

Toward Full Disclosure and True Cost of Water and Sewer Service

*A Report Prepared for The Southeast
Michigan Consortium For Water Quality*

By the Joint True Cost Full Disclosure Team, a work group made
up of representatives of the Detroit Water and Sewerage
Department and its customer communities

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Executive Summary

This report is the result of a water and wastewater rates survey conducted for the Southeast Michigan Consortium for Water Quality in 2004 and a follow-up more detailed survey of the financial and cost recovery practices of 26 communities in Southeast Michigan. Based on an analysis of survey results, a number of findings were identified.

These findings were the basis of formulating several recommendations designed to more fully achieve full disclosure. The findings are also the basis for listing several principles designed to assure that revenue collection systems are adequate to meet the true cost of providing quality water and sewer service considering both short-term and long-term needs.

The “take away” messages for leaders in the region are as follows.

1. Positive actions have been taken toward achieving disclosure of DWSD’s charges and the basis for allocating those charges to customer communities. The most visible example is the series of meetings on prospective wholesale rates between DWSD and municipal customers that begins in the fall concluding with rates being finalized in about March of the following calendar year. Other examples are less visible, but no less important, and include development of a “Rates 101” presentation and other material. This material is available to municipal customers for their local governing or advisory bodies.
2. Success in achieving full disclosure must go beyond information sharing that now accompanies DWSD’s annual rate setting process. A more complete continuum of actions is needed to support full disclosure that is responsive to the needs of both municipal customers and retail customers. This will also result in a more factual basis for discussions and a better understanding of those factors affecting changes in charges for any particular period, e.g. capital versus operating costs. Accordingly, this report includes several recommendations designed to make disclosure more complete than it is today. They range from information that could be provided as part of billing to tracking and reporting of actual costs on some more uniform basis.
3. There are a multitude of approaches being used to fund water and sewer service. Many communities use revenue sources other than sole reliance on the water and sewer rates and user charges to operate and maintain their systems. Disclosure must extend beyond information focused on user charges so that it includes all the various revenue sources used to support water and sewer service.
4. The massive investment in sewer infrastructure estimated by SEMCOG (\$14-26 billion for sewers alone) means it is critical that we strive toward assuring that revenues collected reflect the true cost of the service - considering both short-term and long-term needs. This report describes several principles of revenue collection systems designed to reflect true cost of service. This list of principles should be more fully discussed, expanded, and eventually implemented.

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5. A prime opportunity for moving recommendations on disclosure and true cost of service into action is the contract between a service provider and wholesale customer. (To this end, some initial discussions have taken place with DWSD's customer group working on a model water contract.)
6. The region faces a dilemma: the desire to minimize rates and other charges for sewer and water service versus the seemingly contradictory desire to sustain quality service by making the multi-billion dollar investment required in infrastructure to maintain that quality service. Implementation of revenue collection systems designed to meet the true cost of service, considering both short term and long term needs, is the pathway to resolving this dilemma. Establishing protocols for transparent disclosure of the true costs associated with providing these services is also essential to successfully confronting this dilemma.
7. Continued honing of the initial recommendations in this report is needed. The Consortium or successor entities should work to see they are appropriately refined and implemented.

It is important to recognize that there is no single methodology for revenue collection that should be used throughout Southeast Michigan. A variety of funding methods are employed across the region with varying degrees of reliance on General Fund expenditures, debt financing, connection fees, special assessments, and user fees. Each service provider needs to establish its water and wastewater revenue collection system to meet its unique situation while assuring that revenues reflect the necessary level of investment.

Lastly, in order to track progress on achieving full disclosure and understanding the true cost of water and wastewater service, the information collected for this report needs to be gathered, analyzed, and reported on a periodic basis. This report contains several exhibits that illustrate the various components of water and sewer costs and cost recovery mechanisms experienced by the 26 sample communities during 2004. This data was collected via survey forms and review of audited financial statements and other financial reports. There is a need to further refine the process for collecting and reporting information in this format in an efficient, streamlined manner. This will require additional efforts to inform participants of the elements that contribute to water and sewer costs of service. We believe that these efforts will necessitate a comprehensive and cohesive dedication by regional leaders to succeed.

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Background/Introduction

The Southeast Michigan Consortium for Water Quality was formed to collaboratively resolve water quality challenges facing the region. In an order issued May 5, 2003, United States District Judge John Feikens stated "... in my oversight capacity under the various orders and consent judgments heretofore entered, that the Southeast Michigan Consortium for Water Quality become an integral means of assisting the court in the solution of regional water quality problems."

Two of the issues of focus have been full disclosure and true cost of service, as demonstrated by the following Consortium policy statement:

"A common policy basis should be developed for guiding rate setting for both the regional and local components of the system. A part of that common policy basis should be full disclosure to the billed customer regarding which components of a bill are being charged by various entities. Finally, rates should reflect the true costs associated with providing the service."

To assist in this effort, the Rate Policy Team of the Consortium initially engaged Plante & Moran to survey to all communities in Southeast Michigan. That study successfully obtained information from 141 of the 192 communities contacted and the ensuing report was published in the Spring of 2004. The report followed the same approach and format as prior, similar Plante & Moran reports had conducted for Oakland County communities. Among the observations in the report was that there was an enormous amount of variability in both the **types** of rates and charges employed and the **magnitude** of such charges.

The Plante & Moran report represented an important first step towards disclosure. However, the Consortium had larger goals on this topic. The Consortium's Rate Policy Team subsequently requested that a joint working group of representatives of both the Detroit Water and Sewerage Department (DWSD) and its water and sewage customer communities address the following issues:

1. Follow-up on the report prepared by Plante & Moran for the Consortium by developing a process for periodic collection of water and sewer revenue information from individual municipalities and identify any additional revenue information that should be collected.
2. Identify the policy basis/rationale used by different communities in determining the different sources used to generate revenues to operate water and sewer systems.
3. Develop templates to provide full disclosure to retail customers.

In response, this report was developed. The joint working group was formed from volunteers from the Wastewater Steering Committee Rates Work Group and the Technical Advisory Committee Water Rates Group and became known as the Joint True Cost and Full Disclosure Team (JTCFD). The aforementioned groups are collaborative problem solving teams established by DWSD and its customer communities and have been working for several years to identify and resolve issues between DWSD and its customer communities. A sample set of 26 geographically

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and economically diverse communities in the region was selected to conduct detailed analysis of their water and sewer financial and cost recovery practices. The findings of our analysis are summarized in this report and its accompanying exhibits.

A mechanism to establish formats for ongoing disclosure of water and sewer costs as well as cost recovery mechanisms is provided in this report. Exhibit A represents the proposed utility funding sources and uses in a format suggested to be applied to data for all communities in the region. The terms referenced in this exhibit are defined in Exhibit B.

Exhibit C illustrates how this information might be summarized in a format that could be distributed to end use customers throughout the region.

Exhibits D and E represent summary comparisons of key metrics from Exhibits A and C for the 26 sample communities, cost per unit of water sold and cost per capita, respectively. The 26 sample communities are listed in Exhibit F.

(Note: For purposes of this report, Exhibit A represents a composite of the sample communities that receive service from DWSD. We have generated similar reports for individual communities and will share those reports with community representatives. We have not identified the specific data for individual communities. We believe that subsequent reports should disclose this information, after communities have had the opportunity to review how their specific data has been applied, and this disclosure concept has been extended to all communities in the region.)

This report also identifies policy matters related to the true costs of water and sewer service and establishes principles for establishing revenue collection systems that are aligned with true cost of service.

Findings

The purpose of this investigation was to identify the range of sources used to generate water and sewer revenues within the region and the policies and principles that serve as the basis of the different revenue collection systems employed. The purpose was not to critique the revenue collection methodologies of individual communities participating in the survey. As a result of the analysis of the detailed information obtained through the follow-up surveys, the following general findings were identified.

- There is no one “accepted” approach to financing water and sewer services and establishing water and sewer rates. Rather, there are a myriad of acceptable practices that meet cost of service principles to varying degrees.
- Amongst communities who purchase service (both water and sewer) from DWSD, the cost of “wholesale” service provided by DWSD accounts for a little less than 50% of the total cost of service to the retail customer.
- There are several instances in which programs designed to provide water and/or sewer service are not reported in the financial reports for the water and sewer utility. Instead, they are included in other areas of the community’s financial reports. The cost of some of

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these programs is often quite significant. Because these costs are not a part of customer billing, the disclosure process is complicated. For full disclosure to be successful, communities would need to report all costs associated with water and sewer service in a transparent manner. This finding further clarifies that simple community-to-community comparisons of rates is often erroneous and misleading.

- Often there are major differences in the assumptions used by regional service providers and their individual customer communities to establish budgets for water and sewer services. Understanding these different assumptions and the rationale for alternative approaches is an important part of achieving “full disclosure.” This will also assist in developing the common policy basis for revenue collection envisioned by the Consortium.
- Many utilities surveyed in this effort establish annual capital financing requirements using a “cash” basis – including annual debt service requirements to retire bonds and annual minor cash capital requirements in their planning for rates, etc. Others utilize an approach that aligns with financial reporting protocols by including depreciation expense and the interest element of debt service, but excluding other cash requirements. Still others include full debt service, depreciation expense, AND cash capital requirements.
- There is a great degree of variability among the unit costs for individual communities. There are multiple causes for this variation most notably, the use of various other mechanisms to pay for services (e.g.: property taxes, connection fees, etc.) Nonetheless, the proportional capital financing costs vary much more significantly than operation and maintenance costs (*see Exhibits D and E*).
- Furthermore, there is greater variability in the sewer cost recovery indices than the corresponding water indices. This is likely a function of the specific community requirements associated with major capital improvements, such as CSOs, SSOs, and other environmental projects.
- Based on the approach used in this survey, utilities generally **drew down** reserve funds, (rather than supplied funds to reserves) during FY 2004. Periodic updates of this survey would aid in our understanding of the extent to which reserve funds are being relied upon to cover current costs of service.
- Only a few of the sample communities maintain separate water and sewer funds and report them separately on their audited financial statements. The others report “combined” water and sewer activity.
- Approximately 60% of the sample communities use a fixed charge in their retail bills to pay for a portion of their cost of services.
- The “fixed” portion of user charges is generally designed to recover costs that do not vary with the amount of water used or sewer contributions. The extent to which this approach is followed amongst the sample communities is unclear.
- Almost all communities have at least one revenue source other than user charges to pay for their cost of providing water or sewer service. Both property taxes and connection fees are common sources of funding. Both of these sources appear to primarily be used to finance the costs of capital improvements. Their use is more prevalent for sewer than for water.
- There are several different methods for measuring and estimating use of utility services (water meters, sewer meters, unaccounted for units, etc.) These different methods make it extremely challenging to make community-to-community comparisons on an “apples to

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apples” basis. One way to address this is by expressing the total funding source / use elements as a per capita figure, as done in the attached Exhibit D.

- While the Consortium is desirous of designing a process for the periodic collection and disclosure of water and sewer revenue information in this format, we have identified several complicating elements that need to be recognized and addressed for this to occur. These elements include the following:
 - Communities occasionally have a multitude of different service providers, both through separate “tiers” and within different areas of their community.
 - There are often several different rate forms (commodity charges, fixed charges, excess flow chares, etc.) employed by wholesale service providers in their charges to communities.
 - There are several different definitions of Fiscal Years – the participants in this survey have fiscal years that end in the months of March, June, August, September, October, and December.
 - Service providers and individual communities often employ different planning perspectives and philosophies when budgeting purchased service amounts. For instance, some communities project high purchased wholesale water volumes and low retail water sales to ensure viability of their financial plans, whereas the wholesale service provider to these communities may project lower water purchases, for similar reasons. More cohesive planning on this element will improve disclosure efforts and the effectiveness of regional planning.

Recommendations for Achieving Full Disclosure

Both surveys conducted on behalf of the Consortium confirm that water and sewer financial systems in southeast Michigan are varied and very complex. Generally, it is not possible for retail customers to determine who is being paid and for what services. And, because revenue sources and costs of service vary greatly from community to community, user charges alone do not reflect the cost of water and sewer service, much less allow for comparisons between communities.

The following recommendations focus on actions that, if taken, will complement other steps being taken by the Consortium to achieve full disclosure. Action is needed at both the wholesale and retail levels.

- Prior efforts at disclosure in the region have primarily focused on “rates” and did not deliver the full cost picture of utility service. Accordingly, the survey and this report were designed to address this shortcoming by depicting all costs and cost recovery mechanisms associated with utility service. For full disclosure to be successful, subsequent efforts to collect and analyze information regarding revenue collection to support water and sewer service would have to embrace and further improve upon the approach taken in this survey.
- Revenues collected for service provided extends well beyond user charges. Therefore, efforts to inform customers of the full cost of water and sewer service needs to reflect more than user charges. Regional providers should consider including guidelines for

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disclosure to retail customers as part of the wholesale contracts with customer communities.

- Retail customer billing provides a direct means for achieving some of the full disclosure envisioned by the Consortium. Specifically, some basic information regarding which provider(s) is being paid (DWSD, regional, local), how much is each being paid, and for what purpose (capital versus operational costs) could be part of the retail customer billing process. A template demonstrating how this information could be presented is included in Exhibit C. DWSD, its wholesale customers, and other service providers in the region are encouraged to use this template as a guide to revise billing practices in support of disclosure to retail customers.
- Attempting to disclose all information in retail bills will likely result in confusion. Therefore, in addition to retail billing, municipal water and sewer providers need to consider other mechanisms such as Web sites, direct mailings, etc., in order to provide retail customers desirous of more detailed information about what services are being paid for and to whom.
- Communities are encouraged to design their accounting systems to enable tracking funding sources and uses that supports reporting results in a format consistent with Exhibits A and C.
- Compiling user charge figures into common subcategories was quite challenging and required making several assumptions in reviewing data for several communities. For full disclosure to be successful, a common basis for identifying and reporting the portion of user charge revenues derived from commodity charges versus “other” charges is needed.
- Communities are encouraged to implement accounting systems that reflect their utility business activities and support accurate depiction of functional utility costs.
- Several programs designed to provide water and/or sewer service are not reported in the financial reports for the water and sewer utility, but rather in the community’s financial reports. Communities need to review past practices to assure that all costs associated with water and sewer service are reported in a transparent manner.
- In order to support full disclosure, and in order to assess levels of investment and cost of service, the information collected in this report should be updated periodically for all communities in the region. Participation by all communities is needed and requires a comprehensive and cohesive commitment by regional and local leaders.
- Until we are able to address the disclosure issues identified in this report to allow “apples-to-apples” comparison of user charges, we discourage the publication of rate comparisons.

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Principles of Revenue Collection Reflecting True Cost of Service

SEMCOG's 2001 report on sewer needs estimated that \$14-26 billion needs to be invested in our regional sewer systems over the next 25 years. Our water systems are facing similar challenges and will also require significant investment to maintain reliable, safe service. Along with more fully disclosing information on costs and the basis of costs, the Consortium is seeking a common policy basis for revenue collection to assure that those revenues reflect the "true cost of service". To aid in this effort, a partial list of principles that communities should consider when determining the mix of revenue sources to be used to generate funding for water and sewer service was developed. The principles are based on the collective experience of the authors, utilizing industry "best practices" guidance as set forth by the American Water Works Association (AWWA) and the Water Environment Federation (WEF"). **While not all of these principles are applicable to every community, they all should be evaluated when communities develop the policy basis for revenue sources to support water and sewer service.**

- User charges should, at a minimum, provide a level of funding adequate to cover system operation and maintenance costs.
- Many utilities opt to issue debt to finance capital improvements. This approach tends to result in the most equitable recovery of the costs of the assets constructed, as these assets are financed in a manner that more closely (compared to cash financing) approximates their useful lives by the customers that are receiving benefit from them.
- One advantage of utilizing property taxes for utility financing is that the end user can deduct these amounts from federal and state income tax calculations. A disadvantage is that value of property is not generally regarded as a reliable representation of relative cost of providing utility service. Further, entities with tax exempt (or partially tax exempt) status disproportionately benefit, resulting in a shifting of costs to other entities. This does not align with cost of service principles.
- Connection Fees are generally designed to finance capital improvements, usually those necessary to construct additional facilities to provide service to new customers – such as main extensions and capacity expansions. These types of charges should not be relied upon for annual operating requirements of the utility.
- The accurate separation of operating expenses and capital financing costs has always been a challenge to municipal finance managers. Capital costs must be associated with activities that result in an asset on the books and records of the municipal utility, or an extension to the life of such an asset.
- The "fixed" portion of user charges should be designed to recover costs that do not vary with the amount of water used or sewer contributions.
- The types of costs reported in the Municipal Costs (*see "Exhibit B – Definitions"*) category of this report are not universally well reported. We have generally reflected them in this report based on interviews and clarifications with community representatives. Accounting systems should be designed to assure that municipal costs are properly identified and allocated, based on the actual service provided.

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- When determining the revenue sources a water and sewer provider will use to recover the costs of providing service, there should be an equitable policy match between the revenue source and the service. For example, system expansion to provide service to new areas could be funded through connection fees or fixed charges could be established to cover the cost of meter reading and billing.
- Many utilities establish annual capital financing requirements using a “cash” basis – including annual debt service requirements and annual minor cash capital requirements in their planning for rates, etc. Others utilize an approach that aligns with financial reporting protocols by including depreciation expense and the interest element of debt service, but excluding other cash capital requirements. Either of these approaches represents a generally accepted recovery of the costs of financing capital improvements.
- Some communities include full debt service, depreciation expense, AND cash capital requirements in their rate structures. Generally, this approach results in an improper recovery of the cost of capital investment as the “principal” element of debt service and depreciation expense effectively represent the same element. Communities that employ this cost recovery approach may essentially be including the same element twice in their cost recovery mechanisms.

Next Steps

The Consortium (and other entities evaluating costs of water and sewer service in the region) are encouraged to embrace the findings and recommendations in this report. Institutionalization of the recommendations should be sought using mechanisms such as contracts. If contracts are determined to be inappropriate or unacceptable, alternative means for institutionalization should be identified.

This report should be updated periodically – and expanded to include all communities in the region. But all communities need to know how to participate. This will require additional efforts to inform participants of the elements that contribute to water and sewer costs of service. This report (and its successors) should be reviewed periodically in a workshop concurrent with the annual DWSD Rates Roll Out process. We also believe that future efforts of the JTCFD Team can facilitate cooperative participation with this goal – but will necessitate a comprehensive and cohesive dedication by regional leaders to succeed.

The updated report should also incorporate revisions to the Principals of Revenue Collection Reflecting True Cost of Service. Our efforts to date are incomplete and do not reflect the significant variety of potential practices that are employed in the industry.

The JTCFD Team appreciates the opportunity to participate in this important issue and hopes that the information resulting from our efforts continues to promote regional cooperation.

Exhibits

The following charts represent the format that the authors propose should be applied to disclose water and sewer revenue and revenue requirement data for all communities in the region. Exhibit A is intended to illustrate these elements. The top portion of the exhibit identifies *Revenues / Funding Sources* and the bottom portion represents *Revenue Requirements / Funding Uses*. The definitions for the specific line items on this report are presented in Exhibit B. Note that Exhibit A contains three charts – one for water, one for sewer, and one for combined water and sewer. Exhibit A contains four columns to identify both planned and actual (audited) reported figures. The first column expresses **planned** dollar figures for Fiscal Year 2004, and represents data gathered through the Plante & Moran surveys and follow up interviews conducted by the JTCFD Work Group. The second column indicates **reported** (actual) data based on review of audited financial statements. The last two columns express these figures on a “unit cost” basis by dividing the total dollar figures by the **planned** water sales (in thousands of cubic feet). This “unit cost” is identical in nature to the “effective rate” established in the Plante & Moran report. For purposes of this report, Exhibit A represents a composite of the communities that receive service from DWSD. We have generated similar reports for individual communities and will share those reports with community representatives.

Exhibit C represents a sample, summary disclosure of the information presented in Exhibit A in a format that could be distributed to end use retail customers throughout the region in the form of a utility bill. It indicates the portion of the utility bill that goes to each provider – and also illustrates how much is financing costs of operating and maintenance vs. capital financing.

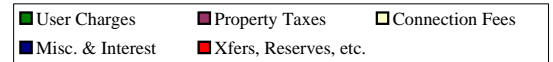
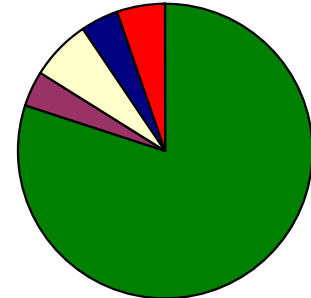
We have also summarized results for each individual community by expressing the “unit cost” (per projected unit of water sold) for each community in Exhibit D. For purposes of this report we are expressing actual reported figures for Fiscal Year 2004. We believe that utilizing actual, audited figures supports a more accurate depiction of findings for this initial review. Exhibit D illustrates the unit cost metric for each major category. Once again, there are tables for water, sewer, and combined water and sewer. Finally, we have followed the same basis and expressed total cost per capita in Exhibit E to establish an additional metric for review. *For purposes of this report, the authors have not identified the specific data for individual communities. We believe that subsequent reports should disclose this information, once communities have had the opportunity to review how their specific data has been applied in this report.*

Exhibit A
Survey Results - Financing of Water and Sewer Utility Costs
DWSD Customer Communities

Figures Expressed in \$/Planned Billable Retail Units (Mcf)

| REVENUES (SOURCES) | <u>Planned</u> | <u>Reported</u> | <u>Planned</u> | <u>Reported</u> |
|-------------------------------------|----------------|-----------------|----------------|-----------------|
| | \$ | \$ | \$/Mcf | \$/Mcf |
| User Charges | | | | |
| Commodity Charges | 228,060,172 | 211,602,975 | 29.24 | 27.13 |
| Fixed Mo/Quarter Charges | 14,034,119 | 16,653,484 | 1.80 | 2.14 |
| Other | 1,364,600 | 4,933,926 | 0.17 | 0.63 |
| Subtotal | 243,458,891 | 233,190,385 | 31.22 | 29.90 |
| Property Taxes | 8,600,306 | 11,504,117 | 1.10 | 1.48 |
| Connection Fees, etc. | 11,925,500 | 19,623,434 | 1.53 | 2.52 |
| Misc & Interest Income | 11,756,666 | 10,003,541 | 1.51 | 1.28 |
| Transfers From Other Funds | 577,100 | 1,367,373 | 0.07 | 0.18 |
| Use of Reserves | 14,870,262 | 13,963,871 | 1.91 | 1.79 |
| Other | 4,343,716 | 2,194,005 | 0.56 | 0.28 |
| Subtotal | 52,073,550 | 58,656,341 | 6.68 | 7.52 |
| TOTAL REVENUES | 295,532,441 | 291,846,726 | 37.90 | 37.42 |
| REVENUE REQUIREMENTS (USES) | | | | |
| Operation and Maintenance Expense | | | | |
| <i>Purchased Water / Sewer Svcs</i> | | | | |
| 1st Tier Provider | 148,711,045 | 143,111,485 | 19.07 | 18.35 |
| 2nd Tier Provider | 8,745,055 | 9,121,015 | 1.12 | 1.17 |
| 3rd Tier Provider | 780,222 | 948,259 | 0.10 | 0.12 |
| Other | (1,059,816) | 146,734 | (0.14) | 0.02 |
| Subtotal | 157,176,506 | 153,327,494 | 20.15 | 19.66 |
| Water/Sewer Treatment | - | - | NA | NA |
| Water Delivery / Sewer Collection | 64,719,418 | 63,260,306 | 8.30 | 8.11 |
| Municipal Costs | 7,665,377 | 8,188,810 | 0.98 | 1.05 |
| Other | 170,000 | - | 0.02 | - |
| Subtotal O&M | 229,731,301 | 224,776,610 | 29.46 | 28.82 |
| Capital Financing Costs | | | | |
| Debt Service on Bonds | 26,543,152 | 27,317,999 | 3.40 | 3.50 |
| Cash Funded Capital | 24,311,315 | 23,402,314 | 3.12 | 3.00 |
| Reserve Req'ts | - | - | - | - |
| Depreciation Expense | 14,946,673 | 16,349,803 | 1.92 | 2.10 |
| Subtotal Capital | 65,801,140 | 67,070,116 | 8.44 | 8.60 |
| TOTAL REV REQ'TS | 295,532,441 | 291,846,726 | 37.90 | 37.42 |
| BALANCE | - | - | | |

Revenue/Sources Profile
Reported



Rev Req'ts/Uses Profile
Reported

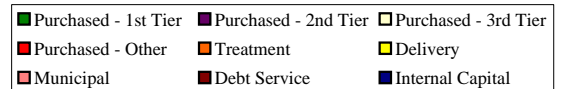
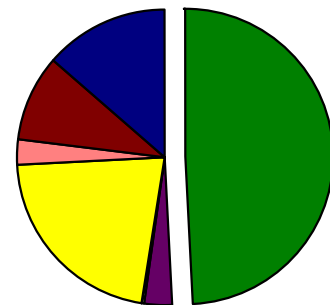
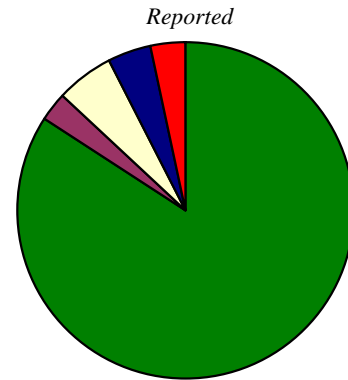


Exhibit A (continued)
 Survey Results - Financing of Water Supply Services
 DWSD Customer Communities

Figures Expressed in \$/**Planned** Billable Retail Units (Mcf)

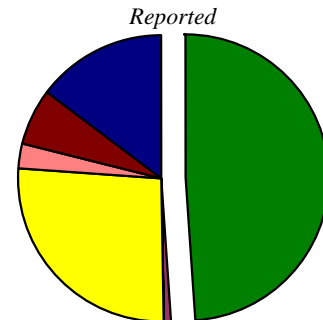
| REVENUES (SOURCES) | <u>Planned</u> | <u>Reported</u> | <u>Planned</u> | <u>Reported</u> |
|------------------------------------|--------------------|--------------------|----------------|-----------------|
| | \$ | \$ | \$/Mcf | \$/Mcf |
| User Charges | | | | |
| Commodity Charges | 122,446,167 | 115,115,279 | 15.70 | 14.76 |
| Fixed Mo/Quarter Charges | 8,661,594 | 11,824,936 | 1.11 | 1.52 |
| Other | 744,100 | 2,267,574 | 0.10 | 0.29 |
| Subtotal | 131,851,861 | 129,207,789 | 16.91 | 16.57 |
| Property Taxes | 2,784,816 | 4,213,936 | 0.36 | 0.54 |
| Connection Fees, etc. | 6,726,600 | 8,498,918 | 0.86 | 1.09 |
| Misc & Interest Income | 7,923,406 | 6,340,381 | 1.02 | 0.81 |
| Transfers From Other Funds | 360,100 | 660,947 | 0.05 | 0.08 |
| Use of Reserves | 5,576,191 | 3,294,756 | 0.72 | 0.42 |
| Other | 3,221,136 | 1,358,198 | 0.41 | 0.17 |
| Subtotal | 26,592,249 | 24,367,135 | 3.41 | 3.12 |
| TOTAL REVENUES | 158,444,110 | 153,574,925 | 20.32 | 19.69 |
| REVENUE REQUIREMENTS (USES) | | | | |
| Operation and Maintenance Expense | | | | |
| <u>Purchased Water</u> | | | | |
| 1st Tier Provider - | 81,538,820 | 75,027,860 | 10.46 | 9.62 |
| 2nd Tier Provider - | 1,576,039 | 1,514,816 | 0.20 | NA |
| 3rd Tier Provider - | - | NA | NA | NA |
| Other | (1,482,218) | 22,020 | (0.19) | NA |
| Subtotal | 81,632,642 | 76,564,696 | 10.47 | 9.82 |
| Water Production Costs | NA | NA | NA | NA |
| Water Utility Delivery Costs | 41,160,418 | 40,112,134 | 5.28 | 5.14 |
| Municipal Costs | 4,190,089 | 4,349,589 | 0.54 | 0.56 |
| Other | 170,000 | - | 0.02 | - |
| Subtotal O&M | 127,153,149 | 121,026,420 | 16.31 | 15.52 |
| Capital Financing Costs | | | | |
| Debt Service on Bonds | 7,617,563 | 10,098,587 | 0.98 | 1.29 |
| Cash Funded Capital | 15,156,729 | 13,977,895 | 1.94 | 1.79 |
| Reserve Req'ts | - | - | - | - |
| Depreciation Expense | 8,516,670 | 8,472,023 | 1.09 | 1.09 |
| Subtotal Capital | 31,290,961 | 32,548,505 | 4.01 | 4.17 |
| TOTAL REV REQ'TS | 158,444,110 | 153,574,925 | 20.32 | 19.69 |
| BALANCE | - | - | | |

Revenue/Sources Profile



■ User Charges ■ Property Taxes ■ Connection Fees ■ Misc. & Interest ■ Xfers, Reserves, etc.

Revenue Req't/Uses Profile



■ Purchased - 1st Tier ■ Purchased - 2nd Tier ■ Purchased - 3rd Tier
 ■ Purchased - Other ■ Water Production ■ Internal Operating
 ■ Municipal ■ Debt Service ■ Internal Capital

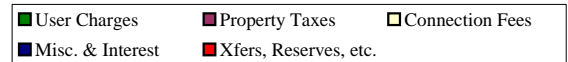
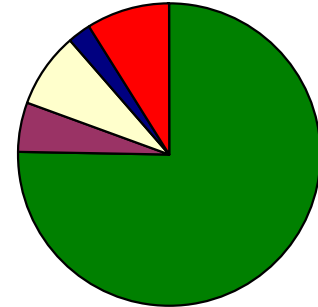
Exhibit A (continued)
 Survey Results - Financing of Sewage Disposal Services
 DWSD Customer Communities

Figures Expressed in \$/**Planned** Billable Retail Units (Mcf)

| REVENUES (SOURCES) | Planned | Reported | Planned | Reported |
|------------------------------------|--------------------|--------------------|----------------|-----------------|
| | \$ | \$ | \$/Mcf | \$/Mcf |
| User Charges | | | | |
| Commodity Charges | 105,614,005 | 96,487,696 | 19.46 | 17.31 |
| Fixed Mo/Quarter Charges | 5,372,525 | 4,828,548 | 0.99 | 0.87 |
| Other | 620,500 | 2,666,352 | 0.11 | 0.48 |
| Subtotal | 111,607,030 | 103,982,596 | 20.56 | 18.65 |
| Property Taxes | 5,815,490 | 7,290,181 | 1.07 | 1.31 |
| Connection Fees, etc. | 5,198,900 | 11,124,516 | 0.96 | 2.00 |
| Misc & Interest Income | 3,833,260 | 3,663,160 | 0.71 | 0.66 |
| Transfers From Other Funds | 217,000 | 706,426 | 0.04 | 0.13 |
| Use of Reserves | 9,294,071 | 10,669,115 | 1.71 | 1.91 |
| Other | 1,122,580 | 835,807 | 0.21 | 0.15 |
| Subtotal | 25,481,301 | 34,289,205 | 4.69 | 6.15 |
| TOTAL REVENUES | 137,088,331 | 138,271,801 | 25.26 | 24.80 |
| REVENUE REQUIREMENTS (USES) | | | | |
| Operation and Maintenance Expense | | | | |
| <u>Purchased Sewage Disposal</u> | | | | |
| 1st Tier Provider - | 67,172,224 | 68,083,625 | 12.38 | 12.21 |
| 2nd Tier Provider - | 7,169,016 | 7,606,199 | 1.32 | 1.36 |
| 3rd Tier Provider - | 780,222 | 948,259 | 0.14 | 0.17 |
| Other | 422,402 | 124,714 | 0.08 | 0.02 |
| Subtotal | 75,543,864 | 76,762,798 | 13.92 | 13.77 |
| Sewage Disposal Costs | NA | NA | NA | NA |
| Sewer Utility Collection Costs | 23,559,000 | 23,148,172 | 4.34 | 4.15 |
| Municipal Costs | 3,475,288 | 3,839,220 | 0.64 | 0.69 |
| Other | - | - | - | - |
| Subtotal O&M | 102,578,152 | 103,750,190 | 18.90 | 18.61 |
| Capital Financing Costs | | | | |
| Debt Service on Bonds | 18,925,590 | 17,219,412 | 3.49 | 3.09 |
| Cash Funded Capital | 9,154,587 | 9,424,419 | 1.69 | 1.69 |
| Reserve Req'ts | - | - | - | - |
| Depreciation Expense | 6,430,003 | 7,877,780 | 1.18 | 1.41 |
| Subtotal Capital | 34,510,179 | 34,521,611 | 6.36 | 6.19 |
| TOTAL REV REQ'TS | 137,088,331 | 138,271,801 | 25.26 | 24.80 |
| BALANCE | - | - | | |

Revenue/Sources Profile

Reported



Rev Req'ts/Uses Profile

Reported

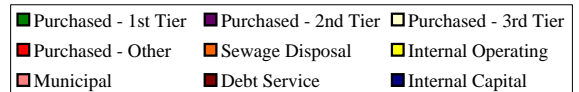
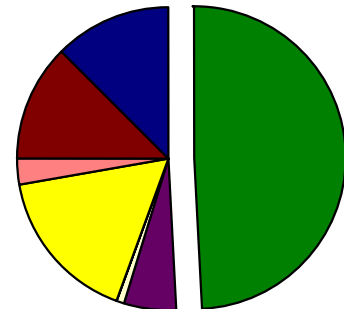


Exhibit B - Definitions

The following terms are represented in Exhibits A, D, and E.

REVENUES / FUNDING SOURCES: all monies available to finance operating and capital investment requirements of municipal utilities on an annual basis. We have avoided limiting the terminology to “revenues” because many of the sources of funding are often not characterized as such. We have separated funding sources into two sub-categories: User Charges and Other.

User Charges: monies derived from a schedule of utility rates and charges to customers. Prior efforts at disclosure in the region have primarily focused on these “rates” and may not have delivered the full cost picture of utility service. User Charges have been subdivided into three categories:

- **Commodity Charges** – monies generated by rates applied to the measured or estimated amount of water use or sewer contributions;
- **Fixed Monthly/Quarterly Charges** – monies generated by fixed charges, irrespective of the actual amount of water the customer may use;
- **Other** – special charges to specific customer groups, such as industrial surcharges, industrial waste control charges, etc.

It should be noted that separating planned and reported user charge figures into the subcategories has been challenging in the review for several communities.

Other revenue has been separated into several other categories:

Property Taxes: monies generated by a portion of the mill levy on the taxes collected by the municipal corporation.

Connection Fees, etc.: monies generated by “up front” payments from new customers as they connect to the utility system. These charges (which include System Development Charges, Tap Fees, Infrastructure Fees, others) are generally designed to finance capital improvements, usually those necessary to construct additional facilities to provide the new service – such as main extensions and capacity expansions.

Miscellaneous and Interest Income: monies generated from ancillary charges (such as late payment fees, fines, etc.) and investment on funds held in reserve.

Transfers from Other Funds: monies transferred into utility coffers from other municipal funds. Some entities use this element to reimburse utilities for services that the utility provides for other municipal departments. Others appear to subsidize certain utility functions with taxes, etc.

Use of Reserves: monies necessary to balance funding sources and uses. In this report, this does not necessarily refer to a budgeted or reported item. Rather, it only appears when annual planned or reported funding sources are not sufficient to meet planned or

reported funding uses. The presumption followed in this report is that reserve funds must be utilized to make up the difference.

Other: any funding source that does not meet the above definitions.

REVENUE REQUIREMENTS / FUNDING USES: all monies necessary to finance operating and capital investment requirements of municipal utilities on an annual basis. We have separated funding uses into two sub-categories: Operation and Maintenance Expense and Capital Financing Costs

Operation and Maintenance Expense: the annual cost of providing utility services. This element generally includes all annual costs that do not meet the criteria for capital costs, as defined below. In this report, we have separated Operation and Maintenance (O&M) expense into five subcategories, as noted below.

- **Purchased Water / Sewage Disposal:** refers to the costs paid by a municipality to a wholesale provider. We have attempted to further separate these costs by various provider:
 - **1st Tier:** the entity that provides water supply and/or end use sewage treatment and disposal, as well as major transmission/collection. Owns the water/sewer plants;
 - **2nd Tier:** purchases services from 1st Tier, provides additional distribution/collection/management services, adds on its own costs and wholesales to individual communities or 3rd Tier;
 - **3rd Tier:** purchases services from 2nd Tier, provides additional distribution/collection/management services, adds on its own costs and wholesales to individual communities;
 - **Other:** included to attempt to capture imbalances in the allocation of purchased water / sewage disposal costs amongst the tiers. This line item is designed to capture any imbalance between what is planned or reported by an individual community from what results from our review of the rates and charges of each of the tiers of suppliers.
- **Water Supply / Sewage Disposal Costs:** any costs associated with water treatment and sewage disposal plants owned and operated by individual communities. In general, communities either purchase these services through the prior element or provide them on their own – and figures will not show up in both categories of this report.
- **Utility Distribution / Collection Costs:** those costs associated with managing individual utility services provided by the municipality, such as maintenance of pipes, customer billing, and administration. In this report we have attempted to further separate”
- **Municipal Costs:** those costs paid to other “governmental activity” departments of a municipal corporation. These costs are generally directly or indirectly related to services (such as accounting, legal, computer services, etc.) provided to the utility by other departments – as many municipalities centralize these types of activities. Some municipalities also levy additional fees to utilities, such as “payments in lieu of taxes” or franchise fees.

- **Other:** any O&M expense that does not meet the above definitions.

Capital Financing Costs: the annual cost of **financing** capital improvements to the utility. Note the emphasis on the term **financing**. Our efforts focused on identifying the annual capital financing costs, which are generally more uniform from year to year, rather than the annual investments in capital improvements. In this report, we have established four subcategories of capital costs.

- **Debt Service on Bonds:** annual principal and interest requirements on municipal bonds (either revenue or general obligation) issued to finance major capital improvements to the utility.
- **Cash Funded Capital:** annual amounts expended on capital improvements. Our efforts intended to focus this element on minor, recurring capital improvements. To the extent that utilities opt to finance major capital improvements through revenue generated funds, this item would also reflect such amounts.
- **Reserve Requirements:** monies necessary to balance funding sources and uses. In this report, this does not necessarily refer to a budgeted or reported item. Rather, it only appears when annual planned or reported funding sources are greater than those necessary to meet planned or reported funding uses. The presumption followed in this report is that the “surplus” results in additional funds that will be held in reserve for future capital improvement needs.
- **Depreciation Expense:** a “non-cash” representation of the loss of value of assets. Generally accepted accounting principles use depreciation expense to represent the “principal” element of capital financing costs to summarize annual performance. These standards report only the “interest” element of debt service, and do not include any cash funded capital improvements.

Summary Categories for Exhibits D and E:

“Other” Revenues/Sources refers to all funding sources that are not associated with *User Charges*.

Purchased – “Other” refers to *Purchased Water /Sewage Disposal* costs from providers other than the first tier supplier.

Internal Operating refers to all Operation and Maintenance expense that is not associated with *Purchased Water /Sewage Disposal*.

Capital refers to all *Capital Financing Costs* included in Exhibit A.

Exhibit D
 Summary of Utility Funding Sources and Uses Reported for FY 2004
 Combined Water Supply and Sewage Disposal Service
Expressed in terms of \$/Mcf of estimated water sales

| | | Revenues/Sources | | | Revenue Requirements/Uses | | | | |
|------|----------------------------------|------------------|--------------|--------------|---------------------------|-------------|--------------|--------------|--------------|
| User | | Charges | Other | Total | Purchased | | Internal | | Total |
| | | | | | 1st Tier | Other | Operating | Capital | |
| 1 | Community 1 | 28.48 | 22.97 | 51.46 | 15.75 | - | 10.87 | 24.83 | 51.46 |
| 2 | Community 2 | 55.91 | 64.29 | 120.19 | 42.71 | 8.28 | 19.30 | 49.90 | 120.19 |
| 3 | Community 3 | 39.88 | 11.86 | 51.74 | 21.42 | 1.03 | 13.83 | 15.45 | 51.74 |
| 4 | Community 4 | 26.70 | 8.55 | 35.25 | 19.59 | 3.01 | 7.53 | 5.12 | 35.25 |
| 5 | Community 5 | 46.92 | 8.64 | 55.56 | 24.55 | 1.85 | 14.84 | 14.31 | 55.56 |
| 6 | Community 6 | 57.53 | 2.53 | 60.06 | 22.79 | - | 14.12 | 23.15 | 60.06 |
| 7 | Community 7 | 44.33 | 11.57 | 55.89 | 22.45 | 1.21 | 9.74 | 22.49 | 55.89 |
| 8 | Community 8 | 42.63 | 4.88 | 47.50 | - | - | 27.23 | 20.27 | 47.50 |
| 9 | Community 9 | 33.13 | 3.89 | 37.02 | 20.31 | - | 7.61 | 9.10 | 37.02 |
| 10 | Community 10 | 50.40 | 11.37 | 61.77 | 21.26 | - | 14.44 | 26.07 | 61.77 |
| 11 | Community 11 | 23.93 | 19.55 | 43.48 | 12.21 | - | 13.85 | 17.42 | 43.48 |
| 12 | Community 12 | 36.70 | 7.02 | 43.72 | 26.46 | 0.98 | 9.42 | 6.86 | 43.72 |
| 13 | Community 13 | 34.57 | 7.28 | 41.85 | 17.28 | 2.68 | 12.31 | 9.58 | 41.85 |
| 14 | Community 14 | 39.40 | 10.83 | 50.23 | 23.20 | 2.62 | 13.67 | 10.74 | 50.23 |
| 15 | Community 15 | 35.72 | 5.74 | 41.47 | 13.85 | 4.23 | 17.23 | 6.16 | 41.47 |
| 16 | Community 16 | 33.76 | 6.41 | 40.17 | 23.33 | 1.68 | 9.59 | 5.58 | 40.17 |
| 17 | Community 17 | 48.64 | 17.15 | 65.79 | 24.25 | - | 22.75 | 18.79 | 65.79 |
| 18 | Community 18 | 54.76 | 42.51 | 97.27 | 22.06 | 8.94 | 17.09 | 49.18 | 97.27 |
| 19 | Community 19 | 46.26 | 32.56 | 78.82 | 22.49 | 0.18 | 14.69 | 41.47 | 78.82 |
| 20 | Community 20 | 24.40 | 5.50 | 29.91 | 7.08 | - | 16.18 | 6.65 | 29.91 |
| 21 | Community 21 | 22.69 | 5.64 | 28.33 | 18.94 | 0.29 | 6.06 | 3.05 | 28.33 |
| 22 | Community 22 | 53.62 | 20.94 | 74.57 | 29.08 | 1.78 | 20.33 | 23.39 | 74.57 |
| 23 | Community 23 | 28.57 | 14.50 | 43.08 | 18.70 | 0.14 | 8.21 | 16.03 | 43.08 |
| 24 | Community 24 | 32.04 | 32.38 | 64.42 | 18.35 | 1.71 | 12.38 | 31.98 | 64.42 |
| 25 | Community 25 | 34.85 | 16.44 | 51.29 | 12.78 | 0.64 | 17.33 | 20.55 | 51.29 |
| 26 | Community 26 | 50.58 | 12.67 | 63.25 | 24.05 | 1.11 | 29.46 | 8.63 | 63.25 |
| 27 | TOTAL / AVERAGE | 35.65 | 6.62 | 42.27 | 10.88 | 0.75 | 16.42 | 14.22 | 42.27 |
| 28 | <i>DWSD Customer Communities</i> | <i>34.87</i> | <i>8.77</i> | <i>43.65</i> | <i>21.40</i> | <i>1.53</i> | <i>10.69</i> | <i>10.03</i> | <i>43.65</i> |
| 29 | <i>Other Wholesale Purveyors</i> | <i>17.50</i> | <i>12.04</i> | <i>29.54</i> | <i>9.72</i> | <i>-</i> | <i>6.26</i> | <i>13.55</i> | <i>29.54</i> |
| 30 | <i>Independent Suppliers</i> | <i>23.02</i> | <i>7.13</i> | <i>30.16</i> | <i>-</i> | <i>-</i> | <i>23.30</i> | <i>6.86</i> | <i>30.16</i> |

Exhibit D (continued)
 Summary of Utility Funding Sources and Uses Reported for FY 2004
 Water Supply Service
 Expressed in terms of \$/Mcf of estimated water sales - Effective Rate

| | | Revenues/Sources | | | Revenue Requirements/Uses | | | | |
|------|---------------------------|------------------|-------|-------|---------------------------|-------|-----------|---------|-------|
| User | | Charges | Other | Total | Purchased | | Internal | | Total |
| | | | | | 1st Tier | Other | Operating | Capital | |
| 1 | Community 1 | 14.59 | 5.51 | 20.10 | 7.66 | - | 5.14 | 7.30 | 20.10 |
| 2 | Community 2 | 27.28 | 29.07 | 56.34 | 20.38 | - | 11.06 | 24.91 | 56.34 |
| 3 | Community 3 | 20.24 | 2.70 | 22.94 | 6.73 | - | 6.92 | 9.29 | 22.94 |
| 4 | Community 4 | 15.71 | 0.80 | 16.51 | 9.68 | - | 3.76 | 3.06 | 16.51 |
| 5 | Community 5 | 23.62 | 4.31 | 27.93 | 11.61 | - | 9.37 | 6.96 | 27.93 |
| 6 | Community 6 | 25.89 | 1.14 | 27.03 | 8.67 | - | 6.49 | 11.86 | 27.03 |
| 7 | Community 7 | 14.68 | 8.45 | 23.13 | 6.66 | - | 4.87 | 11.60 | 23.13 |
| 8 | Community 8 | 13.11 | 2.07 | 15.19 | - | - | 11.23 | 3.96 | 15.19 |
| 9 | Community 9 | 12.63 | 3.48 | 16.11 | 7.16 | - | 4.09 | 4.87 | 16.11 |
| 10 | Community 10 | 21.05 | 6.06 | 27.11 | 6.26 | - | 6.86 | 13.99 | 27.11 |
| 11 | Community 11 | 16.03 | 12.25 | 28.28 | 12.21 | - | 4.86 | 11.21 | 28.28 |
| 12 | Community 12 | 20.48 | 3.99 | 24.47 | 16.51 | - | 6.53 | 1.44 | 24.47 |
| 13 | Community 13 | 15.54 | 1.43 | 16.97 | 7.17 | 1.82 | 6.69 | 1.29 | 16.97 |
| 14 | Community 14 | 22.49 | 6.77 | 29.26 | 14.90 | - | 7.79 | 6.57 | 29.26 |
| 15 | Community 15 | 16.18 | 5.13 | 21.31 | 5.53 | 0.20 | 11.26 | 4.32 | 21.31 |
| 16 | Community 16 | 18.36 | 1.39 | 19.74 | 13.05 | - | 5.86 | 0.83 | 19.74 |
| 17 | Community 17 | 21.00 | 4.21 | 25.20 | 11.01 | - | 11.97 | 2.22 | 25.20 |
| 18 | Community 18 | 20.81 | 11.62 | 32.43 | 7.56 | 1.92 | 10.31 | 12.63 | 32.43 |
| 19 | Community 19 | 25.32 | 18.24 | 43.56 | 13.21 | - | 8.57 | 21.77 | 43.56 |
| 20 | Community 20 | 13.22 | 2.84 | 16.06 | 7.08 | - | 5.02 | 3.96 | 16.06 |
| 21 | Community 21 | 10.97 | 1.42 | 12.39 | 8.03 | - | 2.92 | 1.44 | 12.39 |
| 22 | Community 22 | 22.41 | 10.54 | 32.95 | 8.35 | - | 12.46 | 12.14 | 32.95 |
| 23 | Community 23 | 23.05 | 5.79 | 28.83 | 13.32 | - | 5.27 | 10.24 | 28.83 |
| 24 | Community 24 | 13.01 | 16.39 | 29.40 | 6.15 | 0.38 | 6.19 | 16.68 | 29.40 |
| 25 | Community 25 | 23.14 | 4.92 | 28.06 | 12.78 | 0.64 | 4.13 | 10.51 | 28.06 |
| 26 | Community 26 | 33.07 | 1.83 | 34.91 | 11.12 | 1.11 | 14.04 | 8.63 | 34.91 |
| 27 | TOTAL / AVERAGE | 15.15 | 2.28 | 17.43 | 5.68 | 0.12 | 7.10 | 4.53 | 17.43 |
| 28 | DWSD Customer Communities | 16.57 | 3.12 | 19.69 | 9.62 | 0.20 | 5.70 | 4.17 | 19.69 |

Exhibit D (continued)
Summary of Utility Funding Sources and Uses Reported for FY 2004
Sewage Disposal Service
Expressed in terms of \$/Mcf of estimated water sales

| | | Revenues/Sources | | | Revenue Requirements/Uses | | | | |
|------|---------------------------|------------------|-------|-------|---------------------------|-------|-----------|---------|-------|
| User | | Charges | Other | Total | Purchased | | Internal | | Total |
| | | | | | 1st Tier | Other | Operating | Capital | |
| 1 | Community 1 | 13.02 | 16.36 | 29.38 | 7.58 | - | 5.37 | 16.42 | 29.38 |
| 2 | Community 2 | 28.02 | 34.46 | 62.48 | 21.86 | 8.10 | 8.07 | 24.45 | 62.48 |
| 3 | Community 3 | 17.40 | 8.11 | 25.51 | 13.01 | 0.91 | 6.13 | 5.45 | 25.51 |
| 4 | Community 4 | 10.99 | 7.75 | 18.74 | 9.91 | 3.01 | 3.76 | 2.05 | 18.74 |
| 5 | Community 5 | 23.30 | 4.33 | 27.63 | 12.95 | 1.85 | 5.47 | 7.35 | 27.63 |
| 6 | Community 6 | 28.04 | 1.23 | 29.27 | 12.52 | - | 6.75 | 10.00 | 29.27 |
| 7 | Community 7 | 29.64 | 3.11 | 32.76 | 15.78 | 1.21 | 4.87 | 10.89 | 32.76 |
| 8 | Community 8 | 25.52 | 2.42 | 27.95 | - | - | 13.84 | 14.11 | 27.95 |
| 9 | Community 9 | 22.35 | 0.45 | 22.81 | 14.35 | - | 3.85 | 4.62 | 22.81 |
| 10 | Community 10 | 6.21 | 1.12 | 7.33 | 3.17 | - | 1.60 | 2.55 | 7.33 |
| 11 | Community 11 | 15.66 | 14.47 | 30.13 | - | - | 17.82 | 12.31 | 30.13 |
| 12 | Community 12 | 16.65 | 3.11 | 19.76 | 10.22 | 1.01 | 2.97 | 5.57 | 19.76 |
| 13 | Community 13 | 19.04 | 5.85 | 24.89 | 10.11 | 0.86 | 5.62 | 8.29 | 24.89 |
| 14 | Community 14 | 25.45 | 6.10 | 31.54 | 12.48 | 3.94 | 8.86 | 6.27 | 31.54 |
| 15 | Community 15 | 19.01 | 0.60 | 19.61 | 8.09 | 3.92 | 5.80 | 1.79 | 19.61 |
| 16 | Community 16 | 16.80 | 5.48 | 22.28 | 11.21 | 1.83 | 4.06 | 5.18 | 22.28 |
| 17 | Community 17 | 24.60 | 11.52 | 36.12 | 11.78 | - | 9.59 | 14.74 | 36.12 |
| 18 | Community 18 | 33.95 | 30.89 | 64.84 | 14.50 | 7.02 | 6.78 | 36.54 | 64.84 |
| 19 | Community 19 | 29.61 | 20.25 | 49.86 | 13.11 | 0.25 | 8.65 | 27.85 | 49.86 |
| 20 | Community 20 | 11.29 | 2.69 | 13.98 | - | - | 11.27 | 2.71 | 13.98 |
| 21 | Community 21 | 11.72 | 4.22 | 15.94 | 10.90 | 0.29 | 3.14 | 1.61 | 15.94 |
| 22 | Community 22 | 26.92 | 8.97 | 35.89 | 17.88 | 1.53 | 6.78 | 9.70 | 35.89 |
| 23 | Community 23 | 13.40 | 21.14 | 34.54 | 13.06 | 0.34 | 7.11 | 14.03 | 34.54 |
| 24 | Community 24 | 19.40 | 16.29 | 35.70 | 12.44 | 1.35 | 6.31 | 15.60 | 35.70 |
| 25 | Community 25 | 11.62 | 11.44 | 23.07 | - | - | 13.10 | 9.97 | 23.07 |
| 26 | Community 26 | 17.51 | 10.84 | 28.35 | 12.92 | - | 15.42 | - | 28.35 |
| 27 | TOTAL / AVERAGE | 20.33 | 4.28 | 24.61 | 5.21 | 0.62 | 9.25 | 9.52 | 24.61 |
| 28 | DWSD Customer Communities | 18.65 | 6.15 | 24.80 | 12.21 | 1.56 | 4.84 | 6.19 | 24.80 |
| 29 | Other Wholesale Purveyors | 8.75 | 6.02 | 14.77 | 4.86 | - | 3.13 | 6.78 | 14.77 |
| 30 | Independent Suppliers | 11.51 | 3.57 | 15.08 | - | - | 11.65 | 3.43 | 15.08 |

Exhibit E
Summary of Utility Funding Sources and Uses Reported for FY 2004
Combined Water Supply and Sewage Disposal Service
Expressed in terms of annual \$ per capita

| | | Revenues/Sources | | | Revenue Requirements/Uses | | | | |
|------|---------------------------|------------------|--------|--------|---------------------------|-------|-----------|---------|--------|
| User | | Charges | Other | Total | Purchased | | Internal | | Total |
| | | | | | 1st Tier | Other | Operating | Capital | |
| 1 | Community 1 | 156.81 | 126.47 | 283.28 | 86.72 | - | 59.85 | 136.70 | 283.28 |
| 2 | Community 2 | 363.67 | 418.15 | 781.82 | 277.84 | 53.85 | 125.57 | 324.56 | 781.82 |
| 3 | Community 3 | 230.34 | 68.48 | 298.82 | 123.72 | 5.97 | 79.89 | 89.24 | 298.82 |
| 4 | Community 4 | 192.29 | 61.58 | 253.87 | 141.13 | 21.67 | 54.21 | 36.86 | 253.87 |
| 5 | Community 5 | 465.38 | 85.69 | 551.06 | 243.53 | 18.36 | 147.22 | 141.95 | 551.06 |
| 6 | Community 6 | 316.70 | 13.92 | 330.62 | 125.49 | - | 77.71 | 127.42 | 330.62 |
| 7 | Community 7 | 206.54 | 53.89 | 260.42 | 104.60 | 5.66 | 45.38 | 104.79 | 260.42 |
| 8 | Community 8 | 242.19 | 27.70 | 269.89 | - | - | 154.69 | 115.20 | 269.89 |
| 9 | Community 9 | 304.92 | 35.83 | 340.76 | 186.94 | - | 70.06 | 83.76 | 340.76 |
| 10 | Community 10 | 338.34 | 76.35 | 414.70 | 142.75 | - | 96.94 | 175.01 | 414.70 |
| 11 | Community 11 | 200.63 | 163.90 | 364.53 | 102.39 | - | 116.12 | 146.02 | 364.53 |
| 12 | Community 12 | 241.90 | 46.29 | 288.19 | 174.39 | 6.49 | 62.10 | 45.21 | 288.19 |
| 13 | Community 13 | 292.76 | 61.66 | 354.42 | 146.34 | 22.73 | 104.24 | 81.11 | 354.42 |
| 14 | Community 14 | 238.30 | 65.47 | 303.76 | 140.29 | 15.82 | 82.70 | 64.95 | 303.76 |
| 15 | Community 15 | 169.54 | 27.27 | 196.80 | 65.73 | 20.07 | 81.76 | 29.25 | 196.80 |
| 16 | Community 16 | 223.76 | 42.46 | 266.22 | 154.62 | 11.10 | 63.52 | 36.97 | 266.22 |
| 17 | Community 17 | 285.62 | 100.68 | 386.30 | 142.39 | - | 133.59 | 110.33 | 386.30 |
| 18 | Community 18 | 360.51 | 279.83 | 640.34 | 145.22 | 58.87 | 112.51 | 323.75 | 640.34 |
| 19 | Community 19 | 169.73 | 119.45 | 289.18 | 82.49 | 0.64 | 53.90 | 152.14 | 289.18 |
| 20 | Community 20 | 188.88 | 42.60 | 231.49 | 54.82 | - | 125.23 | 51.44 | 231.49 |
| 21 | Community 21 | 156.78 | 38.96 | 195.74 | 130.85 | 1.99 | 41.84 | 21.07 | 195.74 |
| 22 | Community 22 | 213.32 | 83.31 | 296.63 | 115.67 | 7.07 | 80.86 | 93.03 | 296.63 |
| 23 | Community 23 | 186.20 | 94.51 | 280.70 | 121.87 | 0.92 | 53.47 | 104.44 | 280.70 |
| 24 | Community 24 | 199.08 | 201.15 | 400.23 | 114.03 | 10.61 | 76.91 | 198.69 | 400.23 |
| 25 | Community 25 | 357.73 | 168.79 | 526.52 | 131.17 | 6.57 | 177.86 | 210.92 | 526.52 |
| 26 | Community 26 | 162.35 | 40.68 | 203.03 | 77.18 | 3.57 | 94.57 | 27.71 | 203.03 |
| 27 | TOTAL / AVERAGE | 231.86 | 43.04 | 274.89 | 70.77 | 4.87 | 106.80 | 92.46 | 274.89 |
| 28 | DWSD Customer Communities | 227.94 | 57.33 | 285.27 | 139.89 | 9.99 | 69.84 | 65.56 | 285.27 |
| 29 | Other Wholesale Purveyors | 208.02 | 143.12 | 351.14 | 115.54 | - | 74.47 | 161.13 | 351.14 |
| 30 | Independent Suppliers | 171.30 | 53.07 | 224.38 | - | - | 173.34 | 51.04 | 224.38 |

Exhibit E (continued)
 Summary of Utility Funding Sources and Uses Reported for FY 2004
 Water Supply Service
 Expressed in terms of annual \$ per capita

| | | Revenues/Sources | | | Revenue Requirements/Uses | | | | |
|------|---------------------------|------------------|--------|--------|---------------------------|----------------------|-----------------------|---------|--------|
| User | | Charges | Other | Total | Purchased - 1st Tier | Purchased - Other | Internal Operating | Capital | Total |
| 1 | Community 1 | 80.34 | 30.32 | 110.66 | 42.17 | - | 28.28 | 40.21 | 110.66 |
| 2 | Community 2 | 177.42 | 189.06 | 366.48 | 132.54 | - | 71.92 | 162.02 | 366.48 |
| 3 | Community 3 | 116.89 | 15.60 | 132.49 | 38.87 | - | 39.94 | 53.68 | 132.49 |
| 4 | Community 4 | 113.15 | 5.76 | 118.91 | 69.74 | - | 27.10 | 22.07 | 118.91 |
| 5 | Community 5 | 234.32 | 42.73 | 277.05 | 115.13 | - | 92.92 | 69.00 | 277.05 |
| 6 | Community 6 | 142.52 | 6.26 | 148.78 | 47.73 | - | 35.75 | 65.30 | 148.78 |
| 7 | Community 7 | 68.41 | 39.38 | 107.79 | 31.05 | - | 22.69 | 54.05 | 107.79 |
| 8 | Community 8 | 74.51 | 11.77 | 86.28 | - | - | 63.79 | 22.49 | 86.28 |
| 9 | Community 9 | 116.30 | 32.00 | 148.30 | 65.89 | - | 37.61 | 44.80 | 148.30 |
| 10 | Community 10 | 141.33 | 40.66 | 181.99 | 41.99 | - | 46.09 | 93.91 | 181.99 |
| 11 | Community 11 | 134.40 | 102.69 | 237.09 | 102.39 | - | 40.76 | 93.93 | 237.09 |
| 12 | Community 12 | 134.96 | 26.31 | 161.28 | 108.79 | - | 43.03 | 9.46 | 161.28 |
| 13 | Community 13 | 131.56 | 12.13 | 143.70 | 60.73 | 15.44 | 56.61 | 10.91 | 143.70 |
| 14 | Community 14 | 136.00 | 40.96 | 176.96 | 90.14 | - | 47.08 | 39.74 | 176.96 |
| 15 | Community 15 | 76.81 | 24.34 | 101.15 | 26.24 | 0.95 | 53.45 | 20.50 | 101.15 |
| 16 | Community 16 | 121.65 | 9.18 | 130.83 | 86.52 | - | 38.84 | 5.48 | 130.83 |
| 17 | Community 17 | 123.28 | 24.70 | 147.99 | 64.65 | - | 70.29 | 13.04 | 147.99 |
| 18 | Community 18 | 136.98 | 76.48 | 213.46 | 49.76 | 12.65 | 67.88 | 83.16 | 213.46 |
| 19 | Community 19 | 92.90 | 66.92 | 159.82 | 48.48 | - | 31.45 | 79.89 | 159.82 |
| 20 | Community 20 | 102.34 | 21.96 | 124.30 | 54.82 | - | 38.84 | 30.64 | 124.30 |
| 21 | Community 21 | 75.80 | 9.80 | 85.60 | 55.51 | - | 20.16 | 9.94 | 85.60 |
| 22 | Community 22 | 89.16 | 41.94 | 131.09 | 33.21 | - | 49.59 | 48.30 | 131.09 |
| 23 | Community 23 | 150.17 | 37.70 | 187.87 | 86.77 | - | 34.35 | 66.75 | 187.87 |
| 24 | Community 24 | 80.81 | 101.83 | 182.64 | 38.22 | 2.37 | 38.45 | 103.60 | 182.64 |
| 25 | Community 25 | 237.55 | 50.48 | 288.03 | 131.17 | 6.57 | 42.43 | 107.86 | 288.03 |
| 26 | Community 26 | 106.16 | 5.89 | 112.05 | 35.70 | 3.57 | 45.07 | 27.71 | 112.05 |
| 27 | TOTAL / AVERAGE | 95.33 | 14.32 | 109.65 | 35.75 | 0.73 | 44.67 | 28.50 | 109.65 |
| 28 | DWSD Customer Communities | 112.59 | 21.23 | 133.82 | 65.38 | 1.34 | 38.74 | 28.36 | 133.82 |

Exhibit E (continued)
Summary of Utility Funding Sources and Uses Reported for FY 2004
Sewage Disposal Service
Expressed in terms of annual \$ per capita

| | | Revenues/Sources | | | Revenue Requirements/Uses | | | | |
|------|---------------------------|------------------|--------|--------|---------------------------|----------------------|-----------------------|---------|--------|
| User | | Charges | Other | Total | Purchased - 1st Tier | Purchased - Other | Internal Operating | Capital | Total |
| 1 | Community 1 | 76.47 | 96.15 | 172.62 | 44.55 | - | 31.58 | 96.49 | 172.62 |
| 2 | Community 2 | 186.25 | 229.09 | 415.34 | 145.30 | 53.85 | 53.65 | 162.53 | 415.34 |
| 3 | Community 3 | 113.45 | 52.87 | 166.32 | 84.85 | 5.97 | 39.94 | 35.57 | 166.32 |
| 4 | Community 4 | 79.15 | 55.82 | 134.96 | 71.39 | 21.67 | 27.10 | 14.80 | 134.96 |
| 5 | Community 5 | 231.06 | 42.95 | 274.01 | 128.41 | 18.36 | 54.30 | 72.95 | 274.01 |
| 6 | Community 6 | 174.18 | 7.65 | 181.83 | 77.75 | - | 41.96 | 62.12 | 181.83 |
| 7 | Community 7 | 138.12 | 14.51 | 152.63 | 73.54 | 5.66 | 22.69 | 50.74 | 152.63 |
| 8 | Community 8 | 167.68 | 15.93 | 183.61 | - | - | 90.90 | 92.71 | 183.61 |
| 9 | Community 9 | 188.62 | 3.84 | 192.46 | 121.04 | - | 32.45 | 38.96 | 192.46 |
| 10 | Community 10 | 197.01 | 35.70 | 232.71 | 100.76 | - | 50.85 | 81.10 | 232.71 |
| 11 | Community 11 | 66.24 | 61.21 | 127.44 | - | - | 75.36 | 52.08 | 127.44 |
| 12 | Community 12 | 106.94 | 19.98 | 126.92 | 65.60 | 6.49 | 19.07 | 35.75 | 126.92 |
| 13 | Community 13 | 161.20 | 49.52 | 210.72 | 85.61 | 7.29 | 47.62 | 70.20 | 210.72 |
| 14 | Community 14 | 102.29 | 24.51 | 126.80 | 50.15 | 15.82 | 35.62 | 25.21 | 126.80 |
| 15 | Community 15 | 92.73 | 2.93 | 95.65 | 39.48 | 19.12 | 28.30 | 8.75 | 95.65 |
| 16 | Community 16 | 102.10 | 33.28 | 135.38 | 68.11 | 11.10 | 24.68 | 31.49 | 135.38 |
| 17 | Community 17 | 162.33 | 75.98 | 238.32 | 77.74 | - | 63.30 | 97.28 | 238.32 |
| 18 | Community 18 | 223.53 | 203.35 | 426.88 | 95.46 | 46.21 | 44.63 | 240.58 | 426.88 |
| 19 | Community 19 | 76.83 | 52.53 | 129.36 | 34.01 | 0.64 | 22.44 | 72.26 | 129.36 |
| 20 | Community 20 | 86.55 | 20.64 | 107.19 | - | - | 86.39 | 20.80 | 107.19 |
| 21 | Community 21 | 80.98 | 29.15 | 110.14 | 75.34 | 1.99 | 21.68 | 11.12 | 110.14 |
| 22 | Community 22 | 124.16 | 41.37 | 165.53 | 82.47 | 7.07 | 31.27 | 44.73 | 165.53 |
| 23 | Community 23 | 36.02 | 56.81 | 92.83 | 35.10 | 0.92 | 19.12 | 37.69 | 92.83 |
| 24 | Community 24 | 118.26 | 99.32 | 217.59 | 75.81 | 8.24 | 38.45 | 95.08 | 217.59 |
| 25 | Community 25 | 120.17 | 118.32 | 238.49 | - | - | 135.43 | 103.06 | 238.49 |
| 26 | Community 26 | 56.19 | 34.79 | 90.98 | 41.49 | - | 49.50 | - | 90.98 |
| 27 | TOTAL / AVERAGE | 136.53 | 28.72 | 165.24 | 35.02 | 4.14 | 62.14 | 63.95 | 165.24 |
| 28 | DWSD Customer Communities | 115.73 | 38.16 | 153.90 | 75.78 | 9.66 | 30.04 | 38.42 | 153.90 |
| 29 | Other Wholesale Purveyors | 104.01 | 71.56 | 175.57 | 57.77 | - | 37.24 | 80.56 | 175.57 |
| 30 | Independent Suppliers | 85.65 | 26.54 | 112.19 | - | - | 86.67 | 25.52 | 112.19 |

Exhibit F
Summary of Sample Communities and Major Utility Financing Approaches

| Community | Financial Reporting | | User Charges | | Other Revenue Sources | | | Wholesale Providers | | Municipal O&M Cost Allocation | Capital Costs in Financial Plan - (a) | | | |
|---------------------------------|---------------------|--------------|----------------|------------------|-----------------------|------------------------|-----------------|---------------------|-----------|-------------------------------|---------------------------------------|------------------------|--------------------------|----------------------|
| | Combined | Separate W/S | Commodity Only | Svc Chgs / Other | Property Taxes | Grants / Contributions | Connection Fees | Water | Sewer | | Debt Service Interest | Debt Service Principal | Revenue Financed Capital | Depreciation Expense |
| Birmingham | | X | | X | X | | | 2 | 2 | X | X | X | X | X |
| Center Line | X | | | X | X | | | 1 | 1 | | X | X | X | |
| Dearborn | | X | | X | X | X | | 1 | 1 | X | X | X | X | |
| Detroit - Retail customers only | | X | | X | | | | 0 | 0 | X | X | X | X | |
| Farmington | X | | | X | X | | X | 1 | 1 | ? | X | X | X | |
| Farmington Hills | X | | | X | | | X | 1 | 2 | X | X | X | X | |
| Garden City | X | | | X | | | X | 1 | 2 | ? | X | X | X | X |
| Grosse Pointe Park | X | | X | | | | ? | 1 | 1 | ? | ? | ? | | X |
| Grosse Pointe Shores | X | | | X | X | | | 1 | 2 | | X | X | X | X |
| Hazel Park | X | | X | | | | | 1 | 2 | | X | X | X | X |
| Imlay | X | | X | | X | | | 2 | 0 | | X | X | X | X |
| Livonia | X | | | X | | X | | 1 | 2 | X | X | X | X | X |
| Melvindale | X | | | X | | | | 1 | 1 | | X | X | X | X |
| Mt. Morris | X | | | X | | | | 3 | 1 | ? | X | X | | |
| Northville Township | X | | X | | | | X | 1 | 2 | X | X | X | X | X |
| Rochester Hills | X | | | X | ? | | X | 1 | 2 | X | X | X | X | X |
| Shelby Township | X | | | X | | | X | 1 | 2 | X | X | X | X | X |
| Southfield | X | | | X | ? | | X | 2 | 2 | X | X | X | X | X |
| St. Clair Shores | X | | | X | X | | ? | 1 | 2 | X | X | X | X | X |
| Sterling Heights | X | | | X | | | X | 1 | 2 | X | X | X | X | |
| Taylor | | X | | X | X | | | 1 | 2 | ? | | | X | X |
| Warren | X | | | X | | | | 1 | 0 | X | X | X | X | |
| Washington Township | X | | | X | X | | X | 1 | 2 | X | X | X | X | X |
| West Bloomfield Twp | X | | X | | X | | X | 1 | 2 | X | X | X | X | |
| Wixom | | X | | X | X | | X | 1 | 0 | | X | X | X | |
| Ypsilanti | | X | | X | | | | 2 | 2 | ? | X | X | X | X |
| TOTALS | 20 | 6 | 5 | 21 | 11 | 2 | 11 | 31 | 38 | 14 | 24 | 24 | 24 | 16 |

(a) Note - designation refers to a combined recognition of water and sewer practices.