Appendix M

Financial Information

M.1 Cost Escalation Factors

All cost information presented in this Report to Congress is in 2002 dollars unless otherwise noted. Capital costs were adjusted using the Chemical Engineering Plant Cost Index (CEPCI); O&M Costs were adjusted using the Gross Domestic Product Implicit Price Deflator (GDPIPD). A summary of these cost factors from 1970 to 2002 is provided in Table M.1.

Table M.1 Cost Escalation Factors

Year	Capital	O&M
1970	126	0.2849
1971	132.3	0.2992
1972	137.2	0.3132
1973	144.1	0.3271
1974	165.4	0.3504
1975	182.4	0.3867
1976	192.1	0.4140
1977	204.1	0.4451
1978	218.8	0.4756
1979	238.7	0.5142
1980	261.2	0.5599
1981	297	0.6142
1982	314	0.6572
1983	317	0.6861
1984	323	0.7114
1985	325	0.7349
1986	318	0.7526
1987	324	0.7733
1988	343	0.7986
1989	355	0.8293
1990	357.6	0.8605
1991	361.3	0.8940
1992	358.2	0.9174
1993	359.2	0.9393
1994	368.1	0.9596
1995	381.1	0.9804
1996	381.7	1.0000
1997	386.5	1.0195
1998	389.5	1.0339
1999	390.6	1.0477
2000	394.1	1.0679
2001	394.3	1.0940
2002	395.6	1.1080

M.2 Past Investments in Wastewater Infrastructure

The federal government has been investing in the nation's wastewater infrastructure since the late 19th century. With the passage of the Clean Water Act in 1972, federal investment markedly increased, peaking in 1977. As shown in Table M.2, between 1970 and 2000, the federal government invested more than $122 billion in the nation's wastewater infrastructure.

Table M.2 Federal Funding for Wastewater Infrastructure, 1970 - 2000 (billions of dollars)

Year	Construction Grant[a]	CWSRF[b]	EPA Line Item	Unadjusted Total	Total (2000 Dollars)
1970	< $0.1	0	0	< $0.01	< $0.1
1971	< $0.1	0	0	< $0.01	< $0.1
1972	$0.1	0	0	$0.1	$0.4
1973	$3.0	0	0	$3.0	$8.4
1974	$2.5	0	0	$2.5	$6.0
1975	$4.3	0	0	$4.3	$9.4
1976	$4.6	0	0	$4.6	$9.5
1977	$7.3	0	0	$7.3	$14.1
1978	$2.8	0	0	$2.8	$5.1
1979	$5.1	0	0	$5.1	$8.5
1980	$3.8	0	0	$3.8	$5.8
1981	$3.6	0	0	$3.6	$4.8
1982	$2.3	0	0	$2.3	$2.8
1983	$4.0	0	0	$4.0	$5.0
1984	$4.6	0	0	$4.6	$5.6
1985	$2.1	0	0	$2.1	$2.6
1986	$2.3	0	0	$2.3	$2.9
1987	$2.4	0	0	$2.4	$3.0
1988	$3.1	$0.3	0	$3.4	$3.8
1989	$1.3	$1.2	0	$2.5	$2.7
1990	$0.9	$1.4	0	$2.3	$2.6
1991	$0.3	$2.0	0	$2.3	$2.5
1992	$0.3	$1.9	$0.4	$2.6	$2.8
1993	$0.1	$1.9	$0.4	$2.4	$2.7
1994	$0.1	$1.3	$0.4	$1.8	$1.9
1995	< $0.1	$1.3	$0.6	$1.9	$2.0
1996	0	$1.7	$0.1	$1.8	$1.9
1997	0	$0.8	$0.1	$0.9	$0.9
1998	0	$1.2	$0.2	$1.4	$1.4
1999	0	$1.3	$0.2	$1.5	$1.5
2000	0	$1.4	$0.2	$1.6	$1.6
Total	**$60.9**	**$17.7**	**$2.6**	**$79.5**	**$122.2**

[a] EPA 2000
[b] EPA 2003

EPA estimates that current combined capital investment in wastewater infrastructure from federal, state, and local governments is just over $13 billion annually (EPA 2002). Today, according to industry organizations, individual utilities can pay as much as 90 percent of capital expenses (AMSA and WEF 1999). As shown in Table M.3, capital expenditures by state and local governments have remained relatively constant since 1988; annual O&M expenditures have more than doubled.

Table M.3 State and Local Expenditures on Wastewater Infrastructure, 1970 - 2000 (billions of dollars)

Year	Capital[a,b]	Adjusted Capital (2002 Dollars)	O&M[a,b]	Adjusted O&M (2002 Dollars)	Total (2002 Dollars)
1970	$1.4	$4.4	$0.4	$1.6	$6.0
1971	$1.7	$5.1	$0.8	$3.0	$8.0
1972	$2.2	$6.3	$1.0	$3.5	$9.9
1973	$2.4	$6.6	$1.2	$4.1	$10.7
1974	$2.6	$6.2	$1.4	$4.4	$10.6
1975	$3.6	$7.8	$1.7	$4.9	$12.7
1976	$4.0	$8.2	$2.0	$5.4	$13.6
1977	$4.2	$8.1	$2.3	$5.7	$13.9
1978	$4.4	$8.0	$2.8	$6.5	$14.5
1979	$5.6	$9.3	$3.2	$6.9	$16.2
1980	$6.3	$9.5	$3.6	$7.1	$16.7
1981	$6.9	$9.2	$4.2	$7.6	$16.8
1982	$5.9	$7.4	$4.9	$8.3	$15.7
1983	$5.8	$7.2	$5.4	$8.7	$16.0
1984	$5.7	$7.0	$5.8	$9.0	$16.0
1985	$5.9	$7.2	$6.3	$9.5	$16.7
1986	$6.5	$8.1	$6.8	$10.0	$18.1
1987	$7.5	$9.2	$7.4	$10.6	$19.8
1988	$8.3	$9.6	$8.0	$11.1	$20.7
1989	$8.3	$9.2	$8.7	$11.6	$20.9
1990	$8.4	$9.3	$10.0	$12.9	$22.2
1991	$9.1	$10.0	$11.0	$13.6	$23.6
1992	$8.9	$9.8	$11.4	$13.8	$23.6
1993	$10.3	$11.3	$12.4	$14.6	$26.0
1994	$8.0	$8.6	$13.6	$15.7	$24.3
1995	$8.9	$9.2	$14.7	$16.6	$25.9
1996	$9.3	$9.6	$15.3	$17.0	$26.6
1997	$9.6	$9.8	$16.1	$17.5	$27.3
1998	$9.1	$9.2	$16.6	$17.8	$27.0
1999	$9.7	$9.8	$17.3	$18.3	$28.1
2000	$10.1	$10.1	$18.0	$18.7	$28.8
Total	**$200.2**	**$260.3**	**$234.4**	**$316.0**	**$276.9**

[a] U.S. Census Bureau. 2003. State and Local Government Finances by Level of Government. Retrieved October 2003. http://www.census.gov/govs/www/estimate.html.

[b] EPA. 2000. Office of Water and Office of Policy, Economics, and Innovation. "A Retrospective Assessment of the Costs of the Clean Water Act: 1972 to 1997. Final Report." Retrieved October 2, 2003. http://www.epa.gov/ost/economics/costs.pdf

Many municipalities have made significant investments in CSO control within their jurisdictions. As part of the data gathering for this report, EPA was able to document expenditures on CSO control in 48 communities. To date, these expenditures total more than $6 billion, ranging from $134,000 to $2.2 billion per community. (Table M.4)

Table M.4 Community Expenditures on CSO Control

State	Community	Capital Expenditure ($M)[a]	Annual O&M ($M)	Sources
CA	San Francisco, CA	$1,450.0	$20.3	EPA 2001, EPA 2003
DC	Washington, D.C.	$35.0[b]	$13.7	EPA 2001
GA	Atlanta, GA	$759.0		EPA 2001
GA	Columbus, GA	$95.0	$1.0	EPA 2001, AMSA 2003
IA	Burlington, IA	$2.9		EPA 2001
IA	Washington, IA	$0.6		CSO Municipal Interview
IL	Alton, IL	$4.0		CSO Municipal Interview
IL	Chicago, IL	$2,200.0	$8.2	EPA 2001, EPA2003
IL	City of Batavia, IL	$10.9		CSO Municipal Interview
IL	Decatur, IL	$14.6		CSO Municipal Interview
IL	Galesburg, IL	$9.7		CSO Municipal Interview
IL	Havana, IL	$0.6		CSO Municipal Interview
IL	Lincoln, IL	$3.1		CSO Municipal Interview
IN	Goshen, IN	$12.3		CSO Municipal Interview
IN	Hammond, IN	$13.7		CSO Municipal Interview
IN	Muncie, IN	$20.5		EPA 2001
KY	Louisville, KY	$25.0		EPA 2001
MA	Agawam, MA	$5.9		CSO Municipal Interview
MA	Fitchburg, MA	$0.1		CSO Municipal Interview
MA	MWRA, Boston, MA	$110.0	$2.0	EPA 2001, EPA 2003
MA	South Hadley, MA	$2.5		CSO Municipal Interview
ME	Biddeford, ME	$24.5		CSO Municipal Interview
ME	Hamden, ME	$2.0		CSO Municipal Interview
ME	South Portland, ME	$9.0	$0.4	EPA 2001
MI	Armada, MI	$1.3		CSO Municipal Interview
MI	Rouge River, MI	$350.0	$5.1	EPA 2001
MI	Saginaw, MI	$105.2		EPA 2001, EPA 2003
MI	East Lansing, MI	$20.0		EPA 2003, CSO Municipal Interview
MI	Scottvile, MI	$0.3		CSO Municipal Interview

Table M.4 continued

State	Community	Capital Expenditure ($M)[a]	Annual O&M ($M)	Sources
MO	Cape Girardeau, MO	$34.5		CSO Municipal Interview
NJ	East Newark, NJ	$0.4		CSO Municipal Interview
NJ	North Bergen, NJ	$3.9		EPA 2001
NJ	Perth Amboy, NJ	$6.0		EPA 2003, CSO Municipal Interview
NY	Salamanca, NY	$1.0		CSO Municipal Interview
OH	Fremont, OH	$15.9		CSO Municipal Interview
OH	Perrysburg, OH	$7.6		EPA 2003, CSO Municipal Interview
OR	Portland, OR	$76.0[b]		EPA 2001
PA	Altoona, PA	$13.5		CSO Municipal Interview
PA	Freeland, PA	$3.0		CSO Municipal Interview
PA	Wyoming Valley, PA	$12.0		CSO Municipal Interview
VA	Richmond, VA	$221.0	$6.8	EPA 2001
VT	Randolph, VT	$2.9		EPA 2001
VT	Richford, VT	$3.2		CSO Municipal Interview
VT	Windsor, VT	$1.6		CSO Municipal Interview
WA	Bellingham, WA	$17.0		CSO Municipal Interview
WA	Bremerton, WA	$17.0	$4.6 to $6.1	EPA 2001
WA	King County, WA	$266.0		CSO Municipal Interview
WA	Spokane, WA	$50.0[b]		EPA 2003

[a] Capital Expenditure reflects the total amount (in unadjusted dollars) spent by the community on CSO control.
[b] Includes updated information from the community's LTCP or other documents.

M.3 Projected Needs for CSO Control

Community-specific information on projected CSO needs was available from several sources including:

- *Report to Congress - Implementation and Enforcement of the CSO Control Policy*
- *2000 Clean Watersheds Needs Survey Report to Congress*

Together, these sources provide information on projected capital needs for CSO control in 71 communities, less than 10 percent of the CSO universe. The individual community needs, presented in Figures M.1, M.2, and M.3, total more than $22 billion.

Figure M.1 Communities with Projected Capital Needs for CSO Control Exceeding $100 million

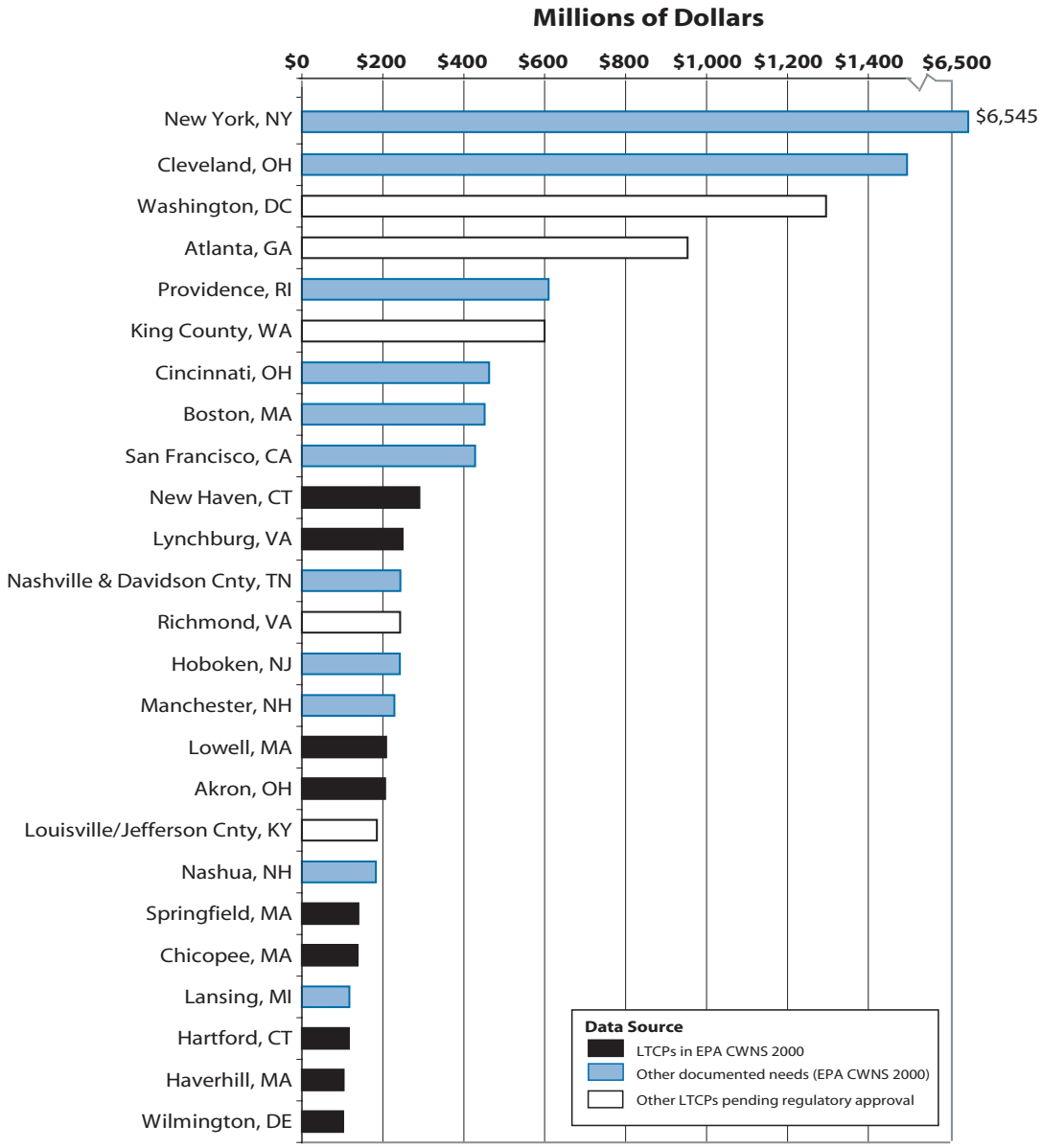


Figure M.2 Communities with Projected Capital Needs for CSO Control Between $10 and $100 million

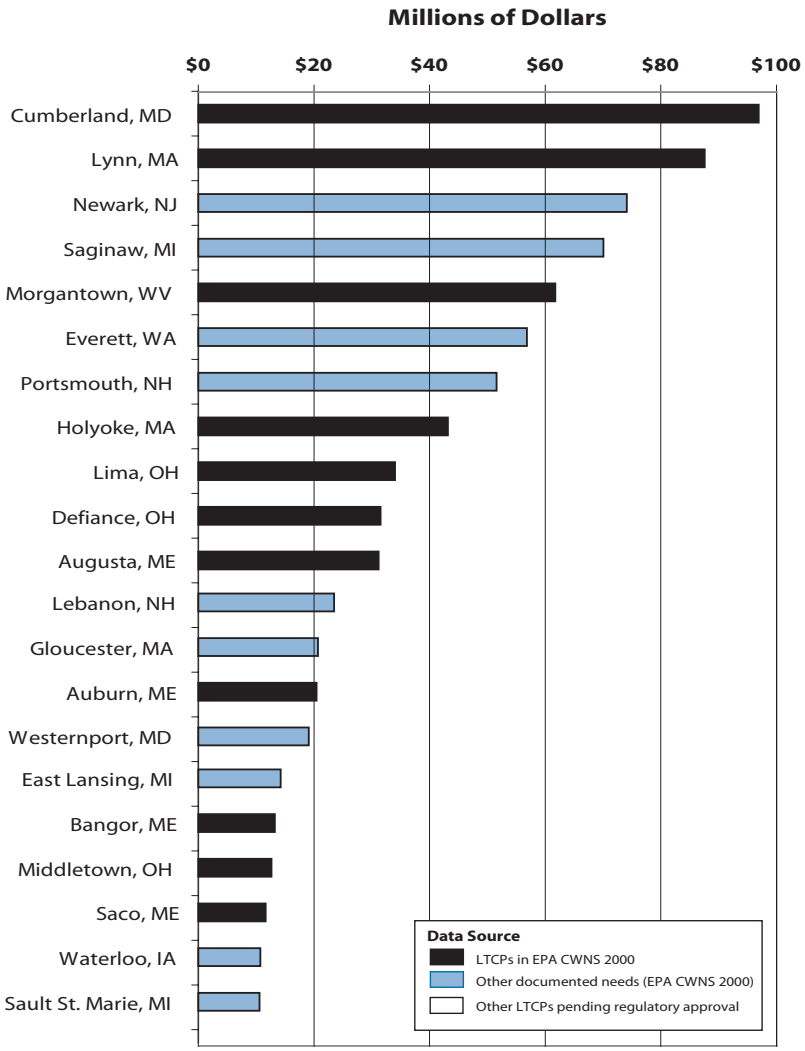
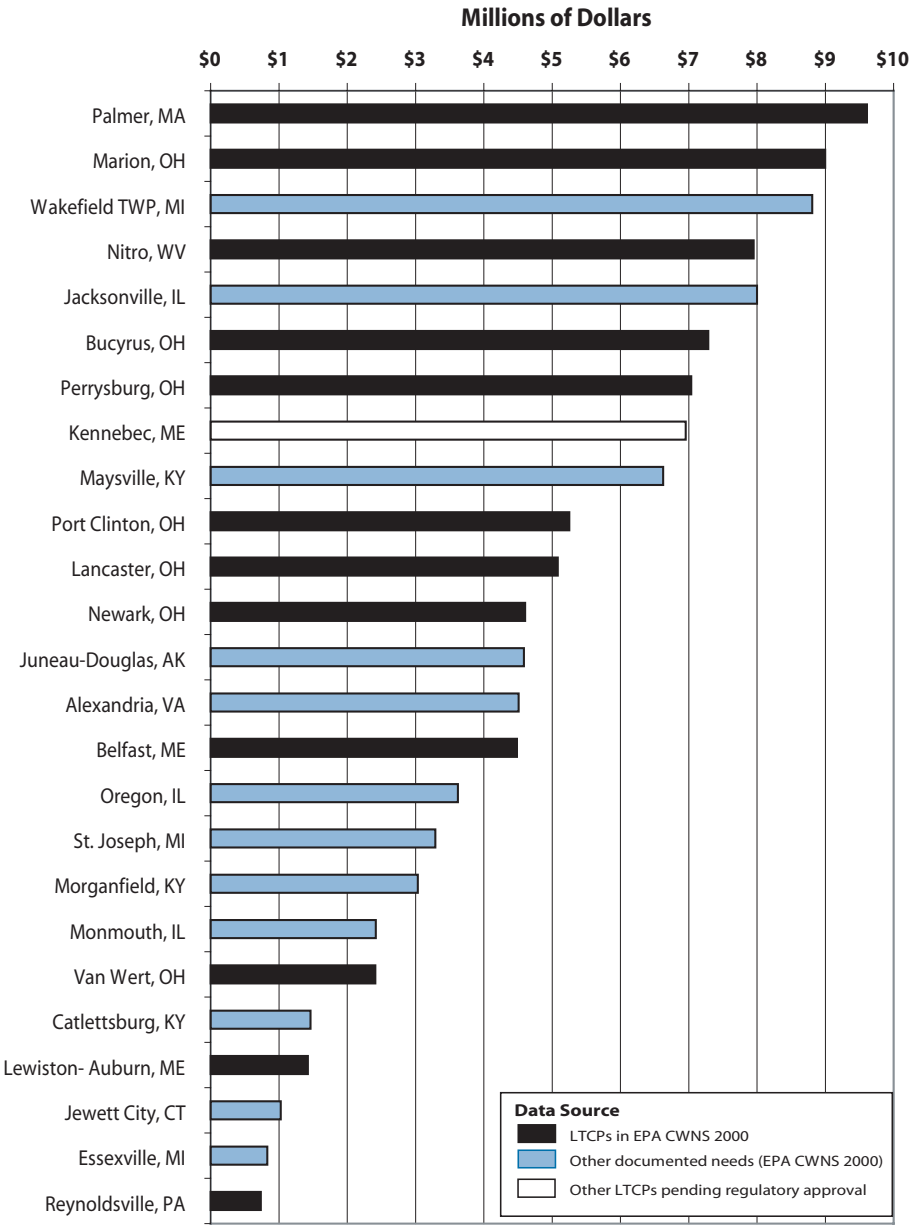


Figure M.3 Communities With Projected Capital Needs for CSO Control Ranging from $735,000 to 10 million



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