objective of this project is to identify and evaluate a variety of supply-side projects, including stormwater capture, recycled water, and graywater reuse, and demand-side water conservation programs that BWP can implement at city-owned and customer-owned properties. The most feasible options can then be used to develop a Sustainable Water Master Plan that BWP can implement to help reduce reliance on MWD imported water and purchasing costs, and will lead to lower water bills and increased satisfaction for customers.

   2. Significance

   The project process and results will also be relevant for other water agencies looking to develop a Sustainable Water Master Plan. In addition, given the latest conditions of state water supplies, the project will also be useful for agencies simply looking to develop criteria to evaluate options, or for comparative data on water supply and demand option savings and costs.

   3. Background

   The City of Burbank, established in 1911, is located in Southern California about 12 miles north of downtown Los Angeles. The City’s municipal utility, BWP has been providing water and electric service to residents and businesses since 1913. BWP’s mission is to provide sustainable, affordable, and reliable service to all of our customers.

   BWP provides about 20,000 acre-feet of potable water and recycled water to customers within the City. BWP’s potable water is supplied by a combination of MWD imported water from the State Water Project and the Colorado River supplies, and groundwater from local wells. The groundwater is treated at the Burbank Operable Unit (BOU) prior to entering the distribution system. Recycled water is produced at the Burbank Water Reclamation Plant (BWRP), operated by the Burbank Public Works Department, and is delivered via an independent distribution system.
Over the last ten years, the share of imported water has remained at about 50 percent, even as the cost to purchase from MWD has nearly doubled, from $549 per acre-foot in 2006 to $1032 per acre-foot in 2014.  

4. Problem Statement

In 2009, the state of California enacted Senate Bill (SB) 7x7, mandating urban water agencies to reduce their water usage by 20 percent by the end of 2020. SB 7x7 also has additional requirements, including an interim reduction goal of 10 percent by the end of 2015, and the establishment of baselines and targets. Concurrently, BWP began an ambitious water conservation effort, both in response to this legislation and to restricted MWD supply options resulting from drought conditions and other state regulations.

The centerpiece of this effort was a 3 Days a Week watering ordinance that was approved by the Burbank City Council and went into effect in July 2009. In addition to this “stick” approach, BWP also provided “carrots” in the form of free low-flow showerheads and aerators. Through December 2010, Burbank homes received an average of two water-saving devices, a remarkable example of BWP and the community working together to avoid further water shortages and save money at the same time. BWP also began offering incentives for high-efficiency toilets and started a comprehensive energy and water efficiency program that included indoor and outdoor water audits.

Through these efforts, BWP reduced its water use from 184 gpcd in 2006 to 153 gpcd in 2011. The gpcd increased to 161 in 2013, after the 3 Days a Week ordinance was relaxed in 2011.

While drought conditions varied over the next few years, on January 17, 2014, Governor Brown declared an official drought emergency and asked for all state residents to reduce their water usage by at least 20 percent. As a result of the combination of the increase in water usage over the last two years, the increased cost of imported water, and the ongoing drought conditions, BWP would like to explore additional efforts that both increase supply options, such as through stormwater capture, recycled water, and graywater reuse, and reduce customer demand, such as through new and expanded water conservation programs.

5. Stakeholders

The primary stakeholder would be BWP Customer Service and Marketing Division, which implements water conservation programs targeted to residents and businesses. The other significant stakeholder would be the BWP Water Division, which is responsible for water supply procurement and distribution. Other stakeholders would be BWP Executive Management, the BWP Board, which sets overall policy for BWP, and the Burbank City Council, which oversees BWP and other City Departments.

6. Possible Approaches and Data

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1 MWD Adopted Water Rates and Charges. Available at: [http://www.mwdh2o.com/mwdh2o/pages/finance/finance_03.html](http://www.mwdh2o.com/mwdh2o/pages/finance/finance_03.html)

2 The baselines and targets use a metric known as gallons per capita per day (gpcd). GPCD is calculated using a water agency’s total potable water sales divided by the population served and the number of days in a year.

The City of Santa Monica developed a Sustainable Water Master Plan in 2013 in order to achieve 100 percent self-sufficiency for water by 2020. This plan could be used as a guide to inform a similar plan for BWP.

BWP will also make available data from our operations, including water supplies and costs, customer interval usage data from our Smart Grid network, water conservation program savings and costs, and other customer data as appropriate for market research purposes.

7. Deliverables

The deliverables of this project will be:

1. A Sustainable Water Master Plan, consisting of, but not limited to:
   a. Criteria to evaluate supply and demand side options, such as:
      i. Magnitude of savings
      ii. Magnitude of costs and cost-effectiveness
      iii. Technical feasibility
      iv. Customer acceptance, using existing data or via an approved survey tool
      v. Political considerations, for example, with regards to the City Council
   b. Relevant supply and demand side options, including but not limited to:
      i. Stormwater capture
      ii. Recycled water
      iii. Graywater reuse
      iv. Conservation programs

2. A presentation to the BWP Board and staff

3. Client Information

   1. Client Commitment

For this project, BWP will commit funds up to $15,000. A detailed budget is included in the appendix.

   2. Internship Opportunities

As part of this proposal, BWP will provide up to two summer internships for interested students. The internships will be based onsite at BWP’s headquarters in Burbank, will be paid a competitive wage, and will run for eight weeks, likely from early July through early September. As part of the internship, students will be able to conduct further research related to the group project, work on other water conservation projects, and gain exposure to careers in water and energy utility operations.
## BWP Bren School Group Project

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Internships</td>
<td>$11,200</td>
</tr>
<tr>
<td>For 2 students</td>
<td>$17.50/hour</td>
</tr>
<tr>
<td>Professional development</td>
<td>$1,500</td>
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<tr>
<td>Includes conferences, trainings, etc.</td>
<td></td>
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<tr>
<td>Travel</td>
<td>$1,500</td>
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<tr>
<td>Includes mileage reimbursement</td>
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<tr>
<td>Other expenses</td>
<td>$800</td>
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**Total Project Expenses**: $15,000
CUSTOMER INFORMATION
SECURITY AGREEMENT

By signing below, I understand and agree to the following:

1. Use of customer data provided to Burbank Water and Power partners, such as vendors and consultants, is only for official business related to Burbank Water and Power.

2. All customer data provided by Burbank Water and Power is required to be properly safeguarded or destroyed to prevent it from being accessed by unauthorized persons. This requirement is not limited to the timeframe of specific project work for and/or with Burbank Water and Power.

3. Sharing customer data with anyone not specifically authorized by Burbank Water and Power is prohibited, and may be punishable by law.

______________________________
NAME (PRINTED)

______________________________
SIGNATURE

______________________________
COMPANY

______________________________
DATE

Confidential form for vendors
K:\CIS\Policy\CIS Security Agreement for third parties October 2011
Ms. Casey Hankey  
Group Project Coordinator  
Bren School of Environmental Science & Management  
2400 Bren Hall  
UC Santa Barbara, CA 93106-5131  

Dear Ms. Hankey,  

Burbank Water and Power is pleased to present this group project proposal to the University of California, Santa Barbara Bren School of Environmental Science & Management. Our project – A Sustainable Water Master Plan – provides an opportunity for graduate students to understand the day-to-day operations of and the long range planning essential to a community-owned water utility.  

Kapil Kulkarni, a Bren MESM alumnus and the utility’s water conservation coordinator, developed our proposal and is committed to serving as the client for the project. His current experience working at BWP and his graduate student experience working with BWP as the client gives him a unique perspective of the roles, opportunities, and challenges of the group project for both the client and graduate students.  

Mr. Kulkarni has access to all relevant utility and customer data, and will be able to provide this data (upon signature of a standard, one page confidentiality and non-disclosure agreement), as well as insight on additional data collection options, to students as part of the group project. In addition, we are committed to providing significant funding, not-to-exceed $15,000, for this research endeavor. The combination of a relevant and timely research issue, access to otherwise proprietary data, and funding that provides for two internships will provide students with the experience necessary to develop their careers as multidisciplinary problem solvers.  

Sincerely,  

Jeanette Meyer  
Marketing Manager, Customer Service and Marketing  
Burbank Water and Power  
164 W. Magnolia Blvd.  
Burbank, CA 91503  

Attachments:  
Proposal  
Budget  
Data agreement