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ICI Benchmarking Study

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Goals

- Identify commercial customers and subsectors with the greatest potential savings

- Develop and implement cost-effective outreach strategies & conservation programs

- Identify data gaps

- Improve data analysis, reporting accuracy and efficiency

Method & Process

- Determine useful water use benchmarks for ICI sectors

- Analyze and normalize water use data
  - Identify denominator (sqft, per bed, per customer, etc.)
  - Determine average, median or top quartile water use

- Separate indoor and outdoor water use

- Select cost-effective outreach strategies

- Seek customer input

Five Sectors Selected
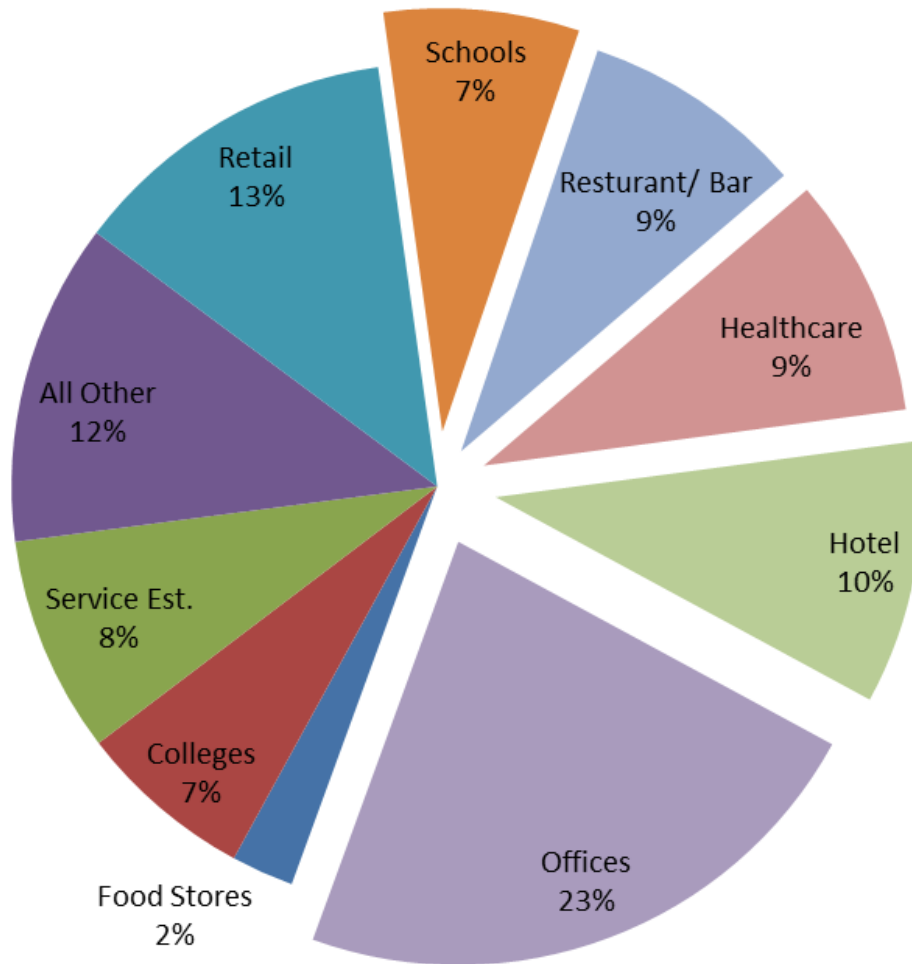
- Number of customers

- Volume of use

- Data availability

- Ability to normalize water use

- Potential for savings

Data challenges

- Cross-referencing billing data with other data sources (multiple meters, addresses)

- Limited data for irrigation and cooling tower uses

- Tax appraisal data does not include square footage for many tax-exempt properties

- Some data from online sources (e.g., number of guest rooms per hotel)

- Lack of uniformity in customer classification

- Account errors

Indoor Benchmarks

| Customer Group	Median	Mean
Hotels (Gallons/Guest Room/Day)	90	105
Hospitals (Gallons/Bed/Day)	321	335
High Schools (Gallons/Person/Day)	30.9	36.9
Office Buildings (Gallons/SqFt/Year)	20.9	26.9
Restaurants (Gallons/Seating Capacity/Day)	20	30

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Outdoor Benchmarks (Gal/SqFt/Year)

Customer Group	Median	Mean
Hotels	7.95	8.75
Hospitals	N/A	N/A
High Schools	N/A	N/A
Office Buildings	6.0	8.0
Restaurants	5.53	6.23
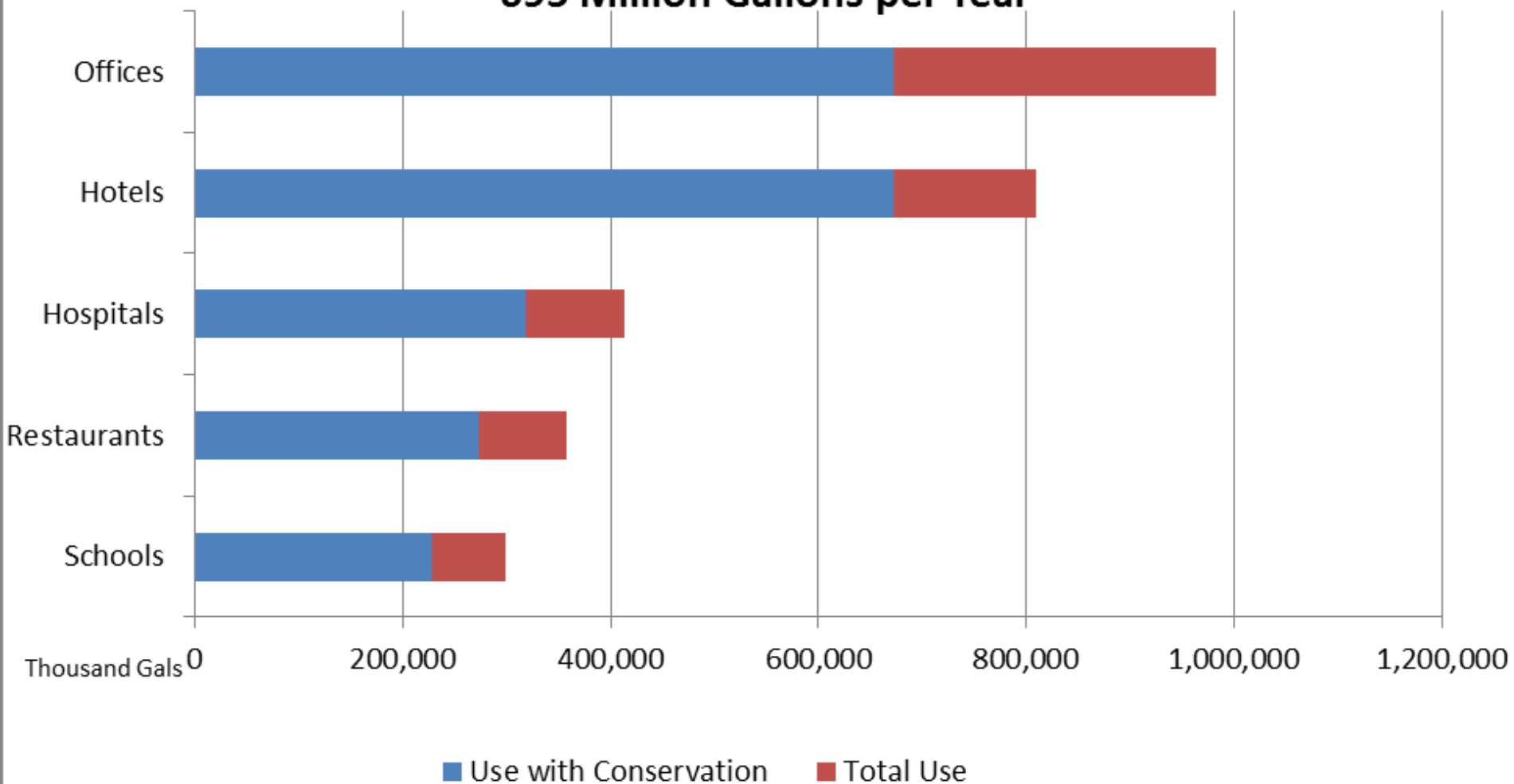
Figure 3. Distribution of Potential Water Savings for the Five Sectors Analyzed

- Offices 45%
- Schools 10%
- Restaurants 12%
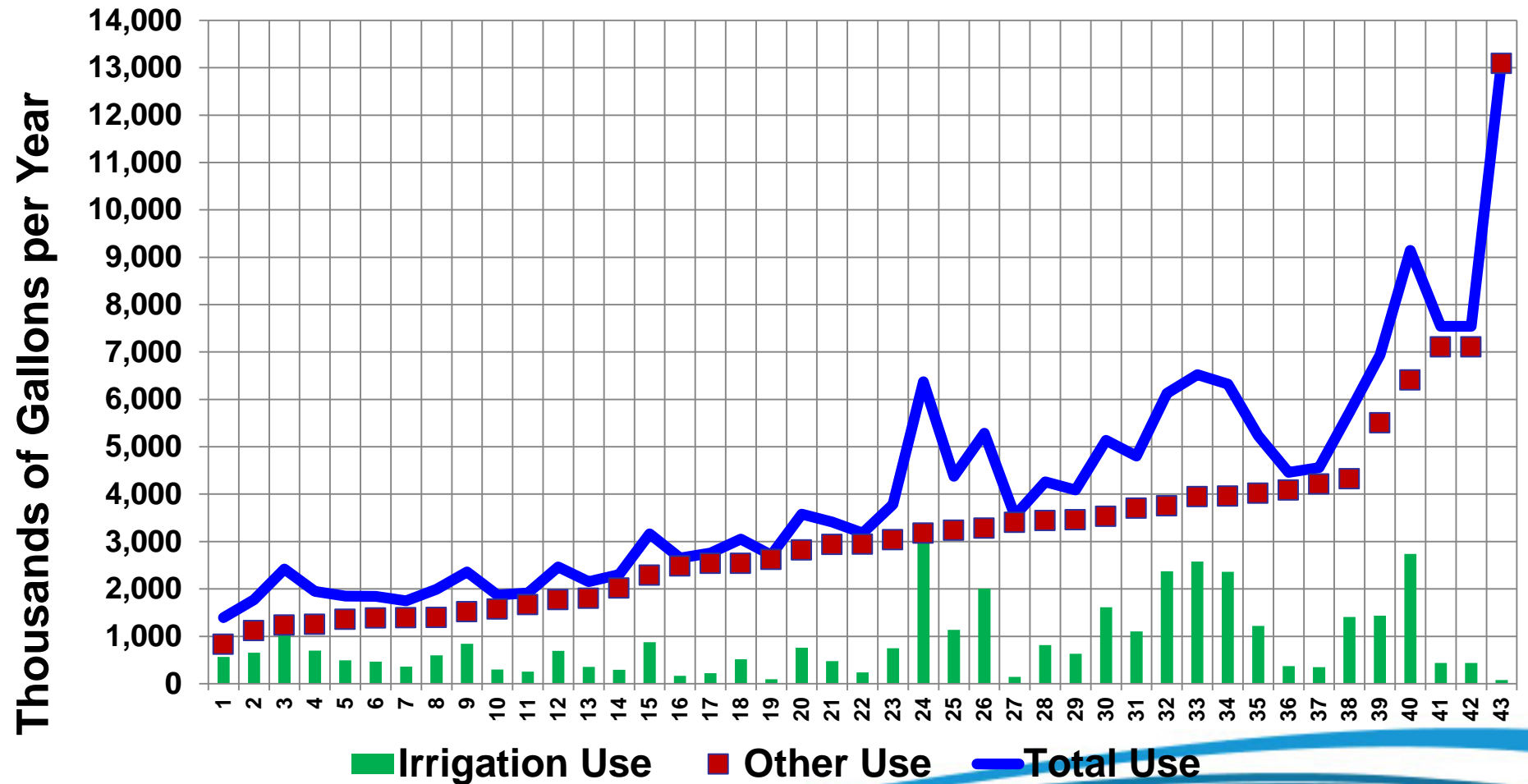- Hospitals 13%
- Hotels 20%
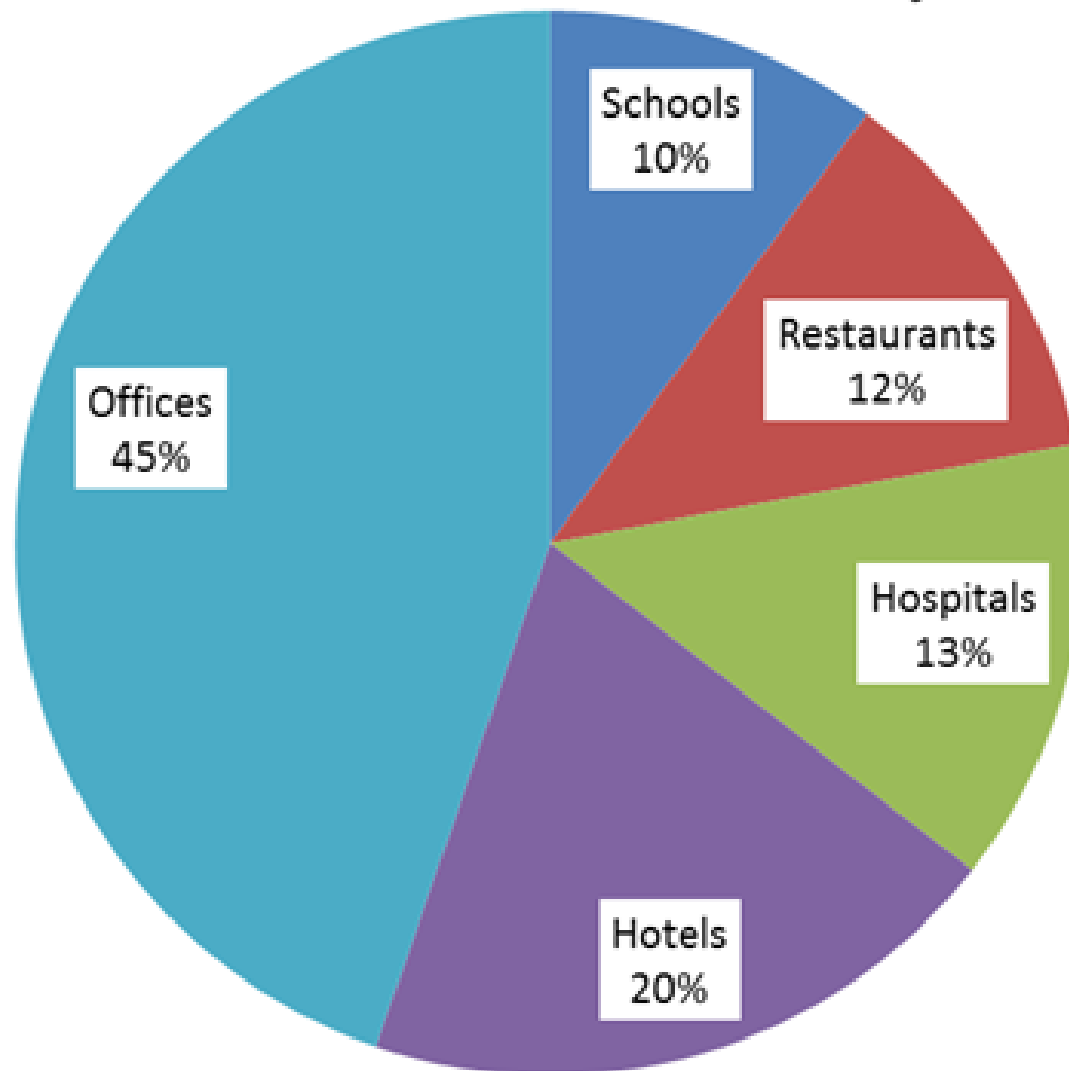
Current Strategies

- Active:
  - 3C Business Challenge and facility audits
  - Rebate and other incentive programs
  - Targeted compliance monitoring
  - Outreach to trade/business organizations

- Passive
  - City code and federal efficiency requirements
  - Conservation-oriented rates
  - Publications; web site
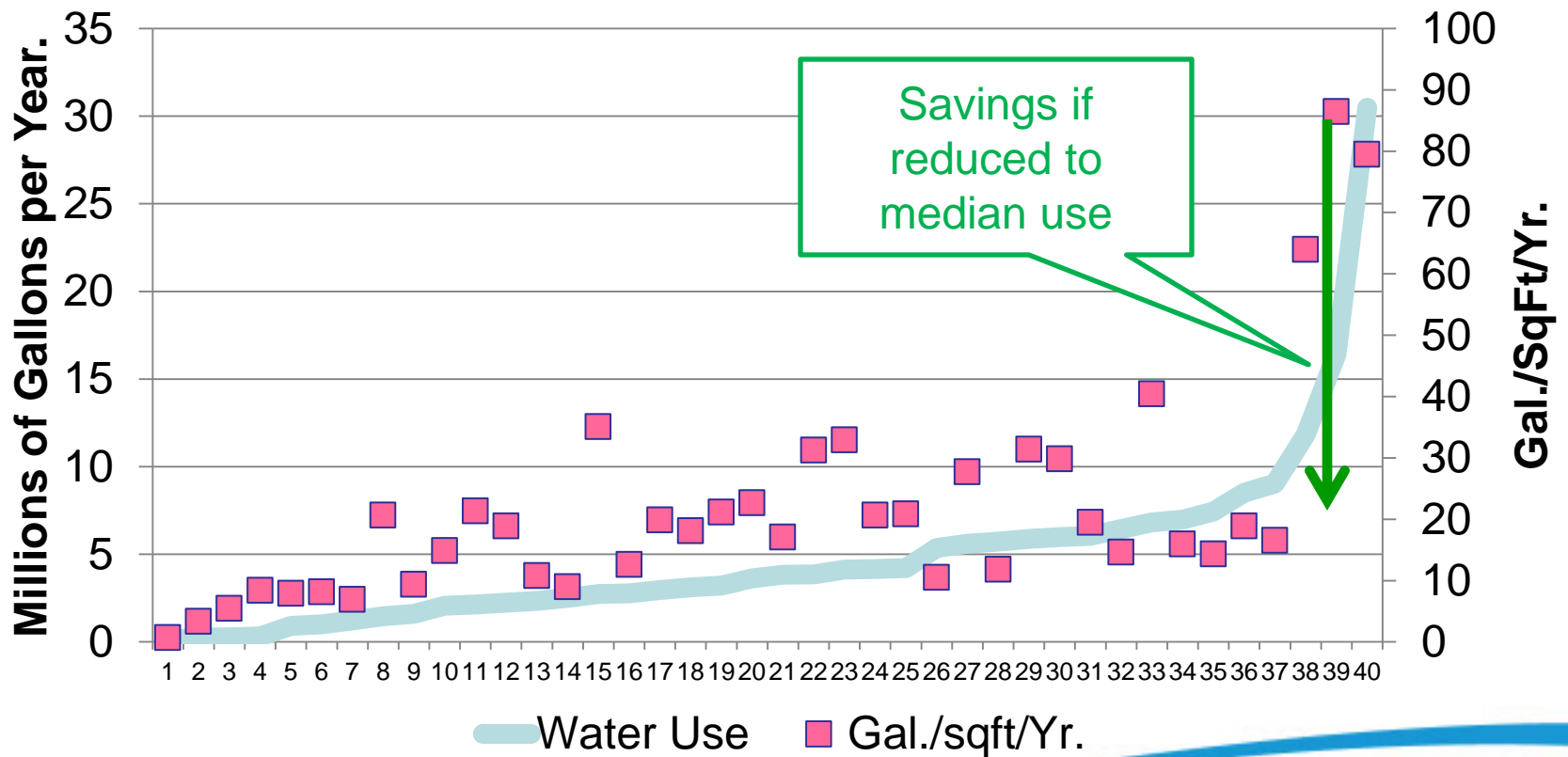
Targeting Customers

- **High potential total savings, few customers**
  - Hospitals, schools
  - Individual facility outreach & audits

- **High potential total savings, many customers**
  - Offices, restaurants, hotels
  - Recognition programs, code compliance, audits limited to top users

- **Low potential total savings, many customers**
  - Fast food, small offices
  - General outreach, code compliance

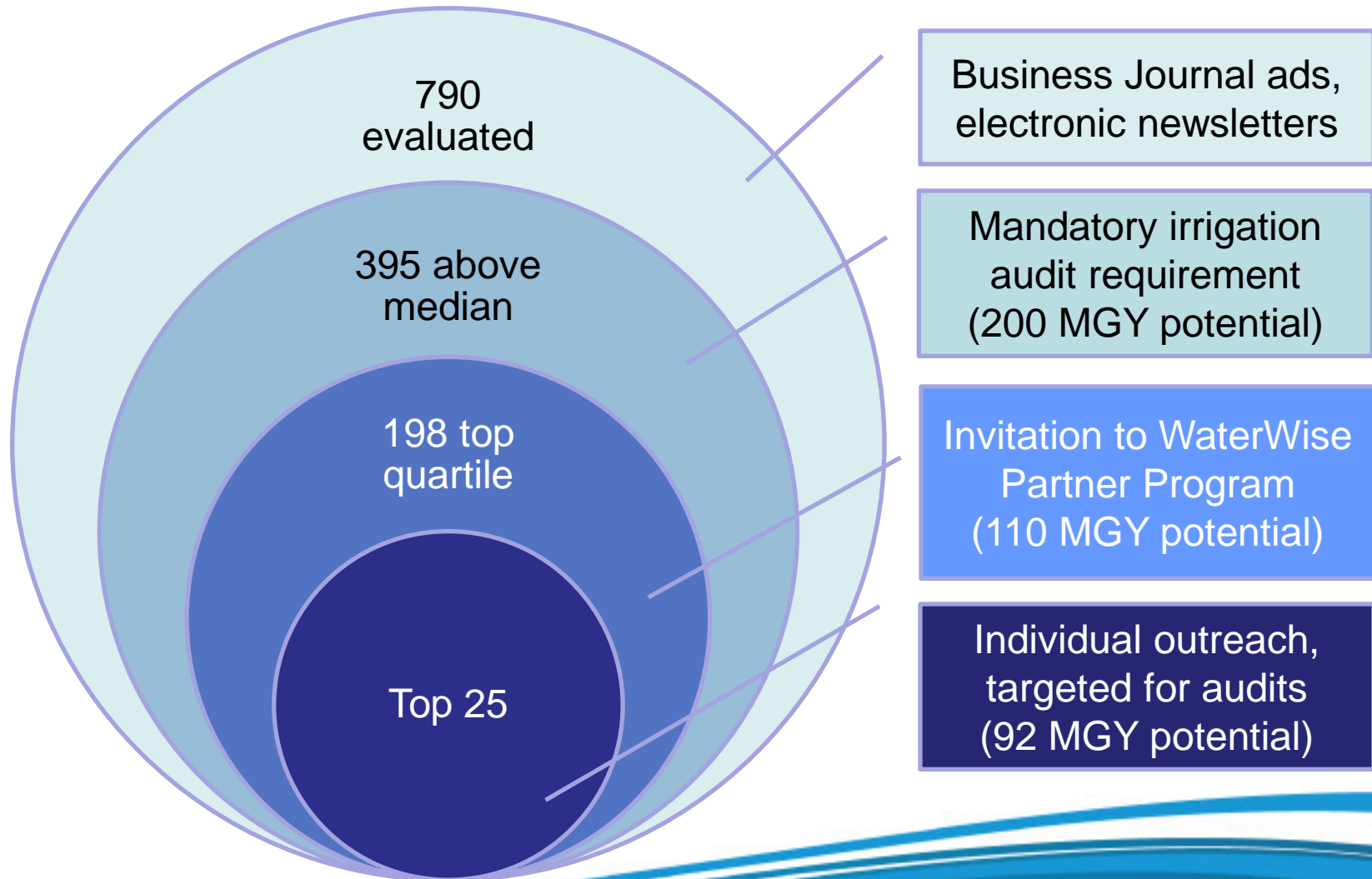# Hotels with Irrigation Meters in Austin - FY 2011

Austin WATER — Clearly Reliable

Thousands of Gallons per Year

Irrigation Use ■ Other Use — Total Use

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High Rise Office Building Water Use in Austin

> Six Stories

Example: Office Buildings

790 evaluated — Business Journal ads, electronic newsletters

395 above median — Mandatory irrigation audit requirement (200 MGY potential)

198 top quartile — Invitation to WaterWise Partner Program (110 MGY potential)

Top 25 — Individual outreach, targeted for audits (92 MGY potential)

Summary

- Relies on utility specific data and benchmarks

- Water use above median quickly identifies areas of greatest potential savings

- Sector prioritization, volume and number of accounts above median helps identify most cost effective strategies

- Analysis helps identify needed database and reporting improvements

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