

LEAGUE OF
MINNESOTA
CITIES

State
of
the **Cities**

REPORT

2006

State of the Cities Report 2006

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The League of Minnesota Cities is a non-profit, membership organization dedicated to helping cities throughout Minnesota build quality communities by providing effective advocacy, expert analysis, trusted guidance, and collective action. The League serves its members through advocacy, education and training, policy development, risk management, and other services.

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Executive Summary

The *State of the Cities Report 2006* presents the results of the third annual League of Minnesota Cities fiscal conditions survey. It also explores the factors causing the cost of clean water to increase and describes the future costs cities will face to provide safe drinking water and reliable wastewater and stormwater systems.

Overall Fiscal Conditions of Cities

City fiscal conditions improve for almost half of Minnesota cities

The survey results show that the share of cities seeing improvement in their financial circumstances continues to grow (see Table ES-A). Forty-five percent of cities reported that conditions improved between 2004 and 2005—about four times the percent of cities seeing an improvement in fiscal health from 2002 to 2003. Almost half of the cities responding have a positive outlook regarding their ability to provide their residents and business owners with quality public services in 2006. While there has been a steady improvement in the share of cities saying they are better able to provide services to their communities, almost half of the cities responding to the current survey say their fiscal conditions declined from 2004 to 2005 (49 percent). About that same share foresee further erosion of fiscal health in 2006. Smaller cities were more likely to see a decline in fiscal health in 2005 and to predict further decline in 2006.

TABLE ES-A

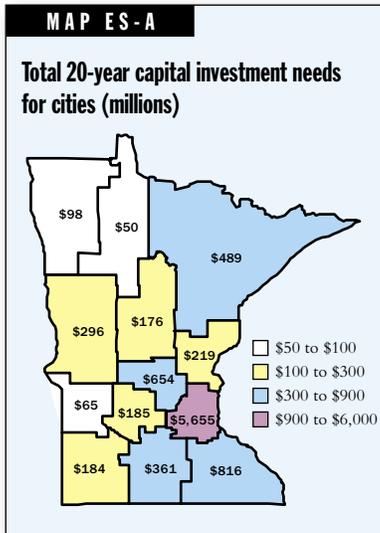
Percent of cities better able to meet needs compared to previous year				
	2003	2004	2005	2006 (predicted)
Percent of cities	12%	31%	45%	46%

Wide range of spending pressures exert impacts on budgets

Cities reported 2004 shortfalls in property tax revenues, state revenues, and fees. These shortfalls may have created difficulties, but city fiscal conditions are affected by more than just revenue streams. A wide range of fiscal pressures, including actions of the state and federal government, impact a city's ability to meet its financial needs. The current survey asked cities for the first time to select budget factors that had a major impact on their 2005 budgets. Among the top factors cited were infrastructure needs, health insurance costs, public safety needs, and state environmental mandates.

City budget actions focus on revenue increases, reserves, and efficiency measures

The three budget actions that cities employed most frequently in 2005 were to grow revenue through property taxes and/or fee increases, to rely on reserves, and to pursue efficiency measures, including contracting, entering into cooperative agreements, and increasing productivity levels. Fewer cities reduced workforce or made overall spending cuts in 2005 than in previous years, suggesting that many cities' financial circumstances are more stable (although not necessarily rosy). The share of cities making cuts to their workforces fell from 26 percent in 2003 to 5 percent in 2005, a decrease of 81 percent. A similar decline was seen in the share of cities reporting overall spending cuts.



The Cost of Clean Water

Cities' ability to tackle new and emerging issues will be determined by their mixed fiscal conditions, and the growing cost of water systems is one of the most pressing of emerging issues facing cities today. Providing safe drinking water, efficient wastewater systems, and effective stormwater management are some of the most important things cities do. About 700 of Minnesota's 853 cities operate municipal drinking water and wastewater systems, with the rest relying primarily on wells and individual sewer treatment systems.

Future capital investment needs for drinking water and wastewater exceed \$9 billion

Over the next two decades, Minnesota's municipal drinking water and wastewater systems will require huge investment to rehabilitate and replace infrastructure, expand systems, and upgrade treatments. The map at left shows that cities collectively face more than \$9 billion in future capital needs. In the next five years, cities face almost \$1 billion per year in capital needs¹.

Increasing demand in a changing regulatory environment

Minnesota will experience a population increase of more than one million people by 2030, according to the state demographer². This is one reason why maintaining and improving the quality of our water resources is one of today's most critical public challenges. Local governments and the state must build the infrastructure necessary to accommodate growth while striving to meet ambitious water quality goals that affect the three types of water systems: drinking water, wastewater, and stormwater.

A wide range of state and federal standards apply to public water systems. In regard to drinking water, the contaminant standards of the Federal Safe Drinking Water Act have changed and expanded several times since the law's enactment in 1974. In addition to keeping up with these changing standards, cities face the growing issue of securing adequate long-term drinking water supplies for existing and future development³. Many communities are challenged simply to maintain an adequate supply of drinking water for existing residents and industry.

The primary issue affecting wastewater is compliance with the Federal Clean Water Act. The act requires the Minnesota Pollution Control Agency to measure pollution discharge to all water bodies and to limit future discharges to levels that keep the water from exceeding water quality standards. For each body of water that is determined to be impaired, the state must complete a study of the contributing sources of pollution and develop a cleanup plan, which may place limits on new development. These limits have serious implications for cities' ability to attract new industry, jobs, and residents.

The Clean Water Act also requires 200 Minnesota governmental entities, including 161 cities, to reduce pollution from stormwater runoff by developing and implementing pollution prevention plans. Infiltration and retention ponds, rain gardens, and underground storage are some of the costly infrastructure improvements that many of these plans will feature.

Regulatory certainty, increased investment, and planning key to accommodating growth

How these issues are addressed will impact how and where growth occurs in Minnesota. Until the environmental requirements that cities will need to meet are clearly identified, there will continue to be uncertainty about what development will be permitted and what infrastructure will be necessary to allow it to go forward. Furthermore, if cities are unable to expand stormwater management and wastewater treatment capacity due to discharge limits, or if they are unable to secure adequate drinking water supplies, development will be forced to go elsewhere. Whether due to regulatory uncertainty or permit restrictions, the options for those who wish to build homes and businesses will be to move their development to cities that have capacity, to build in unsewered areas or rural areas where stormwater permits are not needed, or to move to other states. Adding development in unsewered areas increases the risks of pollution from poorly performing septic systems, as well as the costs of delivering public services in areas with lower density.

Conversely, if the state has a strong program that identifies what steps need to be taken to protect and clean up water, and provides local governments the technical assistance and funding needed to make the infrastructure changes that effort requires, cities will be able continue to plan for responsible economic growth and to provide reliable, affordable water utility service to their residents and businesses.

Capital needs will increase future household costs

Over the next two decades, the average annual household cost for drinking water and wastewater will grow from \$401 to \$727, if all the estimated future capital needs are borne by local ratepayers. This would be an 81 percent increase⁴. These averages mask significant variations in future household cost among regions and individual cities.

Projected household cost increases unaffordable for many Minnesotans, if borne locally

The U.S. Department of Agriculture's (USDA's) current affordability standard is that the average household cost of either drinking water or wastewater should not exceed 1.7 percent of median household income⁵ (in the past, lower standards of 1.4 percent and 1.5 percent of median household income have been used). Using this standard, if all the future needs identified are borne locally:

- 6.3 percent of cities will have unaffordable drinking water systems in the next five years.
- 13.4 percent of cities will have unaffordable wastewater systems in the next five years.
- The number of cities with unaffordable water systems will increase to 13.1 percent and 15.7 percent of cities, respectively, over the next two decades.

Affordability problems are concentrated in smaller cities. This is due in part to the lack of economies of scale for capital-intensive projects that serve few households, as well as the fact that smaller cities generally have a lower median household income.

In order to keep their average household costs under 1.7 percent of median household income, cities exceeding the current standard of 1.7 percent of median household income would need to reduce their future costs by approximately \$20.5 million a year over the next five years.

Using alternative standards that measure affordability against less affluent households causes the “affordability gap” to grow significantly. For example, the annual gap balloons to \$86.6 million over the next five years for cities to maintain household costs to an affordability threshold of 1.5 percent of 60 percent of median household income. Under this measurement standard, the annual gap could grow to \$146 million in the next two decades.

State and federal assistance critical to controlling costs

The affordability gap estimates assume that all future needs are borne by local ratepayers—yet this will likely not be the case. The state and federal government currently fund four major programs that provide grant and loan assistance to communities for major capital projects. These programs currently allocate approximately \$82 million per year for drinking water, wastewater, and stormwater infrastructure assistance in Minnesota. Federal matching funds for the state Water Pollution Control Fund were recently cut by a third and further cuts have been proposed. Gov. Pawlenty has recommended increasing state funding for this program four-fold merely to replace recent federal cuts.

The \$82 million of appropriations is approximately equal to the estimated annual affordability gap at 1.5 percent of 60 percent of median household income (\$86.6 million). Of course, affordability is not the state’s only concern—many of these dollars will instead go toward capital projects to meet critical environmental or public health concerns. In addition, many of the dollars go toward non-city systems and non-system projects; for example, approximately 20 percent of the 2006 intended use list for the wastewater revolving loan funds is targeted to projects that connect currently unsewered township areas to municipal systems or to alternative systems in these township areas.

Conclusion

A steady increase in the share of cities reporting improved fiscal conditions is a positive sign for cities; yet serious fiscal issues remain. Almost half of Minnesota’s cities have a negative outlook for their ability to meet needs in 2006. Minnesota’s very small cities continue to struggle—of the cities for which financial circumstances deteriorated between 2004 and 2005, two-thirds are below 1,300 population.

A variety of factors were cited by cities as having major, negative impacts on city budgets, and some of the most concerning factors relate to water-policy issues. Existing state and federal funds provided to cities for drinking water, wastewater, and stormwater system needs are essential to cities' ability to meet their capital needs. The importance of these funds will only increase as cities struggle to meet all their identified—and as yet unforeseen—future clean water needs.

Where and how growth will occur in the decades to come will be determined by decisions made today about how Minnesota's public policies address the need for clean water. If left unaddressed, the expanding regulatory requirements for wastewater discharge and stormwater runoff, as well as long-term drinking water supply issues, will severely limit the ability of cities to expand systems to encourage efficient and environmentally-sound development. The proposed Clean Water Legacy Act is one critical step in securing an affordable long-term solution to these issues.

Endnotes

- ¹ Wastewater needs data is from the Pollution Control Agency's 2005 Wastewater Infrastructure Needs Survey of the operators of Minnesota's municipal wastewater systems. Drinking water needs data is from the U.S. Environmental Protection Agency's national assessment of drinking water infrastructure needs, based on extrapolations of survey data from only a subset of communities. (See Appendix B for more details regarding the data and analysis.)
- ² *Minnesota Population Projections 2000–2030*, Martha McMurry, Office of the State Demographer, 2002.
- ³ *Minnesota's Water Supply: Natural Conditions and Human Impacts*, Department of Natural Resources, 2000.
- ⁴ Future capital needs are calculated assuming the community uses 20-year financing at 4.5 percent interest. One half of existing debt service is included in the 0-5 year estimates, while the 6-20 year estimates only include debt service for estimated future needs.
- ⁵ *State of Minnesota 2006 Capital Budget Requests*, January 17, 2006, p. 17.

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Introduction

The third-annual fiscal conditions survey

The League of Minnesota Cities *LMC State of the Cities Report 2006* discusses the results of the third annual city fiscal conditions survey. The survey responses highlight the fiscal issues and budget challenges in cities across the state and the range of strategies cities are using to continue to provide quality services. Three years of survey data allows for exploration of longer-term trends. The first chapter of the report describes the results overall and offers a breakdown of responses by city size and geographical characteristics. Seven other states participated in the survey project this year. The report looks at Minnesota and the four other participating Midwest states to compare cities' fiscal health and budget strategies.

Survey methodology

The fiscal conditions survey was sent to all LMC member cities, which at the time numbered 826 of Minnesota's 853 cities (the only non-member cities are under 200 population). As was the case for each of the previous fiscal conditions surveys, some questions were modeled after questions on the National League of Cities annual survey. Cities in Georgia, Illinois, Iowa, North Dakota, Pennsylvania, South Dakota, and Tennessee also received the survey. Of the 4,457 cities surveyed overall, 1,399 responded to the survey for an overall response rate of 31 percent. Minnesota's response rate was 49 percent. More information on the survey methodology and a copy of the 2006 survey instrument can be found in Appendix A.

The cost of clean water

The report also provides an overview of an issue of critical importance to cities and all Minnesotans: clean water. The report sets out the major policy issues related to drinking water, wastewater, and stormwater systems, including how requirements for clean water will affect development patterns and cities' ability to attract new business. The report explores the future cost to cities and their residents in replacing aging infrastructure, expanding systems for new residents and industry, and meeting increasingly strict federal and state regulatory requirements. The report explores the affordability of the potential added burden on households in order to meet future capital needs.

The first chapter of the report describes cities' fiscal conditions and offers a breakdown of responses by city size and geographical characteristics, and also compares cities' fiscal health and budget strategies to four other Midwest states. The second chapter provides an overview of an issue of critical importance to cities and all Minnesotans: clean water

Chapter 1: City Fiscal Conditions

Introduction

Three years have passed since the 2003 Legislature made deep cuts to Local Government Aid (LGA) and Market Value Homestead Credit (MVHC) reimbursements, and the economy has had more time to recover from the 2001–02 recession.

The third annual League of Minnesota Cities fiscal conditions survey shows that the share of cities seeing improvement in their financial circumstances continues to grow. Overall, the rate at which cities made workforce reductions or cut spending in 2005 was significantly lower than in 2003, suggesting more cities have seen their budget situations stabilize (although not necessarily suggesting that budget situations are good). Still, despite positive signs for some, nearly half of cities report deterioration between 2004 and 2005 in their ability to provide quality services to residents and businesses.

Responses overall, as well as trends by city size and geographical characteristics, are described for the following survey elements:

- Cities' ability to meet their financial needs in the current year and projected ability to do so in the upcoming year.
- The types of revenue shortfalls cities have experienced over the last budget year.
- The impact on city budgets of various factors, including service needs of new development, state and federal mandates, public safety needs, and the cost of employee health benefits. A new question on the 2006 survey offers insight into how different fiscal pressures are affecting cities across the state.
- The kinds of budget strategies cities employed in 2005.

For the second consecutive year, several other state municipal leagues—Georgia, Illinois, Iowa, North Dakota, Pennsylvania, South Dakota, and Tennessee—sent the fiscal conditions survey to their member cities. The last sections of this chapter compare the fiscal conditions of Minnesota cities and cities in other states, and describe some of the results from the National League of Cities (NLC) annual fiscal conditions survey.

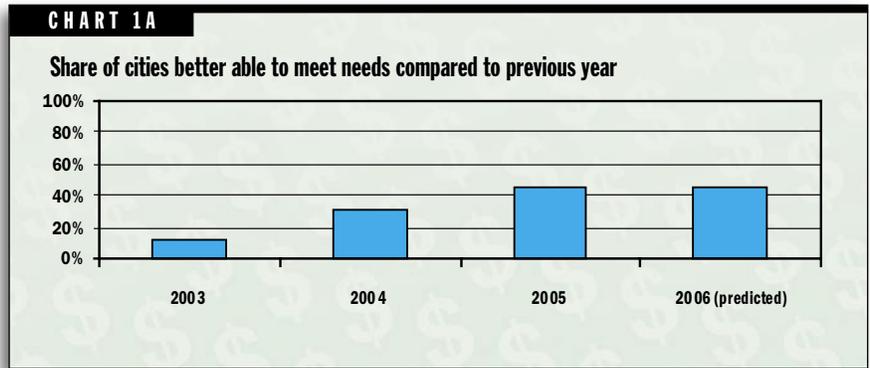
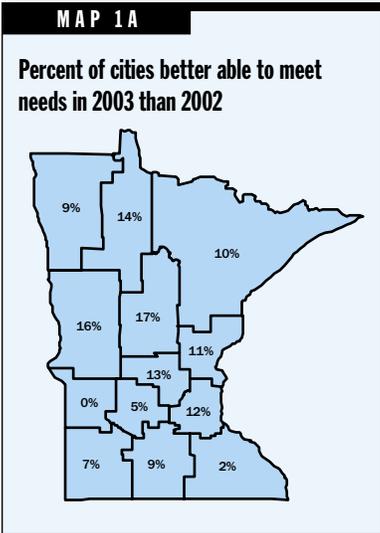
Cities face familiar and unfamiliar challenges

Each city has a unique array of issues to grapple with and the impact of any one issue depends on the local characteristics and environment. As Chapter 2 describes, for example, cities are facing significant costs to upgrade and/or expand their drinking water, wastewater, and stormwater systems to meet the demands of new growth and to address aging infrastructure. The burden of these added costs, and the implications of the new state and federal regulations for development and economic growth, will affect cities differently depending on local circumstances. Other examples of important issues that cities will have to consider include familiar challenges, like transportation, and new challenges, like preparing emergency plans for dealing with the threat of pandemic flu.

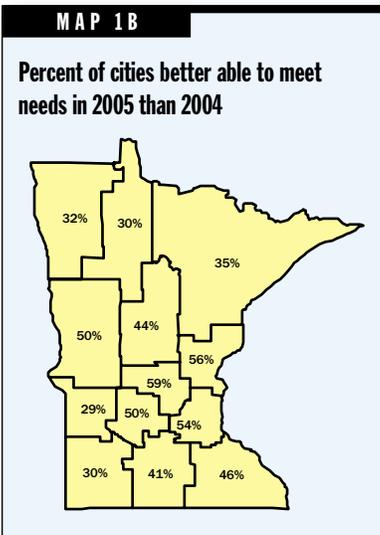
The third annual League of Minnesota Cities fiscal conditions survey shows that the share of cities seeing improvement in their financial circumstances continues to grow.

Fiscal conditions improve for some cities

The key question on the fiscal conditions survey asks cities to indicate whether they are better or less able to meet their financial needs in 2005 than in 2004, as well as their outlook for 2006. Forty-five percent of responding Minnesota cities reported that their financial circumstances in 2005 were better than in 2004. This is almost four times the percent of cities seeing an improvement in fiscal health from 2002 to 2003. Almost half of the respondents are optimistic that their ability to provide their residents and business owners with quality public services will improve in 2006. As seen in Chart 1A, there has been a steady increase in the share of cities that are positive about their fiscal health since 2003.



As time has passed since the economic recession of 2001-02 and the significant state aid and credit cuts of 2003, more cities have seen their financial circumstances improve. There has been some positive news about the state and national economies. State budget forecasts are heralding rosier times ahead, although there are still some doubts about the reliability of certain revenue streams, like the new health impact fee on cigarettes. The 2005 Legislature increased funding for LGA and did not impose levy limits on cities. While nearly half of cities are better able to meet needs in 2005 than in the previous year, it does not follow that these cities are in good fiscal health. Comparing financial circumstances from year to year is a relative comparison, not an absolute measure. An answer of “better able” may mean that conditions have improved slightly, that those cities have adjusted to their budget constraints, or that officials don’t foresee additional major fiscal challenges.



The maps at left show the share of cities, by region, citing improved fiscal conditions in 2003 and in 2005 (see Appendix A for a table containing this data). In all regions, there has been an increase in the share of cities reporting improved conditions between 2003 and 2005. For predictions about fiscal health in 2006, however, the proportion of cities with a positive outlook dropped in Region 3 in the northeast; Region 6e, Region 7e, and Region 7w to the west and north of the metro area; and Region 10 in the southeast corner of the state.

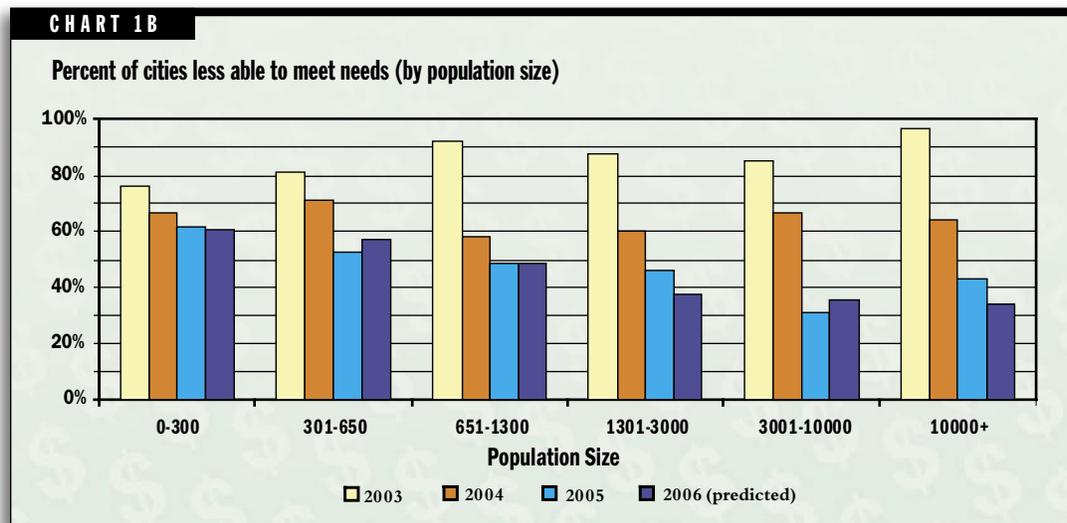
Financial decline continues for almost half of Minnesota cities

While there has been a steady improvement in the share of cities saying they are better able to provide services to their communities, almost half of the cities responding to the current survey say their fiscal conditions declined from 2004 to 2005 (49 percent). About that same share foresee further erosion of fiscal health in 2006. Those cities facing deteriorating

fiscal conditions may have experienced permanent changes in their financial circumstances, leading them to give a negative assessment of their ability to meet needs or to deal with more significant obstacles in achieving budget stability.

Several trends illustrate that smaller cities in particular have struggled:

- About one-third of the cities with a decline in their ability to meet needs between 2004 and 2005, as well as a negative outlook for 2006, were under 300 population.
- Smaller cities were more likely to see a decline in fiscal health in 2005; two-thirds of the cities reporting a decline are below 1,300 population.
- At least half of the cities below 650 population have indicated continual deterioration in their ability to meet needs since 2003 (see Chart 1B).
- While all population groups have seen a steady decrease since 2003 in the share of cities less able to meet their financial needs, improvement is more widespread among larger cities.
- As the chart below shows, the gap between the proportion of cities that experienced declining conditions in 2003 and those predicting decline in 2006 is much greater for cities over 10,000 population than it is for cities under 300.



Fiscal condition as related to proximity of urban or regional centers

Beyond population size, whether the city is located within a metropolitan statistical area¹ (MSA) has been related to a city’s ability to meet its financial needs. There are seven MSAs in Minnesota: Duluth-Superior, Fargo-Moorhead, Grand Forks, La Crosse, Minneapolis-St. Paul, St. Cloud, and Rochester (see Map 1C). Table 1A below shows the share of MSA and non-MSA cities that reported improving fiscal conditions in 2004 and 2005 and predicted improvement for 2006. MSA cities have been more

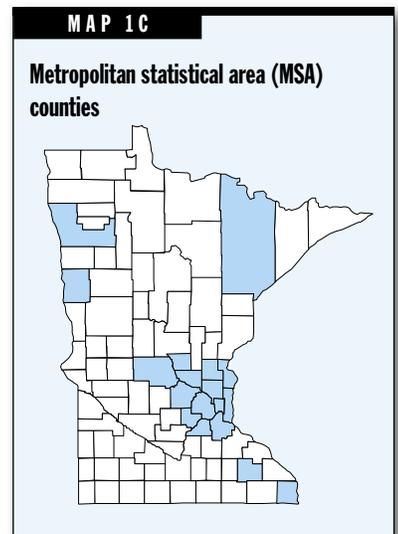


TABLE 1A

Percent of cities better able to meet needs by MSA status

	2004	2005	2006 (predicted)
MSA cities	35%	48%	47%
Non-MSA cities	29	43	45

likely to report and predict being better able to meet needs than non-MSA cities. The gap between the two groups, however, has narrowed over time, suggesting that MSA status is less of an influence as the state and national economy recover and more time passes since the large cuts to LGA and the MVHC reimbursement. Cities in MSAs may have already taken advantage of the wider range of options for addressing fiscal challenges that their proximity to larger, more urban centers affords them. These options include a wider range of potential partners for cooperative agreements and the availability of private firms with which to contract to deliver services.

The incidence of state revenue shortfalls is down dramatically from a peak of 82 percent in 2003, the year of the aid and reimbursement cuts.

Revenue shortfalls dominated by shortfalls in property taxes, state revenues, and fees

Cities in Minnesota most often reported shortfalls for fiscal year 2004 in property tax revenues (40 percent), state revenues (39 percent), and fees, charges, and license revenues (25 percent). The incidence of state revenue shortfalls is down dramatically from a peak of 82 percent in 2003, the year of the aid and reimbursement cuts. For most cities with shortfalls in these three revenue streams, the shortfalls were less than 10 percent of the expected amount. 15 percent of cities said that their state revenue shortfalls exceeded 10 percent of what they expected to receive. Among cities over 10,000 population, more than a quarter of them experienced state revenue shortfalls that exceeded 10 percent of expected amounts. Cities overall have increasingly reported shortfalls in revenue from fees and charges since 2003.

Many cities rely on LGA to provide quality services in their communities. Significant cuts to LGA in 2003 resulted in more than four out of five cities reporting shortfalls in state revenue that year. During the 2005 session, however, the Legislature directed an additional \$48 million into the program—about one third of the amount cut in 2003. The increase is welcome relief to many cities, but not necessarily enough to improve their overall fiscal conditions: more than three out of every four cities that predict a decline in fiscal health in 2006 will see their aid amounts increase between 2005 and 2006 (see Table 1B). And for some cities, the LGA appropriation increase merely slowed the long-term decline in their LGA caused by the 2003 cuts and formula changes—it did not cause an actual increase in their LGA payments.

TABLE 1B

Number of cities predicting they are better or less able to meet needs in 2006 (by 2005-06 LGA change)

2005-06 LGA Change	Better Able in 2006	Less Able in 2006
No Change	30	10
LGA Increase	144	148
LGA Decrease	11	35
Total	185	193

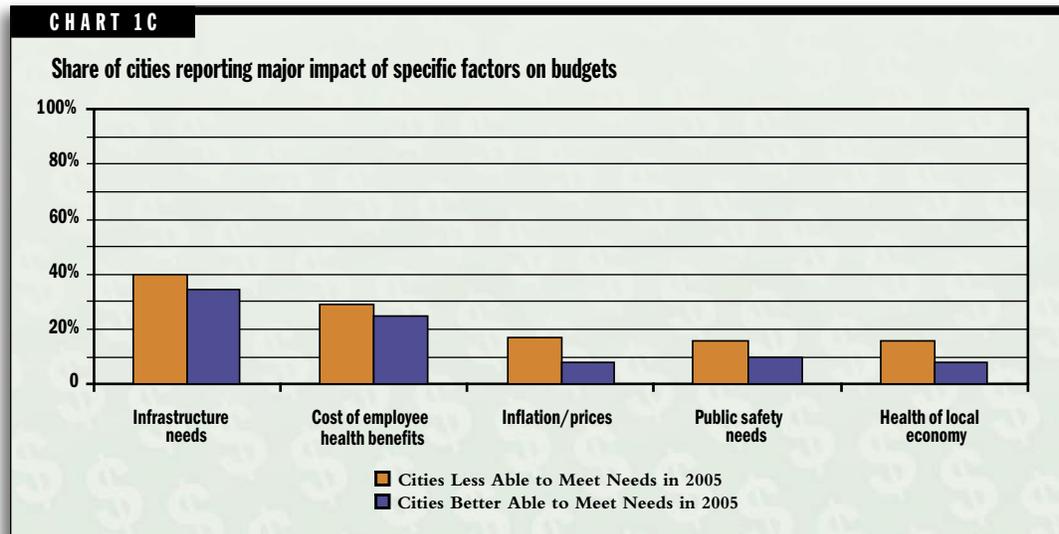
Wide range of fiscal pressures exert impacts on budgets

Whether a city is experiencing improvement or decline in its financial health is determined not only by revenue fluctuations but also by a wide range of other fiscal pressures, including actions of the state and federal government. The current survey asked cities for the first time to identify whether budget factors on a predetermined list had an impact on their 2005 budgets:

- More than one-third of responding cities identified infrastructure needs as having a major impact. The state's continued inaction on a long-term funding strategy for improving the state highway system is increasing pressure on local streets.
- Among the top factors having a major impact on city budgets were public safety needs and health insurance costs. The cost of providing healthcare to employees and meeting pension obligations continues to grow.
- State environmental mandates were cited by 41 percent of cities as having an impact on their budgets. As the second half of this report describes, the needs for updating and/or replacing city infrastructure for water systems will be driven in large part by state and federal regulations and mandates.

More than one-third of responding cities identified infrastructure needs as having a major impact.

Cities that were less able to meet needs in 2005 than in 2004 most often identified the following five factors as having major impact on their budgets: infrastructure needs, cost of employee healthcare benefits, inflation, public safety needs, and the health of the local economy. Major impacts from each of these factors were reported less frequently by cities that saw improvement in their financial circumstances from 2004 to 2005. The difference between these two groups of cities is most pronounced in their views of inflation/prices as a major factor impacting budgets.



Now that state aids have stabilized for most cities and many fewer cities are experiencing revenue shortfalls, revenue increases are more about addressing inflation and other budget pressures than about making up for lost revenues.

City budget actions focus on revenue increases, reserves, and efficiency measures

The three budget actions that cities employed most frequently in 2005 were to grow revenue through property taxes and/or fee increases, to rely on reserves, and to pursue efficiency measures, including contracting, entering into cooperative agreements, and increasing productivity levels. In 2003 and 2004, the top three budget actions were overall spending cuts, revenue increases, and use of reserves.

The share of cities increasing revenues has remained almost unchanged since 2003, though the circumstances surrounding revenue increases have changed. After the aid and reimbursement cuts of 2003 and 2004, cities were increasing revenues in large part in reaction to those cuts. Now that state aids have stabilized for most cities and many fewer cities are experiencing revenue shortfalls, revenue increases are more about addressing inflation and other budget pressures than about making up for lost revenues.

The share of cities making cuts to their workforces fell from 26 percent in 2003 to 5 percent in 2005, a decrease of 81 percent. A similar decline was seen in the share of cities reporting spending cuts. Far fewer cities reduced workforce or made overall spending cuts; this suggests that many cities' financial circumstances are more stable (although not necessarily rosy).

Minnesota cities report more improvement than Iowa, less improvement than South Dakota cities

Cities in Georgia, Illinois, Iowa, North Dakota, Pennsylvania, South Dakota, and Tennessee also completed the 2006 fiscal conditions survey. Minnesota cities reported improving fiscal conditions between 2004 and 2005 slightly more often than did all cities overall and Midwest cities overall (see Table 1C). Minnesota cities predicted slight improvement in their fiscal conditions for 2006. For cities in the other Midwest states, there is either no change from 2005 to 2006, or there is an actual decrease in the share of cities expressing optimism about next year.

TABLE 1C

Percent of cities better able to meet needs by state		
State	% Better Able in 2005	% Better Able in 2006 (Predicted)
South Dakota	57%	53%
Illinois	46	46
Minnesota	45	46
North Dakota	42	35
Iowa	29	29
Midwest Overall	42	42
Georgia	71	71
Tennessee	49	43
Pennsylvania	28	25
All States Overall	44	44

Other observations from comparing Minnesota cities with those in the other Midwest states are:

- In a pattern very similar to that for just Minnesota cities, property taxes, fees and charges, and state revenue shortfalls are reported most frequently by cities in the five Midwest states overall.
- Cities in Minnesota reported shortfalls in property taxes only slightly more often than did cities in other Midwest states (40 percent vs. 38 percent).
- For all other revenue sources, cities in those states identified shortfalls more frequently. The difference is most pronounced for local income tax, sales tax, and tourist taxes. Minnesota cities do not have the authority for a local income tax and rely less heavily on the latter two revenue sources than do cities in other states.
- Use of budget strategies in 2005 by Minnesota cities and Midwest cities overall was largely similar (see Table 1D). Revenue increases, however, were enacted by 83 percent of Minnesota cities while 68 percent of Midwest cities overall raised revenues.

TABLE 1D**Budget strategies used by cities in 2005**

	Revenue Increases	Spending Decreases	Increasing Efficiencies	Workforce Cuts	Service Cuts	Draw Down Reserves
Minnesota	83%	12%	32%	5%	9%	33%
All States	67	14	33	6	7	35
Midwest Group	68	14	29	6	7	34

Comparison with National League of Cities survey results

The National League of Cities (NLC) administers an annual fiscal conditions survey to its members. The three LMC surveys have modeled some questions on the NLC survey tool. Since most NLC members are very large cities, only comparisons between NLC results (which can include larger Minnesota cities) and responses to the LMC survey by Minnesota cities over 10,000 are made. The NLC data shows a significant jump from 2004 to 2005 in the share of cities reporting improvement. The gap between the share of cities reporting that 2004 was better than 2003 and the share reporting that 2005 was better than 2004 was larger for cities responding to the NLC survey than it was for Minnesota cities over 10,000 responding to the LMC survey (37 percent to 63 percent vs. 35 percent to 55 percent, respectively). Looking ahead to 2006, however, cities that responded to the NLC survey and Minnesota cities over 10,000 predicted improvement at the same rate: 59 percent.

TABLE 1E**Better able to meet needs: NLC survey results and LMC survey results for cities over 10,000**

	NLC Cities	MN Cities over 10,000
Better Able in 2004	37%	35%
Better Able in 2005	63	55
Better Able in 2006	59	59

The five factors most often identified by cities on the NLC survey as having an impact on their budgets were, in order of frequency, employee benefits costs, the cost of wages and salaries, inflation, change in the local tax base, and public safety needs. These were similar to the top five among Minnesota cities over 10,000, which were inflation, the cost of wages, public safety needs, infrastructure needs, and benefits costs.

Almost half of the cities responding to the NLC survey reported increases in fees and charges, compared to 71 percent of Minnesota cities over 10,000. Slightly more than half of the cities in Minnesota over 10,000 increased the size of their workforce in 2005. NLC reported that 40 percent of cities nationally took this action.

Conclusion

While overall the share of cities reporting improvement in their financial circumstances from the previous year has increased steadily, almost half of Minnesota cities were less able to meet their needs in 2005 than in 2004. Small cities in particular, are still experiencing deteriorating fiscal conditions. In 2005, many fewer cities made spending cuts or reduced the size of their workforce, suggesting that although conditions may not be rosy, they seem to have stabilized for some cities. Revenue increases were not used primarily to make up for shortfalls but to react to a range of spending pressures, including employee health insurance costs, infrastructure needs, and state environmental mandates. Chapter two discusses the intersection of the last two of these pressures: how state and federal environmental mandates along with growth and the need to replace old systems are increasing the costs of the infrastructure needed to provide clean water.

Endnotes

¹ The U.S. Census Bureau defines a metropolitan statistical area (MSA) as a geographical area containing at least one urbanized area of at least 50,000 inhabitants with a total area population of at least 100,000. The area consists of one or more counties. The seven MSAs that include at least one Minnesota county are: Duluth-Superior, Fargo-Moorhead, Grand Forks, La Crosse, Minneapolis-St. Paul, Rochester, and St. Cloud.

Chapter 2: The Cost of Clean Water

Introduction

Providing safe drinking water, efficient wastewater systems, and effective stormwater management are some of the most important things cities do. About 700 of Minnesota's 853 cities operate municipal drinking water and wastewater systems, while the rest rely primarily on wells and individual sewer treatment systems. Cities' mixed fiscal conditions, as described in the first half of this report, will impact their ability to tackle new and emerging issues; one of the most pressing of these issues is the growing cost of water systems.

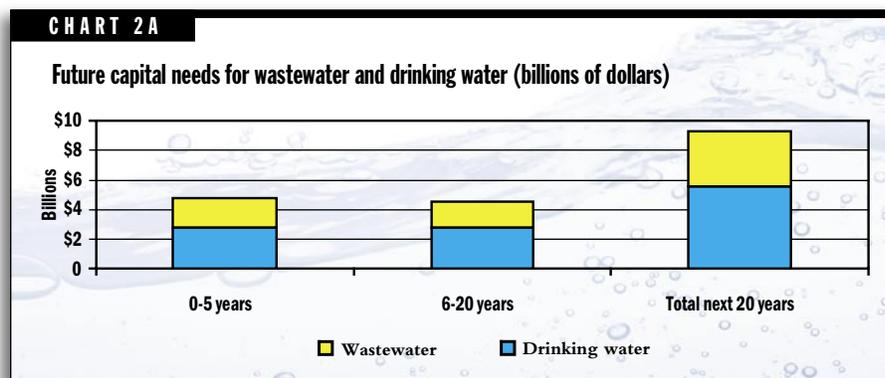
This chapter analyzes current spending on municipal systems and the billions of dollars needed in the next two decades to upgrade treatment facilities, replace aging infrastructure and expand systems for new residents and industry. Findings include:

- Future capital needs for water systems exceed \$9 billion over the next 20 years.
- Cities and the state face complex regulatory, growth and water supply issues.
- Typical household costs for drinking water, wastewater, and stormwater systems will increase significantly, raising concerns about affordability.
- State and federal revenues are critical to keeping costs for water affordable. Recent federal cuts require the state to significantly increase its support merely to maintain existing levels of assistance to cities.

The analysis that follows is unique in that it looks at the cost of all three major water systems for cities statewide. As with any analysis, the data used has limitations. Current spending data is incomplete and estimates of future needs are conservative. Non-municipal systems are not included. Still, the analysis demonstrates the scope of a critical public issue. It is one that needs attention from state policy makers now, as it will only grow in urgency over the next several years.

Future capital investment needs for drinking water and wastewater exceed \$9 billion

Minnesota's municipal drinking water and wastewater systems will require huge investments over the next two decades. Chart 2A shows that cities collectively face more than \$9 billion in future capital needs to rehabilitate and replace infrastructure, expand systems, and upgrade treatments. In



the next five years, cities face almost one billion dollars per year in needs¹. In comparison, cities with wastewater and drinking water enterprise funds reported a total of \$355 million in capital outlays in 2004². Stormwater needs data is not as comprehensive, so it is discussed separately later in this chapter (see page 16).

But as daunting as the projections are, they may actually underestimate the full costs for a number of reasons:

- The projections do not account for any increased costs to operate and maintain expanded or upgraded systems.
- The projections do not account for inflation.
- The future costs of complying with the federal Clean Water Act are unknown, so these costs are not fully reported.
- It is difficult to anticipate all future needs, especially for smaller cities with limited staff capacity.
- Unanticipated future changes to the regulatory environment, demographics and technology can all impact future costs.

Increasing demand in a changing regulatory environment

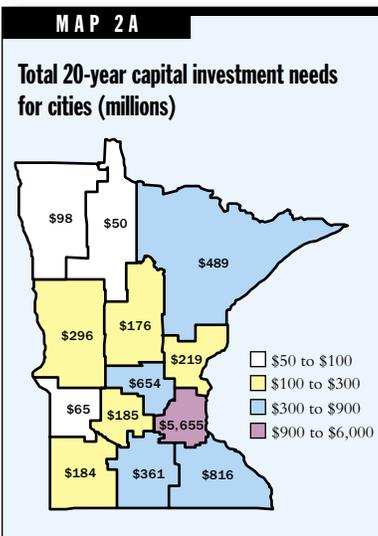
Maintaining and improving the quality of water resources is one of today’s most critical public challenges. The state demographer projects that Minnesota’s population will increase by more than one million people by 2030³. The state and local governments must build the infrastructure necessary to accommodate this growth while striving to meet ambitious water quality goals that affect drinking water, wastewater, and stormwater systems. Decisions made today about how Minnesota’s public policies address the need for clean water will impact where and how growth will occur in the decades to come.

Drinking water: Higher standards, inadequate supply

Public water systems must meet a wide range of state and federal standards for clean, drinkable water. The U.S. Environmental Protection Agency (EPA) sets maximum contaminant levels for a broad list of substances, including pesticides, bacteria, and industrial chemicals. The levels indicate the lowest concentration at which a substance becomes a potential health concern. The state uses Health Risk Limits for additional contaminants that the EPA does not limit but are a potential danger to Minnesotans.

Since the Federal Safe Drinking Water Act of 1974, contaminant standards have changed and expanded several times. New research on the effects of different chemicals and improved testing methods led to revision of the standards. Also, concerns about the effects of contaminants on the environment and on children have changed over the years. For example, new rules related to copper and lead required public water systems to implement new testing procedures and education efforts. In 2001, the EPA lowered the acceptable limit for the presence of arsenic in drinking water. Beyond setting standards for contaminants such as these, the federal government also imposes reporting and emergency preparedness requirements on water suppliers.

Keeping drinking water safe is a huge challenge and responsibility; having enough water is also critical. Securing adequate long-term water supplies is a growing interstate and international issue. A 2000 Minnesota Department of Resources report⁴ describes several supply issues for Minnesota, including:



- Demand is growing for water use by residences, industry, and agriculture.
- The amount of impervious surface increases with new development, reducing the degree of recharge of water supplies from rain water.
- Increased development also raises the frequency of contamination incidents.
- Natural recharge is also disrupted by flood protection measures and some agricultural improvements.
- Water supplies are diminished during periods of drought. In certain areas, competition for groundwater supplies with natural amenities, like streams or springs, can be a challenge.

An adequate supply of water is essential for economic competitiveness and quality of life. Recently, media reports have described how the water shortage in southwestern Minnesota has halted new industrial growth and forced local water suppliers to pump in water from thousands of miles away to meet current demand⁵. In the seven-county metro area, the Metropolitan Council recently projected that demand for water by all types of users will increase by about 29 percent between 2000 and 2030 because of growth in population and economic activity⁶. Water supply is an issue in northeastern Minnesota because the area's naturally rocky geology makes accessing water difficult.

Wastewater: Grappling with the Clean Water Act and one million new Minnesotans

The primary issue affecting the future cost of wastewater is compliance with the Federal Clean Water Act. In addition to normal environmental protection requirements, the act requires that the Minnesota Pollution Control Agency (MPCA) measure pollution discharge to all water bodies and limit future discharges to levels that keep the water from exceeding water quality standards. When a water body is found to be too polluted, the state must complete a study of the contributing sources of pollution known as a Total Maximum Daily Load (TMDL) study and develop a plan for cleaning up the water. Meeting TMDL standards may require expensive improvements to municipal wastewater treatment systems. According to one state official, this effort is "the biggest environmental initiative in most states since the Superfund program⁷." For example, one major impairment identified by TMDLs is phosphorus. Infrastructure necessary to comply with state phosphorus treatment requirements is projected to cost cities \$200 million to \$250 million⁸.

The TMDL limits also have grave implications for cities' ability to attract new industry, jobs, and residents. The state demographer's estimate that Minnesota's population will increase by more than one million people by 2030⁹ may not hold true if cities are unable to expand wastewater treatment capacity due to discharge limits—development will be forced to go elsewhere. Also, the costs of development will increase as the supply of developable land is constricted and land prices increase. Some urban development will move to non-urbanized areas, resulting in less dense development and greater reliance on individual septic systems.

At first blush, pushing development away from community systems onto individual septic systems may seem like a benign policy outcome. The need for expensive expansion of community systems is reduced, the cost of the septic systems is borne by the homeowner, and in theory septic systems produce no polluting discharge. Indeed, for many residences, septic systems are the most appropriate approach. Yet septic systems only produce

The state demographer's estimate that Minnesota's population will increase by more than one million people by 2030 may not hold true if cities are unable to expand wastewater treatment capacity due to discharge limits—development will be forced to go elsewhere.

no discharge if they are properly installed and properly maintained. The MPCA estimates that 12 percent of the state’s 535,000 septic systems statewide pose an imminent threat to public health and safety, while another 27 percent are failing (see Table 2B)¹⁰. In addition, most septic systems produce septage waste that must either be applied to agricultural land or treated at a treatment facility.

TABLE 2B

Minnesota’s on-site sewage treatment

	Number	Percent
Estimated Failing Individual Sewage Treatment Systems (ISTs)	144,000	27 %
Estimated ISTs Posing Imminent Threats to Public Health and Safety	64,000	12 %
Estimated Fully Functioning ISTs	327,000	61 %
Total ISTs	535,000	100%

Septic systems also require large lots. Development relying on septic systems, therefore, requires more land, creating an increased demand for streets and other infrastructure per housing unit. A report by the Minnesota Department of Agriculture found that the cost of providing local services to new residential development is generally much higher if the development is built outside of cities, with the extra burden falling most heavily on county and school budgets¹¹. One reason for this discrepancy is that the cost of many services—such as school transportation, law enforcement, fire protection, and ambulance service—are all significantly higher per capita when residential development is less dense and/or harder to reach because of lakes or other natural barriers.

Recently, many small communities have turned to alternative treatment methods in an effort to provide wastewater service at a lower cost than via traditional systems. These alternative systems have potential, but many of them are experiencing performance and operations problems. A recent review of 22 of these systems found that the majority are experiencing complete or intermittent performance failure. Correcting these failures will cost millions of dollars. Cities and other communities, as well as state and federal funders and regulators, must carefully evaluate whether alternative systems are appropriate to meet particular communities’ needs and must ensure such systems are designed and built correctly.

Stormwater and other non-point source pollution: Better control may lessen the need for point-source improvements

The Federal Clean Water Act also attempts to mitigate non-point source pollution including agricultural, construction site, and stormwater runoff. MPCA estimates that statewide, 85 percent of water pollutants are contributed by non-point sources¹². Yet historically most of the public response to pollution has been to address point sources such as municipal and industrial systems.

The state has recently stepped-up efforts to address non-point source pollution. The non-point source problem with the most direct impact on cities is stormwater runoff. A relatively new stormwater permit system requires 200 Minnesota governments, including 161 cities, to reduce pollution

from stormwater runoff. These entities must develop and implement pollution prevention plans, many of which will involve costly infrastructure improvements including infiltration and retention ponds, rain gardens, and underground storage.

On the other hand, better control of non-point source pollution of all kinds may offset some of the need for point-source improvements. The Clean Water Legacy Act (CWLA) currently being considered at the Minnesota Legislature would strengthen how TMDL plans use good science to fairly assign responsibility for elements of the clean-up plan for any given impaired water body.

Growth depends upon solutions to water policy issues

How these issues are addressed will impact how and where growth occurs. Until the environmental requirements that cities will need to meet are clearly defined, there will continue to be uncertainty about what development will be permitted and what infrastructure will be necessary to allow it to go forward. Furthermore, if cities are unable to expand stormwater management and wastewater treatment capacity due to discharge limits, or if they are unable to secure adequate drinking water supplies, development will be forced to go elsewhere. Whether due to regulatory uncertainty or permit restrictions, the options for those who wish to build homes and businesses will be to move their development to cities that have capacity, to build in unsewered areas or rural areas where stormwater permits are not needed, or to move to other states.

Conversely, if the state has a strong program that identifies what steps need to be taken to protect and clean up water, and provides local governments the technical assistance and funding needed to make any infrastructure changes that effort requires, cities will be able continue to plan for responsible economic growth and to provide reliable, affordable water utility service to their residents and businesses.

Cities spent over \$650 million on various water systems in 2004

Cities with drinking water, wastewater, and stormwater enterprise funds reported spending more than \$650 million on these services in 2004¹³. If water systems were included in cities' general funds, they would collectively be the third-largest spending category, ahead of culture and recreation (\$560 million), but behind public safety and streets and highways (about \$970 million each). Water system costs are distributed as follows:

- The 658 city water enterprise funds reported spending \$296 million to operate and maintain their drinking water systems, for an average of \$198 per household.
- The 724 city sewer enterprise funds spent \$333 million, or \$190 per household.
- The 114 separate city stormwater enterprises reported \$27 million in spending, or \$35 per household¹⁴.
- There are an additional 69 city enterprises that combine a water system and other activities. These blended enterprises spent \$8 million, for an average of \$345 per household¹⁵.

Many other cities fund these same services but do not do so through separate enterprises. This is especially true in the case of stormwater, where many cities do not separate stormwater spending from general public

Until the environmental requirements that cities will need to meet are clearly defined, there will continue to be uncertainty about what development will be permitted and what infrastructure will be necessary to allow it to go forward.

works spending. In addition, new infrastructure is often built by developers who pass the costs on to purchasers of new homes. These privately-borne costs are not reflected in the city spending totals.

Capital needs will increase future household costs

The \$9 billion in projected capital needs will significantly increase the cost of drinking water and wastewater systems across Minnesota. Table 2C shows the average impact on households of meeting the identified capital needs with only local dollars (that is, without state or federal assistance). The numbers reflect only those cities for which current enterprise spending and future needs data is available¹⁶. The average annual household cost for drinking water and wastewater will increase from \$401 to \$727—an 81 percent increase¹⁷. As stated earlier in this report, these estimates do not include the costs of operation and maintenance for expanded and upgraded systems, complying with new regulations, inflation, or currently unforeseen needs.

These averages mask significant variations in future household cost among regions and individual cities. Maps 2B and 2C illustrate the average annual cost per household by region for both drinking water and wastewater systems today and in years 6–20. The average current spending ranges from \$353 in Southeast Minnesota to \$596 in the West Central region. Future projections range from \$653 in the Northwest to \$997 in Region 7E, just north of the Twin Cities.

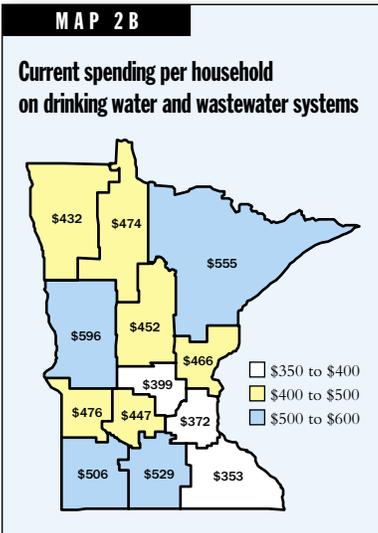
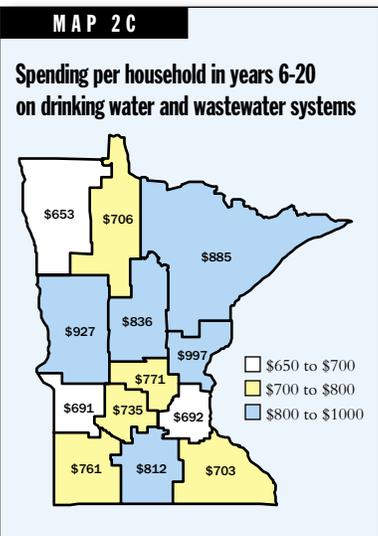


TABLE 2C

Estimated annual household costs for drinking water & wastewater in Minnesota

	Drinking water	Wastewater	Total
Current annual cost per household	\$203	\$198	\$401
0–5 year annual cost per household	\$302	\$266	\$569
6–20 year annual cost per household	\$401	\$326	\$727



Stormwater permit system will increase future household costs

While thorough estimates of cities’ current spending and future needs for stormwater are not readily available, the communities that presently must obtain permits under National Pollution Discharge Elimination System (NPDES) standards for stormwater management are facing new costs that will add to the burden faced by households and businesses across the state. The first phases of this standards program included more than 100 cities while the most recent rule change expands the standards to 42 smaller cities. The MPCA’s economic analysis for the rule expanding to this broader group of municipalities estimated the cost of compliance on these newly-added municipalities to be approximately \$10 per household annually¹⁸. Other analyses found total future costs to be several times higher. For example, a survey of 12 suburban Twin Cities communities by MPCA staff estimated total budgeted stormwater capital costs to be approximately \$25 per household per year¹⁹. A 2003 West Central Initiative report estimated that the 83 cities in economic development Region 4 would experience household costs for both capital and operations well in excess of \$10 per month²⁰—a difference of \$95 per household per year.

Many Minnesotans could struggle to afford projected household water costs

The projected increase in the cost of water systems over the next 20 years will strain household budgets across the state. What is an acceptable amount to pay for these services? The USDA's current standard is that the average household cost of either drinking water or wastewater should not exceed 1.7 percent of median household income (MHI)²¹. Using this standard, if all the future needs identified earlier in this report are borne locally, the analysis found that:

- 6.3 percent of cities will have unaffordable drinking water systems in the next five years.
- 13.4 percent of cities will have unaffordable wastewater systems in the next five years.
- The number of cities with unaffordable water systems will increase to 13.1 percent and 15.7 percent of cities (respectively) over the next two decades.

Affordability problems are concentrated in smaller cities (see Table 2D). This is due in part to the lack of economies of scale for capital-intensive projects that serve few households and also to the fact that Minnesota's smaller cities generally have a lower median household income.

TABLE 2D

Share of Minnesota cities with future water service costs exceeding affordability threshold, if borne locally

Population range	Drinking Water		Wastewater	
	0-5 years	6-20 years	0-5 years	6-20 years
0-300	15%	28%	21%	27%
301-650	8	14	16	17
651-1,300	4	12	20	22
1,301-3,000	3	11	7	9
3,001-10,000	0	2	7	8
10,001+	0	0	0	0

Specific thresholds for affordability are somewhat arbitrary. The USDA has in the past used 1.4 percent and 1.5 percent of median income, rather than 1.7 percent. The threshold increase has been driven in large part by federal budget pressures to reduce grant funding—the higher the threshold, the fewer the projects that qualify for grant funding. A median income threshold can be characterized as being rather cold-hearted: if a city meets the threshold of 1.7 percent of median household income, then the system is affordable to the half of households with incomes above the median, while the other half are paying more than 1.7 percent of their income.

To address these concerns, Table 2E (see page 18) analyzes future affordability based on the threshold of 1.5 percent of a community's median household income. Affordability is also tested using 60 percent of the community's median household income in order to test the impact on less affluent households²². As shown in Table 2E, at these alternative thresholds affordability becomes a much more widespread problem.

The scope of the projected affordability problem depends on the threshold (see Table 2F):

- Cities exceeding the current affordability standard of 1.7 percent of median household income would need to reduce their future costs by approximately \$20.5 million a year over the next five years to keep their average household costs under 1.7 percent of median household income.
- This “affordability gap” balloons to \$86.6 million over the next five years if cities were to maintain household costs under 1.5 percent of 60 percent of median household income.
- In the next two decades, the gap could grow to \$146 million (see Appendix B for 20-year estimates).
- These gaps are concentrated mainly in smaller, poorer communities.

TABLE 2E

Share of cities exceeding various water affordability thresholds in the next five years

	More than 1.7% MHI	More than 1.5% MHI
Drinking Water		
100% MHI	6%	10%
60% MHI	30%	41%
Wastewater		
100% MHI	13%	17%
60% MHI	27%	30%

TABLE 2F

Estimated annual water affordability gap in the next five years at various income thresholds (in millions)

	More than 1.7% MHI	More than 1.5% MHI
Drinking Water		
100% MHI	\$1.2	\$1.2
60% MHI	\$11.3	\$24.6
Wastewater		
100% MHI	\$19.3	\$24.1
60% MHI	\$44.7	\$62.0
Total		
100% MHI	\$20.5	\$26.1
60% MHI	\$56.0	\$86.6

These affordability gaps are very rough approximations. As mentioned earlier in this report, many future costs are not included in the estimates of future needs. Not all cities with drinking water and wastewater systems were included due to missing data. Drinking water needs are based on extrapolations of survey data from only a subset of communities, rather than a broad survey of all communities with drinking water systems. Future needs will be much less uniformly distributed, as this analysis assumes, since some communities will face very large capital projects while others will not. (Details on the affordability calculations and additional data can be found in Appendix B.)

State and federal assistance critical to controlling costs

The affordability gap estimates discussed in the previous section assume that all future needs are borne by local ratepayers—this is *not* likely to be the case. The state and federal government currently fund four major programs that provide grant and loan assistance to communities for major water-related capital projects²³(see Table 2G).

State Water Pollution Control Revolving Loan Fund

The State Water Pollution Control Revolving Loan Fund provides loan assistance for wastewater and, more recently, stormwater projects. It is funded through both federal and state appropriations. Recent cutbacks in federal appropriations will require a four-fold increase in state dollars to maintain overall revenues. Gov. Pawlenty's 2006 capital budget recommendation would essentially fill the hole created by federal cutbacks. Over the past five years, approximately \$27 million per year in total state and federal funds have been appropriated to this program. However, so far in 2006, the federal share has been cut by one-third and further cuts have been proposed by President Bush.

By combining loan repayments and leveraged funds with state and federal appropriations, the Public Facilities Authority (PFA) currently makes approximately \$100 million in wastewater loans per year. In recent years, demand has grown for these dollars and there are now three dollars of requests for each dollar of assistance available. PFA staff believes that as the new rules for stormwater and TMDL requirements take effect, more stormwater projects will become eligible for assistance from this fund²⁴.

To be eligible for funding from this program, a project must rank high on the MPCA project priority list, which ranks projects by criteria including environmental impact, the use of the receiving water (e.g., drinking water or fishing), and the condition of the receiving water (e.g., whether the facility discharges into an impaired water). New MPCA rule changes will broaden the criteria to include the age and condition of existing infrastructure in determining the priority ranking.

State Drinking Water Revolving Loan Fund

The State Drinking Water Revolving Loan Fund provides low-interest loan assistance for drinking water projects. Like the water pollution control fund, it is funded through both federal and state appropriations. The fund provides loans based on public health risk, regulatory compliance, and affordability criteria. Over the past five years, the program has been appropriated approximately \$18 million per year in state and federal funds for drinking water projects. By combining loan repayments and leveraged funds with state and federal appropriations, the PFA currently makes approximately \$40 million to \$50 million in drinking water loans per year.

USDA Rural Development

The USDA Rural Development program provides assistance to support drinking water, sanitary sewer, solid waste, and stormwater facilities in rural areas and cities and towns of 10,000 or less. Rural Development appropriates approximately \$25 million per year in grants and loans to Minnesota communities.

Recent cutbacks in federal appropriations will require a four-fold increase in state dollars to maintain overall revenues. Gov. Pawlenty's 2006 capital budget recommendation would essentially fill the hole created by federal cutbacks.

Rural Development grants assist projects that cause local systems' costs to exceed 1.7 percent of median household income. Communities can receive grant funding for the construction costs of such projects that would exceed the affordability threshold. At one time, 40 percent of the funding from Rural Development was used for grants, but over the past several years the share dedicated to grants has declined to 25 percent.

State Wastewater Infrastructure Fund

The State Wastewater Infrastructure Fund (WIF) provides supplemental grants and zero-interest loans for projects in some of Minnesota's smallest and poorest communities that qualify for state revolving loan funds or Rural Development funds. The state appropriated an average of \$10 million per year to WIF from 1996 to 2003 and \$15 million per year since 2004. Governor Pawlenty's 2007-08 capital budget recommendation includes \$15 million for WIF.

TABLE 2G

State and federal assistance	2002-06 Average Appropriations (Millions/yr)	2007-08 Expected Funding* (Millions/yr)
Water Pollution Control Revolving Loan Fund		
Federal Dollars	\$23.6	\$16.4
State Dollars	\$3.5	\$16.4
Drinking Water Revolving Loan Fund		
Federal Dollars	\$15.6	\$15
State Dollars	\$2.6	\$3
USDA Rural Development		
	\$25	\$25
Wastewater Infrastructure Fund		
	\$12	\$7.5
Total	\$82.3	\$83.3

*State dollar amounts for 2007-08 are Gov. Pawlenty's recommendations

Total appropriations to these four programs averages about \$82 million per year—almost the same amount as the estimated annual affordability gap at 1.5 percent of 60 percent of median household income (\$86.6 million). Of course, affordability is not the state's only concern, and many of these dollars are instead used for capital projects meeting critical environmental or public health concerns. In addition, many of the dollars go toward non-city systems and non-system projects—approximately 20 percent of the 2006 intended use list for the wastewater revolving loan funds is targeted to projects involving connecting currently unsewered township areas to municipal systems, or to alternative systems in such township areas.

Cost of future needs is likely more than what this report estimates

The estimates of future water system needs in this report are conservative according to the state and federal agencies that produce the underlying data. While the data from MPCA and EPA is the best available for state-wide estimates, an alternative analysis on the regional level demonstrates how conservative these estimates may be. The West Central Initiative (WCI) undertook an infrastructure study for the nine counties of economic development Region 4 in western Minnesota. The WCI study was based on a comprehensive survey and interviews of public works

professionals in cities throughout Region 4. Professional engineering staff assisted city staff in estimating their future infrastructure needs for stormwater, wastewater, and drinking water systems. They reported needs totaling \$813.5 million over 20 years (\$919 million in 2005 dollars).

In comparison, using this report's methodology, the cities of Region 4 have 20-year needs totaling \$302 million, less than 40 percent of the amount estimated by WCI. If the true future needs of cities across the state are similarly understated, then the future costs for drinking water and wastewater systems could exceed \$24 billion, as opposed to the \$9 billion figure cited at the beginning of this chapter.

True future needs, inasmuch they can be guessed, likely lie between these two figures. One important reason for the discrepancy is that smaller cities with fewer staff resources are less able to maintain comprehensive 20-year planning for their systems. These cities' needs are likely underreported by the MCPA and the EPA. The WCI study overcame this shortcoming by providing engineering assistance to the 82 cities in its study. But Region 4 has a higher concentration of small cities than the state as a whole and the Twin Cities metro area in particular, so the discrepancy is likely more significant in Region 4 than in many other areas of the state (see Table 2H).

TABLE 2H

Region 4 has more small communities	Share of cities under 1,000 population	Total city population
Region 4: West Central	76%	11,7261
All Greater Minnesota	68%	1,470,802
Region 11: Twin Cities Metro	20%	2,677,418

Conclusion

Regardless of the exact amounts needed to address future water infrastructure needs, state and federal funding is critical to assisting cities in meeting these needs. The importance of funding assistance will only increase as unforeseen challenges and requirements are added to existing ones. Even now, the state is preparing to significantly boost its share of the funding burden merely to maintain existing support levels, due to recent cuts in federal funding.

If left unaddressed, the expanding TMDL requirements for wastewater discharge and stormwater runoff, as well as long-term drinking water supply issues, will severely limit the ability of cities to expand systems to accommodate new development.

The Clean Water Legacy Act (CWLA) being considered by the Minnesota Legislature in its 2006 session would provide approximately \$80 million in new state funding annually to address the costs of complying with the federal Clean Water Act. This would result in more than \$60 million per year in new funding to cities. The CWLA would fund new phosphorus treatment upgrades, replacements for failing septic systems, and additional revenues for the Water Pollution Control Revolving Loan Fund.

The CWLA is critical not only to meet new regulatory requirements, but also to ensure that growth occurs in an environmentally sustainable manner and Minnesota residents can afford the clean water they desire and deserve.

Endnotes

- ¹ Wastewater needs data is from the Pollution Control Agency's 2005 Wastewater Infrastructure Needs Survey of the operators of Minnesota's municipal wastewater systems. Drinking water needs data is from the U.S. Environmental Protection Agency's national assessment of drinking water infrastructure needs, based on extrapolations of survey data from only a subset of communities. (See Appendix B for more details regarding the data and analysis.)
- ² Office of the State Auditor 2004 city enterprise database, 2005.
- ³ *Minnesota Population Projections 2000 – 2030*, Martha McMurry, Office of the State Demographer, 2002.
- ⁴ *Minnesota's Water Supply: Natural Conditions and Human Impacts*, Department of Natural Resources, 2000.
- ⁵ "Lack of Water Inhibits Growth in Southwest Minnesota," *Star Tribune*, December 26, 2005.
- ⁶ *Water Resources Management Policy Plan*, Metropolitan Council, 2005.
- ⁷ "Water Quality Standards," *Minnesota Cities*, April 2005, p. 7.
- ⁸ 2005 MPCA staff estimates.
- ⁹ *Minnesota Population Projections 2000 – 2030*, Martha McMurry, Office of the State Demographer, 2002.
- ¹⁰ *10-Year Plan to Upgrade and Maintain Minnesota's On-site (ISTS) Treatment Systems*, Minnesota Pollution Control Agency, February 2004, p. 7.
- ¹¹ *Cost of Public Service Study*, Minnesota Department of Agriculture and Duncan Associates, June 1999.
- ¹² *Annual Pollution Report*, MPCA, 2004, p. 46.
- ¹³ Data is from the Office of the State Auditor 2004 city revenue and expenditure report and city enterprise database, 2005.
- ¹⁴ Residential households are assumed to pay 90 percent of the costs of the system. The actual share will be higher or lower for individual communities. This assumption is consistent with MPCA estimates. 2004 spending includes operating and non-operating expenditures and debt service costs.
- ¹⁵ Because these cities blend financing for two or three different types of activities, these cities are omitted from the rest of the analysis.
- ¹⁶ Current spending and future needs data were paired where data was available. Approximately 50-60 cities were not included in this phase of the analysis.
- ¹⁷ Future capital needs are calculated assuming the community uses 20-year financing at 4.5 percent interest. One half of existing debt service is included in the 0-5 year estimates, while the 6-20 year estimates only include debt service for estimated future needs.
- ¹⁸ *Statement of Need and Reasonableness: Proposed Amendments in Minnesota Rules Governing the Stormwater Regulatory Program*, MPCA, September 3, 2004, p. 105.
- ¹⁹ Survey conducted by James Anderson of the Minnesota Pollution Control Agency for the U.S. Environmental Protection Agency.
- ²⁰ *Infrastructure Study for West Central Minnesota Communities*, West Central Initiative, January 2003.
- ²¹ *State of Minnesota 2006 Capital Budget Requests*, January 17, 2006, p. 17.
- ²² According to the Minnesota Department of Revenue's most recent Tax Incidence Study, approximately 39.4 percent of households statewide have incomes less than 60 percent of the state median income. The share of households with incomes less than 60 percent of their city's median income will vary from one city to another.
- ²³ Descriptions of these four programs are from Minnesota Department of Finance 2006 capital budget project narratives and conversations with staff of the Minnesota Pollution Control Agency, Minnesota Department of Health, U.S. Department of Agriculture Rural Development, and the Minnesota Public Facilities Authority. Funding data is from Jeff Freeman of the Public Facilities Authority.
- ²⁴ Jeff Freeman, Minnesota Public Facilities Authority.

Appendix A: Fiscal Conditions Survey Methodology

The fiscal conditions survey was sent to all LMC member cities, which at the time numbered 826 of Minnesota's 853 cities (the only non-member cities are under 200 population). As was the case for each of the previous LMC fiscal conditions surveys, some questions were modeled after questions on the National League of Cities annual survey. Cities in Georgia, Illinois, Iowa, North Dakota, Pennsylvania, South Dakota, and Tennessee also received the survey. Of the 4,457 cities surveyed overall, 1,399 responded to the survey for an overall response rate of 31 percent. State-by-state, the response rates were as follows: Georgia, 22 percent; Illinois, 32 percent; Iowa, 29 percent; Minnesota, 49 percent; North Dakota, 22 percent; Pennsylvania, 40 percent; South Dakota, 25 percent; and Tennessee, 23 percent.

The key question on the survey asks cities to indicate whether they were better able to meet their financial needs in 2005 than in 2004 and to predict whether they will be better able to meet needs in 2006 than in 2005. Other survey questions ask cities to identify the types of revenue shortfalls they have experienced during the past year, including the magnitude of those shortfalls, and the budget strategies they implemented in 2005. For the first time, the survey directed cities to describe the impacts on their 2005 budgets of a list of fiscal pressures, such as population size, inflation, and public safety needs.

The number of Minnesota cities that have responded to each of the three annual LMC fiscal conditions surveys is 199. Cities responding to the survey for the first time this year numbered 123. The year-to-year trends in the responses are in part influenced by the fact that the group of cities responding changes each year.

TABLE APP-A

Percent of cities better able to meet financial needs compared to previous year by region

Region	2003	2004	2005	2006 (predicted)
1	9%	25%	32%	36%
2	14	10	30	50
3	10	21	35	26
4	16	37	50	55
5	17	25	44	52
6e	5	26	50	36
6w	0	35	29	29
7e	11	20	56	44
7w	13	31	59	48
8	7	21	30	42
9	9	40	41	47
10	2	39	46	42
11	12	38	54	58

2006 Fiscal Conditions Survey Tool

1. Overall, would you say that your city is better or less able to...

- a. Meet financial needs in fiscal year 2005 than last year? *(check one)* Better Able Less Able
- b. Address its financial needs in the next fiscal year (2006) compared to this fiscal year? *(check one)* Better Able Less Able

2. Please indicate whether FY2004 revenue shortfalls in the following areas were less than 10% or greater than 10% as a percentage of funding expected from each revenue source:

Check one box for each item on the list below. Shortfall = actual receipts fell below predicted or budgeted receipts.

	No Shortfall	Shortfall <10% of Expected	Shortfall >10% of Expected	Not authorized in my city
a. Property Tax Revenues.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Fees, charges, license revenues.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Sales tax revenues.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Local income/commuter tax revenues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Lodging, restaurant, amusement, other tourist-related taxes...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. State revenues.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Federal revenues.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Please indicate in Part A whether there has been an increase, a decrease, or no change in an item between FY2004 and FY2005 for your city. Please indicate in Part B whether a change had no impact, a moderate impact, or a major impact on your city's overall FY2005 budget.

Check one box in Part A and one box in Part B for each item on the list below.

	<u>PART A: CHANGE</u>			<u>PART B: IMPACT</u>		
	Increase	No Change	Decrease	No Impact	Moderate Impact	Major Impact
a. Value of city tax base	<input type="checkbox"/>					
b. Service needs of new development	<input type="checkbox"/>					
c. Amount of federal aid to city	<input type="checkbox"/>					
d. Federal environmental mandates	<input type="checkbox"/>					
e. Federal non-environ. mandates	<input type="checkbox"/>					
f. State environmental mandates	<input type="checkbox"/>					
g. State non-environ. mandates	<input type="checkbox"/>					
h. Restrictiveness of state tax and expenditure limits on cities	<input type="checkbox"/>					
i. Public safety needs	<input type="checkbox"/>					
j. Infrastructure needs	<input type="checkbox"/>					
k. Human service needs	<input type="checkbox"/>					
l. Education needs	<input type="checkbox"/>					

2006 Fiscal Conditions Survey Tool, continued

	<u>PART A: CHANGE</u>			<u>PART B: IMPACT</u>		
	Increase	No Change	Decrease	No Impact	Moderate Impact	Major Impact
m. Cost of employee pensions	<input type="checkbox"/>					
n. Cost of employee health benefits	<input type="checkbox"/>					
o. Employee wages and salaries	<input type="checkbox"/>					
p. Prices, inflation, cost of living	<input type="checkbox"/>					
q. Population (# of people in city)	<input type="checkbox"/>					
r. Health of local economy	<input type="checkbox"/>					

4. Please indicate which actions your city has taken in FY2005 for the 2006 fiscal year:
Check one box for each item on the list; if your city does not have authority to take action regarding an item, please check the "not authorized" box.

	Significant Increase	Slight Increase in 2006	Maintain	Slight Decrease in 2006	Significant Decrease in 2006	Not Auth. in my city in 2006
a. Taxes.....	<input type="checkbox"/>	<input type="checkbox"/>				
b. Reliance on ending balances/reserves....	<input type="checkbox"/>	<input type="checkbox"/>				
c. Fees/charges/licenses increases.....	<input type="checkbox"/>	<input type="checkbox"/>				
d. Growth rate of operating spending.....	<input type="checkbox"/>	<input type="checkbox"/>				
e. Actual infrastructure spending.....	<input type="checkbox"/>	<input type="checkbox"/>				
f. Actual public safety spending.....	<input type="checkbox"/>	<input type="checkbox"/>				
g. Other spending.....	<input type="checkbox"/>	<input type="checkbox"/>				
h. Service cutbacks/elimination.....	<input type="checkbox"/>	<input type="checkbox"/>				
i. Privatizing or contracting out.....	<input type="checkbox"/>	<input type="checkbox"/>				
j. Productivity levels.....	<input type="checkbox"/>	<input type="checkbox"/>				
k. Number and/or scope of interlocal agreements or other cost-sharing plans...	<input type="checkbox"/>	<input type="checkbox"/>				
l. Size of city government workforce.....	<input type="checkbox"/>	<input type="checkbox"/>				

Your name: _____ Title: _____

City: _____ Phone: () _____

Appendix B: Water Systems Data Analysis Methodology

Data sources

Future wastewater needs

Data from the 2005 Wastewater Infrastructure Needs Survey, conducted by the Minnesota Pollution Control Agency (MPCA), includes future wastewater infrastructure needs and capital costs as reported by local system administrators. The data does not address operations and maintenance costs, individual sewage treatment systems, industrial systems, or township systems. According to MPCA staff, the data likely underreports future impacts of impaired waters remediation and increasing phosphorus standards, as many cities are unsure what system upgrades might be required. Data is reported as either current needs (over the next five years) or longer term (six to 20 years). A few reported needs did not have designated timeframes, so were assumed to be in the six-to-20-year timeframe.

MPCA's *Future Wastewater Infrastructure Needs and Capital Costs* report, released in January 2006, includes more detail regarding the various types of projects (treatment upgrades, system repair, etc.) included in the need estimates. The data used in this *State of the Cities Report 2006* includes survey responses that were received too late to be included in the MPCA report.

Future drinking water needs

The U.S. Environmental Protection Agency (EPA) 2003 national assessment of drinking water infrastructure needs was utilized. It estimates Minnesota's current needs (defined as high priority for short-term implementation in order to ensure safe drinking water), and 20-year needs (defined as those a system expects to address for routine maintenance or replacement) by three population categories: large systems serving over 50,000; medium systems serving 3,300 to 50,000; and small systems serving less than 3,300. The estimates are based on extrapolations from survey responses from all large systems and a sample of medium systems. The total needs were assigned to individual cities and non-city entities with community water systems based on their share of their population category's total population. Future needs will be much less uniformly distributed, as this analysis assumes, since some communities will face very large capital projects while others will not. 2003 dollar figures were inflated to 2005 figures using the state and local government implicit price deflator.

The estimates are defined by EPA as conservative, due to stringent documentation criteria applied to survey responses. The estimates are also limited to capital and Drinking Water State Revolving Fund eligible needs, thus excluding projects solely for operations and maintenance, future growth, etc. Because they are based on the needs of a sample of cities, the estimates should be considered rough approximations.

Future stormwater needs

Amendments have been adopted to Minnesota rules governing the stormwater regulatory program. The MPCA's 2004 Statement of Need and Reasonableness (SONAR) yielded a statewide per household annual cost estimate of approximately \$10 for those cities not originally affected by the NPDES requirements but covered now as a result of the rule change. These cost estimates were inflated to 2005 dollars and applied to all 161 cities (and 40 non-cities) now covered by the rules. Because it only quantifies the cost of compliance with the rules for the newly-covered, it likely undercounts total future needs for stormwater spending.

Alternative future needs calculations

The West Central Initiative (WCI) undertook an infrastructure study for the nine counties of economic development Region 4 in western Minnesota "Infrastructure Study for West Central Minnesota Communities, 2003." The WCI study was based on a comprehensive survey and interviews of public works professionals in cities throughout Region 4. Professional engineering staff assisted city staff in estimating their future infrastructure needs for stormwater, wastewater, and drinking water systems. They reported needs several times higher than the estimates produced by the state and federal data sources listed earlier in this appendix.

MPCA staff also created an alternative calculation for stormwater costs based on a survey of 10 suburbs to estimate annual per-acre budgeted 5-year capital spending on stormwater needs. This calculation also yielded results several times higher than the SONAR estimates.

2004 actual spending

Data from Minnesota's Office of the State Auditor (OSA) in its annual city expenditure and revenue database was used to measure current spending and debt service spending for all drinking water, wastewater, and stormwater enterprise funds. There is more than 90 percent consistency between the lists of cities with water-related enterprises and those cited by the MPCA or the Minnesota Department of Health as having wastewater or drinking water systems, respectively. The OSA stormwater enterprise list does not match as well to the list of cities required to get stormwater permits (many permit cities likely book stormwater expenditures in either another water enterprise or as part of general public works spending). Note: some cities have blended enterprises that include more than one of the three types. These are excluded for the separate analyses but included in the overall totals.

TABLE APP B-A

City water systems: OSA data and state lists			
	Wastewater	Drinking water	Stormwater
Number of 2004 city water enterprise funds (excluding blended ones)	724	658	114
Number of cities on state agency list of water systems	701	710	161
Number of cities in enterprise data and state list	664	648	75

Current expenditures include operating expenditures and non-operating expenditures. Debt service includes interest, bond payments, and other long-term debt payments. Because the bond payments data includes refinancing of bonds, which does not reflect actual new spending, this analysis uses the lower of 2003 and 2004 debt service (it is unlikely that too many cities had major refinancing two years in a row, while actual bond payments are relatively consistent from year to year).

Future needs debt service calculations

For both drinking water and wastewater, the cost of future needs is calculated by assuming that all future needs will be financed through borrowing for 20 years at 4.5 percent interest. This is consistent with MPCA methodology.

Per household costs

Consistent with MPCA methodology, the average spending per household is calculated by assuming that 90 percent of costs are borne by homeowners and the balance is borne by non-residential property.

Median Household Income (MHI)

The most up-to-date city-level income data is the 2000 Census estimate of 1999 median household income. The most recent county-level median income estimates are for 2003 from the U.S. Bureau of Labor Statistics. As all spending and future needs data is adjusted to 2005 dollars, the census income data is inflated as well. Rather than inflating all cities' income by a uniform, statewide amount, city MHI is inflated to 2005 estimates using 150 percent of the county-level MHI change from 1999 to 2003.

Affordability analysis

The affordability analysis utilized in this *State of the Cities Report 2006* combines 2004 actual expenditures with projected future needs to estimate the increase in per-household cost and the new cost as a percent of household income (wastewater and drinking water only) for cities where both 2004 OSA spending data and future needs data are available.

For short-term household costs (0-5 years), the analysis used the following: estimated debt service for 0-5 year future wastewater needs and "current" EPA drinking water needs; estimated 2004 current expenditures based on OSA data; and 50 percent of 2003/2004 OSA debt service, since much of this will not all go away in the next five years. For the long-term estimate (6-20 years), the analysis used estimates of debt service for total future wastewater and drinking water needs, plus 2004 current expenditures (assuming all 2003/2004 debt service is retired).

The current affordability threshold used by USDA Rural Development is 1.7 percent of median household income for either drinking water or wastewater costs. In the past, USDA has used 1.5 percent and 1.4 percent. The analysis tests affordability of short- and long-term future needs against income to estimate the number of cities with affordability issues and to estimate the “affordability gap”—that is, the amount that future costs exceed local ability to pay. This is calculated by subtracting the affordability threshold from the future average household cost and multiplying it times the number of households. For sensitivity analysis, affordability was tested against both 1.7 percent and 1.5 percent of MHI. Affordability for less affluent ratepayers was also tested, using 80 percent and 60 percent of median household income.

Also, for the purposes of this analysis, estimated statewide future drinking water needs were distributed on a per-capita basis (wastewater needs are based on city-by-city survey responses). Actual needs will be much less uniformly distributed as this analysis assumes, since some communities will face very large capital projects while others will not. Actual affordability challenges will therefore also be less uniformly distributed. The affordability gap may be larger or smaller than this analysis calculates, depending upon which cities face large capital needs.

TABLE APP B-B

Statewide results (cities only) future capital needs (in billions of dollars)		
	Drinking water	Wastewater
0-5 years	\$2.8	\$2.0
6-20 years	\$2.8	\$1.7
Total next 20 years	\$5.6	\$3.7
Number of cities	710	701

TABLE APP B-C

Estimated household costs		
	Drinking water	Wastewater
Current annual cost per household	\$203	\$198
0-5 year annual cost per household	\$302	\$266
6-20 year annual cost per household	\$401	\$326

TABLE APP B-D

Estimated affordability gap at various income thresholds (millions)

	0-5 years >1.7% MHI	6-20 years >1.7% MHI	0-5 years >1.5% MHI	6-20 years >1.5% MHI
Drinking Water				
100% MHI	\$1.2	\$2.5	\$2.1	\$5.0
80% MHI	3.5	8.8	6.1	16.6
60% MHI	11.3	37.0	24.6	65.8
Wastewater				
100% MHI	19.3	22.9	24.1	27.8
80% MHI	28.4	32.3	34.0	40.0
60% MHI	44.7	58.3	62.0	80.5
Total				
100% MHI	20.5	25.4	26.1	32.8
80% MHI	31.8	41.1	40.1	56.5
60% MHI	56.0	95.3	86.6	146.3

TABLE APP B-E

Count of cities that exceed various affordability thresholds

	0-5 years >1.7% MHI	6-20 years >1.7% MHI	0-5 years >1.5% MHI	6-20 years >1.5% MHI
Drinking Water (of 648 cities)				
100% MHI	41	85	65	131
80% MHI	92	179	130	274
60% MHI	194	389	263	484
Wastewater (of 664 cities)				
100% MHI	88	103	111	120
80% MHI	125	136	144	162
60% MHI	180	187	198	211

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