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**TO:** San Diego County Water Authority  
**FROM:** Thomas Gaffney / Reed Schmidt  
**DATE:** March 5, 2010  
**SUBJECT:** Metropolitan Water District of Southern California Water Rates

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### **Introduction**

Bartle Wells Associates (BWA) has been retained by San Diego County Water Authority (SDCWA) to examine the water rates charged by Metropolitan Water District of Southern California (MET) to its member agencies. Bartle Wells Associates provides expert financial, rate structure design, and similar consulting services to many cities and special districts. We have extensive experience in cost of service rate structure requirements. The general, overarching rule for cost of service rate design for California public agencies is that rates must reflect actual costs of providing service, they must be reasonable, and the rates must be proportional to the cost of the service to the customers paying those rates.

In conducting our review, we have examined information regarding MET's rates available from MET's website, MET's Administrative Code provisions regarding rates and funds, MET board letters regarding rates from 2000 to the present, MET's State Water Project contract, and other information provided by Water Authority staff or obtained by our independent research. This memorandum presents a summary of our findings.

### **Findings**

Our primary finding is that MET fails to properly allocate to the Supply category all of its State Water Project (SWP) contract revenue requirement above that recovered by MET's readiness-to-serve charge (RTS) and property taxes. Instead of following standard industry practice and cost of service allocation principles, MET allocated a substantial portion of the costs from its water supplier (Department of Water Resources) to a MET revenue category for conveyance and distribution. This allocation has resulted in improper distortion of MET's water Supply and System Access rates. It has also resulted in distortion of the System Power rate. We also find that a portion of MET's Water Stewardship revenue requirement, which is intended to recover costs associated with providing subsidies for development of local water

supplies and conservation programs, is improperly collected as a portion of MET's charge for conveyance service.

**Allocation Of Expenses Is Not Equitable Or Logical.** The January 12, 2010 MET Board Action Memo 8-1, shows in Schedule 1 that SWP costs amount to be nearly \$501 million, 30% of MET's revenue requirement. These costs are for payments MET makes under its SWP water supply contract. These are costs for purchasing water that MET then provides to its wholesale customers. The water is delivered to MET through facilities owned, maintained, and operated by the State of California, not through facilities MET owns, maintains, and operates. Yet Schedule 5 of the same memo shows that rather than allocating all of these costs to Supply, MET's proposed rate plan allocates \$429 million (85%) of such cost to MET's Conveyance and Aqueduct service function. Because MET does not own or operate, maintain, or operate any of the SWP facilities, the SWP costs are a MET cost of Supply and not a cost of Conveyance and Aqueduct service.

Although MET recovers some of the SWP costs through its RTS charge, property taxes, and its supply rate, MET allocates most of its SWP costs to MET's Conveyance and Aqueduct service function and then recovers these service function costs with the System Access Rate and the System Power rate. This is inconsistent with proper cost of service allocation. The portion of SWP costs currently collected by the System Access rate and the System Power rate should instead be assigned to the Supply service function and recovered with the Supply rates.

This misallocation of Supply costs is significant now and the misallocation will have an increasing impact over time — \$429 million is a large number, even in the context of an agency which serves a region of 19 million people. MET's own 10-year budget forecast projects that SWP costs will increase dramatically in the coming decade due to the costs of a Delta fix, environmental requirements and rising energy costs associated with global warming regulations.

MET **does** own and operate the Colorado River Aqueduct (CRA). MET allocates to the Supply rate water purchase costs that MET pays for Colorado River water under its delivery contracts with the Secretary of Interior and conserved water purchase agreements with Imperial Irrigation District, Palo Verde Irrigation District, and others. MET allocates other costs for the CRA that **do** relate to conveyance to its System Access Rate. This is entirely different than MET's SWP contract where it pays a price for a product delivered by infrastructure which it neither owns nor maintains. By treating both SWP costs and CRA costs as conveyance costs, when it is plain that the former are supply costs and the latter are in substantial part conveyance costs, the MET rate structure treats dissimilar costs as though they were the same and deviates from reasonable industry practice and the stated logic of the rates themselves in doing so.

Another misallocation regards the System Power rate, which recovers the costs of pumping water from the SWP and Colorado River to MET's service area. Currently, MET allocates the

power costs to the Conveyance and Aqueduct service function. This allocation is not correct for water supplied by the SWP. The SWP power costs should be allocated to the Supply service function and recovered through the Supply rates, because they are a supply-related cost. MET's current allocation is not consistent with how MET allocates power costs related to water treatment to the Treatment Surcharge. MET's allocation for supply should be consistent with the allocation of power costs for treatment.

We reviewed information from three other SWP contracting agencies and all of them allocate SWP costs as supply costs. We are aware of no other agency that benefits from the SWP that allocates SWP costs the way MET does. BWA finds MET's cost-of-service allocation is not consistent with proper cost of service allocation, and is not consistent with industry practice.

**MET's Water Rate Structure Does Not Accomplish MET's Stated Goals.** The October 16, 2001 MET Board Action Memo 9-6 stated that proposed MWD rate structure furthers MET's strategic objectives, supports and encourages sound water resource management, accommodates a water transfer market, enhances fiscal stability and is based on cost-of-service principles. The development of a water market in California is a goal also expressed as a Legislative policy of the State in Water Code Sections 109(b) and 475. However, by allocating a disproportionate amount of its costs to conveyance and aqueduct rates, MET hinders its member agencies from developing water transfer programs – i.e., the cost of water transfers is artificially inflated and the market is distorted to discourage what the MET Board has stated it wishes to encourage.

Artificially reducing supply rates reduces the financial incentive to secure local water supply alternatives, and disserves MET policy and good public policy given the water supply situation in our State, the long-term threats to the MET's SWP supply and increased competition from other Colorado River Basin states for supplies delivered via the CRA.

By not allocating SWP project costs to the supply rates, MET's current water rates and cost allocation do not encourage conservation by its member agencies, thus compromising another fundamental policy goal of MET and the Legislature (Water Code Sections 10608 and 10608.4). Higher supply rates that more accurately reflect supply costs would send an accurate price signal to MET member agencies and encourage water conservation and development of local water supplies. Subsidized supply prices distort the price signal and create irrational incentives for Southern Californians facing very grave risks to their short-term and long-term water supplies.

**Water Stewardship Rate.** MET has a goal of encouraging member agencies to develop other sources of water. (October 16, 2001 MET Board Action Memo 9-1, Att. 1, page 2.) MET's Water Stewardship Rate recovers the costs associated with MET's subsidies to local agencies for the development of new local supply projects and funding of conservation programs. The Water Stewardship Rate should not be charged on all water moved through the MET system, but only on water that MET sells to its member agencies. Because the Water Stewardship

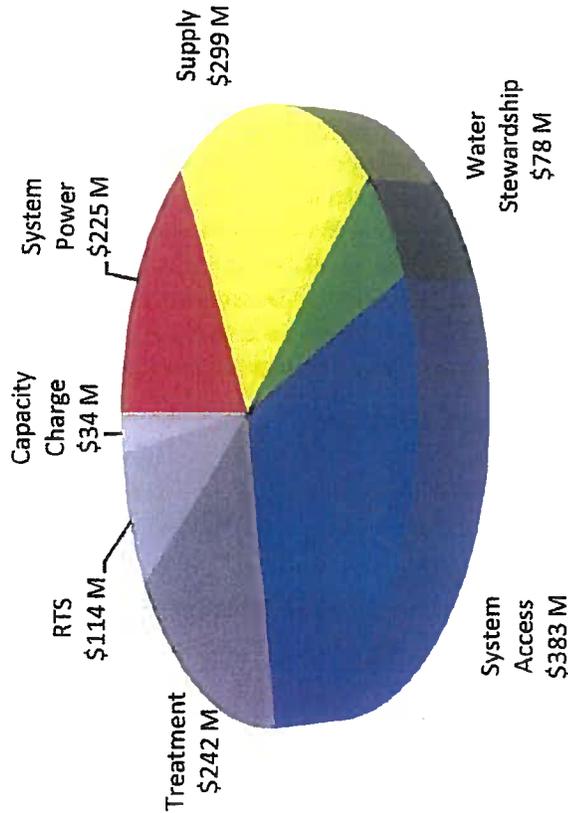
service function is intended to increase water supply through projects, such as recycling, desalination, and groundwater recovery, and conservation, the costs of these projects should be recovered with Supply rates.

**MET's 2001 Rate Structure and Cost-of-Service Study.** MET's current water rate structure differs from what was presented in MET's 2001 Rate Study. Several components of MET's current structure have changed in description and purpose since the 2001 Rate Study — which is the stated basis of MET's current rates — so that the current rate structure is therefore not well supported by that study.

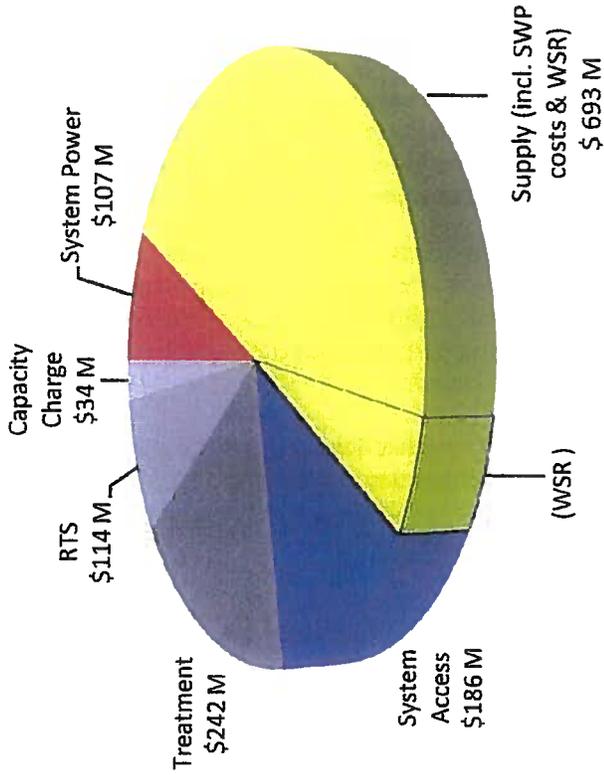
Attached is a graphic using data provided by MET during a cost of service review presentation in July 2009 that shows a proper reallocation of MET's revenue requirement to appropriate MET rate categories, based on the principles discussed in this memorandum.

# Revenue Requirement Allocation

## MWD's Current Allocation



## Correct Allocation



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## **THOMAS E. GAFFNEY, PE, CIPFA**

### **Experience**

Thomas E. Gaffney is a principal consultant of the firm and has over 35 years of consulting experience. He is an expert in developing financing plans, impact fee studies, utility rate studies, multi-agency contracts and financing programs, contract negotiations, and bond marketing. Mr. Gaffney has directed projects involving more than 300 separate agencies in California and five other western states.

Mr. Gaffney has developed the key terms and conditions of multiple-agency agreements for over 20 regional financing programs. Tom has served as project manager on projects involving water and wastewater, reclaimed water, hydroelectricity, public buildings, community storm drainage, flood control, and highways. He has helped implement utility billing systems for over 20 local agencies. Mr. Gaffney has managed sales of various forms of municipal bonds.

Mr. Gaffney specializes in water-related financing plans and rate studies. He has worked extensively developing wastewater revenue programs conforming to the SWRCB's Revenue Program Guidelines. He has developed water rate analyses involving virtually every type of fixed and volume water rate configurations.

### **Representative Assignments**

- **City of Vacaville:** Water and wastewater rate studies and wastewater capital facilities financing plan. Developed wastewater connection charge.
- **City of Fresno:** Prepared financial plan and rate study for \$400 million of wastewater facilities. Worked with citizen's Utility Advisory Board to secure approval of rate recommendations.
- **Selma-Kingsburg-Fowler CSD:** Prepared a Financial Policies and CIP Update for \$28 million of capital facilities. Recommended connection charges for the district and its member cities.
- **City of Woodland:** Prepared water, wastewater, and storm drain rate studies. Developed a fully pay-as-you-go financing plan for each of the three City enterprises.
- **City of Thousand Oaks:** Wastewater financing plan including SRF loans, revenue bonds, and rates and connection charges for \$75 million of capital improvements. Water financing plans and rate studies.
- **City of Petaluma:** Developed financing plan for \$125 million Ellis Creek wastewater treatment plant. Assisted with securing \$115 million of SRF loans and \$100 million line of credit.
- **Napa Sanitation District:** Prepared a revenue program required for SRF loan approval. Developed a pay-as-you-go financing plan for \$10 million of wastewater facilities.
- **Novato Sanitary District:** Financial advisor for \$110 million wastewater treatment master plan. Recommended a reserve policy plan for District funds.
- **Zone 7 Water Agency:** Prepared a plan for financing agricultural water facilities totaling over \$200 million. Developing financing elements for stream management master plan.

### **Memberships and Professional Affiliations**

- California Association of Sanitation Agencies
- California Water Environment Association

### **Registrations/Certifications**

Registered Civil Engineer in California

Certified Independent Public Finance Advisor (CIPFA), and professional member of the National Association of Independent Public Finance Advisors

### **Education**

B.S., Civil Engineering, University of California, Berkeley

M.B.A., Finance, University of California, Berkeley

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## **REED V. SCHMIDT, CIPFA**

### **Experience**

Reed V. Schmidt is a principal consultant with 30 years of practical experience in financial and economic consulting, research, and analysis. He has directed over 150 projects for cities, counties, and special districts in the areas of public works financing, utility rate studies, utility connection fee studies, public utility pricing and valuation, and energy planning.

Mr. Schmidt's expertise is creating financial plans for local governments in order to complete water, wastewater, and recycled water capital programs. His comprehensive plans have analyzed a wide variety of financing mechanisms, both conventional and innovative, and have identified the sources of revenue to fund capital and operating costs. He has developed cost-of-service studies for water, wastewater, and electricity rates, and has developed computer models to design water and sewer rates and connection fees.

Mr. Schmidt has appeared as an expert witness on utility rates and costs before regulatory agencies in California, Nevada, Texas, Arkansas, and Ohio. He has appraised public utility property and has appeared as an expert witness in superior court.

Before joining Bartle Wells Associates, Mr. Schmidt was a partner in Chester & Schmidt Consultants and had also worked as an independent consultant. He began his consulting career as senior financial analyst with Turner, Collie & Braden, Inc., in Houston, and was also senior economist and utilities analyst with Jones-Tillson & Associates in San Mateo.

### **Representative Assignments**

- **Montara Water & Sanitary District:** Water rate design, financial feasibility analysis, and negotiations for purchase of the District's water system. Financial advisor on sale of bonds & notes.
- **City of Brentwood:** water and wastewater rate studies.
- **City of Cotati:** Water and wastewater rate studies and development impact fees.
- **Delta Diablo Sanitation District:** Wastewater rate and fee analysis; power purchase negotiations.
- **South Tahoe Public Utility District:** Financing plans for water and wastewater capital improvement programs and financial advisory services for water and wastewater revenue bonds.
- **City of Huntington Beach:** Water rate study and evaluation of transitioning to tiered quantity rates.
- **East Bay Municipal Utility District:** Power purchasing evaluations for water and wastewater operations, electric rate analysis, and feasibility studies.
- **Tahoe City Public Utility District:** Water and wastewater financing plans and bond sales.
- **City of Benicia:** Financing options analysis for water and sewer capital projects.
- **Ironhouse Sanitary District:** Financing plan and rate recommendations for wastewater treatment and disposal facilities.
- **San Lorenzo Valley Water District:** feasibility assessment of purchase of a private water system.
- **Town of Apple Valley:** feasibility study of acquisition of two privately owned water companies.
- **Sanitary District No. 2 of Marin County:** Design of wastewater connection fee.
- **City of Yuba City:** Sale of water revenue certificates to acquire a private water company and valuation of water system.

### **Memberships and Professional Affiliations**

National Association of Business Economists, International Association of Energy Economics, and American Water Works Association

### **Education**

B.A., magna cum laude, Economics - University of Houston

M.A., Economics - University of Houston

### **Certification**

Certified Independent Public Finance Advisor (CIPFA)

Professional member of the National Association of Independent Public Finance Advisors

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## BARTLE WELLS ASSOCIATES

Bartle Wells Associates is an independent financial advisor to public agencies with expertise in water, wastewater and recycled water rates and finance. Our firm was established in 1964 and is owned and managed by its principal consultants. We have advised over 480 public agencies in the western United States and completed over 3,000 assignments. Bartle Wells Associates has the diversity of experience and abilities to evaluate all types of financial issues faced by local governments and to recommend the most appropriate, cost-effective, and practical solutions.

Bartle Wells Associates specializes in three professional services: financial plans, utility rate & fee studies, and project financing. We are the only independent financial advisor providing *all three* services to public agencies.

### PROFESSIONAL SERVICES

- Financial Plans
- Rate & Fee Studies
- Project Financing

Bartle Wells Associates has a highly-qualified professional staff with backgrounds in finance, civil engineering, business, public administration, and economics. The firm is a charter member of the National Association of Independent Public Finance Advisors (NAIPFA), which establishes strict criteria for independent advisory firms. All of our consultants are Certified Independent Public Finance Advisors (CIPFAs).

**FINANCIAL PLANS** Our *financial plans* provide agencies with a flexible roadmap for funding long-term operating and capital needs. We develop long-term cash flow projections to help agencies evaluate the wide range of financing options available and identify long-term revenue requirements. If debt is needed, we recommend the most appropriate and lowest-cost financing approaches and clearly identify the sources of revenue for funding projects and repaying debt. We also help agencies develop prudent financial policies, such as fund reserve targets, to support sound financial management. BWA has developed over 1,000 financial plans to help water and wastewater agencies fund their operating and capital programs and maintain long-term financial health.

**RATE & FEE STUDIES** Our *rate and fee studies* employ a cost-of-service approach and are designed to maintain the long-term financial health of a utility enterprise while being fair to all customers. We develop practical recommendations that are easy to implement and often phase in rate adjustments over time to minimize the impact on ratepayers. We also have extensive experience developing impact fees to recover the costs of infrastructure required to serve new development. BWA has completed hundreds of water, wastewater, and recycled water rate and fee studies. We are familiar with virtually every type of water and sewer rate structure and are knowledgeable about the legal requirements governing water and sewer rates and connection fees. We develop clear, effective presentations and have represented cities and special districts at hundreds of public hearings to build consensus and public acceptance for our recommendations.

**PROJECT FINANCING** Our *project financing* experience includes coordination of over 300 bond sales including General Obligation bonds, water and sewer revenue bonds, Assessment District bonds, Mello-Roos Community Facilities District bonds, multi-agency bond pools, and Certificates of Participation (COPs). We also have extensive experience helping agencies secure funding via competitively bid bank loans, lines of credit, and state and federal grants and loan programs. To date, we have helped California agencies obtain over \$4 billion of infrastructure financing. We generally recommend issuing debt via a competitive sale process to achieve the lowest interest rates possible. As independent financial advisors, we work only for public agencies and do not buy, trade, or resell bonds. Our work is concentrated on providing independent advice which enables our clients to finance their projects on the most favorable terms – lowest issuance costs, lowest interest rates, smallest issue size, and greatest flexibility.

Bartle Wells Associates is committed to providing value and the best advice to our clients. Our strength is *quality*—the quality of advice, service, and work we do for all our clients.