

# Windsor Efficiency PAYS<sup>®</sup>

## On-Bill Financing Pilot Program

Sam Salmon  
Councilmember  
Town of Windsor

LGC Ahwahnee Conference  
Yosemite, California  
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# Windsor Efficiency PAYS<sup>®</sup>

## Background



- Sonoma County Regional Climate Protection Authority (RCPA) partnership with Town of Windsor
- US Department of Energy Better Buildings Program Grant (ARRA Funds)
- Develop a surcharge on-water-bill pilot for residential water and energy efficiency retrofits



## RCPA Funding to Provide:

- Program concept paper, program design and training
- Initial contractor certification, and some funding for quality assurance
- Request for Proposals to obtain a Certification Agent, Capital, and bulk purchased measures
- Necessary forms, contracts, and worksheets tailored to each utility
- General marketing about this new way to purchase resource-efficient products
- Grant applications for funding to upgraded billing systems and establish a guarantee fund

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## Background



### Windsor to Provide:

- Staff available for meetings and to provide data during the concept paper and design phases
- Billing and collection for a TOWB pilot starting by July 2012
- Guaranteed payment to the capital provider regardless of customer collections
- Maintain customer service responsibilities if the utility terminates the pilot (to keep commitments to customers who purchased products during the pilot)
- Sufficient cost-effective measures to justify a pilot (e.g., if required, providing a portion of certification costs, rebates, or a comprehensive, resource-blind program)

Reduce energy use. Save money. Create jobs.



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## Background



2008 Sonoma County Community Climate Action Plan identified on-bill financing as key to overcoming barriers to community water efficiency

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## Background



- Financing tools applied where best suited can overcome barriers and maximize uptake of demand reduction measures
- This will enable maximum GHG emission reduction most quickly at the lowest cost
- Tariffed (utility-based) on-bill efficiency purchases identified for local water utilities based on PAYS<sup>®</sup>

# Why Pay As You Save<sup>®</sup>?

- Least expensive way to meet goals
- Reaches all types of customers
- Reduces need for rebates
- Can deliver a variety of measures

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## Target Market & Goals



- A unique resource efficiency program to reach 2,000 Windsor residential customers
- Help meet per-capita water use reduction targets by the year 2020
- Help meet goal to reduce greenhouse gas emissions 25% below 1990 levels by the year 2015
- Provide ratepayers a cost effective way to reduce water and reclamation bills

Reduce energy use. Save money. Create jobs.







**WINDSOR**  
**EFFICIENCY PAYS<sup>®</sup>**

# What is Windsor Efficiency PAYS<sup>®</sup>?

# Based on Pay As You Save®



- Concept originated in 1999 by the Energy Efficiency Institute, Inc. (Colchester, Vermont)
- A market-based system where customers, vendors, and capital providers, acting in their own interests, produce unprecedented resource efficiency investment that is also in society's interest

# Windsor Efficiency PAYS®



- Residential water and energy efficiency measures with no up-front payment and no debt
- Customers pay only for as long as they save
- Estimated savings exceed bi-monthly payments
- Payment over time until measures are paid off, occupancy ends, or measure fails

# How PAYS<sup>®</sup> works

- Contractor markets products and services
- Customer selects (qualifying) measure(s)
- Customer pays nothing to contractor
- Customer pays tariffed charge on utility bill:
  - Estimated savings greater than payments
  - Measures certified for immediate net savings
  - DNP for non-pay just like any other utility tariff
  - Customers pay only as long as they save
- Charges “run with the meter” — when customer leaves, next customer at the location pays
- Not a consumer loan; no new debt obligation

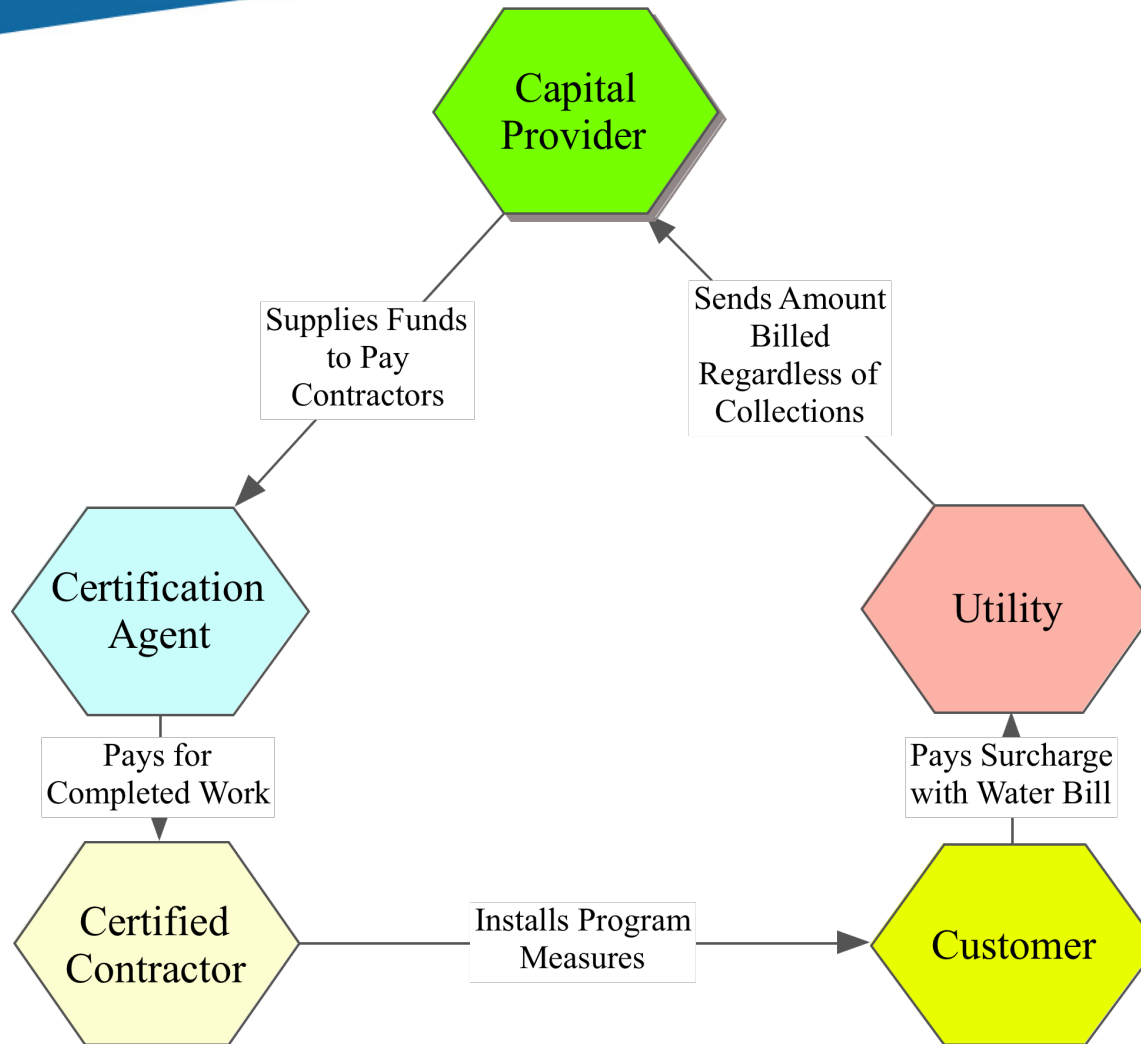
# PAYS<sup>®</sup> installations

- **Windsor, CA:** Toilets & showerheads, drought-tolerant landscaping, appliances, CFLs
- **Hawaii:** Solar hot water
- **Kansas & Kentucky:** Weatherization and heating systems
- **New Hampshire:** street lighting, indoor lighting, HVAC, CFLs

# PAYS<sup>®</sup> system results

- More customers buy more measures: at least 50% offer acceptance rate
- Customers say “Yes” after having said “No”
- Works for renters and building owners
- Even expensive measures become marketable
- Contractors do marketing
- Primary limiters:
  - Budgets/Capital
  - Contractor capacity

# Windsor Efficiency PAYS<sup>®</sup> Flow Chart



# Windsor Efficiency PAYS<sup>®</sup>



## Measures

- Toilets (0.8 gpf)
- Showerheads (1.25 – 1.5 gpm)
- Faucet aerators (1.0 – 1.5 gpm)
- CFLs (dimmable, non-dimmable)
- Chilipepper (hot water recirculation pump)
- Clothes washers
- Refrigerators
- Drought-tolerant landscaping



# Windsor Efficiency PAYS® Measure Costs



ESTIMATED WINDSOR EFFICIENCY PAYS® COSTS AND SAVINGS	Total Installed Measure Cost <sup>1</sup>	Co-pay	Bi-Monthly Surcharge	Surcharge Duration	Average Bi-Monthly Estimated Savings <sup>2</sup>	Average Bi-Monthly Estimated Net Savings <sup>2</sup>
<i>Basic</i>						
High-efficiency toilet, shower-head, and two (2) aerators	\$334.56	\$0.00	\$7.78	10 years	\$15.90	\$8.12
<i>Basic Plus</i>						
High-efficiency clothes washer	\$768.80	\$0.00	\$16.70	10 years	\$22.05	\$5.35
Compact fluorescent light (ea)	\$5.18	\$0.00	\$0.20	5 years	\$1.71	\$1.51
Drought-resistant landscaping <sup>3</sup> (assumes 1,000 square feet)	\$2,650.00	\$0.00	\$37.26	15 years <sup>2</sup>	\$49.66	\$12.40
<i>Co-Pay<sup>3</sup></i>						
Hot water-recirculation pump	\$160.00	\$75.00	\$3.36	5 years	\$4.72	\$1.36
High-efficiency refrigerator <sup>5</sup>	\$1,301.32	\$845.29	\$18.06	5 years	\$24.10	\$6.04

<sup>1</sup> Reflects known program costs as of July 1, 2012.

<sup>2</sup> PAYS® upgrade measures have been selected to provide an estimated minimum of \$1.00 in savings on your utility (water and energy) bill for every \$0.75 of PAYS® surcharge. Exact savings will vary among participants and is dependent upon the accuracy of self-reporting usage estimates.

<sup>3</sup> Landscaping package offers savings, and so is billed, only during the summer season.

<sup>4</sup> These are two examples of the Co-pay measures to be offered.

<sup>5</sup> Assumes replaced refrigerator uses 875 kWh per year.

# Windsor Efficiency PAYS<sup>®</sup>



## Utility Costs

- New Utility Billing database module and data migration
- PAYS<sup>®</sup> rate study analysis
- Contract negotiation costs
- Marketing
- Other miscellaneous
- Staff time

# Windsor Efficiency PAYS®



## Utility Costs

ESTIMATED COST OF SAVED WATER	
<b>Costs</b>	
<b>Startup</b>	
Hard costs	\$50,688
Soft costs (existing staff)	\$230,763
<b>Subtotal Startup</b>	<b>\$281,451</b>
<b>Operations</b>	
Staff (installation phase)	\$22,152
Landscape rebates	\$80,435
Marketing and Other Expenses	\$13,288
Staff (account maintenance for pmt. duration)	\$11,388
<b>Subtotal Operations:</b>	<b>\$127,262</b>
<b>Total</b>	<b>\$408,713</b>

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## Utility Costs

<b>Water Saved (Acre Feet)</b>	<b>To Date:</b>	<b>To June 30, 2014:</b>
Annually	18.0	27.3
Lifetime (20 years)	360	546
<b>Unit Cost (\$/AF)</b>	<b>\$1,133.80</b>	<b>\$749</b>
<b>Cost per Ratepayer (7,719 residential accounts)</b>		<b>\$52</b>
<b>Notes</b>		
<p>1. Savings above reflect less than two years of activity. Extended operation would reduce unit cost of saved water given that only 30% of program costs are variable. Water efficiency programs typically require 3 to 10 years to achieve full market penetration.</p>		
<p>2. More than half of the costs above are "soft" costs, in that they would have been incurred even without this program.</p>		

# Results to Date



- 424 residential units completed, more are in the scheduling pipeline
- 5.9 million gallons per year estimated savings (18.4 AF/yr)
- 24 K therms / 73 K kilowatts per year
- \$15 average net bi-monthly bill savings

# Measures Installed



- 631 toilets (0.8 gpf)
- 578 showerheads (1.25 – 1.5 gpm)
- 878 faucet aerators (1 – 1.5 gpm)
- 25 Chilipepper recirculation pumps
- 8 clothes washers
- 2 refrigerators
- Turf removal (41,100 ft<sup>2</sup>)

# Program Comparison



631 toilets installed through PAYS®

- October 2012 to February 2014

408 toilets installed through HET rebates

- 44 (FY 08/09)
- 130 (FY 09/10)
- 100 (FY 10/11)
- 112 (FY 11/12)
- 22 (FY 12/13)

## SF Res Example 1

### January bi-monthly billing

- Combined Nov–Dec usage = 14,315 gal
- \$221.22

### March bi-monthly billing

- Combined Jan–Feb usage = 5,875 gal
- \$134.79, with PAYS® surcharge
- \$86.43 reduction



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## SF Res Example 2



- Basic package installed October 2012
- Chilipepper installed January 2013
- Landscaping installed in March 2013

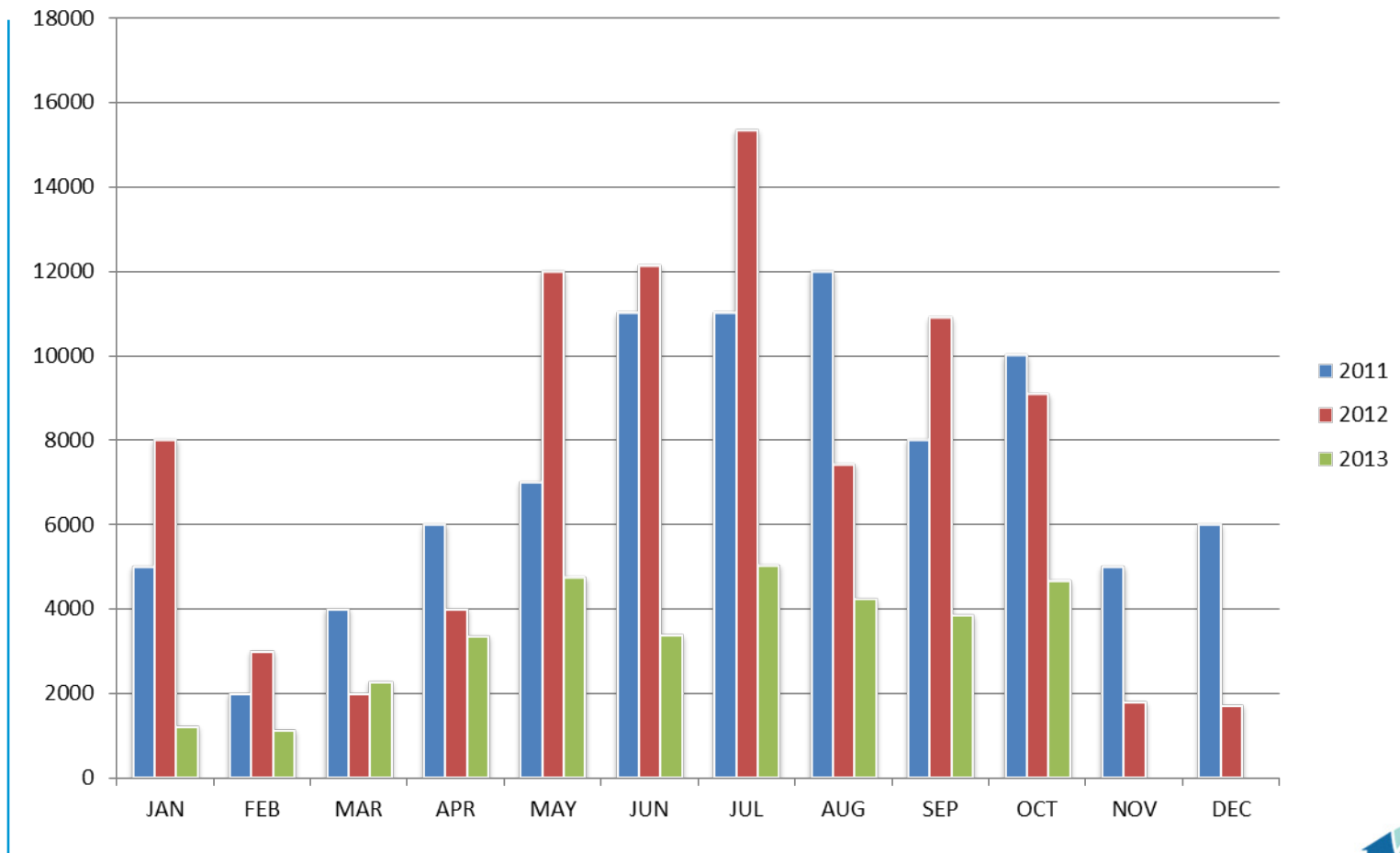
Nov-11	5,000	Nov-12	1,792
Dec-11	6,000	Dec-12	1,721
Jan-12	8,000	Jan-13	1,220
Feb-12	3,000	Feb-13	1,136
Mar-12	2,000	Mar-13	2,280

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## SF Res Example 2



### Single Family Participant

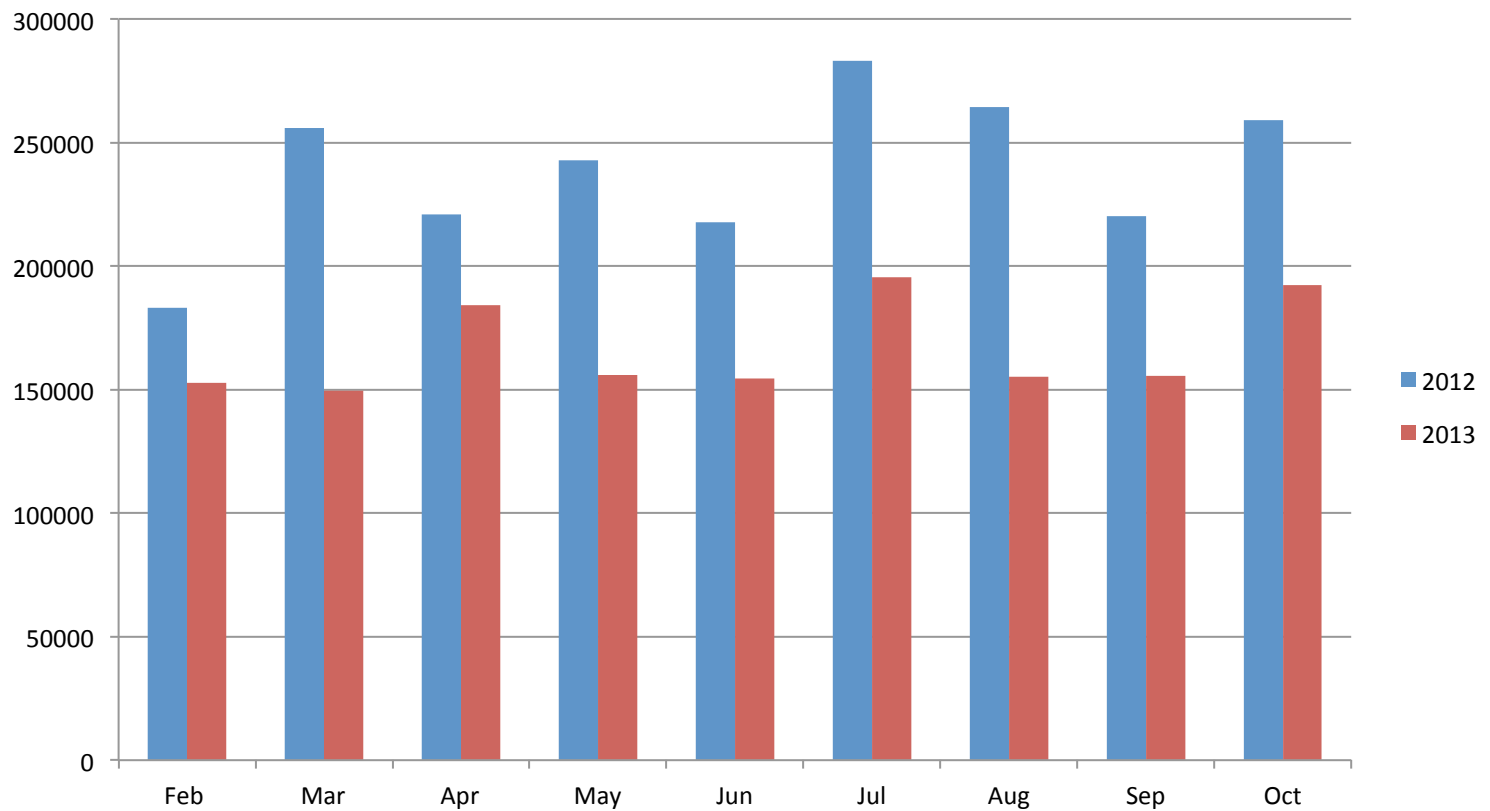


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## Multi-Family



### Multi-Family 1



# PAYS<sup>®</sup> system summary

- Can be a less expensive way to meet goals
- Reaches all types of customers
- Reduces need for rebates
- Can deliver a variety of measures

# More Information

Paul Piazza; Town of Windsor  
(707) 838-5357;  
[ppiazza@townofwindsor.com](mailto:ppiazza@townofwindsor.com)

Lauren Casey; RCPA:  
(707) 565-5379; [lc Casey@SCTAinfo.org](mailto:lc Casey@SCTAinfo.org)

Chris Bradt; Bevilaqua-Knight, Inc.:  
(510) 463-6127; [cbradt@bki.com](mailto:cbradt@bki.com)

[www.WindsorEfficiencyPAYS.com](http://www.WindsorEfficiencyPAYS.com)

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## Rate Changes



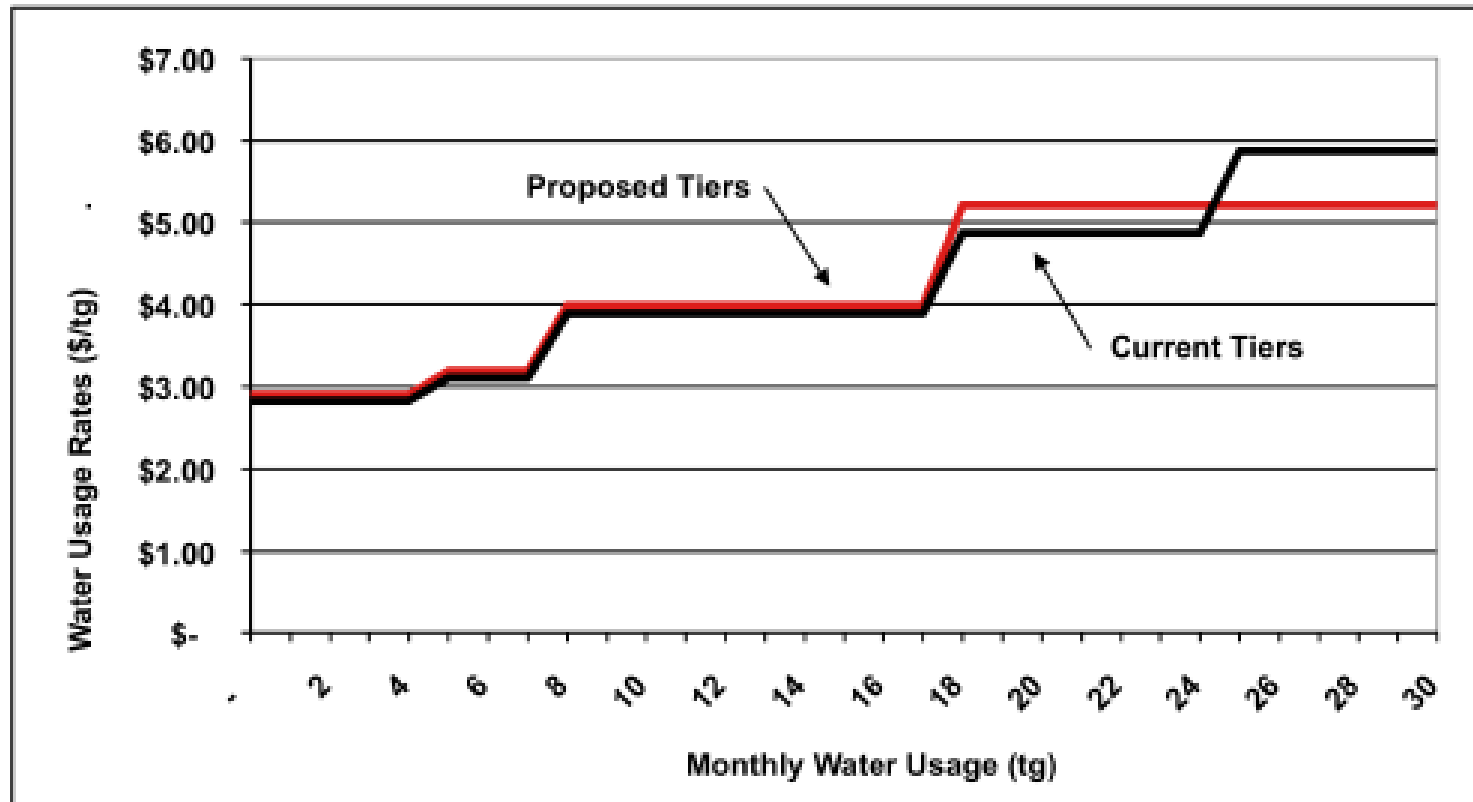
### Water:

- Convert unit of water usage from 1,000-gallon to 1-gallon increments
- Reduce number of residential tiers
  - Increase emphasis on the 3rd and 4th residential tiers
  - Slightly increase emphasis on usage charges relative to service charges

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Town of Windsor  
Current and Proposed Single Family Tier Structures



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## Rate Changes



### Sewer:

- Convert unit of water usage from 1,000-gallon to 1-gallon increments
- Replace residential usage blocks with variable usage charge
- Create fixed service charges for all water reclamation customers



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## Rate Changes

### Single Family Water Reclamation Bills

