Making the Case for More Capital Spending

National Association of Clean Water Agencies
2009 Winter Conference

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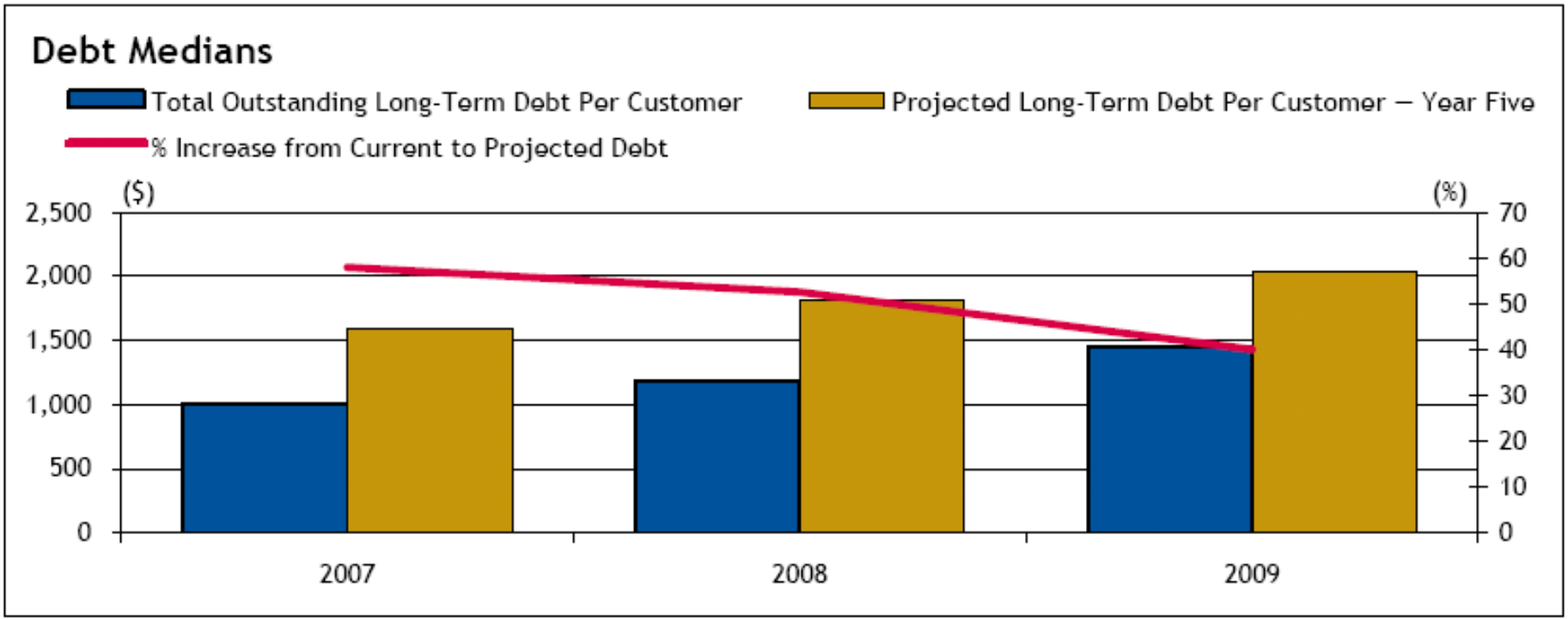
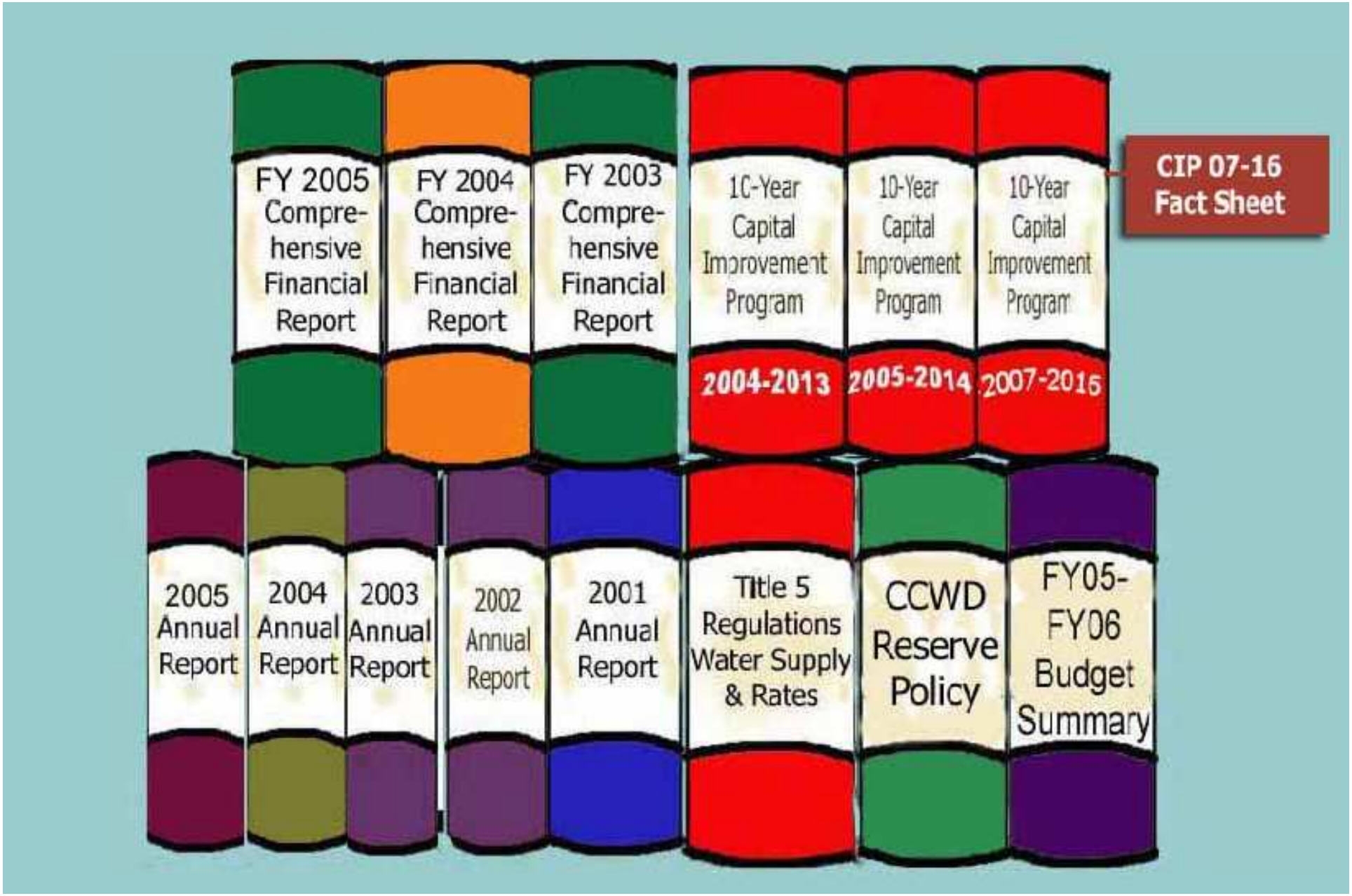
Capital Spending Trends
(Fitch W&S Medians 1/28/09)

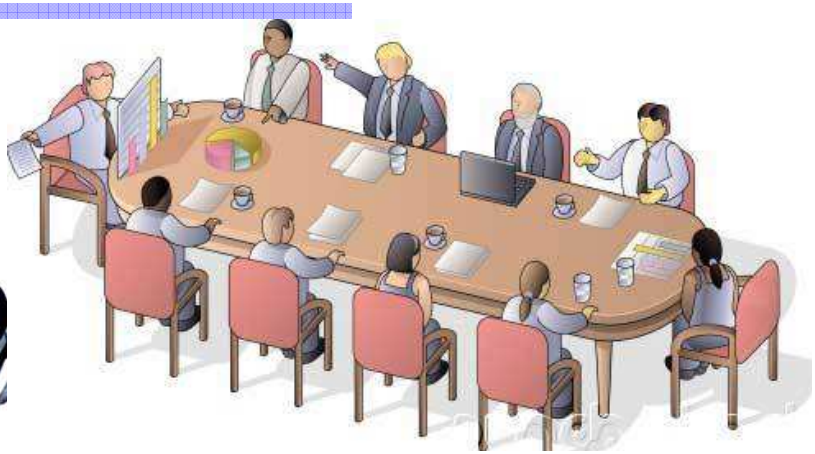




Source: Conta Costa Water District www.ccwater.com/

Targeting Techniques

- Yourself
- Your board
- Your boss
- Your neighbor



What are you really selling?

- New projects to serve new people
- New capacity
- Mandated upgrades
- Good commonsense proactive initiatives that result in lower life cycle costs

What are you really selling?

- Funding a capital reserve fund
- Funding a pay as you go program
- Permission to borrow
- Rate increases

Poor infrastructure fails America, civil engineers report

STORY HIGHLIGHTS

- Civil engineers' report card on aging infrastructure give
- "A failing infrastructure cannot support a thriving econo
- Report grades 15 infrastructure entities such as roads,
- Engineers say investment of $2.2 trillion over five years

Next Article in U.S. »

WASHINGTON (CNN) -- America's civil engineers think the nation's aging and rusty infrastructure is just not making the grade.

The engineers' report card gives U.S. infrastructure a cumulative grade of D.

1 of 3

The American Society of Civil Engineers issued an infrastructure report card Wednesday giving a bleak cumulative ranking of D.

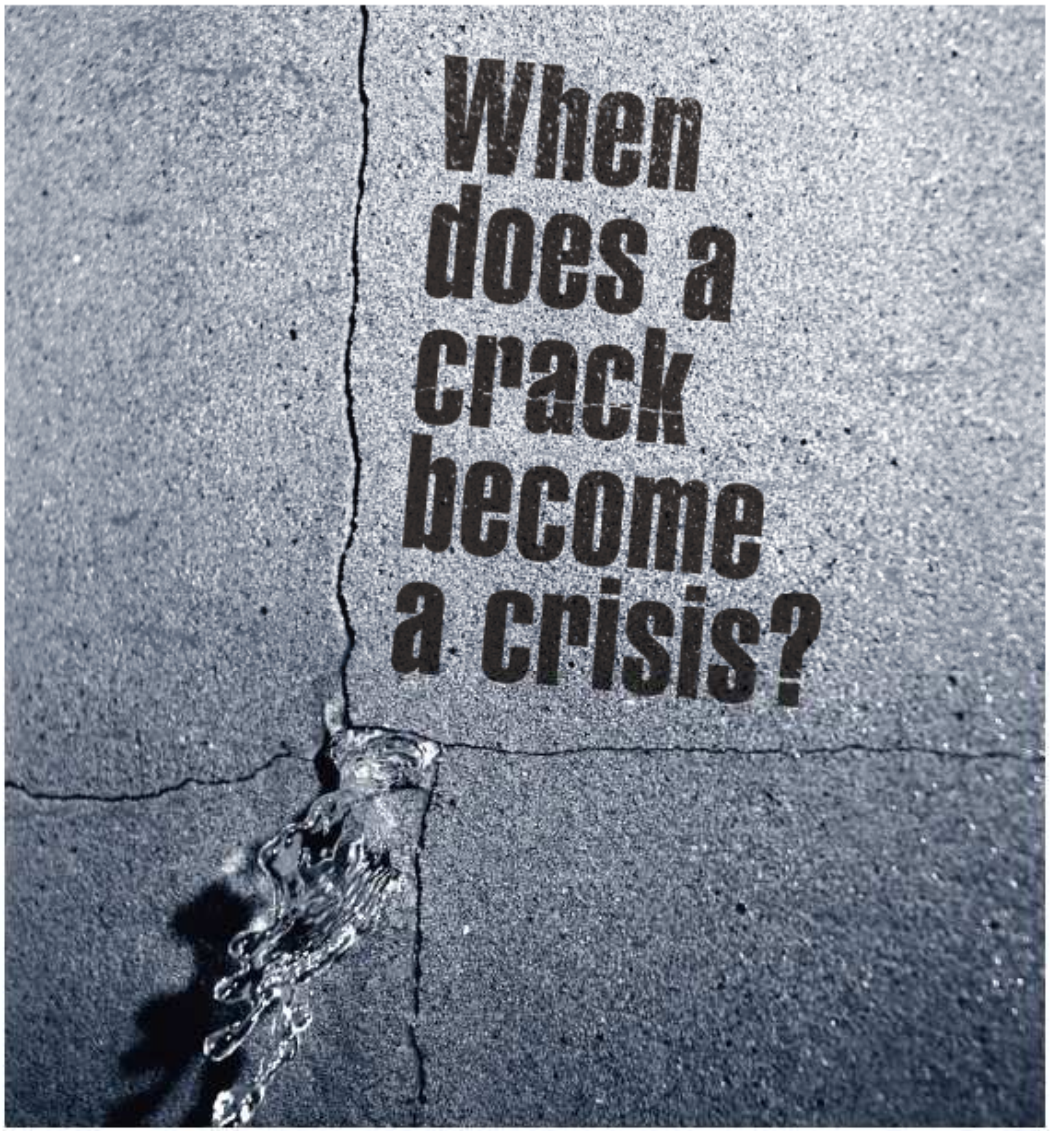
"We've been talking about this for many many years," Patrick Natale, the group's executive director, told CNN.

"We really haven't had the leadership or will to take action on it. The bottom line is that a failing infrastructure cannot support a thriving economy."

Watch what the report had to say »

The ranking -- which grades the condition of 15 infrastructure entities such as roads, bridges and dams -- is the same as the the last time such a report was issued, in 2005. In 2001, the grade was D+, slightly better but still poor.

Roads got a D-, with Americans spending more than 4.2 billion hours a year stuck in traffic. "Poor conditions cost motorists $67 billion a year in repairs and operating costs. One-third of America's major



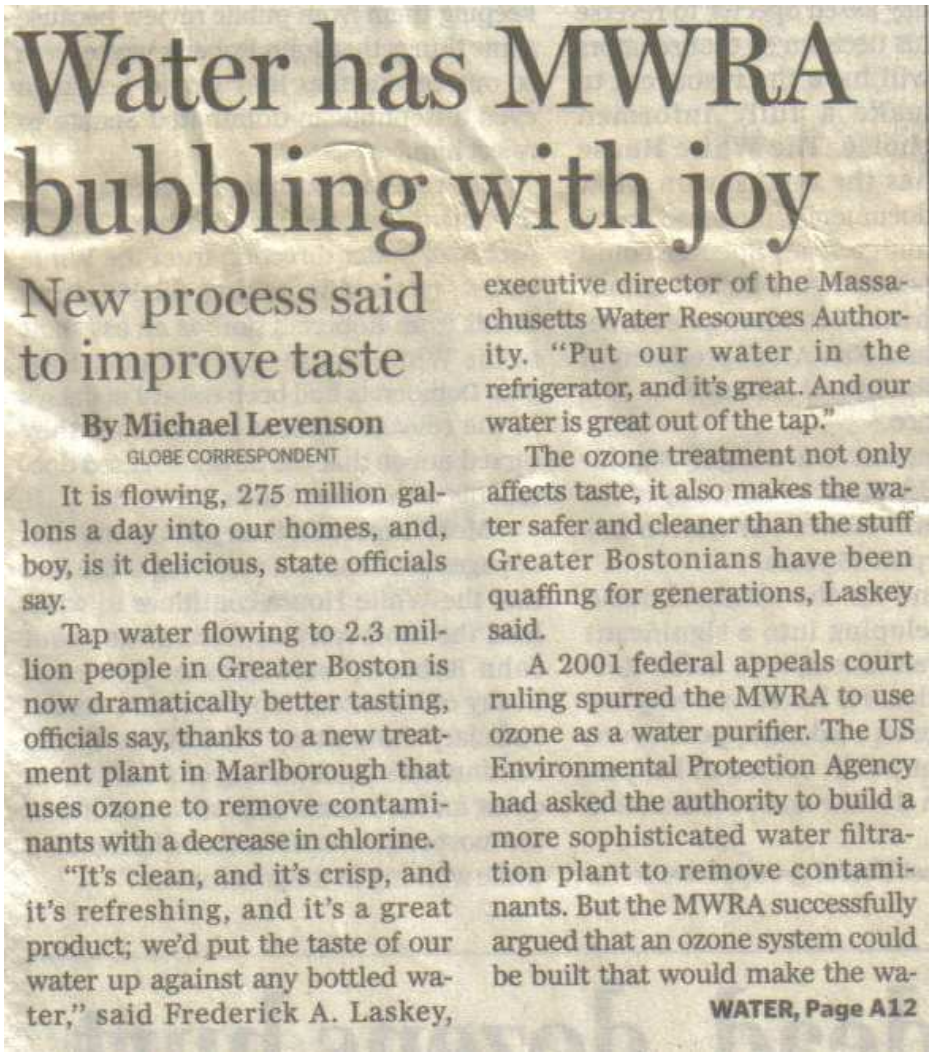
When it shuts down our water and sewer systems.

Our water and sewer pipes are getting older by the day, putting our community at risk for leaks and breakage. Join us in stopping this problem before it gets worse. Supporting initiatives to invest in water and wastewater infrastructure. For more information call (XXX) XXX-XXXX or visit www.WaterisLife.net.

water is life
and infrastructure makes it happen™

www.WaterisLife.net

Softer Sell



Water has MWRA bubbling with joy

New process said to improve taste

By Michael Levenson
GLOBE CORRESPONDENT

It is flowing, 275 million gallons a day into our homes, and, boy, is it delicious, state officials say.

Tap water flowing to 2.3 million people in Greater Boston is now dramatically better tasting, officials say, thanks to a new treatment plant in Marlborough that uses ozone to remove contaminants with a decrease in chlorine.

"It's clean, and it's crisp, and it's refreshing, and it's a great product; we'd put the taste of our water up against any bottled water," said Frederick A. Laskey, executive director of the Massachusetts Water Resources Authority. "Put our water in the refrigerator, and it's great. And our water is great out of the tap."

The ozone treatment not only affects taste, it also makes the water safer and cleaner than the stuff Greater Bostonians have been quaffing for generations, Laskey said.

A 2001 federal appeals court ruling spurred the MWRA to use ozone as a water purifier. The US Environmental Protection Agency had asked the authority to build a more sophisticated water filtration plant to remove contaminants. But the MWRA successfully argued that an ozone system could be built that would make the wa-

WATER, Page A12

"Its clean, and its crisp, and its refreshing, and it's a great product…."

America's Infrastructure Systems Need Attention

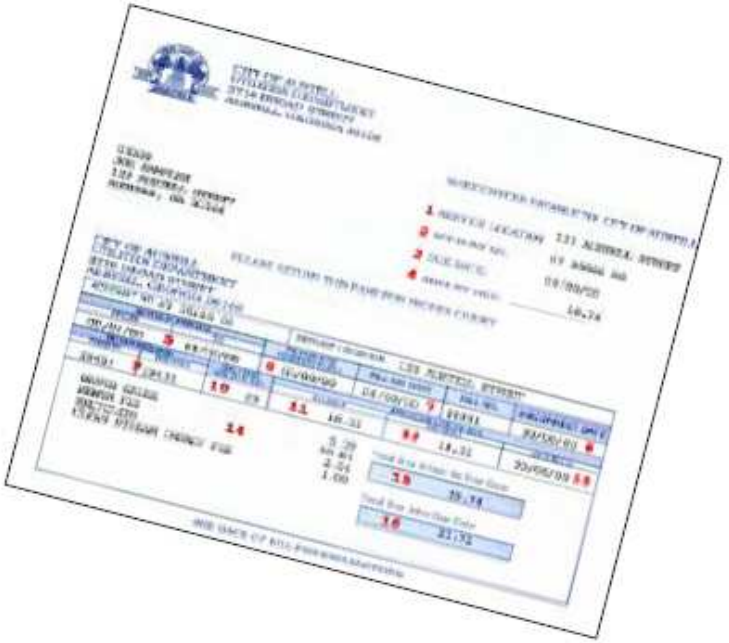
Water and wastewater pipes and plants will soon need to be replaced.

New water and wastewater treatment plants will be required.

water is life
and infrastructure makes it happen™

How Can You Help?

- Be Informed of the water and wastewater needs of your community.
- Support reinvestments as utility rates rise.



- Participate in water related programs available in your community.

water is life
and infrastructure makes it happen™

A Thousand Words

http://www.wuc.on.ca/information/distribution.our_watermains.cfm

Long-Term Financial Forecasting

Financial Forecast for FY 06	2.0%	3.0%	3.0%	3.0%	3.0%	2.5%	2.5%	2.0%	2.0%	2.0%	2.0%
	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
July 1- Carry-over for Construction	19,157,356	34,510,935	25,556,386	17,502,322	8,080,670	22,030,183	13,257,736	5,589,972	20,217,978	11,871,003	2,842,820
REVENUE:											
Domestic Users (1% growth)	19,253,683	20,033,434	20,814,842	21,665,983	22,535,624	23,349,321	24,179,717	24,894,862	25,623,733	26,422,513	27,236,659
Industrial Users (No growth)	2,831,320	2,759,609	2,650,000	2,704,389	2,816,385	2,931,498	3,051,520	3,177,397	3,308,158	3,445,174	3,587,228
Billing and Collections (User Fee)	491,440	542,866	542,866	542,866	542,866	542,866	542,866	542,866	542,866	542,866	542,866
Facility and Tap Fees	1,800,000	1,200,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000
Interest & Non-operating Revenues	356,156	600,000	430,000	255,000	300,000	352,000	188,000	258,000	320,000	147,000	171,000
City of Asheville (annex.-Enka)	85,000	37,000	37,000	37,000	37,000	37,000	45,000	75,000	103,000	36,000	49,000
Rental Income	55,000	58,750	58,750	58,750	58,750	58,750	58,750	58,750	58,750	58,750	58,750
Transfer from Reserves	475,276		1,000,000								
Miscellaneous											
Total Revenues	25,347,875	25,231,659	26,433,458	26,163,988	27,190,625	28,171,436	28,965,853	29,906,875	30,856,507	31,552,304	32,545,503
State and Federal (EPA) Grants											
Revenue Bonds	24,000,000				22,000,000			22,000,000			20,000,000
Total Funds Available	68,505,230	59,742,594	51,989,844	43,666,310	57,271,295	50,201,619	42,223,589	57,496,847	51,074,485	43,423,306	55,388,323
EXPENSES:											
O & M with New Capital Equipment	11,240,505	11,595,000	11,939,850	12,295,046	12,660,897	13,037,724	13,425,855	13,825,631	14,237,400	14,661,522	15,098,368
Replacement Funds (WWTP & Fleet)	400,000	300,000	400,000	400,000	400,000	450,000	475,000	500,000	525,000	525,000	525,000
Debt Service	6,574,691	7,946,647	7,988,683	7,984,762	8,582,376	9,165,669	9,491,059	9,739,268	10,708,617	11,030,077	11,224,519
CIP (including Bond Projects)	15,779,099	14,344,561	14,158,989	14,905,833	13,597,839	14,290,491	13,241,702	13,213,970	13,732,465	14,363,887	14,177,770
Total Expenses	33,994,295	34,186,208	34,487,522	35,585,640	35,241,112	36,943,883	36,633,617	37,278,869	39,203,482	40,580,486	41,025,656
Pay-as-you-go (Revenue only)	7,724,411	5,790,012	6,604,925	5,984,181	6,047,353	6,068,043	6,148,938	6,441,976	6,010,489	5,960,704	6,322,617
Debt Coverage (User Fees / no Cap. Equip)	1.8	1.5	1.7	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5
Debt Coverage with Total Revenue	2.1	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.6

April 13, 2005

10-Year Capital Improvement Program

Active Plan CIP	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Interceptor and Wet Weather Rehabilitation	4,454,441	2,465,334	1,796,589	4,276,237	2,173,200	3,018,632	441,789	1,268,573	0	1,246,255	1,207,367
General Sewer Rehabilitation	6,445,638	6,951,150	7,141,232	6,060,534	6,076,814	6,100,896	9,512,811	8,598,699	10,293,516	9,583,701	9,338,676
Private Sewer Rehabilitation	253,743	101,495	156,241	213,429	169,425	117,218	120,488	123,850	127,305	130,857	134,508
Treatment Plant / Pump Stations	2,253,931	1,375,250	2,544,823	1,725,921	2,641,290	1,697,422	459,002	471,808	484,971	498,502	512,410
Engineering Force Account	2,030,127	2,111,332	2,174,672	2,239,912	2,307,109	2,376,323	2,447,612	2,521,041	2,596,672	2,674,572	2,754,809
Reimbursements	341,220	340,000	345,431	389,800	230,000	980,000	260,000	230,000	230,000	230,000	230,000
Contingency		1,000,000									
Capital Improvement Program Totals	15,779,099	14,344,561	14,158,989	14,905,833	13,597,839	14,290,491	13,241,702	13,213,970	13,732,465	14,363,887	14,177,770

Source: Metropolitan Sewage District of Buncombe County

8 Year Financial Plan

Water and Sewer Projection Summary	2005	2006	2007	2008	2009
Capital program					
Debt - CP/revenue bonds	$ 200,000	$ 200,000	$ 161,980	$ 168,460	$ 158,123
Debt - equipment L/P	18,500	3,000	3,000	3,000	3,000
PAYGO	7,750	7,750	7,850	7,850	24,925
Total	$ 226,250	$ 210,750	$ 172,830	$ 179,310	$ 186,048
PAYGO as % of total	3%	4%	5%	4%	13%
Commercial paper balance (6/30)	$ 200,000	$ 400,000	$ 161,980	$ 330,440	$ 158,123
Revenue bond issues (first issue 7/1/06)		$ 400,000		$ 330,440	
Number of water customers	218,067	224,609	231,347	238,288	245,436
% incr. in avg. residential bill	**8.90%**	6.50%	6.50%	5.00%	5.00%
% incr. in water sales volume		3.00%	3.00%	3.00%	3.00%
Total revenue	$ 184,731	$ 200,175	$ 216,165	$ 233,168	$ 249,500
Total operating expenditures	82,691	85,364	89,167	93,142	97,294
Net income available for DS	$ 102,040	$ 114,812	$ 126,998	$ 140,027	$ 152,206
Total revenue bond DS(1)	$ 37,600	$ 47,689	$ 51,160	$ 70,651	$ 74,138
Total G.O. and other DS	55,576	57,172	55,780	54,667	52,773
Total DS	$ 93,176	$ 104,861	$ 106,940	$ 125,318	$ 126,910
DS as % of total revenue	50%	52%	49%	54%	51%
Debt service/operating fund bal.	$ 52,760	$ 54,960	$ 67,169	$ 74,027	$ 74,398
As % of op. exp. and DS	30%	29%	34%	34%	33%
Total outstanding debt(2)	$ 970,407	$ 923,079	$ 1,275,084	$ 1,219,561	$ 1,493,791

Source: Doug Bean, Charlotte-Mecklenburg Utilities

One number

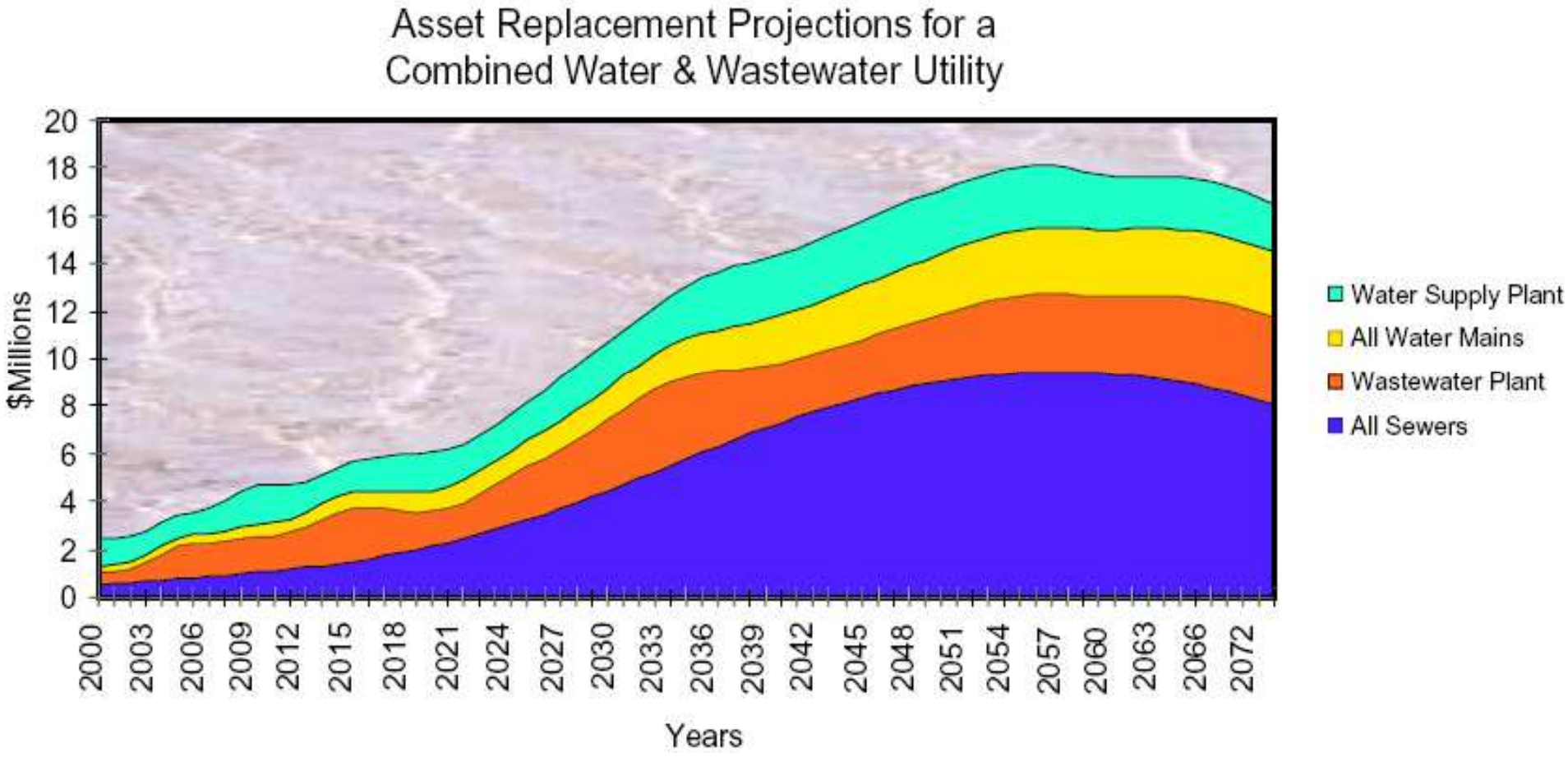
- Average yearly expenditure over the last 20 years is $226,000

  This equates to a 1,396 year replacement schedule

- Yearly funding should average $4,000,000
- 162 miles of unlined cast iron mains
- Poor condition of distribution system directly affects water quality

Source: Linda Sims, City of Durham, Department of Water Management

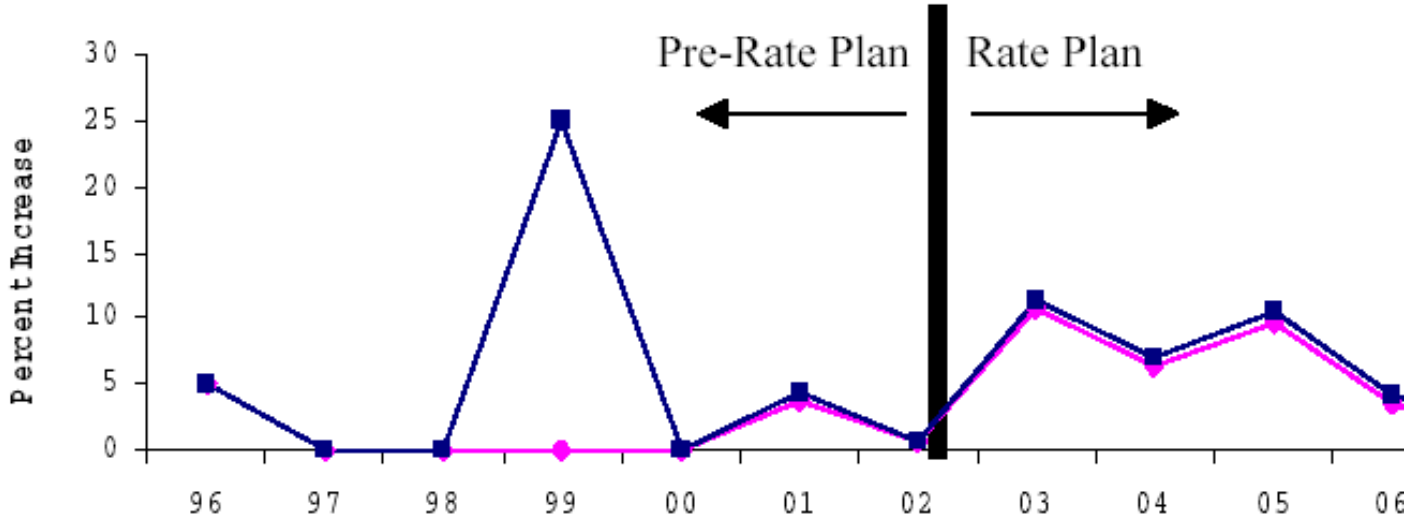
The ‘Nessie’ Curve

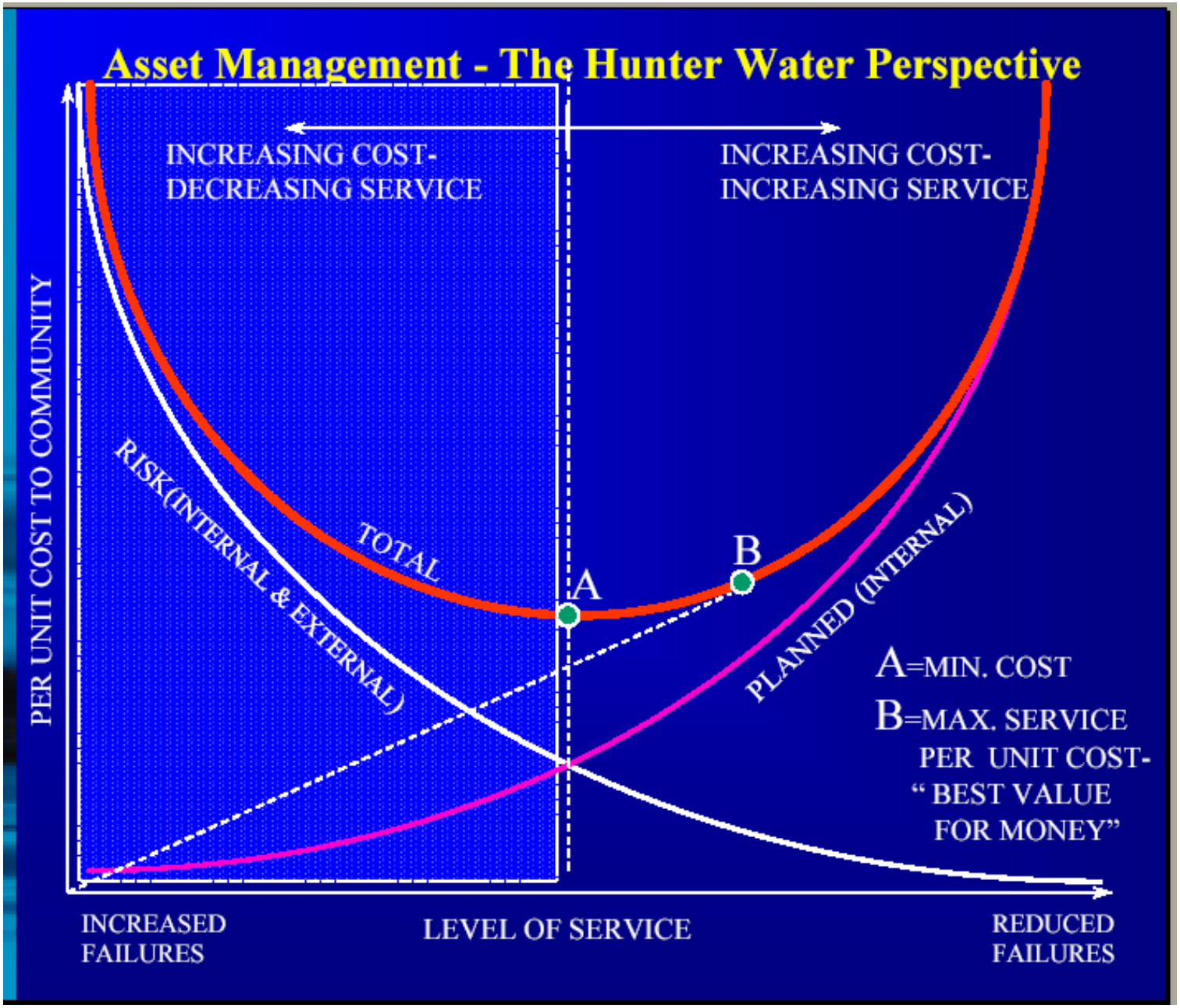


Source: Dawn of the Replacement Era, AWWA

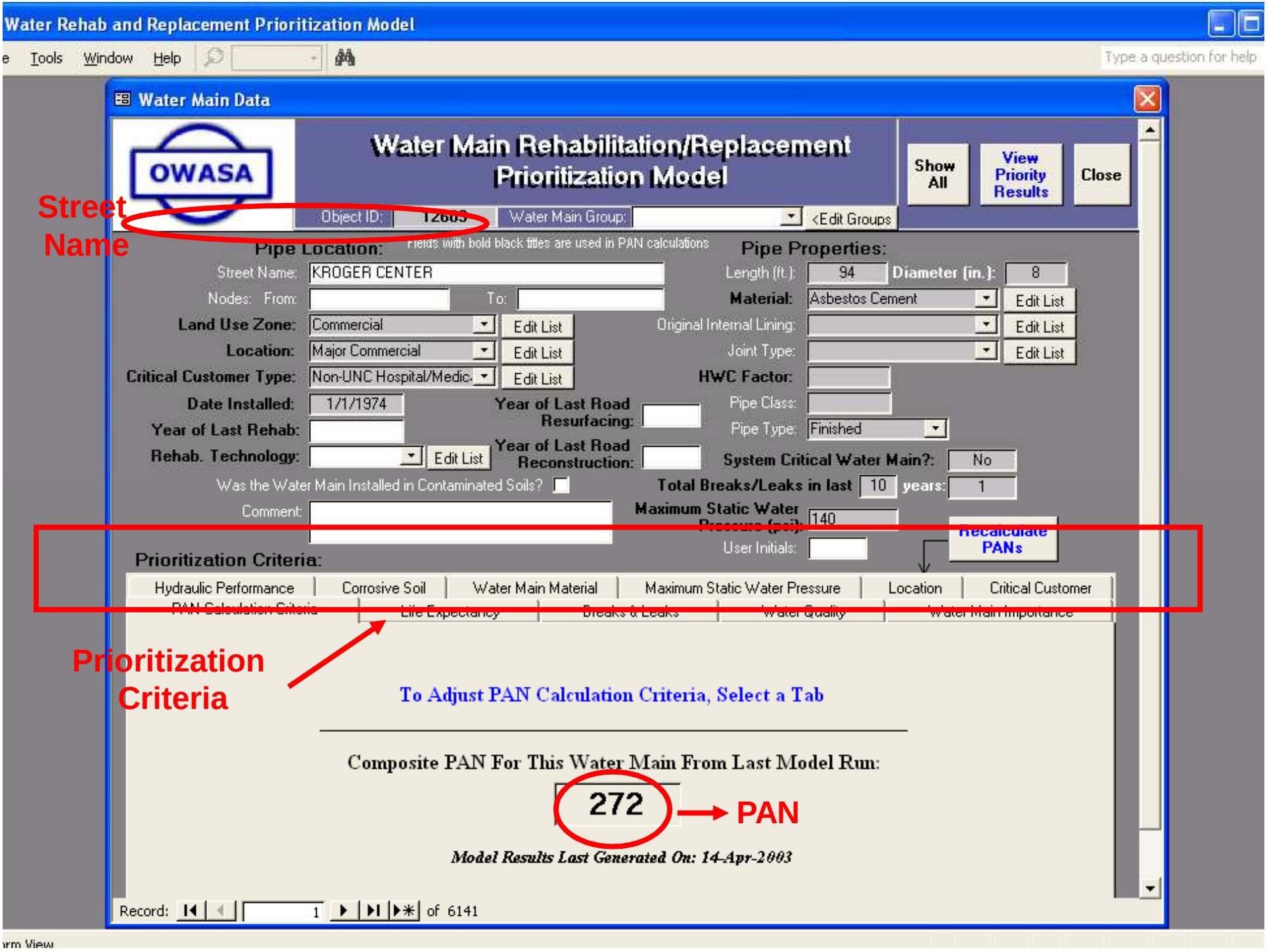
KINGSPORT PUBLIC WORKS
APRIL 22, 2004

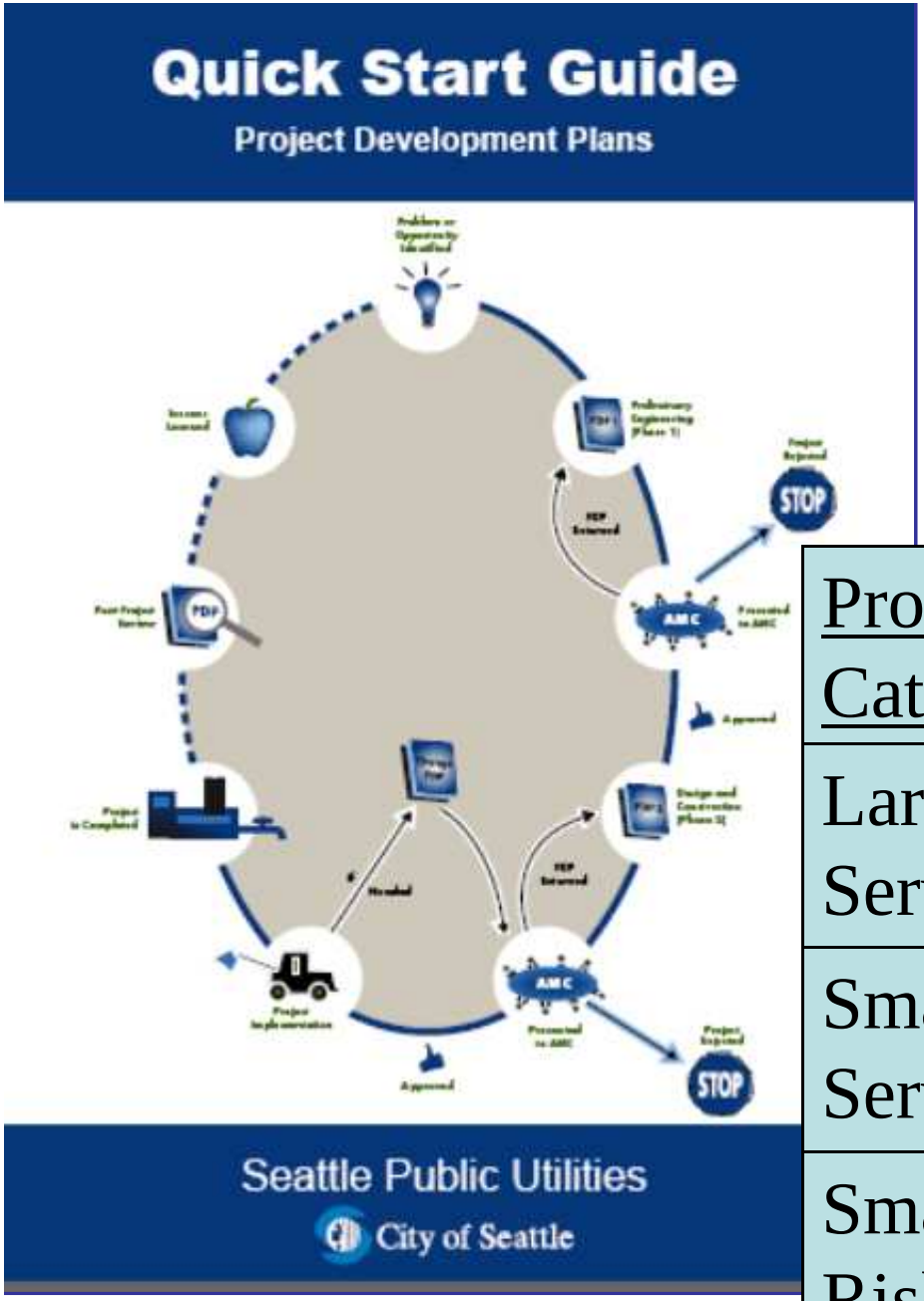
FY05 Water and Sewer Rate Stabilization and Capital Plans





Slide source: Hunter Water, 2002 AWWA/WEF Management Conference


Water Rehab and Replacement Prioritization Model
Tools
Window
Help
Type a question for help
Water Main Data
OWASA
Water Main Rehabilitation/Replacement Prioritization Model
Show All
View Priority Results
Close
Street Name
Object ID:
T2603
Water Main Group:
<Edit Groups
Pipe Location:
Fields with bold black titles are used in PAN calculations
Pipe Properties:
Street Name:
KROGER CENTER
Nodes: From:
To:
Land Use Zone:
Commercial
Location:
Major Commercial
Critical Customer Type:
Non-UNC Hospital/Medic
Date Installed:
1/1/1974
Year of Last Rehab:
Rehab. Technology:
Edit List
Year of Last Road Resurfacing:
Year of Last Road Reconstruction:
Was the Water Main Installed in Contaminated Soils?
Comment:
Length (ft.):
94
Diameter (in.):
8
Material:
Asbestos Cement
Original Internal Lining:
Joint Type:
HWC Factor:
Pipe Class:
Pipe Type:
Finished
System Critical Water Main?:
No
Total Breaks/Leaks in last
10
years:
1
Maximum Static Water Pressure (psi):
140
User Initials:
Recalculate PANs
Prioritization Criteria:
Hydraulic Performance
Corrosive Soil
Water Main Material
Maximum Static Water Pressure
Location
Critical Customer
PAN Calculation Criteria
Life Expectancy
Breaks & Leaks
Water Quality
Water Main Importance
Prioritization Criteria
To Adjust PAN Calculation Criteria, Select a Tab
Composite PAN For This Water Main From Last Model Run:
272
PAN
Model Results Last Generated On: 14-Apr-2003
Record:
1
of 6141



Making a Business Case

Program Category	Program NPV	NPV
Large Services	-$215,000	-$295
Small Services	-$497,000	-$29
Small High Risk	3,172,000	$575

EPA Region 4
ENVIRONMENTAL FINANCE CENTER
www.efc.unc.edu • Serving the Southeast

Rates Dashboard: GA Water Services

Version 2008.02

GA Rates Webpage

1. Select Your Utility Rate Structure:

Example: Low OR, Low Rates

2. Select Type of Bill (6,000 Gallons/Month):

- (•) Water Bills
- ( ) Sewer Bills

$13.47

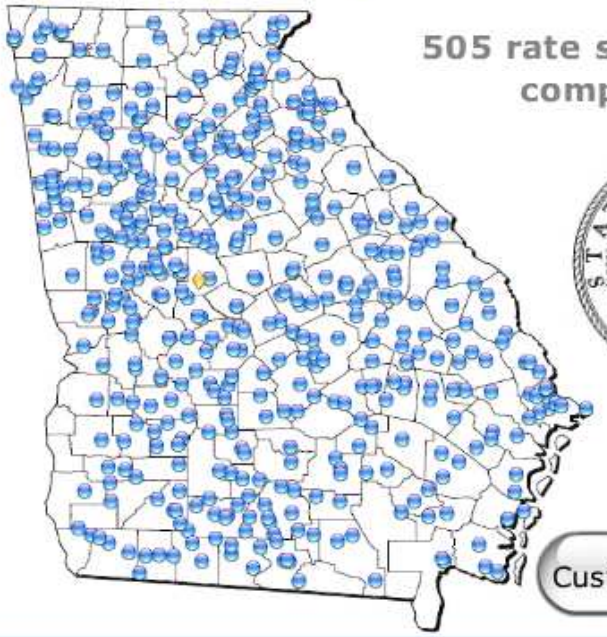
State median water bill: $21.89

3. Select Your Comparison Criterion:

All Systems | All Systems

All Utilities

Example: Low OR, Low Rates



505 rate structures compared

Customer Profile

Water Bill for 6,000 GPM

Rates in 2008

Conservation Pricing Signal

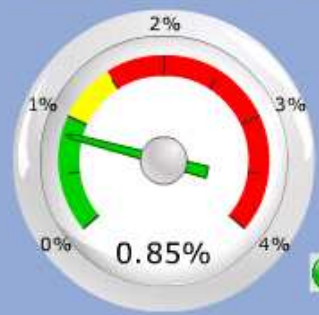
Price ($/1000 gallons) for water at 10,000 GPM

*By comparison, basic cable costs $45.00 in Town B

Op. Rev / Op. Expend. (2007)

Water & sewer oper. rev./oper. expend. for the utility

Water Bills as % MHI



Expenditures for 6,000 GPM as % Median Household Income of Town B

Sources: GEFA / EFC 2008 Water and Sewer Rates Survey, GA Department of Community Affairs RAF & RLGF Reports, EPA SDWIS, EPA NPDES, U.S. Census 2000

*Full basic cable price, excluding premium packages, is given by service area where available or statewide, geographical average where no provider is identified.

Funded by the Georgia Environmental Facilities Authority and the U.S. EPA

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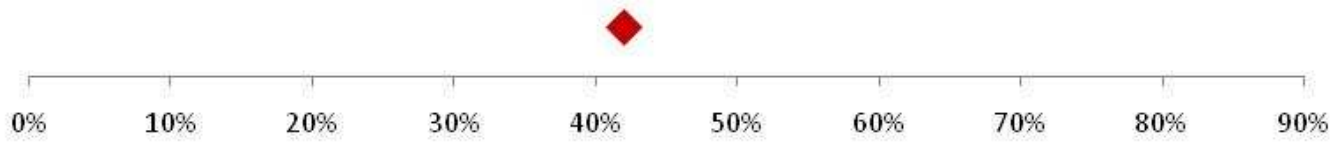
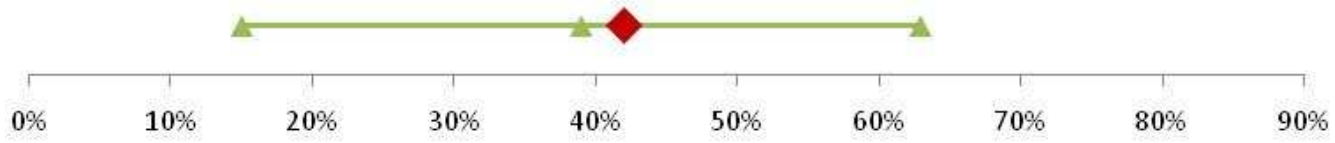
Benchmarking

- Utility with a Debt to Asset Ratio of 0.42

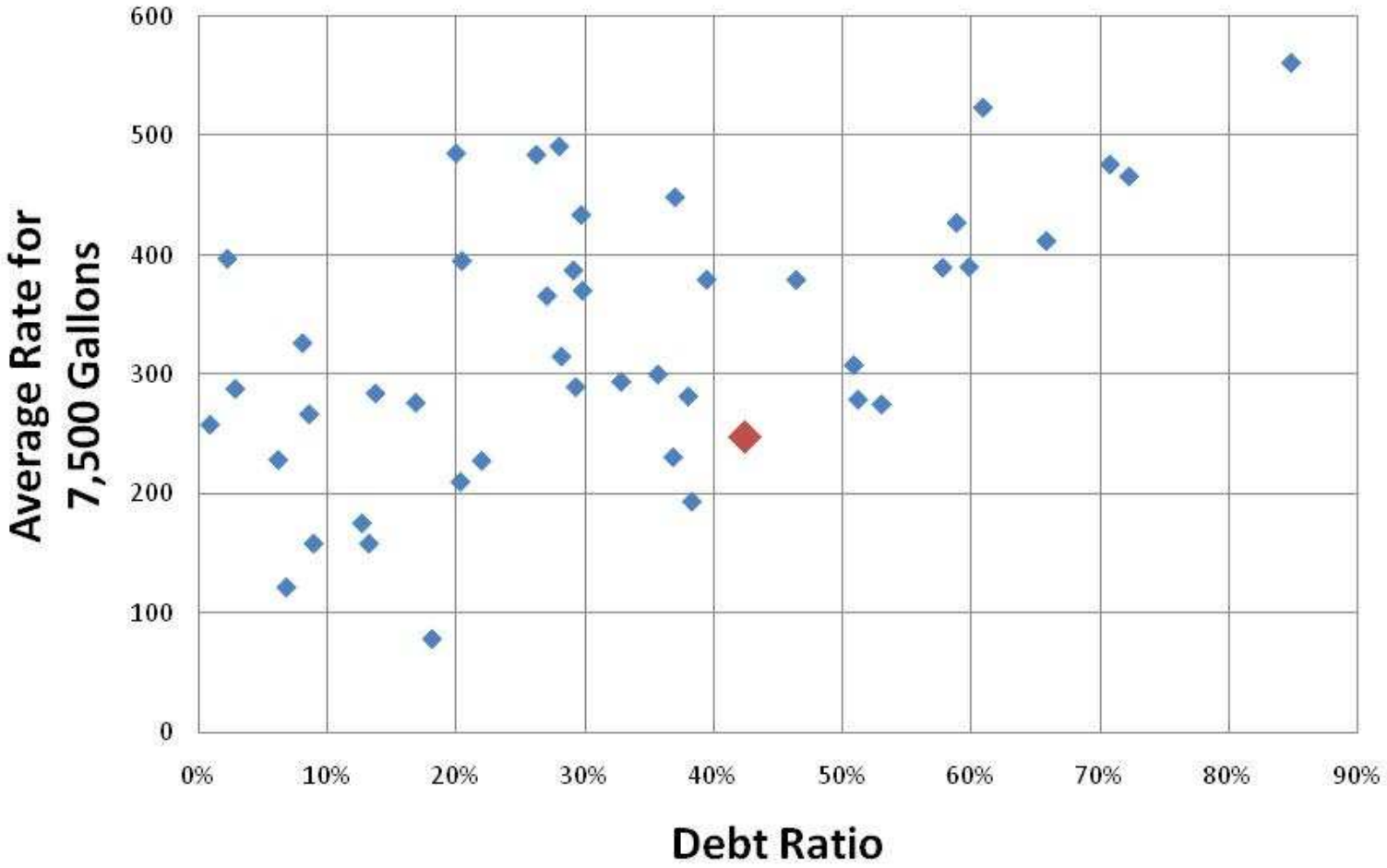


Benchmarking Against Peers

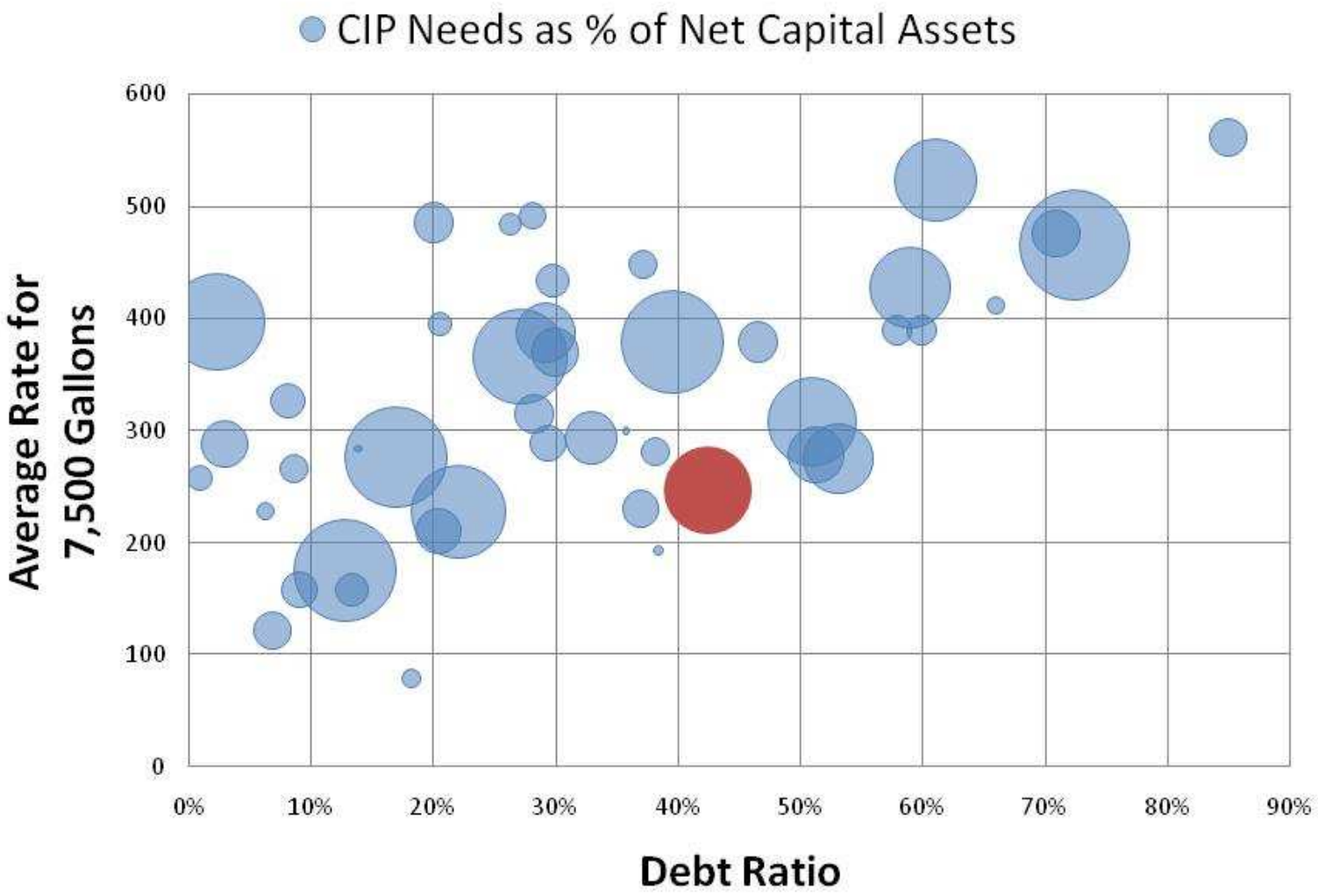
- Utility with a Debt to Asset Ratio of 0.42
- Peer group has Mean Debt to Asset Ratio of 0.39 and Standard Deviation of 0.24



Benchmarking: Multiple Variables



A Fuller Picture



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