

RUC Item #080184

GRU Water Conservation Programs

RUC Presentation

April 8, 2009



Topics

- Background
- Current Conservation Efforts
- Water Use Analysis & Trends
- Future Initiatives
 - GRU
 - SJRWMD, SRWMD
 - Alachua County
- Utility's FY2010 Proposed Programs

Background – Statewide Perspective

- Water Supply constraints in many regions
- Increasing emphasis on conservation as an “Alternative Water Supply”
- Need to reduce landscape irrigation
- Set statewide per capita goal

Background – Regional Perspective

- SJRWMD currently proposing almost entire district to be Priority Water Resource Cautionary Area
- SRWMD concerns about spring flows
- Groundwater models not yet complete, severity of constraints not yet defined
- Water Supply Plan Workshops - June 2009
- Local approach: focus on conservation & reclaimed water

GRU Current Efforts

- Efficient System Operations
- Conservation Rate Structure
- Reclaimed Water Expansion
- Education
- Regular High Water User Evaluations
- Audits on As Needed Basis

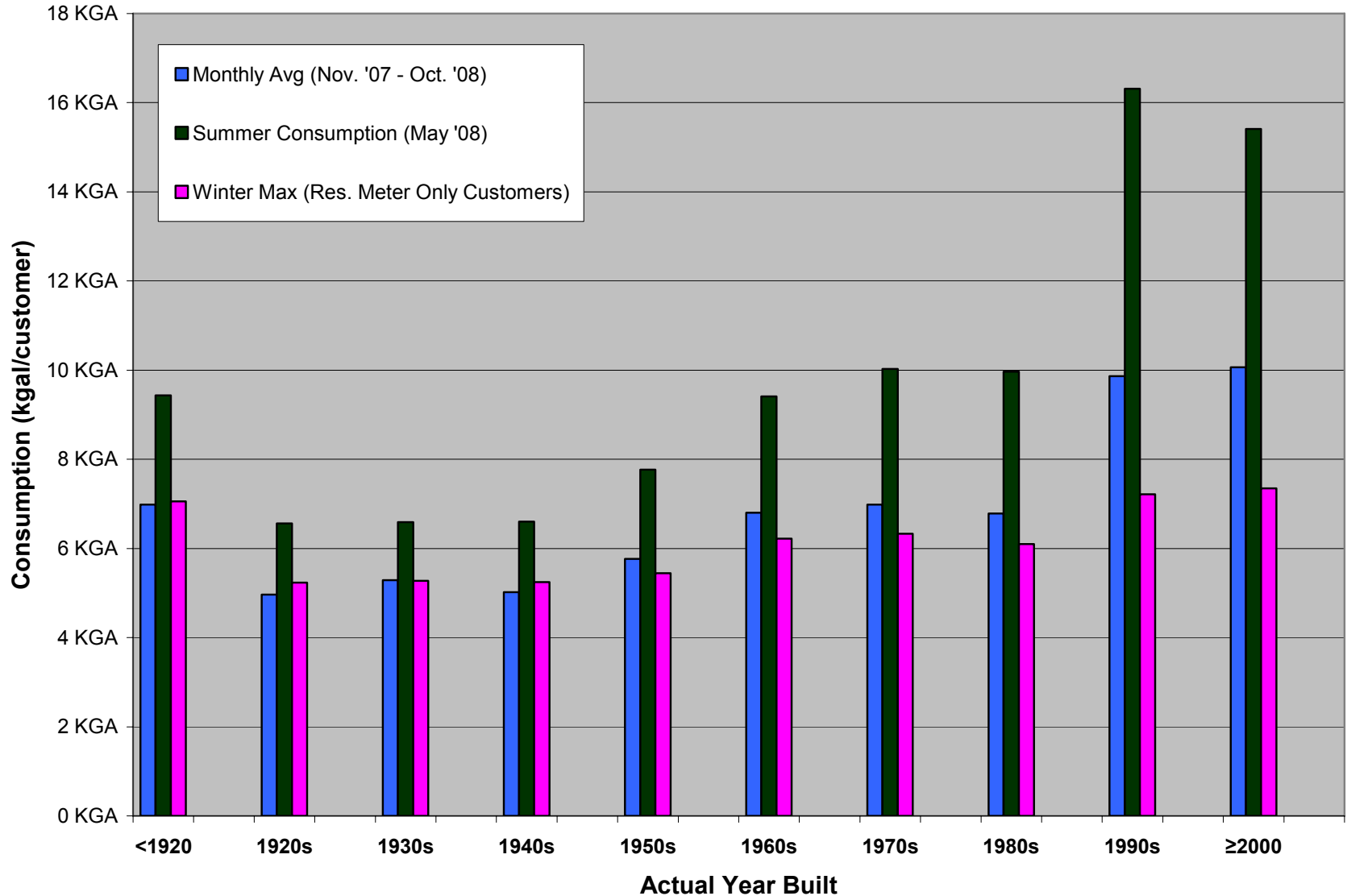
GRU Current Efforts (cont'd)

- Irrigation Maintenance Rebate Program
- Soil Moisture Sensor Pilot Program
 - Study with UF
- Conserve Florida EZ Guide
 - UF tool for evaluating the efficiency of water conservation programs

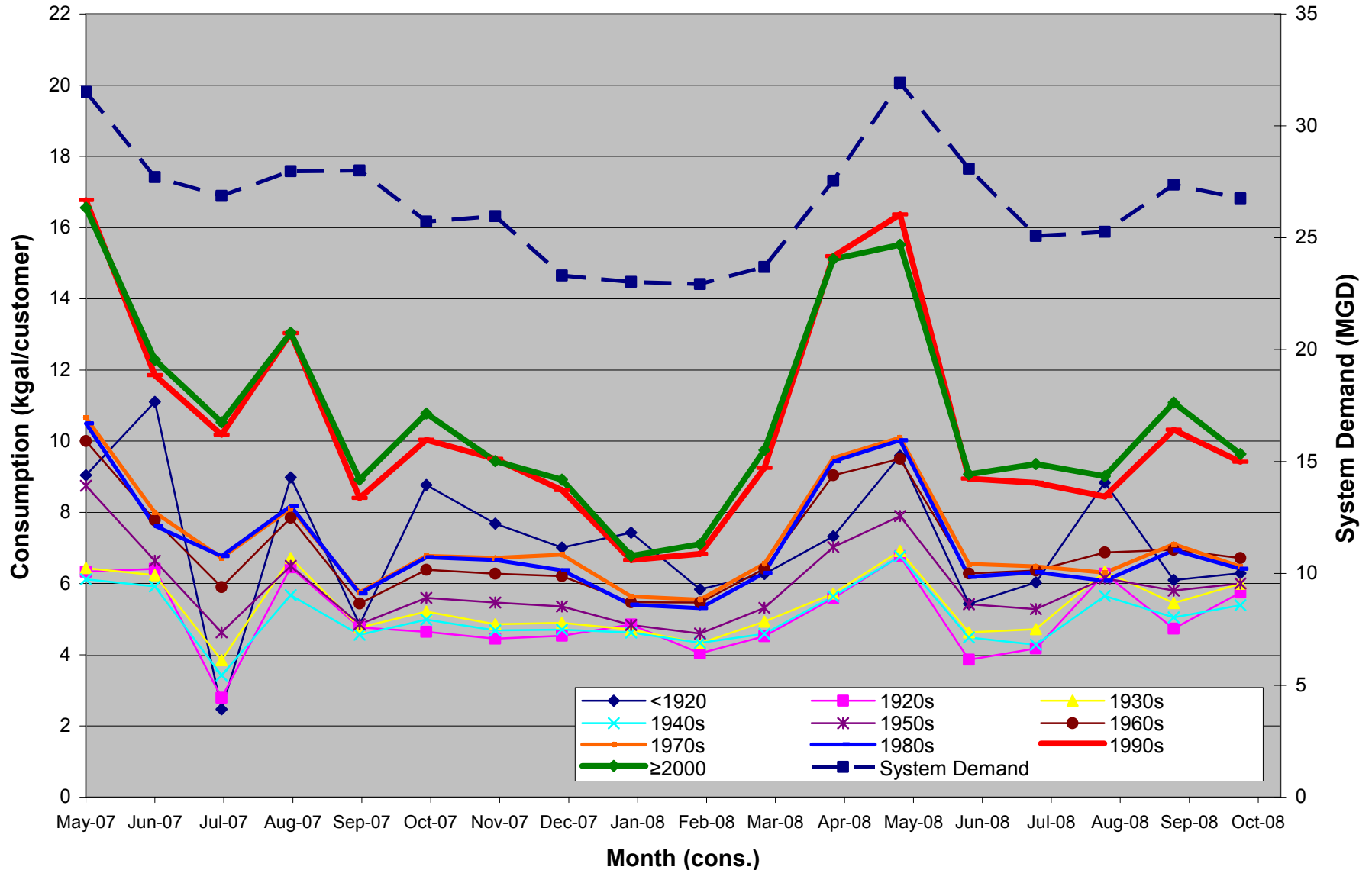
**How do our customers
use water?**

**Where can we gain
savings in water use?**

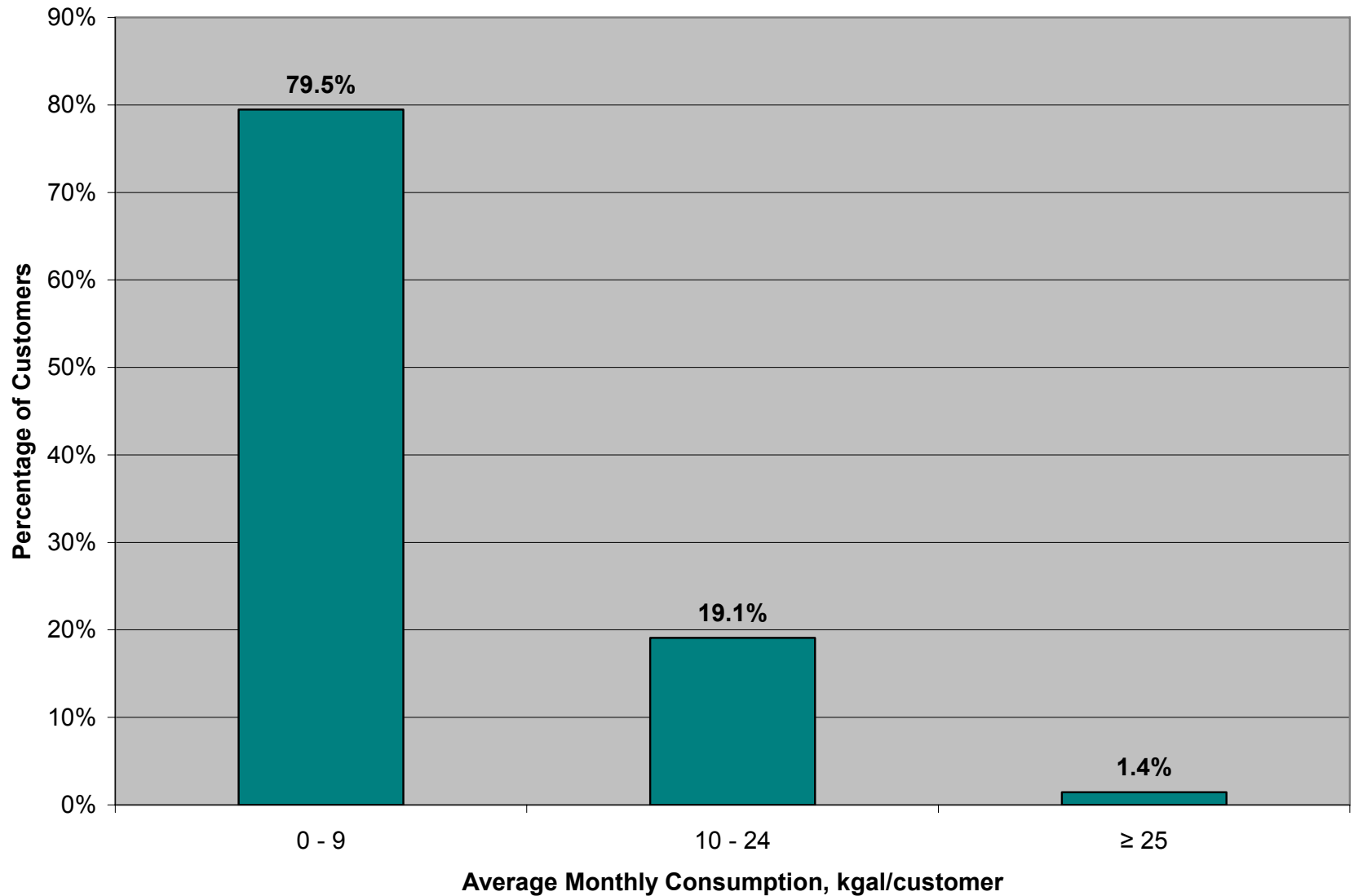
Consumption Avg. for Single Family Residential (SFR) Accounts, by Actual Year Built



Overall Avg. Monthly System Demand & Monthly Avg. Consumption by SFR Customers



Percentage of SFR Residential Meter Customers in Monthly Avg. Consumption Bins by Rate Tiers

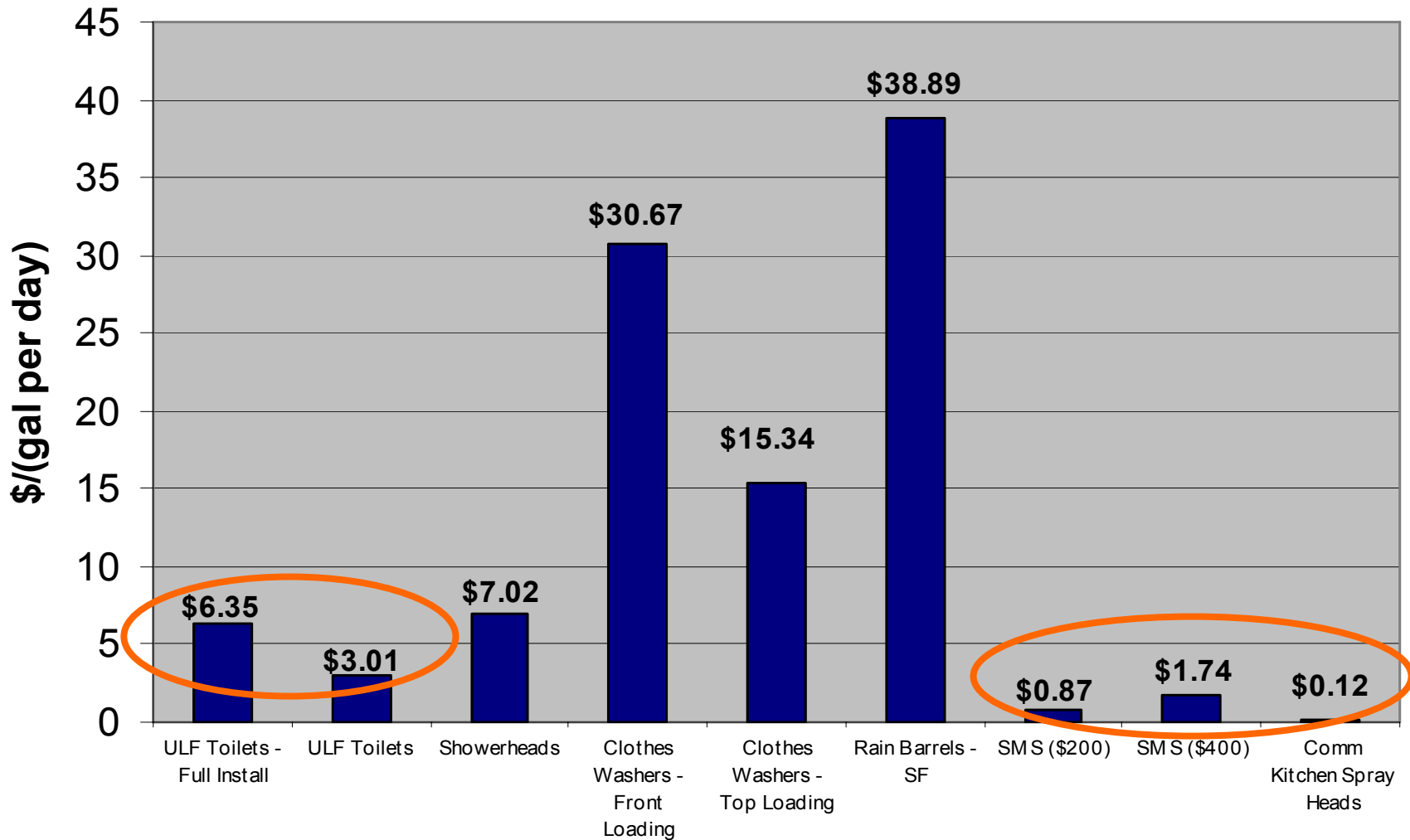


Conclusions

- Irrigation is largest discretionary demand
- Drives peak demands & capital facilities
- Newer homes irrigating more, using more water
- Conservation Focus
 - Reducing irrigation
 - Indoor retrofits
 - Efficient toilets for LEEP homes

**Where do we go
from here?**

BMP Cost per Demand Reduced (\$/gpd)



BMP

Does not include staff time.

Total Potential Customers, Costs & Savings

| Program | Est Potential Total Eligible Accts | Savings per Acct (gpd) | Cost per Acct | Total Potential Savings (gpd) | Total Potential Savings (mgd) | Total Cost | Cost per Gal Saved (\$/gpd) |
|------------------------------------|------------------------------------|------------------------|---------------|-------------------------------|-------------------------------|----------------|-----------------------------|
| Toilet Retrofit - Free Toilet Only | 12,809 | 63.18 | \$260 | 809,273 | 0.809 | \$3.3 M | \$4.12 |
| | | | | | | | |
| SMS - Assume \$200 per Home | 3,280 | 230 | \$270 | 754,400 | 0.754 | \$0.9 M | \$1.17 |
| | | | | | | | |
| Commercial Kitchen Spray Nozzle | 100 | 225 | \$40 | 22,500 | 0.023 | \$4,000 | \$0.18 |

Total Potential Savings: 1,586,173 gpd

Costs include staff time.

FY10 Proposed NEW Programs

| FY10 Proposed Programs | Retrofits per Year | Savings per Acct (gpd) | Cost per Acct | Total Savings (gpd) | Total Cost | Cost per Gal Saved (\$/gpd) |
|-------------------------------------|--------------------|------------------------|---------------|---------------------|------------|-----------------------------|
| LEEP Homes Toilet Retrofit | 50 | 63.18 | \$ 540 | 3,159 | \$ 27,000 | \$ 8.55 |
| SMS at \$400 per Acct | 50 | 230 | \$ 540 | 11,500 | \$ 27,000 | \$ 2.35 |
| Commercial Kitchen Spray Nozzle | 100 | 225 | \$ 40 | 22,500 | \$ 4,000 | \$ 0.18 |
| Existing Irrigation Sys Maintenance | 100 | 80* | \$ 100 | 8,000 | \$ 10,000 | \$ 1.25 |

Total Combined Savings: 45,159 gpd

Total Combined Cost: \$68,000

Total Combined Cost per Gallon per Day Saved: \$1.51/gpd

*Based on preliminary data.

Costs include staff time.

SJRWMD Initiatives

- Irrigation restrictions
- Emphasis on irrigation & indoor retrofits
- Water conservation cost share
 - Irrigation technologies
- Landscaping Ordinance recommendations

SJRWMD Irrigation Restriction

- Odd/Even Watering Restrictions
 - 2 day/wk EDT (Odd – Wed & Sat; Even – Th & Sun)
 - 1 day/wk EST (Odd – Sat; Even – Sun)
- Enforcement
 - Alachua County proposing to adopt & enforce countywide
- No new irrigation wells if RCW available
- Increased cost of “irrigation” water may cause an increase in wells

Conclusions

- Irrigation is largest discretionary demand
 - Drives peak demands & capital facilities
 - GRU, Alachua County, & WMDs working to reduce irrigation demands
- Continue existing conservation programs
- Implement New Conservation Programs
- Future consideration: LDRs to promote Florida Friendly Landscaping

Other Considerations

- More conservation = upward rate pressure
- Customers can install private irrigation wells to avoid tiered water rates
- Conservation necessary
 - Reducing peaks will offset potential capital improvements
 - Constraints in water supply
 - Promotes sustainability

Current & Proposed FY10 Water Conservation Efforts

Continue Current Efforts

- Efficient System Operations
- Conservation Rate Structure
- Reclaimed Water Expansion
- Education
- High Water User Evaluations
- High User Audits
- Irrigation Maintenance Rebate Program
- SMS Pilot Study
- Conserve Florida Water EZ Guide

Proposed New for FY10

- Soil Moisture Sensor Rebate Program – Continuation from FY09 Pilot Study
- High Efficiency Toilet Retrofits for LEEP Homes – Pilot Study
- Commercial Kitchen Spray Head Retrofits

Questions & Discussion