

This presentation premiered at WaterSmart Innovations

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Reducing Outdoor Water Demand of Residential High Water Users

October 7, 2009

WaterSmart Innovations 09

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Presentation Overview

- Background information
- Participants/neighborhoods
- Pilot project details
- Pilot project findings
- Pilot project to program
- Program findings

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Background Information

- Why focus on the Top 1% residential water users?
 - If a 20% savings could have been realized among all Top 1% water users (~3,400 accounts) between January and September of this year, a total of 260,894,799 gallons or 800 acre-feet would have been saved
 - GPCD would be 0.54 lower
 - The Top 1% used ~5% of all residential water billed
- Motivating factor of program:
 - Appropriate plant material, but over watered

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Residential Outdoor Water Use Program

- This program tracks the health of a homeowner's landscape (in partnership with the Bexar County Master Gardeners) and the amount of water necessary to maintain or further enhance
- The goal: to learn more about the water-using habits, issues and behaviors typical of these customers, and to reduce outdoor water use



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How It Begins...

- Through outreach mailings – Top 1%
- High bill complaints – calls transferred from Customer Service to Conservation to set-up appointment
- And sometimes through word of mouth – customer relating audit experience to friends, family, and neighbors; Neighborhood outreach



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Top 1%: 2008 - 2009

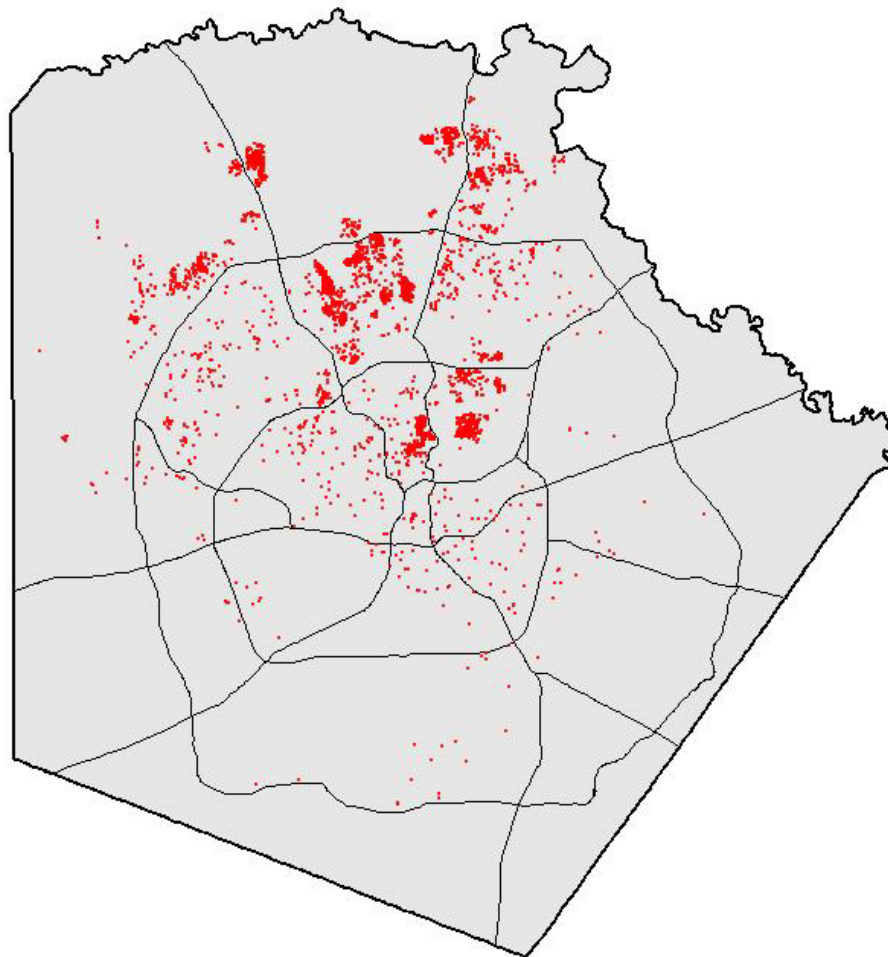
- Water use range:
 - 2006: 43,016 – 112,215 gpm
 - 2007: 25,445 – 85,283 gpm
 - 2008: 35,000 – 200,000 gpm
- Lot sizes: 0.19 or 8,275 sf
 - 4 acres or 174,240 sf
- Household size range:
 - 1,953 – 13,176 sf
- Home values range:
 - ~\$189,000 – \$3,820,000



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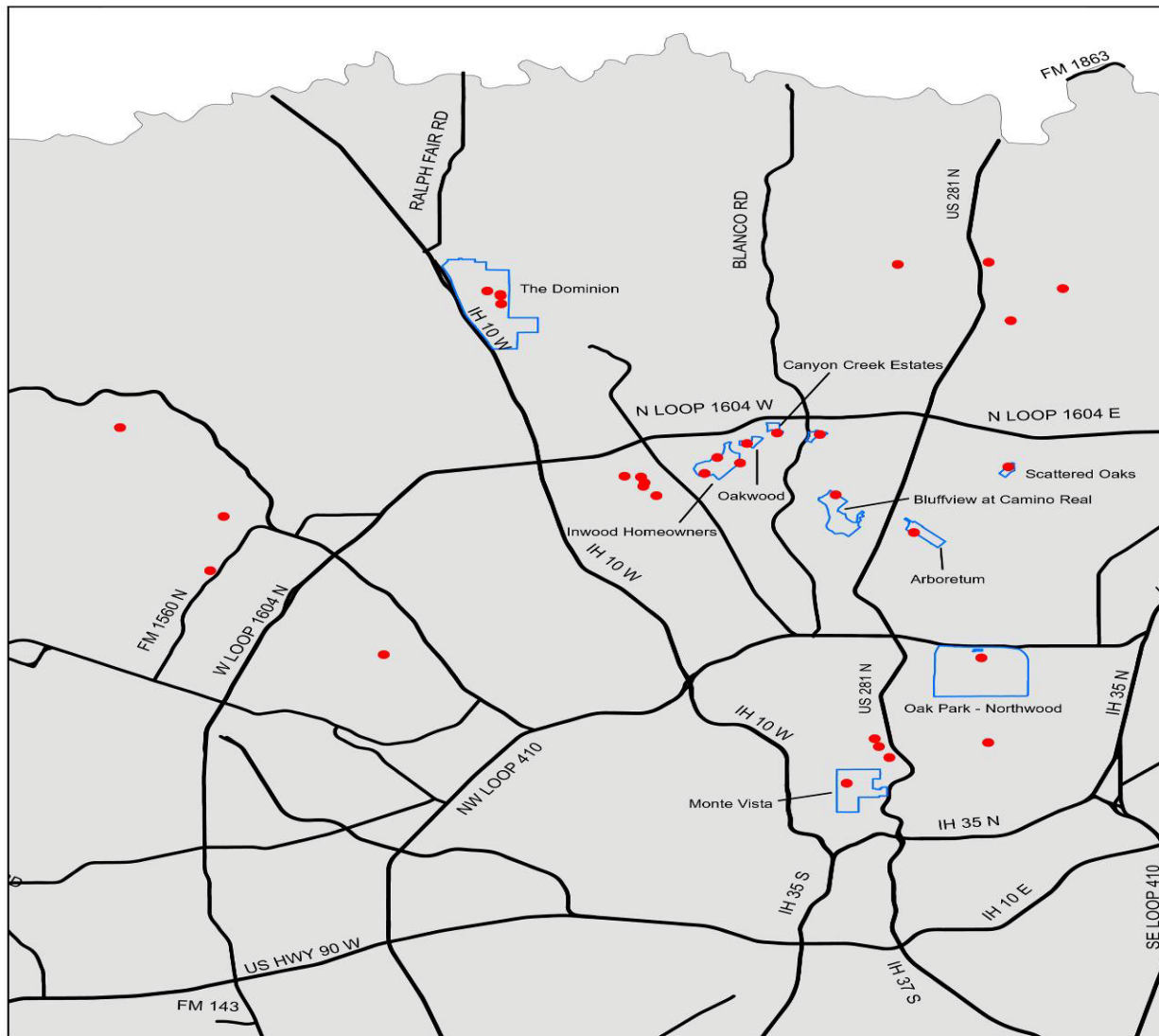
Cluster Analysis of Residential Top 1%



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Pilot Program Survey Response



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Items Addressed during Visits

- Complete plant inventory and landscape assessment
- Irrigation controller programming
- Irrigation system maintenance/design

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Sprinkler and Outdoor Audit



- All zones of a sprinkler system observed
- All are timed with meter to determine gpm
- Leaks are flagged and shown to customer
- Advice is given based on type of landscape, and design of sprinkler system
- Sprinkler timer is adjusted according to recommendation

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Benefits of Program

- Assessment and careful monitoring of the health of their landscape by the Bexar County Master Gardeners
- A personalized landscape plan based on recommendations
- Irrigation audit by our Conservation Consultants
- Better informed consumer
- Achieves the goal of promoting outdoor conservation
- Strengthens SAWS relationship with this segment of our service area
- Most importantly, a reduction in their water consumption

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Key Observations/Findings

- Enthusiastic participation
- Acknowledgement of high water use and high water bill
- Various levels of homeowner connection to their landscape
- Improper programming of controllers for effective and efficient irrigation
- Improper irrigation zoning and/or design
- Overall appropriate plant material, but improper maintenance and design
- Water savings being realized

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Gauging Water Use

- Not saving 2
- Slight savings 5
- Good savings 4
- Very good savings 6
- Excellent savings 7

71% doing good (saving ~5,000 gallons per month vs. 2006)

54% doing better (saving ~10,000 gallons per month vs. 2006)

29% doing excellent (better than 2006 and 2007)

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Very Good: Bluffview Estates

- Lot size:
 - 0.5051 acre or 22,002 sf
- Irrigable area:
 - ~17,000 sf

2006 avg: 83,974 gals

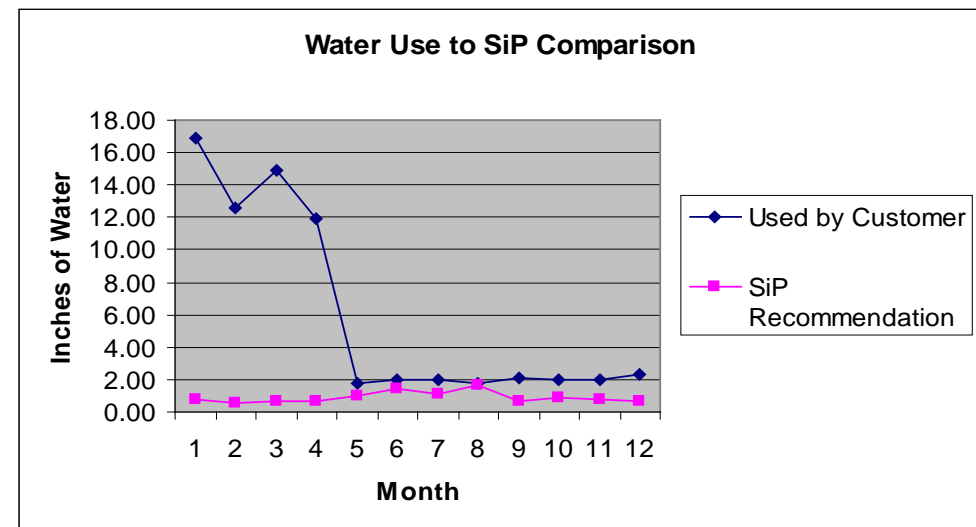
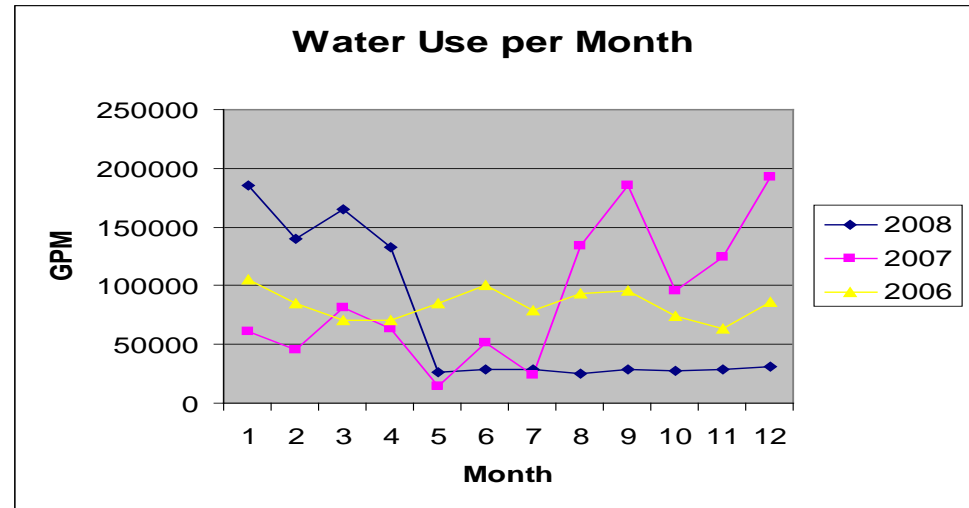
2007 avg: 89,336 gals

2008 avg: 70,696 gals

(from May: 28,147)

2009 avg: 22,537 gals

(restrictions: 15,149)



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Bluffview Estates



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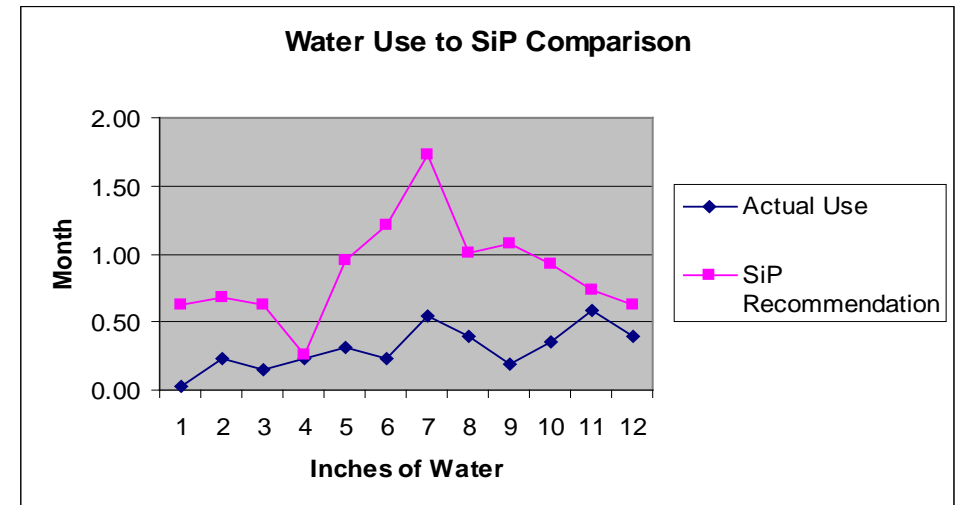
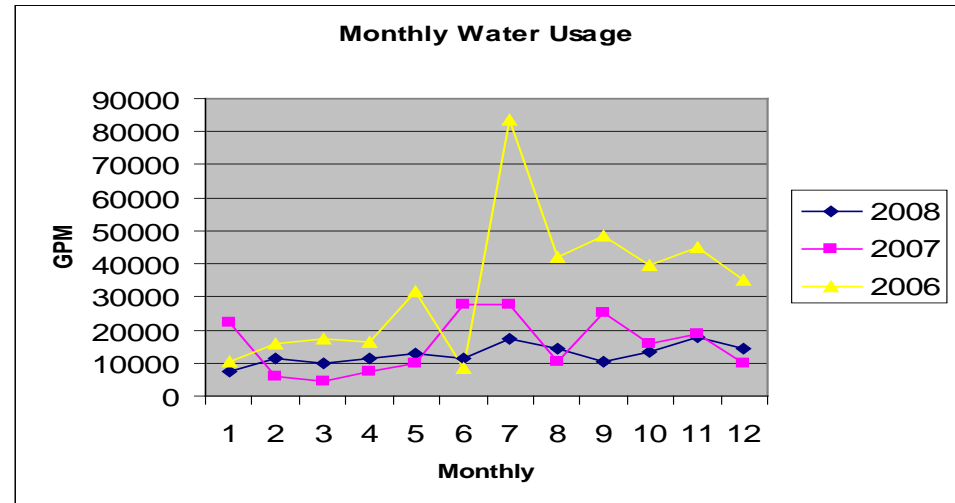
Excellent: Shadow Canyons

- Lot size:
 - 1.27 acres or 55,321 sf
- Irrigable area:
 - ~30,000 sf

2008 avg: 11,895 gals

2007 avg: 15,461 gals

2006 avg: 32,792 gals



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Water Use Totals: Pilot Group

- 2008 total savings of 2,540,480 gallons or 7.80 acre-feet
- 21% total savings over 2006
- Monthly savings of 8,821 per participating home/month
- Most savings achieved individually:
 - 461,579 gallons saved or 58% usage drop
 - reduced from 66,519 to 28,054 gallons per month
- So far in 2009, original group has saved 2,402,349 or 7.37 acre-feet
- Total savings over 20 months:
 - 4,942,829 gallons or 15.17 acre-feet

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Pilot Project to Program

- Started in January 2009
- At least 60 participants per year, 5 per month
- Program includes:
 - Initial evaluation
 - Follow-up visit in 3rd month
 - Final visit in 6th month
- Participants' water use monitored for 2 years
- Achieve at least 20% water savings
- Target consistent high water users and neighborhoods

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Current Status of Program

- 2009 group consists of 21 homeowners
- Has saved 1,707,176 gallons or 5.24 acre-feet
- Through August, Top 1% group (45 homes) has reduced water use by 4,109,525 gallons or 12.61 acre-feet
- Because of water restrictions, program is currently in recruitment mode
- Total savings attributed to program since inception (20 months) is 6,650,005 gallons or 20.41 acre-feet

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