



The Painful Art of Financial Leadership

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KENAN-FLAGLER
BUSINESS SCHOOL

Water and Wastewater Leadership Center

How Fun is Finance

- *“Not as painful as I expected.”*
- *“Made a painful topic bearable.”*
- *More fun than swimming in a vat of fats, oil, and grease.”*

COMPANY/ INDUSTRY	REVENUE (Billion \$)
Apple Computer	\$13.93
Nike	\$13.73
<i>NACWA Financial Survey Respondents (2005, N=133)</i>	\$13.00
Northwest Airlines	\$12.29
Bottled water industry	\$7.70 ¹
Private water/sewer companies	\$7.59 ²

* Source: Fortune 500 (2006), 1: ICBWA estimate, 2002, 2: U.S. Economic Census, 2002, 3: Estimate from public & private providers, 4: *The Fiscal Survey of States*. National Governor's Association, Dec. 2006.

UTILITY	REVENUE (Million \$)
State of Vermont	\$1,035.00
New York City Department of Environmental Protection	\$1,012.60
State of North Dakota	\$ 997.00
Dallas Water	\$ 685.85
City of Los Angeles	\$ 637.86
Philadelphia Water Department	\$ 569.61
Metro St. Louis Sanitary District	\$ 521.85

Top 6 government-owned utilities earn more in annual revenues than the Gross Domestic Products of seventeen countries in the world.

Table B.6-2 Trends in Long-Term Debt

Outstanding Debt	1996 - 1999	1999 - 2002	2002 - 2005	1996 - 2005
- Common Agencies Responding	72	72	87	67
- Percentage (%) Change (Total Debt)	+19.9%	+17.7%	+16.8%	+73.0%
- Percentage (%) Change in CPI (Inflation rate)	+6.2%	+8.0%	+8.3%	+24.3%

Table B.9-4 Trends in Five-Year Needs

Outstanding Debt	1996 vs. 1999	1999 vs. 2002	2002 vs. 2005	1996 vs. 2005
- Common Agencies Responding	66	66	67	51
- Percentage (%) Change (Total 5-Year Needs)	+4.6%	+18.8%	+15.5%	+110.8%
- Percentage (%) Change in CPI (Inflation rate)	+6.2%	+8.0%	+8.3%	+24.3%

* Source: NACWA 2005 Financial Survey

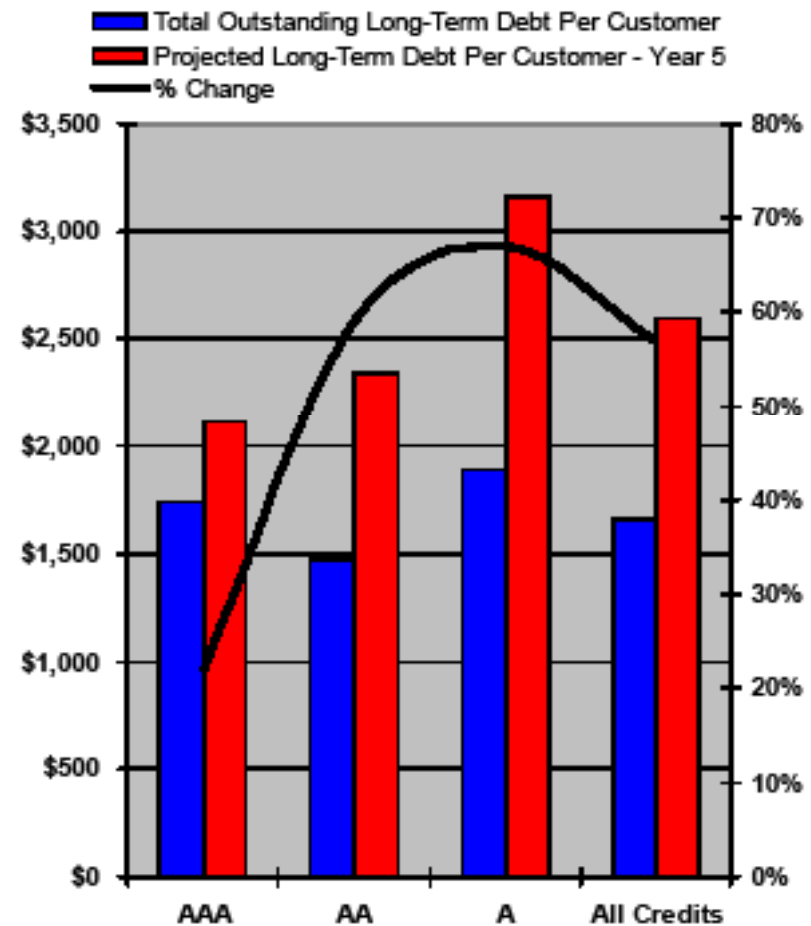


National Perspective

1. Rising Debt Levels

- > \$39 Billion in needs
 - 158 Credits in 2007 Medians
 - Systems serve 15%-20% of U.S. population
 - Wholesale systems not included
- > Currently moderate
- > **Dramatic increase in 5 years**

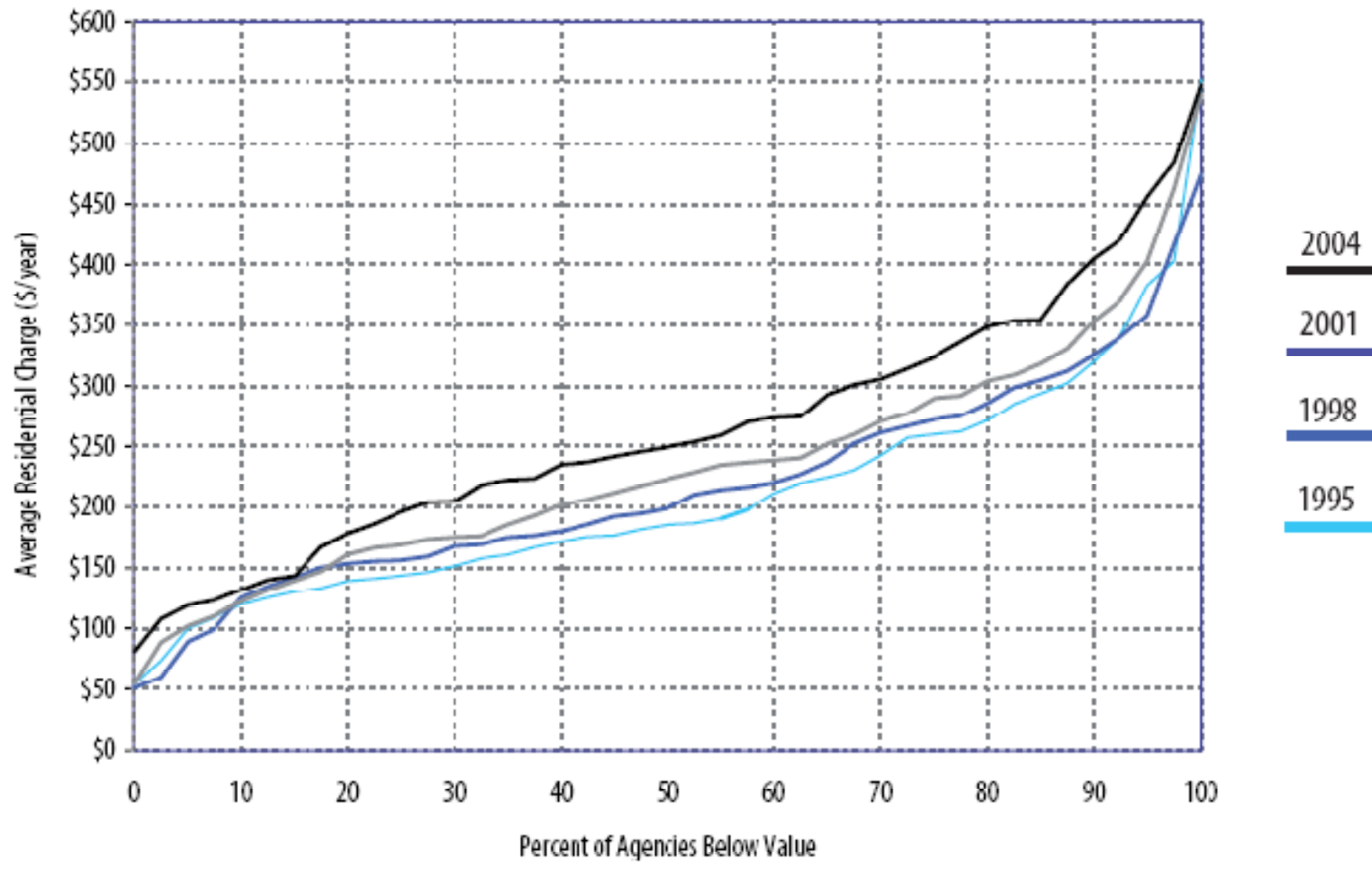
2007 Debt Medians





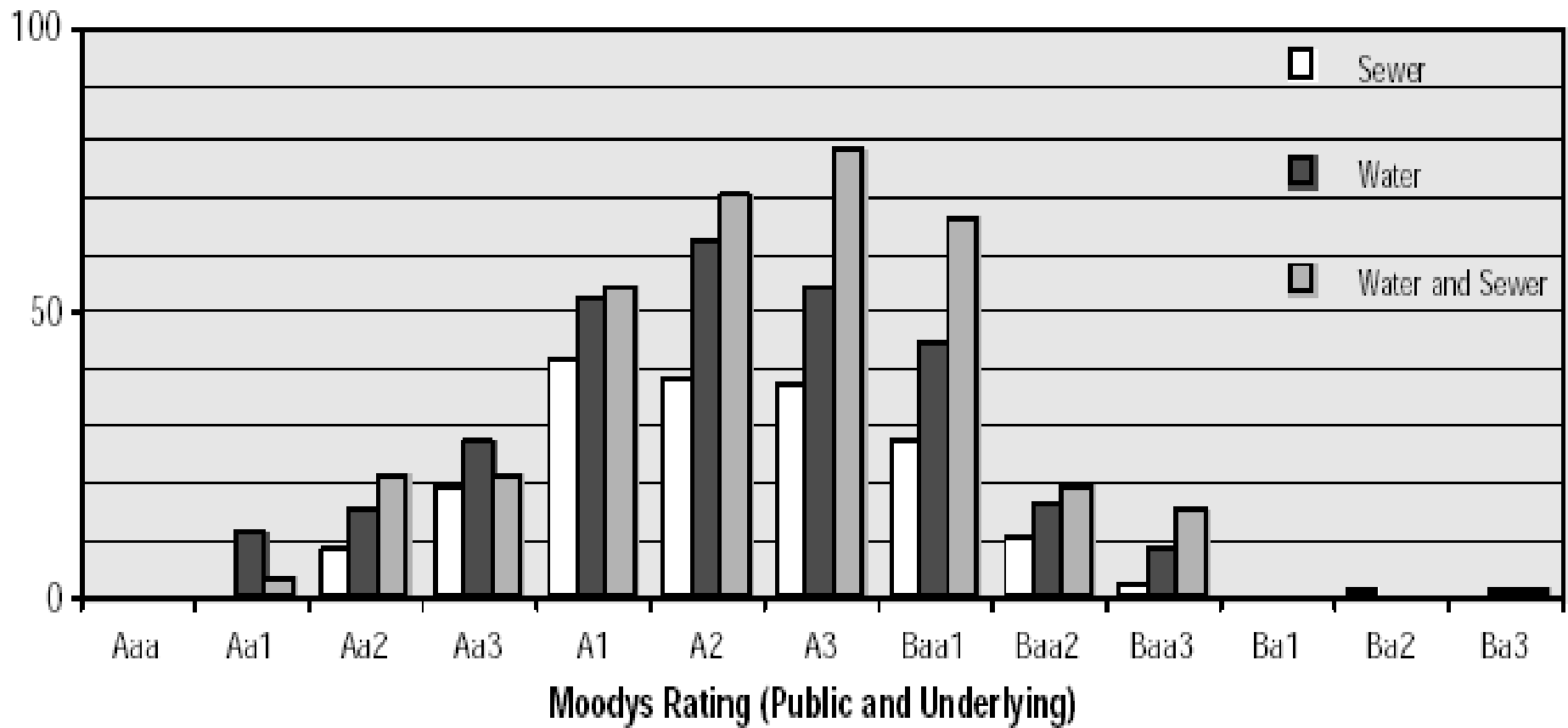
Source: Fayetteville Observer 2/6/04

Figure C.9-2 Average Residential Charge Distribution (All Respondents)



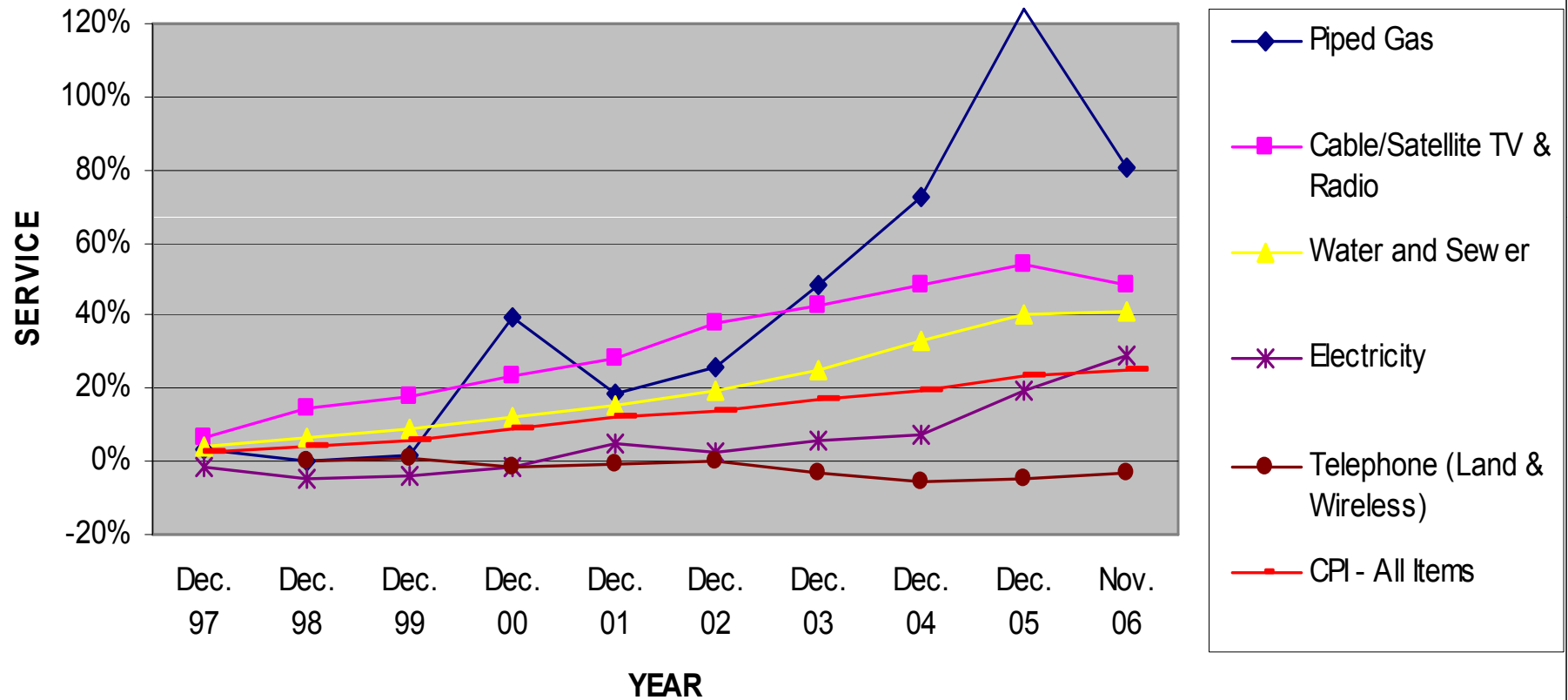
* Source: NACWA 2005 Financial Survey

Water and Sewer Revenue Bonds Ratings



* Source: *Moody's Water and Sewer Outlook, 2000*

U.S. Consumer Price Index Cumulative Percent Change for Selected Household Services (1997-2006, all urban consumers)



* Source: U.S. Bureau of Labor Statistics, January 2007

INCOME/EXPENDITURE	ANNUAL	MONTHLY
Gross Income at Federal Poverty Line (2005)	\$16,090	\$1,340.83
Average Tax Surplus	\$2,182	\$181.83
Average Value of Food Stamps for Recipients	\$2,738	\$228.17
Mean Net Income after Taxes & Food Stamps	\$21,010	\$1,750.83
Mean Housing Expenses	\$7,406	\$617.17
Mean Health Care Expenses	\$1,007	\$83.92
Mean Child Care Expenses	\$2,982	\$248.50
Mean Imputed Food Expenses	\$7,361	\$613.42
Available Income After Household Expenses	\$2,254	\$187.83
Electricity*	\$1083	\$90.25
Telephone	\$500	\$42
Cable TV**	\$600	\$50
Water and Sewer*	\$500	\$42
Solid Waste Services (sample)	\$120	\$10.00

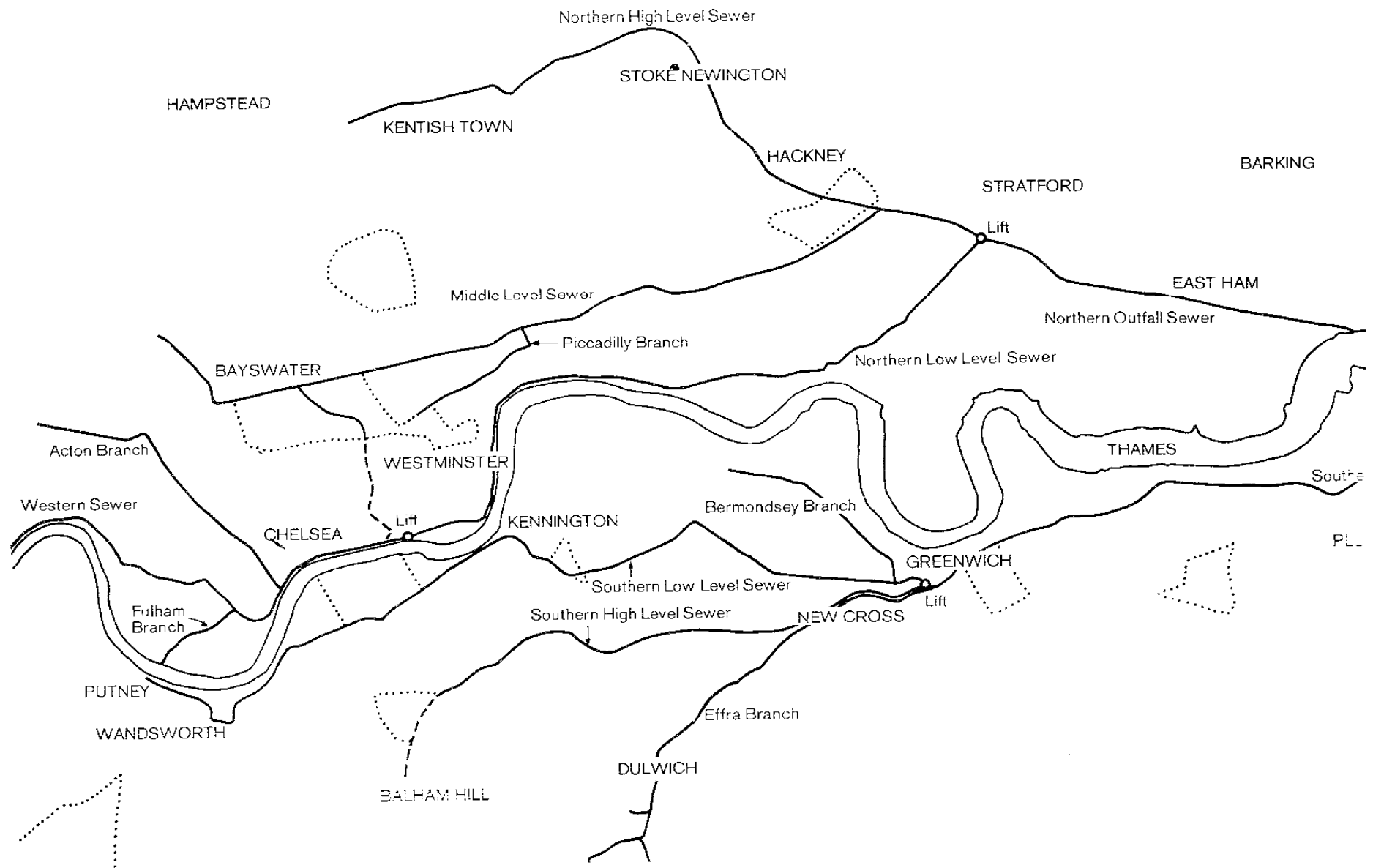
20% CLUB

CITY	POVERTY RATE
New Orleans, LA	27.9%
Cleveland, OH	26.3%
Fresno, CA	26.2%
Detroit, MI	26.1%
St. Louis, MO	24.6%
Atlanta, GA	24.4%
Stockton, CA	23.9%
Philadelphia, PA	22.9%
Long Beach, CA	22.8%
El Paso, TX	22.2%
Los Angeles, CA	22.1%
Cincinnati, OH	21.9%
Louisville, KY	21.6%
Milwaukee, WI	21.3%
New York, NY	21.2%
Mobile, AL	21.2%
Memphis, TN	20.6%
Washington, DC	20.2%

Table C.6-1 - Community Assistance Programs

Program	# of Agencies	Percentage (%) of Agencies
- Utility Collects Funds and Distributes	20	14.2%
- Lifeline Rates / Bill Discounts	16	11.3%
- Other Community Agencies Provide Assistance	58	41.1%
- Payment Plans	40	28.3%
- Other	21	14.9%

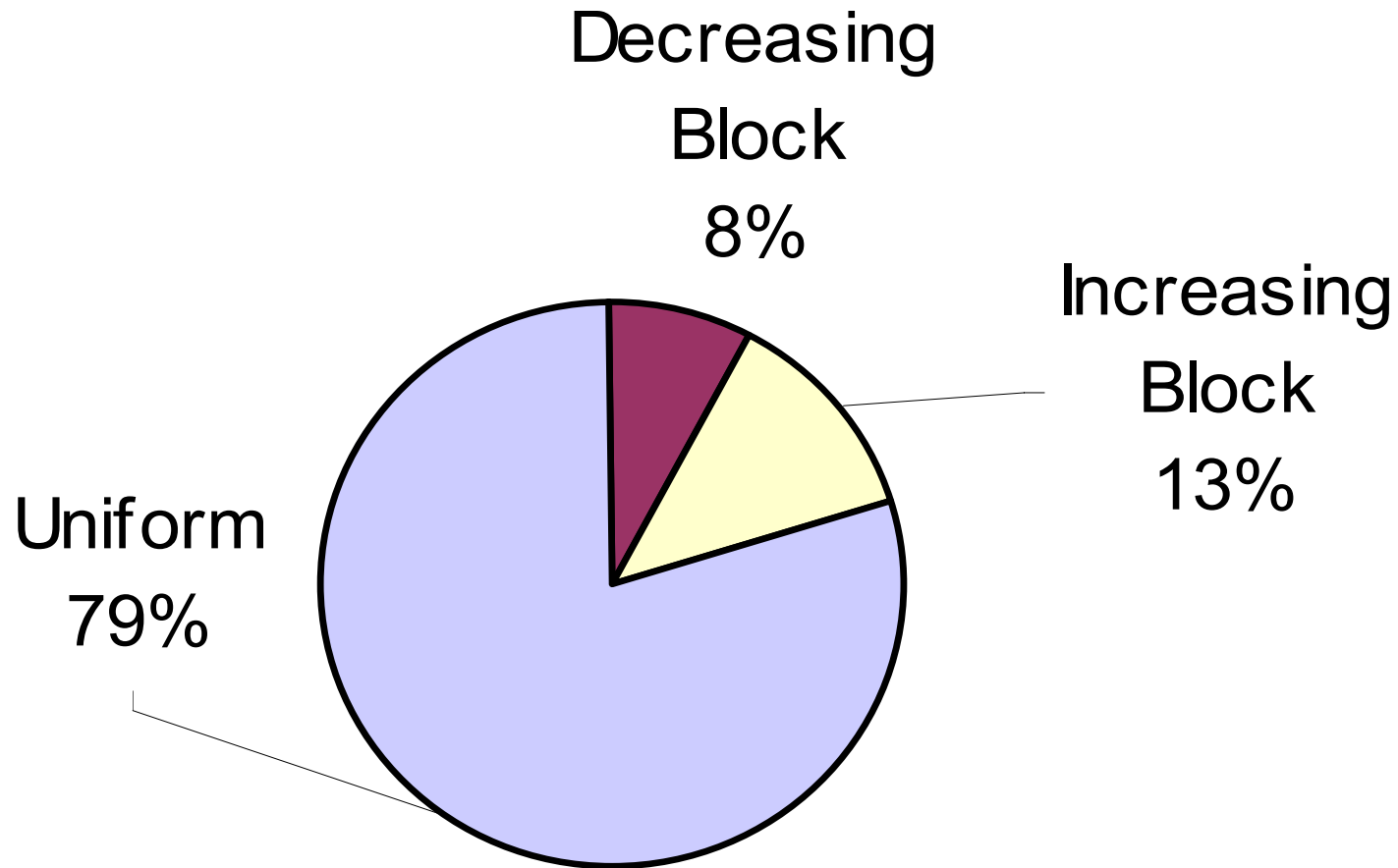
** Source: NACWA 2005 Financial Survey*



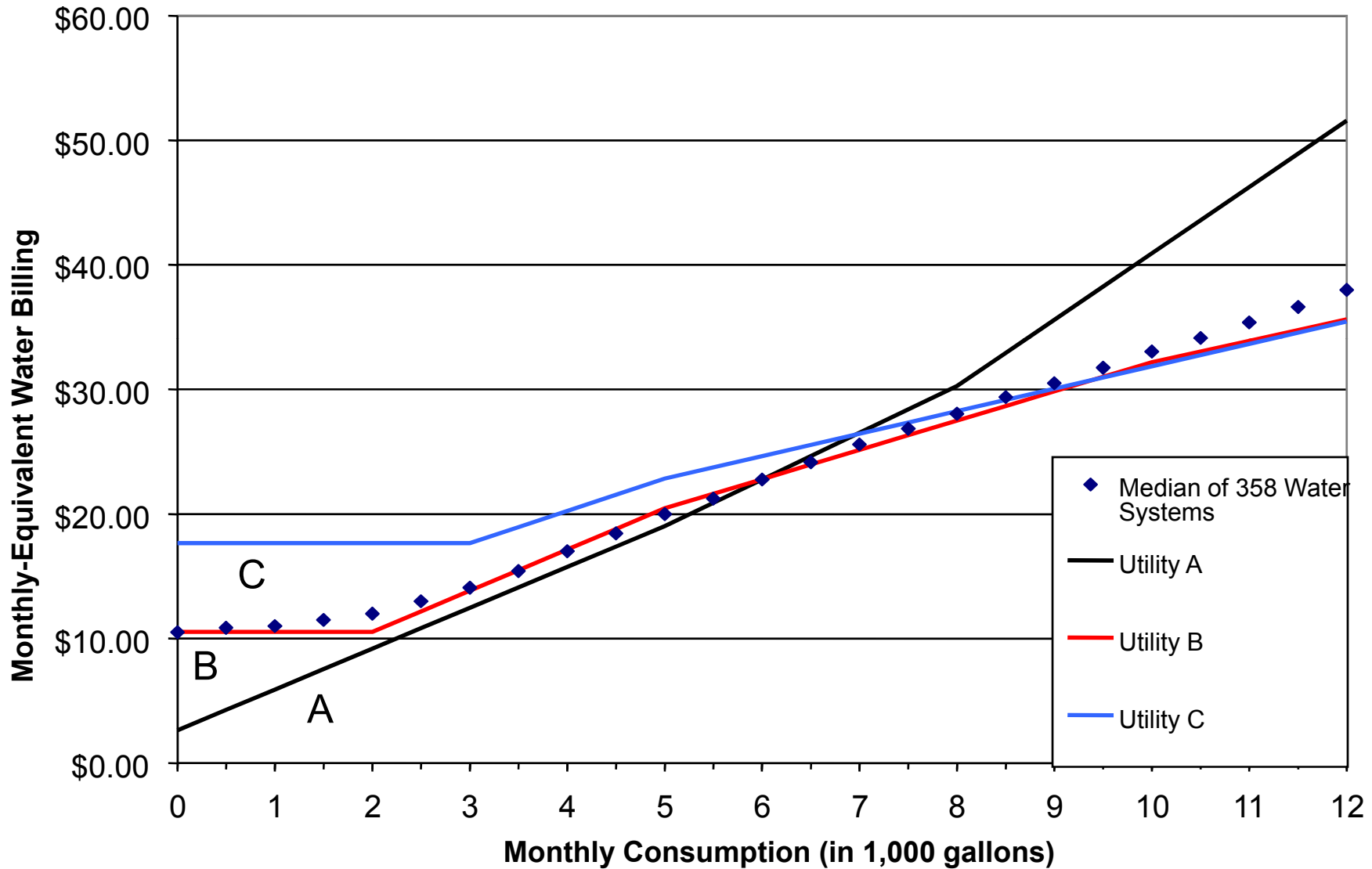
1859 Map of Main Interceptor Sewers from Joseph Bazalgette, Chief Engineer of London Metropolitan Board of Works. Source: *London Under London: A Subterranean Guide*. Trench, R. & E. Hillman, 1993.



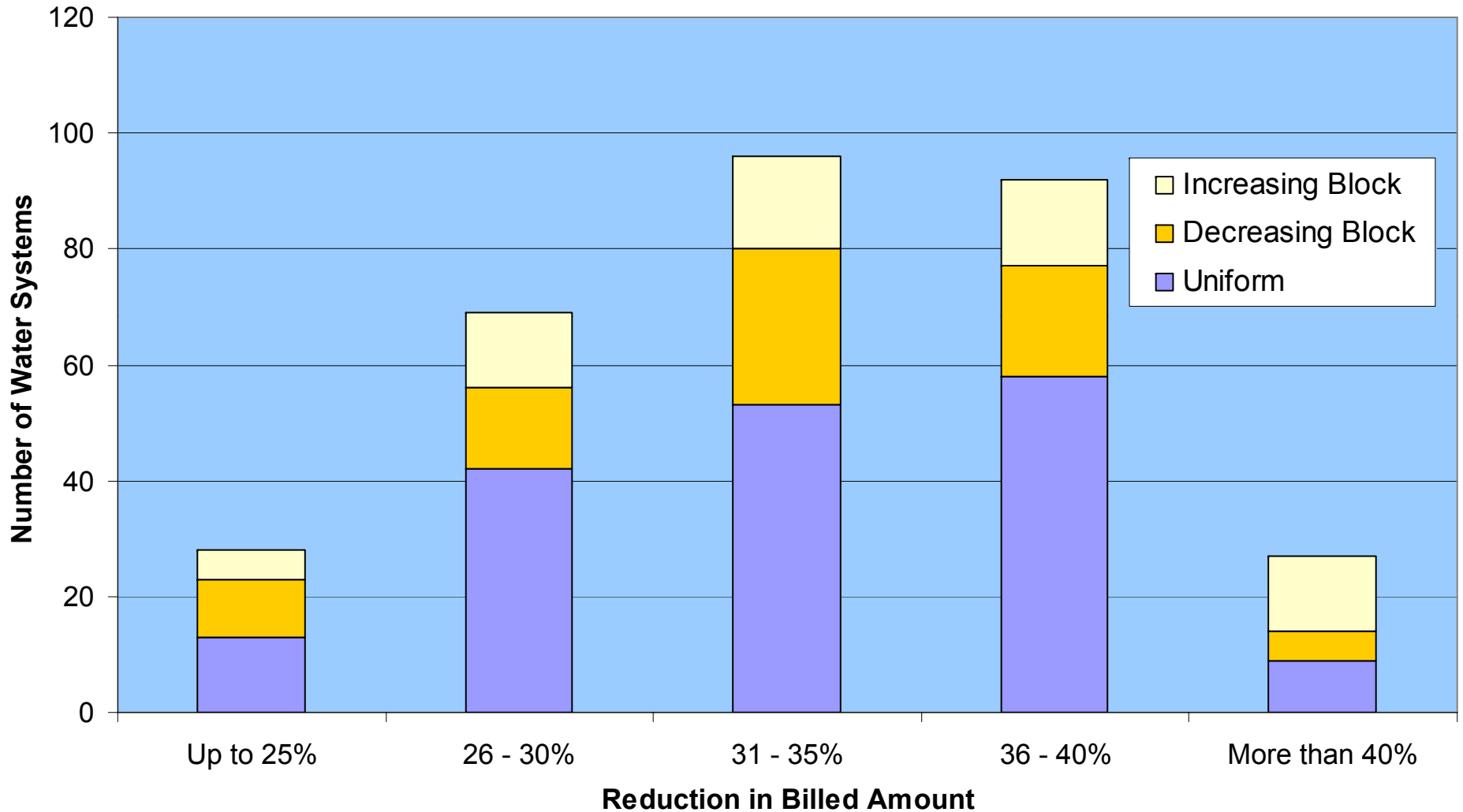
Residential Sewer Rate Structures for Sample of NACWA Utilities, 2006 (N=87)



Comparison of Customer Bills over Different Consumption Levels (3 Utilities)



Reductions in Monthly Water Bills for a 40% Reduction in Residential Consumption, from 10,000 GPM to 6,000 GPM (n=312)



Source: NC Utilities FY05-06 Rate Schedules.