

# RI Green Hospitality Workshop

## Water Conservation Case Studies February 24, 2010

Steve Mecca  
President, EcoWise Systems  
[steve@ecowisesystems.com](mailto:steve@ecowisesystems.com)  
(401) 560-0050



# Restaurant Water and Cost Saving Case Studies: National Casual Dining Chain RI & MA locations

- Hours of operation: 11am – 11pm
- RI location: 616 avg customers per day
- MA location: 760 avg customers per day

## Water efficiency improvements: fixtures

- All faucets: upgrade faucet aerators and unrestricted faucets with high efficiency aerators
- Pre-rinse spray valves: replace with ultra high efficiency model
- Toilets: Install water-saving flush handles on compatible toilets
- Urinals: Install EcoDisc™ green cleaning, water saving product for urinals

## Water efficiency improvements: behaviors & habits

- Reinforce current efficient water use practices:
  - *No hose use in kitchen (no hose at all is best)*
  - *Full racks when using dish machine*
  - *Pull thaw frozen food, limit power thawing*
  - *Confirm correct irrigation controller settings and rain sensor present and active*
- Introduce new efficient water use practices:
  - *Alternative back dock cleaning product: EcoClean MP*
  - *Proper floor washing procedure*
  - *Fix those leaks!!*
  - *Pre-portion ice cream*

# RI Restaurant

- Annual water/sewer costs pre-retrofit: \$13,820
- Annual water/sewer costs post-retrofit (projected based on 9 months data): \$10,919
- Gallons of water saved: 271,440
- Annual savings: \$2,901
- Retrofit cost: \$1,066
- Payback: 4.4 months
- ROI: 172%
- Additional savings:
  - *\$110 annually in cost avoidance from periodic increase in water/sewer rates*
  - *Estimated \$1,333 in water heating costs*

# MA Restaurant

- Annual water/sewer costs pre-retrofit: \$37,920
- Annual water/sewer costs post-retrofit (projected based on 9 months data): \$29,399
- Gallons of water saved: 503,280
- Annual savings: \$8,521
- Retrofit cost: \$1,029
- Payback: 1.5 months
- ROI: 728%
- Additional savings:
  - Estimated \$4,000 - \$8,000 annually from inaccurate water meter discovered from water audit findings
  - \$380 annually in cost avoidance from periodic increase in water/sewer rates
  - Estimated \$1,491 annually in water heating costs

# MA Condominium complex Water and Cost Saving Case Study

- 79 of 112 units chose showerhead and bathroom faucet aerator upgrade
- 135 showerheads, 225 bathroom faucet aerators upgraded
- Estimated gallons of water saved: 633,000\*
- Estimated annual water/sewer savings:  
\$7,454 (\$6,203 + \$1,431 in cost avoidance from water/sewer rate increase)
- Estimated annual water heating cost savings: \$3,355
- Retrofit cost: \$12,581
- Payback: 14 months
- Additional savings:
  - Estimated \$1,000 – 2,000 annually from sub-metered irrigation not deducted from sewer charges (discovered from water audit and project savings analysis)

\* Actual year 1 water saved:

223,652 gallons. Building exterior one year maintenance project's power washing skewed results

# RI Hotel

## Water and Cost Saving Sample Case Study

- 80 rooms, 78 guests per day
- 80 showerheads, 86 bathroom faucet aerators
- Estimated gallons of water saved: 394,737
- Estimated annual water/sewer savings: \$3,158
- Estimated annual water heating cost savings: \$4,889
- Estimated retrofit cost: \$7,488
- Payback: 11.2 months



# A dollar saved from cost-cutting is easier than a dollar earned from new sales!

- \$1 expense savings = \$5 - \$10 sales revenue
- And generating new sales costs advertising \$\$ every year!
- Example:  
Annual \$10,000 reduction in water related operating costs = increase sales by at least \$40,000 (because net profit is \$10,000)

# Any downside?

- Nope!
- Average water audit costs \$250 - \$750
- Typical restaurant water efficiency upgrade = 2.0 hours
- Hotel water efficiency upgrade (showerheads and faucet aerators) done without guest room down time

Thank you for attending



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