

Promoting "green" by going brown: A turf conversion incentive case study



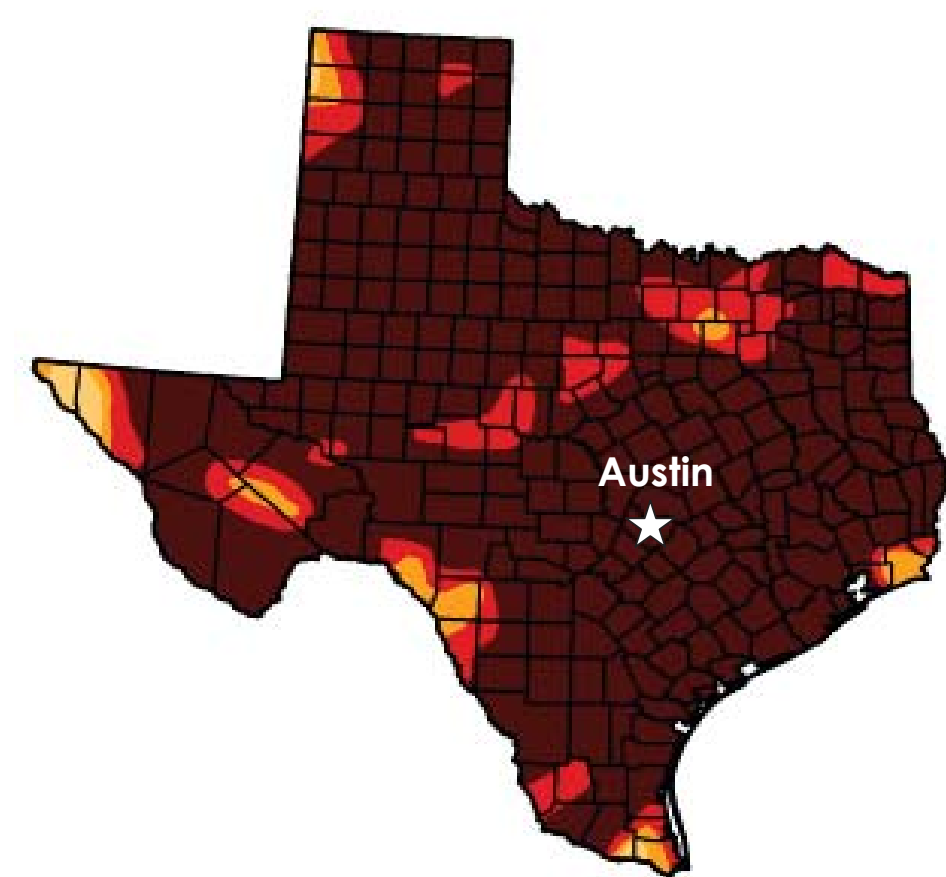
BACKGROUND

During 2011 Central Texas experienced record-setting hot and dry conditions that left many homeowners struggling to keep their lawns alive. In response, Austin Water implemented the Lawn Remodel Program. The program offered residential customers a financial incentive to stop watering their St. Augustine lawns and replace them with more drought-tolerant landscaping once drought conditions improved.

Drought conditions at implementation, September 2011:

- DO Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought Exceptional

Source: U.S. Drought Monitor



The **program goals** are:

1. **Reduce short-term water use** by requiring that program participants stop irrigating their lawns.
2. **Reduce future water use** by replacing existing water-thirsty turf with more drought-tolerant landscaping.

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IMPLEMENTATION

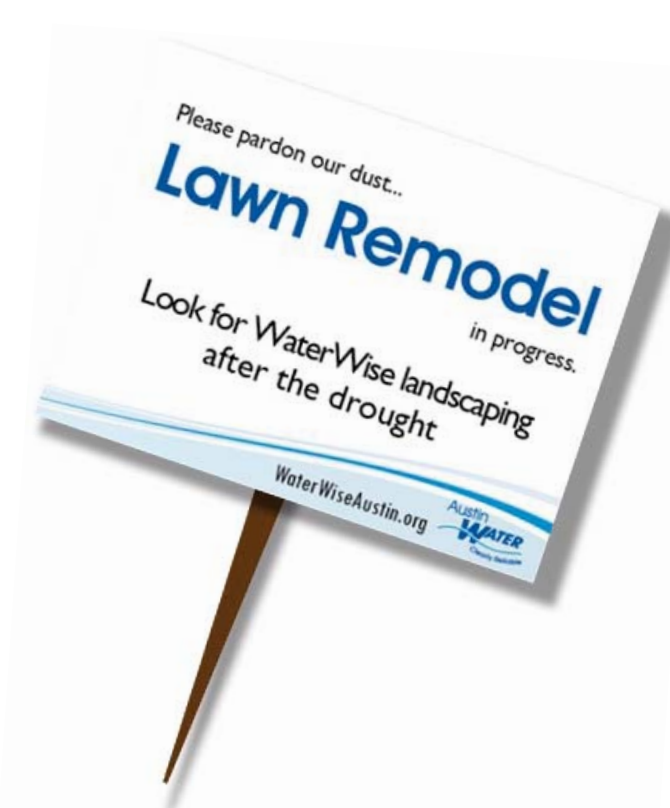
During the registration period of September 14, 2011 through October 31, 2011, nearly **800 applications** for a total of **3.5 million square feet** were accepted into the program.

Participants agreed to convert their entire front and/or back yard using the following replacement options:

- **Drought-tolerant turf** rebated at \$0.10 per square foot
- **Native plants** rebated at \$0.20 per square foot
- **Permeable hardscape** rebated at \$0.30 per square foot

Permeable hardscape installations, like mulching under trees and gravel paths, were allowed to be installed early, plant installations were not permitted until the Stage 2 Water Use Restrictions were lifted. At the time the program was implemented, no prediction was made as to when this would occur. By joining the program, participants agreed to accept an indefinite delay in the completing the new installation.

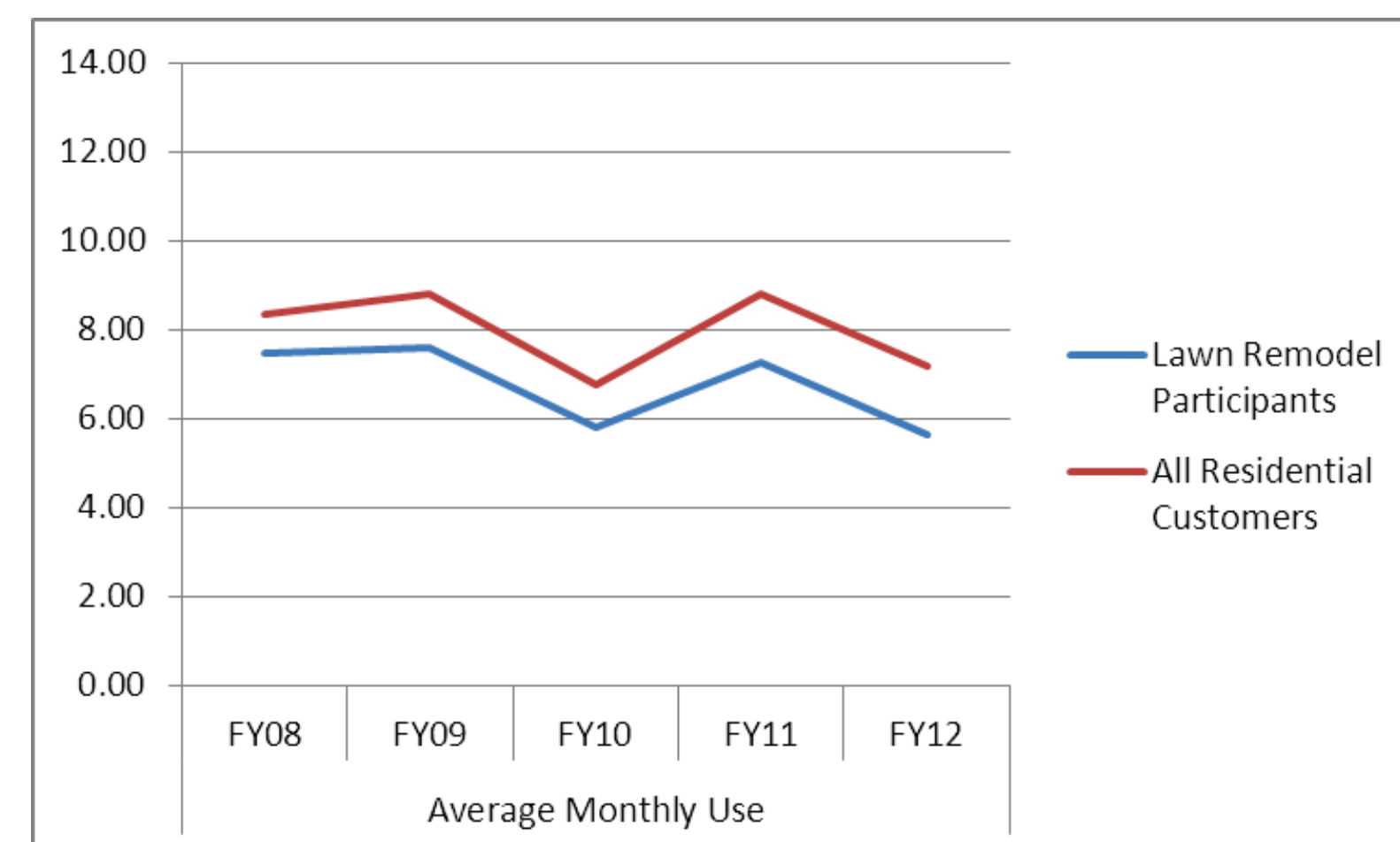
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PARTICIPANT PROFILE

Water use by Lawn Remodel participants followed the same usage patterns as other residential customers, but participants historically used an average of approximately **1,200 gallons less** per month than the average of all residential customers.

Comparison of average monthly water use by Lawn Remodel participants and all residential customers, FY08-FY12:



Additional facts:

- Average conversion area roughly 4,500 square feet
- 64% opted to convert their entire property, 22% only their front yard, and 14% only their back yard
- Participation fairly evenly spread throughout city

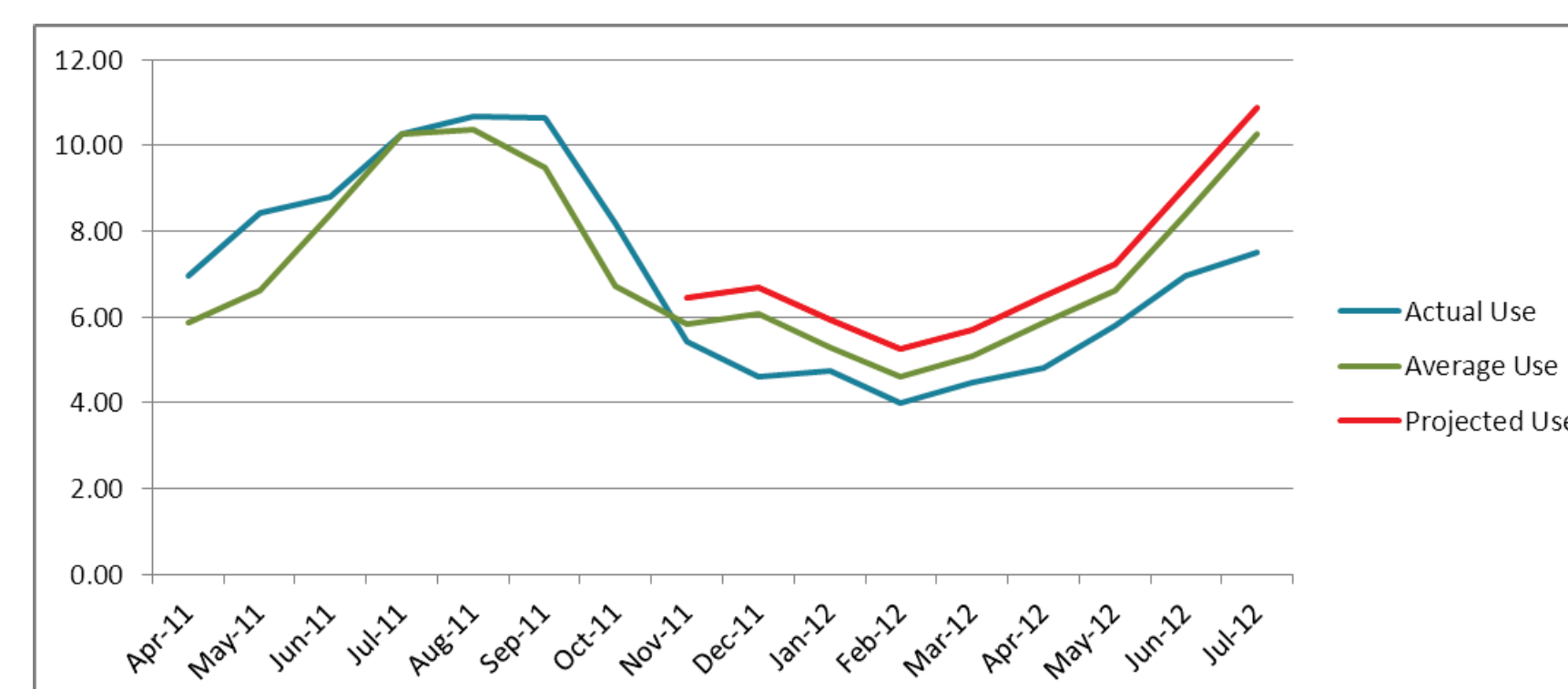
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PRELIMINARY FINDINGS

Prior to registering for the program, Lawn Remodel participants had been using roughly 600 gallons more per month than their average usage for those months during the four previous years. Once they were accepted into the program, their monthly usage dropped an average of 1,100 gallons below the averages for those months.

Based on a projected continued use of 600 gallons more each month had those customers not joined the program, a savings of **up to 12.3 million gallons** can be attributed to the program, meeting the first goal of implementing the program – **reducing water use in the short term.**

Comparison of average, actual, and projected monthly water use by Lawn Remodel participants, April 2011 through July 2012:



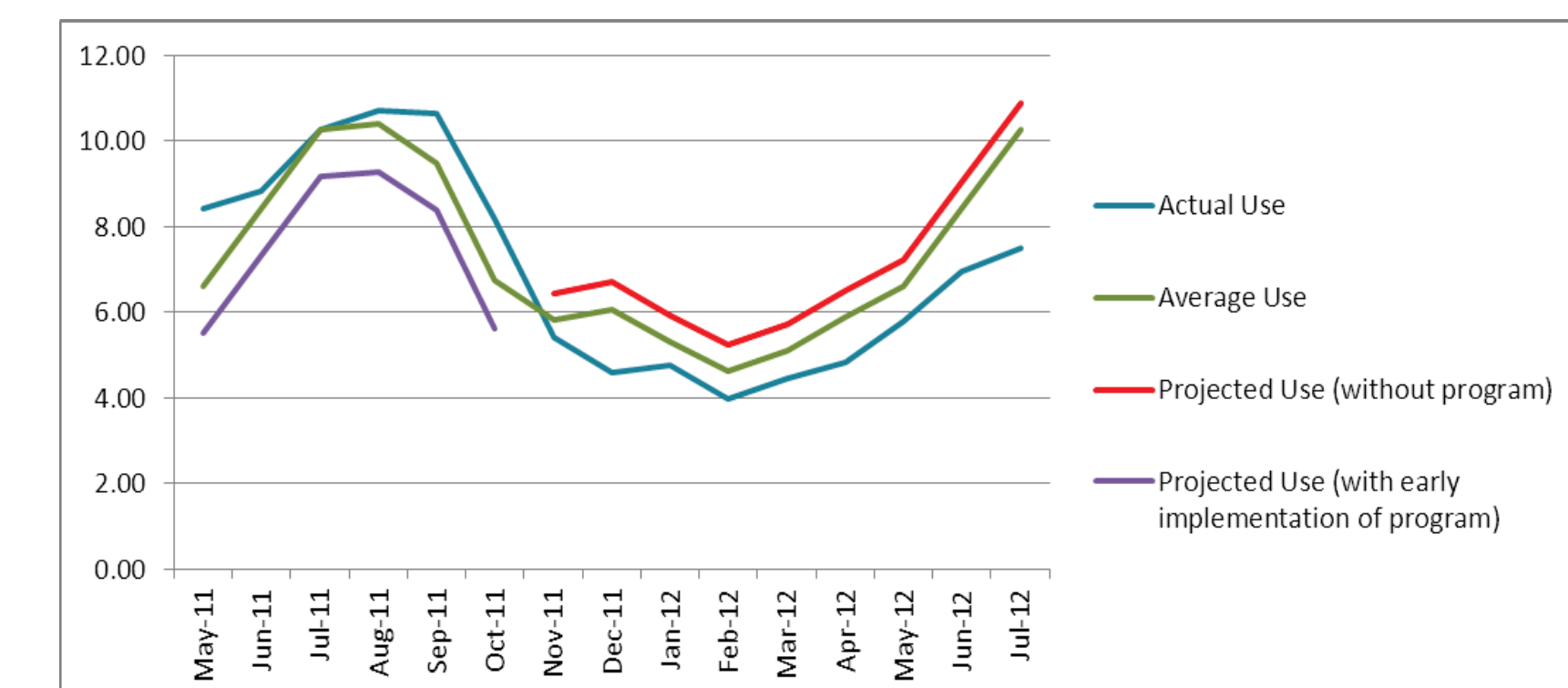
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LESSONS LEARNED

Though the program is not complete, there are two primary lessons learned so far. First, this program **attracted low water users**. To potentially capture more savings, higher water users could have been targeted by limiting participation to customers meeting certain usage criteria.

The second has to do with **implementation timing**. The program went into effect at the end of the irrigation season, with the implementation of Stage 2 Water Use Restrictions. Had it gone into effect at the beginning of the irrigation season, more savings could potentially have been gained. In comparing average to actual monthly usage following acceptance into the program, participants used approximately 1,100 gallons less per month. Applying that to the six months prior suggests an **additional savings of nearly 9.4 million gallons.**

Comparison of average monthly use, actual monthly use, projected monthly use if the program were not implemented, and projected monthly use if the program were implemented earlier by Lawn Remodel participants, May 2011 through July 2012:



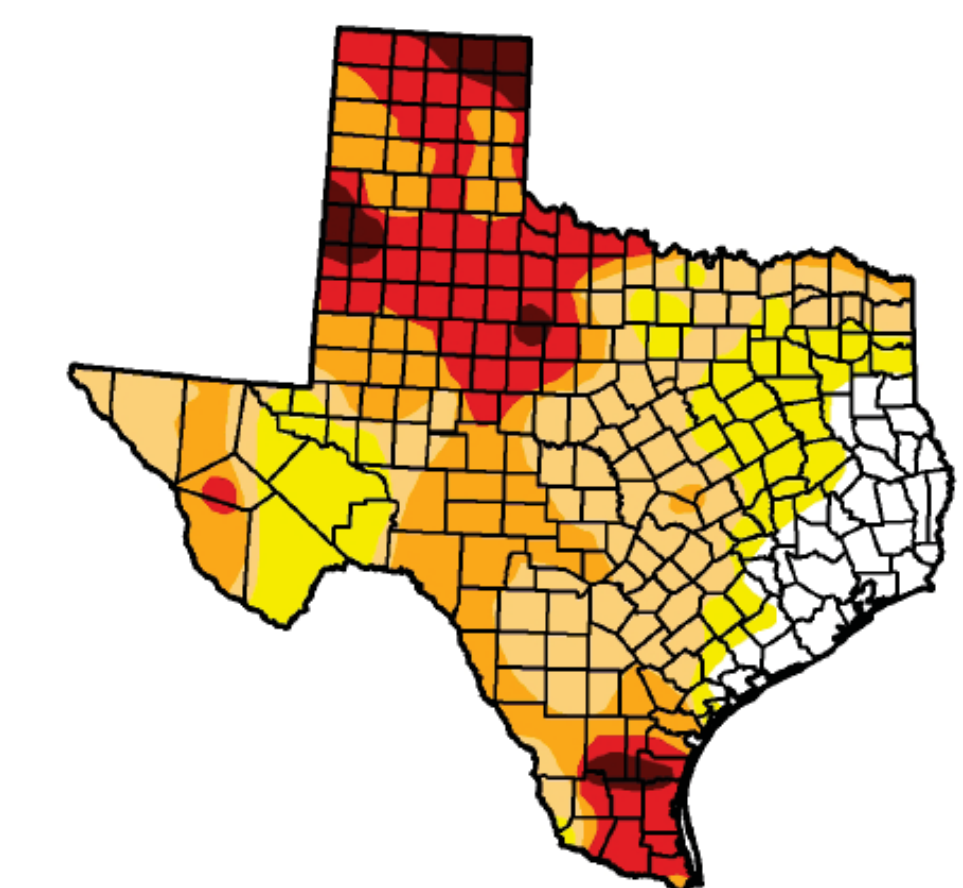
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NEXT STEPS

With the lifting of Stage 2 Water Use Restrictions, **landscape plant installations were allowed to proceed beginning July 12, 2012**, though participants were strongly encouraged to wait until fall. The first goal of the program – to reduce short-term water use – was met. Once the installations are complete, water use will be monitored to measure progress in meeting the second goal – **reducing future water use.**

Drought conditions as of September 2012:

- DO Abnormally Dry
 - D1 Drought - Moderate
 - D2 Drought - Severe
 - D3 Drought - Extreme
 - D4 Drought Exceptional
- Source: U.S. Drought Monitor



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