

# Business Process Reengineering Report

DRAFT

**December 29, 2006**



City of San Diego  
Metropolitan Wastewater Department

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# 1 Executive Summary

## 1.1 Introduction & Background

The Mayor of the City of San Diego launched a Business Process Reengineering (BPR) initiative to improve the efficiency of services provided by the City of San Diego. This initiative involves the reengineering of processes and the investigation of benchmarks and best management practices as the basis for City departments to develop their “Most Efficient Organization” (MEO). To support the Mayor’s BPR initiative, and as part of the planned progression of optimization efforts, the Metropolitan Wastewater Department (MWWD) implemented a comprehensive Bid-to-Goal Reengineering program from June 10, 2006 through December 15, 2006. These efforts have culminated in the development and delivery of this Business Process Reengineering Report.

As part of more than 10 years of planned studies and implemented action plans, the MWWD Bid-to-Goal Reengineering effort was integral in applying “best of class” practices within MWWD with the purpose of systematically assessing and improving MWWD’s business practices and operations. The MWWD Reengineering effort was accomplished in concert with examining and reengineering the overall Departmental structure and cross-functional processes. Potential synergies between separate functional areas were identified and applied in order to minimize inefficiencies from organizational “silos.”

Throughout the MWWD Bid-to-Goal Reengineering Process, MWWD made a concerted effort to partner with the Labor Organizations (MEA and AFSCME Local 127). Both Labor Organizations spoke at the official MWWD Bid-to-Goal Reengineering Process Kickoff meeting and were consulted on and approved the membership of the divisional BPR Teams. MWWD BPR Labor-Management meetings were held monthly to review the status of the BPR, solicit Labor Organization input, answer questions about the project, and discuss any anticipated barriers to progress. As process mapping sessions were organized, schedules were distributed to the Labor Organizations to encourage attendance and participation in the process. Attendee sign-in sheets were completed at To-Be process mapping sessions after the Labor Organizations requested such action.

Six BPR Teams were commissioned to investigate relevant process benchmarks and to study reengineering opportunities for work processes and organizational structures required to accomplish the MWWD mission. Each team developed its own MEO. These divisional MEOs were then analyzed at the department level to identify additional reengineering opportunities during the consolidation of the MWWD MEO. This report documents the results of this process and was delivered to the overall project sponsor (Deputy Chief Operating Officer of Public Works). This Departmental MEO meets the private market competitive operating budget presented in the Private Market Proposal (PMP) produced by HDR Engineering, Inc., a third party industry expert.

The purpose of this MWWD BPR Report is:

- ◆ to accomplish the requirements of the MWWD Reengineering Team Charter;
- ◆ to provide an overview of the multiple work products developed during the MWWD Bid-to-Goal Reengineering Process
- ◆ to serve as an executive summary of the key results presented in several documents, including the Private Market Proposal and the Employee Bid; and
- ◆ to provide a guide and/or directory to users of the various project work products from the project allowing City officials, MWWD managers, BPR team members, MWWD staff, and others to efficiently access the detailed information contained in the work products.

## 1.2 Relationship of MWWD Bid-to-Goal Reengineering Process to City-wide Business Process Reengineering

The City of San Diego has embarked on a BPR program to improve the overall efficiency and effectiveness of its operations. Toward this end, the City developed a BPR guide designed to assist various City departments with their BPR efforts.

With City approval, MWWD has used a slightly modified process to achieve the City's BPR goals. MWWD and the City have determined that it is in the best interest of MWWD's wastewater system customers and users to undertake a Bid-to-Goal Reengineering Process for providing the most efficient and effective wastewater services possible. This Bid-to-Goal Reengineering Process uses a structured scoping process and private sector benchmarking data to establish a target for an employee proposal, or Employee Bid that, upon further negotiation, becomes the MWWD Most Efficient Organization (MEO). However, the Bid-to-Goal Reengineering Process also uses many of the tools incorporated in the City's BPR guide, such as process mapping and peer reviews, as described in more detail in Section 2.

## 1.3 Scope of the MWWD Bid-to-Goal Reengineering Process

For this Bid-to-Goal Reengineering process, the following MWWD Divisions were within the scope of study evaluated by the MWWD Business Process Reengineering (BPR) Teams:

- ◆ Operations and Maintenance Division;
- ◆ Wastewater Collection Division;
- ◆ Environmental Monitoring and Technical Services Division;
- ◆ Engineering and Program Management Division;
- ◆ Services and Contracts Division;
- ◆ Information and Organizational Support Division; and

Because a majority of the functions of the Department Administration and Management Division are actually carried out by staff assigned to the Information and Organizational Support (IOS) Division (and to a lesser extent some of the other Divisions), references to the IOS Division and its functions in this document are understood to include those functions provided on behalf of Department Administration and Management.

MWWD's Stormwater Pollution Prevention Division (SWPP) is funded by the General Fund as opposed to the remainder of the Department which is funded by the Sewer Enterprise Fund. Accordingly, the BPR process for SWPP was conducted in parallel with the rest of MWWD, but not as a part of the Bid-to-Goal process. Results from this evaluation are contained in a stand alone report held by the SWPP Deputy Director.

#### 1.4 MWWD Reengineering Team Charter Overview

The MWWD Reengineering Team Charter outlines the background of the BPR initiative and the goals intended to develop the most efficient processes within MWWD. The charter was approved and signed by the Deputy Chief of Public Works. The Team Charter delineates that teams will be commissioned to investigate possible reengineering and benchmarking opportunities.

The Team Charter states the objectives to be delivered at the end of the project, the constraints and assumptions, project milestones, and finally the limitations and potential problems that may be encountered during the BPR.

The objectives of the MWWD Reengineering as set forth by the Project Charter were to:

- ◆ Create a comprehensive list of authorizing documents, performance metrics (baseline data and benchmarks), and internal/external stakeholder requirements.
- ◆ Compare current practices and levels of service to the required/desired levels.
- ◆ Conduct a Peer Review (review of practices by representatives of high performing utilities).
- ◆ Identify opportunities to reengineer the organization, incorporating the assessment of right sized service levels and budgets, and projecting results for at least five future years.
- ◆ Develop a successor proposal for the ongoing Public Contract Operations (Bid-to-Goal) Agreements that will provide the framework for the overall MWWD organization to perform at a competitive level using appropriate performance standards and incentives.

The full MWWD Reengineering Team Charter is attached to this report as Appendix A.

## 1.5 Description of the Bid-to-Goal Reengineering Process

### 1.5.1 Planning

The MWWD Bid-to-Goal Reengineering Process began in May of 2006. The project was initiated with the formation of a BPR Steering Committee comprised of Department Management in partnership with Labor Organizations and the City of San Diego Public Works Business Center.

The BPR Steering Committee aided in the development of an overall project schedule, which included step-by-step actions that led up to the drafting of this BPR Report for delivery to the project sponsor (Deputy Chief of Public Works, Richard Haas). Implementation of approved recommendations contained in this BPR Report will proceed after “Meet and Confer” conferences with the Labor Organizations and approval by the Mayor and City Council. In addition to the BPR Steering Committee, subcommittees or BPR Teams were formed to assist in the completion of division-level activities. MEA and AFSCME Local 127 were consulted and approved the members of these divisional BPR Teams. The Labor Organizations were also afforded the opportunity to attend all meetings of the BPR Teams.

A Department "kick-off" meeting was held on June 6, 2006, to initiate the MWWD Bid-to-Goal Reengineering process. Both Labor Organizations (MEA and ASFME Local 127) were present and spoke in support of the Bid-to-Goal Reengineering Process at the meeting. The purpose of the meeting was to inform MWWD employees about the Bid-to-Goal Reengineering Process and to communicate a sense of urgency surrounding the need for an improved and efficient Department.

MWWD BPR Labor-Management meetings were held monthly starting on July 18, 2006 to review the status of the BPR effort, solicit Labor Organization input, answer questions about the project, and discuss any anticipated barriers to progress. These meetings were held at Metropolitan Operations Complex in Kearny Mesa, hosted by MWWD Management (Scott Tulloch and/or Robert Ferrier with Joe Harris), and attended by both MEA and Local 127 representatives.

### 1.5.2 Statement of Work

The Statement of Work (SOW) is the foundation of the Bid-to-Goal Reengineering Process in that it describes, in contractual terms, the work requirements performed by MWWD in fulfilling its mission of providing the San Diego Metropolitan Area with wastewater collection, conveyance, treatment, disposal and reclaimed water services. MWWD staff with assistance from the consultant began developing the SOW in June of 2006 for all in-scope areas of MWWD. The SOW contains:

- ◆ A Management, Operations and Maintenance section that describes the overall responsibilities of the MWWD employees who would manage the wastewater system

- ◆ A Quantifiable System Definition (QSD) that defines the critical features of the physical system for which the MWWD BPR Team would be responsible, including system physical assets. The QSD also provides projections for future wastewater flows and related loadings, and other future system demands so that the anticipated System growth may be considered and included in the BPR analyses.
- ◆ A summary of the minimum performance standards for system operation.
- ◆ A series of appendices which provide a detailed listing of all of the core services, core functions, and activities that would be performed, plus a prioritized listing of the authorizing documents which require or allow the employees to perform the core services.

While the SOW is based generally on the scope of services and the level of service to be provided to MWWD's customers beginning on July 1, 2007 through June 30, 2008, this SOW reflects several changes to the services that MWWD is currently providing, including system growth, and a notable increase in the size of MWWD's annual Capital Improvement Program (CIP) to approximately \$170 million per year in 2007 dollars. The SOW also anticipates the relocation of some staff from MWWD to other City Departments as part of the City's BPR and reorganization initiatives.

A description of the SOW is located in Section 3 of this BPR Report. The complete SOW is located in Appendix B.

### 1.5.3 Process Mapping

BPR process mapping kickoff and training workshops were conducted to delineate the basic steps of process mapping and the desired results of the "As-Is" and "To-Be" mapping sessions. Process mapping was accomplished by the Divisional BPR Teams and facilitated by MWWD employees specializing in organizational effectiveness. The process mapping schedules were distributed to the Labor Organizations to encourage attendance and participation.

During the "As-Is" process mapping, the BPR Teams outlined the entire business process (suppliers and inputs to customers and outputs) as it is currently conducted. This process mapping uncovered non-value-added steps including handoffs and loopbacks which are unnecessary to move from input to output and are not required by regulation or law, but are part of the current process. For consistency and ease of communication, all process maps were produced or converted to Visio. Ideas for improvement were documented in "parking lots" and reintroduced during the "To-Be" process mapping sessions.

The "To-Be" process mapping sessions were scheduled and held to create recommendations for more effective and efficient processes. Sign-in sheets were kept at "To-Be" sessions to comply with Labor Organization requests.

A detailed description of the Process Mapping is located in Section 2.5. The Process Maps are located in Appendix H.

#### 1.5.4 Peer Review

MWWD hosted Peer Reviews inviting subject matter experts from best practice agencies to tour MWWD's facilities and review its processes and performance. Based on their observations and experience in the wastewater area, these reviewers were asked to rate the effectiveness of MWWD and to provide suggestions for improvement.

Detailed documentation of the Peer Reviews is located in Section 2.3. The Peer Review Forms and Memorandums are located in Appendix G.

#### 1.5.5 Private Market Proposal

Following the Process Mapping and Peer Review efforts a Private Market Proposal (PMP) was delivered to MWWD by the consultant. The purpose of the PMP, attached in Appendix C, is to establish a competitive cost level or target for the Employee Bid process which was included in MWWD's overall reengineering effort. The Private Market Proposal is an opinion of probable cost prepared by the consultant based upon the requirements of the SOW, using readily available data from a variety of sources that were judged to be indicative of the Service Fee that a private sector operations contractor would require to carry out the requirements of the SOW. The consultant used several methodologies to develop the PMP, including:

- ◆ Process unit benchmark analysis
- ◆ Workload analysis
- ◆ Organizational benchmark analysis
- ◆ Cost history analysis
- ◆ Modified cost history analysis

The methodologies, assumptions, and results of the analyses were reviewed by the MWWD BPR Steering Committee, Divisional BPR Teams, and partnering Labor Organizations. This review resulted in further clarification of the methods used, revisions to the SOW, additional research and data collection, and, in some cases, some minor modifications to the PMP estimate to accurately reflect the revised requirements of the SOW.

The assumptions and methodologies were also reviewed by the Public Utility Advisory Commission's (PUAC) Operations Committee. Both the methodology and assumptions were approved by the full PUAC on November 20, 2006.

A description of the methodologies and assumptions are in Section 4 of this Report. The complete PMP is located in Appendix C.

#### 1.5.6 Employee Bid

Employee Bids were prepared by Divisional BPR Teams who met to determine how to reduce costs and remain competitive with a private market service provider. These Divisional Bids

were then consolidated into the Departmental Bid. The Departmental Bid is MWWD’s proposal to meet the requirements of the SOW at a competitive cost (as defined by the PMP).

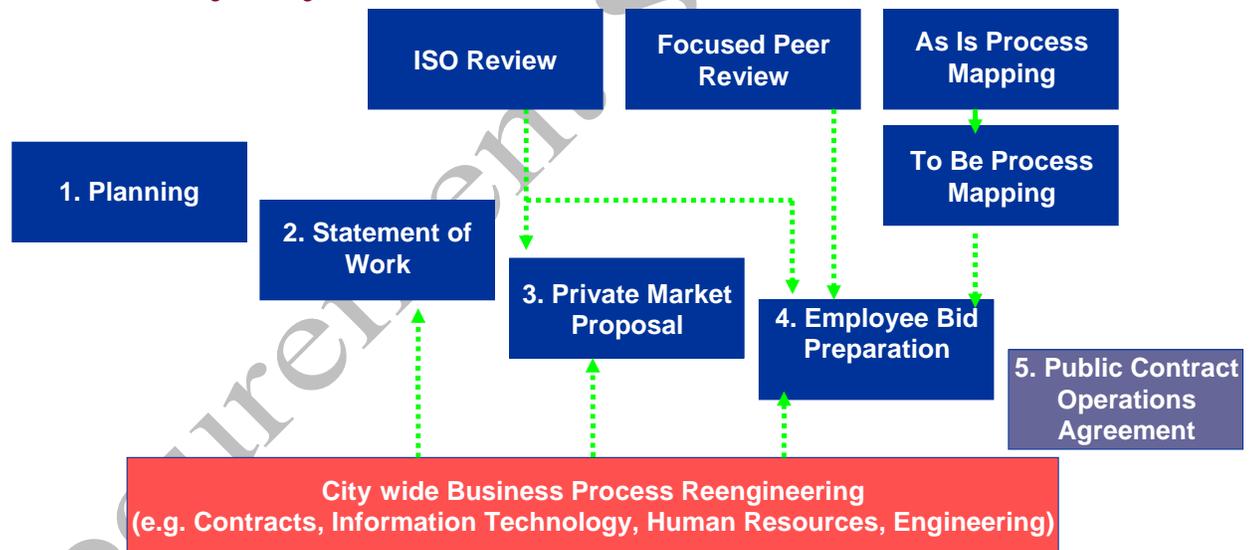
A description of the methodologies and assumptions utilized during preparation of the Employee Bid are in Section 5 of this Report. The complete Employee Bid is located in Appendix D.

### 1.5.7 Next Steps

Throughout the Bid-to-Goal Reengineering Process, MWWD also incorporated input from other City-wide BPRs. A graphical depiction of the Bid-to-Goal Reengineering Process is shown in Figure 1.1. This Report documents the work completed thus far (highlighted in blue).

The final step in the Bid-to-Goal Reengineering Process is to develop and approve the Public Contract Operations Agreement (highlighted in grey). If approved by the Mayor and City Council, The Public Contract Operations Agreement will establish the terms and conditions for operation of the City’s wastewater system in accordance with the Employee Bid.

Figure 1.1: Bid-to-Goal Reengineering Process Flow Chart



### 1.6 Acknowledgement

This Report is a testament to the dedication and informed participation of MWWD's employees and labor organization business partners (MEA and AFSCME, local 127), all in the cause of delivering best value to San Diego residents and ratepayers.

## 2 Evaluation of Current Operations and Processes

### 2.1 Description of Authorizing Documents and Agreements

A list of Authorizing Documents has been created to document the law applicable to the System. The Private Market Proposal and the Employee Bid have been developed to perform the requirements of the SOW in accordance with applicable law and to meet, at a minimum, the historical level of service that the City has received from MWWD. The Employee Bid is based on anticipated future conditions, such as wastewater treatment and conveyance needs and Capital Improvement Programs that are projected to occur within the System. The detailed list of Authorizing Documents is located in Appendix B of the Statement of Work.

### 2.2 Summary of Stakeholder Outreach

As part of this Bid-to-Goal Reengineering Process, the MWWD BPR Team solicited comments from internal and external stakeholders. Some key internal stakeholders were involved throughout the process including Department Deputy Directors and Labor Organization Representatives. Other internal stakeholders such as key MWWD staff, support departments, and customer departments were consulted as subject matter experts for specific activities.

The key external stakeholders were the external peer reviewers and the Public Utilities Advisory Commission (PUAC). The external peer review group included industry experts in six key functional areas of MWWD. The peer review groups spent several days on site learning about MWWD's processes and providing recommendations for optimization. For more detail documentation regarding the External Peer Review, see Section 2.3.

The PUAC is a committee that is appointed by the Mayor and confirmed by the City Council to advise the Mayor and Council on public utility matters impacting rate payers, system customers, and residents of the City of San Diego. These utilities include the City's Water Department and Metropolitan Wastewater Department. The Operations Committee of the PUAC, led by Bob Coffin, was consulted throughout the Bid-to-Goal Reengineering Process specifically regarding the methodologies used in developing the Private Market Proposal. On November 20<sup>th</sup> 2007, the PUAC approved the following action:

“Approve the Private Market Proposal Methodology as a Reasonable Approach to Estimating the Competitive Cost of Providing Wastewater Service.”

### 2.3 Summary of External Peer Review Comments

As part of this Bid-to-Goal Reengineering Process, MWWD conducted an External Peer Review during the week of August 14<sup>th</sup> 2006. The goal of this initiative was to share information with other best practice agencies, and to identify specific recommendations that could improve the overall performance and effectiveness of MWWD. The External Peer Review focused on six key areas within MWWD:

- ◆ Asset Management
- ◆ General Management
- ◆ Rate Case Formulation
- ◆ Laboratory Operations, Industrial Waste Control, Regulatory Permitting, and Ocean Monitoring
- ◆ Wastewater Collection Operation and Maintenance
- ◆ Wastewater Treatment Plant Operations

Each focus area had a Peer Review Team that consisted of the key MWWD staff responsible for the activity and one or more external experts who are currently involved in similar activities for other best practice agencies. The External Peer Review was conducted over several days and included the following activities:

- ◆ Introduction and Overview of MWWD
- ◆ Review of Current MWWD Processes
- ◆ Site Tours
- ◆ Interviews with Key Staff
- ◆ Recommendation Brainstorming Sessions
- ◆ Documentation of Recommendations

A list of the External Peer Review Participants and the Documentation of the Recommendations are located in Appendix G.

## 2.4 Summary of ISO Certification Review

The Bid-to-Goal Reengineering Process included an assessment of MWWD's ISO Certification Program. The assessment, performed by the consultant, documented why organizations implement ISO 14001 programs; reviewed the history of MWWD's certifications; summarized interviews with managers/supervisors of units holding ISO certifications; discussed the EPA and Cal/EPA's support of the principles of continual improvement and sound management systems embodied in the ISO 14001 standard; evaluated benchmarking information from both private and public sector on ISO 14001; and, finally, made conclusions and recommendations on three possible outcomes: 1) elimination of the ISO program; 2) continuation of ISO at the individual division level; and 3) implementation of the ISO program Department-wide.

The full ISO Assessment Report is attached in Appendix F. This Section answers the specific questions contained in the consultant's Scope of Services and addresses recommendations for next steps for the MWWD and the Divisions to consider.

#### 2.4.1 Should MWWD Eliminate the ISO program?

The consultant recommends that MWWD should not eliminate the ISO Program and maintain the existing ISO 14001 programs for the following reasons:

- ◆ Each MWWD operating division with ISO 14001 and its employees are proud of their accomplishments in obtaining and maintaining their ISO certification.
- ◆ The start-up investment has been made; the program for each Division has more than paid for itself in the initial years of implementation.
- ◆ On an incremental basis, the value of the annual benefits for each program outweighs the annual maintenance costs.
- ◆ In addition to annual quantifiable benefits, the programs produce many intangible benefits, such as improved environmental awareness, better communications internally and externally, leadership role among environmental professionals, positive brand image among government regulators, and a potential for improved bond rating and reduced insurance premiums.
- ◆ The majority of staff have accepted ISO 14001 and integrated it into their everyday work.
- ◆ ISO 14001's EMS-based approach mitigates non-compliance rooted in ignorance by focusing on the root causes of non-compliance.
- ◆ External audits help safeguard against willful shirking of government regulations.
- ◆ San Diego is recognized as the ISO 14001 expert; recently (summer 2006) the EPA Region IX Administrator praised MWWD at a conference for its leadership in ISO 14001. This recognition likely improves MWWD's overall relationship with EPA and perhaps state regulators as well.
- ◆ The probable negative publicity and regulatory reaction from the elimination of the ISO 14001 program.

#### 2.4.2 Should MWWD continue the EMS program at the Individual Division Level?

The consultant recommends that the EMS programs be continued at the Divisional level for the following reasons:

- ◆ Each MWWD ISO Certified Division has different needs and programs for its environmental practices; these include:
  - ◆ Operational procedures.
  - ◆ Annual audits and impact assessments.
  - ◆ Workflow procedures for measuring and monitoring, such as daily plant readings and laboratory testing.

- ◆ When each of the three operating MWWD Divisions were certified to ISO 14001, they were the first in their respective field to do so. This appears still to an important motivator to the employees and a source of pride.
- ◆ It would be difficult to consolidate the ISO 14001 program without watering it down due to the different activities in each Division.
- ◆ Development of an integrated MWWD-wide ISO 14001 program is not advisable at this time due to the number of other initiatives currently ongoing within the City (e.g., reengineering).

### 2.4.3 Should Implementation of the ISO 14001 program be expanded Department-wide?

The consultant recommends that the EMS programs not be expanded Department-wide for the following reasons:

- ◆ Based on the interviews there is limited interest from management staff to have a department-wide ISO program covering non-operating units. The three operating units which have the greatest impact on the environment do have established programs, and need to stay decentralized. From a Departmental perspective the program would be enhanced by sharing of information across divisions at the Environmental Management Representative (EMR) level.
- ◆ Within the non-operations oriented Divisions, there is uncertainty about which functions will remain with MWWD and which will be centralized downtown through the Business Process Reengineering process.
- ◆ At a later date, once the non-operations oriented Divisions stabilize, implementation of an ISO 14001 EMS could be reconsidered. Waste minimization is typically the program/area that non-operations oriented Divisions focus on.

## 2.5 Summary of Process Mapping Results

### 2.5.1 Summary of Process Mapping Results

As part of this Bid-to-Goal Reengineering Process and the city-wide BPR Process, MWWD conducted a process mapping initiative. The goal of this initiative was to redesign existing work processes to identify substantial improvements that would feed into the development of MWWD's MEO. Process flow mapping is a tool that visually displays an entire process in a logical sequence of events from beginning to end. It provides a structure for thinking through a difficult process in a simplified manner, which can then be analyzed.

MWWD's process mapping initiative was composed of many cross sectional teams within each division. These teams were brought together to create "As-Is" and later "To Be" process maps. For the "As-Is" map document BPR teams assessed what they actually do. This enabled them to:

- ◆ Identify value-added work plus areas of opportunity, (activities which transform materials and information into products and services the customer wants);
- ◆ Clearly see normally insignificant or overlooked areas and display their relevancy to process;
- ◆ Clearly identify nonessential and non-value-adding work, (processes which consume resources, but don't contribute directly to the end product or service);

Although the “To-Be” process method is similar to the “As-Is” process mapping, the “To-Be” process starts with a clean slate and focused on what one should do. Using the “Ah-Ha’s” and opportunities from the “As-Is” charting, BPR Teams developed reengineering alternatives that:

- ◆ Increased efficiency, consistency and quality;
- ◆ Raised accountability;
- ◆ Created cost savings or cost avoidances; and
- ◆ Reduced duplication of effort;
- ◆ Continued to deliver on performance goals.

The process mapping initiative provided employees the opportunity to share their knowledge on a process and to collaborate on the development of the maps. It also challenged the teams to assess and evaluate the current process and suggest ways to improve its efficiency and effectiveness. The outcome of this effort will be increased productivity and reduced cost, which would benefit each division and the overall functioning of the organization. The sections below describe the processes mapped and summarize the improvements in each of the six existing Divisions of MWWD. The detailed documentation of the process mapping initiative is located in Appendix H.

### 2.5.2 Operations & Maintenance Division

The Operations and Maintenance (O&M) Division mapped 22 processes:

- ◆ O&M Back Log
- ◆ North City Back Log
- ◆ Data Base New/Change Asset O&M
- ◆ O&M EMPAC Data Base PM New/Modify
- ◆ O&M EMPAC Corrective Maintenance (MBC & South Bay)
- ◆ O&M EMPAC Corrective Maintenance (CFS)
- ◆ O&M EMPAC Corrective Maintenance (North City)
- ◆ O&M EMPAC Preventative Maintenance (MOC 9)
- ◆ O&M EMPAC Preventative Maintenance (South Bay & MBC)

- ◆ O&M EMPAC Preventative Maintenance (North City & Point Loma)
- ◆ O&M Large Scale Operations THINGS TO TRIGGER
- ◆ O&M Large Scale Operations THINGS TO TRIGGER (Point Loma, North City, South Bay, Pump stations, MBC, COM C, CSF)
- ◆ Generative Preventative Maintenance (PM work orders)
- ◆ Identify Work
- ◆ Procurement & Warehouse
- ◆ O&M EMPAC Predictive (RMG)
- ◆ O&M EMPAC Overhauls
- ◆ O&M Process Monitoring
- ◆ O&M Procurement Contracts Reasons to procure
- ◆ O&M EMPAC Rebuilds
- ◆ O&M EMPAC Setting/Deleting Items in W/H
- ◆ O&M Technical Training PT/I&C techs/Electricians/PPCE/Main Coordinators/Supervisory staff

The O&M Division created “As-Is” process maps for all of the functions listed above and “To-Be” process maps for O&M EMPAC Corrective Maintenance (MBC & South Bay), O&M EMPAC Corrective Maintenance (CFS), O&M EMPAC Corrective Maintenance (North City) Procurement & Warehouse, and O&M EMPAC Predictive (RMG). A “To-Be Parking Lot” or list of ideas for improvements was created for the O&M Process Monitoring process. The table below serves as an example of the measurable improvements that were made to the O&M Division processes using the process mapping method.

Table 2-1: O&M Division: EMPAC Correctives

	As-Is	To-Be	Delta (Change)
Number of Steps	64	34	47%
Number of Decisions	15	7	53%
Number of Hand-offs	23	14	39%
Loop-backs/Defects	5	4	20%
Waiting & Delays	21	13	38%

### 2.5.2.1 Summary of Improvements

- ◆ The initial process was divided by facility. Improvements were made to this process through standardization of the process into one process for all facilities.
- ◆ Waiting and delays in the “To-Be” process are less prevalent due to the improvement in communication between levels of supervision and increased process efficiency.

- ◆ The demand for services has increased so it is to be expected that the number of employees supporting the process will show no significant decrease.

### 2.5.3 Wastewater Collection (WWC) Division

The Wastewater Collection (WWC) Division mapped 5 processes:

- ◆ Maintenance frequency optimization process
- ◆ Cleaning process
- ◆ Pump stations process
- ◆ Pump station interceptors process
- ◆ Canyon access process

Process maps were created for all of the processes during the “As-Is” process mapping sessions. “To-Be” process maps were developed for Maintenance frequency optimization, Cleaning, and Canyon access. The “To-Be” process mapping team for Pump Stations and Pump Station Interceptors focused on addressing parking lot issues and did not result in “To-Be” process maps. The table below serves as an example of the measurable improvements that were made to the WWC Division processes using the process mapping method.

*Table 2-2: WWC: Maintenance Frequency Optimization & Cleaning*

	As-Is	To-Be	Delta (Change)
Number of Steps	22	24	+9%
Number of Decisions	5	8	+60%
Number of Hand-offs	8	7	13%
Loop-backs/Defects	2	4	+100%
Waiting & Delays	6	5	17%

#### 2.5.3.1 Summary of Improvements

- ◆ The Maintenance frequency and cleaning processes were mapped as two separate processes during the “As-Is” process mapping session. These two maps were integrated into one during the “To-Be” session because of the need for the processes be better coordinated and to allow for the reduction of double-work.
- ◆ This integration resulted in an increased number of steps and decisions, but the division will benefit from increased quality control and an integrated process. One major improvement proposed by the process mapping exercise was increased crew autonomy, affording the crews the latitude to make recommendations to their supervisors on findings. This change is expected to:
  - ▲ Increase crew’s sense of empowerment

- ▲ Increase crew productivity
- ▲ Increase the efficient use of time
- ▲ Provide more accurate information on the status of cleaning frequency
- ◆ The introduction of a quality check on data before it enters the computer algorithm system (e.g., in the “As-Is” process all data goes to the computer algorithm without being checked and often the algorithm would require a correction later). To address this problem, it was proposed that if the supervisor did not approve the crew recommendation, the recommendation will be checked by the planner/scheduler quality controller before going to data entry. After data entry the supervisor will either approve or deny the crew recommendation. Only denied recommendations will be sent to the computer algorithm.
- ◆ Decision points were added in the “To-Be” process in response to some of the parking lot items surfaced during the “As-Is” process.

#### 2.5.4 Environmental Monitoring & Technical Services Division

Environmental Monitoring & Technical Services (EMTS) Division mapped 6 processes:

- ◆ Contract In-Sourcing
- ◆ High Level PIMS-LIMS-PIMS
- ◆ High Level Trucked Waste
- ◆ Laboratory Services
- ◆ Process Control
- ◆ Contract In-Sourcing To-Be

The EMTS Division created “As-Is” process maps for all of the functions listed above and “To-Be” process maps for Contract In-Sourcing. The “To-Be” process mapping sessions targeted overall improvements in areas that would benefit from the exercise. The table below provides some of the measurable improvements that were made to the EMTS Division Contract In-Sourcing process using the process mapping method.

*Table 2-3: EMTS: Contract In-Sourcing*

	As-Is	To-Be	Delta (Change)
Number of Steps	31	25	19%
Number of Decisions	5	5	0%
Number of Hand-offs	6	2	67%
Loop-backs/Defects	3	3	0%
Waiting & Delays	3	1	67%

2.5.4.1 Summary of Improvements

- ◆ Improvements were made in this process at points where the EMTS Division required information from other MWWD divisions. These specific points (or steps) were modified to allow the EMTS Division to work in conjunction with other divisions to accomplish the tasks more expediently.
- ◆ A reduction in the amount of time required to accomplish a contract agreement was accomplished by combining approval/review opportunities.

2.5.5 Information and Organizational Support Division

The Information and Organizational Support (IOS) Division mapped 2 processes:

- ◆ Safety Accident Investigation
- ◆ City of San Diego Hiring Process

Process maps were created for all of the processes during the “As-Is” process mapping sessions. Employees from Safety and Human Resources/OD assisted in the process mapping. The Hiring Process was modified to incorporate input from the City-wide Human Resources BPR process and its application to MWWD. Drafting of the Safety & Training Accident Investigation process included MWWD’s Safety Manager and an experienced Safety Officer.

Process mapping provided this division an opportunity gain an understanding of existing processes in preparation for the creation of more efficient and effective methods of operation. The table below serves as an example of the measurable improvements that were made to the IOS Division processes using the process mapping method.

Table 2-4: IOS: Safety & Training Accident Investigation

	As-Is	To-Be	Delta (Change)
Number of Steps	40	37	7.5%
Number of Decisions	5	6	+20%
Number of Hand-offs	15	9	40%
Loop-backs/Defects	5	0	100%
Waiting & Delays	7	1	86%

2.5.5.1 Summary of Improvements

The most significant issue affecting Accident Investigation is the inconsistent notification of an injury. The improved process now requires immediate notification of Safety whenever there is an accident, regardless of severity. This change will ensure employees receive the appropriate medical treatment, inclusion of Safety experts at the onset of an incident, and a systematic paper trail to increase the accuracy of injury reviews that will lead to better prevention. An Injury Review Committee has been added to the process for case review of whether an injury was preventable, and if disciplinary action is necessary. These improvements should increase the efficiency of the process and effectiveness of Safety Investigations

### 2.5.6 Services & Contracts Division

The Services and Contracts (S&C) Division mapped 4 processes:

- ◆ Contracts
- ◆ Records Management
- ◆ Rate Case
- ◆ Budget and Accounting

Services and contracts created “As-Is” and “To-Be” process maps for all of the functions listed above. The “To-Be” process mapping sessions targeted overall improvements in existing policies and procedures which would enhance the division’s efficiency in meeting the needs of other divisions. Secondly, the “To-Be” process maps were created to reflect changes occurring at the city BPR initiative (e.g., including Purchasing & Contracts (P&C) in the contracts process). In addition, the “To-Be” process focused on upgrading or replacing the current automated systems (e.g., records management) which would benefit all MWWD employees. The table below serves as an example of the measurable improvements that were made to the S&C Division processes using the process mapping method.

*Table 2-5: S&C: Records Management - Incoming Documents*

	As-Is	To-Be	Delta (Change)
Number of Steps	17	13	24%
Number of Decisions	3	3	0%
Number of Hand-offs	3	2	33%
Loop-backs/Defects	1	0	100%
Waiting & Delays	1	1	0%

#### 2.5.6.1 Summary of Improvements

- ◆ The added loop in the “To-Be” process is a quality control decision which the Deputy Director can use as a performance measure
- ◆ Waiting and delays in the “To-Be” process is expected to occur less than 5% of the time because of the improvement in efficiency
- ◆ The “To-Be” process will benefit from an improved automated system which will result in:
  - ▲ time reduction,
  - ▲ less handoffs,
  - ▲ improve quality assessment and control,
  - ▲ maximum use of the system and consistency across divisions,

- ▲ overall a more efficient and effective records management unit

### 2.5.7 Engineering and Program Management Division

The Engineering and Program Management (EPM) Division mapped 8 processes:

- ◆ Metro Condition Assessment
- ◆ Metro Modeling
- ◆ Metro Pre-Design
- ◆ Metro Master Planning
- ◆ Project Action
- ◆ Municipal Planning
- ◆ Municipal Modeling
- ◆ Program Master Scheduling

Engineers and staff familiar with the various functions participated in the relevant process mapping sessions. The EPM Division handles both Metropolitan and Municipal projects, which resulted in the need to map components of each. Detailing the various aspects of EPM eliminated any uncertainty or disagreement regarding various processes. Having standard procedures will ensure consistency across all projects. The table below serves as an example of the measurable improvements that were made to the EPM Division processes using the process mapping method.

Table 2-6: EPM: Metro Planning - Condition Assessment

	As-Is	To-Be	Delta (Change)
Number of Steps	31	27	13%
Number of Decisions	6	6	0%
Number of Hand-offs	9	3	67%
Loop-backs/Defects	4	3	25%
Waiting & Delays	8	2	75%

#### 2.5.7.1 Summary of Improvements

- ◆ Initial process included an inordinate number hand-offs and delays that have been eliminated from the future process
- ◆ Removing modeling from the process increased the efficiency of the process
- ◆ More autonomy was afforded from management, Condition Assessment does not pass through as many check points as previously included
- ◆ Reporting of results was the most cumbersome portion of the process. In the new process, the report is reviewed by the team, updated, and then sent for O&M Deputy

Director review. This will reduce the number of late revisions previously hampering the efficiency of the process.

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## 3 Statement of Work Summary

### 3.1 Introduction

As discussed previously, the City and MWWD have determined that it is in the best interest of the City and its customers and users to undertake a Bid-to-Goal Reengineering Process for providing the most efficient and effective wastewater services possible. In furtherance of this objective a Statement of Work (SOW) has been developed for the implementation of the following scope of services:

Management, operation, and maintenance of the wastewater system (collectively, the “System”) including without limitation collection and treatment of wastewater, production of reclaimed water, transportation and disposal of sludge, implementation of industrial pretreatment programs, conducting an ocean monitoring and reporting program, and the support of certain capital repairs and replacements.

In developing this SOW, the City and MWWD are seeking to accomplish certain financial and management objectives and to improve the overall efficiency and safe operation of the System. The objectives are as follows:

- ◆ Create a more efficient, less costly system while providing excellent service quality.
- ◆ Continue to provide high-quality, uninterrupted service to all System users.
- ◆ Manage, maintain, and operate the System in a safe and efficient manner in accordance with all applicable laws and regulations and in conformance with good industry practice.
- ◆ Preserve and protect the System.
- ◆ Promote System reliability and efficiency through state of the art predictive, preventive, and corrective maintenance practices.

The SOW provided in the appendix of this report covers the Management, Operations, and Maintenance Services provided by MWWD. It served as the basis for preparation of a Private Market Proposal and, subsequently, Employee Group Bids as part of the reengineering process. The SOW applies to the existing system; future changes such as conversion to secondary treatment at Point Loma Wastewater Treatment Plant would require changes to the SOW.

### 3.2 Definitions

For the purposes of consistency and clarity, Chapter 2 of the SOW contains a list of definition of key terms that are used throughout the SOW. These terms are also used in the Private Market Proposal and the Employee Bid, and it is anticipated that they will ultimately be used as definitions in the Public Contract Operations Agreement.

### 3.3 Management, Operations and Maintenance Services

Chapter 3 of the SOW describes the general responsibilities of both the MWWD BPR Team, the group of MWWD employees responsible for managing, operating and maintaining the municipal and metropolitan wastewater systems, and the responsibilities of the City. More specifically, these responsibilities include:

- ◆ Overall responsibilities of the MWWD BPR team;
- ◆ Overall responsibilities of the City;
- ◆ Requirements for safety and security of persons and property;
- ◆ Responsibilities for equipment, chemicals, materials and supplies;
- ◆ Operations requirements;
- ◆ System maintenance requirements; and
- ◆ Responsibilities for Capital Projects and Asset Repairs, and Replacements.

Chapter 3 of the SOW also briefly discusses the issues of out-of-system services, physical changes to the system, and Uncontrollable Circumstance(s).

### 3.4 Quantifiable System Definition

Chapter 4 of the SOW describes the wastewater and system characteristics upon which both the Private Market Proposal and the Employee Bid are based.

The wastewater characteristics used as the basis for the PMP and Employee Bid are documented in the following reports:

- (1) *Annual Receiving Waters Monitoring Report for the Point Loma Ocean Outfall, 2005*
- (2) *Annual Receiving Waters Monitoring Report for the South Bay Ocean Outfall (South Bay Water Reclamation Plant), 2005*
- (3) *Annual Receiving Waters Monitoring Report for the South Bay Ocean Outfall (International Wastewater Treatment Plant), 2005*
- (4) *North City Water Reclamation Plant Annual Monitoring Report*
- (5) *Point Loma Ocean Outfall Annual Monitoring Report (2005)*
- (6) *South Bay Water Reclamation and Ocean Outfall Annual Monitoring Report (2005)*

Changes in these wastewater characteristics impacting the costs for providing the services are grounds for renegotiation of the Budget Objective for providing the services in accordance with the provisions of the Public Contract Operations Agreement.

The Quantifiable System Definition (QSD) table included in this chapter lists key aspects of the System for which services are to be provided by the MWWD BPR Team. However, the table does not fully define the components of the System in detail. It is understood that the actual “as-built” drawings and documents of other official records on the Commencement Date are the authoritative definition of the System. The projections section of the QSD table presents the future anticipated conditions used to develop the Budget Objective in the Employee Bid for the services of the MWWD BPR Team in conjunction to the System. Changes in these future anticipated conditions are grounds for renegotiation of the Budget for providing the services in accordance with the terms of the Public Contract Operations Agreement.

### 3.5 Performance Objectives and Thresholds

Chapter 5 of the SOW presents levels of performance expected from the MWWD BPR Team in its execution of the SOW. Service requirements are summarized into Performance Objectives that relate directly to the essential items within the Core Services as discussed below. For each Performance Objective, a Performance Threshold is defined that describes the minimum acceptable level of service required. To conform to the requirements of the Public Contract Operations Agreement, the MWWD BPR Team must achieve these thresholds.

### 3.6 Core Services Hierarchy and Tables

MWWD is divided into a number of divisions that provide services to customers and stakeholders. Six of these divisions are part of the MWWD BPR team: Operations and Maintenance, Information and Organizational Support, Engineering and Program Management, Environmental Monitoring and Technical Services, Services and Contracts, and Wastewater Collection. Each of these divisions is considered to represent a “core service” of MWWD.

Within each division there are typically six to eight sections that focus on certain functions. Each section is considered to represent a “core function.” Within each section there may be specific programs or groups that perform certain tasks. Each program or group is considered a “basic service requirement group.” The tasks that these groups complete are referred to as “basic service requirements.”

The linkage between the core services hierarchy and the units within the MWWD organization is summarized in the figure below, along with an example from the IOS Division/Core Service.

Figure 3.1: Core Services Hierarchy

NAME	MWWD ORGANIZATION	EXAMPLE
Core Service	Division	Information and Organizational Support
Core Function	Section or Activity Group	Information Technology Management
Basic Service Requirement Group	Program or Activity	IT Governance
Basic Service Requirement	Task	Implement IT policies and procedures

The extensive set of tables contained in Appendix A of the SOW describes the basic work requirements for each of the six Core Services. Separate tables are included for each Core Function.

Within the tables, each Basic Service Requirement is assigned one or more purposes or drivers. The purposes and/or drivers are intended to indicate MWWD’s most compelling reason for performing the Basic Service Requirement or task. Purpose Codes (1 through 5) have been used in the tables to indicate purpose or driver for the Basic Service Requirement. These Purpose Codes are explained in the figure below.

Figure 2.2: Purpose Codes for Basic Service Requirements

PURPOSE CODE	CATEGORY NAME	CATEGORY DEFINITION	EXAMPLES
1	Legal Requirement	A legally required service based upon a law, permit, ordinance or similar Authorizing Document	California law; NPDES permit; OSHA regulations; Intergovernmental Agreement adopted by ordinance; City ordinance.
2	Stakeholder Requirement	A service required by an entity or customer outside of the MWWD Division (within or outside of the City) performing the work	Clearing of blocked sewers; annual MWWD budget submittal; Service Level Agreement; other Intergovernmental Agreements
3	Industry Standard or Benchmark	A service or function commonly performed by U.S. wastewater utilities	WEF Manual of Practice documents
4	Internal City Requirement	A service required by a City, Department or Division policy	City recruiting policy
5	Other	A service that does not fall into one of the above four categories.	

The Core Services tables also specify the Performance Level of Service for each Basic Service Requirement. These performance levels may be specified as a frequency (e.g., analyses performed per month), as a number of units process or handled (e.g., millions of gallons of wastewater treated), or in other forms relevant to the Basic Service Requirement.

## 4 Consolidated Private Market Proposal

### 4.1 Introduction

As part of the Bid-to-Goal Reengineering Process, the City commissioned HDR Engineering Inc. (HDR) to develop the Private Market Proposal (PMP) to estimate the cost to perform the Statement of Work (SOW) based upon HDR's experience with public/private partnership transactions, published results of such procurements, and other readily available benchmarking information.

The PMP has been developed using several key assumptions:

- ◆ The PMP Costs are based on performance of the SOW by a Private Sector Service Provider (Provider).
- ◆ The Provider will use best industry practices and private market staffing models applicable to the San Diego market and environment.
- ◆ Provider insurance/risk allocation costs and profit are included in the PMP.
- ◆ The focus of the PMP is on costs directly controlled by MWWD including MWWD's departmental overhead costs. City overhead costs and services performed by other City Departments are considered a pass-through cost and are not addressed in the PMP. The PMP has been structured in such a way that the cost gap between the Department's current operations (including Departmental overhead costs) and the PMP can be calculated.

The body of this section outlines, at a high level, the methodologies, assumptions, and a summary of the PMP. The complete PMP is included in Appendix C of this document.

### 4.2 Methodologies Used

The goal for the PMP was to estimate the staffing levels, salaries, fringe benefits, and other direct costs that a private provider would propose if they were to submit a proposal to provide the services described in the Statement of Work beginning in July of 2007.

There are many different methodologies that can be utilized to develop the PMP. HDR found that there was not one method that was adequate to develop a PMP for an organization with a comprehensive scope as MWWD for every key function, so the best method for each function was selected based on the data available to support each method. A summary of the methodologies used to develop the costs shown in PMP are listed below:

- ◆ Process Unit Benchmark Analysis – The use of industry benchmarking data to define staffing or cost levels associated with specific assets and/or processes.
- ◆ Workload Analysis – The use of industry productivity rates to define the staffing or cost levels for specific activities.

- ◆ Organizational Benchmark Analysis – The use of industry benchmarking data to define staffing or cost levels for an organizational group.
- ◆ Cost History Analysis – The use of historical MWWD cost data to define cost levels
- ◆ Modified Cost History Analysis – The use of historical MWWD cost data modified to account for anticipated conditions during the PMP TERM.
- ◆ Other Analysis – The use of an alternate method not categorized above, but specifically defined in the PMP

A detailed explanation of each method and a summary of the specific assumptions and methods that were utilized for development of each section of the PMP are included in Appendix C, Section 3.

## 4.3 Assumptions

### 4.3.1 General

One of the key goals of this Bid-to-Goal Reengineering Process is to compare the PMP to MWWD's current cost of performing each core function and determine the Cost Gap. With this goal in mind, the following list presents the general assumptions used to develop the PMP:

- ◆ The scope of services for the PMP is the SOW (dated October 20, 2006).
- ◆ PMP Costs are in 2007 dollars.
- ◆ PMP costs are based on projected FY 2008 levels of service from the SOW. It should be noted that, in some cases, the level of service has changed significantly from the level of service included in the FY 2007 budget.
- ◆ PMP does not include an allowance for vacant staff positions or delays in hiring. There is no allowance for light duty, and other special leave absences not required by law.
- ◆ Capital project costs are not included in the PMP, since these costs are a City responsibility, independent of the service provider for Management, Operations, and Maintenance Services. The PMP does include certain costs for planning, coordination, and administration of capital projects in accordance with the SOW.
- ◆ The PMP includes two different sets of labor costs. One is based on private market salaries and private market benefits, while the other uses current City of San Diego salaries and benefits. The City will need to make a policy decision about which set of salaries and benefits to use.
- ◆ Except as specifically noted, the PMP provides for meeting the required output and outcomes for each core service in the SOW (as described in Section 5 of the SOW).
- ◆ The costs for services provided by other city departments were computed based on historical cost data. These costs are considered pass-through costs for the purpose of this opinion of probable cost and the PMP.

### 4.3.2 Cost Categories

The PMP has been broken out into eight cost categories that are associated with MWWD's expenditure accounting structure. The eight cost categories are identified below:

- ◆ Personal Services
- ◆ Fringe Benefits
- ◆ Supplies and Services
- ◆ Other Services
- ◆ Data Processing (DP) – Fixed Contract
- ◆ DP – Lease/Purchase/Contract
- ◆ Capital Outlays
- ◆ Utilities and Energy

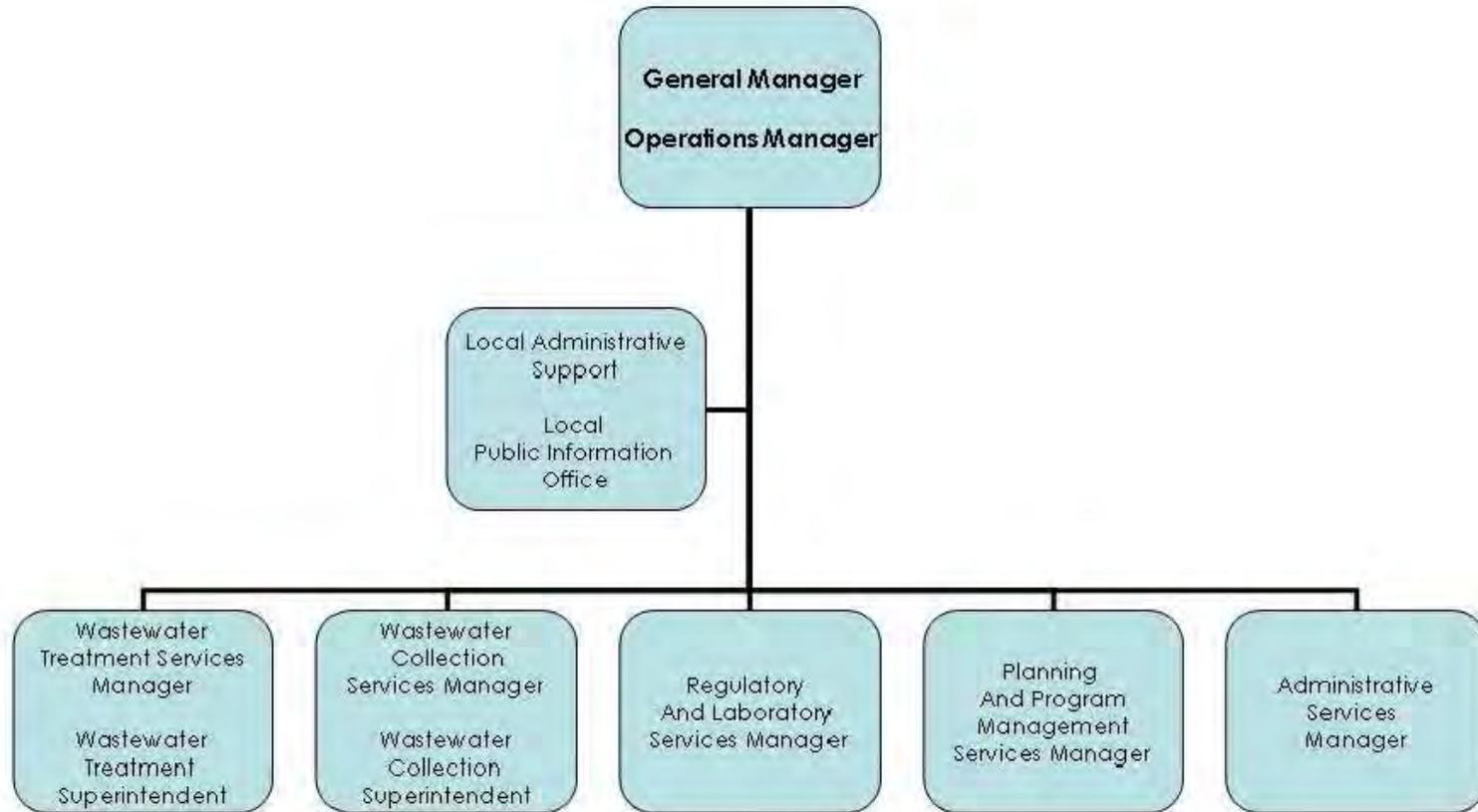
### 4.3.3 Detailed Assumptions

A detailed description of PMP assumptions is located in Appendix C, Section 4.

### 4.3.4 Management Structure

The assumed management structure for the PMP was based upon structures employee by contract operations firms when operating large scale and/or extensive utility facilities. This structure is illustrated in Figure 4.1.

Figure 4.1: Private Market Proposal Management Structure



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#### 4.4 Summary of Private Market Proposal for MWWD

Based on the methodologies and assumptions discussed above, a detailed PMP was developed with the estimated cost, or service fee, that would be required for a private market contractor to provide the services shown in the SOW dated September 15, 2006.

Tables 4.1 and 4.2 summarize the PMP costs. Table 4.1 compares the PMP costs to the recent budget and expenditures by MWWD's current divisions. Table 4.2 includes a summary comparison of costs by cost category. For comparison purposes, each table has the following columns:

- ◆ Actual FY 06 Expenditures – the MWWD actual expenditures from July 1, 2005 through June 30 2006.
- ◆ Actual FY07 Appropriation – the MWWD Fiscal Year 2007 appropriation.
- ◆ PMP (Private Compensation) – the PMP cost using private sector staffing levels, salaries, and benefits.
- ◆ PMP (City Compensation) – the PMP cost using the private sector staffing levels and City of San Diego salaries and benefits.
- ◆ Gap (Private Compensation) – the difference between the Adjusted FY07 Appropriation and the PMP using Private Compensation.
- ◆ Gap (City Compensation) – the difference between the Adjusted FY07 Appropriation and the PMP using Public Compensation.

It must be noted that the PMP is based on the SOW created for FY 2008, and that the scope of services performed in FY06 and planned for FY07 is not identical to the SOW created for FY08. The primary difference is the significant increase in CIP improvement projects shown in the SOW versus the historical quantity of CIP improvement projects implemented during FY06 and planned for FY07.

Table 4.3 presents a summary of the detailed FY07 staffing plans. The MWWD staffing level is based on the MWWD budget, while the PMP staffing represents the estimated staffing level a private contractor would use to perform the scope of services outlined in the Statement of Work.

Table 4-1: PMP Core Function

Division	Expenditures	Fiscal Year 2007 Appropriation	Private Compensation*		City Compensation**	
		Actual	PMP	Gap	PMP	Gap
O&M	\$86,825,748	\$89,856,501	\$79,497,258	\$10,359,243	\$80,217,728	\$9,638,773
WWC	\$46,593,190	\$63,456,934	\$45,467,257	\$17,989,677	\$47,015,874	\$16,441,060
EMTS	\$18,550,995	\$20,646,354	\$19,264,359	\$1,381,995	\$19,430,808	\$1,215,546
IOS	\$17,546,963	\$16,827,799	\$14,839,808	\$1,987,991	\$14,902,142	\$1,925,657
S&C	\$34,328,462	\$36,378,686	\$34,021,860	\$2,356,826	\$34,176,763	\$2,201,923
EPM	\$11,116,491	\$12,250,505	\$12,043,084	\$207,421	\$12,149,867	\$100,638
Contingency Reserve		\$30,683,816				
Private Market Subtotal	\$214,961,849	\$239,416,779	\$205,133,626	\$34,283,153	\$207,893,182	\$31,523,597
Contractor Contingency and Profit	6%		\$12,308,018		\$12,473,591	
<b>Private Market Proposal</b>			<b>\$217,441,643</b>		<b>\$220,366,773</b>	
Contract Administration	1%		\$2,174,416		\$2,203,668	
<b>Total</b>		<b>\$239,416,779</b>	<b>\$219,616,060</b>	<b>\$19,800,719</b>	<b>\$222,570,441</b>	<b>\$16,846,338</b>

\* PMP costs developed using private market salaries and a fringe benefit rate of 39%.

\*\* PMP costs developed using the average city salaries average city fringe benefit rate.

FY 07 Appropriation includes \$30.6 million in operating and contingency reserves. These have been subtracted for comparison to the PMP.

Table 4-2: PMP Cost Category

Cost Category	Expenditures	Fiscal Year 2007 Appropriation	Private Compensation*		City Compensation**	
		Actual	PMP	Gap	PMP	Gap
Salaries	\$58,271,601	\$62,860,449	\$49,972,379	\$12,888,070	\$47,795,432	\$15,065,017
Fringe Benefits	\$27,255,583	\$29,206,492	\$19,489,228	\$9,717,264	\$24,425,732	\$4,780,760
Supplies/Services/Other Services	\$98,064,580	\$112,325,639	\$102,277,986	\$10,047,653	\$102,277,986	\$10,047,653
DP - Fixed Contract	\$6,288,802	\$5,928,902	\$6,101,049	-\$172,147	\$6,101,049	-\$172,147
DP - Lease/Purchase/Contract	\$7,025,163	\$8,639,184	\$8,912,005	-\$272,821	\$8,912,005	-\$272,821
Energy and Utilities	\$16,352,264	\$18,419,416	\$16,666,070	\$1,753,346	\$16,666,070	\$1,753,346
Outlay	\$1,703,856	\$2,036,697	\$1,714,909	\$321,788	\$1,714,909	\$321,788
Contingency Reserve		\$30,683,816				
Private Market Subtotal	\$214,961,849	\$239,416,779	\$205,133,626	\$34,283,153	\$207,893,182	\$31,523,597
Contractor Contingency and Profit	6%		\$12,308,018		\$12,473,591	
<b>Private Market Proposal</b>			<b>\$217,441,643</b>		<b>\$220,366,773</b>	
Contract Administration	1%		\$2,174,416		\$2,203,668	
<b>Total</b>		<b>\$239,416,779</b>	<b>\$219,616,060</b>	<b>\$19,800,719</b>	<b>\$222,570,441</b>	<b>\$16,846,338</b>

\* PMP costs developed using private market salaries and a fringe benefit rate of 39%.

\*\* PMP costs developed using the average city salaries average city fringe benefit rate.

FY 07 Appropriation includes \$30.6 million in operating and contingency reserves. These have been subtracted for comparison to the PMP.

Table 4-3: PMP Staffing

Division	Fiscal Year 2007 Budgeted Positions	Positions Excluded for City-wide BPR Process*	Private Market Proposal Positions
O&M	331.0	5.0	286.0
WWC	343.4	16.0	256.9
EMTS	156.0	-	146.0
IOS	67.0	9.0	39.5
S&C	55.0	4.0	42.5
EPM	64.3	30.5	47.3
<b>Total</b>	<b>1,016.7</b>	<b>64.5</b>	<b>818.2</b>

\* These values may not match the Private Market Proposal in Appendix C due to information that has been made available since the completion of the PMP.

Procurement Services

## 5 Consolidated Employee Bid Summary and Potential Saving

### 5.1 Introduction

The San Diego Metropolitan Wastewater Department (MWWD) has undertaken this Bid-to-Goal Reengineering Process as a productivity improvement initiative within the overall City of San Diego's Business Process Reengineering Program. MWWD established a team of employees (MWWD BPR Team) to develop a plan to provide wastewater management, operations and maintenance services in accordance with the SOW and the best interest of public health, safety, welfare, environmental protection, and community economic interests. The Employee Bid documents the Budget Objective, the cost assumptions, the significant planned initiatives, and the procedural information regarding the implementation of the Employee Bid.

Strategies for savings and performance improvement as well as performance accountability measures were developed by the MWWD BPR Team through Stakeholder Outreach, Business Process Mapping, External Peer Reviews, and ISO Certification Review, as described in Chapter 2. These strategies have been documented in Chapter 6, Employee Bid Implementation Plan and Timeline.

This chapter outlines, at a high level, the general basis and Budget Objective of the Employee Bid. The complete Employee Bid document is included in Appendix D of this document.

### 5.2 General Basis of the Employee Bid

This Employee Bid is based on several key changes to the way MWWD operates. This section identifies and explains these key changes. The detailed basis of the Employee Bid is identified in Appendix D, Section 2.

#### 5.2.1 Unfunded and Approved Positions

This Employee Bid assumes that the MWWD's budgeting process is modified to include the use of unfunded and approved positions. This will allow MWWD to manage staffing levels to account for vacancies, light-duty, and industrial leave (any condition resulting in a long-term unavailability of staff) without artificially inflating the budget.

#### 5.2.2 Consolidated Department-wide Contingency

This Employee Bid assumes that contingencies for large emergencies which are historically held at the Division level will be consolidated to the Department level. This will result in a more accurate annual estimate of contingencies, better management of Departmental priorities, and a reduction to the overall budget.

#### 5.2.3 Division Consolidation

The Employee Bid assumes that MWWD will be reorganized and consolidated from six to five Divisions. The current Services and Contracts Division and the Information and Organizational

Support Division will be consolidated into a single entity called the Administrative Services Division. This will result in an overall reduction of management level staff.

#### 5.2.4 MWWD Reserve Fund

##### 5.2.4.1 Background

An “Asset Repair or Replacement” is a repair or replacement to the System that extends the life of the asset and is of a long-term character or effect. MWWD has historically provided Asset Repair and Replacements needed to ensure reliability and continuous operation of the System. The MWWD BPR Team proposes to continue to perform these Asset Repair and Replacements which will allow them to continue their current level of service and continue the development of in-house expertise of the staff for work on specialized wastewater equipment.

Asset Repair and Replacements are difficult to budget on an annual basis because it is not possible to accurately predict the type or number of occurrences in any single year. It is, however, possible to predict the long-term average cost of occurrences on an annual basis by using a useful life analysis of assets.

Historically, MWWD has budgeted Asset Repairs and Replacements conservatively because there was no mechanism to allow for budgeting more than one year at a time.

##### 5.2.4.2 Implementation of MWWD Reserve Fund

The Reserve Fund is a budgeting mechanism that is designed to allow MWWD to budget non-annual expenditures such as Asset Repair and Replacements with more accuracy. The MWWD BPR Team proposes that a Reserve Fund is created, funded, and maintained by and for the City to support:

- ◆ The cost of Asset Repair(s) or Replacement(s);
- ◆ The cost of significant non-capital maintenance activity, such as the contract cleaning of digesters and routine pump refurbishment;
- ◆ Necessary activities when Capital Funds are not readily available to meet the needs of the System for continuous operation;
- ◆ Any other activity approved by the MWWD Director.

The Reserve Fund shall only be used for Non-personnel expenses associated with these activities. The cost for labor and fringe benefits of the MWWD BPR Team for activities associated with these activities shall not be charged to the Reserve Fund. Any dollars not expended at the end of the fiscal year shall be transferred into the Reserve Fund for the subsequent fiscal year for expenditure in succeeding years. Funding of the Reserve Fund will be included in the MWWD BPR Team’s Employee Bid. Expenditures associated with the Reserve Fund will not be included in the MWWD BPR Team’s annual financial performance

evaluation. The amount of the annual current expense contribution to the Reserve Fund may be adjusted based on Asset Management techniques and anticipated replacement cost needs.

This fund will facilitate more accurate budgeting, stabilize MWWD’s annual budget, and eliminate incentives to defer these repair, replacement, and maintenance costs to meet annual financial objectives. The fund is a best practice approach which will also insure the long-term viability of the System’s infrastructure assets.

### 5.2.5 MEO Transition Period

The Employee Bid assumes that the transition period for MWWD from the existing organization to the Most Efficient Organization (MEO) will conclude on January 1, 2008.

## 5.3 Summary of MWWD Employee Bid Budget Objective

The Budget Objective of the Employee Bid ties the MWWD BPR Team’s performance to Metropolitan Wastewater Department’s Mission and its vision to be a ‘Best-in-Class’ wastewater utility for its customers. MWWD BPR Team performance and service levels will be measured to document that the MWWD BPR Team is providing the community with outstanding wastewater service, while the performance targets will lead to achieving the goal of becoming a Best-in-Class wastewater utility for the ratepayers.

### 5.3.1 Cost Table for all Core Services

Table 5.1 compares the Fiscal Year 2007 Budget, the Private Market Proposal, and the Budget Objective of the Employee Bid for each core service in the SOW. The Budget Objective matches the Private Market Proposal and results in an annual savings of \$19,800,000 versus the Fiscal Year 2007 Appropriation. Cells in the table that are gray do not apply due to divisional consolidation, centralization of the operating contingency, and additional costs associated with privately contracting this work.

Table 5-1: Core Service Cost

	FY2007 Appropriation	Private Market Proposal	Budget Objective
Operations and Maintenance	\$89,856,501	\$79,497,258	\$86,271,512
Wastewater Collection	\$63,456,934	\$45,467,257	\$46,673,694
Environmental Monitoring and Technical Services	\$20,646,354	\$19,264,359	\$19,329,480
Information and Organizational Support	\$16,827,799	\$14,839,808	
Services & Contracts	\$36,378,686	\$34,021,860	
Administrative Services			\$46,989,880
Engineering and Program Management	\$12,250,505	\$12,043,084	\$13,059,320
Other Insurance			\$1,760,000
MWWD Operating Contingency			\$5,532,263
Contractor Contingency and Profit		\$12,308,018	
Contract Administration		\$2,174,416	
<b>Total Operating Budget</b>	<b>\$239,416,779</b>	<b>\$219,616,060</b>	<b>\$219,616,060</b>

### 5.3.2 Staffing Table Showing All Core Services

Table 5.2 compares the Staffing Level by core service for each of the following:

- ◆ FY07 Budget – Identifies the Fiscal Year 2007 Budget Staffing Level.
- ◆ Budget Excluding BPR – Identifies the Fiscal Year 2007 Budget Staffing excluding positions that are being analyzed by a separate BPR process that had not concluded at the time this report was written. Note: The personnel and non-personnel costs for services analyzed by other BPR groups were included based on historic cost levels.
- ◆ Employee Bid – Identifies the Employee Bid Staffing Level.

It should be noted that some functions in the Employee Bid were shifted to other Divisions. Therefore, direct comparisons at the Division level may not be entirely accurate.

*Table 5-2: Core Services Staffing*

Division	Fiscal Year 2007 Budgeted Positions	Fiscal Year 2007 Budgeted Positions Excluding Downtown BPR Process*	Employee Bid
O&M	331.0	326.0	284.0
WWC	343.4	343.4	257.4
EMTS	156.0	156.0	142.0
IOS	67.0	53.0	
S&C	55.0	51.0	
Admin			94.0
EPM	64.3	41.3	49.0
<b>Total</b>	<b>1,016.7</b>	<b>970.7</b>	<b>826.4</b>

\* The Fiscal Year 2007 Budgeted Positions Excluding Downtown BPR Process may differ from those identified in the PMP due progressions in the City-wide BPR process since the completion of the PMP.

### Employee Bid Implementation Plan and Timeline

During the last six months, the MWWD BPR Team has performed an extensive assessment and optimization of its current business processes as part of the overall City of San Diego's Business Process Reengineering Program. This Bid-to-Goal Reengineering Process will result in a savings of \$19,800,000 annually when compared to the Fiscal Year 2007 Appropriation. The Employee Bid is documentation of the commitment of the MWWD BPR Team to achieve these savings.

In order to reach the Most Efficient Organization (MEO) and achieve the identified savings, a number of initiatives must be implemented. These initiatives and their implementation schedules are identified in Appendix E – Implementation Summary. The implementation summary has seven columns:

- ◆ DIV. & NO. – A unique field which identifies the Division that will be responsible for the implementation of the initiative.
- ◆ Priority – Identifies the priority of the initiative.
- ◆ Description – Describes the initiative.
- ◆ Source of Initiative – Identifies the source of the initiative.
- ◆ Implementation Timeframe – Identifies the Start and Completion Date of the initiative.
- ◆ Meet and Confer Required – Identifies whether the initiative requires a Meet and Confer with the appropriate labor union(s).
- ◆ Approval Required – Identifies any approvals outside of the BPR Team that are necessary for implementation.

The BPR Team has already begun implementation of the initiatives. The BPR Team has committed to reaching the Employee Bid Budget Objective by January 1, 2008.

## 6 Communications Plan for Implementation

With any successful reengineering effort, a communications plan will be developed detailing the upcoming changes and recommendations. The plan needs to be proactive, while also recognizing that any change can cause discomfort. Clear goals and messages must be developed, as well as specific strategies and activities to help make the transition smooth.

In order to implement the MWWD Bid-to-Goal Reengineering Process, employees and customers must know the purpose and goals of the planned changes. 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, the communication strategy, to be successful, will include a variety of methods or routes to send a consistent message to the employees.

In early 2007, therefore, a MWWD Communications Team will be formed to determine the key messages that will be woven through the MWWD communications materials as well as select the best strategies to reach specific groups and general audiences, both internal and external to the Department. MWWD Divisions that currently have successful outreach activities will share those techniques as a starting point for the Department-wide communications plan. A variety of communication techniques will be considered, including:

- ◆ E-Mail or Voice Mail blasts
- ◆ “Tailgate” Sessions and Staff Meetings
- ◆ Logo Development
- ◆ On-line resources
- ◆ Lunch and Learn
- ◆ Newsletters (electronic or paper)
- ◆ Posters or Bulletin Boards
- ◆ Videos
- ◆ Intranet (as available)
- ◆ Webinars (as available)

## 7 Detailed Implementation Plan

The MWWD BPR Team will develop a detailed plan to implement the changes and recommendations described in this report. The detailed plan will be prepared after the Public Contract Operations agreement between the MWWD BPR Team and the City has been negotiated, finalized and approved.

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