San Diego Water Department
Customer Support Division

Assessment Report

November 30, 2005

HDR Engineering, Inc.

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1.1 COMPETITIVE ASSESSMENT OVERVIEW

HDR Engineering, Inc. (HDR) is assisting the City of San Diego Water Department's Customer Support Division (Customer Support) to implement the Customer Support Bid to Goal Program (BTG). Implementation of Bid to Goal requires preparatory steps, which include securing staff commitment and understanding of the Program, developing a detailed plan for achieving Program goals, and securing commitment and support from management, the Mayor and City Council. This Competitive Assessment Report represents the first major step in Bid to Goal Program implementation.

The overall objective of the Bid to Goal Program is to ensure that the ratepayers enjoy the full benefit of services that are delivered at a competitive price. In order to determine that price without requesting competitive bids, it is necessary to establish credible and defendable outcome targets. HDR draws performance and pricing data from both the private and public sectors and then adjusts the data to factor in the cost of contract procurement, administration, and oversight. HDR's experience with Bid to Goal in San Diego and elsewhere has shown that planned union participation from the very beginning is critical to implementation success.

In the Bid to Goal Program, the employees commit to operate under a public contract called the Employee Bid and through a Memorandum of Understanding (MOU), which is approved by the Mayor and City Council. Gainsharing may be paid equally to all employees of the Division, but only after the savings are documented. Pay-for-Performance may be paid to the employees of the Division's Activity Groups who perform to the high levels of productivity that are defined in the Bid to Goal documentation.

Competitive assessment strategies have been developed for five of the six activity groups within the Customer Support organizational structure. The Information Systems activity group is not included within the scope of the Program due to its Department-wide scope. The activity groups within the scope of the Bid to Goal Program are as follows:

- Customer Services Office
- Division Administration
- Field Services & Investigations
- Meter Services
- Water Resource Management

1.2 BID TO GOAL

As public leaders consider their options to improve competitive performance, it is important for them to know that there are viable approaches that rely heavily on the ingenuity of public employees and their determination to provide competitive results. The most prominent example is the Bid to Goal program. This pioneering strategy was developed for the O&M Division of the San Diego Metropolitan Wastewater Department (Metro) in 1997 to optimize public sector organizations by combining the best features and practices of both the public and private sectors. The Bid to Goal process establishes performance and cost goals. In the Bid to Goal program, the employees operate under a public contract through a Memorandum of Understanding (MOU) approved by the Mayor and City Council.

1.2.1 Best-Service Delivery

The Bid to Goal initiative departs from conventional thinking to focus on the development of a public employee labor/management collaboration aimed at achieving best possible service delivery. Best-service delivery was defined as the most cost-effective use of public funds, while accepting no sacrifice in safety (of the public and employees), environmental protection standards, or quality of careful and responsible management of the assigned physical assets. Bid to Goal includes the use of incentives, like gainsharing and pay-for-performance, to stimulate continuous improvement, which is a common private sector technique.

1.2.2 Competitive Price

The overall objective of the Bid to Goal process has been to ensure that the ratepayers enjoy the full benefit of services that are delivered at a competitive price. In order to determine that price without requesting competitive bids from the private sector, it is necessary to establish credible and defendable outcome targets. The outcome of a successful Bid to Goal initiative is a multiyear agreement between the public leaders and the labor/management team to deliver beneficial results to the ratepayers.

1.2.3 Establishing the Competitive Cost Target…the Goal

The Competitive Cost Target/Goal for the Customer Support Division was developed by employing the strategies that HDR has successfully applied in working with public sector employees in Managed Competitions and Bid to Goal program development in the water and wastewater industry across the United States. In the Bid to Goal Program, HDR establishes the Competitive Cost Target using the approach listed below. The Competitive Cost Target then becomes the Cost Goal for the employees to achieve as they prepare their Employee Bid. These strategies have been enhanced through direct, related operating experience of HDR Team members.

Key steps used to set the Competitive Cost Target/Goal are summarized below:

- ***Organize Cost and Budget History as Follows:***

  - Take the Customer Support Division cost and budget history and organize it into a Microsoft Excel format. For this analysis the Customer Support Division is divided into five Activity Groups or Sections. They are Customer Services Office, Field Services and Investigations, Meter Services, Water Resources Management, and Division Administration. The Division's Information Systems Section is excluded, since it is not part of this Assessment.

  - The City budgets at the Object Account level. The 400+ Object Accounts are consolidated into six Object Account Groups. These Object Account Groups are Personal Services, Fringe Benefits, Supplies and Services, Data Processing, Energy Resources/Utility, and Outlay.

  - Operations and Maintenance of the Recycled Water System became part of the Customer Service Division Scope in FY 2006 having been moved from the Water Operations Division. The cost and budget history for the Recycled Water System from

Water Operations have been included in the Meter Services Section, where that activity currently resides.

- ***Evaluate Staffing Levels*** – Based on analysis of this Assessment Report, the overall Customer Support staffing level appears competitive based on comparisons to the number of FTE Positions proposed in a recent large Managed Competition for Customer Support. Therefore, in most cases, the appropriation for FY 2006 is used to establish the competitive cost for Personal Services and Fringe Benefits.

- ***Evaluate Non-Personnel Expenditures*** – Apply a three-year historical average (FY 2003-FY 2006) for all non-personnel expenditures to determine the actual needs for these expenses. To conduct this evaluation, the historical Period 13 expenditures and encumbrances were adjusted by the Consumer Price Index (CPI) for San Diego to FY 2006 dollars, and then averaged. This method reflects the average of Period 13 Expenditures and Encumbrances in current (FY 2006) dollars. CPI adjustments in this Assessment Report for both time and location were made by applying the appropriate ratios of CPI values reported by the Federal Bureau of Labor Statistics (BLS).

- ***Apply Best Practices and Competitive Benchmarking Targets*** – Where available, apply best practices and benchmarks to Customer Support activities to refine the competitive costs.

- ***Conduct a Zero-Based Review for Large Supplies and Services Costs*** – Assess the opportunities for savings for future expenditures in areas such as postage, meter purchases, and Water Conservation voucher programs.

- ***Consolidate Internal Contingencies*** – Contingency funds are often found in relatively small amounts throughout budgets of the Activity Groups. HDR recommends that all contingencies should be consolidated into a divisional contingency budgeted in the Division Administration budget. In HDR's assessment of other organizations, we have found that contingencies are frequently budgeted in small amounts in many sections within an agency. Budgets should be established acknowledging the need for contingencies, and the contingency amount should be managed at the highest organizational level. The Bid to Goal programs for both the San Diego MWWD O&M Division and the Water Department Water Operations Division have provided for Divisional Contingencies. Based on HDR's experience, the following benefits are achieved from consolidating contingencies:

  - Supervisors can be held more accountable for the budget performance of their Activities.
  - Contingency expenditures can be managed and prioritized at the Division Management Level.
  - City-wide or Department-wide cost cutting measures can be managed without adversely impacting Activity performance or objectives.

- Risks are assessed and assigned to the most appropriate responsible party, as in a private contract.

1.2.4 The MOU and Incentive Programs

The MOU establishes the broad policy objectives for the Bid to Goal Program. It defines the employees' responsibilities for cost savings and cost control as well and broad performance requirements. The MOU also defines the City's responsibilities for funding and provisions for an incentive program. The Cost Target/Goal must be matched to a specific scope of services with performance parameters detailed in the MOU. The Goal represents the minimum savings required to comply with the MOU. Incentives can be built into the MOU to encourage additional savings to the community. Gainsharing and Pay–for-Performance programs can be used to provide employee incentives, as well as, to establish the basis for the accumulation of reserve funds that plays a similar role as a performance bond.

1.3 ASSESSMENT REPORT METHODOLOGY

1.3.1 Data Gathering

A considerable amount of data was requested from the Customer Support Division and data requests were fulfilled in a short timeframe. Materials were indexed and organized and placed in an office at 600 B Street, 12th Floor. This office will serve as the project reference library throughout the development of the Bid to Goal program. In addition, the HDR Team used a number of reference documents and data from other client projects. A log of the data and references reviewed can be found in Appendix 1.

1.3.2 Stakeholder Interviews

All voting members of the Customer Support BTG Planning Steering Committee were interviewed, at least once, to gain an understanding of the Division's inner workings and operations, gather opinions and viewpoints about conditions and attitudes, and observe activities in various functional areas. This Planning Steering Committee meets monthly and is made up of CSD Section Heads from each Activity Group, a labor union representative from MEA and AFSCME 127, a City Financial Management representative, a representative from the Water Department's Safety Program and one from Human Resources, the Customer Support Division Deputy Director, Assistant Deputy Director and Bid to Goal Project Manager.

In addition, more than 20 other employees from throughout the Customer Support Division were interviewed. These individuals represented a cross-section of front-line and supervisory personnel. The Labor Union representatives were asked to provide names of individuals for these interviews.

Topics and questions that were a part of the questionnaire included: What is working well and not so well? What changes are envisioned over the next five years that need to be factored into the Bid to Goal program development? What challenges exist for Gainsharing? What other incentives might be implemented? What are examples of policies and procedures that prevent employees from performing their jobs effectively? What current reports and tools are used to track jobs or effectiveness and efficiency? What is the interviewee's overall impression of Bid to Goal in other City Departments? Are there any 'Sacred Cows' (an idea or theory that is immune, usually unreasonably so, from criticism or

opposition)? Specific performance measures to compare the Customer Support Division to other similar agencies; Constraints that may keep the Customer Support Division from optimizing costs or service levels; What one thing would you change if you could? and other issues not covered in the questionnaire.

A memorandum that summarizes the interviews, while retaining the confidentiality of those interviewed, can be found in Appendix 2. The findings represent a snapshot in time and range from one extreme to the other. As the Employee Bid and Business Plan are developed, these findings will be reviewed by the Performance Improvement Teams and solutions for perceived problems will be evaluated.

1.3.3 Communications Plan

In order to implement the Customer Support Division Bid to Goal Program, employees and customers must know the purpose and goals of what is being planned. When change initiatives are launched, communication becomes the major process for organizational success. Communicating regularly and effectively with employees has become more complex with new technology because the avenues through which people prefer or have access to receive information vary. Thus, this communication strategy, to be successful, will include a variety of methods or routes to send a consistent message to the employees. The specifics of the Communication Plan can be found in Section 3.5.3, Key Opportunities for Change for the Administration Group.

1.3.4 Planning Steering Committee

The Bid to Goal Planning Steering Committee was formed to oversee the development of the Bid to Goal program and to serve as a conduit of communication to and from the employees throughout the Customer Support Division. The list of members of the Planning Steering Committee and the schedule for monthly meetings can be found in Appendix 3.

1.3.5 Benchmarking and Best Practices

1.3.5.1 Overview

Numerous benchmarking efforts have been undertaken in the past decade in the water industry. An important lesson has emerged from these efforts. To adequately assess performance information, three different and complimentary perspectives should be included: internal, customer, and competitors/peers. While there are problems of measurement and comparability associated with just about any performance measure, comparison to others will start to provide insight into the Division's performance. Information from other utilities, when available, is helpful, but the final performance goals are a judgment call for each utility.

1.3.5.2 Definitions

- ***Benchmark*** - A comparison of specific results achieved by different organizations; a standard or point of reference used in measuring quality or value.

- ***Benchmarking*** – A structured approach for looking outside an organization by studying and adapting best practices to complement internal operations and creative ideas; A learning experience; continuous comparison and measurement against recognized leaders. It should not matter if the comparison makes you look good or bad initially. What is important is you have done the comparative analysis, learned from the analysis, and applied a better or best practice to reduce cost or increase effectiveness, or both.

- ***Best Practice*** – There is no universally accepted definition of a "best practice." The terms "best practice" and "lessons learned" are often used interchangeably. Lessons learned are usually best approaches and practices that have not been evaluated as rigorously as best practices, but that still offer ideas about what works best in a given situation. They can also be examples of how *not* to do something. Lessons are often "lessons from" a specific program or project and are not intended to be universal in scope or application.

- ***Performance Measurement*** – Performance measurement is the regular collection of specific information regarding the operational results of various City services. It includes measurements and standards on job duties, employee training, and both internal and external customer satisfaction. Together with benchmarking and continuous improvement, performance measurement forms the nucleus for managing for results. In general, a good performance measurement system should be able to provide answers for the following questions.

    - What was achieved?
    - How efficiently was the work done?
    - How were customers, both internal and external, helped by the effort?

1.3.6 The HDR Team

The HDR Engineering, Inc. Team (HDR) reviewed numerous existing reports, performed research on the Internet, and utilized relevant information from existing and previous clients. In the Findings Section, Section 3, of this Assessment Report, more specific information is presented both on the references used and recommendations for benchmarks and best practices to be considered by the Performance Improvement Teams (PITs) for each Activity Group. Background and experience information on the key HDR Team members can be found in Appendix 4.

1.4 SUMMARY OF KEY FINDINGS

- Based on Division-wide comparisons with both national benchmarking studies and a competitive procurement, HDR has determined that the costs and staffing levels for the Customer Support Division are competitive. Significant efforts to reduce costs or staffing may adversely impact performance, customer satisfaction, or revenues received.

    - The total costs for providing Customer Support Services for the Water Department and billing services for the Metropolitan Wastewater Department are within the best performing 25 percent of all 186 combined water and wastewater utilities who

participate in the American Waterworks Association's annual benchmarking program called QualServe.

- The total costs for providing Customer Support Services for San Diego customers are competitive with the actual bids received in the nation's largest Managed Competition, which included competitive prices submitted for Customer Support Services.

- The overall number of Full Time Equivalent (FTE) Positions for providing Customer Support Services for San Diego customers is competitive with the staffing levels proposed by the bidders in the nation's largest Managed Competition. However, best practice agencies continue to look for ways to optimize their staff to meet changing trends in workload and improve efficiency and productivity.

- Since the water and wastewater industry began competitiveness initiatives, such as Managed Competitions and Bid to Goal programs, in the late 1990s, HDR has found that numerous organizations have worked to reduce costs to competitive levels. During these times of "doing more with less," performance has sometimes suffered. The major emphasis of this Assessment Report is to suggest best-in-class approaches to improve performance, customer satisfaction, and revenue collection while remaining competitive in terms of costs and staffing.

  HDR, as a key part of this Assessment Report, has developed the competitive cost for the operation of the Customer Support Division for the Sections included in the Bid to Goal program. Table 1 presents the competitive level for the Customer Support Division as well as the FY 2006 Budget. The competitive level is the cost that HDR estimates that would be derived through a competitive bidding process for the FY 2006 level of services provided by the Customer Support Division. The competitive level in Table 1 was developed through independent analysis of the costs for each section within the Customer Support Division and will be the cost goal for each activity group of the employee bid.

Table 1
Customer Support Division – FY 2006 Budget and Competitive Level

Description	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
Division Administration	$ 1,731,451	$ 1,648,800	4.8%	$ 82,700
Water Resources Management	$ 2,929,098	$ 2,822,100	3.7%	$ 107,000
Customer Services Office	$ 6,586,051	$ 6,195,800	5.9%	$ 390,300
Field Services & Investigations	$ 3,545,612	$ 3,643,900	-2.8%	$ (98,300)
Meter Services	$ 7,589,052	$ 7,660,600	-0.9%	$ (71,500)
				$ -
TOTAL	$ 22,381,264	$ 21,971,200	1.8%	$ 410,100

Table 1 shows that the competitive level for the entire Customer Support Division is 1.8 percent less than the FY 2006 Budget based on the summation of competitive level of the individual sections of the Customer Support Division. Appendix 5 presents the detailed cost and budget history and Competitive Level values for each of the Customer Support Sections and Activity Groups.

2.1 CUSTOMER SUPPORT DIVISION STRENGTHS AND OPTIMIZATION SINCE 2000

Below is a summary of the Customer Support Division accomplishments that have taken place since 2000. More detail on these activities can be found in Appendix 6.

- ***Water Resource Management Section*** – The City of San Diego Water Conservation Program reduces water demand through promoting or providing incentives for the installation of hardware that provides permanent water savings. It also provides services and information to help San Diegans make better decisions about water use in their homes, landscaping, and businesses. These efforts increase water savings by providing a "new source of potable water" for an expanding San Diego. Today, the Program directly accounts for approximately 26,000 acre-feet (AF) of potable water savings per year, meeting the goal set in 1997 by the Strategic Plan for Water Supply. This savings has been achieved by creating a water conservation ethic; adopting programs, policies, and ordinances designed to promote water conservation practices; and implementing comprehensive public information and education campaigns.

- ***Field Services and Investigations Section*** – Since January 2001, the Field Services and Investigations Section has reduced full-time positions by more than 10 percent, 53 to 47 positions, while improving customer service quality. The reclassification of the Restoration Crew to Field Representatives, combined with an ongoing cross-training program, has allowed a smaller staff to produce the same level of productivity with fewer positions. The Field Investigations staff resolves billing questions in the field and has downsized from five to three positions while continuing to complete 80 to 85 percent of investigations within five days. A recent reorganization of Meter Reading has allowed much improved oversight and accountability. Misreads among new staff are reduced more effectively now that rereads are sent to the Meter Reading Supervisor, reducing the work load on Field Investigations. Under the new system, training deficiencies can be identified and corrected on an individual basis.

- ***Customer Service Office*** – The Customer Service Office (CSO Group) implemented a monthly billing policy commencing in September 2003 that doubled remittance, mailings, and increased remittance processing by almost 90 percent. The impact of this change has resulted in extra work for the CSO Group, namely an increase of 70% in "exception/deferred billings." The change to monthly billing was accomplished with a decrease in CSO Group staff.

2.2 CURRENT BUDGETS AND COSTS HISTORY

Customer Support Division historical cost information establishes the basis for projecting future costs and in the identification of the competitive level for costs. The Performance Improvement Teams (PIT) will use these cost data to test and develop optimization strategies as the basis of performance optimization planning. Front-line and cross-functional employee teams from the Customer Support Division will form the PITs. After receiving education and initial training in the Bid to Goal purpose and objectives, the employee teams will review strategies that are proposed in this Assessment Report.

These teams will review the recommendations, provide feedback, and then develop performance goals and optimization strategies for their Employee Bid. Each PIT's goal is to develop plans to achieve competitive levels for costs and performance.

Cost data were downloaded from the City of San Diego accounting system into Microsoft Excel spreadsheets for manipulation and consolidation into the Customer Support Activity Groups that are being studied in this Bid to Goal project. The existing cost history and budget data were compiled in four steps, as described below.

- ***Step 1: Organization Code Numbers*** – The Customer Support Division provided the Division's organizational charts for FY 2006. The costs and budgets of the Division are allocated by the following Organization Codes:

  200 Division Administration
  - 220 Division Management
  - 212 Public Relations

  205 Water Resources Management
  - 250 Section Management
  - 252 Ultra-Low Flow Toilet Voucher
  - 255 Field Investigations
  - 256 Retrofit Ordinance
  - 251 Residential Int-Ext Water Conservation
  - 2570 Public Info/Educ & Outreach
  - 1254 Clotheswasher Rebate
  - 1255 Program Development
  - 1259 Commercial Landscape Survey PR

  207 Customer Service Office
  - 270 Section Management
  - 271 Clerical Support
  - 272 Exception Billing
  - 273 Collections/Overdue Accounts
  - 274 Customer Information
  - 275 Payment Processing
  - 276 Water Repair

  208 Field Services & Administration
  - 280 Section Administration
  - 281 Service Restoration/Turn-Off
  - 282 Code Compliance
  - 283 Meter Reading
  - 284 Sewer Classification
  - 289 Field Investigations

  2400 Information Systems (Not included in this Bid to Goal program)

  2800 Meter Services
  - 2815 Section Management
  - 2810 Commercial Meters
  - 2811 Domestic Meters
  - 2812 Backflow Maintenance

2813 Cross Connection
2816 Fire Hydrant Meter Shop
2817 Planning/Scheduling Program
2818 Recycled Water Construction
2819 Recycled Water Ops & Maintenance

- ***Step 2: Activity Groups*** – HDR reviewed the organizational groupings of areas that are to be studied in this assessment phase of the Bid to Goal program. These Activity Groups represent a manageable group of Organization Codes that will be the basis of the identification of competitive costs. The Customer Support Division Activity Groups for this study are:

  200 Division Administration

  205 Water Resources Management

  207 Customer Service Office

  208 Field Services & Administration

  2800 Meter Services

- ***Step 3: Object Accounts for the Sections Within Activity Groups*** – The City breaks down its object accounts into the following Object Account Categories. Following are the six Object Account Groupings:

Object Account Numbers	Object Account Group Name
1000-1999	Personal Services
2000-2999	Fringe Benefits
3000-3999	Supplies and Services
4000-4999	Data Processing
5000-5999	Energy Resources/Utility
6000-6999	Outlay

- ***Step 4: Analysis of Cost and Budget Data*** –HDR reviewed these cost summaries to investigate inconsistencies in cost allocation and in budgeting. Where inconsistencies were found, contacts were made with Division managers and financial analysts to attempt to identify the cause of the inconsistency.

2.2.1 Divisional Cost and Budget Analysis

Table 2 summarizes costs and appropriations of the Customer Support Division for FY 2003 through FY 2006, based on this analysis. The Findings Section of this Assessment Report will discuss the individual costs and budgets for each section and Activity Group. For FY 2003 through FY 2005 the costs and budgets for the Recycled Water program previously found in the Water Operations Division are included in this Table.

Table 2
Customer Support Division - Cost and Budget History

Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006
Division Administration	$ 916,421	$ 981,898	$ 704,233	$ 649,663	$ 1,483,769	$ 1,354,849	$ 1,731,451
Water Resources Management	$ 3,105,906	$ 2,417,936	$ 3,481,280	$ 2,648,257	$ 3,500,270	$ 2,981,560	$ 2,929,098
Customer Services Office	$ 5,504,731	$ 5,035,215	$ 6,056,451	$ 5,708,877	$ 6,080,662	$ 5,474,670	$ 6,586,051
Field Services & Investigations	$ 3,017,480	$ 2,745,376	$ 3,429,999	$ 3,091,193	$ 3,780,564	$ 3,550,048	$ 3,545,612
Meter Services	$ 5,516,562	$ 5,853,554	$ 7,118,252	$ 5,780,309	$ 8,208,610	$ 7,010,575	$ 7,589,052
TOTAL	$ 18,061,100	$ 17,033,979	$ 20,790,215	$ 17,878,299	$ 23,053,875	$ 20,371,702	$ 22,381,264

Figure 1 presents the Customer Support Division budget and Period 13 expenditures for Fiscal Years (FY) 2003 through 2005, and appropriated budget for FY 2006, for this Assessment Report. Costs are increasing annually; however, the FY 2006 Budget is less than the budget in FY 2005

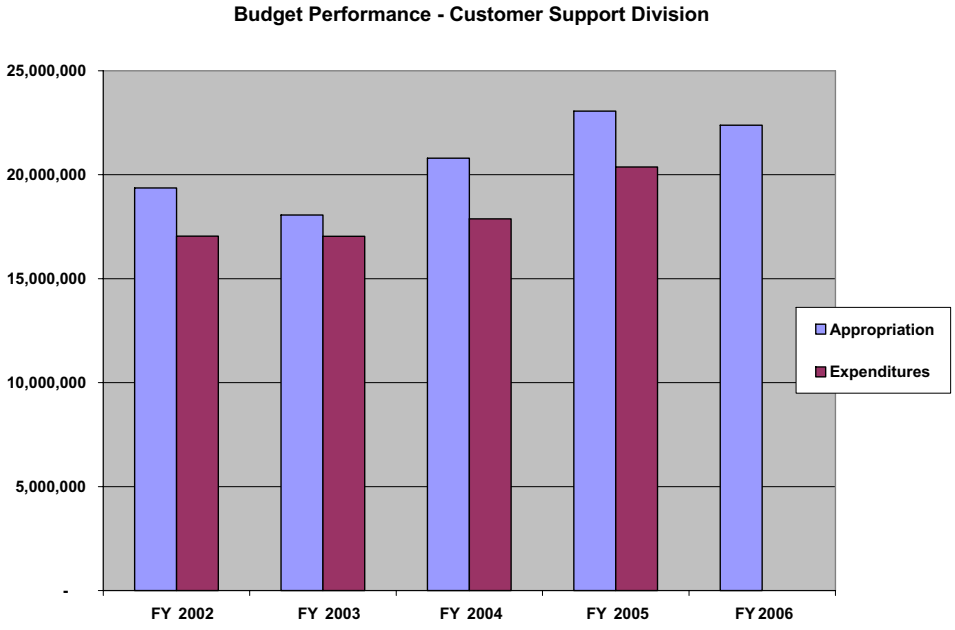

Figure 1 – Budget Performance – Customer Support Division

Figure 2 presents the FY 2006 Divisional cost distribution based on the Activity Groups within the Division. The two largest costs are Meter Services (33.9 percent), maintaining the metering devices and other maintenance activities, and the Customer Service Office (29.4 percent) billing, collections, and customer interface.

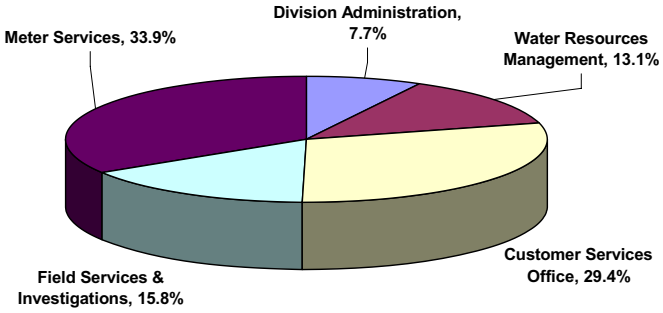

Figure 2 – Activity Group Distribution – Division – FY 2006

Figure 3 presents the FY 2006 budget distribution by Object Account Groups for the Division. The largest costs are for Personnel and Fringe Benefits (65.0 percent) and Supplies and Services (25.7 percent). The Personnel and Fringe Benefit share of the Divisional Budget is expected, since the only other significant costs involved in Customer Support Operations are postage and meter replacement.

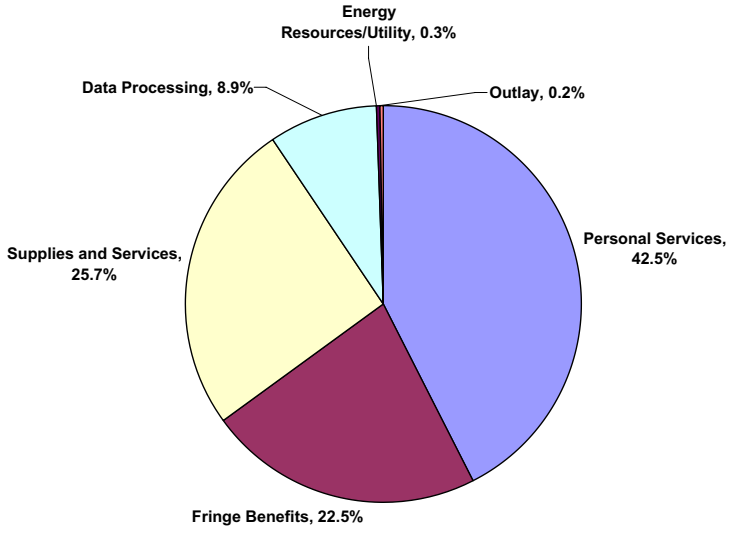

Figure 3 – Object Account Distribution – Customer Support Division – FY 2006

Since total personnel costs (Personal Services plus Fringe Benefits) represent a large part of the Divisions' budget, a review was conducted of the growth in these costs during the period between FY 2003 and FY 2006. Personal Services costs include all the payroll costs paid directly to employees such as salary, vacation, holidays, jury duty, standby pay, and overtime. Fringe Benefits include the costs paid by the City for employees such as retirement, pensions, Worker's Compensation insurance, healthcare coverage, unemployment insurance, and disability coverage. Based on the cost history data provided to HDR, analysis shows that during this three-year period, the budgeted Personal Services cost increased by an average of 7.1 percent per year. During the same time period the Fringe Benefits increased an average of 27.63 percent per year. In FY 2003, Fringe Benefits represented an additional

35.2 percent above the Personal Services cost; in FY 2006, this Fringe Benefit multiplier has increased to an addition of 53.0 percent to Personal Services costs. The Customer Support Division has little or no control over these costs, which are related to the area's cost of living, the cost of benefits, such as healthcare, labor negotiations, and other policy decisions.

One indicator that is controllable is the extent to which the agency performs related to its budget. Figure 4 shows the annual percentage amounts of expenditures of the Customer Support Division to its appropriated budget.

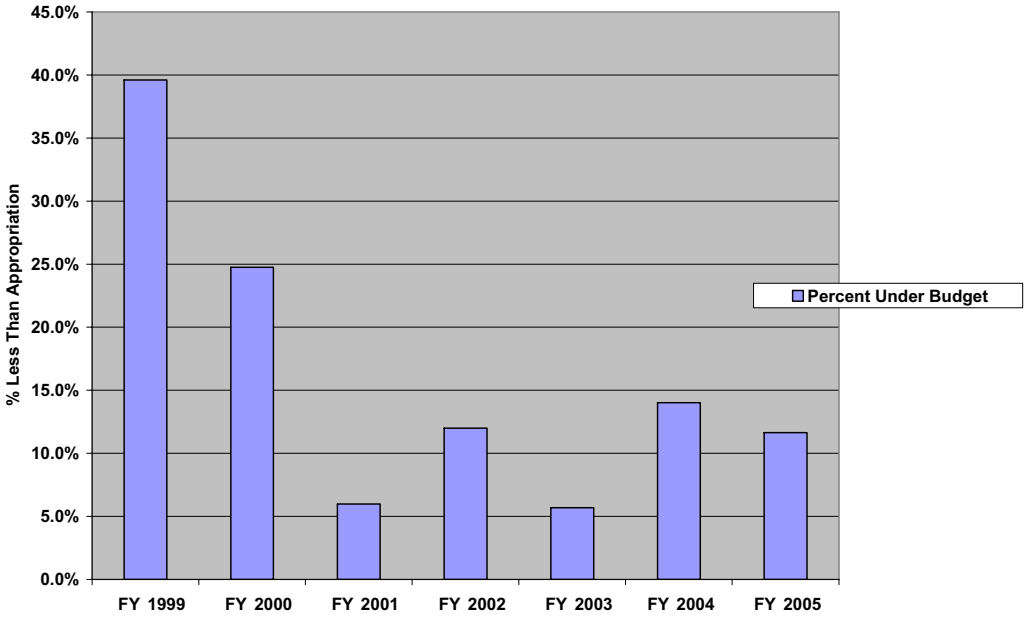

Figure 4 – Percent Under Budget

Figure 4 demonstrates that the Customer Support Division consistently manages its expenditures for under-budget performance. It also indicates that, with continued management and cost controls, a bid budget that could create budget savings can be achieved.

During FY 2003 through FY 2006, the Division appropriated funds for anticipated expenses to cover Water Resources supplies and services (plumbing supplies), commercial meter purchases and for the Unbilled Revenue Recovery program. It was difficult to anticipate the amount of the total expenditure for these activities. As a result, Customer Support incurred savings due to these unexpended balances each fiscal year in these areas.

The Division incurred additional budget savings due to the timing of implementation of the Water Systems technician (WST) series. Although WST personnel salary increases were budgeted to cover full implementation, only part of this personnel expense was expended due to later implementation of WST than anticipated.

Also, the length of time required to fill vacancies has increased in the last few years due to the City's increased review and approval process of hiring requests, as well as, mandated hiring freezes. The inability to fill vacancies has resulted in savings in the Division's personnel expenses.

2.3 COMPETITIVE COSTS AND SERVICE LEVELS

One major purpose of this Assessment Report is to establish the overall cost that the customers of the City's water system would expect to pay if the services were provided by the private sector through a competitive procurement process. The essential concept of the Bid to Goal process states that, when public employees develop a cost for performance that is competitive with private sector, and they commit to operate within that competitive price, then it is in both the customers' and the employees' best interest to grant the employees the opportunity to operate the system. The first key step in the process of gaining this employee commitment is to establish the competitive level. If the competitive price established by HDR is confirmed by the Water Department, then this competitive level becomes the goal of the Bid to Goal. The employees, through their PITs, set out to develop plans, initiatives, and strategies to achieve and commit to this goal.

To establish the competitive level in this Assessment Report, HDR compared current Customer Support Division costs two ways. The first approach compares current to national benchmarks; the second approach compares the budgets with actual bids received in 2002 for one of the country's largest managed competitions, the Sewerage and Water Board of New Orleans.

2.3.1 QualServe Benchmarking

A system of performance indicators for water and wastewater utilities has been the vision of many utilities leaders for many years. This vision was realized in 1995 when the quality service program (now QualServe) was established as the underpinning of the programs to help utilities improve performance. Since then, organizations around the world have implemented performance indicator systems. In January 2003, the launch of the QualServe Benchmarking Clearinghouse and its 65 members affirmed the importance of a system of performance indicators to help utilities in the United States and Canada with comparative analyses, and building a measurement system for internal use. In 2004, the QualServe Benchmarking Program focused efforts on delivering the Performance Indicators Survey, and then presenting analyses on participating utility data. The City of San Diego Water Department and the Metropolitan Wastewater Department are participants in this study.

The QualServe benchmarking program utilizes over 20 water and wastewater performance indicators as the basis for comparing data on utility operations. Each year, following a data collection and validation stage, a Benchmarking Performance Indicators Survey & Analysis report is produced. HDR supports the QualServe effort especially since their report is the only one of its kind, providing participants, such as San Diego, access to the most complete, accurate, and current water and wastewater utility benchmarking data available. By participating in the Performance Indicators Survey, utilities learn which performance indicators to track, compare their own utility's results with others in the benchmarking program, and learn outstanding practices of other utilities. QualServe is based on the principles of continuous quality improvement and is intended to help utilities "take a picture" of where

they are today. By analyzing the results of the picture and implementing some of changes recommended by employees, peer utilities, and consultants alike, the utility makes progress toward a better tomorrow.

Every year there are more participants in the QualServe program. This means that as more data is collected comparisons from year to year will be available and trends can be derived. However, this also means that performance indicators will change. Over time by analyzing QualServe data, utilities can assess their relative performance as well measure the effect of their own operational changes.

One of the five QualServe categories is Customer Relations. Several of the Performance Indicators in this category are currently being tracked by the Water Operations Division, including: customer service complaints; technical quality complaints; disruption of water service; and residential cost of water service. The other two are customer service cost per account and billing accuracy, which is not tracked by the Customer Support Division.

Thus, the most significant Benchmarking Performance Measure related to the Customer Support Division found in the QualServe data is the 'Customer Service Cost per Account.' This measure represents the total customer service cost divided by the number of active accounts. Customer service costs include all direct salaries, employee benefits, and direct costs, including contracts that are associated with providing the following:

- Activation of new accounts.
- Meter reads, maintenance, and repair or replacement.
- Preparation and delivery of bills.
- Receipt and processing of payments.
- Records maintenance.
- Collection of delinquent accounts.
- Processing of bankruptcies.
- Provision of turn-on/turn-off services.
- Receipt, investigation, and resolution of complaints.
- Preparation and provision of outreach and education materials.

For comparison with the QualServe Benchmarking data, Customer Support Division costs that are not related to the above listed tasks are not included. Examples of the excluded costs are costs of the Water Resources Management Section, the costs of Recycled Water operations and maintenance, and the costs associated with Sewer Classification, Backflow maintenance and Cross-connection Control. Table 3 presents the results of the QualServe data analysis for all of the 186 utility participants.

Table 3
QualServe Benchmarking Data

	San Diego	All Participants		
		25th Percentile	Median	75th Percentile
Customer Service (Support) Cost per Account	24.0	26.4	39.3	52.9

These data show that the total costs for customer support using the QualServe analysis approach ranks the Customer Support Division within the top 25th percentile of all utilities surveyed.

2.3.2 Benchmarking Comparison with Managed Competition Bids

In February 13, 2002, the Sewerage & Water Board of New Orleans (S&WB NO) received bids in its Managed Competition process for Operations and Maintenance Services for the system. The competition process, one of the largest in US history, covered the following services:

- Management, operations, and maintenance of the water system.
- Management, operations, and maintenance of the sanitary sewer system.
- Meter reading, billing, collection, and other customer services.
- Provision of certain capital repairs and replacements.

Three competitive bids were received in response to the Request for Proposals (RFP) process. One bid was from the employees, who were assisted by HDR, and two bids were received by large international contract O&M firms specializing in water and wastewater system contract operations. The two private firms' technical proposals indicated that their costs and approach was based on applying their best national and international resources to the project. In the overall competition for the project, the Employee Bid Team offered the lowest bid. Due to situations beyond the control of the Employee Bid Team, the contract was never awarded and the public employees continue to operate the system. However, on the date the bids were received, all the bidders had put forth their best proposal assuming the successful bidder would be awarded the contract, and would be required to fulfill the requirements of the contract and their proposal. The private bidders had guaranteed their performance through bonding and letters of credit. Thus the S&WB NO proposal submittals are good indicators for comparison and benchmarking of the costs for Customer Support Services within the San Diego Water Department.

All bidders were required to provide costing for numerous variations of contract durations, and durations for current staff employment guarantees. Each bid required separate costing for the water system, the sewer system and the customer services functions. The availability of the scope of services for customer services in the New Orleans Managed Competition, and its associated cost make the comparison of these bids to the Customer Support Division's FY 2006 Budget straightforward. To make the comparisons, the following scoping adjustments have been included:

- All New Orleans bids were adjusted using Bureau of Labor Statistics (BLS) Consumer Price Indices (CPI) for current costs (FY 2006), and for cost of living for the San Diego metropolitan area.
- The scope of services and levels of performance for the New Orleans bid, and the current Customer Support Division are very similar. To account for the differences, some adjustments were made. The Customer Support Division's total FY 2006 budget was adjusted to reflect the differences between the overall Customer Support Division scope and the specified scope of services that was bid in New Orleans, as follows:

- Budgeted costs for the CSD's Water Resources section were deducted, since the New Orleans scope does not require a program of this type.
- Budgeted costs for the Code Compliance Section were deducted, since this Activity was specifically retained by the Sewerage & Water Board due to its intrinsically governmental function, and not included in the bid scope.
- Budgeted costs for the Recycled Water System Construction and O&M were deducted, since there is no reclaimed water system in New Orleans.
- Budget Costs for the city-wide Information Technology allocation to the CSD were deducted, since these costs do not support Water Department activities.
- The New Orleans Scope requires monthly reading of all water meters; therefore, an estimated amount has been added to the Customer Support Division costs to reflect monthly meter reading.

- The Bid Cost per Account was computed for comparison purposes, since the Sewerage & Water Board has 145,934 accounts and San Diego has 267,263.

Table 4 presents the results of the comparison between the Customer Support Division's FY 2006 Budget and the bids from the New Orleans Managed Competition, as adjusted above.

Table 4
Private Sector Bid Comparison of Costs

	CPI	Employee Bid	Bidder A	Bidder B	San Diego
Actual Bid/Budget	171.0	$14,707,201	$16,309,505	$11,135,410	$ 30,974,348
Adjusted Bid/Budget	218.3	$18, 775,333	$20,820,848	$ 14,215,556	$ 25,916,260
Bid/Budget per Account	218.3	$128.66	$142.67	$97.41	$96.97

Table 4 demonstrates that the FY 2006 Overall Budget for the Customer Service Division is competitive with the low bidder based on this comparison.

The data from the New Orleans Managed Competition can also be compared to evaluate the staffing levels. Bidders were not required to submit staffing plans, but two bidders elected to do so. Table 5 was developed by making adjustments to the proposed New Orleans Managed Competition staffing numbers in a similar fashion as was done for the costs. Table 5 presents the number of Full Time Equivalents per 1,000 accounts for the New Orleans bidders who provided staffing plans, and for the Customer Support Division based on the FY 2006 organizational chart.

Table 5
Private Sector Bid Comparison of Staffing

	Employee Bid	Bidder A	San Diego
Actual FTEs Bid /Budget	139	129	227
Adjusted FTEs Bid/Budget	139	129	209
Bid/Budget - FTEs per 1,000 Accounts	0.952	0.884	0.834

Table 5 demonstrates that the FY 2006 Overall Staffing Levels for the Customer Service Division are competitive.

Appendix 5 contains expenditures, appropriations and competitive level cost tables for each Activity Group and for each Activity.

2.3.3 Conclusion

HDR has compared the costs and budgets for the Customer Support Division to the nations only benchmarking study and to actual bids from a large managed competition. To conduct this analysis certain adjustments to the costs were made to make the comparisons valid.

Based on this Divisional comparison, HDR has concluded that the costs and staffing of the Customer Support Division are competitive. The remainder of this Competitive Assessment Report will address opportunities for the Customer Support Division to continue to improve and to become recognized as a Best in Class provider of Customer Support services while continuing to operate at cost levels which are competitive with the private sector and competitive public water agencies.

3.1 CUSTOMER SERVICES OFFICE

3.1.1 Description of Customer Services Office

The Customer Services Office (CSO or CSO Group) is responsible for producing and mailing customer invoices, responding to customer inquiries, and collecting and processing payments. In addition, the CSO administers an emergency contact center for customer calls to report water main breaks, hydrant knock-overs, and system leaks.

There are seven sections (Activities) within the CSO Group: Section Administration, Clerical Support, Billing, Collections/Overdue Accounts, Customer Information, Payment Processing, and Water Repair. The budget for Fiscal Year 2006 shows 56 FTEs, but currently the CSO Group is staffed with 52 FTEs. There are seven sections (Activities) within the CSO Group: Section Administration, Clerical Support, Billing, Collections/Overdue Accounts, Customer Information, Payment Processing, and Emergency Communication. The budget for Fiscal Year 2006 shows 56 FTEs, but currently the CSO Group is staffed with 53 FTEs (56 budgeted positions, minus 5 vacancies, plus four part-time people each working 20 hours). A brief description of each Activity follows.

3.1.1.1 Section Administration

As the name implies, Section Administration has administrative responsibility for the CSO Group. There are three FTEs in Section Administration: one Claims and Insurance Manager, and two Customer Service Supervisors.

Section Administration is responsible for the following items.

- Policy and procedure development and maintenance.
- Revenue protection and enhancement.
- Budget and expenditure control.
- Management reporting.
- Communication and coordination both within the CSO Group and outside.
- Staffing and job assignment.
- Coordination of training and career development.
- Maintenance and administration of the Customer Information System (CIS).

3.1.1.2 Clerical Support

The main support component to the CSO is Clerical Support. Clerical Support consists of two people: an Associate Management Analyst and a Word Processing Operator. Primary responsibilities of Clerical Support are:

- Schedule and monitor work flow.
- Manage purchase and distribution of supplies.
- Assist with personnel administration.
- Assist with policy and procedure development and maintenance.
- Maintain billing rate schedules.
- Coordination of activities and communication between other CSD Groups.

- Typing investigation letters, direct payments, print requisitions, purchase orders, and performance evaluations.
- Responding to analytical requests both internal to the CSO and other CSD Groups.

3.1.1.3 Exception Billing

The name for this Activity is slightly misleading. While the most time-consuming work function is investigation and correction of exception bills, this Activity is responsible for generating and mailing all customer invoices. Exception bills are accounts for which an invoice cannot be produced through the regular meter reading process, including high bills, low bills, and no-read bills.

There are 14 full-time positions allocated to Exception Billing, but currently there are three vacancies. Exception Billing is currently staffed by: one Senior Customer Service Representative, one Information System Analyst II, one Administrative Aide II, and eight Customer Service Representatives. Responsibilities include:

- Accurate and timely production of customer invoices.
- Review and correction of exception bills.
- Responding to more complex billing issues involving larger accounts.
- Managing CIS for meter changes.
- Assisting with adjustments due to billing errors, including back bills, leak adjustments.
- Maintain phone equipment (Aspect) including daily reporting of call center activity and performance.
- Daily distribution of CSO reports.

3.1.1.4 Collections/Overdue Accounts

The Collections/Overdue Accounts section as the name implies is responsible for managing the collection efforts on overdue accounts. The section is also actively involved with account service turn-on and turn-off, coordinating this effort with Field Services.

There are four and one-half positions in the Collections/Overdue Accounts, of which all are filled. These positions include: one-half of a Senior Customer Service Representative's time, and four Customer Service Representatives. Major areas of responsibility include:

- Identifying and maintaining the "past-due" accounts list.
- Identifying accounts and maintaining list of accounts for service disconnection due to lack of payment.
- Coordinating service turn-on and turn-off with Field Services.
- Confirming account payment and coordinating service restoration.
- Managing accounts in bankruptcy up to and through referral to City Treasurer.
- Confirming account cash refunds and initiating the repayment process.
- Supporting Customer Information section as needed.
- Supporting Water Repair as needed.

3.1.1.5 Customer Information

The Customer Information section provides the main point of contact for customer inquiries. The section handles all billing related customer contacts through all media (phone, fax, or e-mail), as well as provides service to "walk-up" customers. The Customer Information section interacts regularly with all other CSO Activity sections and all other CSD Groups.

There are 22 approved positions in Customer Information, and currently two vacancies. The section consists of: three Senior Customer Service Representatives, and 17 Customer Service Representatives. Customer Information has the following responsibilities.

- Respond to customer inquiries through all media channels, including but not limited to:
  - Account initiation or termination.
  - Billing related questions (high, low, or estimates).
  - Initiating account investigations responding to billing questions.
  - Responding to general service related questions.
  - Respond to generic billing related questions (balance due, payment address, date of next bill, etc.).
- Operate the walk-up window responding to inquiries listed above, as well as receiving customer payments.

3.1.1.6 Payment Processing

The Payments Processing section processes check and money order payments received from water and sewer customers. The section also processes payments for other City functions, namely taxes and rental payments on a cost recovery basis.

The section has six budgeted positions (all of which are filled) that include: one Senior Customer Service Representative and five Cashiers. The section's functions include:

- Receiving, opening, and sorting payments
- Processing payments, including agency and Community Service Center payments.
- Producing and mailing invoices, reminder notices, and shut-off notices.
- Depositing payments.
- Resolving misapplication of cash (posting errors).
- Providing payment processing services for other City functions/activities.

3.1.1.7 Water Repair

The Water Repair section is responsible for receiving, and reporting all emergency and repair requests to field repair crews. This section was originally part of the Water Operations Group, but was transferred to the CSO Group about 10 years ago. While not directly involved with the other activities previously described, they do interact with customers. This section also receives assistance from other CSO sections as needed.

There are four and one-half budgeted positions in the Water Repair Section. All of the positions are currently filled. These positions include one-half of a Senior Customer Service Representative's time (This is the same person listed in Collections/Overdue Accounts), and four Customer Service Representatives. The section's responsibilities include:

- Receiving emergency related phone calls.
- Prioritize emergency requests.
- Accurately report situation to field repair.
- Communicate extent of problem(s) to the Water Operations Group.
- Coordinate continuation of service after repairs are completed.

3.1.1.8 Unbilled Revenue Recovery Program

The Unbilled Revenue Recovery Program, while listed as an Activity, is not a dedicated section similar to the previously mentioned activities. This activity stems from the investigation, analysis, and recommendations prepared by Utility Revenue Management Company, Inc. (URM). Through its work, URM identified six revenue enhancement programs: 1) large meter maintenance; 2) consumption pattern evaluation of large meters; 3) consumption pattern evaluation of 1- to 2-inch meters; 4) consumption pattern evaluation of 3/4-inch meters; 5) no sewer account identification; and 6) increased revenue tracking.

While still showing a budget appropriation for FY 2006 of $100,018, there are no direct activities associated with this Activity. This program has been phased out. Since any expenditure was paid from additional revenue, the Unbilled Revenue Recovery Program is not included in HDR's assessment.

3.1.2 Assessment of Current Activities

3.1.2.1 Assessment Approach

- ***Review of Internal Data and Other Sources*** – HDR conducted its assessment through review and analysis of internal documents and data, and other relevant sources related to Customer Service office operation. A variety of documents were reviewed including:
  - Customer Services Representative Desk Reference.
  - City of San Diego Water Department Billing and Collection Policy Manual, April 27, 2000.
  - The City of San Diego Manager's Report: Water Department Billing and Collection Policies, dated May 3, 2000.
  - San Diego Water Department Management Review Study conducted by Black & Veatch, October 2001.
  - Utility Revenue Management, Inc. Report, Document No. 291251, dated November 16, 2001.
  - Water Customer Service Optimization Presentation and Recommendations, December 3, 2004.
  - Organization Financial Status Reports (1999 – 2005).

- CSO Group Performance Metrics (2003 – 2005).
- Various Internal Tracking Reports, including payment processing, customer service call volume, Water Repair calls, collections, and billing.
- U.S. Water Customer Service Costing Model. This model was used by U.S. Water, L.L.C. to determine the cost of providing privatized/outsourced customer service activities.
- Reengineering Call Centers for the Year 2000 – Principles and Processes, by Jeff Hiatt.
- Call Center Best Practices Benchmarking Reports, by Prosci Research.
- Private company and employee submitted proposals to operate a large urban water and sewer department.

- ***Staff Interviews*** – Interviews were conducted with numerous staff from the CSO Group, and included all levels of the Group. These interviews proved invaluable, substantiating HDR's analysis and experience, as well as, identifying appropriate measures of Group operations. The information provided in these interviews was instrumental in development of the ideas for competitive improvements and best management practices.

3.1.2.2 Current Budget and Costs History

Figure 5 presents the Customer Service Office budget performance for FY 2003 through FY 2006. Costs are shown to be fluctuating from year to year, but the Period 13 costs have always been under the budgeted costs.

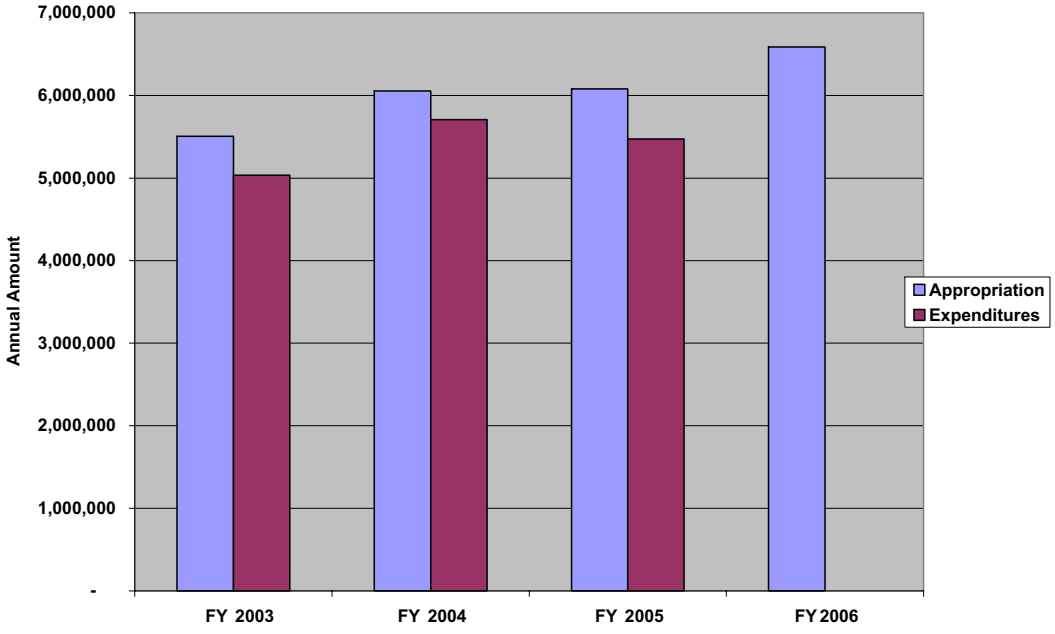

Figure 5 - Customer Service Office Budget Performance (FY 2003-2006)

Figure 6 presents the FY 2006 Customer Service Office cost distribution by organizational sections. The Billing Section is the largest group, representing 28.8 percent of the Group's budget due to the cost of mailing included in this Section's budget.

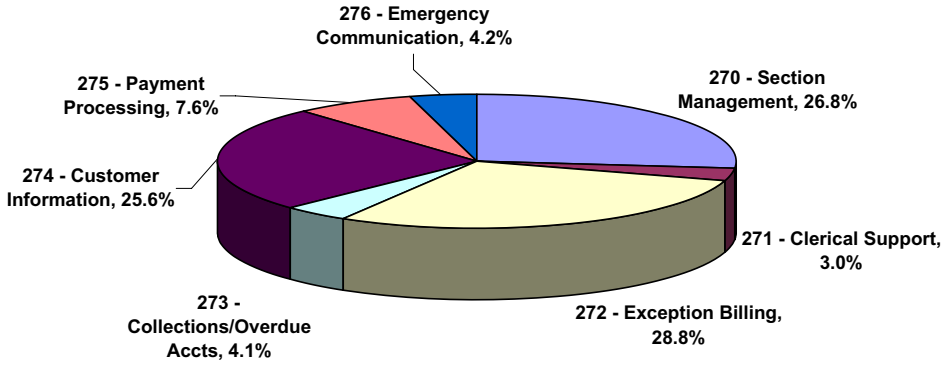

Figure 6 - Customer Service Office Cost Distribution by Section (FY 2006)

Figure 7 presents the FY 2006 budget distribution. Personnel costs and fringe benefits account for 56.0 percent of the total costs. Data Processing Costs represent 22.7 percent of the budget, and Supplies and Services are 21.1 percent.

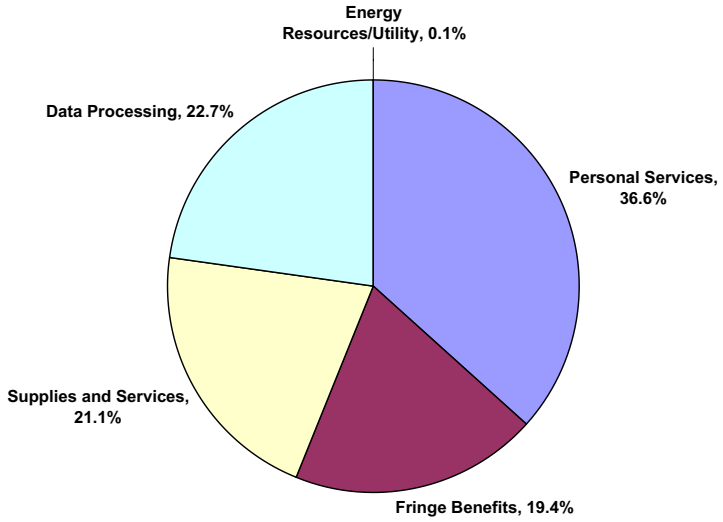

Figure 7 - Customer Support Office Budget Distribution by Object Account (FY 2006)

3.1.2.3 Benchmarking Measures and Comparisons

Benchmarking measures were calculated through data provided by the CSO Group, and comparisons were made to other entities through published information such as QualServe and direct industry experience of the HDR consultants. In terms of comparisons to other entities, comparable measures for each Activity were not discovered, therefore have not been provided.

It is important to note that, while benchmarks provide an interesting measure of relative performance, the better indication of performance might be in the review of CSO Group performance in these measures over a number of years. This comparison will be limited though, as the advent of monthly billing has drastically changed the operational characteristics of the Group. The remainder of this section will present benchmark measures and, when possible, industry comparisons for each Activity.

- ***Section Administration*** – Benchmark measures for this Activity will be calculated over the entire CSO Group. The key measures that will be employed are:

  1. Cost of CSO Group operation per account.
  2. Dollars of revenue collected per dollar spent to collect that revenue.
  3. Number of customer accounts per FTE.

  Before entering into the measures mentioned above, a global review of the CSO Group is appropriate. The Group is currently operating with 51 Full-time employees, and four hourly employees working about 20 hours each—the equivalent of two more full-time employees. The total number of employees in the CSO Group has dropped from 54 people in 2003 to the current 53 FTE level.

  The organization structure, while logical in terms of functional responsibility, is not efficient in terms of staffing for peak demands, or for overall Group accountability. There are too many fragmented Activities with individuals that are not adequately cross-trained to work in other Activities when the need arises. All of the Managers and Supervisors have been in the CSO Group for 14 or more years. Some have private industry experience, but most do not.

  Overall the Group is performing its function of billing and collecting at or above observed industry standards. An obvious measure of this is the fact that the Group executed a move to monthly billing in September 2003 while at the same time decreasing the number of employees—an incredible accomplishment.

  The three measures of performance for the CSO Group show continued improvement over the three-year period. As mentioned previously, this improvement in and of itself is indicative of an organization driven by performance improvement. The fact that this has been achieved while undertaking a major change to monthly billing is even more impressive.

  As discussed in Section 3.6 of this Assessment Report, the Customer Support Division compares favorably with other combined water and wastewater customer service agencies by having a total customer service cost per account in the top quartile of the agencies participating in the national benchmarking study. The results presented below differ from those presented earlier as the costs included here are for the CSO Group only.

  An interesting measure presented in the following Table 6, and one that is not published, is the revenue to cost ratio. This ratio represents the dollars of revenue collected divided by

the CSO Group cost to collect that revenue, as provided in the Daily Unit Report. As seen by the table below, this number has fluctuated over the three-year period, but showed an impressive gain in 2005. This gain in 2005 is attributed to the fact that the CSD is in its second full year of monthly billing. While the CSD instituted monthly billing in 2004, the CSO Group experienced increased call volume, and an increase in the number of investigations as a result of this billing change. The added cost to deal with this change lowered the ratio in 2004.

Table 6
Section Administration Benchmark Measures

Measure	2003	2004	2005
Cost/Account	$19.06	$21.45	$20.48
Revenue/Cost Ratio	81.60	78.28	84.05
Accounts/FTE	4,892	5,023	5,043

The calculation of accounts/FTE has been steady over the last two years. This number falls in the lower range experienced in private operation of municipal utility customer service and billing. Direct experience of HDR personnel showed a range of 4,000 to 7,000 accounts per FTE.

- ***Clerical Support***– The performance of this section is measured in terms of the overall CSO Group, similar to Section Administration. Therefore, there are no direct measures reported for Clerical Support.

- ***Exception Billing*** – The measures for Exception Billing are:

  1. Cost per bill produced (including mailing).
  2. Number of exception bills per total bills produced.
  3. Days to produce bills after meter reading is completed.

  As with the overall Group, Exception Billing has showed improvement over the last three years as shown in Table 7. The cost/bill produced has dropped by almost 30 percent. This improvement is directly related to the change to monthly billing. Even though the cost for this Activity has increased since 2003, the number of bills produced has almost doubled.

  An interesting result appears in the calculation of exception bills to total bills produced. Contrary to the indication provided by CSD employees that the number of billing exceptions has increased, there has actually been improvement in this area. The number of exception bills has decreased from 5.9 percent in 2003 to 5.3 percent in 2005. But even with this improvement, the number is still high compared to more acceptable levels of 2 to 3 percent.

  Days from meter reading to billing is not strictly kept, but review of billing records indicates that it has remained constant. While two days appears satisfactory, there is a

concern in the lack of review prior to calculating and mailing bills. Once meter readings are received from Field Services and downloaded into the CIS, bills are automatically calculated. There is no formal review or parity check to determine if the correct number of accounts or consumption totals for these accounts are reasonable and consistent.

Table 7
Exception Billing Benchmark Measures

Measure	2003	2004	2005
Cost/Bill Produced	$0.71	$0.60	$0.51
Exception Bills/Total Bills	5.9%	5.7%	5.3%
Days from Reading to Billing	2 days	2 days	2 days

- ***Collections/Overdue Accounts*** – Collections/Overdue Accounts measures are:

1. Percentage of uncollected revenue past 90 days per total billing.
2. Number of accounts disconnected per total accounts.
3. Percentage of uncollected revenue per total billing.
4. Percentage of revenue collected per total billing.

The four measures presented for the Collections/Overdue Accounts Activity and shown in Table 8 indicates that the section is performing above standards. The increase from 2004 to 2005 in the percentage of uncollected revenue past 90 days per total billing is somewhat contradictory to the advent of monthly billing. It is normal for this number to decrease. What is also interesting to note is that the percentage of accounts disconnected is also increasing. But even with these increases, the section is operating above industry standards.

Collection rates over 98 percent are considered excellent. The table below shows that the CSO Group has been above that number for each of the last three years. In 2003 collections exceeded billing. This is usually indicative of a more aggressive collection campaign to recover revenue from prior periods. Account write-offs have also been significantly lower than industry average, which is in the range of 0.5 percent to 1.0 percent. The success of the Group in this area is most likely due to the active and diligent disconnection program that is adhered to by the CSD.

Table 8
Collections/Overdue Accounts Benchmark Measures

Measure	2003	2004	2005
Percent Past 90/Billing	0.40%	0.35%	0.56%
Accts Dis./Total	7.9%	8.1%	9.2%
Percent Write-off/Billing	0.11%	0.11%	0.09%
Percent Collected/Billing	103.1%	99.8%	99.7%

- ***Customer Information*** – Measures currently captured for Customer Information, shown in Table 9, concentrate on volume of calls handled. While these can be worthwhile measures, two additional measures that will capture quality of performance are: number of calls handled with one phone call (one-call resolution), and the time to resolve the issue. The currently reported measures for Customer Information are:

  1. Call volume per FTE per day.
  2. Percentage of calls abandoned.
  3. Percentage of calls answered within 30 seconds.
  4. Percentage of CSR availability.

  The measures currently calculated for Customer Information are somewhat contradictory, and indicate some decline in performance. The rate of abandoned calls along with the percentage of calls answered in 30 seconds has increased. It is logical that, if the time to answer calls increases, the rate of abandonment would also increase. The concern is why these numbers are increasing. One explanation might be that CSRs are spending more time on each phone call.

  While this apparent decline in Customer Information performance might seem negative, it is not known if there has been an improvement in one-call resolution, or time to resolve a customer request. In other words, as previously mentioned, the section may be doing a better job resolving customer requests without the need for further investigation. More investigation of this Section will be determined through the PIT process prior to determining appropriate performance measures.

  Reviewing the results of the calculations of calls per FTE per day combined with CSR availability seems to support the theory that representatives are taking more time per phone call. There is still a concern that CSR availability is lower than what is considered acceptable. CSR availability is calculated by adding the time a CSR is waiting for a call, plus the time actually spent on the call, including wrap-up time. CSR availability based on 2005 experience indicates that CSR's are available about half of the time while on the job. This result may not be indicative of actual availability as it does not capture the fact that while in the office, CSR's may be performing work related activities away from the phones, but are available to respond as needed.

  The percentage of calls answered within 30 seconds has shown a significant decline over the last two years. Given the decrease associated with the previously discussed measures, this result is not surprising. Again, the concern is why performance in this measure is decreasing. One explanation might be the change to monthly billing, which has resulted in significant increases in phone calls soon after bills have been received. The peak demand created at this time cannot be handled with the current staff assigned to Customer Information.

Table 9
Customer Information Benchmark Measures

Measure	2003	2004	2005
Calls/FTE/Day	59	84	71
Calls per Year	332,089	378,738	351,119
Percent Calls Abandoned	2%	3%	3%
Percent Calls in 30 sec.	91%	76%	73%
Percent CSR Availability	54%	48%	53%

- ***Payment Processing*** – Payment Processing benchmark measures reported are:

  1. Transactions processed per FTE.
  2. Cost to process a single transaction.
  3. Percent of payments deposited in one day.

  The Payment Processing section is doing a good job, if not close to best-in-class. What is most impressive is that the section has increased the number of payments processed by over 50 percent with the addition of only one person.

  The cost per transaction appears to be in the middle range compared to private companies that could perform this function. Preliminary research indicates that transaction costs for private companies providing this service range from $0.10 to $0.20 per transaction.

  Time to deposit is measured in terms of the percentage of payments that are deposited the day they are received. This number declined significantly in 2004 from 2003,as shown in Table 10, but was directly related to the advent of monthly billing. What is more important is the increase in 2005 back to premonthly billing levels. But, regardless of this success, the section should still be achieving a higher percentage of one-day deposits. As mentioned in the next report section, the addition or upgrade of the remittance processing machine will allow the section to achieve numbers much closer to 100 percent.

Table 10
Payment Processing Benchmark Measures

Measure	2003	2004	2005
Transactions/FTE	336,984	562,213	511,208
Cost/Transaction	$0.18	$0.15	$0.17
Percent Deposited in One Day	94%	76%	92%

- ***Water Repair*** – The measures for Water Repair are similar to Customer Information. In this case, HDR feels that measuring the volume of calls handled is the important metric. One missing measurement is the time it takes to report the incident to the field. Considering the

emergency nature of these calls, time is of the essence in getting this information to the appropriate responding unit. The benchmark measures for Water Repair are:

1. Percentage of calls abandoned
2. Percentage of calls answered within 30 seconds
3. Percentage of CSR availability

The section has shown incredible improvement in the percentage of abandoned calls since 2003, as shown in Table 11. There is still a concern that any emergency calls should be abandoned. The way to measure this is to investigate the time the customer stays on the line before disconnecting.

The percentage of calls answered within 30 seconds is too low. Considering the high percentage of CSR availability, it should be expected that calls answered in 30 seconds would be higher. The reason this expectation is not achieved is most likely due to the peaking of emergency calls. Once an emergency event occurs, all customers affected call in close order. Staffing on a full-time basis to handle these peaks would not be prudent. Currently, the Customer Information section and other sections within the CSO Group will assist during these peak periods. But this assistance does not occur quickly enough to improve the percentage of calls answered within 30 seconds.

Table 11
Water Repair Benchmark Measures

Measure	2003	2004	2005
Percent Calls Abandoned	12%	1%	1%
Percent Calls within 30 sec.	85%	80%	82%
Percent CSR Availability	73%	67%	71%

3.1.3 Key Findings

In general terms, the CSO Group should be working towards the objectives of billing for all allowed services, and collecting in a timely and efficient manner for those services provided. Every section within the CSO Group should be working towards this objective. The best practices and opportunities for change suggested below all drive towards these objectives.

Best practices and opportunity for change will be presented for each Activity. The only exception will be Clerical support which will be combined with Section Administration. These strategy suggestions are to be used by the Performance Improvement Team (PIT) to first review and then decide whether they are appropriate for further consideration or if they should be replaced by an idea that emerges from PIT discussions.

3.1.3.1 Section Administration and Clerical Support

- ***Administration and Clerical Improvement Strategy 1***
  - **Benchmark/Best Practice**
    More "fluid" job responsibility for Customer Service Representatives (CSRs). CSRs should be multi-disciplined and handle most aspects of customer service, namely billing, collections, and customer information.
  - **Observation of San Diego's Practice**
    Currently the CSO Group has four sections handling these activities. While this separation of duties might appear to make people more accountable, it tends to make the entire Group less productive, as there is minimal opportunity to dedicate resources where and when they are most needed.
  - **Suggested Improvement**
    Combine Exception Billing, Collections/Overdue Accounts, Customer Information, and Water Repair into one Activity.
  - **Anticipated Benefit or Competitive Impact**
    Implementing this practice should lead to more efficient staffing and subsequently better customer service by shifting CSRs to respond to peak demands as they occur.
- ***Administration and Clerical Improvement Strategy 2***
  - **Benchmark/Best Practice**
    More frequent (more days) and longer customer service hours, including Saturdays and some holidays.
  - **Observation of San Diego's Practice**
    Customer Service is available Monday through Friday, 7:30 a.m. through 5:00 p.m., with no Saturday or holiday hours. Water Repair (Emergency Communication) hours of operation are 7:00 a.m. to 7:00 p.m. Monday through Friday.
  - **Suggested Improvement**
    Extend hours and days of operation.
  - **Anticipated Benefit or Competitive Impact**
    Providing more opportunity for customer contact will improve service, and subsequently lead to better collection performance.
- ***Administration and Clerical Improvement Strategy 3***
  - **Benchmark/Best Practice**
    Allow CSRs to respond to most customer requests without obtaining prior supervisor approval
  - **Observation of San Diego's Practice**
    CSRs are very restricted in ability to resolve customer requests without prior approval

- **Suggested Improvement**
  Allow CSRs to grant payment extensions and deferred payments. CSRs should also be able to make billing adjustments for proven meter reading related items such as over- and under-estimated bills, and high bills that are proven incorrect after investigation.
- **Anticipated Benefit or Competitive Impact**
  Response to customer will be accelerated, improving collections and customer satisfaction. This change will drive towards one-call resolution.

- ***Administration and Clerical Improvement Strategy 4***
  - **Benchmark/Best Practice**
    Flexible work hours.
  - **Observation of San Diego's Practice**
    The CSO Group has very rigid hours. This practice leads to a lower level of employee satisfaction.
  - **Suggested Improvement**
    Allow for more flex-time. This can and should include Saturdays. This improvement would almost have to be implemented if Administration and Clerical Improvement Strategy 2 is adopted.
  - **Anticipated Benefit or Competitive Impact**
    The internal benefit is tough to estimate, but should lead to higher employee satisfaction, which should lead to better customer service.

3.1.3.2 Exception Billing

- ***Exception Billing Improvement Strategy 1***
  - **Benchmark/Best Practice**
    Best practice is to have meter reading and billing in sync. Bills are not sent out en-masse with estimated readings.
  - **Observation of San Diego's Practice**
    San Diego reads every other month, but sends out bills every month. The estimated reading causes confusion and perhaps even distrust with the customer, and leads to excessive work for the CSO.
  - **Suggested Improvement**
    Continue to bill every month; bill for two months of fixed charges one month, and two months consumption the next.
  - **Anticipated Benefit or Competitive Impact**
    Fewer customer phone calls, less work in billing adjustments, and improved customer confidence in San Diego Water.

- ***Exception Billing Improvement Strategy 2***

  - **Benchmark/Best Practice**
    The industry best practice is to increase electronic bill presentment and payment (EBPP). Forecasts indicate that over 50 million households (approximately half of all U.S. households) will receive one or more electronic bills in 2006. Studies indicate significant savings and increased collections when using EBPP.

  - **Observation of San Diego's Practice**
    San Diego is currently transmitting twenty percent of its bills electronically.

  - **Suggested Improvement**
    It is suggested that San Diego increase the number of bills sent electronically. This can be accomplished by offering an initial incentive or perhaps a small credit for electing EBPP.

  - **Anticipated Benefit or Competitive Impact**
    Encouraging and increasing EBPP will allow San Diego to keep pace with the industry, enhancing a service that customers want, while reducing operating costs and improving collections.

3.1.3.3 Collections /Overdue Accounts

- ***Collections/Overdue Accounts Improvement Strategy 1***

  - **Benchmark/Best Practice**
    An account is always assigned to a responsible party. Customer accounts are not left upon moving/vacating a property.

  - **Observation of San Diego's Practice**
    A customer's name is removed from the account upon notifying Customer Information that they are moving and, in many cases, no responsible party is listed on the account.

  - **Suggested Improvement**
    Always have a responsible party listed on every account. If it is a property sale, place the new homeowner on the account the day of settlement. For tenants, place the landlord's name on the account unless the landlord provides a new tenant's name.

  - **Anticipated Benefit or Competitive Impact**
    Fewer billing adjustments, and improved confidence in customer billing will result through implementation of this process.

3.1.3.4 Customer Information

- ***Customer Information Improvement Strategy 1***

  - **Benchmark/Best Practice**
    The trend in the industry is towards one-call resolution of customer requests. Resolving the issue in one call speeds the resolution and ultimately reduces the cost of resolving the issue by having fewer people involved in the process.

- **Observation of San Diego's Practice**
  Customer Information is being driven by the goal of call quantity, and not call quality. The measures in place focus on getting to and terminating the call quickly.
- **Suggested Improvement**
  Customer Information should drive towards one-call resolution. This benchmark cannot be implemented without implementing Administration and Clerical Improvement Strategy 3.
- **Anticipated Benefit or Competitive Impact**
  The anticipated benefit related to this improvement is reduced need for Field Service investigations, and more efficient customer service, leading to quicker receipt of payments.

- ***Customer Information Improvement Strategy 2***
  - **Benchmark/Best Practice**
    The best practice in customer request response is to avoid or eliminate Field Services calls. These calls are expensive and increase the time of response and ultimate resolution of customer requests.
  - **Observation of San Diego's Practice**
    The program of call quantity tends to push CSRs to send requests to Field Service for investigation. While this may not be large in comparison to the number of phone calls received, there is significant added cost for a Field Services call.
  - **Suggested Improvement**
    Encourage resolution of the request over the phone. This can be accomplished by rewarding CSRs who successfully resolve issues without requesting Field Services investigation all while maintaining the level of revenue collected by the CSO Group.
  - **Anticipated Benefit or Competitive Impact**
    The impact of this improvement will be lower Field Services operating expense, and improved customer responsiveness.

3.1.3.5 Payment Processing

- ***Payment Processing Improvement Strategy 1***
  - **Benchmark/Best Practice**
    The best practice is to deposit payments the day they are received.
  - **Observation of San Diego's Practice**
    The Payment Processing section deposits approximately 90 percent of payments on the day they are received. One bottleneck is with the remittance processing machine. This machine is dated and slower than newer equipment. Also when the machine fails, there is no backup.

- **Suggested Improvement**
  Improve one-day processing by upgrading or purchasing an additional remittance processor.
- **Anticipated Benefit or Competitive Impact**
  The benefit associated with this improvement is improved cash flow, and higher interest on deposits.

3.1.3.6 Water Repair

- ***Water Repair Improvement Strategy 1***
  - **Benchmark/Best Practice**
    Respond to all emergency calls with no call abandonment.
  - **Observation of San Diego's Practice**
    Currently there are abandoned calls that cannot be explained based on the high percentage of CSR availability.
  - **Suggested Improvement**
    Immediately act to emergency situations by more quickly shifting other CSO Group CSR's to emergency requests. Response to emergency situations should be the number one priority, but will require some level of prioritization when these calls conflict with periods of Customer Service peak demand.
  - **Anticipated Benefit or Competitive Impact**
    More rapid assessment of, and response to emergency situations that will increase customer satisfaction and confidence in San Diego Water.

3.1.4 Competitive Cost of CSO Group

Table 12, below, summarizes the budget and competitive costs of the CSO Group. The competitive costs were developed based on a review of budget and costs history over the past three years. The personnel and fringe benefits costs are based on the FY 2006 appropriation for each Activity. The competitive costs for non-personnel expenses were largely calculated based on a three-year averaging of costs history adjusted to FY 2006 dollars, with a few exceptions. For major cost items, HDR applied best practices and innovative performance improvement ideas to set the competitive level, where appropriate.

The major difference between the FY 2006 Appropriation and the Competitive Level lies in elimination of the five budgeted positions that are not currently filled. HDR does not see the need to fill these positions because the CSO is adequately accomplishing its tasks with the current level of FTE's. When the CIS implementation effort takes place, the greatest labor needs will be IT and Data Analyst tasks and should not require additional CSR's. As the Employee Bid is developed, the actual cost of the CIS and the long term benefits will need to be factored in based on the CIS consultant's analysis. Another significant difference between the FY 2006 Appropriation and the Competitive Level is the reduction in Outlay, reducing money budgeted for the Revenue Recovery Program, which has been reported as being complete.

An additional $275,000 could be eliminated from Supplies and Services. This money represents a fee for service to help pay the cost of Community Service Center customer service activities. In addition, there may be further FTE reductions with adoption of some of the strategies suggested in this Assessment Report, PIT recommendations, and CIS implementation, but these can not be estimated at this time.

Table 12
Competitive Cost – Customer Service Office

Description	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
Personal Services	2,412,624	2,124,200	12.0%	$ 288,400
Fringe Benefits	1,280,029	1,173,100	8.4%	$ 106,900
Supplies and Services	1,391,472	1,529,400	-9.9%	$ (137,900)
Data Processing	1,496,040	1,351,500	9.7%	$ 144,500
Energy Resources/Utility	5,886	13,000	-120.9%	$ (7,100)
Outlay		4,600		$ (4,600)
Total	6,586,051	6,195,800	5.9%	$ 390,300

3.2 FIELD SERVICES AND INVESTIGATIONS

3.2.1 Description of Field Services and Investigations Group

The Field Services and Investigations Section is the primary field contact group with the Department's customers. The Section is comprised of five distinct activities with 48 budgeted positions. One of these positions is working full time in the development of the AMR program. Since February 2001, while the Section has reduced full-time staffing by more than 10 percent, productivity has not diminished and in some areas has improved.

3.2.1.1 Meter Reading

The Meter Reading team is assigned the task of reading approximately 270,000 monthly and bi-monthly accounts, including confined space entry in some of the meter vaults. In addition, Meter Readers report a variety of field conditions and conduct valuable field surveys. There are 20 budgeted positions in the Meter Reading section. (one Supervisor, two Supervising Meter Readers, and 17 Meter Readers). The full time Meter Reading team is supplemented from a group of hourly meter readers who serve on an on-call basis to meet work load requirements and for temporary replacement of injured workers. The key functions of the Meter Reading section are listed below:

- Read water meters on predetermined route and cycle schedule.
- Re-evaluate meter routes using rerouting software.

3.2.1.2 Service Restoration/Turn-Off

The Restoration Crew is a rapid response unit for turn-on and turn-off water service. Turn-offs are generally ordered by the Customer Service Office for non-payment. The Restoration unit's dedication is a primary reason for the Department's low delinquency rate and its ability to achieve all ordered turn-ons within 24 hours. There are 10.5 budgeted positions in the Service Restoration section. The key functions of the Service Restoration Section are listed below:

- Shut off meters upon non-payment
- Restore water service when delinquent payments are made.
- Notify residences to initiate water service through posting 'No Sign' notifications.
- Lock off meter failing to comply with 'No Sign' notifications.

3.2.1.3 Field Investigations

The Field Investigations team conducts both customer and Department generated investigations for a variety of purposes. These include, but are not limited to: high and low water usage; customer complaints and requests; leak adjustment requests; and 'what served' investigations. There are 5.5 budgeted positions in the Field Investigations Section and their key functions are listed below:

- Response to customer requests concerning billing accuracy.
- Investigation of high bill/low bills identified by Customer Service Office.
- Investigate billing issues with Commercial Accounts.

3.2.1.4 Sewer Classification

The Sewer Classification staff investigates commercial water uses to determine the appropriate sewer rate. The leader of the group is also the Installation Order System coordinator and interface with the Development Services Department. There are five budgeted positions in the Sewer Classification section. The key functions of the Sewer Classification section are listed below:

- Determine the appropriate billing rate classification for non-residential customer accounts.
- Inspection and investigation of new non-residential services.
- Investigate non-residential billing inquiries.
- Manage the billing Appeals Process.
- Verification of Installation Order System documentation

3.2.1.5 Code Compliance

The Code Enforcement staff investigates unauthorized water use and other under-billing/under-registration. They also enforce compliance with State and City of San Diego codes related to

inspection and maintenance of backflow prevention devices. Among its remedies are Administrative Citations and Notices of Violations with civil penalties and referral to the City Attorney or District Attorney for criminal and/or civil prosecution. Due to its work in battling theft on construction sites, the team is regularly requested for presentations at the Western States Utility Theft Association. There are five budgeted positions plus one supplemental position in the Code Compliance section. The key functions of the Code Compliance section are listed below:

- Monitor construction sites.
- Investigate new reads or questionable bills.
- Inspect for backflow compliance.
- Inspect for fire service requirements.
- Obtain PC 832 certifications.
- Issue misdemeanor or administrative violation citations.
- Issue Notice of Violations.
- Prepare cases for City Attorney for civil penalties.

Looking into the future, Field Services is focusing on improving customer service and reducing cost by moving into automated meter reading (AMR) and wireless access to the customer information system from the field.

3.2.2 Assessment of Current Activities

3.2.2.1 Reviewed Existing Data

A variety of documents (provided through the HDR Information Request) were reviewed regarding facilities maintenance for water utilities. Key documents were the data provided by the Field Services and Investigations section in accordance with HDR's Scope of Services. Several key documents, including the Black and Veatch (B&V) *Management Review* (October 2001); Procurement Documents from the Sewerage & Water Board of New Orleans, Managed Competition (2001); AWWA *Opflow* (February 2001); and *Benchmarking Meter Reading Performance: Understand Your Improvement Opportunity*, by Christine Kozlosky, Vice President, Ascent Group, Inc, July 2005, were reviewed as part of this analysis. This data provided metrics and best-management practice benchmarks.

3.2.2.2 Interviewed Key Staff

Interviews were conducted with numerous staff from the Field Services and Investigations Section, who were very forthcoming with information regarding the operation. The information provided in these interviews was instrumental in development of the ideas for competitive improvements and best management practices.

3.2.2.3 Identified Current Budgets and Costs History

Figure 8 presents the Field Services and Investigations budget performance for FY 2003 through FY 2006. Costs are shown to be increasing from year to year, and the Period 13 costs have always been under the budgeted costs. The decrease in the appropriation for FY 2006 from the appropriation in FY 2005 is due to an appropriation for $269,790 for unclassified professional services that was budgeted in FY 2005, but not in FY 2006

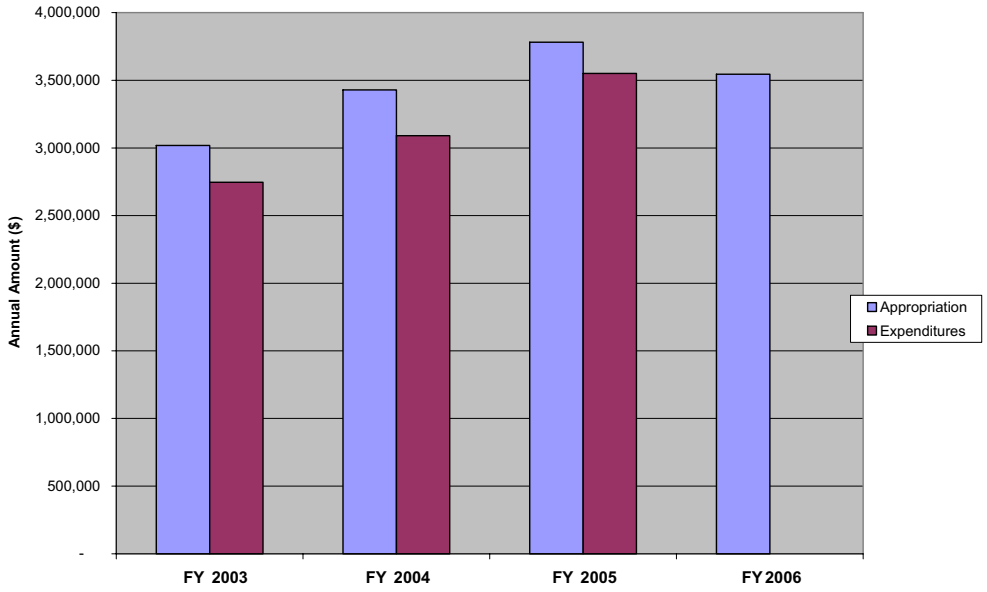

Figure 8 - Field Services and Investigations Budget Performance (FY 2003-2006)

Figure 9 presents the FY 2006 Field Services and Investigations cost distribution by organizational sections. Meter Reading is the largest group in cost, representing 38.1 percent of the Activity Group's budget.

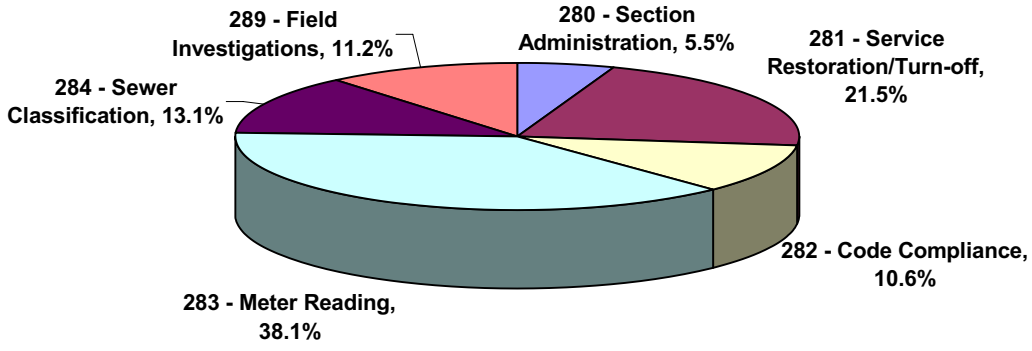

Figure 9 - Field Services and Investigations Cost Distribution by Section (FY 2006)

Figure 10 presents the FY 2006 budget distribution. Personnel costs and fringe benefits account for 87.6 percent of the total costs. All remaining costs represent only 12.4 percent of the budget.

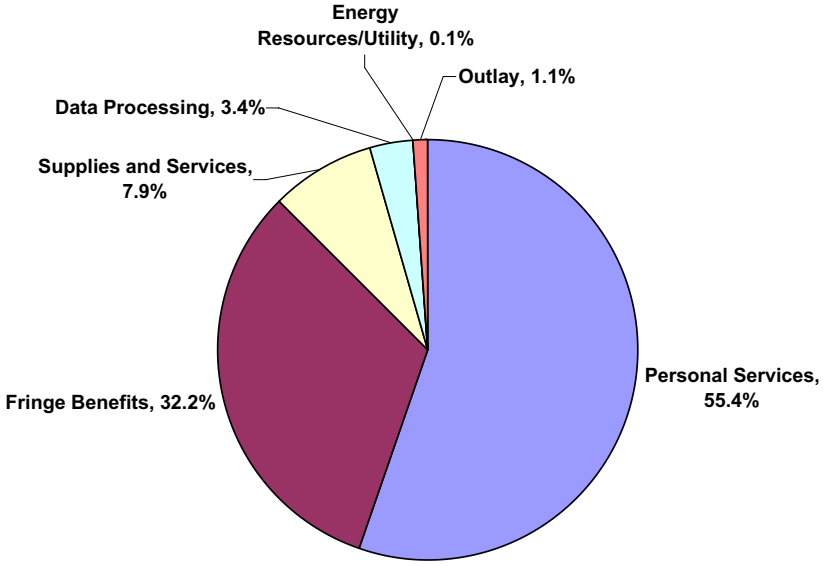

Figure 10 - Field Services and Investigations Budget Distribution by Object Account (FY 2006)

3.2.2.4 Reviewed Best Practices and Benchmarking Information

The Field Services and Investigations section provided data for comparison and comparative analysis. The following paragraphs provide that analysis by listing the performance measure and presenting the Field Services and Investigations Section's results, followed by a discussion of the review and analysis of the data for that performance indicator.

HDR obtained findings from a benchmarking study by Ascent Group, Inc. and will use this study to assess performance in meter reading. The Ascent Group, Inc. is a management consulting firm that specializes in customer service operations and improvement, performance benchmarking, competitive benchmarking, work management, and market research. The Ascent Group conducted research during the first quarter of 2005 to better understand how different utilities are optimizing practices and utilizing technology to improve meter reading efficiency and effectiveness while reducing operating costs. They asked companies to share strategies and experiences to identify the practices that lead to higher productivity, reduced costs, and increased performance.

This Assessment Report compares Field Services and Investigations Meter Reading performance against the Ascent Group's database of meter reading benchmark metrics and practices. The Ascent Group data provides benchmarking information in four areas: percentage of meter reading errors, cost per meter read, percent of skipped meters, and number of meters read per employee. HDR found that, in one category, Field Services' meter readers outperform

even the "best performers," and Field Services' outperforms industry averages in three of the four categories as discussed below.

3.2.2.5 Meter Reading Benchmarking Measures

- ***Cost Per Meter Read*** – The cost per meter read is the average cost to read one meter one time by the Meter Reading unit. Table 13 presents the Customer Service Division's results for recent fiscal years. This measure is computed by dividing the period 13 expenditures and encumbrances by the sum of the monthly and bi-monthly meters read each month in the fiscal year.

Table 13
Cost Per Meter Read

FY 2003	FY 2004	FY 2005	FY 2006 (Budget)
$ 0.66	$ 0.80	$ 0.95	$ 0.84

The Black and Veatch (B&V) *Management Review* (October 2001) stated that the Field Services meter reading unit's performance was "found to [be] comparable to typical utilities the size of San Diego. Meter readers were found to read an average of 470 meters per day and the direct cost of meter reading is reported to be $0.54 per read with additional costs for supervision and administration of $0.19 for a total of $0.73 per read. Those values fall in the middle of the range of municipal utilities." B&V reported a range of $0.30 to $1.25 (in 2001).

In addition, San Diego's cost per meter read costs more than the "best performers" and industry average. San Diego's cost per meter read is $0.80 (FY 2004), compared to the best performer average of $0.63 and industry average of $0.70, as reported in the national Ascent group metering benchmarking study. San Diego's high number of meters in vaults requiring confined space entry, and some utilities also simultaneously reading electric and or gas meters may adversely impact the San Diego's comparison on this measure. Also, the cost of living in the San Diego metropolitan area adversely impacts San Diego when compared on a cost basis with national surveys.

- ***FTE Per Account*** – The Full Time Equivalents per account is the total number of personnel assigned to the Meter Reading unit per 1,000 accounts. The Meter Reading Unit and Investigations Unit consists of 20 budgeted full-time meter readers, plus 7 hourly meter readers, plus 5.5 in Field Investigations, for a total of 32.5 staff actively providing meter reading services. The performance measure equates to 0.122 FTE/1,000 accounts. Data from the New Orleans Managed Competition, discussed earlier in this Assessment Report, indicated ratios of 0.336 and 0.411 for the two bidders. The New Orleans Bid required monthly reading as compared to San Diego's bi-monthly billing. If the San Diego FTE/1,000 accounts were doubled to 0.244, the value would still be less than the staffing levels bid in that competitive procurement.

- ***Meters Read Per Meter Reader Staff Per Day*** – This measure represents the average number of meters read by the Meter Readers. The data reported by Field Services and Investigations is shown in Table 14.

Table 14
Meter Reads Per Day

Type of Meter Installation	Reads /Day	Comments
Bi-monthly (residential)	458	Based on 40 work-day reading cycle averaging approx 14 routes per day
Monthly (commercial)	217	Reads over 19 work-days (average is 190, as Navy housing is excluded)
Vault (confined space)	108	Reads per day over 10 work days

The number of meters read per day per employee is better than industry average, 458 for San Diego compared to 319 for the rest of the industry, while best performers read 609 meters per employee per month as reported in the Ascent Group study. When costs are not the basis of comparison, San Diego generally compares favorably to participants of national benchmarking studies.

- ***Meter Reading Errors Per 1,000 Meters*** – This measure represents the number of meter reading errors per 1,000 meters read per month. Field Services began tracking this measure in June 2005; therefore, data are limited. The data reported by Field Services and Investigations are shown in Table 15.

Table 15
Meter Reading Errors Per 1,000 Meters Read

	June 2005	July 2005	August 2005
Total Misreads	274	232	98
Errors per 1000 meters	2.02	1.81	0.75

Errors per 1,000 meters read documents an extremely important tracking measure since the cost to investigate and correct for misreads is significant. For example, if the monthly Field Investigation budget was applied solely to these misreads, the cost to resolve these errors is $165 per misread meter. Therefore, it is important to reduce misreads of meters, since the cost to read a meter the first time is only $0.84 per read. Field Services and Investigations also provided data on the number of misreads by meter reader. This data shows that 80 percent of the misreads can be attributed to six meter readers, or 26 percent of the meter reader staff. Many meter readers consistently complete their routes with no misreads; therefore, a system for training, performance checking, incentives, and/or discipline of meter readers may cause improvement in this area.

The study found that San Diego's meter reading errors are significantly lower than that of "best performers" and industry average. San Diego's meter reading errors for total meters read is 0.75 percent in August 2005 compared to 1.0 percent for best performers and 3.0 percent for industry average reported by the Ascent Group study.

- ***Skipped Meters*** – The skipped meters measure is the percentage of meter reads that are skipped in the field compared to the total reads. Results for Skipped Meters for San Diego are 0.963 percent for August 2005. The results from the Ascent Group study found 0.4 percent skipped for best performers and 5.5 percent skipped for the industry average. The Field Services Section should develop a comparable performance measure for skipped meters adjusting for duplicated accounts and removed meters.

3.2.2.6 Meter Reading Best Practices

Not only is it critical to effectively and efficiently read meters on schedule, the meter reader plays an important community relations role—the "gatekeeper" who looks for leaks, problems, hazards, safety issues, and serves as a neighborhood watch. For many customers, the meter reader is often the only utility employee ever seen. These customer touch-points form the basis of customer opinion.

The following is an inventory of Best Practices documented for the Meter Reading function:

- Best performing utilities use AMR strategically to address inaccessible meters, unsafe meter locations, high turnover premises, and other high-read cost meters. Seventy percent of the Ascent Group study participants use AMR or a similar technology to remotely read meters in difficult access locations. While a system-wide implementation may not be feasible, a strategic deployment to address problem meters can be very effective.

- Best performing utilities continually optimize routes to maximize productivity and reduce costs. The "best performers" identified in the Ascent Group study (above average performance—low cost, high productivity, high service) reported continuous or frequent rerouting and route optimization to maximize productivity and reduce costs. Companies with AMR implementations also stressed the importance of route consolidation and optimization throughout the transition to automation. Utilities can gain 10 to 20 percent efficiency on a system-wide rerouting. Rerouting is critical in areas of high growth, after an acquisition or merger, and during the transition to AMR.

- Best performing utilities implement clear and concise measures of meter reader performance—give employees a clear idea of job expectations and performance. The "best performers" identified in this study were deliberate in their measurement of employee, group, and departmental performance—cost, service, and productivity. Best performers reported providing employees with a clear idea of job expectations and performance. Performance measures will change in the transition to AMR: route expectations change, employees may be performing other duties in addition to reading meters, emphasis will be shifting to other priorities. Management expectations and measures should change accordingly.

- Best performing utilities encourage the right behavior through incentive programs and/or informal or formal reward programs. Formal "cash bonus" incentives are the most popular reward—meter readers have the opportunity to earn bonuses based on superior performance. Non-cash incentives are the next popular—meter readers earn gift certificates, dinners, parking spots, trophies, and other non-cash items for superior performance

- Focus on motivating the right behavior and encouraging superior performance in the right areas. Incentives and rewards can become stale with time, be sure to rotate emphasis on various measures to keep interest in the program. Also make sure the rewards are fair and worth the extra effort—ask employees for suggestions on types of rewards. Involvement is key to a successful reward program.

- Best performing utilities train and equip meter readers—provide employees with the tools, safety equipment, clothing, and training to do the job right the first time. Effective classroom and on-the-job training improves overall accuracy. Analysis shows a direct correlation between increased training, especially on-the-job-training (OJT), and reduced errors, up to a point. Companies reporting shorter than average training programs tended to have higher error rates, skip rates, and increased unit cost.

- Companies reporting significant improvement in the reduction of chronically inaccessible meters have established a dedicated working group or organization to focus communication and resolution efforts. Several have established special desks or "no access" committees to tackle chronic access issues. These working groups serve to establish and communicate policy, enforce policy, and provide follow-through until resolution. Creation of a special working group or desk to concentrate and focus your difficult-to-access meter effort will encourage more consistent enforcement and resolution.

- Key success factors for resolving difficult-to-access meters:
  - AMR or remotely read meters.
  - Dedicating resources to address chronic issues can significantly reduce access problems.
  - Performance metrics that hold meter readers accountable for getting the reading.
  - Proactive communications with customer.
  - Employee performance in best performing companies is measured and reported clearly and concisely—employees have a clear idea of job expectations and performance.

3.2.2.7 Field Investigations, Service Restoration, and Code Compliance Benchmarking Measures

- ***Percentage Field Investigations Completed Within Five Days*** – This measure documents the ratio of the number of field investigation work requests received vs. the number completed within five working days. Table 16 presents the data for this measure for the period FY 2003 through FY 2005.

Table 16
Percentage of Field Investigations Completed Within Five Days

Fiscal Year	Accounting Period												
	1	2	3	4	5	6	7	8	9	10	11	12	13
2003	80%	70%	90%	80%	85%	80%	80%	70%	75%	75%	85%	70%	NDA
2004	90%	80%	40%	75%	75%	60%	25%	40%	85%	90%	90%	90%	NDA
2005	85%	80%	100%	75%	75%	75%	50%	25%	60%	85%	85%	81%	80%

* NDA No Data Available

The time to resolve customer service issues is an important factor for Customer Satisfaction, but it is also an indicator of success in the collection of bills in dispute. For San Diego, the number of referrals to Field Investigations may be due in part to provision of estimated billing which tends to cause more customer inquiries. The number of complaints referred to Field Investigations may also be a result of practices and procedures within the call center. Based on solicitations for bids and proposed contracts for Customer Support Services such as the New Orleans Procurement, the goal for Field Investigations should be to complete the investigation within 48 hours of notification. To accomplish this goal in San Diego with the same staffing level, the number of referrals needs to be reduced, and the investigation procedures streamlined.

- ***Restoring Services Within 24 Hours of Payment*** – Restoration of service after a customer has remedied any outstanding bills in 24 hours is an important Customer Satisfaction Measure. Table 17 presents the data for both the percentage of service 'turn-ons' completed within 24 hours and the number of service 'turn-offs' completed with 48 hours.

Table 17
Percentage of Turn-Ons and Turn-Offs Within Specified Timeframes

Turn-Ons Completed in 24 Hours, Percent													
Fiscal Year	Accounting Period												
	1	2	3	4	5	6	7	8	9	10	11	12	13
2003	99	99	100	99.8	99.8	99.8	98.5	99.9	99.4	100	100	100	NDA
2004	100	100	100	100	100	100	100	100	100	100	100	100	100
2005	100	100	100	100	100	100	100	100	100	100	100	100	100
Turn-Offs Completed in 48 Hours, Percent													
Fiscal Year	Accounting Period												
	1	2	3	4	5	6	7	8	9	10	11	12	13
2003	97.5	94	100	99.9	99.83	100	99.59	99.64	96.51	99.9	98.5	100	NDA
2004	100	100	97.8	100	97.83	100	100	100	100	100	100	100	100
2005	100	100	100	100	100	100	100	100	100	100	100	100	100

* NDA No Data Available

Table 17 demonstrates that the service restoration section is achieving its goal of completing all turn-ons and turn-offs within the specified timeframe.

3.2.2.8 Number of Administrative Citations Issued

- ***Number of Code Enforcement Investigative Contacts Per Day*** – The number of Code Enforcement investigations per day is an Activity measure of the workload of the Code Compliance section. Table 18 presents the average, maximum and minimum number of Code Enforcement investigations per day for the period FY 2003 through FY 2005. The table also shows this number per FTE in the Code Compliance section based on six positions.

Table 18
Code Enforcement Investigations

	FY 2003		FY 2004		FY 2005	
	#/day	#/FTE	#/day	#/FTE	#/day	#/FTE
Annual Average	15.50	2.58	10.70	1.78	12.95	2.16
Maximum Period	31.25	5.20	22.5	3.75	18.35	3.05
Minimum Period	4.65	0.77	4.30	0.72	4.25	0.71

Table 18 indicates that the work load for the Code Compliance section is not consistent throughout the year. The Performance Improvement Teams should determine the reasons for this workload inconsistency to understand if it is due to internal factors such as staff on leave or reassignments, or if it is due to external factors such in incoming work assignments.

3.2.2.9 Field Investigations, Service Restoration, and Code Compliance Best Practices to Consider in the PIT

The following list of Best Practices that winning organizations are implementing to ensure efficient operations was presented in a February 2001 article in AWWA's Opflow. The Field Services and Investigations PIT should review this list and build from it.

- ***One Worker Per Service Vehicle*** – Experience shows that a second worker on a vehicle adds 70 to 100 percent to hourly labor cost, but improves productivity by less than 20 percent. For the few times when two workers are really needed for safety reasons, two trucks can work together. Field Services has modified its work practices and does not routinely assign two people to a vehicle.
- ***Flexible Crew Size*** – Send the minimum number of people required to do each job each day.
- ***Reduce Travel Time*** – Successful competitors and private sector companies assign workers to jobs within specified geographic sectors (quadrants). Field workers are allowed to take trucks home to reduce travel time.

- ***Sensible Work Selection*** – Time can be saved by not doing work that does not need to be done. Example is a "check for dead." When water meters show "0" consumption for two consecutive months, a list of such meters is printed to be checked by a field worker to ensure that the meters are working correctly. The field worker should be asked how many checked water meters are actually dead. Experience shows only about 25 percent or less. Most are vacant houses. By asking the field workers to only check those meters they think may really be dead, hundreds of labor hours can be saved/year.
- ***Increased Tempo*** – Competitive businesses have workers who work efficiently with very little downtime. Think of UPS workers. Increasing the tempo requires effective planning so workers can maximize amount of work per day.
- ***Precise Short-Term Work Plans*** – Competitive utilities have employees who know what they will be doing and what tools and materials they need for today, tomorrow, next week. This type of work planning takes effort, but it is essential to being competitive.
- ***Minimum Supervision*** – No more than three layers of supervision and ratios of at least eight employees to each supervisor are common in competitive companies.
- ***Overhead at Bare Minimum*** – Utilities are often overstaffed with support staff. These employees add a lot to cost but very little to outcome.
- ***Adequate Standards and Procedures*** – Competitive utilities have standard procedures that detail every task. Workers are well trained in these procedures and know what to do. Many utilities have too many supervisors who reinvent the wheel each day because of a lack of standard operating procedures (SOPs).
- ***Proper Tools and Materials*** – Standardize materials.

3.2.3 Key Findings

3.2.3.1 Key Opportunities for Change

- ***Meter Reading Operations Strategy Number. 1***
  - **Benchmark/Best Practice**
    Best performing utilities reroute continuously. Continuous or frequent rerouting and route optimization maximize productivity and reduces cost. While making the transition to AMR, the need for continual rerouting is very important to realize the benefits of the new technology.
  - **Observation**
    The Field Services Section is currently undergoing total rerouting of the system and, since a rerouting has not occurred in 13 years, it has caused a decrease in productivity. Continual rerouting and making small changes in the routes may be enacted without such significant impacts on productivity. The incentive program "read the route, and out" encourages rapid reading of the routes but also may be the cause of skipped meters and misreads. The impact of skipped meters and misreads is more costly field investigation for resolution.

- **Suggestions on How to Improve**
  Continuously reroute the system and focus on gradually increasing the measure of numbers of meter reads per day per staff.

- **Benefit and Competitive Impact (Cost; Productivity; Potential Long-Term Impacts)**
  Increased productivity and decreased cost.
  Reduces overtime.
  Fully realize the benefits of AMR

- ***Meter Reading Operations Strategy Number 2***

  - **Benchmark/Best Practice**
    Best performing utilities implement clear and concise measures of Meter Reader performance. Deliberate measurement of employee, Group and Division performance is key to increasing productivity, correcting deficiencies and identifying discipline issues, setting equitable incentives, and improving divisional performance.

  - **Observation**
    The current meter reader incentive program of 'read route and out' results in a high level of effort by the staff to complete their routes quickly. This incentive, which achieves the objective of quickly reading meters reportedly results in some skipped meters and misreads. The cost to remedy skips and misreads by the Field Investigation Section is much more than reading the meter correctly the first time.

  - **Suggestions on How to Improve**
    Establish a performance system that promotes accurate meter reading and the field resolution of misreads.

  - **Benefit and Competitive Impact (Cost; Productivity; Potential Long-Term Impacts)**
    Increased productivity and decreased cost especially to the Field Investigations section but with no additional cost for meter reading.
    Reduces overtime.

- ***Meter Reading Operations Strategy Number 3***

  - **Benchmark/Best Practice**
    Best performing utilities encourage high performance through incentives and rewards. Use of targeted incentive programs can result in organizational excellence by rewarding employees, Groups, and the Division for performance that achieves the divisional goals.

  - **Observation**
    Again, the current meter reader incentive program of 'read route and out' results in a high level of effort by the staff to complete their routes quickly. Reward for other sections who must respond and rectify the misreads and skipped meters that results are not as well incentivized. Each section's incentives should be designed to result in the overall objective that achieves productivity goals as well as accuracy goals.

- **Suggestions on How to Improve**
  Establish a performance incentive system that promotes accurate meter reading and the field resolution of misreads.

- **Benefit and Competitive Impact (Cost; Productivity; Potential Long-Term Impacts)**
  Motivated workforce.
  Increased productivity and decreased cost especially to the Field Investigations Section but with no additional cost for meter reading.

- ***Meter Reading Operations Strategy Number 4***

  - **Benchmark/Best Practice**
    Best performing utilities use both classroom and on-the-job training (OJT) to reduce the time required to achieve meter reading at the Standard of Performance. Best performing utilities report that one to two days classroom time and 12 to 13 days of OJT equips the Meter Reader to perform at the standard 20 days sooner than average utilities. Training at this level is found at utilities with the fewest errors and skipped meters and the highest productivity, in combination with the lowest cost per read.

  - **Observation**
    The data shows that the 80/20 rule applies within the Meter Reading Section in that most of the Meter Reading errors are attributed to a small group of staff. Since errors and decreased performance may be caused by two employee issues, lack of understanding of the job's requirements or lack of motivation to perform the job correctly, adequate training will eliminate the lack of knowledge of the job as a cause for substandard performance. If poor performance persists after adequate training, then the substandard work indicates an attitude or discipline matter.

  - **Suggestions on How to Improve**
    Establish a training program for new hires and refresher training for current staff that uses both classroom and OJT that promotes accurate Meter Reading. The training should also emphasize how meter reader actions impact the overall performance of the Division, ultimately impacting Customer Satisfaction.

  - **Benefit and Competitive Impact (Cost; Productivity; Potential Long-Term Impacts)**
    Motivated workforce.
    Increased meter reading accuracy.

- ***Field Investigations, Service Restoration, and Code Compliance Operations Strategy Number 1***

  - **Benchmark/Best Practice**
    Best performing utilities use cross-trained and cross-functional teams to eliminate organizational silos. Best performing utilities form teams with the training, experience, and skills to undertake a wide array of activities, thus providing more staff flexibility to meet changing workload and divisional priorities.

- **Observation**
  The Field Investigations and the Service Restoration/Turn-Off sections each are comprised of staff with similar job descriptions. The data show that the Service Restoration section is meeting its required work orders within the specified time; however, the Field Investigation team is not. The data also indicates that billing is often delayed by the time required to complete Field Investigations. A combination of these two groups would provide the capability to schedule and manage workload to better achieve divisional performance goals. Also, the Code Compliance Group consistently achieves all of its investigations, thus making available more experienced staff to assist in resolving more complex investigations.

- **Suggestions on How to Improve**
  Consolidate the Field Investigations Group and the Service Restorations Group into one organizational unit. Current budgeting already provides one supervisor over both units. Set performance measures for the group to meet divisional goals for time for turn-on, time for turn-off, and time for completion of field investigations. Also consider including the Code Compliance section in the consolidation.

- **Benefit and Competitive Impact (Cost; Productivity; Potential long term impacts)**
  Career path in workforce.
  Better response time in meeting divisional priorities through scheduling flexibility.

3.2.3.2 Identified Competitive Costs

Table 19 summarizes the historical and competitive costs of the Field Services and Investigations section. The competitive costs were developed based on a review of budget and costs history over the past three years. The personnel and fringe benefits costs are based on the FY 2006 appropriation. The competitive level for Personal services is increased for minimal overtime for the Service Restoration crews, and for the salaries for the hourly meter readers. The competitive costs for non-personnel expenses were largely calculated based on a three-year averaging of Period 13 costs adjusted to FY 2006 dollars, with a few exceptions. For major cost items, HDR applied best practices and innovative performance improvement ideas to set the competitive level, where appropriate. The Performance Improvement Teams should investigate the beneficial impacts of the Automated Meter Reading system implementation on the Field Services and Investigations Section for cost reduction potential.

Table 19
Field Services and Investigations - Competitive Level

Description	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
Personal Services	1,962,981	2,097,400	-6.8%	$ (134,400)
Fringe Benefits	1,140,120	1,140,200	0.0%	$ (100)
Supplies and Services	281,157	262,500	6.6%	$ 18,700
Data Processing	118,892	124,400	-4.6%	$ (5,500)
Energy Resources/Utility	4,097	8,100	-97.7%	$ (4,000)
Outlay	38,365	11,300	70.5%	$ 27,100
Total	$ 3,545,612	$ 3,643,900	-2.8%	$ (98,300)

3.3 METER SERVICES

3.3.1 Description of Meter Services Group

The Meter Services Section provides domestic, commercial, construction, and recycled meter installation, maintenance, repair, replacement, and testing for over 271,000 active meters in the Water Department service area. The Meter Services section also provides construction and operations and maintenance services for the San Diego Recycled Water System. This section is also responsible for maintenance and testing of backflow and cross-connection devices in the water distribution system. The Meter Services section is comprised of six distinct organizations with 75 budgeted positions. Vacancy rates have reduced staffing by more than 15 percent over past few years. The six organizations and their activities that make the Meter Services section are as follows:

3.3.1.1 Commercial Meters

The Commercial Meter subsection is responsible for preventative maintenance of the 1,200 commercial (3-inch and larger) meters in the Water Department service area. Preventative maintenance includes testing, cleaning, and repair of these meters, along with the associated construction activities when meters are required to be replaced. There are 17 budgeted positions in the Commercial Meter Group.

3.3.1.2 Domestic Meters

The Domestic Meter section removes and installs domestic (3/4- to 2-inch) meters; raises, resets, repairs meters; and replaces meter boxes. This Activity includes replacement of problem meters that exist in the system, along with the installation of domestic meters for new construction. As part of this process, crews are responsible for meter locating, meter grade adjustments, and valve replacement. There are 15 budgeted positions in the Domestic Meter Group.

3.3.1.3 Backflow Maintenance

Backflow Maintenance annually maintains more than 3,000 backflow devices in the Water Department service area. This requires testing, repair, and replacement of all backflow devices as mandated by the State Department of Health regulations. There are 17 budgeted positions in the Backflow Maintenance Group.

3.3.1.4 Cross-Connection

The Cross-Connection Control Program administers the activities to ensure the safety of the drinking water system from hazards that might exist on private properties. The four main activities include: 1) tracking of and notification to private backflow prevention device owners of the requirement of annual testing and maintenance of these devices; 2) inspection of existing facilities that do not presently have backflow devices for the degree of hazard; 3) notifying property owners of backflow requirement; and 4) follow through to assure device is installed and maintained annually. The Cross-Connection Control Program tests 14,000 devices annually and requires an additional 28,000 sites to survey for backflow requirements by June 2007. The

State Department of Health regulations dictate the requirements of this program. There are seven budgeted positions in the Cross-Connection Group.

3.3.1.5 Recycled Water Operations and Construction

Operations, maintenance, and meter installations for the Water Department recycled water system is performed by the Recycled Water Operations and Construction sections. Other activities include repair of services and reclaimed water main appurtenances as well as manual chlorination of a tank (this process is being automated). The system consists of 110 miles of pipeline, 300 metered connections, three storage reservoirs, and three pumping stations. This group includes a construction crew and has a total of eight budgeted positions.

3.3.1.6 Construction/Fire Hydrant Meter Program

This section administers and manages all fire hydrant construction meters for the proper accounting of drinking water used for construction purposes. This includes the installation and removal of meters as well as repair and preventive maintenance. This section's workload is dictated by the demands of the construction industry. There are eight budgeted positions in the Construction/Fire Hydrant Meter Group.

3.3.2 Assessment of Current Activities

3.3.2.1 Reviewed Existing Data

Numerous documents (provided through the HDR Information Request) were reviewed regarding the Customer Support Division. Key documents pertaining to the Meter Services section were the focus of this review in accordance with HDR's Scope of Services. These key documents included the Black and Veatch (B&V) Management Review (October 2001); Cognyst Consulting, AMR Justification Document (April 2005); procurement documents from the Sewerage & Water Board of New Orleans, Managed Competition (2001 & 2002); AWWA Manual of Water Supply Practices-M6, Water Meters-Selection, Installation, Testing, and Maintenance; and AWWA Manual of Water Supply Practices-M36, Water Audits and Leak Detection. This data provided metrics and best-management practice benchmarks.

3.3.2.2 Interviewed Key Staff

Interviews were conducted with staff from the Meter Services section and the staff was very forthcoming with information regarding the operations. The information provided in these interviews was instrumental in development of the ideas for competitive improvements and best management practices.

3.3.2.3 Identified Current Budgets and Costs History

Figure 11 presents the Meter Services budget performance for FY 2003 through FY 2006. Budgeted costs are shown to be increasing from year to year until FY 2006, where they leveled off, and the costs for FY 2004 and FY 2005 were under the budgeted costs.

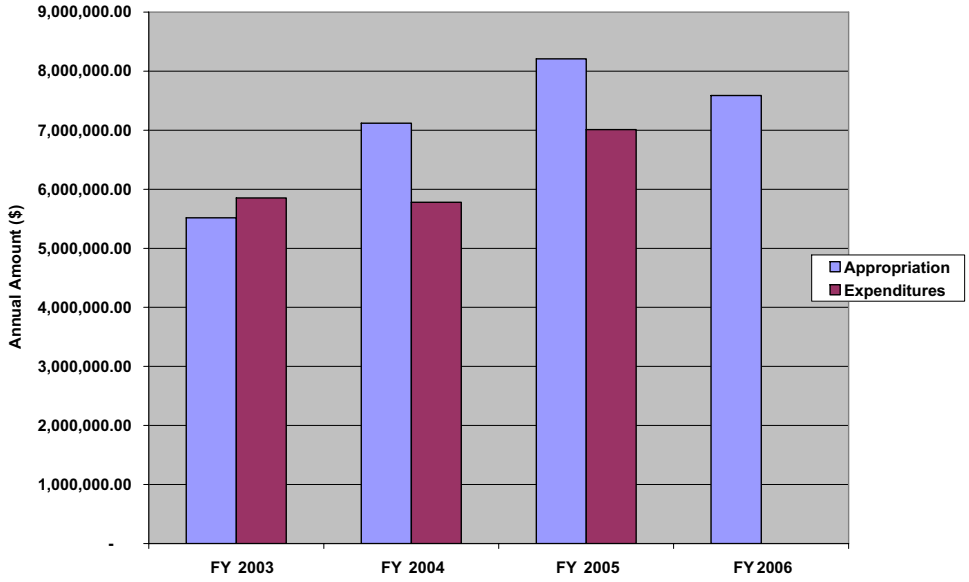

Figure 11 - Meter Services Budget Performance (FY 2003-2006)

Figure 12 presents the FY 2006 Meter Services cost distribution by organizational sections. The Commercial Meter and Domestic Meter sections represent slightly over one-half of the section's budget.

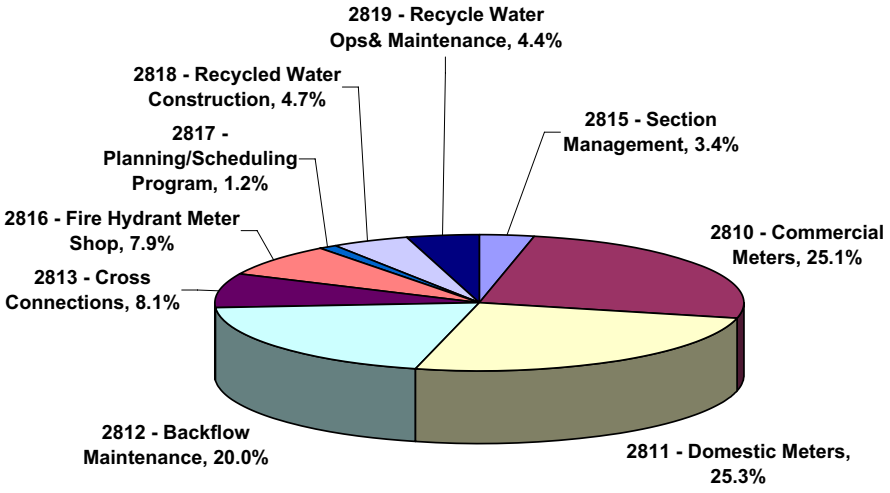

Figure 12 - Meter Services Cost Distribution by Section (FY 2006)

Figure 13 presents the FY 2006 budget distribution. Personnel costs and fringe benefits account for 71.3 percent of the total costs. Supplies and Services Costs represent 26.7 percent of the budget due mainly to the purchase of water meters and meter repair supplies.

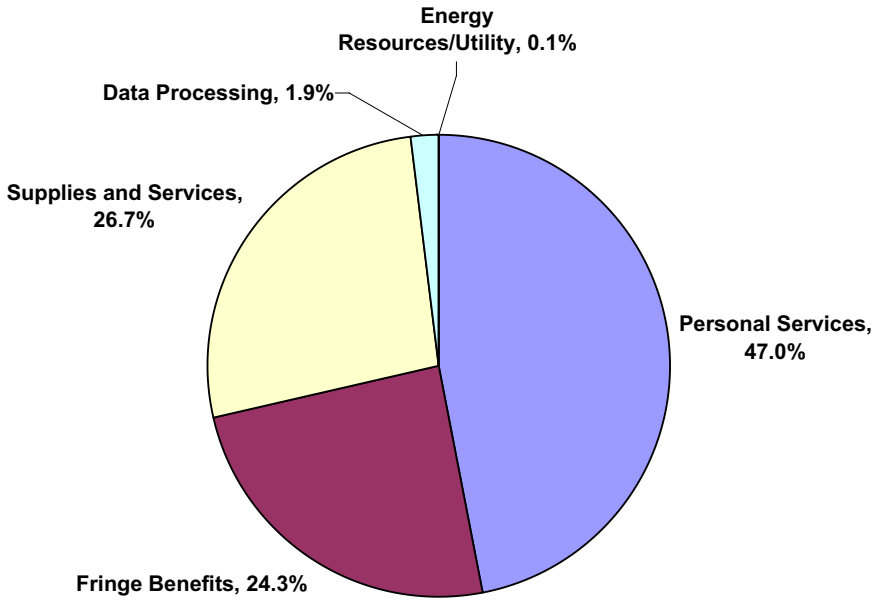

Figure 13 - Meter Services Budget Distribution by Object Account (FY 2006)

3.3.2.4 Reviewed Best Practices and Benchmarking Information

The Meter Services section provided data for comparison and comparative analysis. The following Table 20 provides that analysis by listing the performance measure and presenting the Meter Services Section's results, followed by a discussion of the review and analysis of the data for that performance indicator.

Table 20
Meter Services Benchmarking Data

Domestic Meters	Benchmarking Data – Status
Cost per meter maintenance	Not currently tracked
Replacement of meters as needed within 60 days of request	Not currently tracked *
Average number of meters replaced per day per crew	Average of 5 meters installed per day per crew
Cost per meter change	Pending Crystal Reports
Installation of new meters as requested by contractor within 10 days	Pending Work Assignment Order (WAO) Reports
Commercial Meters	**Benchmarking Data – Status**
Average number of PMs per crew per day	Average of 1.7 PMs per crew per day
Backflow Maintenance	**Benchmarking Data – Status**
Average number of PMs per crew per month	Average of 20.1 PMs per crew per month

Recycled Water	Benchmarking Data – Status
Cost per number of connections	$91,792 budgeted/300 connections = $305.97 per connection
Cost per mile of pipe	$91,790 budgeted/110 miles of pipe = $834.45 per mile of pipe
Cross Connections	**Benchmarking Data – Status**
Cost per service connection	$76,440 budgeted/271,204 connections = $0.28 per connection
Cost per device administered	$76,440 budgeted/14,580 devices = $5.24 per device

* The Division currently does not single out tracking for the replacement of meters, but tracks the number of all work orders completed as well as any backlogs to ensure backlogs of any type do not exceed 60 days.

3.3.2.5 Domestic Meter Benchmarking Measures

Customer Support manages approximately 271,000 active meters in service. All 5/8-inch through 2-inch are referenced as domestic meters and account for about 99.5 percent of all meters in the system. The remaining 3-inch and larger meters, or 0.5 percent of the total meter base, are considered the commercial meters (see Figure 14).

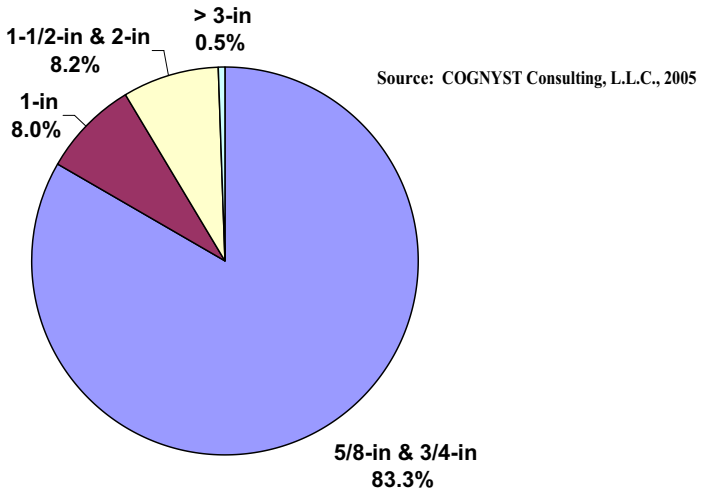

Figure 14 – Percentage of Meters by Size

The Water Department changed about 6,000 domestic meters per year over the years 2002 and 2003. Since that time a domestic meter backlog reduction program has been initiated with great results and the work order backlog is tracked over a <30 days, 30-60 days, and >60 day period. The replacements are largely generated by requests from Meter Readers concerning broken or stuck meters.

With the implementation of Automated Meter Reading (AMR) program a formal age or consumption limit meter change-out program is being initiated. As part of the research

conducted anticipating AMR implementation a cost recovery analysis of water meters was conducted. As a result, the Division has engaged in a meter change-out program that covers replacing older domestic meters smaller than one-inch. Currently all these small domestic meters in the system older than 24 years have been replaced. Costs of meter replacements are anticipated to be recovered within 2.5 years of installation.

Besides the work order backlog data tracking, the domestic meters section limits its benchmark data to the average number of meters replaced per crew per day and new meter installation within 10 days as requested by the contractor. On average, five meters are replaced per crew per day. The same crews that replace meters are also responsible to raise, locate, and replace meter boxes as well as for new meter installations, resets, repairs, removes, and investigations. The average installation contractor for outside meter removal and installation can be as high as 15 to 20 meters per day based on a one-man crew. To achieve these levels the contractors limit the crews' responsibility to simply replacing meters in a concentrated area. These rates are based on limited travel to meter locations and do not include repairs or other investigations. For the installation of new meters as requested by contractors, the response will vary depending on construction demands.

In order for Customer Support to develop an ongoing domestic meter change-out program, the testing of a limited number of meters will be required. This would entail measuring the accuracy of a statistically valid random sample of meters of a given make/age class or consumption amount each year. In principle, if the sample performed within the limits of accuracy, all the meters in that make/age class or consumption amount would be assumed to be performing accurately, and the class would be allowed to age. If the sample failed, such that the loss of revenues from the meter is exceeding the cost of replacing them, then the class would be scheduled for replacement. The domestic meter change-out program would also track meters replaced due to reports of being broken or stuck by make/age class or consumption amount to forecast the rate of failure and to determine if wide-scale replacement is warranted. The Division currently does not single out tracking for the replacement of meters, but tracks the number of all work orders completed as well as any backlogs to ensure backlogs of any type do not exceed 60 days. Customer Support does follow AWWA standards as a guideline for the meter change-out program.

3.3.2.6 Commercial Meter Benchmarking Measures

The Commercial Meter Group maintains approximately 1,270 large (3-inch and over) meters in the Water Department service area. These large meters serve less than 0.5 percent of the customers and are responsible for more than 15 percent of all revenue (see Figure 15 below).

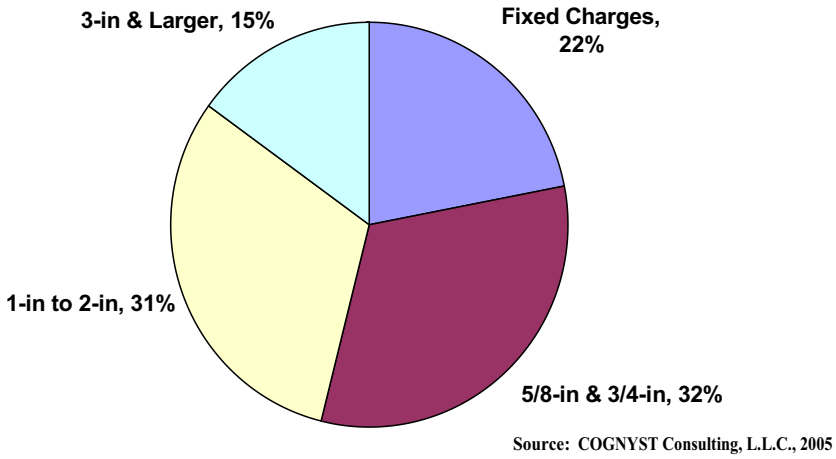

Figure 15 – Revenue Billed by Meter Size

Water Department staff indicated that most of the large meters in the system are more than 20 years old and are difficult to maintain. For some, it is difficult to get replacement parts. Some meters require frequent recalibration, and will not maintain accuracy for very long.

The Commercial Meter Group has currently one benchmark, which is the average number of Preventive Maintenance (PM) work orders per crew per day. Currently, the average number of PMs per crew per day is 1.7, and it should be noted that the same crews are responsible for other functions.

COGNYST has reported a comparable example of PMs per crew per day is with the Las Vegas Valley Water District (LVVWD). LVVWD initiated a program late in the year 2000 to repair and replace its almost 7,000 large meters and put them on a regular testing and maintenance schedule. Over the first 51 months of the program, LVVWD recovered an additional $6.6 million in annual revenues from the meters it serviced, an increase of 22.5 percent over the annual revenues from those same meters. The refurbishments included ensuring that all bolts could easily be removed, and that the meters had test ports that could quickly and easily be connected to LVVWD's meter testing equipment in the field. These upgrades have enabled LVVWD crews to test and maintain a large meter in about 75 minutes. This means that the crews can handle more jobs per day.

3.3.2.7 Standardization of Domestic and Commercial Meter PMs/Testing Procedures

There is no phase of water-utility operation that has been handled in so many different ways as that of maintaining and testing water meters. The closest approach to standard test procedures has been the accuracy requirements contained in the various AWWA meter standards. The confusion and wide variance in maintenance and testing procedures result from the fact that the testing of water meters in ordinary shop practice is primarily concerned with meters that are not new but that have been removed from service and repaired. Each agency has had to begin with

the historic information available and develop its own testing procedures. Under such circumstances, it is not difficult to understand the reason for the widely divergent procedures that have developed over the years, many of which do not produce reasonable answers on overall operational ability of meters tested and maintained. This has made comparative analysis used for benchmarking measures somewhat difficult between water utilities. HDR recommends that any standards for meter testing at the Water Department be reviewed and updated for relevancy of approach and appropriateness in acquiring the data needed to assess a meter replacement program.

3.3.2.8 Backflow Maintenance Benchmarking Measures

The Backflow Maintenance Group maintains over 3,000 backflow devices annually and currently uses one benchmark measure to track operational efficiency. An average number of PMs per crew per month is used as that measure and is 20.1. It should be noted that these crews are responsible for other functions. A typical standard of production is 10 per crew per day without performing any other outside functions.

3.3.2.9 Recycled Water Benchmarking Measures

The Recycled Water Group tracks two measures: 1) cost per number of connections – $305.97/connection, and 2) cost per mile of pipe – $834.45/mile of pipe. Comparative data could not be found, but internal tracking should continue providing the baseline information to help reduce costs.

3.3.2.10 Cross-Connection Benchmarking Measures

The Cross-Connection Group tracks two measures: 1) cost per service connection – $0.28/service connection, and 2) cost per device administered – $5.24/device. Comparative data could not be found, but internal tracking should continue providing the baseline information to help reduce costs.

3.3.2.11 Meter Services – Water Meter Installation Best Practices

Although standard specifications exist for meter valves, pipes, and tubing, there are no standards for meter settings; however, there are certain principles that should be observed. Basic requirements of an acceptable meter installation are as follows:

- Position meter in horizontal plane for optimum meter performance.
- Locate meter so that it is readily accessible for reading, servicing, and or testing.
- Provide leak tight, permanent setting to ensure that the meter can be removed from service without negatively affecting customer's plumbing.
- Provide for permanent electrical grounding that does not use the meter to prevent accidental shock to meter service personnel.

- Provide high-quality inlet shutoff valve to allow meter maintenance. Location of meter may also dictate a meter valve on outlet side to prevent water draining back when meter is removed.
- Provide a minimum loss of pressure.
- Consider public safety and design installation to prevent accidents.

To avoid future operating problems, all open connections should be capped whenever a meter is removed from its setting for any length of time. Also, meters should be protected from heat and direct sunlight during storage and transit prior to installation or after removal.

3.3.2.12 Meter Services – Water Meter Testing Best Practices

To start a program of periodic testing, it is necessary to set an arbitrary time in which to complete the work. Also, it is desirable to select a period of years that coincides with the best estimate of the frequency with which meters should be tested. In this way, the work load is leveled out, and approximately the same number of meters will be due for testing each time. If, for example, a utility with 10,000 meters in service sets up a program for testing meters on a 10-year cycle, the utility has to remove approximately 900 meters each year. This amount is less than 10 percent of the number in service, as there are always meters that will not remain in service for the full period but will be removed for other reasons.

It is generally considered advisable to provide for more frequent testing of large meters, because an error in their registration affects revenue to a much greater extent. Furthermore, current and compound meters may under or over register to a much greater degree than positive-displacement meters.

If enough 3-inch and larger meters are installed, the repair and testing of these larger meters may be delegated to particular crews. They will develop special skills that are necessary for the effective maintenance of larger meters. A survey of the largest utilities in the United States determined that the testing period for the larger meters is conducted on a yearly basis. In any meter-testing program, accurate and readily available records are essential. A formal ongoing meter record program should be established as an initial step in the program. Electronic data processing has proven to be a highly effective tool in maintaining an effective meter record program.

Probably the best advice that can be given regarding a meter testing program is to be alert to and study all phases of the metering field; there is no substitute for experience in determining the best procedure for any one utility. Although a metered system is best known for equitably spreading the cost of water service, serious inequities and injustices can occur unless all meters are maintained at a high, uniform level of efficiency and unless every reasonable effort is made to prevent inequities from occurring.

3.3.2.13 Meter Services – Field Activity Best Practices

The following list of Best Practices that winning organizations are implementing to ensure efficient operations was presented in a February 2001 article in AWWA's Opflow. The Meter Services PIT should review this list and build from it.

- ***One Worker Per Service Vehicle*** – Experience shows that a second worker on a vehicle adds 70 to 100 percent to hourly labor cost, but improves productivity by less than 20 percent. When the few times when two workers are really needed for safety reasons, then two trucks can work together.
- ***Flexible Crew Size*** – Send the minimum number of people required to do each job each day.
- ***Reduce Travel Time*** – Successful competitors/private sector assign workers to jobs within specified geographic sectors (quadrants). Field workers are allowed to take trucks home to reduce travel time.
- ***Sensible Work Selection*** – Time can be saved by not doing work that does not need to be done. Example is a "check for dead." When water meters show "0" consumption for two consecutive months, a list of such meters is printed to be checked by a field worker to ensure that the meters are working correctly. The field worker should be asked how many checked water meters are actually dead. Experience shows only about 25 percent or less. Most are vacant houses. By asking the field workers to only check those meters they think may really be dead, hundreds of labor hours can be saved/year.
- ***Increased Tempo*** – Competitive businesses have workers who are always in a hurry. Think of UPS workers. Increasing the tempo requires effective planning so workers can maximize amount of work per day.
- ***Precise Short-Term Work Plans*** – Competitive utilities have employees who know what they will be doing and what tools and materials they need for today, tomorrow, or next week. This type of work planning takes effort, but it is essential to being competitive.
- ***Minimum Supervision*** – No more than three layers of supervision and ratios of at least eight employees to each supervisor are common in competitive companies.
- ***Overhead at Bare Minimum*** – Check number of office workers. Utilities are often overstaffed with support staff; these employees add a lot to cost but very little to outcome.
- ***Adequate Standards and Procedures*** – Competitive utilities have standard procedures that detail every task. Workers are well trained in these procedures and know what to do. Many utilities have too many supervisors who reinvent the wheel each day because of a lack of SOPs.
- ***Proper Tools and Materials*** – Standardize materials.

3.3.3 Key Findings

3.3.3.1 Key Opportunities for Change

- ***Meter Services Operations Strategy Number 1***
  - **Benchmark/Best Practice**
    Best performing utilities implement clear and concise measures of meter services performance. Deliberate measurement of employee, Group, and Division performance is key to increasing productivity, correcting deficiencies and identifying discipline issues, and improving divisional performance.
  - **Observation**
    The Domestic and Commercial Meter Groups are responsible for installation and maintenance of all meters in the Water Department service area. These activities require defined procedures and focused attention. Maintenance procedures can differ from commercial meter to commercial meter. Due to the various makes and age of these meters, a defined and streamlined PM program becomes awkward. The future AMR large meter change-out should improve this situation by the standardization of meters. If staff functions vary from day-to-day, performance is difficult to measure.
  - **Suggestions on How to Improve**
    Establish a performance system that promotes consistent meter installation and maintenance procedures. The development of clear and documented maintenance and calibration procedures will become much more important as staff rotates into the Meter Services Section as part of the WST program.
  - **Benefit and Competitive Impact (Cost; Productivity; Potential Long-Term Impacts)**
    Increased productivity, improve tracking measures by focusing on core activities and limit other non-core functions.
    Reduces overtime.
- ***Meter Services Operations Strategy Number 2***
  - **Benchmark/Best Practice**
    Best performing utilities encourage high performance through incentives and rewards. Use of targeted incentive programs can result in organizational excellence by rewarding employees, Groups, and the Division for performance that achieves the divisional goals.
  - **Observation**
    For the Domestic Meter Group and the low average of meters replaced, an incentive program for the number of meters replaced per day could greatly improve productivity. Until the commercial meters are standardized with the AMR program, PM measurement will be hard to track. In the other sections, PM measurements have many variables and may require some section streamlining to better target an achievable goal. Each Section's incentives should be designed to result in the overall objective that achieves productivity goals.

- **Suggestions on How to Improve**
  Establish a performance incentive system that promotes efficient installation and maintenance of the meters. This can be achieved through the pay for performance opportunities of the Bid to Goal program.

- **Benefit and Competitive Impact (Cost; Productivity; Potential Long-Term Impacts)**
  Motivated workforce.
  Increased productivity and decreased cost.
  Promotes sections to work together.

- ***Meter Services Operations Strategy Number 3***

  - **Benchmark/Best Practice**
    Best performing utilities use both classroom and on-the-job-training (OJT) to reduce the time and effort required to achieve proper installation and maintenance. Best performing utilities specifically require backflow/cross-connection training and testing to be certified and San Diego requires certification in this area. In addition, meter installation and maintenance requires sufficient classroom and OJT. Meters are measuring devices and are required to be accurate.

  - **Observation**
    Meters are measuring devices and are required to be accurate. This requires the proper skill sets and staff experience. Is the experience and knowledge gained by many years on the job being transferred to the younger staff members? Is the skill set of the current staff members being sharpened by refresher training? Interviews with staff and responses to specific questions on meter maintenance procedures indicate that a review of the techniques and training levels of the staff is warranted.

  - **Suggestions on How to Improve**
    Establish a training program for new hires and refresher training for current staff that uses both classroom and OJT and that promotes accurate meter performance. The training should also emphasize how meter services actions impact the overall performance of the Division. Loss of revenue to the water utility will occur if the meters are not maintained efficiently.

  - **Benefit and Competitive Impact (Cost; Productivity; Potential Long-Term Impacts)**
    Motivated workforce.
    Increased meter accuracy.
    Reduction in loss revenue.
    Knowledge and experience transfer.

- ***Meter Services Operations Strategy Number 4***

  - **Benchmark/Best Practice**
    Best performing utilities implement practices as recognized by AWWA Manual of Water Supply. The AWWA Manual of Water Supply Practices M6 – Water Meters—

Selection, Installation, Testing, and Maintenance—is recognized as one of the best guidance manuals for water utilities today.

- **Observation**
  Accurate water measurement is the means by which water utilities produce revenue to cover expenses, charge each customer equitably, prevent waste of water, and minimize the load on wastewater facilities. Water utilities require guidelines or a tool set to obtain the best revenue for their investment in meters and maintenance facilities. This manual can provide the tool set for consistent and accurate methodology.
- **Suggestions on How to Improve**
  Select and adopt the best procedures from this manual to be used for Meter Services Operations.
- **Benefit and Competitive Impact (Cost; Productivity; Potential Long-Term Impacts)**
  Increased productivity and improved tracking measures.
  Proven, reliable, standardized procedures.
  Revenue enhancement from well maintained meters.

3.3.3.2 Identified Competitive Costs

Table 21 summarizes the historical and competitive costs of the Meter Services section. The competitive costs were developed based on a review of budget and costs history over the past three years. The personnel and fringe benefits costs are based on the FY 2006 appropriation. The competitive costs for non-personnel expenses were largely calculated based on a three-year averaging of Period 13 costs adjusted to FY 2006 dollars, with a few exceptions. For major cost items, HDR applied best practices and innovative performance improvement ideas to set the competitive level, where appropriate.

Table 21
Meter Services - Competitive Level

Description	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
Personal Services	3,566,580	3,566,400	0.0%	$ 200
Fringe Benefits	1,844,544	1,844,600	0.0%	$ (100)
Supplies and Services	2,025,106	2,008,200	0.8%	$ 16,900
Data Processing	143,459	209,000	-45.7%	$ (65,500)
Energy Resources/Utility	9,363	9,600	-2.5%	$ (200)
Outlay	-	22,800		$ (22,800)
Total	$ 7,589,052	$ 7,660,600	-0.9%	$ (71,500)

3.4 WATER RESOURCES MANAGEMENT

3.4.1 Description of the Water Resources Management Group

The City of San Diego has promoted effective conservation practices since the mid 1980s and is recognized for its outstanding water conservation program managed by the Water Resources

Management Group. Water resources management is complex because of the challenges in developing new drinking water supplies; managing populations that are continually growing and shifting locales; dealing with economic cycles and cycles of drought that influence public opinion and acceptance of water conservation; and adjusting to legislative changes that bring about mandates for new initiatives. In recent years, water conservation has seen major advances in research, public education, and development of water-efficient fixtures in the home and workplace.

3.4.1.1 Water Conservation Program

In 1985, the San Diego City Council officially established the City's Water Conservation Program to reduce San Diego's dependency upon imported water. Today, the Water Conservation Program directly accounts for over 23 million gallons per day (MGD) of potable water savings per year. This savings has been achieved by creating a water conservation ethic; adopting programs, policies, and ordinances designed to promote water conservation practices; and implementing comprehensive public information and education campaigns.

3.4.1.2 Long-Range Goals

The City of San Diego Long-Range Water Resources Plan (2002 – 2030) was adopted by the San Diego City Council on December 9, 2002. This plan built on the previously approved 1997 *Strategic Plan for Water Supply*. The Strategic Plan set water conservation goals of 26,000 AF of water saved by 2005, and the Long-Range Plan set water savings goals of 32,000 AF by 2010, 36,000 AF by 2020, and 46,000 AF by 2030. One AF of water equals 325,851 gallons or enough water to cover an area of land about the size of a football field one foot deep. Depending on water use, one AF of water can supply two average California homes with a year's worth of water for all indoor and outdoor needs.

3.4.1.3 Water Conservation Report

In 1987, the City Council adopted Council Policy 400-11, entitled an "Action Plan for Implementation of Water Conservation Techniques." The plan required the preparation of an annual report which reviews the water conservation activities undertaken by the City during the previous year. The FY 2005 Update serves as the report through June 30, 2005, and notes that the Water Department achieved its 1997 goal of saving 26,000 AF of water by 2005.

The Section is now focused on the next goal from *The City of San Diego Long-Range Water Resources Plan* of 32,000 AF by 2010. Future planning for water conservation efforts is an ongoing process. The current programs undergo periodic re-evaluation to ensure the realization of forecasted savings. Additionally, changes in water conservation technologies require reassessment of long-range plans.

3.4.1.4 The San Diego Water Resource Management Group: Who We Are and What We Do

- ***Mission*** – To maintain a City-wide consumption reduction of 20 percent from FY89 levels (preconservation, average gallons per day) and obtain the water savings target of 26,000 AF by 2005, 32,000 AF by 2010, 36,000 AF by 2020, and 46,000 AF by 2030.

- ***Section Management*** – To effectively administer the operations of the section so that all section objectives are met in a timely manner.
- ***Residential Interior/Exterior Water Conservation Program*** – To conduct interior/exterior surveys and provide landscape water management support to large irrigation customers such that we at least complete 80 percent of requested surveys within one week.
- ***Commercial/Industrial Water Conservation Program*** – To provide water savings analysis, recommendations, and equipment vouchers for commercial, industrial, and institutional water user/customers.
- ***Ultra-Low Flush Toilet Incentive Program*** – To provide financial incentives for the retrofit of Ultra-Low Flush Toilet (ULFT) fixtures to Water Department customers city-wide.
- ***Field Investigations*** – To provide department, customer initiated, and proactive field investigations within three days of request and to provide field support to on-going programs.
- ***Retrofit Ordinance*** – To process certificates of compliance and deposit $10 processing fees within 30 days of receipt.
- ***Public Information, Education, and Outreach Program*** – To increase City residents' awareness and understanding of water conservation by participating in public outreach events, maintaining informational displays and gardens, and by distributing information materials to City residents and new homeowners.
- ***Clothes Washer Vouchers*** – To issue clothes washer vouchers to customers City-wide.
- ***Irrigation Incentive Program*** – To provide incentives for equipment upgrades and/or educational assistance to customers to improve the efficiency of their irrigation systems resulting in reduced water consumption.
- ***Landscape Water Management*** – To provide "water budgets" to all irrigation and mixed use commercial water accounts.

3.4.2 Assessment of Current Activities

3.4.2.1 Reviewed Existing Data

HDR requested a variety of documents that were provided to us and are documented in the Document Log (see Appendix 1). This included the Water Resources Management Group's *FY 2005 Water Conservation Report Update* and the City of San Diego Water Department's *Commercial Landscape and Residential Survey Programs*, 3rd Annual Report, Fiscal Year 2005.

3.4.2.2 Interviewed Key Staff

Interviews were conducted with a cross-section of staff from the Water Resources Management Group. The individuals were very forthcoming with information regarding their activities. The information provided in these interviews was instrumental in development of some of the ideas

for competitive improvements and best management practices, as well as confirming HDR Team members' experience in the industry.

3.4.2.3 Identified Current Budgets and Costs History of FY 2003, 2004, 2005, and Budgets for 2006

Figure 16 presents the Water Resources Management budget performance for FY 2003 through FY 2006. Budgeted costs are shown to be increasing from year to year until FY 2006, where the budget cost decreased significantly, and the Period 13 costs for FY 2003, FY 2004, and FY 2005 were under the budgeted costs. Figure 17 presents the FY 2006 Water Resources Management cost distribution by organizational sections. The cost for each section is equally distributed within the Activity Group. Section Management is the largest group in cost representing 20.5 percent of the Group's budget.

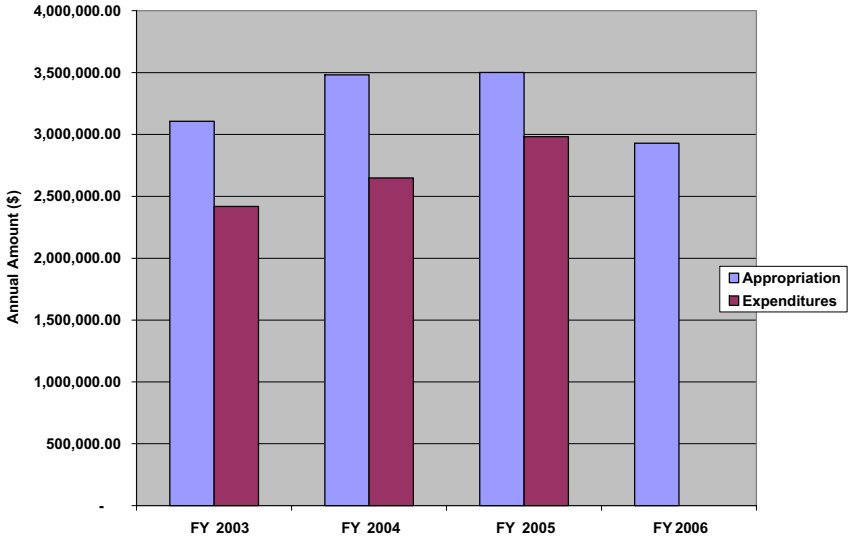

Figure 16 - Water Resources Management Budget Performance (FY 2003-2006)

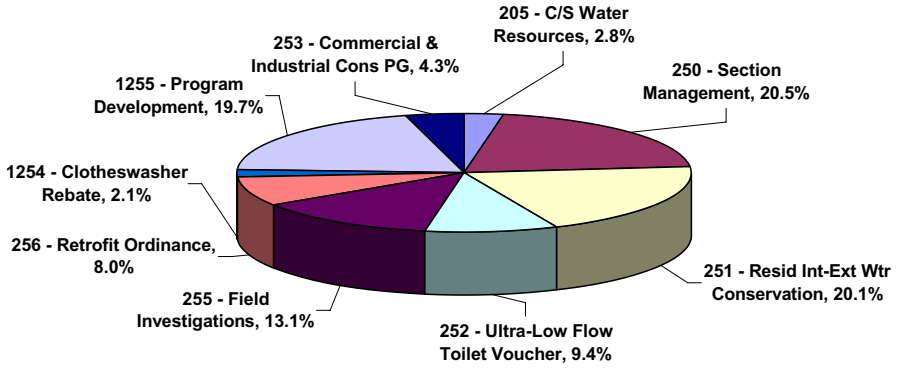

Figure 17 - Water Resources Management Cost Distribution by Section (FY 2006)

Figure 18 presents the FY 2006 budget distribution. Personnel costs and fringe benefits account for 53.4 percent of the total costs. Supplies and Services Costs represent 42.3 percent of the budget due mainly to the vouchers paid to approved customers.

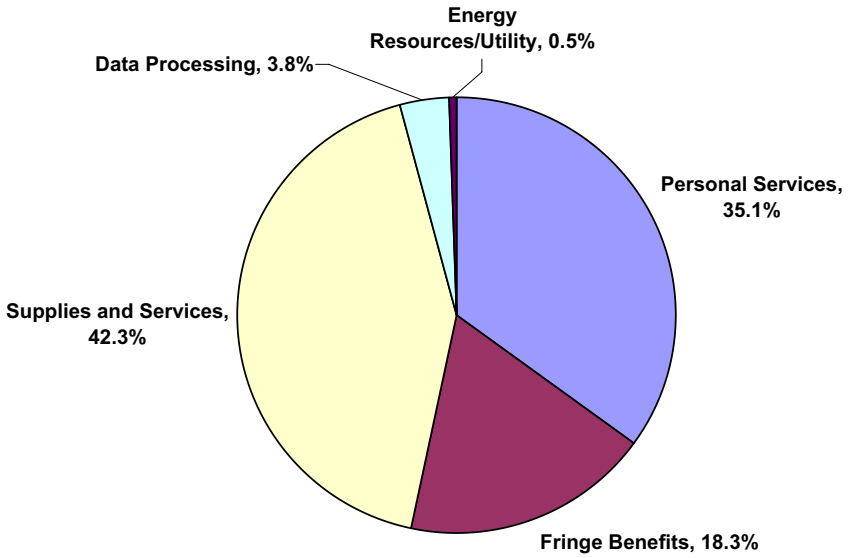

Figure 18 - Water Resources Management Budget Distribution by Object Account (FY 2006)

3.4.2.4 Reviewed Benchmarking and Best Practices Information

The Water Resource Management Section provided performance metric data for comparison and comparative analysis. The next section lists that performance data and the Water Resources Management Section results. The concluding part of this section discusses the information sources used in the HDR analysis and some key best practices.

Comparison to other utilities and determining how good a number might be was not within the scope of this Assessment Report, unless that existing information was provided. The California Urban Water Conservation Council (CUWCC) compiles significant amounts of data on what other California Utilities and agencies are doing. Hopefully, the CUWCC will soon compile benchmark information, similar to the AWWA QualServe Benchmarking Report, which will enable the comparisons that show what is best in class and where San Diego stands relative to others.

- ***Water Resources Management Performance Metrics***
  - **Per Capita Change Trends in Water Consumption as Compared to Five Years Ago**

    This measure divides the yearly demand in gallons by the population for that year and then divides that number by 365 to determine the per capita per day consumption figure. Between the Years 2000 and 2005, there has been a 9 percent reduction in water consumption, as shown in Table 22.

Table 22
Per Capita Trends in Water Consumption

Year	Demand (gallons)	Population	Per Capita Per Day
2000	80,266,560,000	1,277,168	172.18
2005	75,182,166,842	1,314,803	156.66

- **Cost Per Acre Foot Saved**

The table below provides information on the various water conservation programs undertaken by the Water Resource Management Group. The table shows costs incurred both by the City and the Water Department per AF of water saved. This information is used to answer questions about costs for AF. People will often want to know the "cost per AF for a specific program," so this table is used to answer those types of questions.

The City Cost is how much the City spent to accomplish the task. The Water Department Cost is sometimes less because either the City's Metropolitan Wastewater Department paid for a portion of the costs or the City received some type of reimbursement from the San Diego County Water Authority or the Metropolitan Water District of Southern California (or both). It is important to remember that the City's budget and expense tracking systems typically will only show the City's expenses, but never the reimbursements/co-funding.

At the end of Table 23, there is a "bottom line" value, because sometimes people will ask what the overall "cost per AF is for the whole Water Conservation Section." It is **not** a sum of just the items above, but looks at a compilation of the above data and various numbers from other activities that occur to come up with an overall Water Conservation "cost per acre foot." For the Water Conservation Program, therefore, the cost per Acre Foot Saved is $72.82 for the Water Department and $112.39 for the City cost.

Table 23
Cost Per Acre-Foot Saved

Action of Voucher	City Cost	Water Dept. Cost	GPD	Lifetime AF Savings	Water Dept. Cost/AF	City Cost/AF
RES ULFT	$23.00	$11.50	28	0.63	$18.33	$36.67
CII ULFT	$37.00	$18.50	48	1.08	$17.20	$34.41
Res HEW	$11.00	$5.50	15	0.27	$20.46	$40.92
CII HEW	$19.00	$9.50	60	0.67	$14.14	$28.27
CII CTCC	$21.50	$10.75	492	5.51	$1.95	$3.90
X-Ray Processor	$150.00	$75.00	2,857	16.00	$4.69	$9.37
Water Broom	$19.00	$19.00	140	1.57	$12.12	$12.12
Residential Survey	$166.00	$92.00	60	0.34	$273.77	$493.98
CII Landscape Survey	$2,624.00	$1,956.00	11,833	$132.55	$14.76	$19.80
WC Program	**$1,631,090.00**	**$1,704,739.00**	**2,089,968**	**23,410.648**	**$72.82**	**$112.39**

- **Water Conservation Expenditures Per Account = $11.16/year or $0.93/month**

  This measure was derived by using the FY 2005 Period 13 expenditures, $2,981,560.21 divided by the number of accounts that existed on June 30, 2005, which were 267, 263 accounts. Thus, water conservation expenditures per account are $11.16/year per account or $0.93/month per account.

- **Residential Per Capita Water Use**

  This measure was derived by taking the Residential Water consumption for FY 2005 which equaled 39,859,616,984 gallons, then dividing by 365 days which equaled 109,204,430 gallons per day divided by the population of 1,314,803, which results in the 83 gallons per day figure. A similar calculation was done for FY 2001 adjusting for consumption and population.

  FY 2001 = 86 gallons per capita per day
  FY 2005 = 83 gallons per capita per day

- **Commercial Landscape Water Use Per Acre of Irrigated Landscape**

  Customers that participate in the city of San Diego Commercial Landscape Survey Program can save from 9 to 31 percent reduction with a 20 percent average reduction.

- **Percent of Department Budget Dedicated to Water Conservation**

  FY 2006 = 0.71 percent, based on:

  Water Department Budget for FY 2006: $412,049, 402
  Water Conservation Budget for FY 2006: $2, 929, 098

- **Water Conservation Savings**

  The following Figure 19 demonstrates that the conservation measures undertaken by the Water Resource Management Group have resulted in the City meeting the water conservation goals of 26,000 AF of water saved by 2005, established in the *City of San Diego Long-Range Water Resources Plan (2002 – 2030).*

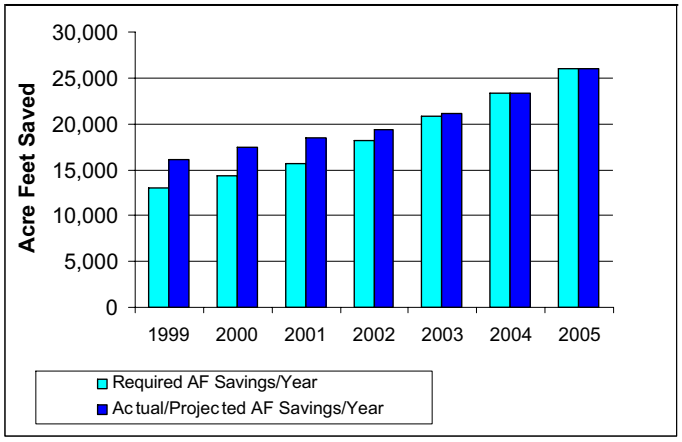

Figure 19 – Water Conservation Savings

- ***Information Sources and Research*** – Specific to benchmarking and best practice information for the Water Resources Management Group, data was reviewed from USEPA's "Guidelines for Water Conservation Plans"; an article by the Ontario Water Works Association Water Efficiency Committee entitled "Water Efficiency Best Practices"; USEPA's 1999 Report, "Cases in Water Conservation"; the City of San Diego Water Department's "Commercial Landscape and Residential Survey Programs, 3rd Annual Report, FY 2005"; AWWA Water Loss Control Committee Report "Applying Worldwide BMPs in Water Loss Control"; AWWA Journal, August, 2003; California Urban Water Conservation Council "Strategic Plan: 2003 – 2005", March 2004; California Urban Water Conservation Council, Memorandum of Understanding, March 2004 Revision; and several websites including Arizona Department of Water Resources, California Department of Water Resources, USEPA Water Efficiency Program, American Water Works Association, and the California Urban Water Conservation Council.

  The following information summarizes some of the findings from the benchmark/best practice review.

  - **USEPA Report**

    The USEPA published a report, "Cases in Water Conservation: How Efficiency Programs Help Water Utilities Save Water and Avoid Costs." These case studies feature the efforts and achievements of 17 water systems that range in size from small to very large. In every case, the results are impressive. The incidence of water conservation and water reuse programs has increased dramatically in the last 10 years. A summary of results from several of the larger utility participants follow:

    Irvine Ranch Water District's primary conservation strategy was a new rate structure instituted in 1991. The five-tiered rate structure rewards water efficiency and identifies when water is being wasted. After the first year of the new rate structure, water use declined by 19 percent. Between 1991 and 1997, the District saved an estimated $33.2 million in avoided water purchases.

    Metropolitan Water District in Los Angeles County is the largest supplier of water for municipal purposes in the U.S. Metropolitan recognized the need for conservation, given increased economic and population growth, drought, government regulations, water quality concerns, and planned improvement programs. Conservation efforts have considerably reduced the cost estimate of Metropolitan's capital improvements. Water savings have amounted to approximately 65,000 AF per year, a savings of 59 MGD.

    Phoenix's conservation program currently saves 40 MGD. Its conservation programs focused on pricing reforms, residential and industrial/commercial conservation, landscaping, education, technical assistance, regulations, and interagency coordination. Phoenix estimates that the conservation rate structure alone saved 9 MGD.

- **AWWA Water Audit Method**

  AWWA's Water Loss Control Committee published a committee report in the August 2003 edition of *Journal AWWA* entitled "Applying Worldwide Best Management Practices in Water Loss Control." This report supports the use of the AWWA Water Audit Method as the best practice method to audit drinking water supplies. A fundamental concept of this method is that all drinking water can be accounted for, via metering or estimation, as either a form of consumption or a loss. Hence, no water is "unaccounted-for." The Water Loss Control Committee recommends against the continued use of the imprecise term "unaccounted-for" water, referring instead to the specifically defined Non-revenue Water, included in the AWWA Water Audit Method. Water losses, manifested as both real (physical) losses and apparent (paper) losses, constitute a major inefficiency in water supplies because water and energy are wasted, revenue is not fully recovered, and water use and loss data integrity are compromised. While many water professionals perceive customer meter inaccuracy as the sole paper loss that occurs in water supply systems, there are a number of other components that result in non-revenue water.

- **Memorandum of Understanding Regarding Urban Water Conservation in California**

  In 1991, more than 100 California urban water suppliers, including the City of San Diego, committed to implementing long-term conservation measures called Best Management Practices, or BMPs, by signing the Memorandum of Understanding Regarding Urban Water Conservation (MOU). Today, more than 200 urban water suppliers, public advocacy organizations, and other interested parties have signed the MOU, forming a coalition known as the California Urban Water Conservation Council (CUWCC). The City of San Diego is a member of the CUWCC. More information on the BMPs or the CUWCC can be found by logging on to www.cuwcc.org.

  The MOU commits the signatory water suppliers to good faith implementation of a program of water conservation which embodies a series of "Best Management Practices" for California's urban areas. It also commits all of the signatories to an ongoing, structured process of data collection through which other conservation measures, not yet in general use, can be evaluated as to whether they should be added to the list of Best Management Practices. This MOU also establishes assumptions for use in calculating estimates of reliable future water conservation savings resulting from proven and reasonable conservation measures. Estimates of reliable savings are the water conservation savings which can be achieved with a high degree of confidence in a given service area. The signatories have agreed upon the initial assumptions to be used in calculating estimates of reliable savings.

  The 14 BMPs below are what San Diego and the CUWCC signatories have voluntarily committed to implement:

  BMP 01: Water Survey Programs for Single-Family and Multi-Family Residential Customers.

BMP 02: Residential Plumbing Retrofit
BMP 03: System Water Audits, Leak Detection, and Repair
BMP 04: Metering with Commodity Rates for All New Connections and Retrofit of Existing
BMP 05: Large Landscape Conservation Programs and Incentives
BMP 06: High-Efficiency Washing Machine Rebate Programs
BMP 07: Public Information Programs
BMP 08: School Education Programs
BMP 09: Conservation Programs for CII Accounts
BMP 10: Wholesale Agency Assistance Programs
BMP 11: Conservation Pricing
BMP 12: Conservation Coordinator
BMP 13: Water Waste Prohibition
BMP 14: Residential ULFT Replacement Programs

The City of San Diego has an active and award winning Water Conservation program. To date the City has implemented 11 of the 14 BMPs. The BMPs that have not been implemented are as follows: BMP 10 is not applicable; BMP 08 is supported by the County; and based on the suggestions made in this Assessment Report, BMP 04 and BMP 11 will be strategies that will likely be undertaken in the years ahead.

- **The City of San Diego Water Department's Commercial Landscape and Residential Survey Programs, 3rd Annual Report, Fiscal Year 2005**

  According to a 2004 U.S Bureau of Reclamation sponsored satellite study, the City of San Diego contains approximately 24,000 acres of irrigated landscape of which 53 percent is ornamental turf grass and groundcover plants, and 47 percent trees and shrubs. Using the Water Resources Landscape Database (WRLD), staff has calculated a water budget for this landscape area. The budget estimates that a maximum of 66,378 AF of water is required to irrigate this landscape each year. In FY 2005, the City Water Department delivered 220,864 AF of water to its metered customers. Of that amount, approximately 115,946 AF (52 percent) was used for landscape irrigation. The difference between the amount of water used for irrigation and the amount required represents the total landscape water conservation potential for the City. The landscape water conservation potential for the City is 35,000 to 45,000 AF per year, 16 to 20 percent of all the water delivered to metered customers in FY 2005. Currently, the City's cost to deliver an acre-foot of water is approximately $500. Therefore, conserving this amount of water would result in avoided costs to the City and its customers of $17 to $22 million each year. Achieving this level of conservation would also result in substantial reductions in energy use. According to the California Energy Commission, 2,300 to 3,200 kilowatt hours (kWh) are needed to deliver each AF of water.

  Since the Commercial Landscape Survey Program (CLSP) began in FY 2003, 1,498 acres of large commercial landscape have been surveyed, 733 water accounts now receive water budgets printed on the water bills, and 12,534 Landscape Watering

Calculator Schedules have been produced countywide. The Residential Survey Program has completed over 38,000 surveys since 1991. The resulting conservation savings from the CLSP program surveys and water budgets is determined by water meter readings. For sites surveyed in FY 2003 and FY 2004, the measured savings equaled 1,165 AF. Table 24 demonstrates that the potential water savings over a four-year savings lifetime, at sites that participated in the CLSP and received water budgets and landscape calculator schedules, is 6,171 AF, and that the total program cost per AF saved is $85.00.

Table 24

Summary of CLSP Data FY 2003 – FY 2005

Water Meter Budgets Produced	Landscape Water Schedules Produced	Acres Surveyed	Total Measured Water Savings from FY 2003 and FY 2004 Surveys in Acre-Feet(1)	Potential Water Savings Projected for Four Years in Acre Feet(2)	Program Expenditures (3)	Cost Per Acre Foot Saved (3) / (2)
733	12,534	1,498	1,165	6,171	$527,009	$85

(1) Measured Water Savings includes data from 545 metered accounts that received water budgets in FY 2003 and FY 2004, and had greater than one year of post-survey water use. See Tables 5 thru 7 for details.
(2) Potential Water Savings include all potential savings from water budgets and landscape calculator schedules, projected over a four-year lifetime. See tables 2 and 5 for details.
(3) Expenditures include database support, cofunding, and fully loaded staff costs. See Table 4 for details.

3.4.3 Key Findings

3.4.3.1 Key Opportunities for Change

- ***Strategy Number 1: Manage the Water Loss Control Program for the Water Department and Perform an AWWA Water Audit***

  - **Benchmark/Best Practice**

    In 1997, the Water Loss Task Force launched its effort to develop a workable water audit structure for drinking water utilities. AWWA participated on this task force, which published its results in 2000, *Performance Indicators for Water Supply Services*. The key concept around this method is that no water is "unaccounted-for." All water supplied is accounted for by using either measured or estimated quantities. A quantity is determined for the major components of water consumption and water loss, and a cost is placed on each component in order to assess its financial impact to the water utility. The AWWA Water Audit Method is effective because it features sound, consistent definitions for the major forms of water consumption and water loss encountered in drinking water utilities. It also has a set of rational performance indicators that evaluate utilities on system-specific features such as the average pressure in the distribution system and miles of water main.

- **Observation**

  The Water Resources Management Group has a very successful program within the Water Department, but recognition of this program and its overall importance to the Department is not well understood by Water Department employees or other City agencies. Like most programs in North America, San Diego's water conservation program tends to focus largely on the end user. More emphasis needs to be placed on the quantification and control of both the Department's treated water loss and a portion, therefore, of revenue. This will require better coordination with other Divisions within the Water Department, especially Water Operations.

- **Suggestions on How to Improve**

  Having a reliable water audit is the foundation of proper resource management for drinking water utilities. Just as banks provide statements of monies flowing into and out of accounts, the water audit displays how quantities of water flow into and out of the distribution system. The use of the AWWA Water Audit Method is considered to be the best practice method to audit drinking water supplies. A fundamental concept of this method is that all drinking water can be accounted-for, via metering or estimation, as either a form of consumption or a loss. Hence, no water is "unaccounted-for."

- **Benefit**

  The Water Resource Management Group would take on a leadership role for Water Loss Management. This would mean working with Field Services, the Meter Shop, and the Water Ops Division to coordinate the needed data and ultimately provide for the Department increased revenues.

- **Competitive Impact**

  More cohesive understanding of the Water Department system.
  Career path advancement.
  Increased revenues for the Department.
  Implementation of a Best Practice

- ***Strategy Number 2: Manage the Water Resources Management (WRM) Budget to Complement the WRM Functional Organization Chart.***

  - **Benchmark/Best Practice**

    Expenditures need to be tracked against performance centers (such as Indoor Activities and Outdoor Activities), not just budget-line items.

    Staff needs to be empowered to run their Activity Group like a small business.

  - **Observation**

    The fundamental difference between public utilities and private contract operators is not so much one of leadership as it is a difference in management approaches to running the business. Public utilities must learn from the competition and develop a team of business-based managers.

Historically, the budgeting process has been established as an audit tool to prevent misappropriations of funds. The system is rigidly constructed to regulate spending, and input from managers is minimized. Thus, managers feel a lack of accountability for a budget into which they have had no input.

In addition, the voucher programs, embedded in many of the section's budgets, need to placed in a central Voucher Activity so that the cost paid out in vouchers can be tracked independently of routine operating costs.

- **Suggestions on How to Improve**

  Empowerment is key to successfully managed utilities. Decision making is driven to the lowest practical levels to coincide with the conduct of the work. Rather than variance reporting as the primary tool for budget control, performance measure becomes that tool. Make each Activity Manager responsible for: understanding what is included in their budget, monitoring the costs for budget compliance; and ensuring that costs are appropriately charged to their budget. This is what the Bid to Goal program has accomplished with the other Divisions in San Diego.

  Activity Managers will need expenditure information on a period basis. When the budgets are prepared based on the functional organization presented in the Bid to Goal, then cost tracking will be more effective.

- **Benefit**

  People are valued for their ability and trusted to deliver quality performance.

- **Competitive Impact**

  Managers will track expenditures and work to create additional savings; moreover, managers will be able to monitor charges that should not be charged to their budget.

- ***Strategy Number 3: Expand Conservation Pricing to Commercial and Multi-Family Water and Sewer Rates***

  - **Benchmark/Best Practice**

    Phoenix, AZ: Water conservation programs instituted in 1986 and 1998 focused on pricing reform, residential and industrial/commercial conservation, landscaping, education, technical assistance, regulations, planning and research, and interagency coordination. Phoenix's conservation program currently saves approximately 40 MGD. Phoenix estimates that the conservation rate structure alone saved 9 MGD.

    Irvine, CA: The Irvine Ranch Water District's primary conservation strategy was a new rate structure instituted in 1991. The five-tiered rate structure rewards water-efficiency and identifies when water is being wasted. After the first year of the new rate structure, water use declined by 19 percent. Between 1991 and 1997, IRWD saved an estimated $33.2 million in avoided water purchases.

- **Observation**

  Tiered rates motivate customers to use water more efficiently, and they emphasize the value of the resource by charging more for excessive use.

- **Benefit**

  A 1999 survey of 12 utilities using a conservation rate structure revealed that yearly average consumption dipped 8 percent and peak-demand-month usage declined 7 percent.

- **Competitive Impact**

  Conservation pricing and rate design can be effective in achieving a number of different conservation objectives such as "shaving" peak demand, temporarily reducing water demand during drought periods, and inducing conservation from targeted customer classes. They have the added appeal of being based in economic principles and market theory. Therefore, conservation pricing, along with public education, can serve to promote efficient use of water resources as well as reduce water use. This type of pricing may also be the only conservation strategy that does not lead to reductions in utility revenue, especially if sound pricing strategies are used. Moreover, AB 2717 is pushing this concept statewide.

  The Performance Improvement Team will need to meet with Business Operations and the Rate Analysis Section of Financial Management to push this idea forward.

- ***Strategy Number 4: Coordinate with the Water Department's Recycled Water Program.***

  - **Benchmark/Best Practice**

    Reclaimed Water Rates: Reclaimed water raises conflicting issues. It is of lower quality than potable water, yet it costs more to produce. Although most people view it as an inferior product, it is gaining popularity because it can reduce demands on potable supplies for such purposes as irrigating golf courses and recharging groundwater. Most utilities want to encourage its use by pricing it fairly, but setting a reasonable price is difficult and complicated. To find out how these issues affect the economics of reclaimed water supplies, 23 utilities in Arizona, California, Florida, Hawaii, and Texas were surveyed regarding their rates and pricing strategies. An article in the August 1999 AWWA Journal, *Setting Reclaimed Water Rates*, found that about half of the survey participants based their reclaimed water rate on some percentage of their potable water rate. Some utilities end up pricing reclaimed water below the cost of service in order to promote its use.

  - **Observation**

    The City of San Diego has built the North City Water Reclamation Plant and the South Bay Water Reclamation Plant. These plants treat wastewater to a level suitable for irrigation, manufacturing, and other non-drinking or non-potable purposes. The North City Plant has the capability to treat 30 MGD and the South Bay Plant can treat 15 MGD. There has been no beneficial reuse from South Bay, but reuse should start in

early 2006. For the North City Plant, FY 2005 beneficial reuse was 4,294 AF of recycled water (July 1, 2004, to June 30, 2005). There is a performance provision goal for beneficial reuse that was set by an incentive agreement with the Metropolitan Water District. That target is for a beneficial reuse goal of 6,475 AF/year by June 30, 2007.

Since one of the goals of the Water Resources Management Group is to increase participation in the new Commercial Landscape Incentive Program and Weather Based Irrigation Controller Program, marketing efforts need to be dramatically increased. By reaching a larger number of customers through a mass-marketing campaign, it is anticipated that enough interested parties will be identified and that the California State Proposition 13 funds allocated for these programs will be distributed. The measured conservation savings achieved by the CLSP represents approximately 2 to 3 percent of the landscape savings potential citywide; and, at a total program cost of $85 per AF, these programs have proven to be the lowest-cost alternatives for extending water supplies in the region.

- **Suggestions on How to Improve**

  Linking the opportunities for the new Commercial Landscape Incentive Program and Weather Based Irrigation Controller Program and the recycled water program as both groups try and partner with residents, business, agencies, and government is recommended. Both activities need to provide tools to expand the public's awareness, knowledge, and involvement of those who will be served and present information in a way that is understandable and accessible to all San Diegans.

  What could be more powerful to the City's water conservation program than to convince several large commercial landscape clients to not only reduce potable water use through conservation measures, but to completely replace all potable water use with reclaimed water. These two Water Department programs need to explore way to work together, not completely in parallel efforts.

- **Benefit**

  Provide a unified Water Department message regarding water conservation and recycled water.
  Optimize field visits so both programs can be explained.
  Bottom line = Decrease potable water usage.

- **Competitive Impact**

  Avoided energy costs.
  Extend the region's potable water supply.

3.4.3.2 Identified Competitive Costs

Table 25 summarizes the historical and competitive costs of the Water Resources Section. The competitive costs were developed based on a review of budget and costs history over the past three years. The personnel and fringe benefits costs are based on the FY 2006 appropriation. The competitive costs for non-personnel expenses were largely calculated based on a three-year

averaging of Period 13 costs adjusted to FY 2006 dollars, with a few exceptions. For major cost items, HDR applied best practices and innovative performance improvement ideas to set the competitive level, where appropriate.

Table 25
Water Resources - Competitive Level

Description	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
Personal Services	1,027,637	1,027,900	0.0%	$ (300)
Fringe Benefits	536,162	536,200	0.0%	$ -
Supplies and Services	1,240,189	1,037,700	16.3%	$ 202,500
Data Processing	111,299	194,900	-75.1%	$ (83,600)
Energy Resources/Utility	13,811	21,700	-57.1%	$ (7,900)
Outlay	-	3,700		$ (3,700)
Total	$ 2,929,098	$ 2,822,100	3.7%	$ 107,000

3.5 DIVISION ADMINISTRATION

3.5.1 Description of the Division Administration Group

There are six budgeted positions in the Administration Group. These include the Deputy Director, Assistant Deputy Director, one Senior Management Analyst, one Word Processing Operator, one Supervising Public Information Officer, and one Program Manager whose position reports to the Department Directors for Water and Wastewater.

3.5.2 Assessment of Current Activities

3.5.2.1 Interviewed Key Staff

Interviews were conducted with a cross-section of staff from the Administration Group. The individuals were very forthcoming with information regarding their activities. The information provided in these interviews was instrumental in development of some of the ideas for competitive improvements and best management practices.

3.5.2.2 Identified Current Budgets and Costs History

Figure 20 presents the Division Administration budget performance for FY 2003 through FY 2006. Budgeted costs are shown to vary from year to year with new programs transferring into and out of Administration.

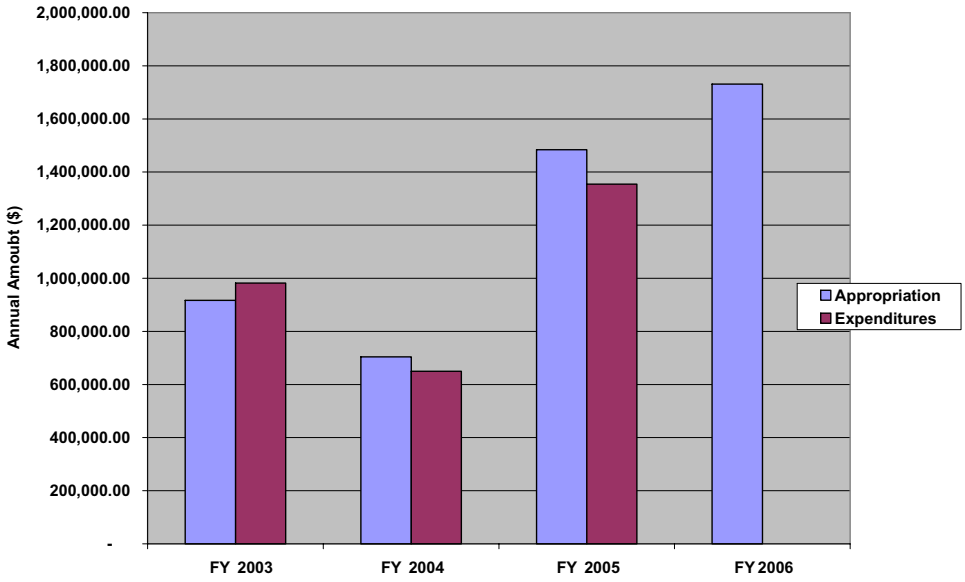

Figure 20 - Administration Budget Performance (FY 2003-2006)

Figure 21 presents the FY 2006 Administration cost distribution by organizational sections.

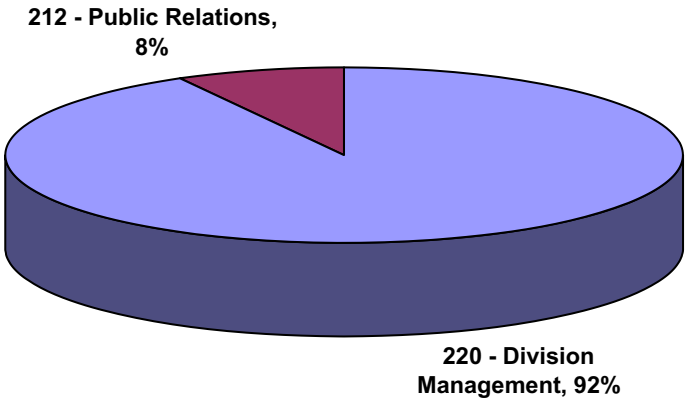

Figure 21 - Administration Cost Distribution by Section (FY 2006)

Figure 22 presents the FY 2006 budget distribution. Personnel costs and fringe benefits account for 44.2 percent of the total costs. Supplies and Services Costs represent 46.9 percent of the budget, due mainly to the rent paid for office space for the section. HDR Engineering, Inc. of the Carolinas

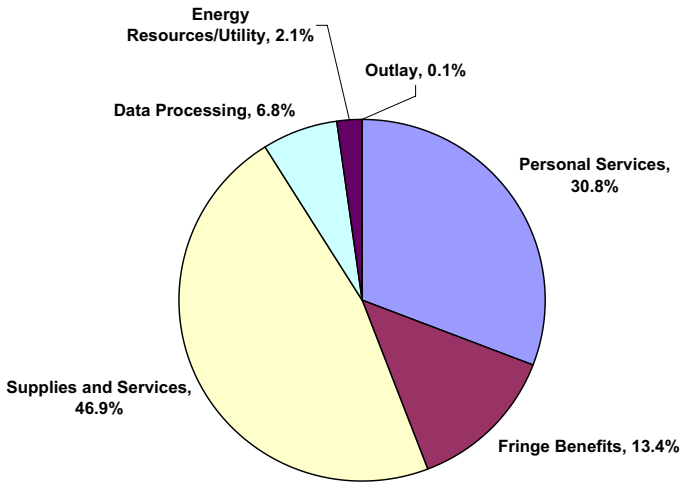

Figure 22 - Administration Budget Distribution by Object Account (FY 2006)

3.5.2.3 Reviewed Benchmarking and Best Practices information

Specific to benchmarking and best practice information for the Division Administration Group, data was reviewed from the American Water Works Association (AWWA) Excellence in Action: Water Utility Management in the 21st Century, 2001, and the AWWA *QualServe Performance Indicators Benchmarking Study*, October 2004.

- ***Division Administration Performance Metrics*** – Four Division Administrative performance indicators were listed in the HDR scope for review. The Division Administration results that were provided to HDR in the data request are as follows:
  - Total Customer Support Cost per account = $114.21.
  - Total FTE per 1,000 accounts = 0.8.
  - Customer Satisfaction Index = Not currently tracked.
  - Complaint Rate = Not currently Tracked.
- ***Information Sources and Research*** – This section presents the information sources used in the HDR analysis of possible best practice ideas for Division Administration. The following sources were used:
  - AWWA, *San Diego Water Department QualServe Performance Indicators Water and Wastewater Utilities Survey Benchmarking Summary*, October 2004, prepared by the American Productivity and Quality Center.
  - AWWA, Benchmarking Performance Indicators for Water and Wastewater Utilities: Survey Data and Analyses Report, 2005
  - AWWA, Excellence in Action: Water Utility Management in the 21st Century, William C. Lauer, Technical Editor, 2001.

- AMWA & AMSA, Creating High Performance Business Services, A Public Sector Handbook, 2000.
- AWWA, The Changing Water Utility: Creative Approaches to Effectiveness and Efficiency, 1998

3.5.3 Key Findings

3.5.3.1 Key Opportunities for Change

- ***Strategy Number 1: Budget Accountability*** – Budget each Activity Group at a competitive cost level and accumulate all the Divisional contingencies in the Division Administration budget. Make each Activity Manager responsible for: understanding what is included in their budget, monitoring the costs for budget compliance, and ensuring that costs are appropriately charged to their budget. Any Divisional contingency should be consolidated into the Divisional Administration budget so that the Deputy Director can set priorities for contingency expenditures.
- ***Strategy Number 2: Division-Wide Scorecard*** – Just as each Activity Group will have a Scorecard to monitor future performance, so should Division Administration track several performance indicators to assess how the Division as a whole is doing. Performance indicators are performance measures that have value for one or two types of inter-organizational comparisons. These are useful as a gauge of how a utility or activity within a utility stacks up to others and how the performance of one is changing relative to others with data in the system. Data in these systems, such as AWWA's QualServe, is far too limited to make a determination that one organization is better than another.

  For the Customer Support Division-Wide Scorecard that will be administered by the Administrative Group, HDR suggests using three of QualServe's Organizational Development Performance Indicators, as follows:

  - **Organizational Best Practice Index:** This indicator is particularly useful for identifying potential benchmarking partners. Correlations with other indicators might show that performance in other areas is related to improvements in improved management practices.

    Performance Measurement System: An effective performance measurement system will:

    - Be multidimensional, utilizing appropriate measures for internal and external stakeholders, supporting both routine work and special projects, and offering integrated measurement systems responsive to the needs of line employees, management, and executives.
    - Have a process for establishing targets, usually in conjunction with the budgeting process, that reflects broad internal, external, financial, and improvement goals in strategic and operating plans.
    - Provide measures focused on quality, effectiveness, and effectiveness.

- Include a routine monitoring and reporting process. Tools such as the Kaplan and Norton, Balanced Scorecard offer useful outlines for organizing a measurement system.

Customer Involvement Program: This is a formal program for relating with customers in a way that assures they participate effectively in the utility management process. Examples of good practices include:

- Offering educational programs and materials and assessing their effectiveness.
- Providing customers with a list of subject matter experts to answer their questions.
- Conducting customer satisfaction surveys and responding to what is learned.
- Soliciting input on projects and programs under consideration, in planning, or construction.
- Identifying and confirming customer priorities both in terms of topic and breadth and degree of concern.
- Resolving customer issues and complaints.

Continuous Improvement Programs: An organizational continuous improvement program will help utility employees at all levels examine their practices with the goal of identifying and implementing improvements to service quality, effectiveness, and efficiency. Good practice would include examining the following:

- ISO 14001.
- Work Process documentation programs.
- Self-assessments such as those offered through QualServe.

- **Training Hours per Employee Per Year:** The purpose of this indicator is to measure the quantity of formal training employees are actually completing. This measure is intended to reflect the organization's commitment to formal training as a means of improving employee knowledge and skills. It does not address the effectiveness or efficiency of the training program. Use of this indicator in comparative analysis will indicate if formal training is consistent with other utilities.
- **Employee Health and Safety Severity Rate:** The purpose of this indicator is to quantify the rate of employee days lost from work due to illness or injury.

- ***Strategy Number 3: Establish Turnover Rate Performance Measure for Division-Wide Scorecard*** This metric measures the ability of the Division to retain valuable and trained employees. It serves as an indicator of the ability of the Division to create a desirable place to work. The extent that turnover rate impacts the overall efficiency of the Division can be measured in funds spent on recruiting, hiring, and training new people.

- ***Strategy Number 4: Expand Communications Program***: Listed below are some of the tools that will be considered.

- ***Newsletter*** – The main communications tool to keep the employees informed will be a newsletter. The content will include a section on each of the CSD's current three major initiatives: Bid-to-Goal (BTG), Automatic Meter Reading (AMR), and Customer Information System (CIS). It is important to include all the current initiatives that the Customer Support Division is undertaking so that the employees will have a better understanding of the changes and improvements that will be implemented in the months ahead. Each edition of the newsletter will contain a section on new technology developments, employee highlights, and committee meeting briefs. Monthly newsletter updates will be e-mailed to employees, posted on specially-designated bulletin boards, and supervisors will hand out hard copy versions with payroll.

- ***Logo Development*** – A logo will be created through an employee contest to integrate BTG into collateral materials and serve as a visual indicator and reminder to employees and the public that the Customer Support Division is working towards a common goal, to be "Best-in-Class." Newsletters, program brochures, posters, and all other printed, web-based, audio visual materials will contain the logo.

- ***Communicate Performance*** – By letting people know where they and their Activity Group stand, it is clear that what they do matters. Monthly performance posters will be displayed for each section to track their progress in accomplishing their pay-for-performance and budgetary goals once the Business Plan is completed. A Division-wide performance poster will also be displayed, providing an overall review of how the entire Division is doing in meeting its goals.

- ***Communicate Face-to-Face*** – The cause of many problems in an organization is lack of communication, which makes employees feel left out, threatened, and not valued. Communication needs to be face-to-face to be most effective. Section tailgates and staff meetings will be conducted, allowing supervisors and employees to communicate directly on BTG. Staffs at all levels perform best when they know how their individual actions and the actions of their work group impact the organization and how plans for change affect their work group.

3.5.3.2 Identified Competitive Costs

Table 26 summarizes the historical and competitive costs of the Administration Section. The competitive costs were developed based on a review of budget and costs over the past three years. The personnel and fringe benefits costs are based on the FY 2006 appropriation. The competitive costs for non-personnel expenses were largely calculated based on a three-year averaging of Period 13 costs adjusted to FY 2006 dollars, with a few exceptions. For major cost items, HDR applied best practices and innovative performance improvement ideas to set the competitive level, where appropriate.

Table 26

Division Administration - Competitive Level

Description	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
Personal Services	532,705.00	532,700	0.0%	$ -
Fringe Benefits	232,206.00	232,200	0.0%	$ -
Supplies and Services	811,928.00	466,600	42.5%	$ 345,300
Data Processing	116,933.00	5,900	95.0%	$ 111,000
Energy Resources/Utility	35,660.00	44,100	-23.7%	$ (8,400)
Outlay	2,019.00	800	60.4%	$ 1,200
Division Contingency		366,500		$ (366,500)
Total	1,731,451.00	1,648,800	4.8%	$ 82,700

APPENDIX 1

LOG OF DATA RECEIVED FROM CITY OF SAN DIEGO CUSTOMER SUPPORT DIVISION AND OTHER DATA SOURCES

1. Period 13 expenses for Fiscal Year 2003 for Administration, Field Services, Water Conservation and Meter Services.
2. FY 2004 to 06 Divisional Expenditure Analysis (and listing of accounting used to offset unanticipated expenses in prior years).
3. Period 13 FY 2004 Final Water expenditures (see Log I, item #21 for FY 2005 report).
4. FY 2005 Period 13 Expend by Cat. – Dept. Summary and Cust. Supp.
5. FY 2004 Period 13 Expend by Cat. – Dept. Summary and Cust. Supp.
6. FY 2003 Period 13 Expend by Cat. – Dept. Summary and Cust. Supp.
7. FY 2005 Summary of Division Expenditures Year-End (diff from above).
8. FY 2004 Summary of Division Expenditures Year-End (due to charges).
9. FY 2003 Summary of Division Expenditures Year-End (hitting at Div level).
10. FY 2004 to 05 Period 13 expenses submitted earlier in September for Administration, Field Services, Water Conservation, and Meter Services.
11. FY 2004 to 05 Period 13 expenses submitted earlier in September for Scott Mercer for Customer Support Office.
12. FY 2003 Recycled Water Period 13 expenses to be added to Meter Shop FY 2003 Period 13 expenses.
13. FY 2004 Recycled Water Period 13 expenses to be added to Meter Shop FY 2004 Period 13 expenses.
14. FY 2005 Recycled Water Period 13 expenses to be added to Meter Shop FY 2005 Period 13 expenses.
15. Customer Support Division - Organizational Chart.
16. Divisional Personnel Status and Vacancy Report.
17. Recycling Program Performance Template (job description).
18. Irrigation Specialist Performance Template (job description).
19. Customer Support Office - Overtime and Postage analysis D. Dee spreadsheet.
20. Postage Study Spreadsheet.
21. Water PBB Key Performance Measures (published in Budget Document – see http://www.sandiego.gov/budget/ for electronic copies of Water Budget.
22. Customer Service (Office) – Optimization Files (see Log I - #7).
    a. Shut-Off Processes.
    b. Customer Inquiry – Misread Proposed Process.
    c. Customer Request – Proposed Process.

d. Deferment Payment Process Should-be Process.
e. Extensions Proposed Process.

23. For Water Systems Tech classifications, reference Operations Division Water System Tech reports (not provided here).
24. Proposed changed protocols for the billing Policy Manual (Pending).
25. Administrative Regulations.
26. Municipal Code – Sections applying to Customer Support.
27. Personnel Manual (for the City of San Diego).
28. Reward and Recognition Program for the Water Department.
29. California Urban Conservation Council memorandum that City is participant to (128 pages) link: http://www.cuwcc.org/memorandum.lasso.
24. Water Conservation Report from Mark Broder to Ellen Barrett submitted in September.
25. Organizational Survey – Organization Chart (employee phone list) submitted earlier in September.
26. Administration Activity Descriptions.
27. Customer Support Benchmarking Data.
28. Field Services Benchmarking Data.
29. Water Conservation Benchmarking Data.
30. Customer Support Office Benchmarking Data.
31. Customer Support Division FTE, Salary and Fringe Spreadsheet.
32. Domestic Water Meter Section Work Standards Operating Procedures memo.
33. Non-Discretionary Expenses (Allowables) Fiscal Year 2003.
34. Cross-Connection Control Section Work Standards and Operating Procedures memo.
35. City of San Diego Memorandum to Commercial Meter Section Employees, from Lester Jennings, Principal Water Utility Supervisor via Clement Harris, Senior Water Utility Supervisor, for Commercial Meter Operating Procedures.
36. Water Department, Customer Support Division, Meter, Recycled O&M and Cross-Connection Section, Organizational Chart.
37. Water Conservation Activity Descriptions and Benchmark back-up data.
38. Backflow Section Tracking, August 2004-2005 (four copies).
39. Commercial Meters Tracking '05 (four copies).
40. Domestic Meters (four copies).
41. Domestic Meter Section Productivity, January-August 2005 (four copies).
42. Commercial Meters Tracking '04 (four copies).
43. Customer Information System, Skipped-Read Meters by Reason for August 2005.
44. Water Department #760, Customer Services Division #020 Activity Index.
45. Misreads (1).

46. CIS Meters by Size and Application as of 06/30/05.

47. Customer Information System, Month End Meter Readings Route Summary – Route 010 – 06/30/05.

48. Cross-Connection Section Survey Staffing Study (one page).

49. The City of San Diego, Chart of Object Accounts, January 31, 1986, prepared by Office of City Auditor and Comptroller.

50. Customer Support Division Field Services and Investigation – FY 2003 – FY 2006.

OTHER REFERENCES

1. AWWA*, San Diego Water Department QualServe Performance Indicators Water and Wastewater Utilities Survey Benchmarking Summary*, October 2004, prepared by the American Productivity and Quality Center. (Total participation includes 202 utilities in water ,wastewater or combined.)

2. AWWA, Benchmarking Performance Indicators for Water and Wastewater Utilities: Survey Data and Analyses Report, 2005.

3. AWWA, Excellence in Action: Water Utility Management in the 21st Century, William C. Lauer, technical Editor, 2001.

4. AMWA & AMSA, Creating High Performance Business Services, A Public Sector Handbook, 2000.

5. AWWA, The Changing Water Utility: Creative Approaches to Effectiveness and Efficiency, 1998

6. USEPA's "Guidelines for Water Conservation Plans".

7. Ontario Water Works Association Water Efficiency Committee, "Water Efficiency Best Practices".

8. USEPA's 1999 Report, "Cases in Water Conservation".

9. The City of San Diego Water Department's "Commercial Landscape and Residential Survey Programs, 3rd Annual Report, FY 2005".

10. AWWA Water Loss Control Committee Report, "Applying Worldwide BMPs in Water Loss Control," AWWA Journal, August, 2003.

11. California Urban Water Conservation Council, "Strategic Plan: 2003 – 2005," March 2004.

12. California Urban Water Conservation Council, Memorandum of Understanding, March 2004 Revision.

13. City of San Diego Water Department, Water Conservation Report FY 2005 Update, October 2005.

14. Sewerage & Water Board of New Orleans (S&WB) Employee Bid, March 2002.

15. Reengineering Call Centers for the Year 2000 – Principles and Processes, by Jeff Hiatt.

16. Call Center Best Practices Benchmarking Reports, by Prosci Research.

17. AWWA Manual of Water Supply Practices-M6, Water Meters-Selection, Installation, Testing, and Maintenance.

18. AWWA Manual of Water Supply Practices-M36, Water Audits and Leak Detection; were reviewed as part of this analysis.

19. *Benchmarking Meter Reading Performance: Understand Your Improvement Opportunity*, by Christine Kozlosky, Vice President, Ascent Group, Inc, July 2005.

APPENDIX 2

SUMMARY OF CUSTOMER SUPPORT DIVISION EMPLOYEE INTERVIEWS[1]

1. What expectations and concerns do you have for this Bid to Goal initiative?

Expectations and what's Working Well:

- Provide better customer service.
- This will be an opportunity to improve the organization and achieve some operational efficiency.
- Hope BTG will identify areas of improved customer service and answer question: What do we want to be?
- Rerouting and balancing routes is important to optimize effectiveness of meter readers.
- Improve customer service in all areas.
- Customers are both internal and external…the ratepayers are our main customers, but internally we should all treat each other as customers.
- Need realistic goals to show performance improvement.
- Do not expect drastic cost reductions.
- Vacancies are needed to get work done but some vacancies could be changed to a different position. With Council directive to not hire for 5 years, Customer Support does not want to give up vacancies.
- Managers have a fair amount of accountability for budgets. Vacancies result in their ability to come in under budget in many cases. Herein lies the challenge for BTG.
- Expect streamlining, better structure, and accountability from BTG.
- Elimination of duplicate work orders.
- Backlog of domestic work orders is almost done.
- SWIM: Has some bugs, but a good tool.
- Training requests and on the job training.
- Water conservation is an award winning program; contributions to saving water and ultimately saving the City money, should complement the BTG process.
- BTG will hold us accountable for a day's worth of work.
- Increase work pride and ethics.

Concerns and What's Not working Well

- Not good at quality customer support; lack good training; do not give people correct tools.
- Meter Shop productivity.
- Communications with Water Operations.

[1] This memorandum summarizes findings from the interviews, while retaining the confidentiality of those interviewed.

- As-built maps not kept up to date.
- Record keeping in Meter Shop not that great. Do not complete the Work Orders. A job is not complete until the information gets into system and can be billed.
- Need more employee recognition.
- If we do good job in Meter Reading that starts effectiveness...need to be able to reward good performance.
- Need more cross-training with other Activity Groups.
- CSRs have many different duties…how will the different groups be compared, and how will Pay for Performance work?
- Big turnover in Customer Service.
- How protect Gainsharing and BTG from political arena with all the political and financial problems in the City?
- No succession planning.
- Fast past schedule to get BTG done.
- The CIS SWIM interface is a problem.
- People issues are not resolved which leads to big morale problem for employees; some managers lack follow-thru on issues.
- A lot of knowledge is not documented in Customer Service and needs to be prior to retirements of key individuals.
- No career path in Customer Service; titles need to be revamped to reflect supervision; pay needs to be raised; maybe have people spend ½ day on calls and ½ day on bills. Would like training on what goes on in other parts of the Customer Support Division and the Water Department as a whole so can be a better CSR.
- For a year a Customer Service Committee worked on an optimization study; this was completed in December; nothing ever happened.
- Problems with coverage and back-up when CSRs are sick or on vacation. Need better cross-training.
- High estimated bills lead to increase in call center and frustrated customers.
- Lack of follow-up in discipline.
- Not very good quality control on work order completion and thoroughness of work order documentation.
- Lack of accountability.
- SWIM not working well. It impacts scheduling and productivity.
- Limited staff…too many open positions.
- No rewards for good work…simple thank you notes would be good.
- No real advancement opportunities.
- Outdated computers and programs.

2. What changes are envisioned over the next five years that need to be factored in to the BTG program development?

- AMR.
- CIS.
- Need to train folks better.
- Strong mayor form of government may result in more political decisions.
- Continuing financial management problems may result in higher costs to purchase General Fund services.
- R&D for new programs.
- Improved interface with customers.
- GPS in all vehicles.
- Uncertain political future.
- Improved Web access for employees and customers.
- Based on recent employee satisfaction survey, need to be working on improved communications, more of a business outlook as a work culture, and a changed vision for the future.
- Urban Forestry program was initiated by Mayor Murphy; unclear what new mayor will do.

3. What challenges do you envision for the development of a gain-sharing program for this effort? Are there other incentives you would like to see implemented as well?
   - Identifying who is responsible for cost savings.
   - Reduced training programs result in lower performance and job knowledge.
   - Other incentives: pay for performance; time off; employee of the month. For the Meter Readers, the finish your route and go home concept is likely to end. Inflexible rules for CSRs do not allow them to offer billing adjustments.
   - Need a way to incentivize CSRs to complete a call versus sending to field investigation...possibly a shared performance standard would help.
   - $$ to support an effective Gainsharing program.
   - Pay for performance is good
4. What are some specific examples of policies or procedures, organizational issues, or current efforts that currently prevent employees from performing their jobs in an effective and efficient manner?
   - Bumping policy impacts... Not having the right people in the right job.
   - Council took payment extension authority away from CSRs.
   - SOPs not very updated. Hopefully, this will be an opportunity to tie to BTG.
   - Need manuals to show employees how things really work.
   - Lack of recognition for employees.
   - Competing resources…more work less staff.
   - Some staff needs better communication skills, both oral and written.
   - CSRs have no authority to grant customers extra time for bill payment.

- Investigators sent out more than once to investigate the same problem presented through different requests and then document different findings, and these discrepancies are not questioned by the supervisor.
- Inability of some supervisors to use computer systems/research.
- Incentive program for meter readers needs to be changed; the proposed reclassification may be the solution since they would get $1.50 more per hour as Field Reps.
- Policies that are in place are not enforced, especially disciplinary actions.
- Get rid of the "us" versus "them" attitude in the section.
- Would like to know more about expenditures; not in the loop.
- Reclassify Code Compliance Officer to revenue Recovery Officer…that is the work we do, but not getting the pay.
- Inability to be able to print from the EC2 screen.

5. What current reports or tools are used to inform management or track jobs or efficiency and effectiveness?
   - Efficiency measures are tracked; less emphasis on effectiveness.
   - Call center has adequate reports
   - Performance measures in Customer Service reward quantity of calls answered over quality of response given. This needs to change.
   - Track everyone's productivity in Meter Shop; this is compiled into a report.
   - Variance reports.
   - SWIM Maintenance Management System is working better
   - Installation order system (IOS) integrates well with Work Assignment Order System (WAO); when problems occur, usually data entry error.
   - While there are work standards, they are not kept up to date.
   - Manual of Cross-Connection Control 9th Edition.
   - Water Resource Management does an annual report.
   - Water Resource Management has an Employee Procedures Workbook which is updated with handouts and training sessions to staff; also staff provide a bi-weekly status report to their Supervisor.
6. What is your overall impression of the Bid to Goal program in other City Departments (METRO, Water Ops, and Environmental Services)?
   - Lot of work.
   - Hopeful that this will be a tool to improve.
   - Encouraged by the possibility of BTG.
   - Island mentality within Department: one Division might not provide services that are a cost for it but a benefit for the other.
   - Worthwhile; productivity improvements.

- Need to be careful about performance measures: if goal is to repair all leaks within 2 weeks, a crew may be inclined to fix a slow leak on Day 13 versus a faster leak on Day 1 just to meet their performance goal.
- Very impressive.
- Staffing goes down over time.
- Great effort.
- This fast track model should be good model for other parts of the City…most of the "kinks" should have been worked out in the previous programs.

7. Are there any "Sacred Cows" that we need to understand? (i.e., items/issues that may need change, but have organizational/cultural/political barriers preventing change)
   - Transfer of revenue from enterprise fund to general fund.
   - Urban Forestry program.
   - Customer Service Reps lack of authority to give extension on bills.
   - Lid replacements from Water Ops. They replace lids with the wrong type.
   - Lack of discipline and structure.
   - Hiring practices, specifically lack of performance testing and background checks. People are too easily assigned/hired without confirming capability/ability to perform job.
   - Customer service concept keeps one from telling someone what you really think.
   - Required to use SDDPC for all data support; they are inefficient and costly and frequently do not deliver service in a timely fashion.
8. Is there any specific performance measure you would like to see used as we compare the Customer Support Division to other similar agencies?
   - Customer satisfaction survey; do not do now.
   - Should we separate out costs for employees on long-term injury/disability status?
   - Measure # of sick days and/or paid time off.
   - Not looking at effectiveness in many of the current performance measures.
   - $$ spent on water conservation budget/entire Department budget
   - $$ spent on conservation/1000 customers.
   - $$ conservation/acre-foot.
   - Not all groups in Customer Service, at least, have performance measures…need to develop a more balanced set of measures.
   - Skips and errors in meter reads.
   - Reads per day. How does 500 reads/day benchmark with others?
   - Tests/day.
   - Repairs/day.
   - Replacements/day.
   - Investigations/day.

- Backlog outstanding.
- Cost savings of water saved per water conservation group intervention.
- Number of customers served per staff member in Water Conservation..

9. What constraints keep the WD from optimizing costs or service level further?
   - Draining of revenues by General Fund.
   - Budget.
   - Change in the workforce: physically workforce is not as able and technically not as capable.
   - Civil service prevents firing underperforming employees.
   - Some SLAs create large cost for questionable return.
   - SOPs are out of date…no written repair procedures, for example.
   - SWIM not working well.
   - Training needs to be improved.
   - People feel safe in their jobs.
10. If there was just one thing that you could change in the Customer Support Division, what would it be?
   - Need to treat our customers as customers. How can we instill this exceptional level of customer service in our employees? If customer could choose us, they would.
   - Need to establish trust and confidence in the customer.
   - Establish major account executives that monitor big customers.
   - Meter readers and meter shop employees need to work more closely together.
   - Make other groups within Customer Support aware and more accountable for billing and customer service.
   - Protect meters and revenue base with a sealing program for the meters.
   - Cut out the "middle-person" in many procedures in Customer Service…refund process needs to be looked at.
   - Provide City vehicles to the meter readers and move to a field office.
   - Get input from all lines of supervision and lower levels. Study the recommendations and implement appropriate items.
   - Would like to have an IT System Analyst assigned to the Meter Services site versus current system of relying on someone coming from downtown.
   - Enforcement of work rules.
   - Motivation of personnel.
   - Would like to see more open communication between Alex Ruiz, Mike Bresnahan, and Frank Belock, and then have that communicated to employees.
   - Judge everything we do by 2 tests: What does our customer need? And how will this provide better customer service?

11. How do you prefer to stay up-to-date on this project? Special briefings? Attend Steering Committee meetings, occasionally? Alex Ruiz communications?
    - Meetings.
    - Briefings.
    - E-mail, but tend to not read them as well.
12. Are there any other issues you would like to discuss?
    - Retirements…brain drain.
    - SOPs need to be updated.
    - Think of ourselves as a business and look at increasing revenues and return on investment.
    - Encourage staff to identify challenges and offer solutions. Don't shoot the messenger.
    - Develop an environment where employees at all levels work together with an expectation for success rather than looking for cover in the event of failure.
    - Public misperceptions about what employees do.
    - Need more cross-training and communication about what different jobs we do in Customer Support and how we all fit into the "team."

APPENDIX 3

CUSTOMER SUPPORT DIVISION BID TO GOAL PLANNING STEERING COMMITTEE MEMBERS AND MONTHLY MEETING SCHEDULE

Table 3.1
Planning Steering Committee Members

Name	Representing
Alex Ruiz	Water/CSD/Deputy Director
Mike Bresnahan	Water/CSD/Assistant Deputy Director
Delia Dee	Water/CSD/ Project Manager
Luis Generoso	Water/CSD/Water Resources Management
David Akin	Water/CSD/Field Services and Investigations
Rosemary Metoyer	Water/CSD/Customer Service
Roger Holly	Water/CSD/Meter Shop
Sharon Brown	City of SD Financial Management
Bryan Green	Water/Safety
Nancy Roberts	MEA
Ed Lehman	AFSCME 127
Ellen Barrett	HDR Team
Ken Barrett	HDR Team
Dave Foltz	HDR Team
Thomas Jakubowski	HDR Team
Jeff Szytel	HDR Team

PROJECT MONTHLY MEETINGS

The Customer Support Division Bid to Goal Planning Steering Committee monthly meetings established the schedule for the key milestones for this project. The schedule is as follows:

- Wednesday, September 7, 2005: Kick-off meeting with review of Bid to Goal program.
- Thursday, October 6, 2005: Update on project status; overview of Performance Improvement Team (PIT) formation, Business Plan, and Performance Measures.
- Tuesday, November 8, 2005: Assessment Report review.
- Thursday, December 8, 2005: PITs present early findings.
- Thursday, January 12, 2006: Final PIT team proposals reviewed by Steering Committee.
- Thursday, February 9, 2006: Review of Business Plan and discussion on Employee Bid (Bid) and Memorandum of Understanding (MOU).
- Thursday, March 9, 2006: Review of Bid and MOU.
- Thursday, April 6, 2006: Review of early implementation of Performance Measures; Other issues on implementation including schedule for Bid and MOU City Council Approval.
- Thursday, May 4, 2006: Implementation issues and status of Bid and MOU approval.
- Thursday, June 8, 2006: Final meeting before Bid to Goal implementation begins July 1, 2006.

APPENDIX 4

BRIEF RESUMES OF HDR TEAM MEMBERS

KENNETH M. BARRETT, P.E.

Ken Barrett, Project Manager for this Assessment Report, is leading the Bid-to-Goal effort for the Field Services group and assisting with the Meter Services group. He is HDR Engineering, Inc.'s National Director of Productivity and Quality and has 32 years of experience in water and wastewater projects for municipalities and regional water agencies.

Ken was Project Manager for the recently completed San Diego Water Operations Division Bid to Goal project. He was the technical lead for the San Diego Metropolitan Wastewater Department's Operations and Maintenance Division's competitive initiative where the Bid to Goal program was first employed. In 1996, he assisted the employees at the Otay Water Treatment Plant on their employee bid for the Managed Competition.

Ken Barrett has a BS in Civil Engineering and a MS in Environmental Systems Engineering from Clemson University. He was an officer in the US Army Corps of Engineers serving as an instructor at the US Military Academy at West Point and as a Battalion Quality Control Officer in Vietnam.

Mr. Barrett has served in leadership roles on Bid to Goal programs for Charlotte and High Point, NC, since 1995. He assisted public employees in 2002 on the Managed Competition for water, wastewater, and customer services for the Sewerage and Water Board of New Orleans. He has served as technical lead in privatization projects for Cranston, RI, and Springfield, MA. He has conducted Competitive Assessment studies for other large water and wastewater utilities including: the Charlotte-Mecklenburg Environmental Management Division; Massachusetts Water Resources Authority; Miami-Dade County Water and Sewer Department; King County, WA, Wastewater Treatment Division; and Kansas City, MO, Water Services Department.

Ken has presented numerous papers on municipal competitiveness issues at local and national AWWA, WEF, and APWA conferences, including, most recently, a presentation at he APWA Congress in Minneapolis with Mark Stone on the successes of the Bid to Goal Program at the San Diego Water Department.

ELLEN R. BARRETT

Ellen Barrett is leading the Bid to Goal effort for the Water Resource Management group and assisting with the Customer Service group. She has a special combination of diversified technical experience combined with an excellent management consulting reputation in the public works field. Ellen's more than 25-year career, which began with the New York State Energy Office, has included large multidisciplinary consulting projects with the City of New York, Los Angeles, and San Diego and the US Navy, as well as numerous other large and small public sector clients throughout the US. She merges a strong technical background in water, wastewater, and solid waste with an excellent understanding of the legal, institutional, procurement, and regulatory issues that affect utility management. Additional strengths include leadership, project management, consensus building, and communications.

Mrs. Barrett has worked with the City of San Diego since 1996. She was the Project Manager and wrote the Employee Bid for the Otay Water Treatment Plant's proposal for the 1997 Managed Competition; she was the Project Manager for Metro's Bid to Goal effort in the O&M Division; she worked on Metro's Collection System Bid to Goal and developed the Performance Metrics Handbook; and for the last two years she worked on the Water Department's Operation Division's Bid to Goal, Business Plan, and ISO 14001-4000 certification.

In addition to San Diego, Ellen has worked specifically to assist public employees become more effective in the work that they do in a number of locations throughout the US, including: King County, WA; Kansas City, MO; St. Louis, MO; the Naval Air Station, Pensacola, FL; Charlotte-Mecklenburg Utilities, Charlotte, NC; New Orleans, LA; Johnson County, KS, and Union County, NC.

Mrs. Barrett has a BA in Government from Smith College in Northampton, MA; a MS in Environmental Science/Resource Management from Syracuse University/State University of New York College of Environmental Science and Forestry; and passed the ISO 14001 Lead Auditor Training in August 2002. Mrs. Barrett has written many professional publication articles, several chapters in reference books, and spoken at numerous conferences both in this country and abroad, under her former name of Ellen R. Bogardus.

DAVID A. FOLTZ

David Foltz is a Senior Management Consultant leading the Bid-to-Goal effort for the Customer Services Office and assisting with the Field Services group. Mr. Foltz has over 20 years of professional experience including significant management experience in customer service, billing and collection, utility accounting, business unit development, and project/transition management. He has worked with local and municipal governments for ten years as both a consultant and service provider. He has managed customer service and billing operations for seven utilities; managed operations and technical transitions projects that transferred municipal operations to private operations; served on a Mayor's Advisory Board; and taken the lead role in several customer and public relations campaigns.

Recent consulting assignments include:

- Project Manager, Customer Information System Procurement and Implementation Consulting Services for Trenton Water Works.
- Project Manager, Stormwater District Formation and Drainage Planning for the Town of Orangetown.
- Project Manager on Water Treatment Financial Impact Analysis for Monroe County Water Authority.
- Task Leader for Revenue and Customer Service portion of New Orleans Sewerage and Water Board Business Service Improvement.
- Technical Specialist and Financial Analyst in Northern Kentucky Water District Automated Meter Reading Feasibility Analysis.
- Lead Analyst for the City of Greensboro Solid Waste Management Division Cost of Service and Rate Design.
- Financial Analyst Sewer Utility Impact/Connection Fee and Special Fees Study for Hanover County.
- Project Manager, Trenton Water Works, Customer Service, Billing and Meter Reading Organizational and Operational Assessment.

Mr. Foltz has a BS in Civil Engineering from Bucknell University, and a Masters of Business Administration from the Wharton School, University of Pennsylvania. Listed below is relevant experience for David Foltz before joining HDR:

- Director of Customer Service for U.S. Water managing customer service, billing, and meter reading for municipal utility operations.
- Vice President, AUS Consultants Outsourced Services, providing customer service, billing, collections, and accounting services to public and private utilities
- Vice President, Airput, Inc., managed the customer care operations, including technology support and user training.

THOMAS D. JAKUBOWSKI

Mr. Jakubowski is leading the Bid-to-Goal effort for the Meter Services group and assisting on the Water Resource Management group. He has more than 25 years of experience working with consulting engineering firms in the water industry. He has been involved with the analysis of over 300 municipal water loss management programs. These programs include leak detection surveys, water audits, revenue enhancement programs, condition assessment, asset management, and water accountability. He has led water loss/leak detection programs in Detroit, Chicago, Boston (MWRA), New Orleans, Miami-Dade County, Durham, Syracuse, Portland, Washington, DC, and numerous other national and international cities.

He is a technical specialist in the area of water loss management and has been a member of the AWWA National Water Loss Control Committee for over 18 years. Mr. Jakubowski has been instrumental in the development of various methodologies and techniques enabling accurate data collection and analysis. Mr. Jakubowski has extensive field experience in leakage investigations, water audits, water loss programs, hydraulic measurements, cost estimating and revenue recovery programs.

Recent publications/presentations include: "Applying Worldwide Best Management Practices in Water Loss Control-AWWA Water Loss Control Committee Report", co-author published in AWWA Journal, August 2003 and elected as presenter for the AWWA 2003 Annual Conference and Exposition; co-author of "Draining Resources" published in American City & County, January 2005; authored "Applying Best Management Practices to Control Water Loss" published in Underground Infrastructure Management (UIM), March/April 2005.

Tom Jakubowski has a BS in Civil Engineering from the University of Wisconsin/Milwaukee.

APPENDIX 5

EXPENDITURES, APPROPRIATIONS AND COMPETITIVE LEVEL TABLES

APPENDIX 5
Table 5.1a
Customer Service Office Summary

Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
1000	Personal Services	2,061,210	1,868,039	2,086,986	1,986,548	2,441,787	2,026,371	2,412,624	2,124,200	12.0%	$ 288,400
2000	Fringe Benefits	722,009	723,245	940,669	881,652	1,239,562	1,039,904	1,280,029	1,173,100	8.4%	$ 106,900
3000	Supplies and Services	926,093	1,117,088	1,322,913	1,674,694	1,403,912	1,559,221	1,391,472	1,529,400	-9.9%	$ (137,900)
4000	Data Processing	1,739,546	1,304,578	1,657,397	1,150,431	958,469	837,233	1,496,040	1,351,500	9.7%	$ 144,500
5000	Energy Resources/Utility	55,873	15,968	48,186	13,005	36,932	8,080	5,886	13,000	-120.9%	$ (7,100)
6000	Outlay	-	6,296	300	2,548	-	3,862		4,600		$ (4,600)
	Total	5,504,731	5,035,215	6,056,451	5,708,877	6,080,662	5,474,670	6,586,051	6,195,800	5.9%	$ 390,300

APPENDIX 5
Table 5.1b
Customer Service Office Details

270 - Section Management									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	192,452.00	231,903.59	192,162.00	251,069.80	205,022.00	273,053.19	216,779	216,800
2000	Fringe Benefits	57,299.00	75,103.23	76,584.00	98,112.23	93,286.00	123,296.86	98,805	98,800
3000	Supplies and Services	3,152.00	632.56	3,152.00	1,739.81	3,165.00	7,927.78	3,165	3,600
4000	Data Processing	1,739,546.00	1,304,578.36	1,657,397.00	1,135,784.11	930,329.00	821,809.91	1,466,427	1,335,900
5000	Energy Resources/Utility	55,873.00	14,937.48	48,186.00	13,005.16	36,932.00	8,079.65	5,886	13,000
6000	Outlay	-	1,776.58	-	1,690.83	-	932.36	-	1,600
	Total	2,048,322.00	1,628,931.80	1,977,481.00	1,501,401.94	1,268,734.00	1,235,099.75	1,791,062	1,669,700
271 - Clerical Support									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	118,051.00	78,399.54	121,545.00	77,710.26	128,461.00	70,589.40	97,683	97,700
2000	Fringe Benefits	39,359.00	31,977.42	53,050.00	35,994.24	65,344.00	36,274.82	49,474	49,500
3000	Supplies and Services	55,139.00	63,903.93	55,139.00	95,608.56	55,139.00	102,378.78	55,139	105,700
4000	Data Processing								-
5000	Energy Resources/Utility								-
6000	Outlay				160.15				100
	Total	212,549.00	174,280.89	229,734.00	209,473.21	248,944.00	209,243.00	202,296	253,000
272 - Exception Billing									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	377,168.00	338,212.94	539,368.00	393,775.43	571,165.00	395,770.81	566,057	456,700
2000	Fringe Benefits	133,248.00	134,239.16	246,210.00	178,702.86	304,313.00	205,589.88	317,540	254,000
3000	Supplies and Services	566,650.00	770,082.83	963,962.00	1,238,087.82	1,041,650.00	1,093,769.14	1,041,650	1,129,500
4000	Data Processing								-
5000	Energy Resources/Utility								-
6000	Outlay								-
	Total	1,077,066.00	1,242,534.93	1,749,540.00	1,810,566.11	1,917,128.00	1,695,129.83	1,925,247	1,840,200

APPENDIX 5
Table 5.1b
Customer Service Office Details

273 - Collections/Overdue Accts									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	153,471.00	134,499.24	121,785.00	146,871.02	178,593.00	160,996.20	178,593	178,600
2000	Fringe Benefits	54,074.00	51,851.51	54,900.00	66,459.62	94,340.00	85,515.52	94,340	94,300
3000	Supplies and Services		865.26		464.30		388.49		600
4000	Data Processing								-
5000	Energy Resources/Utility								-
6000	Outlay				47.29		477.54		200
	Total	207,545.00	187,216.01	176,685.00	213,842.23	272,933.00	247,377.75	272,933	273,700
274 - Customer Information									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	879,327.00	753,337.40	755,847.00	763,216.42	966,378.00	731,322.87	952,452	773,300
2000	Fringe Benefits	312,526.00	301,355.30	344,843.00	349,057.15	460,929.00	380,750.44	482,258	438,900
3000	Supplies and Services	275,000.00	211,860.25	275,000.00	213,672.29	275,000.00	198,369.71	275,000	275,000
4000	Data Processing						354.50		
5000	Energy Resources/Utility								-
6000	Outlay		2,071.36		649.27		664.82		1,200
	Total	1,466,853.00	1,268,624.31	1,375,690.00	1,326,595.13	1,702,307.00	1,311,462.34	1,709,710	1,488,400
275 - Payment Processing									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	217,893.00	173,301.74	194,994.00	196,002.36	211,059.00	224,805.08	223,989	224,000
2000	Fringe Benefits	83,317.00	65,395.94	91,418.00	82,662.45	126,687.00	118,900.75	138,435	138,400
3000	Supplies and Services	22,327.00	69,204.95	25,660.00	121,296.18	25,133.00	156,075.69	13,081	15,000
4000	Data Processing			-	14,646.40	28,140.00	15,068.40	29,613	15,600
5000	Energy Resources/Utility		1,031.00						
6000	Outlay		2,448.49	300.00			1,787.08	100,018	1,500
	Total	323,537.00	311,382.12	312,372.00	414,607.39	391,019.00	516,637.00	505,136	394,500

APPENDIX 5
Table 5.1b
Customer Service Office Details

276 - Emergency Communication									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	122,848.00	158,384.41	161,285.20	157,903.00	181,109.00	169,833.25	177,071	177,100
2000	Fringe Benefits	42,186.00	63,322.06	73,663.97	70,663.00	94,663.00	89,575.73	99,177	99,200
3000	Supplies and Services	3,825.00	538.20		3,825.00	3,825.00	311.06	3,437	
4000	Data Processing								-
5000	Energy Resources/Utility								-
6000	Outlay								-
	Total	168,859.00	222,244.67	234,949.17	232,391.00	279,597.00	259,720.04	279,685	276,300

APPENDIX 5
Table 5.2a
Field Services Investigations
Details

Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
1000	Personal Services	1,779,034	1,702,434	1,755,871	1,777,595	1,839,173	1,857,251	1,962,981	2,097,400	-6.8%	$ (134,400)
2000	Fringe Benefits	596,047	629,163	789,907	754,295	1,045,994	889,311	1,140,120	1,140,200	0.0%	$ (100)
3000	Supplies and Services	240,674	229,275	587,333	364,256	589,157	622,408	281,157	262,500	6.6%	$ 18,700
4000	Data Processing	374,602	164,975	281,027	185,203	278,486	155,832	118,892	124,400	-4.6%	$ (5,500)
5000	Energy Resources/Utility	16,894	8,950	15,861	9,074	7,111	4,559	4,097	8,100	-97.7%	$ (4,000)
6000	Outlay	10,229	10,579	-	771	20,643	20,687	38,365	11,300	70.5%	$ 27,100
	Total	$ 3,017,480	$ 2,745,376	$ 3,429,999	$ 3,091,193	$ 3,780,564	$ 3,550,048	$ 3,545,612	$ 3,643,900	-2.8%	$ (98,300)

APPENDIX 5
Table 5.2b
Field Services Investigations Details

280 - Section Administration									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	102,140.00	101,919.53	106,573.00	99,723.64	113,711.00	110,332.30	117,961	118,000
2000	Fringe Benefits	34,056.00	38,254.90	46,644.00	42,516.74	57,636.00	54,947.75	59,512	59,500
3000	Supplies and Services	18,507.00	18,903.93	318,507.00	23,588.34	18,585.00	64,962.25	18,585	37,800
4000	Data Processing			-	-	-	-		-
5000	Energy Resources/Utility			-	9,024.48	-	4,558.53		4,800
6000	Outlay			-	-	-	-	-	-
	Total	154,703.00	159,078.36	471,724.00	174,853.20	189,932.00	234,800.83	196,058	220,100
281 - Service Restoration/Turn-off									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	464,550.00	378,831.59	423,210.00	401,119.86	443,596.00	435,916.85	410,811	410,800
2000	Fringe Benefits	136,959.00	150,864.30	194,276.00	175,451.69	252,463.00	213,474.72	239,523	239,500
3000	Supplies and Services	84,073.00	64,925.41	82,919.00	80,024.12	110,793.00	101,907.22	110,808	87,800
4000	Data Processing			-	-	-	-		-
5000	Energy Resources/Utility	-	5.00	-	5.00	-	-		-
6000	Outlay	-	-	-	623.80	-	26.43	-	200
	Total	685,582.00	594,626.30	700,405.00	657,224.47	806,852.00	751,325.22	761,142	738,300
282 - Code Compliance									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	195,879.00	264,779.11	200,102.00	234,414.54	211,758.00	162,006.51	219,723	219,700
2000	Fringe Benefits	67,153.00	99,957.19	87,593.00	102,781.88	107,876.00	77,891.95	118,779	118,800
3000	Supplies and Services	40,430.00	41,681.88	40,362.00	41,196.43	38,973.00	36,342.36	38,973	42,700
4000	Data Processing	25,000.00	-	-	-	-	-		-
5000	Energy Resources/Utility			-	44.17	-	-		-
6000	Outlay	-	44.46	-	117.96	-	-		100
	Total	328,462.00	406,462.64	328,057.00	378,554.98	358,607.00	276,240.82	377,475	381,300

APPENDIX 5
Table 5.2b
Field Services Investigations Details

283 - Meter Reading									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	615,904.00	637,801.81	620,257.00	700,796.18	638,001.00	767,051.61	735,756	870,200
2000	Fringe Benefits	222,539.00	221,053.06	285,283.00	284,779.57	407,301.00	350,658.87	469,263	469,300
3000	Supplies and Services	76,148.00	87,581.48	83,494.00	185,616.57	357,464.00	363,674.50	56,974	57,000
4000	Data Processing	233,986.00	65,997.55	161,639.00	138,875.81	185,402.00	102,142.92	52,593	52,600
5000	Energy Resources/Utility	16,894.00	8,944.94	15,861.00	-	7,111.00	-	4,097	3,300
6000	Outlay	9,379.00	9,378.98	-	-	20,617.00	20,661.92	30,820	10,600
	Total	1,174,850.00	1,030,757.82	1,166,534.00	1,310,068.13	1,615,896.00	1,604,189.82	1,349,503	1,463,000
284 - Sewer Classification									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	232,783.00	168,200.51	232,219.00	216,371.86	250,619.00	263,948.27	256,449	256,400
2000	Fringe Benefits	74,022.00	58,295.17	96,369.00	91,907.89	118,269.00	130,620.28	125,168	125,200
3000	Supplies and Services	11,216.00	6,960.02	12,343.00	11,705.29	15,092.00	12,134.57	7,547	10,900
4000	Data Processing	115,616.00	98,977.48	119,388.00	46,326.98	93,083.70	53,689.14	66,299	71,800
5000	Energy Resources/Utility			-	-	-	-		-
6000	Outlay	850.00	1,113.52	-	-	-	-	7,545	400
	Total	366,312.02	366,312.02	460,319.00	366,312.02	477,063.70	460,392.26	463,008	464,700
289 - Field Investigations									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	167,778.00	150,901.80	173,510.00	125,168.51	181,488.00	117,995.59	222,281	222,300
2000	Fringe Benefits	61,318.00	60,737.89	79,742.00	56,856.74	102,449.00	61,717.28	127,875	127,900
3000	Supplies and Services	10,300.00	9,222.40	49,708.00	22,124.99	48,250.00	43,387.56	48,270	26,300
4000	Data Processing			-	-	-	-		-
5000	Energy Resources/Utility			-	-	-	-		-
6000	Outlay		42.28	-	29.61	-	25.00	-	-
	Total	239,396.00	220,904.37	302,960.00	204,179.85	332,187.00	223,125.43	398,426	376,500

APPENDIX 5
Table 5.3a
Meter Services Summary

Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
1000	Personal Services	2,740,400	2,620,725	3,668,615	2,787,575	3,797,606	3,012,165	3,566,580	3,566,400	0.0%	$ 200
2000	Fringe Benefits	1,044,032	1,098,530	1,349,892	1,293,573	1,564,110	1,529,668	1,844,544	1,844,600	0.0%	$ (100)
3000	Supplies and Services	1,659,728	2,060,506	1,963,845	1,658,208	2,099,500	1,888,546	2,025,106	2,008,200	0.8%	$ 16,900
4000	Data Processing	49,174	59,951	110,821	27,588	674,738	514,025	143,459	209,000	-45.7%	$ (65,500)
5000	Energy Resources/Utility	23,228	10,488	25,079	9,920	19,773	6,516	9,363	9,600	-2.5%	$ (200)
6000	Outlay	-	3,354	-	3,445	52,883	59,654	-	22,800		$ (22,800)
	Total	$ 5,516,562	$ 5,853,554	$ 7,118,252	$ 5,780,309	$ 8,208,610	$ 7,010,575	$ 7,589,052	$ 7,660,600	-0.9%	$ (71,500)

APPENDIX 5
Table 5.3b
Meter Services Details

2815 - Section Management									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	82,768.00	38,607.01	873,300.00	42,779.44	848,567.00	69,493.07	135,504	135,500
2000	Fringe Benefits	18,401.00	13,978.94	39,409.00	17,257.99	47,863.00	30,134.71	55,032	55,000
3000	Supplies and Services	(3,923.00)	14,409.01	-	11,844.27	-	13,544.48		14,200
4000	Data Processing	49,174.00	42,499.79	81,053.00	10,010.66	651,522.98	499,847.90	64,091	191,400
5000	Energy Resources/Utility	18,881.00	9,707.07	20,732.00	9,589.28	15,426.00	6,380.81	5,016	9,200
6000	Outlay	-	1,495.00	-	-	-	513.16	-	700
	Total	165,301.00	120,696.82	1,014,494.00	91,481.64	1,563,378.98	619,914.13	259,643	406,000
2810 - Commercial Meters									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	620,685.00	838,202.08	725,600.00	813,591.04	775,944.00	770,261.90	885,125	885,100
2000	Fringe Benefits	243,212.00	333,590.75	310,069.00	378,855.16	359,287.00	390,590.62	424,085	424,100
3000	Supplies and Services	702,718.00	833,179.72	505,407.00	283,198.24	511,845.00	557,124.12	511,883	602,700
4000	Data Processing		17,451.12	29,768.00	17,577.28	23,215.00	14,177.30	79,368	17,600
5000	Energy Resources/Utility	2,173.00	90.42	2,173.00	245.99	2,173.00		2,173	100
6000	Outlay	-	666.40	-	1,384.33	-	224.95		800
	Total	1,568,788.00	2,023,180.49	1,573,017.00	1,494,852.04	1,672,464.00	1,732,378.89	1,902,634	1,930,400
2811 - Domestic Meters									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	420,484.00	458,134.07	513,670.00	550,148.60	538,788.00	646,029.23	646,615	646,600
2000	Fringe Benefits	169,196.00	203,945.70	259,689.00	273,673.10	304,798.00	352,438.12	353,707	353,700
3000	Supplies and Services	317,914.00	679,887.50	933,069.00	829,343.18	846,574.00	636,842.74	920,109	768,100
4000	Data Processing			-	-				-
5000	Energy Resources/Utility	2,174.00	129.10	2,174.00	-	2,174.00	66.31	2,174	100
6000	Outlay		422.31	-	546.79	29,393.00	29,551.58		10,500
	Total	909,768.00	1,342,518.68	1,708,602.00	1,653,711.67	1,721,727.00	1,664,927.98	1,922,605	1,779,000

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Table 5.3b
Meter Services Details

2812 - Backflow Maintenance									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	656,577.00	456,800.71	625,677.00	500,562.47	682,242.00	594,261.13	766,214	766,200
2000	Fringe Benefits	256,567.00	199,649.12	305,409.00	236,870.71	358,811.00	303,433.36	419,262	419,300
3000	Supplies and Services	396,690.00	260,292.79	325,023.00	273,605.47	481,332.00	371,381.02	333,365	322,300
4000	Data Processing								-
5000	Energy Resources/Utility		88.34	-	44.17				-
6000	Outlay		454.33	-	906.48	-	197.51		600
	Total	1,309,834.00	917,285.29	1,256,109.00	1,011,989.30	1,522,385.00	1,269,273.02	1,518,841	1,508,400
2813 - Cross Connections									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	314,162.00	309,792.89	312,740.00	320,368.04	334,926.00	316,384.80	344,245	344,200
2000	Fringe Benefits	101,816.00	112,794.40	131,940.00	134,024.53	159,999.00	147,560.43	169,690	169,700
3000	Supplies and Services	81,671.00	56,701.03	49,427.00	45,726.55	97,587.00	71,336.52	97,587	62,000
4000	Data Processing								-
5000	Energy Resources/Utility		472.62						200
6000	Outlay		222.34	-	227.03	-	200.92		200
	Total	497,649.00	479,983.28	494,107.00	500,346.15	592,512.00	535,482.67	611,522	576,300
2816 - Fire Hydrant Meter Shop									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	369,297.00	275,547.74	324,326.00	288,654.72	311,039.00	215,149.14	342,919	342,900
2000	Fringe Benefits	145,915.00	120,046.36	159,505.00	142,761.69	167,492.00	112,162.00	188,431	188,400
3000	Supplies and Services	61,824.00	39,876.45	54,571.00	48,122.02	65,749.00	52,998.24	65,749	50,300
4000	Data Processing			-					-
5000	Energy Resources/Utility			-	40.76	-			-
6000	Outlay		94.10	-	327.18		5,176.47		1,900
	Total	577,036.00	435,564.65	538,402.00	479,906.37	544,280.00	385,485.85	597,099	583,500

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Table 5.3b
Meter Services Details

2817 - Planning/Scheduling Program									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services					33,170.00	45,651.26	58,834.00	58,800
2000	Fringe Benefits					19,612.00	21,763.14	29,451.00	29,500
3000	Supplies and Services								-
4000	Data Processing								-
5000	Energy Resources/Utility								-
6000	Outlay					23,490.00	23,591.29		8,100
	Total			0	0	76,272.00	91,005.69	88,285.00	96,400
2818 - Recycled Water Construction		Part of Water Operations Division prior to FY 2006							
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	*238,256.00*	*184,288.86*	*253,965.00*	*211,218.15*	*156,190.00*	*189,577.44*	175,883	175,900
2000	Fringe Benefits	*94,431.00*	*72,061.32*	*125,175.00*	*89,895.01*	*83,589.00*	*100,253.13*	97,377	97,400
3000	Supplies and Services	*88,234.00*	*100,753.03*	*81,748.00*	*104,477.45*	*81,748.00*	*110,731.05*	81,748	112,900
4000	Data Processing								-
5000	Energy Resources/Utility					-	*45.30*		-
6000	Outlay			-	*53.00*	-	*75.00*		-
	Total	*420,921.00*	*357,103.21*	*460,888.00*	*405,643.61*	*321,527.00*	*400,681.92*	355,008	386,200

APPENDIX 5
Table 5.3b
Meter Services Details

2814 - New Installations									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services						848.96		-
2000	Fringe Benefits						427.68		-
3000	Supplies and Services			0	105.49		228		-
4000	Data Processing								-
5000	Energy Resources/Utility						23.58		-
6000	Outlay								-
	Total			0	105.49	0	1528.22	0	-
2819 - Recycle Water Ops& Maintenance		Part of Water Operations Division prior to FY 2006							
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	*38,171.00*	*59,351.47*	*39,337.00*	*60,252.67*	*116,740.00*	*164,508.14*	211,241	211,200
2000	Fringe Benefits	*14,494.00*	*20,093.63*	*18,696.00*	*20,234.89*	*62,659.00*	*70,904.93*	107,509	107,500
3000	Supplies and Services	*14,600.00*	*75,406.52*	*14,600.00*	*61,785.06*	*14,665.00*	*74,360.09*	14,665	75,700
4000	Data Processing								-
5000	Energy Resources/Utility								-
6000	Outlay						*123.04*		-
	Total	*67,265.00*	*154,851.62*	*72,633.00*	*142,272.62*	*194,064.00*	*309,896.20*	333,415	394,400

APPENDIX 5
Table 5.4a
Water Resourses Management
Summary

Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
1000	Personal Services	853,753	946,648	1,009,927	1,042,247	1,019,337	1,056,643	1,027,637	1,027,900	0.0%	$ (300)
2000	Fringe Benefits	275,068	340,836	416,744	432,928	498,083	509,649	536,162	536,200	0.0%	$ -
3000	Supplies and Services	1,466,194	723,401	1,591,555	957,946	1,634,190	1,227,706	1,240,189	1,037,700	16.3%	$ 202,500
4000	Data Processing	488,323	378,664	450,564	191,886	337,638	168,591	111,299	194,900	-75.1%	$ (83,600)
5000	Energy Resources/Utility	22,568	19,723	12,490	23,160	11,022	17,649	13,811	21,700	-57.1%	$ (7,900)
6000	Outlay	-	8,665	-	90	-	1,322	-	3,700		$ (3,700)
	Total	$ 3,105,906	$ 2,417,936	$ 3,481,280	$ 2,648,257	$ 3,500,270	$ 2,981,560	$ 2,929,098	$ 2,822,100	3.7%	$ 107,000

APPENDIX 5
Table 5.4b
Water Resourses Management
Details

205 - C/S Water Resources									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services							36,284	36,300
2000	Fringe Benefits							21,377	21,400
3000	Supplies and Services								
4000	Data Processing								
5000	Energy Resources/Utility								
6000	Outlay								
	Total			-	-	-	-	57,661	57,700
250 - Section Management									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	215,737.00	267,255.10	331,565.00	386,116.77	230,169.00	399,167.77	239,157	239,200
2000	Fringe Benefits	70,424.00	97,075.95	130,526.00	158,916.29	116,213.00	188,816.50	120,962	121,000
3000	Supplies and Services	113,350.00	25,133.51	13,350.00	28,222.75	13,350.00	19,637.25	13,350	26,200
4000	Data Processing	255,476.00	198,955.09	245,912.00	77,539.69	184,998.01	50,440.25	46,599	46,600
5000	Energy Resources/Utility	18,885.00	16,607.19	8,807.00	18,808.76	6,256.00	10,661.89	8,773	16,600
6000	Outlay	-	1,173.00	-	40.76	-	606.24	-	700
	Total	673,872.00	606,199.84	730,160.00	669,645.02	550,986.01	669,329.90	428,841	450,300
251 - Resid Int-Ext Wtr Conservation									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	123,788.00	106,539.90	159,690.00	127,440.54	173,527.00	134,087.13	215,676	215,700
2000	Fringe Benefits	40,813.00	42,883.05	69,277.00	58,333.09	88,297.00	70,592.43	118,573	118,600
3000	Supplies and Services	96,131.00	18,308.38	96,131.00	21,969.58	96,613.00	18,941.61	84,665	21,200
4000	Data Processing								-
5000	Energy Resources/Utility		44.17						-
6000	Outlay		47.27			-	69.98		-
	Total	260,732.00	167,822.77	325,098.00	207,743.21	358,437.00	223,691.15	418,914	355,500

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Table 5.4b
Water Resourses Management
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252 - Ultra-Low Flow Toilet Voucher									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	89,376.00	46,879.81	55,513.00	53,784.22	58,746.00	26,211.23	61,400	61,400
2000	Fringe Benefits	27,834.00	16,464.30	21,817.00	21,560.82	26,146.00	12,238.18	28,093	28,100
3000	Supplies and Services	519,191.00	342,034.98	614,191.00	449,593.26	496,401.00	298,149.39	106,100	300,000
4000	Data Processing								-
5000	Energy Resources/Utility								-
6000	Outlay					-	566.77		200
	Total	636,401.00	405,379.09	691,521.00	524,938.30	581,293.00	337,165.57	195,593	389,700
255 - Field Investigations									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	135,427.00	35,745.43	139,529.00	37,295.42	152,597.00	40,607.46	156,971	157,000
2000	Fringe Benefits	48,203.00	14,086.80	63,255.00	16,775.67	80,452.00	21,333.08	90,611	90,600
3000	Supplies and Services	22,237.00	13,416.37	22,598.00	13,386.36	25,424.00	15,912.25	25,444	15,200
4000	Data Processing								-
5000	Energy Resources/Utility								-
6000	Outlay								-
	Total	205,867.00	63,248.60	225,382.00	67,457.45	258,473.00	77,852.79	273,026	262,800
256 - Retrofit Ordinance									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	79,710.00	104,095.97	82,763.00	88,069.17	86,960.00	102,291.27	91,054	91,100
2000	Fringe Benefits	26,970.00	40,732.76	36,329.00	37,960.10	44,405.00	52,169.39	48,060	48,100
3000	Supplies and Services	28,100.00	11,515.41	28,100.00	2,230.92	28,100.00	1,312.41	28,100	5,500
4000	Data Processing								-
5000	Energy Resources/Utility								-
6000	Outlay		1,011.69			-	78.65		400
	Total	134,780.00	157,355.83	147,192.00	128,260.19	159,465.00	155,851.72	167,214	145,100

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Table 5.4b
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1254 - Clotheswasher Rebate									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	44,945.00	24,385.51	22,205.00	23,904.89	23,498.00	24,147.70	24,560	24,600
2000	Fringe Benefits	13,175.00	9,835.05	8,729.00	11,582.43	10,458.00	13,418.89	11,237	11,200
3000	Supplies and Services	175,000.00	50,926.92	175,000.00	217.80	175,000.00	123,886.65	8,228	61,700
4000	Data Processing			-	-				-
5000	Energy Resources/Utility			-	-				-
6000	Outlay			-	-				-
	Total	233,120.00	85,147.48	205,934.00	35,705.12	208,956.00	161,453.24	44,025	97,500
1255 - Program Development									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	11,236.00	34,347.73	27,757.00	13,154.68	29,372.00	2,803.53	30,700	30,700
2000	Fringe Benefits	3,290.00	12,520.74	10,906.00	5,754.39	13,073.00	1,485.45	14,047	14,000
3000	Supplies and Services	120,000.02	12,976.22	120,000.00	4,710.11	407,117.00	379,930.45	367,117	137,300
4000	Data Processing								-
5000	Energy Resources/Utility								-
6000	Outlay								-
	Total	134,526.02	59,844.69	158,663.00	23,619.18	449,562.00	384,219.43	411,864	182,000
1259 - Commercial Landscape Survey PR									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	56,899.00	80,841.04	90,572.00	120,084.21	160,004.00	176,798.05	164,967	165,000
2000	Fringe Benefits	16,082.00	26,625.57	37,297.00	48,266.07	72,965.00	85,155.64	80,137	80,100
3000	Supplies and Services	222,500.00	31,704.60	222,500.00	47,200.43	222,500.00	143,566.96	172,500	172,500
4000	Data Processing	232,847.00	179,709.05	204,652.00	114,346.30	152,640.00	118,151.22	64,700	148,300
5000	Energy Resources/Utility			-	738.73	-	1,335.11		700
6000	Outlay	-	1,110.85						400
	Total	528,328.00	319,991.11	555,021.00	330,635.74	608,109.00	525,006.98	482,304	567,000

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253 - Commercial & Industrial Cons PG									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	69,534.00	138,414.32	70,866.00	90,408.23	74,124.00	56,989.18		-
2000	Fringe Benefits	19,736.00	47,569.64	26,628.00	33,151.61	31,856.00	24,115.23		-
3000	Supplies and Services	24,325.00	47,242.99	24,325.00	157,638.02	24,325.00	181.44	89,325	73,900
4000	Data Processing								-
5000	Energy Resources/Utility	183.00		183.00	44.17	183.00	-	455	-
6000	Outlay								-
	Total	113,778.00	233,226.95	122,002.00	281,242.03	130,488.00	81,285.85	89,780	73,900
2570 - Pub Info/Educ & Outreach PRG									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	27,100.88	108,142.97	29,467.00	101,988.73	30,340.00	93,539.29	6,868	6,900
2000	Fringe Benefits	8,540.96	33,042.45	11,980.00	40,627.31	14,218.00	40,324.51	3,065	3,100
3000	Supplies and Services	145,360.00	170,141.57	275,360.00	232,776.34	145,360.00	226,187.81	345,360	224,200
4000	Data Processing								-
5000	Energy Resources/Utility	3,500.00	3,071.17	3,500.00	3,568.81	4,583.00	5,651.97	4,583	4,400
6000	Outlay	-	5,321.77	-	49.57	-	-	-	2,000
	Total	184,501.84	319,719.93	320,307.00	379,010.76	194,501.00	365,703.58	359,876	240,600

APPENDIX 5
Table 5.5a
Division Administration Summary

Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level	Percent Reduction	Cost Difference
1000	Personal Services	391,746.00	378,154.99	414,287.00	346,716.26	434,143.00	383,541.22	532,705.00	532,700	0.0%	$ -
2000	Fringe Benefits	114,178.00	122,775.06	159,231.00	134,437.57	192,813.00	162,267.87	232,206.00	232,200	0.0%	$ -
3000	Supplies and Services	397,661.00	428,217.17	117,661.00	119,279.65	840,802.00	769,232.88	811,928.00	466,600	42.5%	$ 345,300
4000	Data Processing	5,201.00	11,681.01	2,284.00	2,305.04	9,055.00	2,208.55	116,933.00	5,900	95.0%	$ 111,000
5000	Energy Resources/Utility	5,610.00	39,559.30	8,745.00	46,740.56	4,937.00	37,014.00	35,660.00	44,100	-23.7%	$ (8,400)
6000	Outlay	2,025.00	1,510.30	2,025.00	184.14	2,019.00	584.87	2,019.00	800	60.4%	$ 1,200
	Division Contingency								366,500		$ (366,500)
	Total	916,421.00	981,897.83	704,233.00	649,663.22	1,483,769.00	1,354,849.39	1,731,451.00	1,648,800	4.8%	$ 82,700

APPENDIX 5
Table 5.5b
Division Administration Summary

220 - Division Management									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	333,545.00	316,177.69	351,097.00	281,013.59	368,047.00	311,434.46	464,019	464,000
2000	Fringe Benefits	97,310.00	103,117.44	135,186.00	110,049.83	163,740.00	131,082.57	201,705	201,700
3000	Supplies and Services	369,118.00	372,593.30	89,118.00	59,978.25	812,233.00	714,761.32	783,359	406,000
4000	Data Processing	5,201.00	2,058.76	2,284.00	344.04	655.00	1,186.80	105,413	1,300
5000	Energy Resources/Utility	5,610.00	39,559.30	8,745.00	46,740.56	4,937.00	37,014.00	35,660	44,100
6000	Outlay	2,025.00	1,510.30	2,025.00	184.14	2,019.00	584.87	2,019.00	800
	Division Contingency								366,500
	Total	812,809.00	835,016.79	588,455.00	498,310.41	1,351,631.00	1,196,064.02	1,592,175	1,484,400
212 - Public Relations									
Object Account Category	Description	Appropriation FY 2003	Period 13 FY 2003	Appropriation FY 2004	Period 13 FY 2004	Appropriation FY 2005	Period 13 FY 2005	Appropriation FY 2006	Competitive Level
1000	Personal Services	58,201.00	61,977.30	63,190.00	65,702.67	66,096.00	72,106.76	68,686	68,700
2000	Fringe Benefits	16,868.00	19,657.62	24,045.00	24,387.74	29,073.00	31,185.30	30,501	30,500
3000	Supplies and Services	28,543.00	55,623.87	28,543.00	59,301.40	28,569.00	54,471.56	28,569	60,600
4000	Data Processing	-	9,622.25	-	1,961.00	8,400.00	1,021.75	11,520	4,600
5000	Energy Resources/Utility								-
6000	Outlay	-	-	-	-	-	-	-	-
	Total	103,612.00	146,881.04	115,778.00	151,352.81	132,138.00	158,785.37	139,276	164,400

APPENDIX 6

CUSTOMER SUPPORT DIVISION

HIGHLIGHTS AND ACCOMPLISHMENTS

WATER RESOURCES MANAGEMENT PROGRAM - HIGHLIGHTS AND RECENT ACHIEVEMENTS

The City of San Diego Water Conservation Program reduces water demand through promoting or providing incentives for the installation of hardware that provides permanent water savings. It also provides services and information to help San Diegans make better decisions about water use in their homes, landscaping, and businesses. These efforts increase water savings by providing a "new source of potable water" for an expanding San Diego. Today, the Program directly accounts for approximately 26,000 acre-feet (AF) of potable water savings per year, meeting the goal set in 1997 by the Strategic Plan for Water Supply. This savings has been achieved by creating a water conservation ethic; adopting programs, policies, and ordinances designed to promote water conservation practices; and implementing comprehensive public information and education campaigns. Below is an overview of the programs:

- ***Commercial Landscape Survey Program*** – This new program optimizes water use for irrigation by providing commercial customers with a water-use budget based upon their property's attributes and weather factors. Maintained by a computer application – WRLD or the Water Resources Landscape Database – these budgets are currently being provided to City parks, freeway landscapes (Caltrans), and commercial properties. This program includes a water use survey of properties with dedicated irrigation meters and at least one acre of irrigated landscape. The program has a significant potential for water savings.

- ***Landscape Watering Calculator*** – Located on the City's Water Conservation Program website, the award-winning Landscape Watering Calculator is an easy-to-use tool that provides customers with an estimation of the needed water for their landscape and turf. Available on-line, 24 hours a day, the calculator accounts for water savings of more than 781 AF per year. This tool has been adapted and is now available throughout Southern California and in several counties and water districts throughout the United States. *(www.sandiego.gov/water/conservation)*

- ***Satellite Imaging Pilot Project*** – Funded by the United States Bureau of Reclamation, the new pilot project turns satellite imagery from multi-spectral color images into a functioning geographical information system (GIS) map. From this map, City staff can develop water budgets for entire communities and large areas, assess runoff and pollution problems, and better plan City programs and services.

- ***Water Conservation Action Committee -*** In an effort to enhance the implementation of water conservation programs, an action committee has been formed, consisting of representatives from the landscape architect and contractor associations, the Building Industry Association, multi-family trade groups, property management companies, conservation gardens, offices of elected officials, public relations companies, and water

agencies. The committee evaluates the usefulness of available programs, provides suggestions, and helps promote the programs within the industries they represent.

- ***Resource Guide and Fire-Wise Handbook*** – Developed through the Water Conservation Action Committee, the idea behind the resource guide is for residents to have a reference document that features success stories in landscape designs, tools available to help water efficiently; and places to find more information about the California friendly plants, irrigation technology, and landscape services. The first edition, released in the Fall of 2004, featured fire-wise landscaping techniques as verified by the San Diego Fire Recovery Network and other agencies.

- ***Community and Corporate Partnerships (SD Natural History Museum, SD Watercolor Society)*** – To expand available resources and look at innovative ways to carry the water conservation message, the Water Department developed community partners to help pay for activities and materials and promote water conservation to various audiences. Good examples of this include featuring children's posters in a professional art gallery, bringing art professionals to the *Water Conservation Garden*, displaying posters on billboards rent-free, publishing a water conservation poster calendar, and offering magical educational lessons on water through a famous character, *Ms. Frizzle™*.

- ***Stakeholder Forum*** – Prior to launching a new landscape water conservation public information and outreach campaign, the City of San Diego developed a stakeholder process designed to involve the unique community organizations impacted by its landscape services. This process allowed the Water Department to gain valuable input from professional and community group leaders about how the City could better meet the needs of the community and encourage landscape water conservation. As the ideas began to materialize, these stakeholders became partners in fostering ongoing collaborations between key professional/community-based organizations and the Water Department. This unique process has proven that, by involving the community right from the start, effective community-supported outreach programs can be developed, leading to significant water savings.

- ***Public Information and Outreach Program*** – The City provides its residents with a variety of information and educational materials available through a variety of media. Program staff actively participates in a speakers' bureau and community activities, providing informational brochures and fact sheets, and working to increase awareness of water conservation programs, measures, and successes. News articles are provided monthly to community newspapers, magazines, and professional association newsletters, focusing on programs and water conservation tips relevant to the season. Additionally, newspaper and television news contacts are provided with weekly and monthly information about the water conservation activities, tips, and upcoming events.

- ***Ms. Frizzle™ and the Magic School Bus*** – Ms. Frizzle™ and Scholastic's The Magic

School Bus© are ready to take off for another adventure. The Water Department, in partnership with the San Diego Natural History Museum, is pleased to announce that Ms. Frizzle is back, this time teaching children the important role water plays in our lives and how to use it wisely. This is an enhanced effort to reach out and teach our youngest customers, even in the pre-school age range, the value of water conservation. Activities are held every other Sunday and are free to museum patrons.

- ***Water Conservation Poster Contest*** – Now in its sixth consecutive year of implementation, the annual poster contest is more popular than ever. On the average, we received over 500 posters from over 3,700 posters created in conjunction with the contest. Teachers are required to discuss water supply and conservation in the classroom prior to having the children prepare their posters, ensuring that the conservation message is communicated to our 1st through 6th grade children. The winning posters are included in the annual Water Department calendar, and are featured on billboards, City webpage, *City Access TV*, and art galleries and exhibits.

- ***Hot Water Recirculating System Pilot Study*** – The Water Department recently completed a pilot program for hot water recirculating systems, to evaluate water savings versus energy usage of these residential plumbing systems. This is an emerging water-savings technology that saves water by reducing "warm-up" time for showers.

- ***New Online Survey to Rate Water Conservation in San Diego*** – The Water Conservation Program is asking its customers for feedback on how to improve services. Customers can now log-on to the world-wide-web at http://www.sandiego.gov/water to fill out a short survey featuring questions related to methods for conserving water, past participation in the City's free water conservation programs, and rating the level of service associated with these programs. In appreciation for taking the survey, participants will receive a free Southern California Heritage Gardening Guide CD in the mail. Additional survey features include opportunities for customers to provide suggestions and new ideas for water saving programs, as well as an opportunity to share an interesting story about water conservation.

- ***Awards and Recognition*** – The Water Resources Management Program has received awards and recognition for the following:

  - Entire Water Conservation Program

    1999 Water Conservation Field Services Award, given by the US Department of the Interior, Bureau of Reclamation.
    1999 Community Service/Resource Efficiency Award, given by the California Municipal Utilities Association.
    2003 E.A.R.T.H. Award, given by San Diego Earthworks
    2003 Certificate of Commendation, given by Lt. Governor Cruz Bustamante

  - Landscape Watering Calculator

    2002 National Technology Solutions Award, given by Public Technologies, Inc.
    2003 Advanced Innovation and Technologies Award, given by the Public Officials for Water and Energy Reform (POWER)

- Education and Outreach

  2001 Certificate of Recognition for the Technovation Exhibit, given by the California State Assembly through California Assemblywoman Susan Davis
  2004 Community Service/Resource Efficiency Award, given by the California Municipal Utilities Association
  2005 E.A.R.T.H. Award for the e-Community Exhibit and coordinator Dan Carney, given by San Diego Earthworks

- ***Statewide "Flex Your Power" Campaign Thanking the City of San Diego Water Department*** – The Water Department was one of several organizations recognized as an "Energy Efficient Leader" by California's Flex Your Power outreach campaign. In a series of newspaper ads, Flex Your Power saluted leaders for their commitment and investment in saving energy, money, and the environment for all Californians. The local ad ran in the December 26, 2004, issue of the San Diego Union-Tribune. The ad recognized that in 2003, the Water Department, which served 1.2 million residential and commercial customers, initiated water conservation programs saving water and over 3 million kWhs of energy in 2003 alone. Even with a 10 percent increase in population, San Diego currently uses the same amount of water as it did 13 years ago.

- ***Presentations to the Industry*** – The Landscape Watering Calculator, Hot Water Recirculating Pump Pilot Program, and Satellite Program were topics featured in recent (and upcoming) American Water Works Association conferences and California Urban Water Conservation Council Plenary Sessions.

FIELD SERVICES AND INVESTIGATIONS HIGHLIGHTS AND RECENT ACHIEVEMENTS

Since January 2001, the Field Services and Investigations Section has reduced full-time positions by more than 10 percent, 53 to 47 positions, while improving customer service quality. The reclassification of the Restoration Crew to Field Representatives, combined with an ongoing cross-training program, has allowed a smaller staff to produce the same level of productivity with fewer positions. The Field Investigations staff resolves billing questions in the field and has downsized from five to three positions while continuing to complete 80 to 85 percent of investigations within five days. A recent reorganization of Meter Reading has allowed much improved oversight and accountability. Misreads among new staff are reduced more effectively now that rereads are sent to the Meter Reading Supervisor, reducing the work load on Field Investigations. Under the new system, training deficiencies can be identified and corrected on an individual basis.

The rerouting of meters occurred in FY 2005 for the first time in 13 years. Rerouting is a reassignment of meters into more logical and efficient reading pattern. The benefit is more balanced workload throughout the entire CSD, as well as, increased productivity for meter readers. The rerouting program has eliminated eight to ten routes, and will enable Field Services to continue to improve meter reading efficiency and productivity through an ongoing rerouting process.

The section has empowered field employees and first-line supervisors to make faster decisions that decrease response time, and allow investigations to be completed sooner. For example, leak adjustment

recommendations previously required approval of the Section Manager, but are now approved by the first-line Supervisor. This reduces turnaround time by one full day.

The Sewer Classification Section has decreased turnaround time on its investigations, and participated in important surveys to ensure the accuracy of customer data related to meters.

The Code Enforcement Unit has been recognized by the Western States Utility Theft Association as a nationwide leader in battling water theft. On more than one occasion it has been invited to give presentations at WSUTA conferences.

Over a five-year period, theft of water on construction sites has been significantly reduced. This was accomplished through aggressive inspection and enforcement that included several successful prosecutions through the City Attorney's office. One case alone brought in more than $300,000. As part of one settlement, a defendant was forced to pay for the professional production of a video on how to legally obtain water.

The Code Enforcement team has also pioneered the development of new locking devices, such as a locking ring to secure smaller water meters to prevent tampering, as well as the use of wireless connection to information systems to assist Field Investigations. The new barrel lock will reduce lock expenses from $4.00 to $1.50 per lock while increasing security. The section is also embracing new technologies, such as automated meter reading, which is scheduled to be implemented on a limited basis over the next few years.

CUSTOMER SERVICE OFFICE HIGHLIGHTS AND RECENT ACHIEVEMENTS

The Customer Service Office (CSO Group) has implemented a monthly billing policy that doubled remittance, mailings, and increased remittance processing by almost 90 percent. The impact of this change has resulted in extra work for the CSO Group, namely an increase of 70 percent in "exception/deferred billings." The change to monthly billing was accomplished with a decrease in CSO Group staff—an extraordinary accomplishment.