

Watering Cost of Turf & Non-Turf Yards



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What is the financial difference of watering Turf and Non-Turf yards?

The economical benefits of non-turf groundcover may affect residential landscaping choices. Because outdoor water usage constitutes up to 75% of household water expenses, the City of Tempe Water Utilities Division wants to determine the average water bill savings residents will have if they convert their yards from turf landscaping to non-turf landscaping.

What is "Turf" and "Non-Turf"?



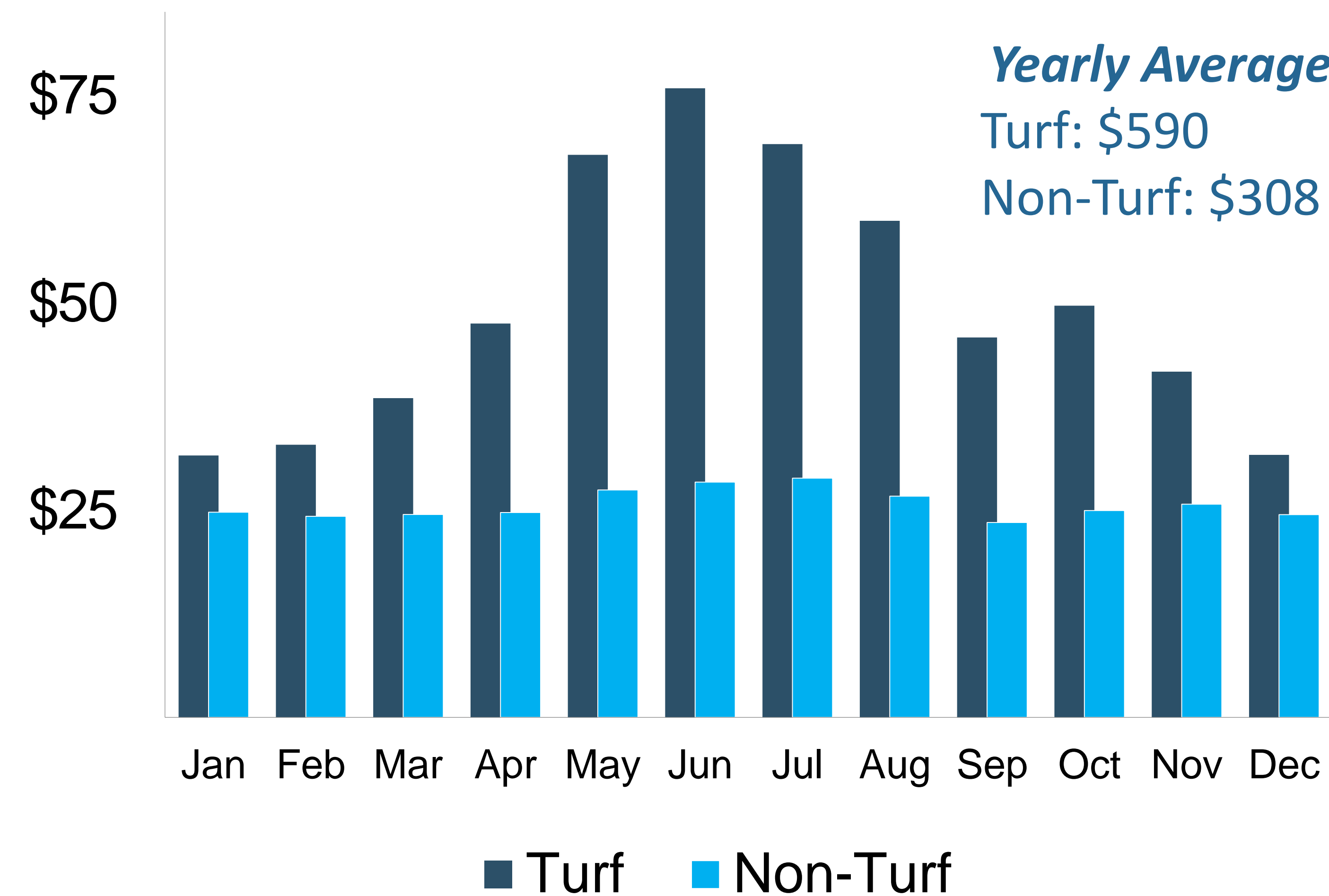
Turf



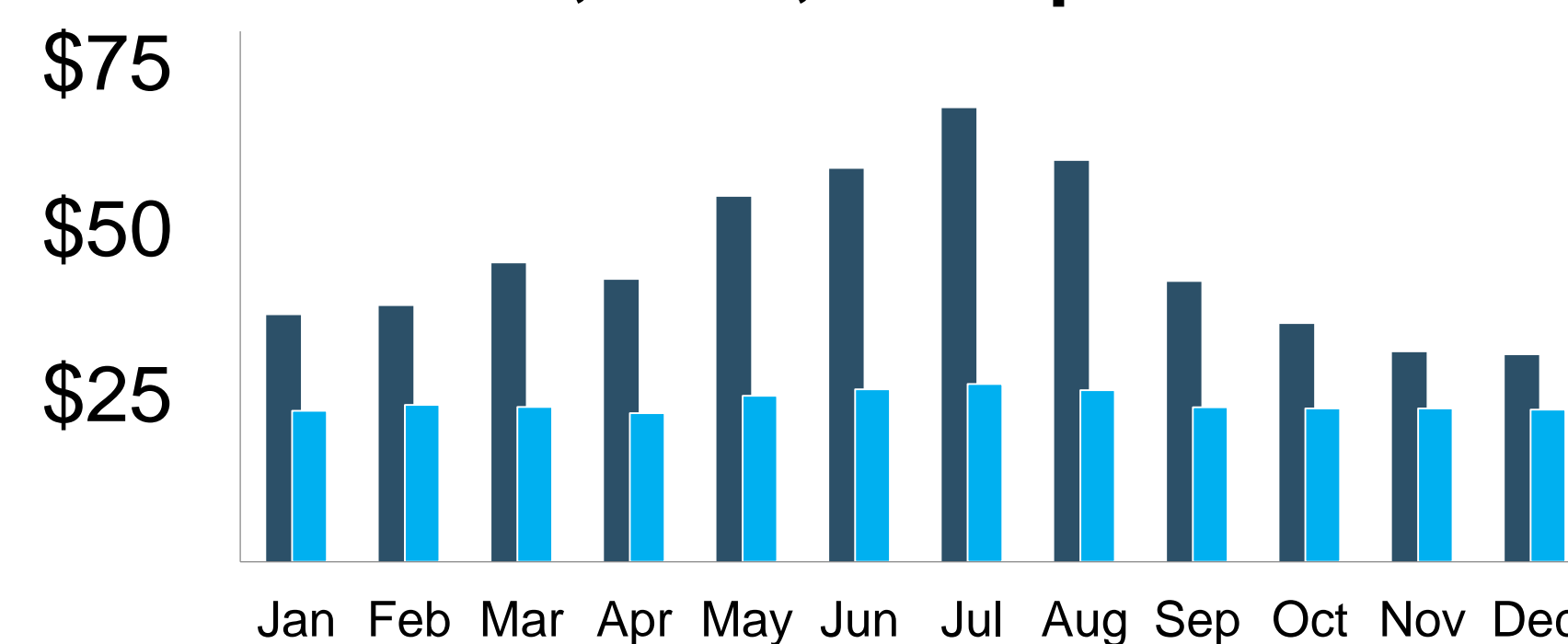
Non-Turf

- Both types were determined through a visual comparison.
- "Turf" was characterized by almost complete turf grass coverage, limited non-grass surfaces, and a varying number of shade trees.
- "Non-Turf" was characterized by the absence of turf grass coverage and a very low number of trees.
- Houses without swimming pools were evaluated.

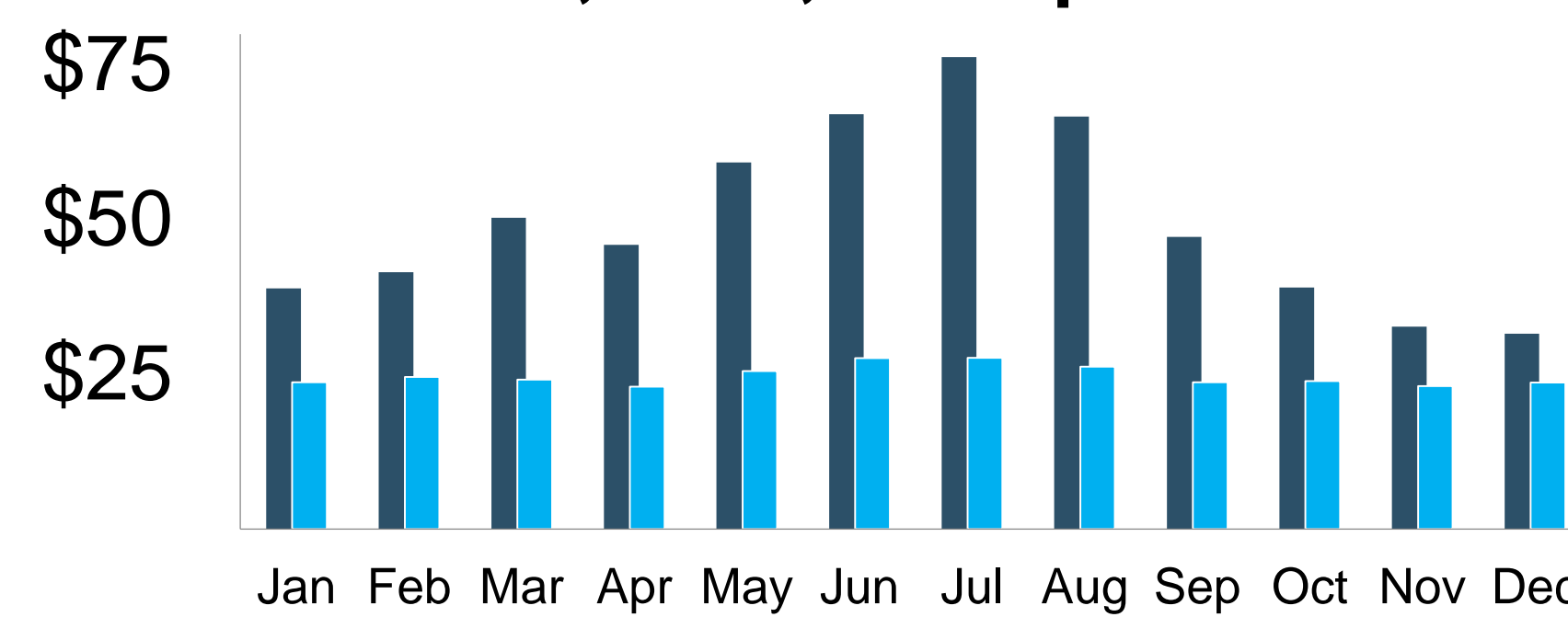
Non-Turf Yards Average Half the Watering Cost of Turf Yards



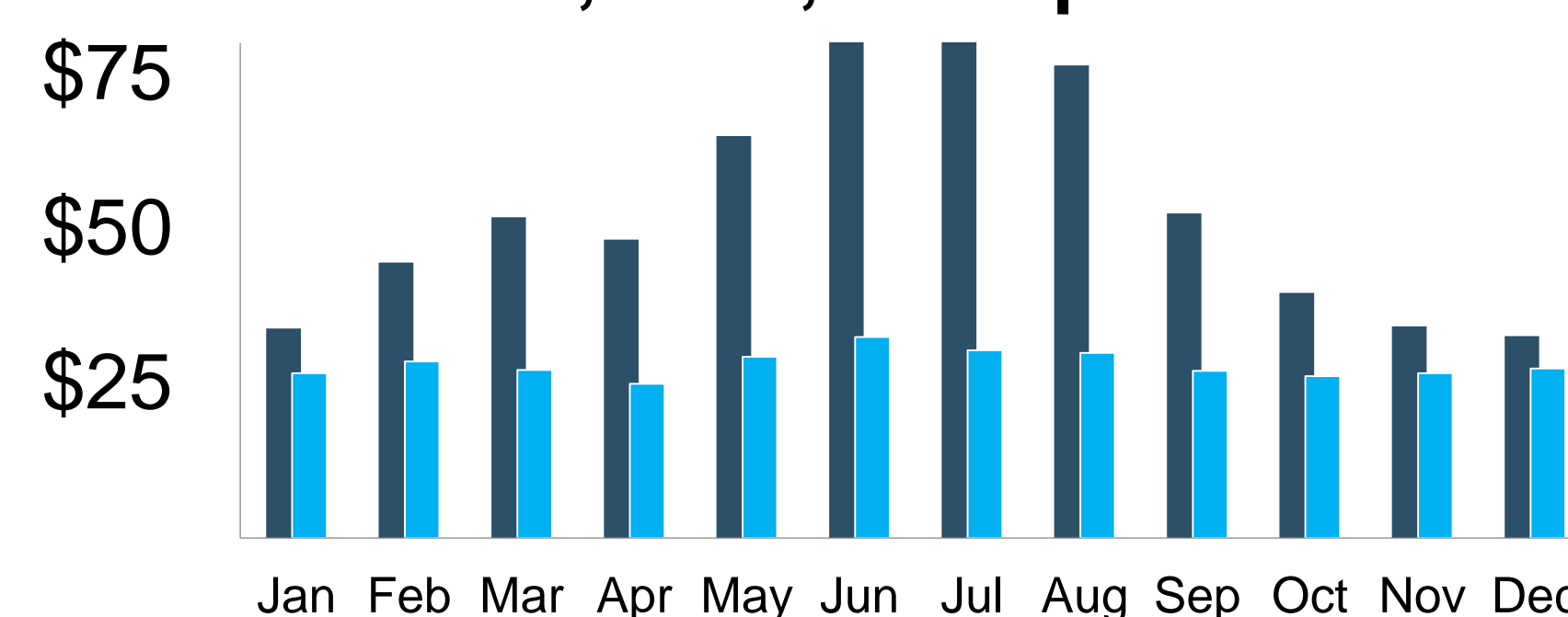
Lot Size 6,000-7,000 Sq. Ft.



Lot Size 7,000-8,000 Sq. Ft.



Lot Size 8,000-9,000 Sq. Ft.



Single Family Residential Homes
 Billing data over two years averaged
 • 2012 & 2013
 From four zip codes of Tempe, AZ
 • 85281, 85282, 85283, 85284
 For 50 houses of each yard type
 • Turf, Non-Turf
 Within a specific range of lot sizes
 • 6,000-9,000 ft²

Data were retrieved from the City of Tempe, and Maricopa County.

Maricopa County Assessor's Office Parcel Map Viewer



Start Date	End Date	Days	Status	Current Amount
02-11-2014	03-14-2014	31	Frozen	\$24.62
01-16-2014	02-11-2014	26	Frozen	\$24.41
12-12-2013	01-16-2014	35	Frozen	\$23.10
11-12-2013	12-12-2013	30	Frozen	\$22.85
10-14-2013	11-12-2013	29	Frozen	\$23.06
09-17-2013	10-14-2013	27	Frozen	\$20.37
08-21-2013	09-17-2013	27	Frozen	\$21.81
07-17-2013	08-21-2013	35	Frozen	\$18.51
06-12-2013	07-17-2013	35	Frozen	\$24.49
05-31-2013	06-12-2013	13	Frozen	\$5.48

City of Tempe Water Billing System

Water usage in Tempe can be reduced with Non-Turf landscaping.

- Statistical data can be used to promote low water use landscaping programs in the City of Tempe.
- Research on water usage in desert cities contributes to the greater Decision Center for a Desert City (DCDC) research knowledge base.
- A comparison of the water usage of residential landscaping decisions can contribute to the education of communities on their environmental impacts.

Acknowledgment

This material is based upon work supported by the National Science Foundation under Grant No. SES-0951366 Decision Center for a Desert City II: Urban Climate Adaptation (DCDC). Any opinions, findings and conclusions or recommendation expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation (NSF).