THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Date: April 6, 2010

To: Board of Directors

From: Brian G. Thomas, Assistant General Manager/Chief Financial Officer

Subject: Raftelis Report referenced in Board Letter 8-2

Attached is the report from Raftelis titled, "Independent Review of FY2010/11 Cost of Service and Rate Setting Process" for your reference.

Brian G. Thomas

Metropolitan Water District of Southern California

Independent Review of FY 2010/11 Cost of Service and Rate Setting Process

Final Report
April 6, 2010

RFC
RAFTELIS FINANCIAL CONSULTANTS, INC.

April 6, 2010

Mr. Brian G. Thomas
Chief Financial Officer
Metropolitan Water District of Southern California
700 N. Alameda Street
Los Angeles, CA 90012-2944

Re: Independent Review of FY 2010/11 Cost of Service and Rate Setting Process

Dear Mr. Thomas:

Raftelis Financial Consultants, Inc. ("RFC") is pleased to submit this Independent Review Report to the Metropolitan Water District of Southern California ("MWD").

As a result of its review process, RFC has determined:

1) The 2010 COS and rate methodology is reasonable, consistent with California law, specifically Government Code Section 54999.7 (requiring a COS study every ten years), and consistent with § 133 and 134 of the Metropolitan Water District Act (requiring the levying of rates sufficient to cover costs) and §4301 of the District's Administrative Code (requiring rates sufficient to cover costs and reflecting the costs of the District's major service functions).

2) The 2010 COS and rate methodology is consistent with water industry best practices, and complies with COS and rate guidelines in the American Water Works Association's ("AWWA") Manual M-1, *Principles of Water Rates, Fees, and Charges.*

3) The 2010 proposed rates have been developed consistent with Board policies and, more specifically, with the 2001 Rate Structure Framework.

4) The 2010 COS is accurate and consistent with the 2001 COS.

In addition, as a part of the independent review process, RFC has identified the potential opportunities to improve MWD's cost of service and rate structure and methodology, which are discussed in the report.

We appreciate the opportunity to be of continued service to you and MWD. Special thanks goes to Ms. June Skillman and MWD staff who have worked so diligently to provide us with information and explanations as we completed our assignment.

If you have questions or comments, please contact me at (704) 936-4430, or Sanjay Gaur at (213) 327-4405.

Very truly yours,
RAFTELIS FINANCIAL CONSULTANTS, INC.

George A. Raftelis

George Raftelis, CPA
Chief Executive Officer

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I. Executive Summary

The Metropolitan Water District of Southern California ("MWD") initially engaged Raftelis Financial Consultants, Inc. ("RFC") in 1998 to perform a comprehensive cost of service ("COS") study and to assist in the development of a rate structure that would be responsive to the Board of Directors' ("Board") pricing objectives. These objectives were established in 1999 and 2000 as a result of a comprehensive strategic planning process by the Board. One of the end results of the strategic planning process was a set of guiding rate principles which defined MWD's *Rate Structure Framework.* In 2001, the Board adopted a COS and rate methodology and related rates that were responsive to its Rate Structure Framework.

Most recently, MWD engaged RFC to independently review whether the 2010[1] proposed rates were consistent with the 2001 Rate Structure Framework and whether the methodology complied with water industry best practices.

As a result of its review process, RFC has determined:

1) ***The 2010 COS and rate methodology is reasonable, consistent with California law, specifically Government Code Section 54999.7 (requiring a COS study every 10 years), consistent with § 133 and 134 of the Metropolitan Water District Act (requiring the levying of rates sufficient to cover costs) and §4301 of the District's Administrative Code (requiring rates sufficient to cover costs and reflecting the costs of the District's major service functions).***

2) ***The 2010 COS and rate methodology is consistent with water industry best practices, and complies with COS and rate guidelines in the American Water Works Association's ("AWWA") Manual M-1,*** **Principles of Water Rates, Fees, and Charges.**

3) ***The 2010 proposed rates have been developed consistent with Board policies and, more specifically, with the 2001 Rate Structure Framework.***

4) ***The 2010 COS is accurate and consistent with the 2001 COS.***

In addition, as part of the review process, RFC has identified the following potential opportunities to improve MWD's COS and rate methodology:

1) **Fixed Source of Revenue**. By increasing fixed revenues, MWD could more effectively address the issue of revenue instability and increasing uncertainty in the future due to the current restriction on the State Water Project ("SWP").

[1] In this report, "2010 COS", "2010 proposed rates" and "2010 model" refer to the FY 2010/11 cost of service and rates presented to the Board in January 2010.

Three potential ways for MWD to increase its fixed revenues would be to maintain the ad valorem tax rate at its current level, recover all or a portion of system access rate ("SAR") costs through a fixed and a variable component, and/or expand the readiness-to-serve ("RTS") charge and the capacity charge to include related O&M expenses. Furthermore, a treated water capacity charge (discussed below) would contribute to MWD's objective of revenue stability.

2) **Reserve Levels**. Given the uncertainty associated with the SWP, it is expected that reserve levels will need to increase to hedge against economic risks. By having appropriate reserve levels, MWD could protect itself from economic risks as well as minimize future rate shocks that its member agencies might experience.

3) **Coverage Ratio and PAYGO**. MWD could consider revisiting the Board's current policy on its debt service coverage ratio and the associated level of rate-funded capital or pay as you go ("PAYGO") capital. An increase in the coverage ratio policy would contribute toward maintaining a healthy credit rating, increasing the availability of PAYGO, and enhancing the financial stability of MWD.

4) **Treated Water Peaking Charge**. Currently MWD has a uniform charge for treatment. A treated water capacity charge or a volumetric surcharge could more directly tie peaking characteristics of member agencies with the costs of providing service during peak periods. In addition, either of these charges would produce a more equitable rate for member agencies that are utilizing the MWD treatment facility for base delivery. A treated water capacity charge could also increase revenue stability by recovering a portion of costs on a fixed basis.

5) **Capacity Charge and the RTS Charge Adjustment.** Currently the capacity charge and RTS charge are slightly over collecting on their appropriate portions of revenue requirements. MWD staff expects that these charges will naturally adjust in future years given the change in member agencies' usage characteristics[2]. MWD should closely monitor the rate design elements of the capacity charge and RTS charge to ensure that in future years they reflect the COS analysis.

6) **Tier 1 and Tier 2 Adjustment**. Given that the purchase order commitments will need to be renegotiated in 2012, MWD could reexamine the tiered structure associated with the supply cost. An option could be reducing the Tier 1 allotment to equal the actual water availability from SWP and the Colorado River Aqueduct ("CRA") and to be consistent with the Water Surplus and Drought Management

[2] Since MWD conducts a COS every year, the costs for each rate element would change according to the budgeted costs of that year. Thus, to maintain the rate stability of the overall rate structure, some rate elements would over or under collect in any given year. However, it is expected that over time, the rate structure will adjust to recover the appropriate portion of revenue requirements for each rate element.

Plan. As a result, the Tier 1 cutoff would need to be reestablished. The Tier 1 rate would reflect the blended COS for SWP and CRA, while Tier 2 could still reflect the cost of water transfers.

II. Introduction

The Metropolitan Water District of Southern California ("MWD") began a strategic planning process in July 1998 to address the evolving needs of its 27 member agencies[3] and their retailers as they continued to provide a high quality, reliable supply of affordable water for their residents. The MWD Board of Directors ("Board") was involved in the strategic planning process for a year and a half and developed the Rate Structure Framework that established the guiding principles of which its cost of service ("COS") and rate approach had to address. During this process, MWD also engaged Raftelis Financial Consultants, Inc. ("RFC") to perform a COS study that would address the Rate Structure Framework adopted by the Board.

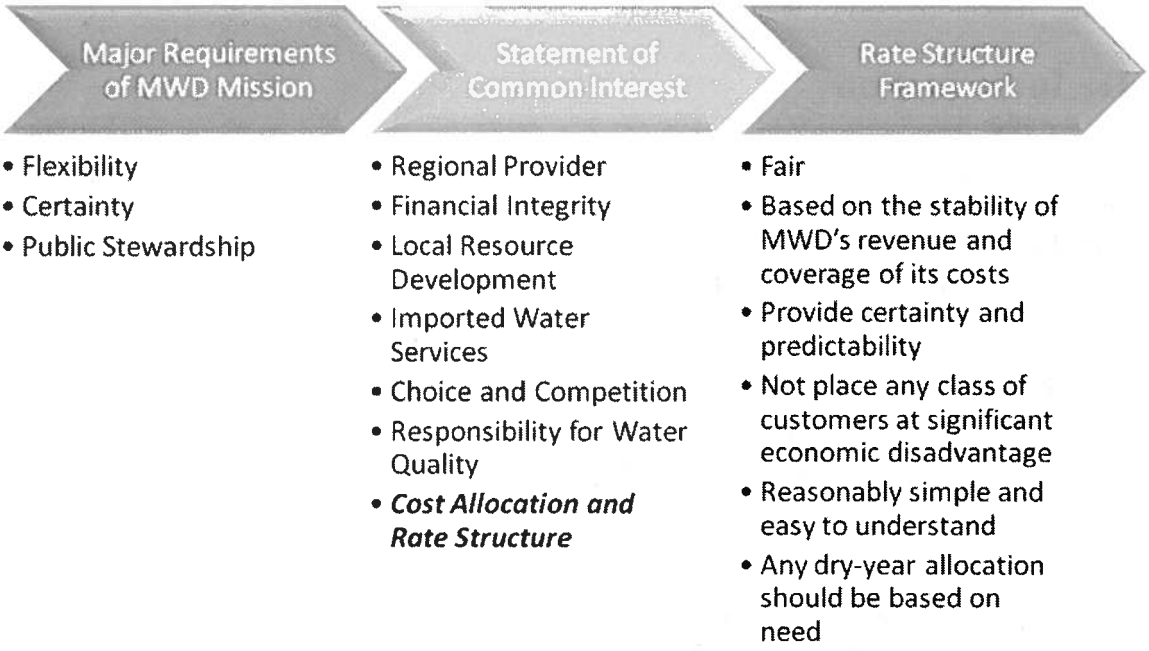
In early 2010, MWD engaged RFC to independently review whether the proposed 2010 rates were still consistent with the Rate Structure Framework. RFC also evaluated the COS and rate methodology's consistency with water industry best practices, such as the guidelines in the American Water Works Association's ("AWWA") Manual M-1, *Principles of Water Rates, Fees, and Charges*. The review process included examining the 2010 model for accuracy and consistency with the 2001 model and the identification of potential opportunities for improving MWD's COS and rate structure.

III. Rate Structure Framework

The Rate Structure Framework evolved through a comprehensive strategic planning process initiated in 1998. As depicted in Figure 1, the first step of the process was to identify the "Major Requirements of MWD's Mission," which was reflected in the Strategic Plan Policy Principles. The Statement of Common Interests formed the basis of MWD's strategic plan to address these mission requirements. One of the most important common interests was *"Cost Allocation and Rate Structure."* In determining the most appropriate COS and rate structure, a set of pricing objectives, or guiding rate principles, was developed. These guiding rate principles defined MWD's Rate Structure Framework by which various COS and rate-setting methodologies could be evaluated.

[3] Currently MWD has 26 member agencies.

Figure 1: Development of the Rate Structure Framework



The strategic planning process which established the foundation of the Rate Structure Framework is discussed below.

Major Requirements of MWD Mission

As one of the first steps in the strategic planning process in 1998, the Board developed a list of three mission requirements in its MWD vision statement – flexibility, certainty, and public stewardship:

- **Flexibility**: MWD is aware of the legislative and economic pressures which make flexibility in providing water services for a changing demand and in a competitive water market paramount. Fair compensation for wheeling through MWD's conveyance systems is an essential element of Southern California's developing market.

- **Certainty**: The certainty that MWD's water supply is reliable and that the COS is appropriate is of utmost importance to member agencies and their retailers who are endeavoring to provide not only water, but value to the residents in their service area.

- **Public Stewardship**: As public stewards of much of Southern California's water supply, MWD and its member agencies are responsible for making certain that the water is provided in a cost-effective and environmentally sound manner.

Statement of Common Interests

From the strategic planning mission requirements, the Board developed a list of seven areas of common interest that formed the major focus elements of the MWD strategic plan:

- **Regional provider**: This area includes the concerns of protecting regional infrastructure and providing service during drought periods. Regional water must be provided to meet the needs of the member agencies, and water supplies must be equitably allocated during drought periods based on the Water Surplus and Drought Management Plan principles.
- **Financial integrity**: It is a common interest of the members for MWD to assure the financial integrity of the agency in all aspects of its operations.
- **Local resource development**: MWD supports local resources development by working in partnership with its member agencies and by providing member agencies with financial incentives for water conservation and for local projects.
- **Imported water service**: MWD is responsible for providing imported water to meet the committed needs of its member agencies.
- **Choice and competition**: After MWD provides imported water for the member agencies' committed demands, a member agency can choose the most cost-effective additional water supplies for its customers. These choices include either MWD, local resource development, market transfers, or some combination of these secondary options. MWD and its member agencies can decide how to provide these additional supplies collaboratively while balancing local, imported, and market opportunities with affordability.
- **Responsibility for water quality**: MWD must advocate source water quality and implement in-basin water quality for the imported water it supplies. This is necessary to guarantee compliance with primary drinking water standards and to meet the water quality requirements for water recycling and ground water replenishment.
- **Cost allocation and rate structure**: The framework for a revised rate structure will be established to address allocation of costs, financial commitment, unbundling of services, and fair compensation for services including wheeling, peaking, growth, and others.

Rate Structure Framework

A major element of common interest was *"Cost Allocation and Rate Structure."* In addressing this element a set of pricing objectives, or guiding rate principles, had to be developed to evaluate alternative COS and rate setting approaches, or methodologies. As a result, the Board adopted a set of rate principles which was defined as the *Rate Structure Framework.* The Rate Structure Framework provided the principles for the Strategic Planning Steering Committee to develop a preferred rate structure. The Rate Structure Framework includes the following principles:

- The rate structure should be *fair;*

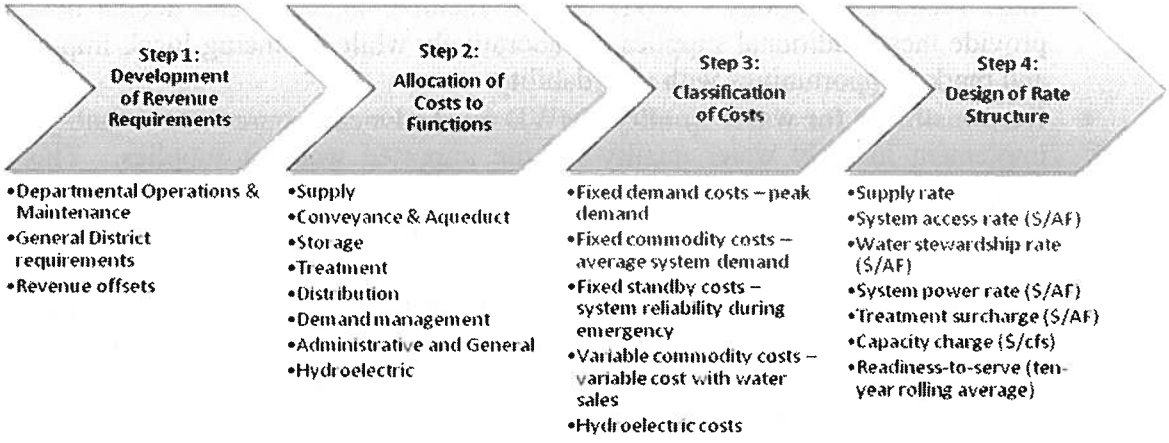
- It should be based on the *stability* of MWD's revenue and coverage of its costs;
- It should provide *certainty and predictability*;
- It should not place any class of customers at *significant economic disadvantage*;
- It should be reasonably *simple and easy to understand*; and
- Any dry-year allocation should be *based on need.*

The 2001 COS and rate structure was adopted by the Board to address the Rate Structure Framework.

IV. Overview of FY 2010/11 Cost of Service ("COS") and Rate Setting Process

Before discussing the results of the review process, it is necessary to understand MWD's COS and rate setting methodology. Specifically, MWD's COS and rate methodology is consistent with AWWA's COS principles. As depicted in Figure 2, the process consists of four steps: *development of revenue requirements, identification of service function costs, classification of costs, and allocation of costs to rate design elements.*

Figure 2: AWWA Cost of Service Methodology



These four steps are discussed below.

Step 1: Development of Revenue Requirements

The first step in the AWWA COS methodology is development of revenue requirements. RFC reviewed the costs that MWD would need to recover through rates and charges. MWD uses the "cash needs" approach to identify revenue requirements, which is a generally accepted industry practice for governmental entities. An estimate of MWD's cash expenditures for fiscal year ("FY") 2010/11 total approximately $1.55 billion. Since

non-rate revenues are available to offset total revenue requirements, the amount of net revenue requirements to be recovered from rates and charges is $1.39 billion.

MWD's costs fall into two general categories: Departmental Operations & Maintenance Costs and General District Requirements. General District Requirements make up 79 percent of the total revenue requirement and Departmental Costs make up 21 percent[4]. The General District Requirements include costs related to the Colorado River Aqueduct ("CRA"), the State Water Project ("SWP"), certain other supply program costs, capital financing costs associated with the Capital Investment Program ("CIP"), and Water Management Programs. Departmental Operation & Maintenance Costs includes budgeted items identified with specific organizational groups and chemicals, solids handling and retail power costs for treatment.

Step 2: Allocation of Costs to Functions

The second step in the AWWA COS methodology is to identify the service function costs. In this step, revenue requirements are allocated to different categories based on the operational functions they serve. MWD's relevant functional categories are: Supply, Conveyance and Aqueduct, Storage, Treatment, Distribution, Demand Management, Administrative and General, and Hydroelectric. Each of these categories is further subdivided to offer more detailed information.

The Supply category is divided into SWP, CRA, and Other Supply. This function includes the costs associated with the subdivisions that maintain and develop water supplies to meet customers' needs.

It should be noted, a major portion of the revenue requirement and the Supply category is the SWP, for which the Department of Water Resources ("DWR") provides an annual Statement of Charges to the State Water Contractors ("SWC"). This invoice is categorized as Delta Water Charge, Transportation Charge, variable power, and Off-Aqueduct Power Facilities. Based on this invoice, MWD has indicated that they have assigned these components to the respective functional categories, such as Supply and Conveyance and Aqueduct. Functionalizing SWP costs in this manner is appropriate because:

1) DWR invoices in a very detailed manner that allows MWD staff to functionalize costs; and

2) DWR does not aggregate invoices to MWD on a per-acre-foot basis.

The Conveyance and Aqueduct category includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water to MWD's distribution system.

[4] When taking into account revenue offsets, Departmental Operation & Maintenance is 19%, General District Requirements is 72% and revenue offsets is 9% of the revenue requirement.

The Storage category is divided into emergency, drought, and regulatory subcategories. This function includes the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs.

The Treatment function includes capital financing, operating, maintenance, and overhead costs for MWD's five treatment plants and is considered separately from other costs so that treated water service may be priced separately.

The Distribution function includes capital financing, operating, maintenance, and overhead costs for the in-basin feeders, canals, pipelines, laterals, and other appurtenant works.

The Demand Management function identifies the cost of MWD's investment in local resource development, such as conservation and recycling.

The Administrative and General function includes costs in each groups' departmental budget that are overhead costs and cannot be allocated to another function.

The Hydroelectric function includes the capital financing, operating, maintenance, and overhead costs to operate 16 small hydroelectric plants which are spread throughout the distribution system.

Functional allocations bases are used to apportion different costs to the various service functions. These bases are: direct assignment, Work-In-Progress ("WIP") or net book value plus WIP, prorated in proportion to other allocations, and manger analysis. Direct assignment for FY 2010/11 is estimated to account for 59 percent of the allocated dollars with WIP/net book value accounting for the second highest percentage at 29 percent.

Step 3: Classification of Costs

The third step of the AWWA COS methodology is cost classification. In this step, the functionalized costs are further organized based on the characteristics of the costs. As with the functional allocation process, the proposed classification process is consistent with AWWA guidelines, but has been customized to meet MWD's specific operational structure and service environment. Specifically, MWD follows a modified Commodity/Demand method[5]. The AWWA M-1 Manual states that the Commodity/Demand method allocates cost into four primary cost classifications: 1) commodity cost, 2) demand cost, 3) customer cost, and 4) direct fire-projection cost. Given that MWD is a wholesale provider, customer cost and direct fire-project cost are not applicable. However, MWD is responsible for providing water during emergencies, such as drought conditions or earthquake; thus a standby service cost classification was developed. Furthermore, the power cost associated with the movement of water is a

[5] In the 1999 "Peer Review of Metropolitan Water District of Southern California Cost of Service Study," the author stated this methodology to be a hybrid of the Commodity/Demand and Extra Base Commodity.

significant cost and is broken into its own cost classification. These additional cost classifications meet the specific unique needs for MWD. Lastly, these cost classifications are further broken in fixed and variable costs. Under this approach, classifications include fixed demand costs for peak demand; fixed commodity costs related to average system demand; fixed standby costs for system reliability during emergency; variable commodity costs or variable costs for water sales; and hydroelectric costs. This is an extra refinement step in MWD's COS process.

Step 4: Design of Rate Structure

The last step of the AWWA COS methodology is the allocation of costs to rate design elements. For MWD, the allocation of costs in this step depends on the purpose of the cost and the way in which the member agencies use the MWD system. Costs that are incurred through average use are usually recovered by dollar per acre-foot rates ($/AF) and are allocated based on the volume of water that each agency purchases. Costs incurred while meeting peak demand are recovered through a peaking capacity charge ($/cfs) and are allocated to agencies based on their peaking characteristics. The cost of providing standby service is recovered by the readiness-to-serve ("RTS") charge.

The supply rate is divided into two categories: Tier 1 and Tier 2. The Tier 2 supply rate reflects MWD's cost of developing long-term supplies of water. This rate also encourages member agencies to maintain local supplies, develop local supply resources, and focus on conservation. Tier 2 recovers a greater proportion of the cost of developing additional supplies if member agencies have increased demands. This supply rate is set at $280/AF, which reflects the current cost associated with purchasing transfers. Another supply rate is the Delta supply surcharge, which is set at $51/AF and reflects the impact from the SWP restrictions and ongoing drought conditions on MWD's water rates. This surcharge is assessed along with the Tier 1 supply rate, which recovers the majority of the supply revenue requirements. The Tier 1 supply rate is calculated as the amount of the total supply revenue requirements that is not recovered by the Tier 2 supply rate and the Delta supply surcharge.

The next rate design element is the system access rate ("SAR"). This is a rate applied to the actual amount of water delivered. All member agencies pay the SAR to use MWD's system for conveyance and distribution. The water stewardship rate ("WSR") is also a charge applied to the actual amount of water delivered. The WSR is designed to recover the costs MWD has from investing in local resource development such as recycling and conservation. All users will pay the same proportional costs for these investments. Another rate element is the system power rate ("SPR"). This rate recovers the cost of pumping water for both SWP and CRA. The treatment surcharge recovers the cost of providing treated water, including commodity, demand, and standby costs.

The capacity charge is levied on the maximum summer day demand of a system between May 1 and September 30 for a three-year calendar period. This charge is designed to pay for the cost of member agencies peaking on the MWD system. It also provides incentive

for these agencies to reduce their usage of the MWD system during peak demand times. The last rate design element is the RTS charge. This charge relates to the third category of water service – standby service or emergency storage. The RTS charge is allocated to member agencies based on each agency's share of a ten-year rolling average of all firm deliveries.

In both full-service raw water and full-service treated water, all rate components and charges apply including the SAR, WSR, SPR, Tier 1, Tier 2, RTS, and the capacity charge. The only difference between full-service raw water and full-service treated water is that treated water pays for the associated cost for treatment. In wheeling service, the SAR, WSR, RTS, and capacity charge apply. The logic behind wheeling service paying for the WSR is that conservation and development of local resources create excess capacity in the system so that member agencies can wheel non-MWD water.

V. Review Process and Results

RFC's review process consisted of four major tasks:

1) Reviewing whether the 2010 COS and rate methodology is reasonable and consistent with California law and Metropolitan Water District Act.
2) Reviewing whether the 2010 COS and rate methodology is consistent with water industry best practices, and complies with COS and rate guidelines in the AWWA's Manual M-1, *Principles of Water Rates, Fees, and Charges*.
3) Reviewing whether 2010 proposed rates have been developed consistently with Board policies and, more specifically, with the 2001 Rate Structure Framework.
4) Reviewing whether the 2010 COS is accurate and consistent with the 2001 COS.

Our findings and conclusions related to each of these tasks are discussed below.

1) Reviewing whether the 2010 COS and rate methodology is reasonable and consistent with California law, Metropolitan Water District Act, and District Administrative Code.

MWD 2010 COS and rate methodology is consistent with California law, specifically Government Code Section 54999.7, which requires a COS study be conducted every 10 years. MWD conducts a COS on an annual basis. The 2010 COS and rate methodology is consistent with § 133 and 134 of the Metropolitan Water District Act and §4301 of the District's Administrative Code. Section 133 states that MWD can set the rates of water and 134 states that the rates can be sufficient to cover cost associated with operating the district as long as the rates are uniform for like classes of service throughout the district. Lastly, the District's Administrative Code §4301 requires rates and charges to be sufficient to cover cost and be reflective of MWD's major service functions, which include Supply, Conveyance, Power, Storage, Distribution, and Treatment, to the greatest degree practicable.

***2) Reviewing whether the 2010 COS and rate methodology is consistent with water industry best practices, and complies with COS and rate guidelines in the AWWA Manual M-1,* Principles of Water Rates, Fees, and Charges.**

MWD's 2010 COS and rate methodology follows the process as prescribed by AWWA's Manual M-1, *Principles of Water Rates, Fees, and Charges.* Specifically, MWD's methodology is consistent with M-1's four step process: 1) development of revenue requirements, 2) identification of service function costs, 3) classification of costs, and 4) allocation of costs to rate design elements.

As mentioned, MWD revenue requirements are identified on the "cash basis," which is embraced by many government utilities and is endorsed in the M-1 Manual. This approach includes expenditures associated with Departmental Operations & Maintenance and the General District. The identification of service functions cost, the classification of cost, and allocation of cost to rate design elements are done to develop a nexus between cost and revenue streams. In addition, the rate design elements meet requirements set forth by AWWA's rate-setting principles and industry guidelines.

3) Reviewing whether 2010 proposed rates have been developed consistently with Board policies, and more specifically, with the 2001 Rate Structure Framework.

RFC first examined whether the 2010 COS and rate methodology used for updating rates was consistent with the 2001 Rate Structure Framework. The Board and member agencies laid out this specific Framework in two documents: the Statement of Common Interest 1999 and the 2000 letter to MWD from the member agencies. As discussed in Section III of this report, the Framework addressed:

- MWD's strategic planning objectives
- Statement of common interests
- Rate structure principles

The 2000 letter from the member agencies presented a proposed Rate Structure Framework which supported the Statement of Common Interests as discussed in Section III. When RFC went through the COS and rate study process in 1998 it developed a rate structure consistent with the Rate Structure Framework. A chart detailing how the rate structure supports, clarifies, or meets the Statement of Common Interests and Rate Structure Framework is provided in Appendix A. Based upon our review of this chart, the current rate structure continues to address the Statement of Common Interests and Rate Structure Framework. However, should the Board's Statement of Common Interests and Rate Structure Framework change, adjustments to the rate structure may be required.

4) Reviewing whether the 2010 COS is accurate and consistent with the 2001 model.

In reviewing the 2010 model, RFC performed two tasks to ensure its accuracy and completeness. The first task was to check the accuracy of the model, and the second task was to check for consistency with the 2001 model. To evaluate accuracy, RFC spot-checked formulas throughout the model. RFC also checked the revenue requirements with the proposed budget for FY 2010/11. The allocation bases and the data sources for the model were also checked. After the 2010 model was examined for accuracy and completeness, the 2010 model was then checked for consistency with the 2001 model. The 2010 model has followed the same structure as the 2001 model, but includes some modifications to allocation factors. These modifications should be expected, given changes in growth, member agencies peaking, hydrological conditions, and other factors.

VI. Potential Opportunities for Consideration

As part of the review process, RFC also identified several potential opportunities for modifying the COS and rate structure.

The opportunities include:

1) Fixed Source of Revenue
2) Reserve Level
3) Coverage Ratio and PAYGO
4) Treated Water Peaking Charge
5) Capacity Charge and the RTS Charge Adjustment
6) Tier 1 and 2 Adjustment

1) Fixed Source of Revenue

A possible opportunity to consider is maintaining or increasing MWD's fixed source of revenue. By looking at this, MWD can address the issues of increased uncertainty in the future and the reality of revenue instability.

Three potential ways for MWD to do this are to maintain the ad valorem property tax rate, develop a fixed revenue for the SAR, or expand the RTS charge and the capacity charge to include related O&M expenses.

Currently, MWD has statutory authority and voter authorization to collect a portion of its revenues through ad valorem tax assessments on property within its service territory. Since FY 1990/91, Section 124.5 of the MWD Act limits property tax revenues, and thereby the tax levy, to the total needed to pay annual debt service on MWD general

obligation bond annual debt service and the portion of the State Water Contract for debt service on State general obligation bonds ("Burns Porter bonds"). As these payments decrease over time, the assessment will decrease. MWD could seek to change the MWD Act Section 124.5 associated with the ad valorem tax rate to include other expenditures besides the specified bond debt service and maintain this level of assessment. In evaluating this option, maintaining the property tax can be considered fair when reflecting on how important the availability of water is to the property value of a customer's home. Without water service the value of a property is decreased enormously so the owner with more expensive property has more to lose and therefore can be expected to pay more for water. Maintaining the property tax will help with the financial stability of MWD's system because it helps to offset future rate increases that member agencies would have to put into effect. It creates a predictable, stable source of revenue and is simple to understand.

Another opportunity to increase fixed revenues for MWD is to create a fixed component of the SAR. The amount of water the CRA and SWP provide to the system fluctuates due to weather conditions and regulatory constraints, while the costs associated with these aqueducts are for the most part stable. Given that these costs are stable, a fixed revenue stream could be developed. By doing this, MWD will increase its financial stability and predictability. However, it should be noted that as MWD increases its fixed revenue charges, the risk associated with water supply reliability shifts from MWD to its member agencies. It is important to understand which agencies are more suitable to bear this risk and consequently should develop the appropriate reserve policies.

A third opportunity to increase MWD's fixed sources of income is to expand the RTS charge and the capacity charge to recover O&M costs. Right now, these charges only pay for capital and do not recover related O&M expenses. It is a common practice to tie O&M expense to capital costs when conducting a COS analysis. Bringing together all costs related with certain operations increases fairness instead of allocating these costs to other areas of the system or other users. It also increases financial stability because it ensures that both capital and O&M costs will be covered and it provides a more predictable source of income for paying for these expenses.

2) Reserve Level

Another area for further consideration is possibly reexamining the reserve level policy. Reserves are used to deal with risk associated from revenue instability and/or future cost increases. Typical reserves include capital replacement, rate stabilization, working capital, risk management, and other emergencies. For example, given the uncertainty associated with the SWP, it is expected that reserve levels will need to increase to hedge against economic risks. By having appropriate reserve levels, MWD could protect itself from economic risks as well as minimize future rate shocks to its member agencies.

3) Coverage Ratio and PAYGO

MWD could consider revisiting the Board's current policy on its debt service coverage ratio and the associated level of rate-funded capital or pay as you go ("PAYGO") capital. An increase in the coverage ratio policy would contribute toward maintaining a healthy credit rating, increasing the availability of PAYGO, and securing the financial stability of MWD. Developing the appropriate level of the coverage ratio and level of PAYGO has been a concern for the Board.

4) Treated Water Peaking Charge

Another issue for MWD to consider is the possibility of developing a treated water capacity charge or a volumetric surcharge for peaking that could more directly tie peaking characteristics of member agencies with the costs of providing service during peak periods. Currently MWD has a uniform charge on treatment. A uniform rate for treatment is inherently problematic, since there is a greater demand for treated water in the summer than in the winter, which creates idle capacity. However, this has become a severe problem, since member agencies are developing their own treatment facilities and are peaking off the MWD system. MWD is left with facilities that aren't being used at their expected capacity. This causes MWD to increase the price of treated water, which gives member agencies even more incentive to build their own treatment facilities to avoid buying treated water from MWD at the higher prices. This compounds MWD's problem. Eventually the cost associated with treatment will need to be recovered through MWD rates and charges. Either a treated water capacity charge or a volumetric surcharge would produce a more equitable rate for member agencies that are utilizing the MWD treatment facility for base delivery. It should be expected that some increased rate shock would occur, since member agencies will have to begin to pay for their peaking. In addition, a treated water capacity charge could increase revenue stability by recovering a portion of costs on a fixed basis and be predictable, if designed properly.

5) Capacity Charge and the RTS Charge Adjustment

Currently the capacity charge and the RTS charge are slightly over collecting on their appropriate portions of the revenue requirement. MWD staff expects that these charges will naturally adjust in the future years, given changes member agencies' usage and behavior[6]. MWD should closely monitor the rate design element of the capacity charge and RTS charge to ensure that in the future years they reflect the COS analysis.

[6] Since MWD conducts a COS every year, the costs for each rate element would change according to the budgeted costs of that year. Thus, to maintain the rate stability of the overall rate structure, some rate elements would over or under collect in any given year. However, it is expected that over time, the rate structure will adjust to recover the appropriate portion of revenue requirements for each rate element.

6) Tier 1 and Tier 2 Adjustment

Given that the purchase order agreements will need to be renegotiated in 2012, MWD could reexamine the tiered structure associated with the supply cost. Based on the current methodology, MWD first calculates the revenue generated in Tier 2 based on the expected sales and cost associated with transfers. This expected revenue is subtracted from the supply cost of the rate design element to determine the rate for Tier 1. Due to the fact that the amount of water required to meet the purchase order agreement is greater than the availability of water from SWP and CRA, transfers are required for this deficiency. This has produced a result where the price difference between Tier 1 and Tier 2 are marginally different. A potential option could be reducing the Tier 1 allotment to equal the actual water available from SWP and the CRA and to be consistent with the Water Surplus and Drought Management Plan. As a result, the Tier 1 cutoff would need to be reestablished. The Tier 1 rate would reflect the blended COS for SWP and CRA, while Tier 2 could still reflect the cost of water transfers.

The outcome of this change would be to reduce the price of Tier 1 and the associated allocation for each member agency. The reallocation of Tier 1 would be fair, since member agencies that use a smaller percentage of their Tier 1 allocation would not pay for transfers. This reallocation of Tier 1 may cause rate shock and unpredictable rates depending on the allocation structure and the member agencies' demand.

VII. Next Steps

In future years MWD should continue to refine its COS analysis based on changes that occur to budgetary requirements, financial conditions, consumption patterns from the member agencies, and other external factors that may require adjustments to the pricing objectives. In addition, MWD should continue its dialogue with member agencies on how the current rate structure is meeting the price objectives of the Board, which are reflected in the Rate Structure Framework.

Appendix A: Comparison Between Member Agency Managers Rate Structure Proposal and Metropolitan's Board Principles

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Comparison Between Member Agency Managers Rate Structure Proposal and Metropolitan's Board Principles (Prepared by Metropolitan Staff)

Board Principles	Member Agency Managers Rate Structure Alternative
Strategic Plan Policy Principles (Adopted in December 1999)	
Regional Provider Metropolitan is a regional provider of water for its service area. In this capacity, Metropolitan is the steward of regional infrastructure and the regional planner responsible for drought management and the coordination of supply and facility investments. Regional water services should be provided to meet the needs of the member agencies. Accordingly, the equitable allocation of water supplies during droughts will be based on water needs and adhere to the principles established by the Water Surplus and Drought Management Plan.	**Supports the Regional Provider Principle** • Metropolitan, working collaboratively with its member agencies, will secure necessary water supplies and build appropriate infrastructure to meet existing and future needs of its member agencies. • There would be no difference in reliability for firm supplies purchased at Tier 1 and Tier 2 rates.
Financial Integrity The Metropolitan Water District Board will take all necessary steps to assure the financial integrity of the agency in all aspects of operations.	**Supports the Financial Integrity Principle** • Through voluntary purchase orders, Metropolitan could have an assured level of firm water purchases up to 1.2 mafy (60% of maximum annual firm water sales) over ten years. • Through voluntary purchase orders, Metropolitan provides a pricing incentive for member agencies to purchase up to 1.7 mafy of firm water in 2003 (90% of maximum annual firm water sales). Compared to the current rate structure, fixed revenue is estimated to increase.
Local Resources Development Metropolitan supports local resources development in partnership with its member agencies and by providing its member agencies with financial incentives for conservation and local projects.	**Supports the Local Resources Development Principle** • Financial incentives for conservation and local projects are provided in two ways: (1) Tier 2 price is set at Metropolitan's cost of securing new supply and sends a price signal for alternative supply development and (2) water stewardship charge is established to help fund existing and future local water recycling, groundwater, desalination, and conservation programs.

Comparison Between Member Agency Managers Rate Structure Proposal and Metropolitan's Board Principles (Prepared by Metropolitan Staff)

Board Principles	Member Agency Managers Rate Structure Alternative
Strategic Plan Policy Principles - Continued	
Imported Water Service Metropolitan is responsible for providing the region with imported water, meeting the committed demands of its member agencies.	**Clarifies the Imported Water Service Principle** • Based on collaborative planning with member agencies, Metropolitan would secure and deliver imported water to meet existing and future supply needs.
Choice and Competition Beyond the committed demands, the member agencies may choose the most cost-effective additional supplies from either Metropolitan, local resources development and/or market transfers. These additional supplies can be developed through a collaborative process between Metropolitan and the member agencies, effectively balancing local, imported, and market opportunities with affordability.	**Supports the Choice and Competition Principle** • Member agencies may choose the most cost-effective additional supplies from among Metropolitan, local resources development and/or market transfers. In addition, the unbundling of rates and charges allows choice in services.
Responsibility for Water Quality Metropolitan is responsible for advocating source water quality and implementing in-basin water quality for imported supplies provided by Metropolitan to assure full compliance with existing and future primary drinking water standards and to meet the water quality requirements for water recycling and groundwater replenishment.	**Supports the Water Quality Principle** • Metropolitan's responsibilities for source quality and in-basin water quality for imported supplies are unchanged. The cost of source quality is recovered through the tiered supply rates. The cost for in-basin water quality is recovered through the treatment surcharge, which is the same as status quo.

Comparison Between Member Agency Managers Rate Structure Proposal and Metropolitan's Board Principles (Prepared by Metropolitan Staff)

Board Principles	Member Agency Managers Rate Structure Alternative
Cost Allocation and Rate Structure The fair allocation of costs and financial commitments for Metropolitan's current and future investments in supplies and infrastructure may not be reflected in status quo conditions and will be addressed in a revised rate structure: (a) The committed demand, met by Metropolitan's imported supply and local resources program, has yet to be determined. (b) The framework for a revised rate structure will be established to address allocation of costs, financial commitment, unbundling of services, and fair compensation for services including wheeling, peaking, growth, and others.	**Supports the Cost Allocation and Rate Structure Principle** • Committed demand by member agencies is established by voluntary purchase orders. • The allocation of cost and unbundling of services are based on standard cost-of-service methodology. • The existing full service rate is unbundled into: ➢ Tiered supply rates (reflecting Metropolitan's existing and future costs of supplies), ➢ System access rate (wheeling), ➢ Capacity reservation charge (peaking), ➢ RTS (standby), ➢ Water stewardship rate (local resources management), ➢ System power rate, and ➢ Treatment surcharge.
Steering Committee Guidelines (Approved in January 2000)	
"Needs-Based" Allocation • Dry-year allocation should be based on need	**Supports the guideline** • There would be no difference in reliability for firm supplies purchased at Tier 1 and Tier 2 rates.

Comparison Between Member Agency Managers Rate Structure Proposal and Metropolitan's Board Principles (Prepared by Metropolitan Staff)

Board Principles	Member Agency Managers Rate Structure Alternative
No Significant Disadvantage and Fair • Rate structure should not place any class of people in the position of significant disadvantage. • Rate Structure should be fair.	**Supports the guidelines** • Member agencies are treated equally. • All supplies would be allocated during droughts based on the water needs of member agencies. • Financial impacts to the member agencies in year 2003 are estimated to be minimal. The financial impacts henceforth are dependent on the collaborative planning between Metropolitan and member agencies and the ability of member agencies to develop cost-effective alternative supplies and manage peak deliveries.
Simple • Rate structure should be reasonably simple and easy to understand.	**Meets the guideline** • The proposal is easy to understand and is based on uniform rates and charges that recover costs of services.
Metropolitan Revenue Stability • Rate structure should be based on stability of Metropolitan's revenue and coverage of costs.	**Supports the guideline** • Compared to status quo, fixed revenue is estimated to increase by 50%. Fixed revenues are collected through property taxes, voluntary purchase orders, capacity reservation charge, and readiness-to-serve charge.