FINANCIAL CAPABILITY ASSESSMENT

OMAHA LONG TERM CONTROL PLAN TO ADDRESS COMBINED SEWER OVERFLOWS (CSOs) AND RELATED WASTEWATER PROJECTS

Prepared for
OMAHA PUBLIC WORKS DEPARTMENT

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May 2013
Table of Contents

1 INTRODUCTION .................................................................................................................. 2
  1.1 Approach ....................................................................................................................... 2
  1.2 Principles and Goals of EPA’s CSO Financial Capability Guidance ....................... 3
  1.3 Additional Considerations from EPA’s 2013 Memo on Financial Capability .......... 4
  1.4 Organization of this Report ......................................................................................... 5

2 RESIDENTIAL INDICATOR ............................................................................................... 6
  2.1 Cost Per Household Calculation .................................................................................. 6
    2.1.1 Current and Projected WWT Costs ....................................................................... 6
    2.1.2 Residential Share of Projected Total Annual WWT Costs ..................................... 9
    2.1.3 Number of Households Served in the Service Area ............................................. 10
    2.1.4 Cost Per Household ............................................................................................. 10
  2.2 Residential Indicator Calculation .............................................................................. 11
    2.2.1 Residential Indicators for Communities of Concern ............................................ 12

3 FINANCIAL INDICATORS .................................................................................................. 15
  3.1 Debt Indicators ............................................................................................................ 15
    3.1.1 Bond Rating ........................................................................................................ 15
    3.1.2 Overall Net Debt as a Percent of Full Market Property Value ............................. 16
    3.1.3 Per Capita Debt .................................................................................................. 17
  3.2 Socioeconomic Factors ............................................................................................... 17
    3.2.1 Unemployment Rate .......................................................................................... 17
    3.2.2 Median Household Income ................................................................................. 18
    3.2.3 Poverty in Communities of Concern .................................................................. 19
  3.3 Financial Management Indicators ............................................................................. 20
    3.3.1 Property Tax Revenues as a Percent of Full Market Property Value .................. 20
    3.3.2 Property Tax Revenue Collection Rate ............................................................... 21
    3.3.3 Unfunded Pension Obligations .......................................................................... 21
  3.4 Overall Financial Capability ....................................................................................... 22

4 CONCLUSION .................................................................................................................... 25
  4.1 Implications for Omaha’s Program ........................................................................... 25
  4.2 Impacts on Customers ............................................................................................... 26
  4.3 Other Economic Considerations ............................................................................... 26
1 INTRODUCTION

Clean Solutions for Omaha is the City of Omaha’s Program for implementing the projects outlined in the City’s Long Term Control Plan (herein called “Plan”) in accordance with the agreement between the City and the Nebraska Department of Environmental Quality (NDEQ). Specific Program goals, as set forth on its website, are:

- Regulatory Compliance. Meet specific regulatory requirements to implement the Plan by 2027, as scheduled, thereby reducing pollutant discharge to the Missouri River and Papillion Creek.
- Economic Affordability. Minimize cost impact to ratepayers by completing the Program within or under budget.
- Community Acceptance. Maintain continuous public dialogue, provide information and pursue opportunities for multiple benefits from the Program.

The City’s Program represents a significant investment on the part of City and the residents and businesses served by its sewer system. It will have far-reaching impacts on the finances of the City and its ratepayers.

Conducting a Financial Capability Assessment (FCA) permits Omaha to comply with prescribed Environmental Protection Agency (EPA) criteria for balancing the timing of projects in the Plan with the financial capabilities of Omaha and customers served by Omaha’s sewer system. The City hired the Economics Center, a part of the Lindner College of Business at the University of Cincinnati, to conduct this economic analysis.

The FCA assesses the Plan’s impact on the Omaha ratepayers, in accordance with applicable EPA Guidance, particularly the 1997 document entitled CSO Guidance for Financial Capability Assessment and Schedule Development ("Guidance"). This Guidance has recently been supplemented by the 2013 EPA Memorandum on “Assessing Financial Capability for Municipal Clean Water Act Requirements” and the accompanying Framework document.¹ The results of the analysis are set out below.

1.1 Approach

The FCA identifies key considerations regarding the level of investment that Omaha can make toward controlling sewer overflows and ensuring effective and sustainable sewer and stormwater-related infrastructure. This information will be used by Omaha to help make decisions about scheduling and implementation of the final Plan.

¹ In this 2013 Memorandum, in response to concerns raised by numerous local government leaders, including the Mayor of Omaha, EPA has recognized the “difficult economic challenges” facing many communities. EPA has reaffirmed the importance of fully utilizing the flexible framework incorporated into the Guidance.
The FCA looks at two categories of EPA default indicators of financial ability/health. These are the Residential and Financial Indicators. EPA’s default indicators were augmented with additional information about local factors as part of the development of the City’s Financial Indicator.

The Residential Indicator assesses anticipated future costs of the wastewater utility along with anticipated costs of the Plan. A snapshot of anticipated conditions in 2018, at the end of the forthcoming proposed rate ordinance, was used for this assessment. Several projections were made to factor in inflation, construction cost increases, financing costs and other required factors. The Financial Indicator focuses on six primary factors, and supplemental information and discussion is in incorporated to better capture the City of Omaha’s true financial capability.

The analysis of both the Residential and Financial Indicators concludes that the cost of the LTCP through 2018 is expected to continue to be affordable. However, the analysis also indicates an increasing financial burden that may present serious difficulties in the ensuing period. Accordingly, the FCA will help Omaha identify economic factors and conditions that the City will need to monitor as it moves forward.

1.2 Principles and Goals of EPA’s CSO Financial Capability Guidance

In performing this analysis on behalf of Omaha, the Economics Center sought to fulfill EPA’s mandate that permittees have the responsibility for assessing their financial circumstances and developing cost-effective solutions that balance environmental and financial considerations.

EPA’s Guidance describes principles for developing programs that stress the need to consider local conditions. “The CSO Control Policy contains four key principles to ensure that CSO controls are cost-effective and meet the requirements of the CWA.” These principles state, in part, that EPA’s aim is to: “provide sufficient flexibility to municipalities … to determine the most cost-effective means of reducing pollutants,” and “allow a phased approach for implementation of CSO controls considering a community’s financial capability” (p. 3). The two other principles are: clear levels of control and site-specific review and, where warranted, revision of water quality standards.

EPA’s Guidance describes an economic evaluation process based on general financial indicators and also stresses that the unique local economic situation of the community be assessed. While recognizing the value of the six financial indicators specified in the document as “a common basis for … discussions,” EPA’s Guidance stresses the importance of granting broad latitude to permittees:

It must be emphasized that the financial indicators found in this guidance might not present the most complete picture of a permittee’s financial capability to fund the CSO

2 For additional details, see Section 3.
controls...Since flexibility is an important aspect of the CSO Policy, permittees are encouraged to submit any additional documentation that would create a more accurate and complete picture of their financial capability. (p. 7)

An example of why permittees should incorporate additional considerations into their FCA is on p. 26 of the Guidance, which states that the purpose of two socioeconomic indicators identified in the document (unemployment rate and median household income) is “to assess the general economic well-being of residential users in the permittee’s service area.” Toward this end, the Guidance encourages the use of supplemental data and analysis:

When the permittee has additional socioeconomic data, it may want to submit the data to the appropriate EPA and state NPDES authorities to facilitate a better understanding of the permittee’s unique economic conditions. Several examples of this type of socioeconomic data could be poverty rate, population growth, and employment projections. (p. 28)

While EPA makes clear why permittees should provide this additional information, it does not dictate how it is to be used. Rather, consistent with the flexibility of its overall approach, EPA allows permittees to incorporate this supplemental material into a thoughtful, comprehensive evaluation.

1.3 Additional Considerations from EPA’s 2013 Memo on Financial Capability

As noted on the first page of this report, concerns raised by numerous local government leaders led EPA administrators to issue a Memorandum on Financial Capability in January of this year. This Memo discusses several important matters that deserve consideration in the preparation of this FCA.

First, EPA recognizes that the cost of a community’s plan “may place a disproportionately high financial burden on households with low incomes.” Accordingly, it encourages communities to “ensure that lower income households continue to be able to afford vital wastewater services.” Specifically, EPA suggests giving attention to using residential bill payment metrics as indicators of affordability, and considering the potential for differential rate structures, where permitted.

Second, EPA reemphasizes that communities can and should “consider and present” information about unique local conditions that affect their financial capability. In particular, attention should be given to other aspects of the debt, socioeconomic, and financial conditions of a community. While the need for flexibility is repeatedly noted in EPA’s 1997 Guidance, its inclusion here makes clear that “consistent implementation” of infrastructure investment plans can produce inequitable outcomes unless these “community specific factors” are taken into consideration.

Third, EPA stresses its “strong support for ensuring that communities” adopt a sustainable approach to addressing their obligations. In the context of financial capability, a useful definition of “sustainability” is offered by Paul Anastas, EPA’s Assistant Administrator for Research and Development: “Our solution
to a problem must not only solve the problem at hand, but it also must not create a new problem as a result. Sustainability must be our true north.\textsuperscript{3} Thus, just as communities must be careful not to impose unintended consequences on the natural environment in pursuit of socioeconomic development, so they must be careful not to create economic harm within the community, particularly to the most vulnerable, in pursuit of environmental protection.

### 1.4 Organization of this Report

Given EPA’s focus on tailoring an FCA to local conditions, the analysis below is prepared as required by the Guidance. However, it also includes critical local information that provides a more complete assessment of the ability of Omaha’s residential ratepayers to pay for the Plan.

The following topics are covered as part of the financial capability assessment in this report:

- **Residential Indicator**
  - Estimation of Total Sewer Costs
  - Development of a Cost per Household (CPH)
  - Estimation of Median Household Income (MHI)
  - Calculation of the Residential Indicator, defined as CPH as a percent of MHI

- **Financial Indicators**
  - Evaluation of Financial Indicators, including additional information on local economic conditions, as prescribed in the Guidance
  - Development of the Financial Capability Indicators Score
  - Evaluation of household burden and other local impacts

This additional analysis is worked into the evaluation of most of the Financial Indicators. It provides a practical approach to assessing local economic conditions, trends, and implications, making full use of the flexibility called for by EPA in order to present an accurate picture of the affordability and financial capability issues attendant to Omaha’s Plan.

\textsuperscript{3} Paul Anastas, “EPA Memo: Sustainability is Our True North,” March 2010.
2 Residential Indicator

In determining Omaha’s financial capability, the first factor to be considered is the Residential Indicator. The Residential Indicator is the annual cost per household for wastewater (including stormwater) service, including the anticipated Plan costs. The Residential Indicator inputs and calculations are presented below.

2.1 Cost Per Household Calculation

2.1.1 Current and Projected WWT Costs
The first step in calculating the Cost per Household is to estimate Omaha’s Projected Total Annual Wastewater Treatment (WWT) Costs over the study period (2012-2018). This estimate combines current and projected WWT costs (including future Plan costs) for 2013-2018. It prorates that portion of the cost attributed to the residential customer base (including households served by commercial accounts), and divides that amount by the total number of households in the Service Area.

*Omaha Service Area Description*

Omaha owns and operates wastewater collection and treatment facilities and, in addition to serving City residents, provides retail services to more than 100 sanitary & improvement districts (SIDs) in Douglas and Sarpy Counties. Omaha also provides contract transmission and treatment service for eight “bulk” community systems: Bellevue, Bennington, Boys Town, Carter Lake IA, Gretna, La Vista, Papillion, and Ralston. These communities have additional O&M costs (and, in one instance, debt costs) that are part of the Service Area’s total WWT costs.

As shown in Figure 1 on the following page, Omaha’s geographic Service Area encompasses all but the northeastern and western edges of Douglas County (an area that includes 99 percent of its households), all but the western and southern portions of Sarpy County (an area that includes 92 percent of its households), and the community of Carter Lake, Iowa. The City’s sewer system directly or indirectly serves virtually all households and businesses in this Service Area.

*Cost Calculations*

EPA defines current WWT costs as the current annual wastewater operating and maintenance (O&M) expenses plus current annual debt service. Current estimated WWT costs for the Omaha system were

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4 Except as otherwise noted, all dollars figures are 2012.
5 Omaha does not have control over the retail rates in these communities, own or operate their collection systems, or directly bill residential customers.
determined by combining Omaha’s 2012 system costs and estimated additional costs of the eight “bulk” communities that operate within the Service Area. These calculations are shown in Table 1.

**Figure 1: Omaha Service Area**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Omaha O&amp;M</td>
<td>$34,796,052</td>
</tr>
<tr>
<td>Existing Bulk Community O&amp;M</td>
<td>$6,198,000</td>
</tr>
<tr>
<td>Existing LTCP Debt Service</td>
<td>$18,598,098</td>
</tr>
<tr>
<td><strong>Current WWT Costs Subtotal</strong></td>
<td><strong>$59,592,150</strong></td>
</tr>
<tr>
<td>Future O&amp;M - Omaha (incremental new) - 2018</td>
<td>$13,017,800</td>
</tr>
<tr>
<td>Future O&amp;M - Bulk Community (new) - 2018</td>
<td>1,203,000</td>
</tr>
<tr>
<td>Future LTCP - Capital (cash-funded) – 2018</td>
<td>$27,894,600</td>
</tr>
<tr>
<td>Future LTCP - Debt Service - 2018</td>
<td>$61,233,000</td>
</tr>
<tr>
<td><strong>Projected 2018 WWT Costs Subtotal</strong></td>
<td><strong>$103,348,400</strong></td>
</tr>
<tr>
<td><strong>Total Current and Projected WWT Costs</strong></td>
<td><strong>$162,940,550</strong></td>
</tr>
</tbody>
</table>
The projected additional WWT costs include incremental new O&M expenses and capital expenditures for the Plan. Capital expenditures include both cash-financed capital and the annual debt service costs for the Plan. Omaha’s entire Plan is currently expected to cost more than $2,000,000,000 over an 18-year period from 2009 to 2027. Some of this will be financed with cash and 20-year bonds, but most will require 30-year bonds in order to spread out the costs across a longer period (Figure 2).

Figure 2: Total Projected Wastewater Program Costs

As noted in the Introduction of this report, the analysis here focuses on the Plan’s affordability in 2018, the final year of the rate ordinance the City expects to adopt in the coming months. Projected WWT Costs for 2018 are also shown in Table 1.

Future O&M costs (for both Omaha and bulk communities) include O&M increases above general inflation and expanded O&M costs that come with added infrastructure. System repair and replacement will be a substantial part of future WWT costs because much of the current Omaha sewer system is decades old and significant replacement costs beyond the Plan will likely be needed to adequately maintain the system. Similarly, Future LTCP costs are based on projected costs for the Plan. Most projected costs are based on the City’s 2013 Cost-of-Service Study.

Omaha’s Total Current and Projected WWT Costs in 2018 (the halfway point in the implementation of the Plan, are calculated to be $162,940,550.

*ADVISORY: This projection does not include funding for biological nutrient removal or other cost increases that may be associated with future regulatory or permit change requirements. While some costs are anticipated for nutrient removal beyond the timeframe of this analysis, the City will want to carefully monitor changes in this area that may affect future WWT program costs.
2.1.2 Residential Share of Projected Total Annual WWT Costs

The second step in the Cost Per Household calculation is determining the Residential Share of Projected Total Annual WWT Costs. This task begins with computing the portion of the sewer system’s wastewater flow that can be attributed to households. The Residential Share is then calculated by multiplying total costs by percentage of total wastewater flow that is attributable to residential users.

At present, Omaha’s total annual wastewater volume is over 51.8 million ccf (hundred cubic feet), of which 32.0 million ccf are contributed (billed) flow. This volume will fluctuate as the Plan is implemented and overall transport and treatment volumes change due to the capture for treatment of current system overflows and the separation of some treated flows into separate storm sewers.

Retail customers in the Service Area are classified as Residential, Commercial, or Industrial. The customer base of the Service Area includes approximately 149,000 residential and 12,900 other accounts. Housing units in structures with more than three units and mobile home parks are served through Commercial accounts, so total residential use by all households must be estimated.

According to data from the Census Bureau’s 2000 Census, 22.8 percent of all households in the Omaha Service Area live in mobile homes or structures that have more than three units, and their usage would therefore be included in Omaha’s Commercial accounts wastewater volume. Although residential users on commercial meters account for about 23 percent of all households, these households are smaller and their consumption of sewer services is also smaller. For purposes of this analysis, usage data from a sample of apartment complexes of various sizes and types was collected, along with data on the number of households residing in them. This analysis revealed that 777 households had a total billed flow of 49,477 ccf in 2012, which results in a monthly household average of 5.306 ccf. By comparison, Residential account data show a monthly household average of 6.027 ccf, indicating usage that is 13.6 percent higher than other households. Infiltration & Inflow are allocated by accounts, resulting in the flow distribution shown in Table 2.

<table>
<thead>
<tr>
<th>Billing Category</th>
<th>Contributed (Billed) Flow</th>
<th>Infiltration &amp; Inflow</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Flow (in ccf)</td>
<td>32,000,746</td>
<td>19,843,604</td>
<td>51,844,350</td>
</tr>
<tr>
<td>Residential Accounts</td>
<td>13,958,532</td>
<td>18,095,068</td>
<td>32,053,600</td>
</tr>
<tr>
<td>Commercial Accounts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--serving Residential</td>
<td>3,629,304</td>
<td>954,830</td>
<td>4,584,134</td>
</tr>
<tr>
<td>--serving Non-Residential</td>
<td>14,412,910</td>
<td>793,706</td>
<td>15,206,616</td>
</tr>
<tr>
<td>Residential Use by All Households</td>
<td>17,587,836</td>
<td>19,049,898</td>
<td>36,637,734</td>
</tr>
<tr>
<td>Residential Share</td>
<td>55.0%</td>
<td>96.0%</td>
<td>70.7%</td>
</tr>
</tbody>
</table>

Table 2: Service Area Wastewater Volume in Ccf, by Source
The Residential Share is thus 70.7 percent of the Total Annual Service Area Wastewater Volume. Multiplying $162,940,550 by 70.7 percent yields an annual Residential Share of $115,198,969.

2.1.3 Number of Households Served in the Service Area

The third step in calculating the CPH is estimating the Number of Households actually served in the Service Area. The method used to develop this estimate utilizes the latest statistics available from the U.S. Census Bureau’s 2011 American Community Survey, supplemented by estimates of the number of septic systems within the Service Area. As shown in Table 3, according to the 2011 American Community Survey, approximately 252,000 households live in the Service Area.

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omaha city</td>
<td>162,607</td>
</tr>
<tr>
<td>Bellevue city</td>
<td>19,264</td>
</tr>
<tr>
<td>Bennington city</td>
<td>473</td>
</tr>
<tr>
<td>Boys Town village</td>
<td>6</td>
</tr>
<tr>
<td>Carter Lake city</td>
<td>1,344</td>
</tr>
<tr>
<td>Gretna city</td>
<td>1,716</td>
</tr>
<tr>
<td>La Vista city</td>
<td>6,646</td>
</tr>
<tr>
<td>Papillion city</td>
<td>7,033</td>
</tr>
<tr>
<td>Ralston city</td>
<td>2,601</td>
</tr>
<tr>
<td>balance of Douglas County</td>
<td>31,856</td>
</tr>
<tr>
<td>balance of Sarpy County</td>
<td>18,480</td>
</tr>
<tr>
<td><strong>Service Area Total</strong></td>
<td><strong>252,026</strong></td>
</tr>
<tr>
<td>Septic System Users</td>
<td>2,047</td>
</tr>
<tr>
<td><strong>Service Area Sewered Total</strong></td>
<td><strong>249,979</strong></td>
</tr>
</tbody>
</table>

Some households have septic tanks for their wastewater. As a result, they do not have sewer bills, and they need to be excluded from the count of households receiving sewer services. Omaha has 2,047 households on septic systems\(^6\). Thus, a net of 249,979 households are served by the City of Omaha.

2.1.4 Cost Per Household

Once the residential share of the total annual WW1 costs is known and the number of households served by Omaha has been determined, the annual Cost Per Household can be calculated. The result is an average annual cost of $461 per household. This final step of the Cost Per Household Calculation is shown in Table 4.

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\(^6\) Based on calculations developed by Omaha Public Works Department from GIS data, March 2013.
Table 4: Annual Cost Per Household Calculation

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Share of Total Annual WWT/Plan Costs</td>
<td>$115,198,969</td>
</tr>
<tr>
<td>Net Number of Households Served by Omaha</td>
<td>249,979</td>
</tr>
<tr>
<td>Annual Cost Per Household (CPH)</td>
<td>$461</td>
</tr>
</tbody>
</table>

2.2 Residential Indicator Calculation

EPA’s final Residential Indicator calculation consists of dividing the Cost Per Household by the median household income (MHI) of the Service Area. The 2011 American Community Survey contains MHI figures and data on the distribution of households by income for each of the jurisdictions within the Service Area. Utilizing this dataset, the Service Area MHI is calculated by taking a weighted average of the Omaha MHI and all of the other communities’ MHIs. As shown below in Figure 2, these MHIs vary considerably.

Figure 2: Variation in Median Household Incomes

The MHI for the entire Service Area is $56,019. Dividing the Cost Per Household of $461 by the Service Area MHI produces a Residential Indicator of 0.82 percent of MHI, as shown in Table 5.
Table 5: Residential Indicator Calculation

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Area MHI</td>
<td>$56,019</td>
</tr>
<tr>
<td>Annual Cost Per Household</td>
<td>$461</td>
</tr>
<tr>
<td>Service Area Residential Indicator</td>
<td>0.82%</td>
</tr>
</tbody>
</table>

2.2.1 Residential Indicators for Communities of Concern

As a public utility, the City of Omaha Public Works Department has a responsibility to provide certain essential public services, in compliance with regulatory requirements, for all City residents. Those services must be provided via rates that are adequate to satisfy Public Works Department’s revenue needs. Recognizing that significant increases in residential rates will affect all households and add to the economic hardship experienced by many low-income households, Omaha has two clearly defined “Communities of Concern” characterized by large concentrations of people with low incomes.

The first Community of Concern is the historical Combined Sewer Area, roughly bounded by Sarpy County, 72nd, I-680, and the Missouri River. As Figure 3 shows, most high poverty tracts are contained within this area.

Figure 3: Poverty Rates by Census Tract, 2011
The Combined Sewer Area is home to 83,791 households, more than half of the City’s total. This is a tale of two cities: within this Community of Concern, the MHI is $37,068 (79% of the overall Omaha MHI), compared to an MHI of $61,254 in the balance of the City (130% of the City’s MHI). Not only is this an area with lower incomes and higher concentrations of poverty, it is also the locus of most major projects in the Plan, so construction disruption will disproportionately affect these lower income residents.

The second Community of Concern is the North Omaha Neighborhood Revitalization Strategy Area. This area is federally designated by the Department of Housing and Urban Development (HUD) as a community experiencing a high concentration of economic distress.

**Figure 4: North Omaha Neighborhood Revitalization Strategy Area**

North Omaha is home to about 16,900 Households. If it were a separate city, it would be the fifth largest in the State of Nebraska. North Omaha’s MHI is $25,109, which is roughly half of the MHI figures for the City of Omaha and the nation. The Nebraska city with an MHI nearly identical to North Omaha’s is Terrytown, the second poorest in the state, but only 2.2 percent as many households. North Omaha’s unemployment rate is 2.5 times the City rate, and its poverty rate (37.2%) is 2.4 times the City rate.

According to HUD, the area is also characterized by physical and social distress, and more than 75 percent of all households are low-and moderate-income. According to a 2008 report by the Pew Partnership, 60 percent of the City’s African American population lives in North Omaha.
The table below provides data on the percent of the Service Area's households living in each of these Communities of Concern, the MHI for each one, and the Residential Indicator (CPH as a percent of MHI) for each one.

<table>
<thead>
<tr>
<th>Communities of Concern</th>
<th>% of Service Area</th>
<th>Estimated MHI</th>
<th>2018 CPH as % of MHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Sewer Area</td>
<td>33.5%</td>
<td>$37,068</td>
<td>1.24%</td>
</tr>
<tr>
<td>North Omaha</td>
<td>6.8%</td>
<td>$25,109</td>
<td>1.84%</td>
</tr>
</tbody>
</table>

**ADVISORY:** Any analysis that utilizes median household income as a standard should recognize that a median household income-based rate means that half of all households will be spending more than this percentage. Because income distribution is uneven, this means the impact is disproportional, with poorer communities experiencing substantially greater financial burdens relative to their ability to pay. As the preceding table shows, the Residential Indicator of 0.82 percent of MHI for the Service Areaequates to 1.24 percent in the Combined Sewer Area and 1.84 percent in North Omaha. For households with incomes qualifying them for the State’s utility assistance program, the CPH will exceed 2 percent of their income by 2014. Consequently, over the next five years, Omaha will benefit from carefully monitoring impacts of the Plan’s cost in lower income communities.
3 FINANCIAL INDICATORS

The second phase in the determination of Omaha’s financial capability is an examination of financial indicators.

This section includes an examination and evaluation of current and future local economic conditions, employing those financial indicators listed in EPA’s Guidance, along with other information about existing and anticipated economic conditions affecting the Omaha service area and its communities.

EPA’s Guidance is intended to assist communities in determining their capacity for funding implementation of necessary programs while avoiding the imposition of substantial and widespread adverse economic impacts. This assessment examines financial indicators for Omaha in three EPA-defined categories: debt indicators, socioeconomic indicators, and financial management indicators.

For each financial capability indicator, this assessment includes a description of the:

- Current conditions Omaha faces; and
- Additional considerations.

3.1 Debt Indicators

Debt indicators are bond rating, net debt as a percent of full market property value, and debt per capita. Because other communities in the Service Area do not participate in the issuing of Omaha’s sewer bonds, these indicators are based only on Omaha data.

3.1.1 Bond Rating.

This section provides information about Omaha’s most recent bond ratings, along with commentary regarding the outlook for Omaha’s financial position. It also includes insights from research published by Moody’s Investors Service and from independent research reported in peer-reviewed literature.

- CURRENT SITUATION: In November 2012, Omaha issued $109 million in sanitary sewer system revenue bonds. At that time, Moody’s gave Omaha an underlying rating of Aa2 and Standard & Poor’s assigned an underlying rating of AA, based on the credit of Omaha’s Sewer System. Omaha’s ratings for General Obligation bonds at that time were Aa1 (Moody’s) and AAA (Standard & Poor’s). Bonds within these general categories are considered to be “high grade” or “high quality” bonds. This bond rating receives the “Strong” rating on EPA benchmarks.

- ADDITIONAL CONSIDERATIONS: In the near term, Omaha’s sewer bond rating is expected to remain at its current level. However, while the rating agencies recognize that Omaha has a large and stable Service Area and a relatively healthy regional economy, they also raised a number of concerns, including a capital plan that calls for a substantial expansion of debt and a continuation of significant rate increases. Moody’s Investor Service noted that “debt required by the Long Term Control Plan will substantially leverage the system,” and it considers the current debt ratio to be
“already somewhat elevated.” Furthermore, in September 2012, it issued a decision to downgrade the City’s general obligation bond rating “primarily based on persistent under-funding of its pension obligations.” These factors suggest that there are real, practical limits on Omaha’s ability to raise additional capital for its Plan through by issuing debt. Any further downgrade in its ratings would mean higher interest rates on the City of Omaha’s bond issues and lead to higher projected costs per household. These conditions have the potential to increase investor uncertainty, which can lead to higher borrowing costs even if the bond rating stays the same.

At a more fundamental level, there are serious problems with this indicator. The Bond Rating Indicator should be excluded from the assessment because of validity problems, or it should at least be adjusted to Mid-Range because of extreme bias in the rating scale and the probability of increased investor uncertainty in the future.

- A 2006 report by Moody’s Investor Services indicates that EPA’s use of bond ratings to assess community credit capacity is invalid. Moody’s says municipal bond ratings are largely a reflection of their risk of default, not debt level or credit capacity. This is confirmed by economist Camilo Sarmiento’s independent peer-reviewed research on the relationship between debt and municipal bond ratings, which found that “outstanding debt fails to significantly explain lower ratings.”

- Because EPA’s scale for scoring bond ratings is so heavily skewed to the positive side, and because of the substantial amount of borrowing that is anticipated in order to fund the Plan, a Mid-Range rating is a better reflection of Omaha’s credit capacity for the Plan as a whole. Based on statistics presented in the previously cited Moody’s report, 81 percent of Moody’s GO bond ratings would receive EPA’s “Strong” rating, while only 0.003 percent of Moody’s GO bond ratings would receive EPA’s “Weak” rating. If this extreme bias were eliminated from EPA’s scale and Omaha’s underlying rating were adjusted to account for the likely impact of the Plan, Omaha would be more appropriately rated as “Mid-Range.”

### 3.1.2 Overall Net Debt as a Percent of Full Market Property Value

This indicator compares debt to the fair market value of real property to support that debt. The 2011 Comprehensive Annual Financial Report (CAFR), issued in June 2012, contains the latest information on Omaha’s direct net debt and debt of overlapping entities.

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7 EPA has taken the position that such interest premiums are best avoided, even if this necessitates a schedule extension. (See EPA arguments presented in the case of Cincinnati MSD before Judge Spiegel, and in opposition to Sierra Club’s position.)


• **CURRENT SITUATION:** The total direct and overlapping debt figures reported on pages 117 and 119 total $1,354,691,000. The total estimated value of all taxable real property in Omaha, reported on page 171, is $26,137,302,000. Using these two figures results in an overall net debt percentage calculation of 5.18 percent. This debt level receives the “Weak” rating on EPA benchmarks.

**3.1.3 Per Capita Debt**

One widely recognized indicator of municipal financial capability is per capita debt. Given the problems with EPA’s bond rating indicator, this would be a sensible replacement; in any case, it should at least be used to augment the two basic debt indicators.

• **CURRENT SITUATION:** As noted above, Omaha’s total direct and overlapping debt was $1,354,691,000 in 2011. Using the 2011 American Community Survey population figure of 409,082 for Omaha, per capita debt is $3,312. The State of Nebraska has not established a financial indicator for debt per capita. However, another Midwestern state, Indiana, provides guidance on debt per capita as part of its sewer affordability analysis.

The State of Indiana uses “Overall Net Debt per Capita” as one of its financial capability indicators and has determined that a level below $1,000 is strong, a level from $1,000 to $3,000 is mid-range, and a level above $3,000 is weak. Accordingly, a “Weak” rating would be appropriate for Omaha’s current per capita debt level.

• **ADDITIONAL CONSIDERATIONS:** In its analysis, Moody’s views Omaha’s current per capita debt as above average, without taking into consideration its pension and other post-employment benefit obligations. When this current unfunded debt is addressed, it will increase this metric by more than 50 percent.

**ADVISORY:** As the City continues to implement its plan, it will benefit from maintaining a broader view of debt indicators than those specified by EPA. Omaha’s pension and related obligations will affect its financial capability, where they are recognized by EPA or not. In addition, the City has a range of other infrastructure needs and service obligations that will require funding in the years ahead. EPA’s recognition of the importance of communities finding sustainable solutions should inform the City’s debt decisions.

**3.2 Socioeconomic Factors**

Socioeconomic indicators are unemployment rate, median household income, and other socioeconomic conditions and trends.

**3.2.1 Unemployment Rate**

Current unemployment figures for Omaha and Douglas County from the Bureau of Labor Statistics (BLS) are used for this indicator. The BLS does not report unemployment figures for customized areas such as the Service Area.
• CURRENT SITUATION: In 2012, the U.S. unemployment rate was 8.1 percent while the rate for the City of Omaha and Douglas County was 4.5 percent. When compared to the national figure, the Omaha unemployment rate receives the “Strong” rating on EPA benchmarks.

• ADDITIONAL CONSIDERATIONS: The recent Great Recession has laid bare the underlying problem of calibrating this benchmark to current national conditions. Because this indicator fails to account for poor national economic conditions, a community can receive a “Strong” rating with double-digit unemployment so long as the national conditions are sufficiently worse. A sound approach to this benchmark would be to use an absolute scale (not a relative one), based on long-term national trends. National trends are shown in the chart below.

![Figure 5: National Unemployment Rate Trend](image)

A Mid-Range score should reflect normal national unemployment conditions. As shown in Figure 5, over the past quarter century, the national unemployment rate has ranged from 4.5 to 6.5 percentage points 70 percent of the time. In 2012 the unemployment rate for both Douglas County and Omaha was 4.5 percent, which would place them in the strong end of Mid-Range.

At the same time, nearly 19,000 fewer City residents are working than four years ago; this is an 8.2 percent decrease in resident employment, and there are substantially higher unemployment rates in Communities of Concern. Such differences in conditions within an economic region are important because they often contribute to disinvestment in urban core areas. Therefore, the adjusted indicator score would be Mid-Range.

### 3.2.2 Median Household Income

The Census Bureau’s 2011 American Community Survey (5-Year Estimate) is the basis for all 2011 Census income statistics. Additional details about the calculation of the Median Household Income (MHI) for the Service Area can be found in the discussion of the Residential Indicator calculation in the previous section.
• CURRENT SITUATION: In 2011, the Service Area estimate of $56,019 was 6.2 percent higher than the U.S. MHI figure of $52,762. Based on these comparisons, the MHI receives the “Mid-Range” rating on EPA benchmarks.

• ADDITIONAL CONSIDERATIONS: Using the Service Area MHI can also obscure impacts on large communities where incomes are much lower. This is particularly true where the disadvantaged households are concentrated in Communities of Concern. For this reason, Omaha’s two Communities of Concern require closer attention for the purpose of assessing the impact of the Plan. It is noteworthy that the 2011 MHI in the Neighborhood Revitalization Strategy Area of North Omaha was $25,109; 54 percent of the City, and 46 percent of the nation. It is also notable that the assessment of socioeconomic conditions for Washington DC’s Long Term Control Plan was based on the MHI of its CSO area, comparable to Omaha’s Combined Sewer Area. When this additional information is taken into consideration, Omaha’s rating should be revised to “Weak”.

3.2.3 Poverty in Communities of Concern
The Guidance repeatedly references the appropriateness of including consideration of other socioeconomic conditions and trends. Consistent with the Guidance, an additional factor is presented to help clarify the socioeconomic status of the Omaha area, its poverty rate, especially in the Communities of Concern.

• CURRENT SITUATION: In 2000, Omaha had a poverty rate of 11.3 percent, nine percent below the US rate of 12.4 percent. By 2011, the Omaha rate had increased to 15.5 percent, eight percent above the national level of 14.3 percent. As shown earlier in Figure 3, the distribution of this economically disadvantaged group is uneven and concentrated in the two Communities of Concern. As noted previously, in 2011, the poverty rate in North Omaha was 37.2 percent; this is an extremely high level, 2.4 times the City rate. This is further documented in the 2008 Pew Partnership report, which noted that families and children living in poverty are problems that are particularly concentrated in North Omaha. Even though North Omaha is only a portion of the Service Area, it is a large community. As noted earlier, if it were a separate city, it would be the fifth-largest in the State of Nebraska, an indication of how widespread this condition is.

** ADVISORY: Given the poverty concentrations in the Communities of Concern and the EPA recognition in EPA’s recent memo that the cost of a community’s plan “may place a disproportionately high financial burden on households with low incomes,” the City may wish to give track residential bill metrics, such as delinquencies, shut-offs, non-payment, and LIHEAP assistance, as indicators of affordability.

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10 When an area is characterized by multiple distinct communities and a wide range of income levels, measuring the program’s cost solely as a percentage of the MHI of the entire area is, from a practical economics perspective, an inadequate and likely inaccurate standard for assessing its impact.
3.3 Financial Management Indicators

Financial management indicators are property tax revenues as a percent of full market property value, property tax revenue collection rate, and unfunded pension liabilities.

3.3.1 Property Tax Revenues as a Percent of Full Market Property Value

This indicator is intended to measure the property tax burden as a percent of the fair market value of real property. Estimation of this indicator is based on information in Omaha’s 2011 Comprehensive Annual Financial Report (CAFR), issued in June 2012.

- CURRENT SITUATION: As noted previously, the total estimated value of all taxable real property in Omaha, reported on page 171 of the 2011 CAFR, is $26,137,302,000. Because the CAFR reports only the property tax revenues for Omaha, it is necessary to estimate total property tax revenues for all other jurisdictions using CAFR data on property tax rates. This is calculated in the following manner.

<table>
<thead>
<tr>
<th>Table 8: Total Estimated Property Tax Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>General purpose tax levy revenues for Omaha*</td>
</tr>
<tr>
<td>Ratio of total and Omaha tax rates</td>
</tr>
<tr>
<td><strong>Total of general purpose property tax revenue</strong></td>
</tr>
</tbody>
</table>

* A portion of this revenue is from taxes on personal property

This is 2.73 percent of Omaha’s estimated full market property value. This revenue level receives the “Mid-Range” rating on EPA benchmarks.

- ADDITIONAL CONSIDERATIONS: This indicator is incomplete when evaluating areas with other local taxes, unless consideration is given to the burden those taxes also impose on sewer customers. According to the 2011 CAFR (page 170), property taxes and sales taxes each accounted for 34 percent of Omaha’s tax revenues; a variety of other taxes generated the remainder of Omaha’s tax revenues. These other tax sources should be taken into consideration because it is not appropriate to discriminate between communities on the basis of how elected officials choose to raise general fund revenues. For example, Omaha recently added a new tax source in order to avoid having to raise existing tax rates. Furthermore, the City also collects payments in-lieu-of taxes, which are not included in the calculations shown here. When all of these taxes are considered, tax revenues amount to 7.93 percent of Omaha’s estimated full market property value, placing it in the “Weak” classification.

Furthermore, according to a 2011 nationwide study of tax burdens in major cities, Omaha’s low income households experience a heavier state and local tax burden than any other income
The table below details how the total state and local tax burden is 15 percent higher for a typical Omaha household with an income of $25,000 than for households at the $75,000 and $100,000 income levels.

<table>
<thead>
<tr>
<th>Household income:</th>
<th>$25,000</th>
<th>$50,000</th>
<th>$75,000</th>
<th>$100,000</th>
<th>$150,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax burden* as % of income:</td>
<td>10.4%</td>
<td>9.4%</td>
<td>9.0%</td>
<td>9.0%</td>
<td>9.4%</td>
</tr>
</tbody>
</table>

* Tax burden includes property, earnings tax, sales, and vehicle (license and gas) taxes.

### 3.3.2 Property Tax Revenue Collection Rate

Omaha’s property tax collection rate is based on information in the 2011 CAFR.

- CURRENT SITUATION: Statistics on page 174 of the City of Omaha’s 2011 CAFR show tax revenues and collections. According to the CAFR, Omaha’s property tax collection rate for that year’s taxes was 97.67 percent. This rate merits the “Strong” rating on the USEPA benchmarks.

- ADDITIONAL CONSIDERATIONS: However, in Nebraska, a high penalty is imposed on delinquencies in two ways: a 14 percent interest rate, which is so far above market rates that virtually all economic incentive to be delinquent is removed, and a “tax sale” marketplace exists, by statute, which protects jurisdictions from the risks associated with property tax delinquencies by allowing investors to purchase delinquent tax bills. The former feature serves to dramatically reduce the current year delinquency rate and increase the tax collection rate.

The “Property Tax Revenue Collection Rate” is described in the EPA Guidance as an indicator of two things: “the efficiency of the tax collection system” and “the acceptability of tax levels to residents.” While the collection rate serves the first purpose well, Nebraska State law renders it invalid and useless for the second purpose. Consequently, this indicator should be excluded from the Financial Capability Indicators.

### 3.3.3 Unfunded Pension Obligations

Another measure of Omaha’s financial capability is the financial burden of its unfunded pension liabilities.

- CURRENT SITUATION: Like many cities across the US, Omaha has struggled to come to grips with this difficult financial management issue. At the present time, this is a financial management issue because the funding issues are unresolved. Yet, as noted earlier, it has also affected the City’s bond rating. Because of changes to Governmental Accounting Standards Board (GASB) rules, these financial obligations will need to be addressed in the next few years. If this were to be used

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as an indicator for financial management issues, a “Weak” rating would be appropriate for Omaha’s current situation.

**ADVISORY: As implementation of its Plan continues, Omaha may find it helpful to develop a forecast of the full range of financial commitments and anticipated needs facing its residents. This would include not only environmental requirements, but also those in areas such as schools, transportation, etc.**

### 3.4 Overall Financial Capability

Together, the debt, socioeconomic, and financial management indicator benchmarks produce Omaha’s financial capability indicators score. Table 10 displays Omaha’s actual values for each item, a rating, and two sets of scores, one using only the six EPA indicators and one that incorporates the additional local considerations raised in the preceding discussion of the financial indicators. The Overall Score is simply an average of all of the individual scores in the table. While the final score for EPA’s standard indicator set, without regard for other important considerations, results in a “Mid-Range” rating, using a broader set of indicators and taking additional factors, including local conditions, into consideration results in a “Weak” rating on the financial capability scale.

<table>
<thead>
<tr>
<th>Table 10: Omaha Financial Capability Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator</td>
</tr>
<tr>
<td>DEBT</td>
</tr>
<tr>
<td>Bond Rating (Sewer and GO Bonds)</td>
</tr>
<tr>
<td>Net Debt as % of Full Market Value</td>
</tr>
<tr>
<td>Debt Per Capita</td>
</tr>
<tr>
<td>SOCIOECONOMIC</td>
</tr>
<tr>
<td>Unemployment Rate</td>
</tr>
<tr>
<td>Median Household Income</td>
</tr>
<tr>
<td>Poverty Rate-Community of Concern</td>
</tr>
<tr>
<td>FINANCIAL MANAGEMENT</td>
</tr>
<tr>
<td>Property Tax Revenues as % of Value</td>
</tr>
<tr>
<td>Property Tax Revenue Collection Rate</td>
</tr>
<tr>
<td>Unresolved Pension Obligations</td>
</tr>
<tr>
<td>OVERALL SCORE (average)</td>
</tr>
</tbody>
</table>

* Includes three local considerations in addition to the six standard EPA indicators.
The final step in the Financial Capability Assessment is to combine the Residential Indicator Score (the Cost Per Household as a percentage of Median Household Income) with the Financial Capability Indicator Score, calculated above. EPA’s Guidance uses a Financial Capability Matrix for this purpose.

As shown in Table 10, when the Financial Capability Matrix is used to determine the level of burden anticipated for Omaha’s Plan, simply following the standard EPA scoring suggests that households in the Service Area, on average, will experience “Low Burden” in 2018 when the Residential Indicator is expected to reach 0.82 percent. However, adapting to incorporate considerations in the 2013 EPA memo results in a “Medium Burden.”

Table 11: Financial Capability Matrix

| Financial Capability Indicator Score: (Debt, Socioeconomic & Financial Indicators) | Residential Indicator Score: CPH as % of MHI |
| --- | --- | --- | --- |
| Low (Below 1.0%) | Mid-Range (1.0 to 2.0%) | High (Above 2.0%) |
| Weak (Below 1.5) | Medium Burden | High Burden | High Burden |
| Mid-Range (Between 1.5 and 2.5) | Low Burden | Medium Burden | High Burden |
| Strong (Above 2.5) | Low Burden | Low Burden | Medium Burden |

However, as noted in Section 2 of this report Omaha has Communities of Concern with significantly lower incomes. These two Communities are shown at the far right in Figure 6.

**Figure 6: Median Household Income Comparison**

![Median Household Income Comparison](image-url)
The meaning of these lower MHIs for the two Communities of Concern is that their concentrations of households with significantly lower incomes will result in a higher Cost Per Household, as shown in Figure 7, which also references the increasing impact on households qualifying for LIHEAP assistance.

For these Communities of Concern, their anticipated sewer costs will move them into the “High Burden” category on EPA’s Financial Capability Matrix. This finding will have serious implications for the financing and scheduling of Omaha’s Plan beyond 2018.

Table 11: Financial Capability Matrix

<table>
<thead>
<tr>
<th>Financial Capability Indicator Score: (Debt, Socioeconomic &amp; Financial Indicators)</th>
<th>Residential Indicator Score: CPH as % of MHI</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Mid-Range (1.0 to 2.0%)</td>
</tr>
<tr>
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<td>Medium Burden</td>
</tr>
<tr>
<td>Mid-Range (Between 1.5 and 2.5)</td>
<td>Low Burden</td>
</tr>
<tr>
<td>Strong (Above 2.5)</td>
<td>Low Burden</td>
</tr>
</tbody>
</table>
4 CONCLUSION

This analysis reveals that Omaha’s Plan, with an estimated price tag of $2 billion, is expected to impose a “Medium Burden” on the Service Area as a whole in 2018. This is an encouraging finding, but it must be understood as applying only to the mid-point of Omaha’s 18-year implementation period. The findings reported here also have a number of important implications for the City’s Program to continue to implement that Plan, as well as for its customers.

4.1 Implications for Omaha’s Program

As it continues to pursue its Program goals of Regulatory Compliance, Economic Affordability, and Community Acceptance, the City faces a range of challenges, among them:

- Balancing water quality investment with other environmental needs;¹²
- Balancing environmental investment with other local needs (schools, safety, existing obligations);
- Balancing environmental protection and human health with economic burden on residents, businesses, and communities; and
- Working to alleviate some of the burden that will be most heavily felt by low income residents.

While implementing the Plan on the current schedule will impose a medium burden on the Service Area as a whole by 2018, in some Communities of Concern, it is already approaching a high burden. By the end of the program in 2027, the entire Service Area may approach the high burden that many other large CSO communities experience.

EPA’s new memo on financial capability notes that communities face “difficult economic challenges.” Even stronger communities are not immune. Thus, while the economy of the region is presently doing relatively well, the City will have to continue to carefully monitor Plan costs and manage the overall Program approach, level of control, and schedule. Concurrently, Omaha must work with NDEQ and other regulators to ensure solutions that are financially and environmentally sustainable.

To assist City leaders in determining appropriate Program strategies in the coming years, the Economics Center has incorporated a number of “ADVISORY” statements throughout this FCA analysis. These statements may also help Omaha to develop an agenda for conversations with NDEQ officials.

¹² Concurrent with this Program, Omaha has a range of other environmental challenges to address, including stormwater mandates, ozone non-attainment remediation, and FEMA recertification of its levee system. In some cases, the magnitude of these projects is highly uncertain and will depend on negotiations with government regulators. Collectively, these environmental concerns will require at least tens, if not hundreds of millions of dollars in additional investment.
4.2 Impacts on Customers

Implementing the next phase of Omaha’s Plan will mean sewer rates that increased by 194 percent from 2006 to 2013 will continue to rise substantially in the next five years. In 2018, rates that will be 82 percent above 2013 levels are expected to create growing problems with delinquencies, shut-offs, and non-payment. Such rate increases will be a particular challenge for lower income households.

Omaha already sets aside considerable resources to provide assistance to customers in severe need. In 2012, roughly 2/3 of a million dollars was distributed to households requesting help in conjunction with Nebraska’s Low Income Home Energy Assistance Program. Yet even at this level of funding, the City was only able to provide modest help to a portion of all low income households. To have broader and deeper impact, the assistance program would have to be funded at a vastly larger scale, and even with more funding, many low income households won’t be reached because they live in apartments, making them ineligible. Thus, addressing future impacts on low income customers will be a complex and difficult challenge for the City.

4.3 Other Economic Considerations

The next round of rate increases, while essential to the continued implementation of Omaha’s Plan, can also be expected to result in higher levels of utility delinquencies and revenue leakage. As users react to these rate increases, a continuation of the recent trends of declining residential and commercial usage is also likely, although the level of demand per user will probably level out as customers exhaust means of conservation.

From a business perspective, all firms are adversely affected by cost increases, but they can generally be divided into two categories. Businesses that primarily have local markets will experience the same increases as their competitors, so they can pass these costs on to their customers to a larger extent. On the other hand, most businesses that sell their products and services outside the metropolitan area will have to absorb these costs internally, reducing their profits. Similarly, the cost of the Plan will have a negative effect on one of the City’s historic competitive advantages, which may have a long-term adverse impact on Omaha’s economic growth.