

Green Hospitality & Tourism Workshop

February 5, 2009

Water Conservation Measures

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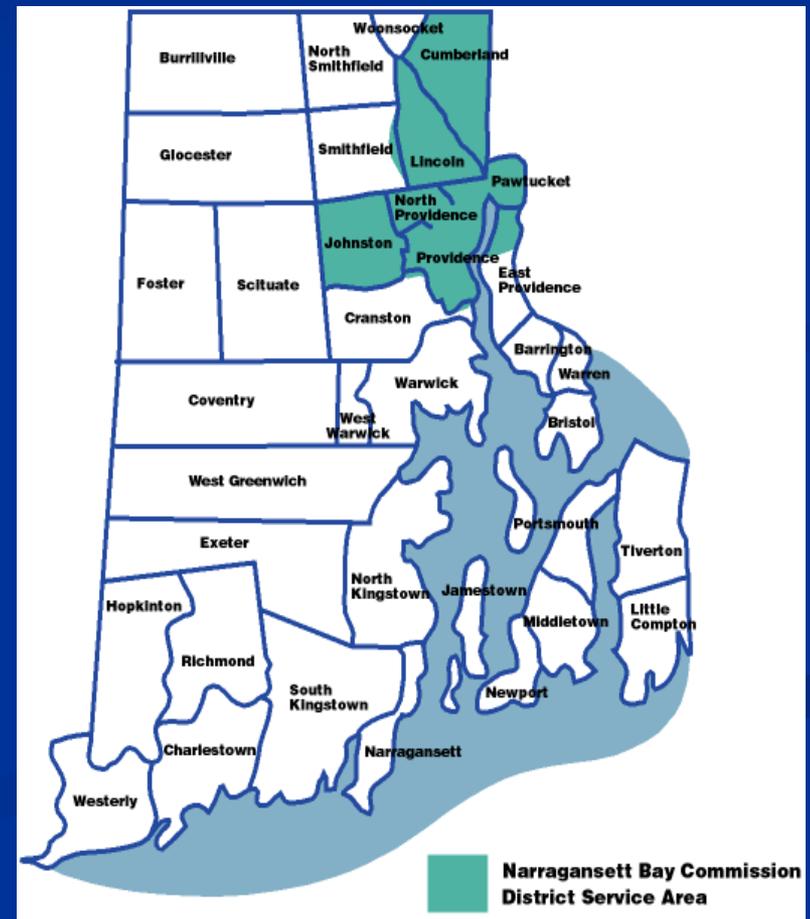
Jim McCaughey

The Narragansett Bay Commission



The Narragansett Bay Commission Service District Area

- 10 Cities/Towns
- 360,000 People
- 8,000 Businesses
- Sanitary Wastewater
- Industrial Wastewater
- Stormwater Runoff



The Narragansett Bay Commission - NBC



Field's Point - 42 MGD

- 8 % Industrial Flow
- 720 Permitted Users
- 108 SIUs



Bucklin Point - 22 MGD

- 11 % Industrial Flow
- 415 Permitted Users
- 59 SIUs

Other WWTFs in RI

Bristol

Burrillville

Cranston

East Greenwich

East Providence

Jamestown

Scarborough

New Shoreham



Newport

Quonset Point

Smithfield

South Kingstown

Warren

Warwick

West Warwick

Westerly

Woonsocket



Cost of Water Use

- Incoming Water Use Fees - billed by Local Water Authority
- Outgoing Wastewater Discharge Fee – billed by Local Sewer Authority
 - NBC commercial customer bills consist of Fixed Annual Fees plus Consumption Fees
 - Fixed Annual Sewer Use Fee is based on the *size of water meter:* Ranging from 5/8” to 10”
 - Consumption Fees are based on incoming meter readings
- Energy Use Fee to Heating Water – billed by Energy Company (Gas, Electric, Fuel Oil)

Ways to Conserve Water & Save Money

- Install low-flow faucets, toilets, & showerheads
- Check equipment & pipes for leaks
- Educate staff and guests on water conservation measures
- Check your meter for unusual activity during “down hours”



Water Conservation Measures

■ General Measures

- Encourage a limited amount of towels/person/day.
- Investigate water softener options - softer water combines faster with soaps and promotes shorter showers and quicker hand washing
- Give out water on-request when/if possible
- Measure and track water usage

■ Kitchen

- Invest on water efficient dishwashers .49 – 1 gallons/rack
- Use low flow spray rinses 1.2 – 1.4 gpm
- Low flow aerators .5 – 2.0 gpm

Water Conservation Measures

■ Pools

- Wash pool filters by hand - a backwash uses from 250 to 1,000 gallons of water and doesn't do as good a job
- Turn the temperature down on your pool – heated water evaporates quickly
- Monitor the use of waterfalls and fountains - aerated water evaporates quickly and can be lost to wind drift
- Maintain the proper pH level of the water - properly treated water means less frequent full scale cleanings
- Repair pool leaks as soon as possible
- Keep the water level on the low side to reduce water lost to splashing or overflow

Water Conservation Measures

■ Lawns

- Let grass grow longer – cutting short encourages growth
- Adjust lawnmower height
- Aerate/spike lawns early in season to promote deep root growth
- Properly fertilize lawns
- Leave cuttings on lawn – reduces moisture loss
- Capture & reuse rainwater with industrial-sized cisterns

■ Plants

- Choose drought-resistant bedding plants – African or French marigolds, petunias, and geraniums
- Create shade with ground cover, trellises and/or hedges

Hotel Water Consumption Seattle Study 1999

■ Findings

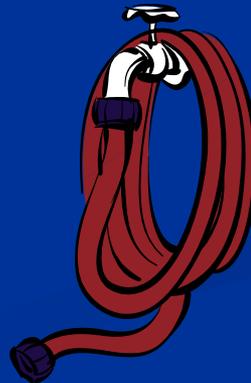
- Installation of faucet aerators
- Replacement of showerheads with low flow models
- Retrofit or replacement of non water conserving toilets/urinals
- Elimination of once-through cooling
- Laundry water recycle
- Dishwasher upgrades
- Repair of leaks
- Education of staff and guests

■ Potential Savings

- 10 – 20%

NBC's Water Audit Program

- Free, on-site, non-regulatory, & voluntary service for commercial & industrial users
- Receive an accurate profile of your business's water consumption and get recommendations that may reduce your water use fees, sewer use fees, and energy costs



Questions?



NBC Environmental, Safety & Technical Assistance
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