

Attachment 4. UC Davis Budget

Line Item	Requested Grant Funding	Cost Share	Total
Personnel Services			
PI, Loge (summer or academic equivalent)	106,936	-	106,936
Co-PI, Jessoe (summer or academic equivalent)	38,847	-	38,847
Co-PI, Spang	102,361	-	102,361
SRA II, Negrea	52,748	-	52,748
Analyst I, Leung	51,970	-	51,970
Programmer, Holquin	50,480	-	50,480
Analyst I, Walton	37,321	-	37,321
Analyst V, Olmos	112,434	-	112,434
GSR III	83,920	-	83,920
			<u>637,017</u>
Supply and Expenses			
Computers, data storage, cloud service, etc.	18,000	-	18,000
General, Automobile, and Employment Practices Liability (GAEL)	2,132	-	<u>2,132</u>
			20,132
Subcontract			
WaterSmart Software Inc.	1,618,746	-	1,618,746
Other			
In-state fee remission	53,062	-	53,062
Indirect Costs			
25% Modified Total Direct Cost	170,537	-	170,537
			<u>TOTAL</u>
			2,499,494

Attachment 4. UC Davis Personnel Hourly breakdown

UC Davis Employee Monthly and Hourly Rate (Salary & Benefit inclusive)

	Year 1		Year 2		Year 3	
	Monthly S&B	Hourly Rate	Monthly S&B	Hourly Rate	Monthly S&B	Hourly Rate
PI, Loge (summer or academic equivalent)	17,174	98.70	17,841	102.53	18,454	106.05
Co-PI, Jessoe (summer or academic equivalent)	12,478	71.71	12,962	74.49	13,407	77.05
Co-PI, Spang	10,965	63.02	11,354	65.25	11,802	67.83
SRA II, Negrea	6,780	38.97	7,021	40.35	7,298	41.94
Analyst I, Leung	6,680	38.39	6,917	39.75	7,190	41.32
Programmer, Holguin	5,408	31.08	5,599	32.18	5,820	33.45
Analyst I, Walton	4,798	27.57	4,967	28.55	5,164	29.68
Analyst V, Olmos	9,033	51.91	9,353	53.75	9,723	55.88
GSR III	3,620	20.80	3,729	21.43	3,841	22.07

Projected University Costs vs Hourly Rate*

	Year 1				Year 2				Year 3			
	Total Personnel Cost	Monthly Effort	Annual % effort	Equip hours	Total Personnel Cost	Monthly Effort	Annual % effort	Equip hours	Total Personnel Cost	Monthly Effort	Annual % effort	Equip hours
PI, Loge (summer or academic equivalent)	34,348	2.0	17%	348	35,681	2.0	17%	348	36,907	2.0	17%	348
Co-PI, Jessoe (summer or academic equivalent)	12,478	1.0	8%	174	12,962	1.0	8%	174	13,407	1.0	8%	174
Co-PI, Spang	32,895	3.0	25%	522	34,061	3.0	25%	522	35,405	3.0	25%	522
SRA II, Negrea	16,951	2.5	21%	435	17,552	2.5	21%	435	18,245	2.5	21%	435
Analyst I, Leung	16,701	2.5	21%	435	17,293	2.5	21%	435	17,976	2.5	21%	435
Programmer, Holguin	16,223	3.0	25%	522	16,797	3.0	25%	522	17,460	3.0	25%	522
Analyst I, Walton	11,994	2.5	21%	435	12,418	2.5	21%	435	12,909	2.5	21%	435
Analyst V, Olmos	36,132	4.0	33%	696	37,412	4.0	33%	696	38,890	4.0	33%	696
GSR III	27,150	7.5	63%	1,305	27,965	7.5	63%	1,305	28,805	7.5	63%	1,305
	\$204,872				\$212,141				\$220,004			

*This budget illustrates an estimate calculated by hourly salary rate. Please be advised the University derives its personnel costs from percentage of effort. Therefore, when an invoice is generated it will reflect the calculations based on percentage of effort.

BUDGET JUSTIFICATION

University of California, Davis

SWES: Smart Water-Energy Savings

Project Period: April 1, 2015 through March 31, 2018

Project Personnel.

- 2.0 months/yr (academic or summer equivalent) requested for PI, Frank Loge to provide strategic oversight on all project activities; engage collaborative partners; mentor a graduate student researcher; review project reports; participate in project meetings; and present findings through peer-reviewed publications and at relevant conferences.
- 1.0 month/yr (academic or summer equivalent requested for Co-PI, Katrina Jessoe to oversee the design of the randomized control trial; contribute to development of hot water messaging content; review and analyze monitoring data; and contribute to reports.
- 3.0 months/yr are requested for Co-PI, Edward Spang to identify key water and energy data streams with partner utilities; oversee all data integration and research analysis; design and execute water and wastewater energy intensity analyses; engage collaborative partners; mentor a graduate student researcher; and present findings through peer-reviewed publications and at relevant conferences.
- 2.5 month/yr for a Staff Research Associate II to oversee maintenance of all project-related IT Systems; install and debug all related software platforms and programs; procure and install all project related computing hardware; contribute to programming for data integration and analysis.
- 2.5 months/yr for an Analyst to administer all aspects of the project (including meeting organization, scheduling, budgeting, and invoicing) and production of written deliverables (including graphic design).
- 3.0 months/yr for a Programmer to develop advanced computer programming language to enhance and streamline all data analytics and visualization; develop web-based platform to share ongoing data monitoring information and results with project partners; contribute to reports and presentations.
- 2.5 months/yr for a Data Analyst to design, build, and maintain the project database; organize and review all incoming data; ensure data quality; import all project data to common database; and contribute to the development of computational analytics.
- 4.0 months/yr for an Analyst V to lead efforts to develop hot water messaging content; provide day-to-day management of all project activities; oversee activities and maintain alignment to project timeline; ensure timely delivery of all project memos and reports; engage collaborative partners; participate in project meetings; and present findings through peer-reviewed publications and at relevant conferences.
- 7.50 months/yr for one Graduate Student Researchers (GSR) to collect and organize data; develop computer scripts for research analysis; contribute to development of hot water messaging content; contribute to water and wastewater energy intensity analysis; participate in elaboration of project memos and reports.

All salaries include a 3% projected increase per fiscal year. This budget illustrates an estimate calculated by hourly salary rate. Please be advised the University derives its personnel costs from percentage of effort. Therefore, when an invoice is generated it will reflect the calculations based on percentage of effort.

Fringe Benefits.

Composite fringe benefits for UC Davis fiscal years 2014-2015, 2015-16, 2016-17, and 2017-18 are reflected as a percentage of the employee's gross salary.

Supplies.

- \$4,500 for the purchase of three project-dedicated computers in the first year of the project.
- \$3,000/yr to acquire project-dedicated servers (and/or cloud computing services) to share project data with project partners and project specific software.
- \$1,500/yr for project-specific publication, print, presentation, and other communication costs.
- \$2,132 for General, Automobile, and Employment Practices Liability (GAEL). GAEL is the University's assessment of the costs of the liability insurance policies which cover all employees. These rates are assessed against the salaries at \$0.45 per \$100.

Other.

A total of \$53,062 is requested for In-state tuition for one graduate student (3 quarters/yr). Rates are based upon the University's current approved fees plus a project 5% increase each fiscal year. Because fees are subject to gubernatorial, legislative, and Regental action, these fees may change without notice.

General, Automobile, and Employment Practices Liability (GAEL). GAEL is the University's assessment of the costs of the liability insurance policies which cover all employees. These rates are assessed against the salaries at \$0.45 per \$100.

Subcontract.

\$539,582/yr to WaterSmart Software, Inc. for the deployment of their behavior-based water conservation platform to approximately 80,000 households across the cities of Fresno, Ontario, and Riverside. The technology includes collection of household water use data, elaboration of customized Home Water Reports based on customer profiles (that are delivered by both mail and via email), and web-based portals for both water users and utilities to access integrated water use analytics.

Travel.

No travel funding is permitted given the terms of the grant.

Facilities & Administrative Costs.

An indirect cost rate of 25% was applied to the modified total direct cost (defined as the Total Direct Costs less Student Fee Remission, Equipment over \$5,000, and the first \$25,000 of each subcontract) over the duration of the project.

Attachment 4. WaterSmart Budget

Line Item		Hours	Rate	Number years	Requested Grant Funding	Cost Share	Total
Personnel Services							
Program Manager	Dominique Gomez	150	\$200.00	3	\$ 90,000.00	\$ -	\$ 90,000.00
Data Scientist	William Holleran	100	\$250.00	3	\$ 75,000.00	\$ -	\$ 75,000.00
Account Manager	Brett Foreman	150	\$150.00	3	\$ 67,500.00	\$ -	\$ 67,500.00
Snr. Engineer	Drew Bazan	50	\$250.00	1	\$ 12,500.00	\$ -	\$ 12,500.00
					\$ -	\$ -	\$ -
							\$ 245,000.00
Supply and Expenses							
		Units					
Set Up Fee, Per Utility		5	\$15,000	1	75,000	-	75,000
Subscription Fee, Per Household		86500	5	3	1,297,500	-	1,297,500
Miscellaneous supplies		1	1246	1	1,246		1,246
							1,373,746
Subcontract							
					-	-	-
Other							
					-	-	-
Indirect Costs							
					-	-	-
						TOTAL	1,618,746

BUDGET JUSTIFICATION

WaterSmart Software Inc.

SWES: Smart Water-Energy Savings

Project Period: April 1, 2015 through March 31, 2018

Project Personnel.

- 150 hours/yr requested requested for WaterSmart Program Manager, Dominique Gómez, to provide strategic oversight on all project activities; engage collaborative partners; review project reports; participate in project meetings; and present findings through peer-reviewed publications and at relevant conferences.
- 100 hours/yr requested for WaterSmart Data Scientist, William Holleran, to work with UC Davis on all aspects of data management and analysis including but not limited to; creation of experimental and control groups; integration of disadvantaged population demographic data; creation of A/B test groups for water-energy messaging; export of data for UC Davis energy/water savings analysis; internal tracking of program impact.
- 150 hours/yr requested for WaterSmart Account Manager, Brett Foreman, to work with UC Davis on development of water-energy messaging including brainstorming; creation of mock rotating content; review with Product team; work with Engineering to code new messages. Manage all aspects of project implementation and management with participating cities (included in Software-as-a-Service fees).
- 50 hours in first year requested for WaterSmart Senior Engineer, Drew Bazan, to work with William Holleran and Brett Foreman to implement engineering changes to support program as needed.

Hourly Rates

Note: As a software-as-a-service company WaterSmart sets hourly rate by department based on average salaries and benefits within departments. WaterSmart's staff does not receive hourly wages.

Hourly Rates

Department	Hourly Rate	Relevant Personnel
Administrative	\$200	Dominique Gómez
Client Services	\$150	Brett Foreman
Engineering/Data Science	\$250	William Holleran, Drew Bazan

Supplies/Software as a Service Fees

WaterSmart provides its services primarily as a software-as-a-service. The yearly subscription fee includes all website hosting, data integration and storage, printing and mailing costs, customer support, licensing fees, and all labor and customer service. First-time initialization and set-up fees are charged separately. WaterSmart's rates will be covered by a combination of cost-sharing from the member cities and payment from UC Davis from the DWR Grant. The costs from the DWR Grant are as follows:

\$15,000 set-up fee per city (one time)

\$5/account yearly software as a service subscription fee.

\$1,246 miscellaneous expenses (external hard drives, printing supplies, reports and publications)

WaterSmart will seek additional cost share from the cities not included in this budget.

Travel.

No travel funding is permitted given the terms of the grant.

Facilities & Administrative Costs.

Not applicable.