APPENDIX F: EXAMPLE COST BENEFIT ANALYSIS

Leak savings example

Leak rate (gallons/day)	Potential conservation savings (gallons/month)	Monthly water rate ($ per 1,000 gallons)	Monthly savings due to fixing this leak ($)	Annual savings due to fixing this leak ($)
10	300	3.24	0.97	11.64

Reduced flow rate savings example (due to replacing a pre-rinse spray nozzle or installing/replacing aerators)

Starting flow rate (gals/min)	Resulting flow rate (gals/min)	Faucet use each day (minutes)	Potential conservation savings (gals/day)	Potential conservation savings (gals/month)	Monthly water rate ($ per 1,000 gallons)	Monthly savings due to reduced flow rate ($)	Annual savings due to reduced flow rate ($)
3	1	120	240	7,200	3.24	23.33	279.96

Ice cream dipper well savings example

Starting flow rate (gals/min)	Resulting flow rate (gal/min)	Dipper well use each day (hours)	Dipper well use each day (minutes)	Potential conservation savings (gallons/day)	Potential conservation savings (gals/month)	Monthly water rate ($ per 1,000 gallons)	Monthly savings due to reduced flow rate ($)	Annual savings due to reduced flow rate ($)
0.5	0.3	12	720	144	4,320	3.24	14.00	168.00

Toilet retrofit example

Flush volume of the existing fixture (gals/flush)	Flush volume of the new fixture (gals/flush)	Potential conservation savings due to fixture retrofit (gals/flush)	Estimated number of flushes per day	Potential conservation savings (gallons/day)	Potential conservation savings (gals/month)	Monthly water rate ($ per 1,000 gallons)	Monthly savings due to toilet retrofit ($)	Annual savings due to toilet retrofit ($)	Cost of new toilet ($)	Fixture pay-back period (years)
3.5	1.6	1.9	100	190	5,700	3.24	18.47	221.64	350.00	1.6

Ice machine retrofit example

Volume of ice produced each day (pounds/day)	Potential conservation savings due to ice type (gallons/100 pounds) [a]	Potential conservation savings due to compressor cooling method (gallons/100 pounds) [b]	Total potential conservation savings (gal/day)	Total potential conservation savings (gals/month)	Monthly water rate ($ per 1,000 gallons)	Monthly savings due to ice machine retrofit ($)	Annual savings due to ice machine retrofit ($)	Cost of new ice machine ($)	Fixture pay-back period (years)
250	0	240	600	18,000	3.24	58.32	699.84	1,500.00	2.1

Notes:

[a] If the existing ice machine makes flake/nugget ice, enter 15 in the space below. If the existing ice machine makes cube ice, enter 0 in the space below (changing to a flake/nugget ice machine will conserve 10 gallons of water for every 100 pounds of ice that is made).

[b] If the existing ice machine is air-cooled, enter 0 in the space below. If the existing ice machine is water cooled, enter 240 in the space below (changing from a water - to an air-cooled ice machine will conserve between 72 and 240 gallons of water for every 100 pounds of ice that is made).