

Appendix: Regression Results

Variable Correlations Matrix

Pearson Correlation Coefficients, N = 51							
Prob > r under H0: Rho=0							
	Water_Use	Fahrenheit	Inches	HH_Size	Age	SF_Share	Vacancy_Rate
Water_Use	1	0.17563 0.2177	-0.38076 0.0058	0.64768 <.0001	-0.3702 0.0075	-0.09786 0.4945	-0.13468 0.346
Fahrenheit	0.17563 0.2177	1	0.54487 <.0001	0.38919 0.0048	-0.28562 0.0422	-0.10249 0.4742	0.09942 0.4876
Inches	-0.38076 0.0058	0.54487 <.0001	1	-0.03532 0.8057	0.17189 0.2278	-0.16158 0.2573	0.1512 0.2896
HH_Size	0.64768 <.0001	0.38919 0.0048	-0.03532 0.8057	1	-0.42262 0.002	0.03241 0.8214	-0.14256 0.3183
Age	-0.3702 0.0075	-0.28562 0.0422	0.17189 0.2278	-0.42262 0.002	1	-0.47413 0.0004	-0.35994 0.0095
SF_Share	-0.09786 0.4945	-0.10249 0.4742	-0.16158 0.2573	0.03241 0.8214	-0.47413 0.0004	1	0.03287 0.8189
Vacancy_Rate	-0.13468 0.346	0.09942 0.4876	0.1512 0.2896	-0.14256 0.3183	-0.35994 0.0095	0.03287 0.8189	1

Regression One

Parameter Estimates				
Variable	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	-446.83769	141.06619	-3.17	0.0027
Fahrenheit	1.9747	1.16153	1.7	0.0959
Inches	-2.45884	0.64063	-3.84	0.0004
HH_Size	250.17812	52.37725	4.78	<.0001
Age	0.08984	0.91209	0.1	0.922

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	151521	37880	15.65	<.0001
Error	46	111362	2420.92082		
Corrected Total	50	262883			

Root MSE	49.20285	R-Square	0.5764
Dependent Mean	210.03993	Adj R-Sq	0.5395
Coeff Var	23.42548		

Number of Observations Used	51
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Regression Two

Parameter Estimates				
Variable	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	439.12876	116.12395	-3.78	0.0004
Fahrenheit	1.93812	1.08892	1.78	0.0816
Inches	-2.43787	0.59782	-4.08	0.0002
HH_Size	248.85241	50.08251	4.97	<.0001

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	151497	50499	21.31	<.0001
Error	47	111386	2369.91166		
Corrected Total	50	262883			

Root MSE	48.68174	R-Square	0.5763
Dependent Mean	210.03993	Adj R-Sq	0.5492
Coeff Var	23.17737		

Number of Observations Used	51
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Variable Descriptions

Water_Use: Water use (withdrawals and deliveries) per housing unit measured in gallons.

Source: *Estimated Use of Water in the United States in 2010*, U.S. Department of the Interior & U.S. Geological Survey.

Fahrenheit: Annual average temperature measured in Fahrenheit.

Source: Current Results: Weather and Science Facts.

<https://www.currentresults.com/Weather/US/average-state-weather.php>

Source: U.S. Climate Data.

<https://www.usclimatedata.com/climate/washington/district-of-columbia/united-states/usdc0001>

Inches: Annual average precipitation measured in inches.

Source: Current Results: Weather and Science Facts.

<https://www.currentresults.com/Weather/US/average-state-weather.php>

Source: U.S. Climate Data.

<https://www.usclimatedata.com/climate/washington/district-of-columbia/united-states/usdc0001>

HH_Size: The average number of people in a household. The Census Bureau defines a household as all people who occupy a housing unit.

Source: American Community Survey, 2010 (one year survey).

Age: The median year a structure was built subtracted from the year, 2010.

Source: American Community Survey, 2010 (one year survey).

SF_Share: Single-family detached units as a share of total housing units.

Source: American Community Survey, 2010 (one year survey).

Vacancy_Rate: Total vacant units as a share of total housing units.

Source: American Community Survey, 2010 (one year survey).