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# CSO Program Stakeholder Workgroup: Meeting #5

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Newport City Hall – Council Chambers  
November 10, 2011



# Welcome & Introductions

- City Representatives
  - Julia Forgue – Director of Utilities
- CH2M HILL
  - Mike Domenica – Program Manager
  - Peter von Zweck – Project Manager
  - Becky Weig – Public Involvement
- Stakeholder Workgroup Participants

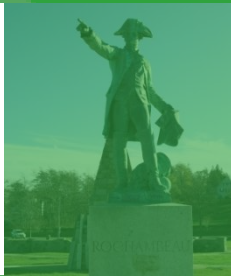
# Agenda

- Overview of the CSO Program Schedule
- Approval of Previous Minutes
- Parking Lot Follow-up Items
- Key Meeting Topic
  - Affordability & Rates
- Future Meetings, Wrap-up & Questions



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# OVERVIEW OF THE STAKEHOLDER WORKGROUP

# Schedule of CSO Stakeholder Workgroup Meetings

	2011												2012											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Meeting #1 - Overview		●																						
CSO System Tours			●																					
Meeting #2 - Metering & Extraneous Flow Investigations				●																				
Meeting #3 - GIS, CMOM & WPCP							●																	
Meeting #4 - Harbor Water Quality								●																
Meeting #5 - Financing & Rates										●														
Meeting #6 - Decision Science Process										●				●										
Meeting #7 - Draft Collection System Capacity Assessment & SMP																	●							
Meeting #8 - Updated SMP																				●				
SMP - Final to EPA																							▲	

- Schedule developed to meet 2 key objectives:
  - Develop a collective understanding of the CSO Program (Meeting #s 1 – 5 & CSO System Tours)
  - Allow sufficient time for discussion and inclusion of Workgroup comments into the SMP (Meeting #s 6-8)

# CSO Program Stakeholder Workgroup Mission Statement

- To review proposed plans and projects for the CSO Program and ***provide recommendations*** to the City about the potential benefits and impacts of proposed plans and projects to all users of the system.
- To share CSO Program plans and project information with each stakeholder's organization to aid the City in its efforts to communicate CSO Program information.
- To support the CSO Program's public education efforts through participation in CSO Program public education activities.

# Purpose of the Stakeholder Workgroup

## Boundary Conditions – limits of the Workgroup’s activities

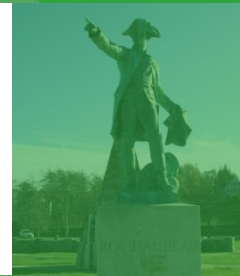
- The Workgroup may:
  - Ask questions about Program approach
  - Provide their perspective on Program approach & decision making
  - Review Program plans and projects & make recommendations
  - Disseminate Program information to their organizations
  - Propose Workgroup agenda topics
- The Workgroup may not:
  - Set City policies
  - Commit City funds





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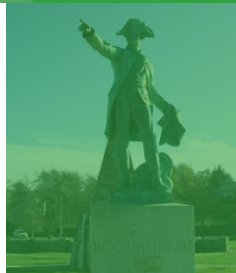
# PREVIOUS MEETING'S MINUTES





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# PARKING LOT FOLLOW-UP ITEMS

# Parking Lot Question #1

- Provide examples of size & footprint for different storage options.
  - Washington St. CSO Treatment Facility Storage
    - 1,000,000 gallons
    - 120 x 85 feet
  - Narragansett Avenue Relief and Detention Sewer
    - 550,000 gallons
    - 1,900-foot long, 84-inch storage pipe

# Washington St. CSO Treatment Facility Storage Location



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# Washington St. CSO Storage Facility



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# Bangor, Maine

- Davis Brook Storage Facility
  - 1,200,000 gallons
  - 2,400 X 8 X 9 feet
  - \$1.3 million (1998)
- Kenduskeag East Storage Facility
  - 1,200,000 gallons
  - 360 x 50 feet
  - \$2.4 million (2000)
- Barkersville Storage Facility
  - 1,400,000 gallons
  - 1,600 x 10 X 12 feet
  - \$2.0 million (2002)





# Parking Lot Question #2

- Update table to show the number of days sampled within 2 days of a CSO event.

Year	Total Days Sampled	# Samples within 2 Days of CSO	Total Days Exceeding Enterococci+	CSO Occurred Within 2 Days	Rain Event, but No CSO	No Rainfall on or Day Before
2008*	13	2 (33% of CSO events)	2	1	0	1
2009	53	10 (38% of CSO events)	4	1	1	2
2010	52	8 (42% of CSO events)	5	2	2	1
2011*	30	2 (25% of CSO events)	2	0	2	0

\*2008 & 2011 are partial years.

+ Enterococci was not exceeded at all 10 locations. For 7 of 13 days, Enterococci was exceeded at only 1 station.



# Parking Lot Question #2

- 2 CSO events are sampled per outfall each year
  - 2 at Wellington
  - 2 at Washington
- Samples are collected at stations nearest the outfalls

Year	Samples During CSO Event	Enterococci Exceedances	Samples 6 Hr. After CSO Event	Enterococci Exceedances	Months Sampled
2009	4	3	4	0	July & October
2010	4	1	4	0	March, April & November
2011	4	4	4	3	August & September

# Parking Lot Question #3

- Can the finance and debt table presented in March 2010 be updated?

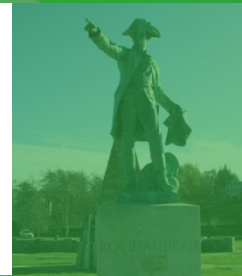
Financed Project	Principal	Interest	Total
2002 - \$13MM Revenue Bonds	\$ 8,160,509	\$ 967,710	\$ 9,128,219
2009 - Long Wharf Force Main Repair	\$ 14,852,481	\$ 6,015,954	\$ 20,868,435
2009 - Railroad Interceptor & UV System	\$ 2,729,266	\$ 950,965	\$ 3,680,231
2009 - Catch Basin Separation & High Priority Sewer Repairs	\$ 2,430,027	\$ 846,702	\$ 3,276,729
2010 – Thames & Wellington Interceptors	\$ 7,549,024	\$ 2,944,397	\$ 10,493,421
<b>TOTAL</b>	<b>\$ 35,721,307</b>	<b>\$ 11,725,728</b>	<b>\$ 47,447,035</b>

\* Data current as of September 30, 2011.



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# KEY MEETING TOPICS

AFFORDABILITY & RATES

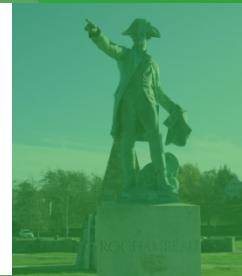
# Topics to Cover

- Introduction & Previous Work
- Updated Affordability Analysis
- Rate Impacts/Structure
- Designing an Affordable Program



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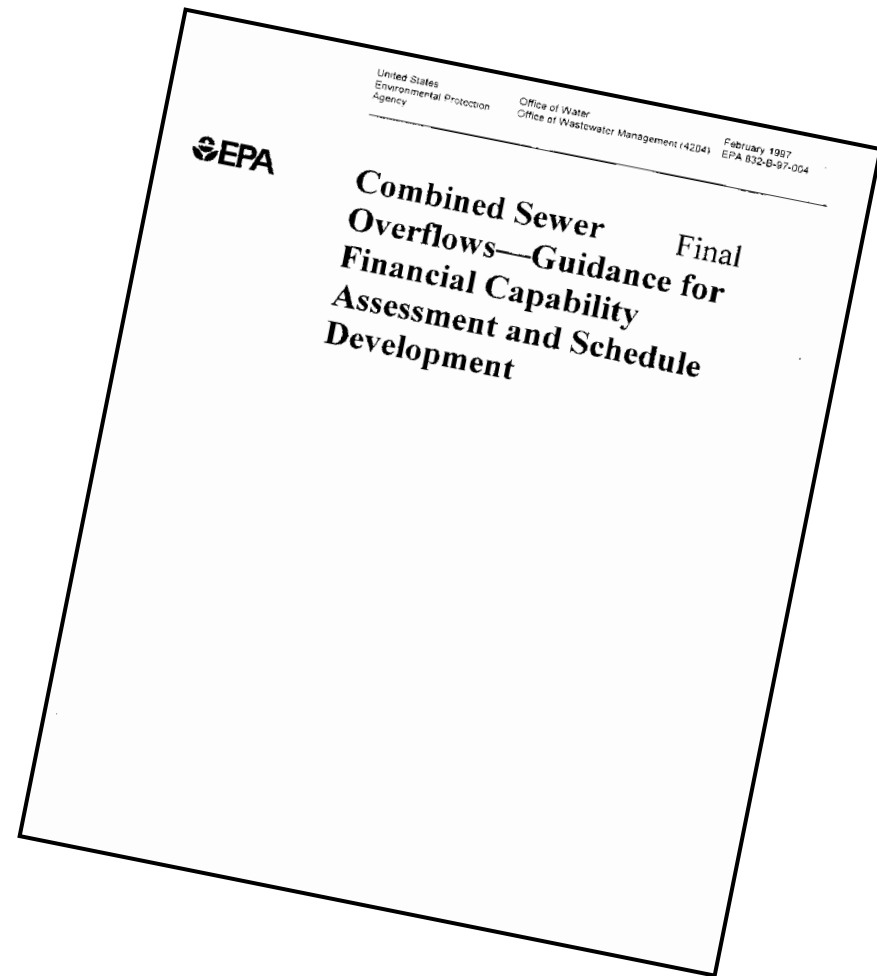
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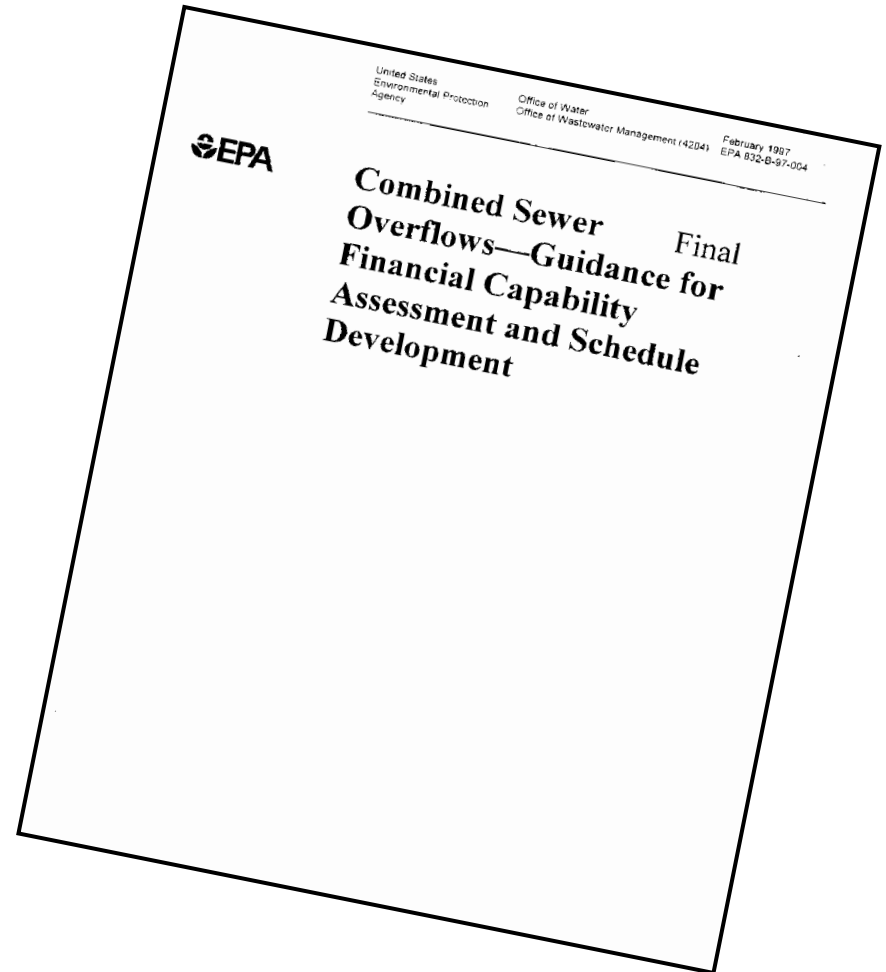
# INTRODUCTION TO AFFORDABILITY

# Why Affordability & Why Now?

- Set budget before shopping.....
  - Set budget of what the City can “afford”
  - Design program implementation elements & schedule within affordable budget
- EPA **guidance** documents frame the consideration of affordability
- City must build its own case



- Elements of the affordability analysis?
  - Wastewater costs per household (all Clean Water Act requirements – capital and O&M)
  - Capital cost amortization period
  - Borrowing interest rate & inflation rate
  - City bond rating
  - Net debt as a percent of full market property value
  - Unemployment rate
  - Median household income
  - Property tax revenue collection rate
  - Outside state & federal financial support (historic)





# Limitations to Affordability Analysis

- EPA does take affordability into account
- The EPA guidance has a prescriptive process that excludes some elements that could significantly affect a community's financial capability
  - Revenue-supported debt excluded
  - Some indicators only considered in relation to national averages
- EPA's methodology provides only a "snapshot" in time – does not account for changing economic conditions

# Building a Rates-Based CSO Program

1. Financial Capability Analysis – What is the maximum “affordable” sewer rate (Defined by EPA)
2. Determining what portion of the Water Pollution Control Division budget (determined by “affordable” rate) is available for CSO control
3. Use the results to plan the type and implementation schedule of CSO controls to stay within budget

# “Financial Indicators Score” is Based on Community’s Overall Fiscal Strength

Indicator	Strong	Mid-Range	Weak
Bond Rating	AAA-A (S&P) Aaa-A (Moody's)	BBB (S&P) Baa (Moody's)	BB-D (S&P) Ba-C (Moody's)
Overall Net Debt as a Percent of Full Market Property Value	Below 2%	2% - 5%	Above 5%
Unemployment Rate	More than 1 Percentage Point Below the National Average	$\pm$ Percentage Point of National Average	More than 1 Percentage Point Above the National Average
Median Household Income	More than 25% Above Adjusted National MHI	$\pm$ 25% of Adjusted National MHI	More than 25% Below Adjusted National MHI
Property Tax Revenues as a Percent of Full Property Value	Below 2%	2% - 4%	Above 4%
Property Tax Collection Rate	Above 98%	94% - 98%	Below 94%
EPA Scoring	<b>3</b>	<b>2</b>	<b>1</b>

# The Financial Capability Matrix Identifies What is a “High Burden”

Permittee's Financial Capability Indicators Score	Residential Indicator (Cost Per Household as a Percent of Median Household Income)		
	Low (Below 1 %)	Medium (Between 1% and 2%)	High (Above 2.0%)
Weak( Below 1.5)	Medium Burden	High Burden	High Burden
Mid- Range (Between 1.5 and 2.5)	Low Burden	Medium Burden	High Burden
High (Above 2.5)	Low Burden	Low Burden	Medium Burden

EPA expects communities to pay to the upper limit of medium burden.

# 2009 Evaluation on Affordability

- Most data from 2005-2008
- This evaluation was never commented on by RIDEM

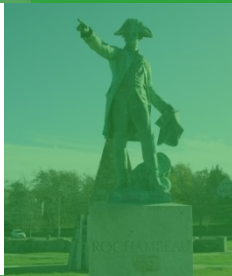
Indicator	Strong	Mid-Range	Weak	Newport Value	Benchmark	Score
Bond Rating	Aaa-A (Moody's) AAA-A (S&P)	Baa (Moody's) BBB (S&P)	Ba-C (Moody's) BB-D (S&P)	Aa3 (Moody's) A+ (S&P)	Strong	3
Net Debt	Below 2%	2% to 5%	Above 5%	0.49%	Strong	3
Unemployment Rate	>1% below National Average	±1% of the National Average	>1% above National Average	3.6% Above	Weak	1
Median Household Income	>25% Above Adjusted National MHI	±25% of Adjusted National MHI	>25% Below Adjusted National MHI	23%	Mid-Range	2
Property Tax Revenues as a % of Full Market Property Value	Below 2%	2% to 4%	Above 4%	0.9%	Strong	3
Property Tax Revenue Collection Rate	Above 98%	94% - 98%	Below 94%	98%	Mid-Range	2
<b>Average</b>						<b>2.33</b>

Concluded that proposed CSO control alternatives for the Wellington catchment area would result in a High Burden – rates > 2.0% of MHI.



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# UPDATED AFFORDABILITY ANALYSIS


# Sources of Data for Updated Affordability Analysis


Financial Indicator	Data Year	Data Source
Bond Rating	2011	Adopted 2011-2012 Budget
Overall Net Debt as a Percent of Full Market Property Value	2011	Adopted 2011-2012 Budget
Unemployment Rate	2011	Adopted 2011-2012 Budget
Median Household Income	2009	2010 US Census
Property Tax Revenues as a Percent of Full Property Value	2011	Adopted 2011-2012 Budget
Property Tax Collection Rate	2010	2010 City of Newport Comprehensive Annual Financial Report



# Updated Financial Indicators Score

Calculation of Newport's Financial Indicators Score

Indicator	Strong	Mid-Range	Weak	Newport Value	Benchmark	Score
Bond Rating	AAA-A (S&P)	BBB (S&P)	BB-D (S&P)	AA - S&P	Strong	3
	Aaa-A (Moody's)	Baa (Moody's)	Ba-C (Moody's)			
Overall Net Debt as a Percent of Full Market Property Value	Below 2%	2% - 5%	Above 5%	0.84%	Strong	3
Unemployment Rate 	More than 1 Percentage Point Below the National Average	1 Percentage point or less above or below the National Average	More than 1 Percentage Point Above the National Average	1% above the National Average (10.1% for Newport vs. 9.1% National Average)	Mid-Range	2
Median Household Income	More than 25% Above Adjusted National MHI	± 25% of Adjusted National MHI	More than 25% Below Adjusted National MHI	1.11	Mid-Range	2
Property Tax Revenues as a Percent of Full Property Value	Below 2%	2% - 4%	Above 4%	1.07%	Strong	3
Property Tax Collection Rate	Above 98%	94% - 98%	Below 94%	97.37%	Mid-Range	2
					<b>MID-RANGE</b>	<b>2.50</b>

 Only indicator to change from 2009 analysis.

# Financial Burden Newport Can Afford per EPA

- Newport is classified as Mid-range financial capability
- A High Burden for Newport would be when a household with median income has to spend more than 2% of annual income on all Water Pollution Control costs

Permittee's Financial Capability Indicators Score	Residential Indicator (Cost Per Household as a Percent of Median Household Income)		
	Low (Below 1 %)	Medium (Between 1% and 2%)	High (Above 2.0%)
Weak( Below 1.5)	Medium Burden	High Burden	High Burden
Mid- Range (Between 1.5 and 2.5)	Low Burden	Medium Burden	High Burden
High (Above 2.5)	Low Burden	Low Burden	Medium Burden

# How Will Affordability Analysis Affect Rates?

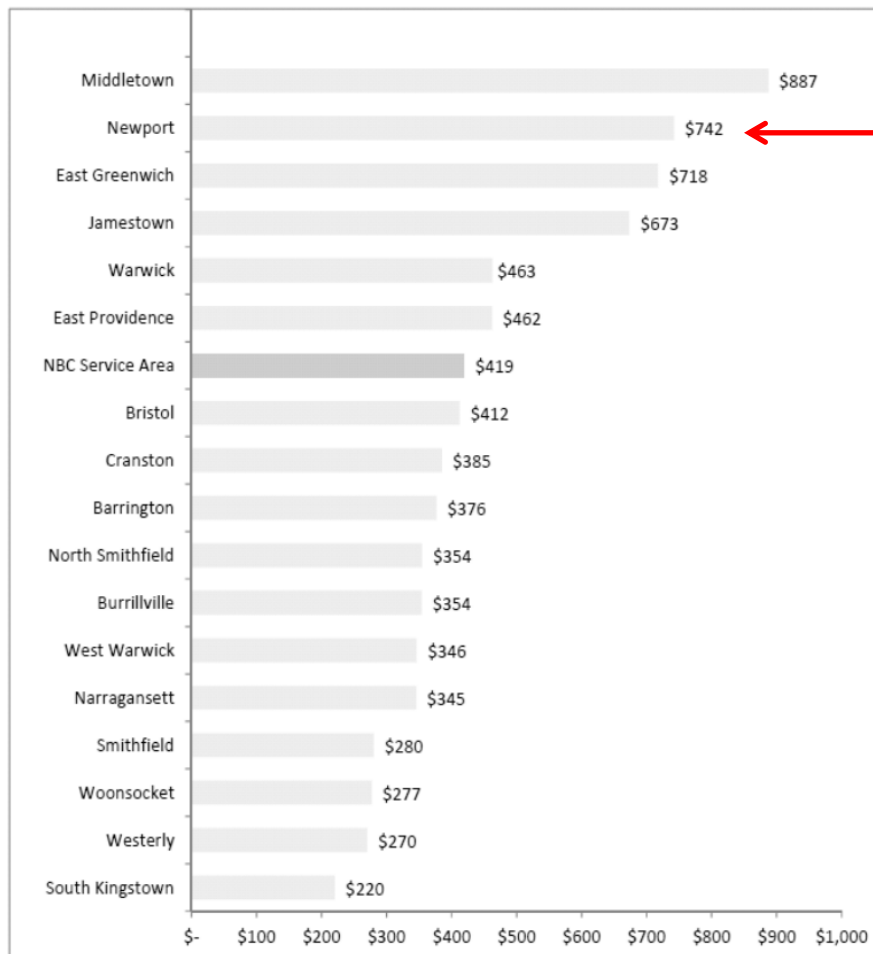
Calculation of Maximum Newport Sewer Bill Based on Affordability Guidance		
Median Household Income (MHI)	\$55,916	
2% of MHI	\$1,118	High burden will be 2% of MHI if <b>Newport is classified as mid-range on Financial Capability.</b>
Current Sewer Bill for Typical Residential Customer*	\$868	Includes \$192 CSO fixed fee plus \$676 annual sewer charge.
Remainder Available Within "Affordability Threshold"	\$250	For all Clean Water Act Programs (including CSO, wastewater treatment, stormwater, asset management, etc.)

\* Based upon FY 2012 charges of \$11.27/1,000 gallons and typical usage of 15,000 gallons per quarter. CSO fixed fee based upon a <1" water meter.  
- Middletown & Navy pay per wholesale contracts.

# Wastewater Rates in RI

## Annual Residential Sewer Charges Rhode Island Cities & Towns

The survey shown below, conducted by the Narragansett Bay Commission (NBC) in 2010, compares the annual residential sewer charges for participating Rhode Island Cities & Towns. The survey shows NBC, with its current fee structure, ranks 12th lowest among participants.



Does not include CSO fixed fee of \$104 for 2010.

- Source: 2010 Narragansett Bay Commission Residential Sewer User Survey
- In this survey all Annual Residential Sewer Charges are based on 97.6 HCF.
- Newport & NBC are the only CSO communities

# Example Program Costs for Other CSO Communities

Community	Population	CSO Program Costs*
South Portland, ME	22,300	\$39,300,000
Newport, RI	24,672	????
Bangor, ME	35,473	\$45,000,000
Fall River, MA	92,000	\$185,000,000
Onondaga County, NY	150,000	\$580,000,000
Narragansett Bay Commission**	360,000	\$858,000,000
Hartford, CT	400,000	\$2,100,000,000

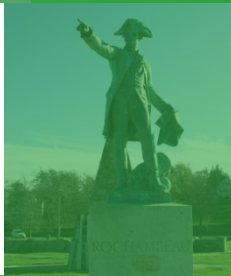
\*CSO Program Costs accounts for amount spent and projected amount necessary to complete CSO program.

\*\*NBC population is the total users in service area. Program cost is the summation of three phases.



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# DESIGNING AN AFFORDABLE PROGRAM

# Sources of Revenue for Water Pollution Control Division



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2011-2012 Budget

City of Newport, Rhode Island

## CITY OF NEWPORT, RHODE ISLAND 2011-2012 WATER POLLUTION CONTROL FUND BUDGET SUMMARY

	2009-10 ACTUAL	2010-11 BUDGET	2010-11 PROJECTED	2011-12 ADOPTED
<b>REVENUES</b>				
45701 Investment Interest Income	\$ 4,026	\$ 4,000	\$ 3,272	\$ 3,000
45854 Sewage Treat. Middletown	977,528	717,038	711,310	711,300
45855 Sewer Assessment Fee	3,860	5,000	10,000	5,000
45856 Sewer Treat., Water Utility	387,413	662,350	595,296	676,200
45857 Sewer Treatment, U.S.N.	601,565	569,495	486,960	615,600
47150 Middletown and Navy share of debt	-	542,207	542,207	327,999
47145 City forgiveness of debt	454,485	-	-	-
45879 Pretreatment Fees	99,620	111,954	109,000	109,000
45892 ICI Reimbursements	101,474	120,011	120,011	120,011
47103 Disposal Permits	232,181	302,071	337,498	286,000
47111 Sewer Use Charge	4,404,902	7,133,000	7,133,000	8,225,000
47115 Miscellaneous	16,301	15,000	6,248	15,000
47120 Sewer - Penalty	26,181	30,000	28,000	28,000
<b>Revenue From Operations</b>	<b>7,309,536</b>	<b>10,212,126</b>	<b>10,082,802</b>	<b>11,122,110</b>
<b>TOTAL UNRESTRICTED REVENUES</b>	<b>7,309,536</b>	<b>10,212,126</b>	<b>10,082,802</b>	<b>11,122,110</b>
<b>RESTRICTED REVENUES AND OTHER SOURCES OF FUNDS</b>				
45862 CSO Fixed Fee	1,100,029	2,074,176	2,074,176	2,077,420
Middletown & Navy Share of CSO Capital				91,100
45863 CSO - Penalty	-	7,500	7,000	7,000
46005 Bond Proceeds	-	12,600,000	9,183,000	-
Grant Proceeds			3,096,000	
Use of CSO Restricted Cash	-	24,116		456,079
46002 Transfer from Other Funds	500,000	1,500,000	1,500,000	-
<b>Total Restricted Revenues and Other Sources of Funds</b>	<b>1,600,029</b>	<b>16,205,792</b>	<b>15,860,176</b>	<b>2,631,599</b>
<b>TOTAL REVENUES &amp; OTHER SOURCES OF FUNDS</b>	<b>\$ 8,909,565</b>	<b>\$ 26,417,918</b>	<b>\$ 25,942,978</b>	<b>\$ 13,753,709</b>



# Categories of Expenditures for Water Pollution Control Division

## CITY OF NEWPORT, RHODE ISLAND 2011-2012 WATER POLLUTION CONTROL FUND BUDGET SUMMARY

EXPENDITURES	2009-10 ACTUAL	2010-11 BUDGET	2010-11 PROJECTED	2011-12 ADOPTED
Salaries	\$ 178,525	\$ 124,902	\$ 126,578	\$ 130,634
Fringe Benefits	89,061	96,999	90,904	99,274
Purchased Services	3,815,977	3,947,919	3,973,764	4,553,068
Utilities	604,144	585,383	642,266	665,000
Internal Services	684,525	732,884	732,884	724,683
Other Charges	8,720	27,500	27,500	25,900
Interest Expense	567,363	1,144,413	1,157,609	1,091,317
Depreciation	2,033,547	2,053,383	2,273,822	2,273,822
<b>Operating Expenditures</b>	<b>7,981,862</b>	<b>8,713,383</b>	<b>9,026,327</b>	<b>9,563,698</b>
<b>OTHER CASH OUTLAYS</b>				
Capital Outlay From Unrestricted Revenues	-	1,917,772	1,772,772	3,425,000
Capital Outlay From CSO Fixed Fees	-	3,094,160	3,094,160	1,900,000
Increase in CSO Restricted Cash			264,917	
Capital Outlay From Revenue Bonds	-	12,600,000	12,279,000	-
Principal Debt Repayment	-	2,075,567	1,549,589	1,138,833
<b>Other Cash Outlays</b>	<b>-</b>	<b>19,687,499</b>	<b>18,960,438</b>	<b>6,463,833</b>
<b>TOTAL EXPENDITURES &amp; CASH OUTLAYS</b>	<b>\$ 7,981,862</b>	<b>\$ 28,400,882</b>	<b>\$ 27,986,765</b>	<b>\$ 16,027,531</b>

# Growing Need to Repair and/or Replace Underground Assets

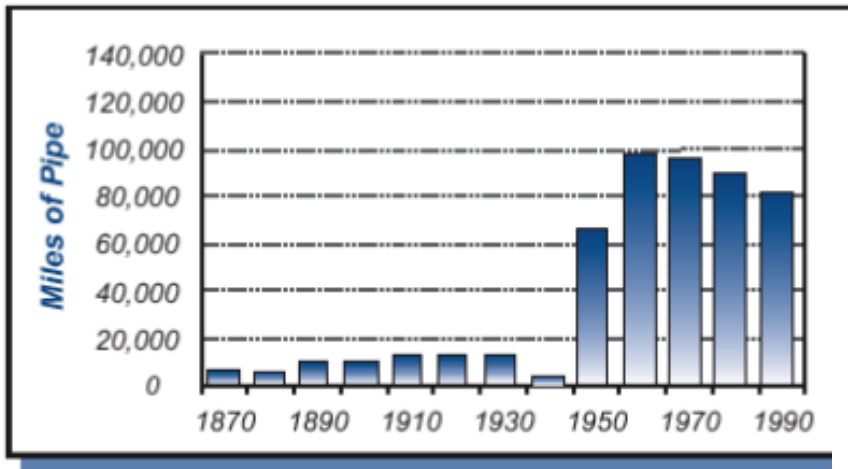


Figure 2-6: Histogram of Miles of Sanitary Sewer Pipe Installed per Decade

Source: The Clean Water and Drinking Water Infrastructure Gap Analysis, EPA, 2002

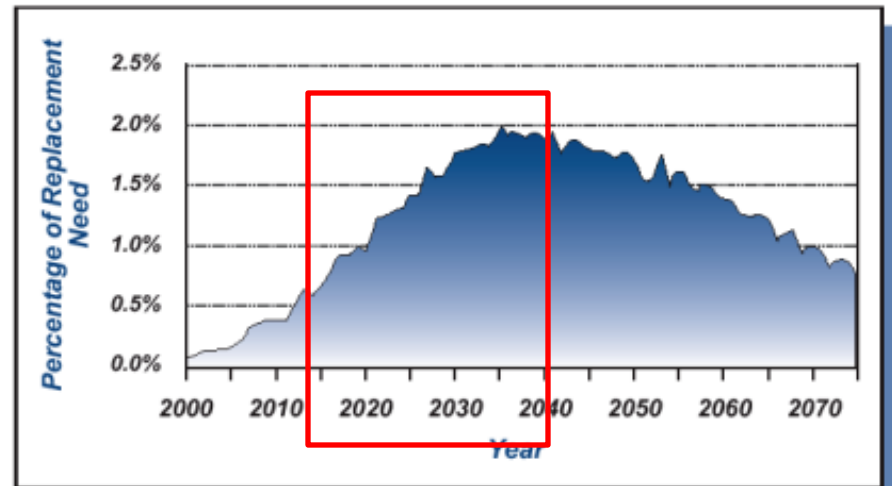
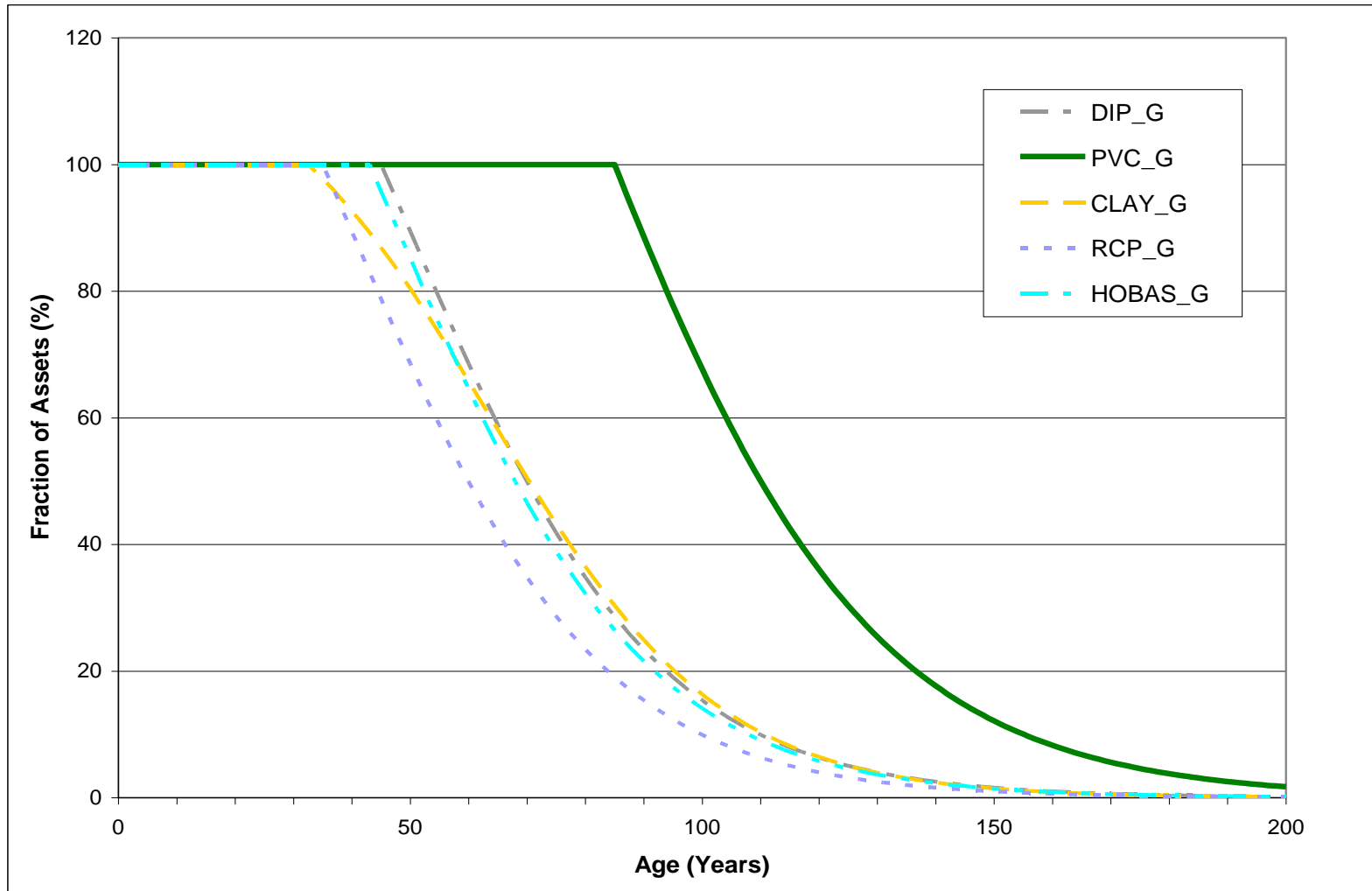


Figure 2-11: Projected Annual Replacement Needs for Transmission Lines and Distribution Mains, 2000-2075

# Wastewater Conduit Deterioration

## Medium Survival Function Curves for Different Material Pipes – Gravity Sewer

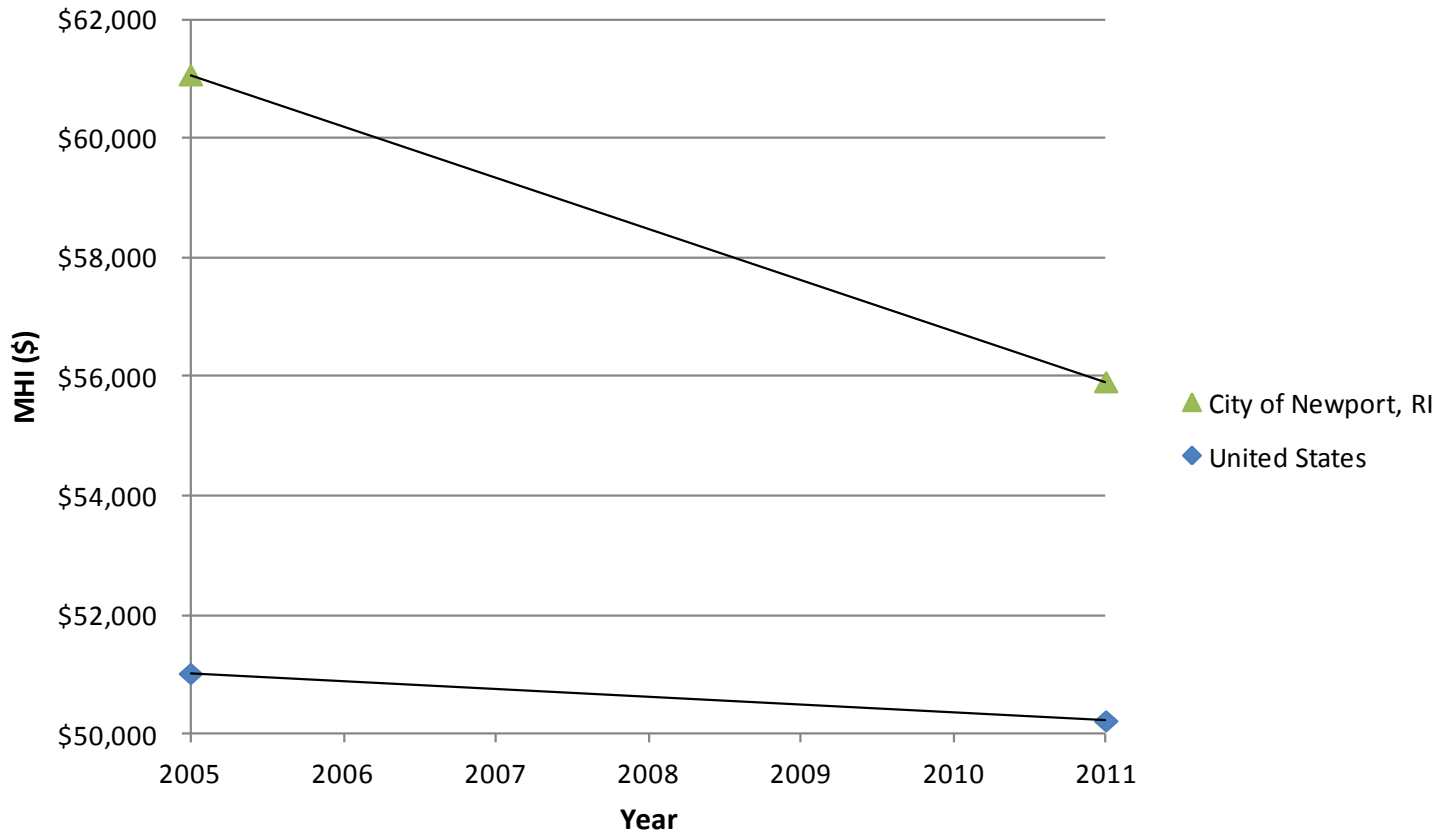


# Historical Trends for Key Indicators

- While EPA analysis provides a “snapshot” in time, recent historical trends for key indicators may be more indicative of Newport’s overall affordability:
  - Median Household Income
  - Unemployment Rate
  - Property Tax Collection Rate

# Median Household Income

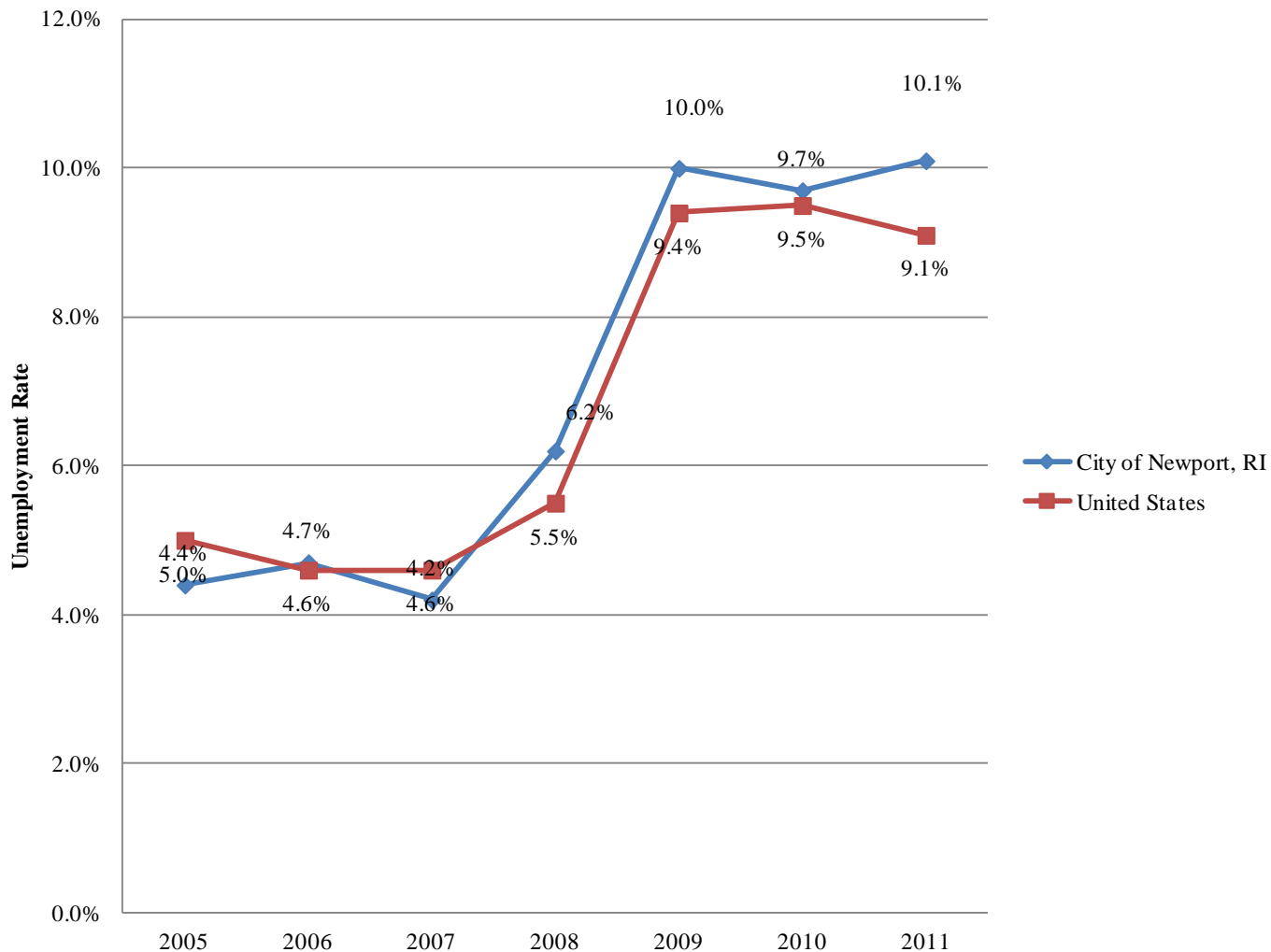
## Newport Median Household Income



Data Source:  
U.S. Census

# Unemployment Rates

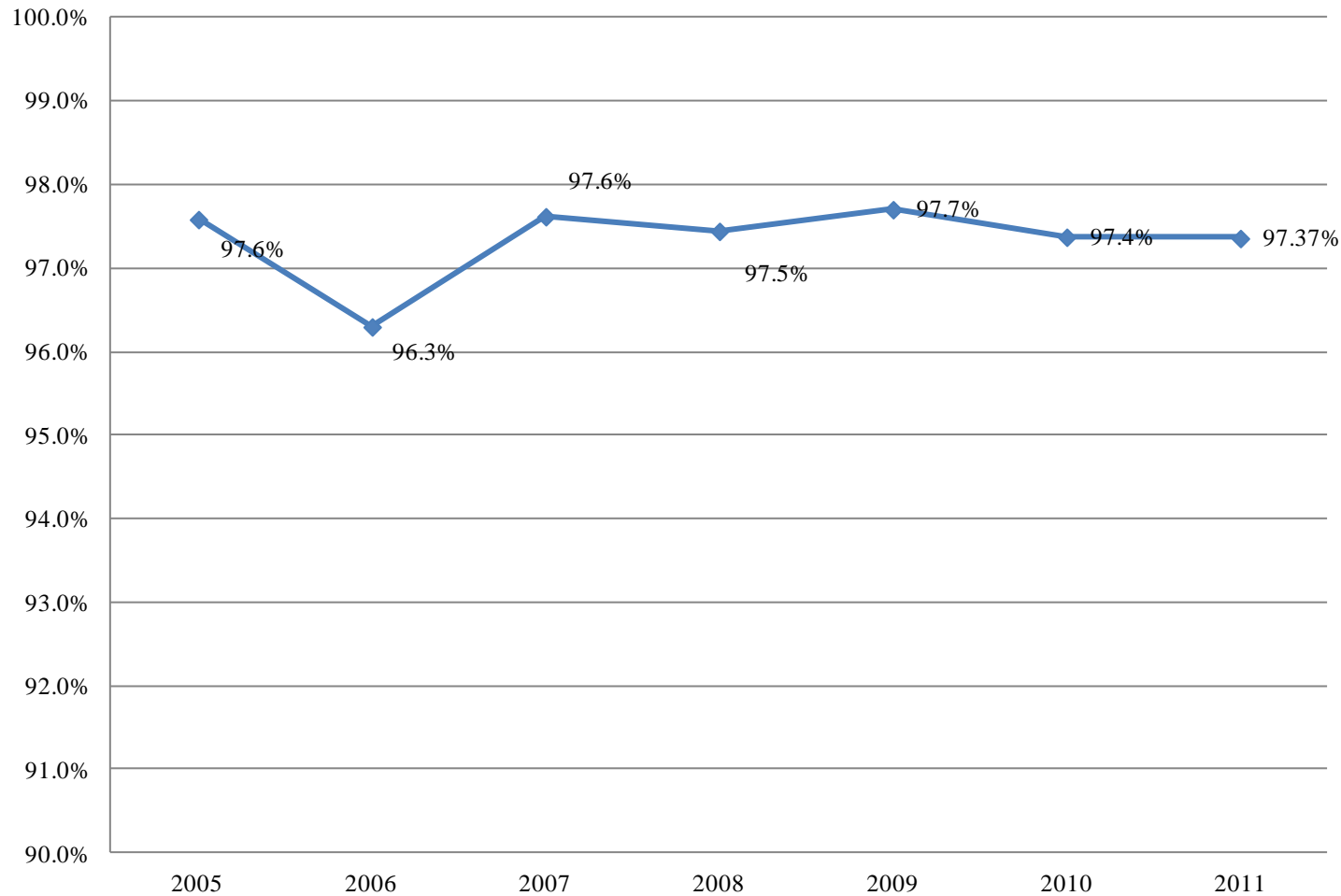
## Newport, RI Unemployment Rate Comparison



Data Source:  
City of Newport  
Adopted Budgets:  
FY 2007 – 2008, Page 5  
FY 2008 – 2009, Page 5  
FY 2009 – 2010, Page 5  
FY 2010 – 2011, Page 5  
FY 2011 – 2012, Page 5

# Property Tax Collection Rate

## Newport, RI Property Tax Collection Rate



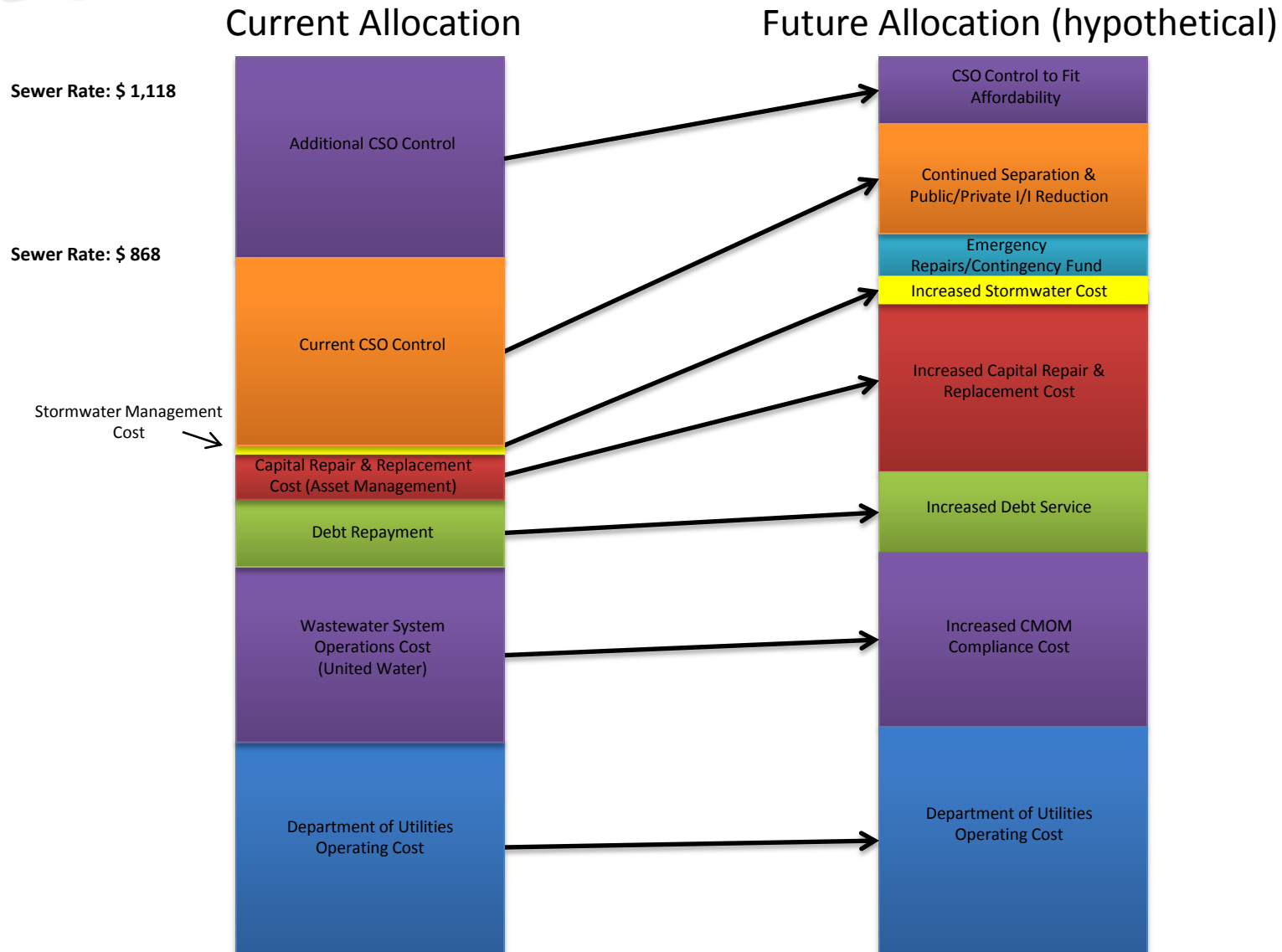
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FY 2007 – 2008, Page 5  
FY 2008 – 2009, Page 5  
FY 2009 – 2010, Page 5  
FY 2010 – 2011, Page 5  
FY 2011 – 2012, Page 5



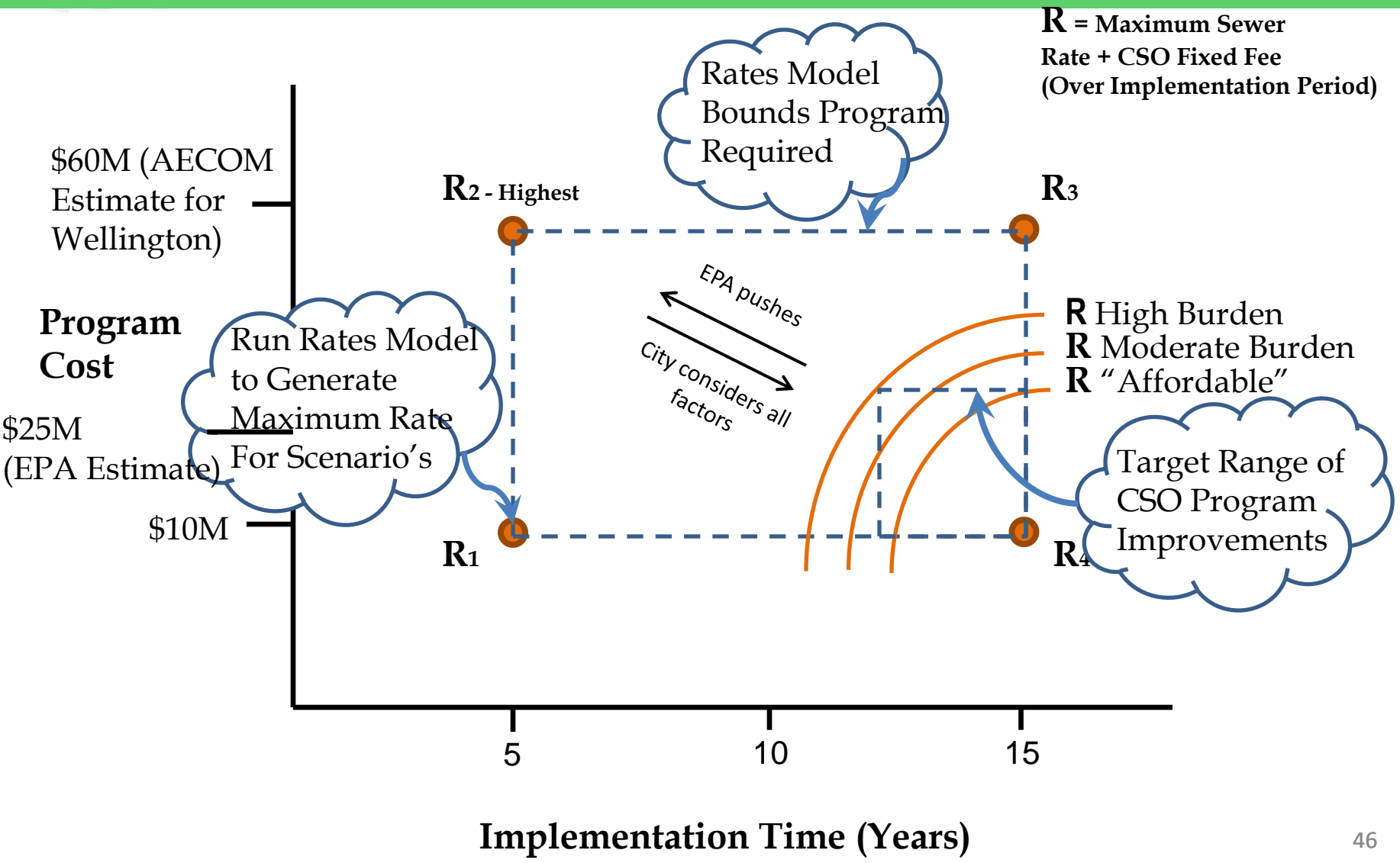
# Other Factors Affecting Affordable Rates

- Forthcoming Stormwater Requirements
- Increased CMOM Requirements
- Emergency Repairs/Contingency Fund
- Stricter RIPDES Discharge Requirements
- Water System Debt
- Affordability at Lower Income Brackets

# How Sewer Rate is Divided Across All Water Pollution Control Division Services



# Defining an Affordable Program



# Affordability - Discussion

## Historical changes in sewer rates:

Fiscal year		2005	2006	2007	2008	2009	2010	2011	2012
Sewer Rate	Per 1,000 gal	\$5.17	\$5.17	\$5.17	\$6.00	\$6.18	\$6.80	\$10.19	\$11.27
CSO Fixed Fee	<1”	\$0.00	\$0.00	\$0.00	\$98.00	\$101.00	\$104	\$190	\$192

- General questions to begin thinking about, we will be asking these and others as we go forward:
  - Is an additional \$250/year in sewer rate charges affordable? acceptable? for how long?
  - What benefits would be expected for the additional sewer rate charge?

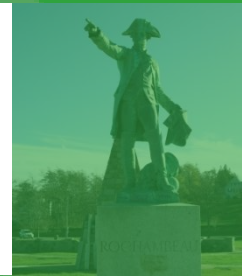
# Next Steps in Rates & Affordability

- During the next several months, more detailed follow-up financial and rate analyses will be conducted to evaluate projected sewer bills for program options
  - CSO program options
  - Scheduling/phasing options
  - Financing options
    - Conduit loans via Clean Water Finance Agency @ market rate
    - State Revolving Fund loans @ subsidized rate – depends upon funds from Federal government and needs of other RI communities
  - More refined projections that take into consideration customer usage, wholesale customer, and other factors



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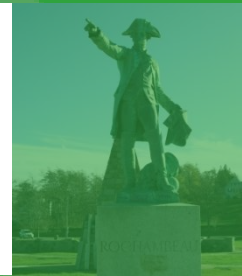


# AFFORDABILITY & RATES- DISCUSSION, COMMENTS & QUESTIONS



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# FUTURE MEETINGS, WRAP- UP & QUESTIONS

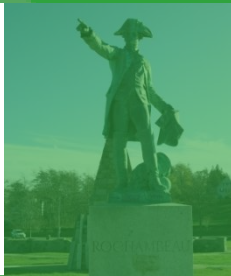


- Next Meeting
  - February 9, 2012
  - 3:00 PM
  - Council Chambers
  - Agenda Topics:
    - Decision Science Process
    - Stakeholders will be broken up into small groups to identify priorities for:
      - Financing & affordability
      - Water quality
      - CSO control alternatives



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QUESTIONS?