



Report

Office of the CFO

- Peer survey: Revenue Structure of Various Wholesale Water Agencies

Summary

At the Board's request, the following report provides a review of rate structures and revenue composition for various wholesale water agencies throughout the country. Revenue composition is broken down into fixed revenue sources, volumetric revenues, and all other revenues. For the water utilities surveyed fixed revenues vary considerably, but the following conclusions can be drawn:

- All utilities surveyed have some level of fixed revenues.
- Fixed revenues range from one percent to 93 percent of total revenues, with most utilities falling in the range from 20 percent to 65 percent.
- Utilities with high cost, long-term supply contracts rely more heavily on higher fixed revenues, including property taxes.
- Water wholesalers whose customers have no water sources of their own and rely heavily on the wholesaler use mostly volumetric rates.
- Water wholesalers whose customers have water supplies of their own tend to use more fixed revenues.

Detailed Report

For the purpose of this survey, 18 water agencies in the nation were selected. Agencies selected for the survey vary considerably in terms of supply sources, customer bases, and revenue structures. All agencies provide wholesale water service except one agency that only provides retail service. Four of the surveyed agencies provide both wholesale and retail water service. Five agencies also provide wastewater service. For this survey, only wholesale water service is reflected where possible, so that results are more comparable with the Metropolitan Water District of Southern California (Metropolitan).

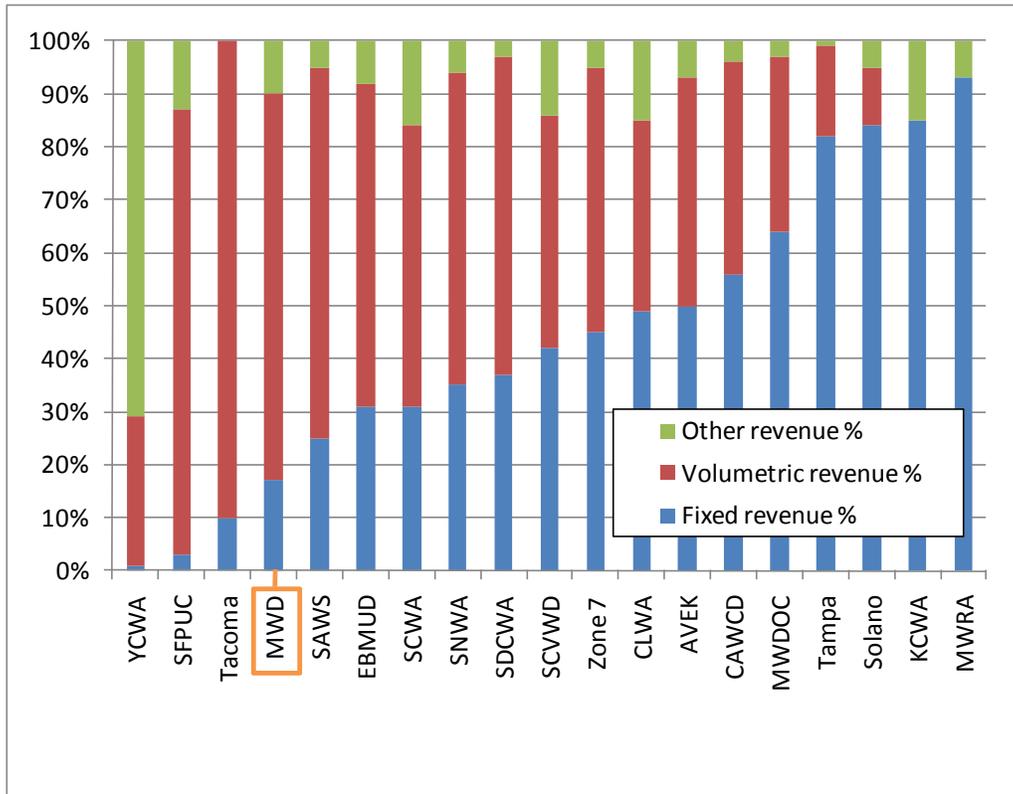
Most utilities surveyed have a mix of fixed charges plus volumetric charges. A common rate design for price-regulated monopolies is referred to as the two-part tariff, which consists of a monthly fixed customer charge and a volumetric charge based on usage. Fixed revenue sources include charges which are allocated based on historic data (typically past water usage), property taxes, assessments, sales taxes, monthly connection charges, and standby charges. These types of revenue are not a function of current year water sales or the current volumetric rate, and they are relatively stable. Even though taxes may be variable based on economic activity or assessed valuations, the volatility of tax revenue is relatively small, compared to volumetric sales revenues.

Volumetric revenues are a function of water sales in the current year. Other revenues include interest income, rents, power sales, grants, and other use charges such as penalties, fees, etc.

For the surveyed utilities, fixed revenues range from one percent to 93 percent of total revenues, but most utilities fall in the range of 20 percent to 65 percent. By comparison, Metropolitan's fixed revenues include the Readiness-to-Serve (RTS) charge, the Capacity Charge, and property taxes. In FY2009/10 these were approximately 17 percent of the total revenues; excluding property taxes, fixed revenues were 12 percent of total water sales revenues. Figure 1 shows the revenue breakdown by surveyed agency.

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Figure 1. Fixed revenues as a percent of total revenues



A higher level of fixed revenues provides better revenue stability, and less dependence on volumetric sales. On the other hand, higher dependence on volumetric revenue provides a better price signal for conservation and local resources.

As an indicator of best practices, Metropolitan is a signatory to the California Urban Water Conservation Council (CUWCC). CUWCC’s Best Management Practices for retail water service recommend collecting at least 70 percent of sales revenue through volumetric charges. Metropolitan could potentially increase its fixed charges significantly (RTS and Capacity Charge) and still meet the CUWCC recommendation. An increase in fixed revenues would imply a reduced reliance on volumetric sales, and less revenue volatility.

The next section provides a brief summary of each surveyed utility’s characteristics and revenues sources. The data was collected primarily from publicly available information such as adopted budgets, or the Comprehensive Annual Financial Reports (CAFR). In some cases, the data was provided via direct communication with the finance departments in each utility. Reported figures reflect actual FY2009/10 where available, or projected budget FY2010/11 otherwise. This report may be updated as new information is collected.

Yuba County Water Agency

YCWA is a wholesale water provider to eight irrigation districts, which have take-or-pay service agreements. Water supply comes from the Yuba River, and excess water is sold to DWR. Yuba’s customers have long-term contracts for the purchase of water. For FY2009/10, wholesale volumetric sales collected \$0.4 million in revenue. Water transfers to Metropolitan and other Southern California water agencies collected \$7.5 million. For the same timeframe, property taxes collected \$0.4 million, or one percent of total revenues. There are no connection or meter charges. Hydroelectric power sales revenues were their largest revenue source at \$16.4 million.

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San Francisco Public Utilities Commission

SFPUC provides both retail and wholesale water and wastewater service to the city of San Francisco and 28 wholesale customers in the bay area. Its water supply is primarily the Tuolumne River watershed, and is most unique in that it requires little treatment and no power for pumping. As a result, almost half of SFPUC's water enterprise costs are for departmental O&M. Amounts reported pertain only to the wholesale water business. Fixed revenues include monthly service charges for customer service and meter maintenance. In FY2010/11 projected fixed revenues are \$4 million, or three percent of total wholesale revenue. Volumetric charges are projected to collect 84 percent of the total wholesale revenues.

Tacoma Water

Tacoma Water is a provider of retail and wholesale water service in Washington State. Most of its water supply comes from surface water. Water sales revenues are collected via a volumetric rate with two tiers. Volumetric rates collect more than half of total water sales revenues. Fixed revenues include a monthly meter connection charge by meter size (ready-to-serve charge), and more than half of it is collected from the residential service class. Wholesale sales are less than five percent of total sales, for Tacoma's 17 wholesale customers. In calendar year 2011 wholesale volumetric sales are projected to be \$1.8 million. Ready to serve charges for the wholesale class is projected at \$0.2 million, or 10 percent of total wholesale revenues.

Metropolitan Water District of Southern California

Metropolitan provides wholesale water service to its 26 member agencies in the six-county area. Its supply sources are the Colorado River, the State Water Project, and various water supply programs. Most of Metropolitan's member agencies have Purchase Order agreements. Fixed charges consist of the Readiness-to-Serve charge, the Capacity Charge, and ad valorem property taxes. In FY2009/10 these collected \$232 million, or 17 percent of the total revenues; excluding property taxes, fixed revenues were 12 percent of total water sales revenues. Volumetric water sales including exchanges were \$1,011 million, or 73 percent of total revenues. For FY2010/11 fixed revenues are projected to be 16 percent of total revenues; excluding property taxes, fixed revenues are projected to be 11 percent of total water sales revenues.

San Antonio Water System

SAWS is a wholesale/retail water/wastewater utility in Texas. Water service is comprised of two business enterprises: Water Supply, and Water Delivery. SAWS' water supply comes from groundwater, recycling, and surface water, to which they have entitlements or ownership of the land. Most of SAWS' revenues are collected from retail customers; wholesale sales are a tiny fraction of total water sales. There are seven wholesale customers who have long-term contracts for the purchase of water.

Fixed revenues include a one-time capital recovery fee for new development assessed on a per-equivalent-dwelling-unit, and monthly service availability fees per meter. In FY2010/11, projected revenues from the capital recovery fees are \$20.7 million, while meter charges are projected to be \$45 million. For the combined wholesale/retail water utility, fixed revenues are 25 percent of total revenues. Water supply fee revenues are collected through a volumetric rate, with inclining block rates for residential and irrigation customers, and flat rate for the wholesale and general rate classes. Conservation revenues are collected from residential and irrigation customers beyond a certain level of usage. Aquifer fees are a pass-through of annual permit fees on all parties pumping groundwater from the aquifer, and are recovered through a volumetric charge to all customers. There are no property taxes or assessments.

East Bay Municipal Utility District

EBMUD is a retail water and wastewater agency in northern California. Its water supply comes from surface sources and mainly the Mokelumne River watershed in the Sierra Nevada. For the water utility, their fixed revenues include a service charge and a seismic surcharge (both per meter per month), a one-time system capacity charge for new meter connections, and property taxes. These fixed revenues amount to \$133 million, or 31

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percent of total revenues. Volumetric charges collect 61 percent of the total revenues. The remaining eight percent is collected from other revenues.

Sonoma County Water Agency

SCWA is a wholesale provider of water and wastewater services to its contractors, comprised of nine municipalities and Districts. Its water supply is Russian River's naturally filtered water. As a result, its costs of supply and treatment are very low. More than half of its total costs are for O&M expenditures. Water rates are calculated by dividing O&M costs by past water usage. In FY2009/10, water rates and charges collected \$32.8 million. Fixed revenues from property taxes were \$18.9 million, or 31 percent of total revenue.

Southern Nevada Water Authority

SNWA is a water wholesaler in southern Nevada. SNWA is a supplemental water provider for southern Nevada. The data are derived from the agency's CAFR for FY2008/09. Fixed revenues include \$27.4 million from the regional connection charge (a one-time per meter connection), \$2.7 million from contributed capital (a function of new construction), \$2 million from groundwater management fees, and \$46.3 million from the Clark County sales tax (1/4 of a cent). These revenues amount to \$78.5 million in FY2008/09, or 35 percent of total revenues. Volumetric charges collect 59 percent of total revenues. The remaining six percent is collected from other revenues from sales of land and livestock, and investment income.

San Diego County Water Authority

SDCWA provides wholesale water service to its 24 member agencies. More than half of its supply is purchased from Metropolitan. The rest comes from water transfers and local resources.

SDCWA's fixed revenue sources include: the Infrastructure Access Charge, collected on a per meter equivalent; the Capacity Charge, collected on a per meter equivalent for new development; the Customer Service Charge, allocated by three-year rolling average demands; the Storage Charge, allocated by three-year rolling average demands; the Standby Availability Charge, assessed per parcel or acre; and ad valorem property taxes. These revenue sources were projected to collect \$98 million in the FY2010/11 budget, or 37 percent of total revenues. Volumetric water sales were projected to collect \$158 million, or 60 percent of total revenues. These figures exclude Metropolitan charges such as the RTS, Capacity Charge, and volumetric sales, which are collected as a pass through.

Santa Clara Valley Water District

SCVWD is a water wholesaler in northern California. SCVWD is a State Water Project (SWP) contractor, a Central Valley Project (CVP) contractor, and also has groundwater supplies. There are three business enterprises: Water Operations; Flood protection, Watershed and Stream Stewardship; and General Fund. Data reported below includes all three enterprises. Fixed revenues include property taxes (ad valorem), special parcel taxes, and benefit assessments to its member agencies. These fixed revenues are projected to total to \$128 million in FY2010/11, or 42 percent of total revenues. Volumetric charges collect 44 percent of the total revenues.

Zone 7 Water Agency

Zone 7 Water Agency is a wholesale water provider to four retailers. It is a SWP contractor and has some groundwater production. Eighty percent of its water comes from the SWP. In FY2009/10, property taxes collected \$16 million. System expansion costs are recovered through one-time connection fees on new development and in FY2009/10 were \$18.1 million. Fixed revenues from property taxes and connection fees are 45 percent of total revenues. Water rates collected \$36.6 million, or 50 percent of total revenues.

Castaic Lake Water Agency

CLWA is a provider of wholesale and retail water service. They are a SWP contractor, and also have groundwater production. Their four wholesale purveyors pay volumetric rates for water purchased. In FY2009/10, wholesale volumetric sales revenues were \$11.2 million. In FY2009/10, property tax revenues were \$40.5 million. Existing debt service is paid from the property tax revenues. A special tax is levied on property tax

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bills for SWP payments. One-time facility capacity fees imposed on developers via permits, recover the cost of future users' share of the agency's debt service; in FY2009/10 facility capacity fees were \$4 million.

For retail water service there is a monthly meter service charge assessed by meter size. Retail water sales were \$22 million, and wholesale sales totaled \$11.1 million. For the combined wholesale/retail water, fixed revenues include the taxes, facilities capacity fees, and meter charges. These total \$44 million, or 49 percent of total revenues.

Antelope Valley East Kern Agency

AVEK is a wholesale water provider. It is the third largest SWP contractor. AVEK depends 100 percent on SWP to import to the region as the supplemental source. Volumetric wholesale water rates recover the cost of supply and delivery to municipalities and industrial customers, and Agricultural customers. In FY2009/10 total water sales revenues were \$20 million. Capacity charges, a one-time charge collected per new connection, provide fixed revenues and in FY2009/10 were \$0.5 million. AVEK has taxing authority to recover the costs of its outstanding bonds, and in FY2009/10 property taxes collected \$22.4 million. Fixed revenues were 50 percent of total revenues in FY2009/10.

Central Arizona Water Conservation District

CAWCD operates and maintains the Central Arizona Project (CAP). CAWCD is a water wholesaler serving municipalities and private water companies (M&I), agricultural districts, and Indian tribes, via long-term purchase contracts. Most of CAWCD's revenues come from its member agencies. CAWCD has long-term contracts with the Department of the Interior and the United States Bureau of Reclamation for Colorado River water, which is its primary source of water, in addition to some groundwater and surface water supplies. In calendar year 2009, ad valorem tax revenues, authorized by the state legislature, were \$69.9 million. Capital charges for the recovery of capital replacement and federal debt is collected from M&I customers based on water entitlements on a dollar-per-acre-foot basis, and were \$13.7 million. Operations, Maintenance and Replacement (OM&R) expenses are broken down into fixed and variable. Fixed OM&R are collected on all water ordered whether delivered or not, and were \$67.8 million. Fixed revenue sources include the property taxes, capital charges, and fixed OM&R; these are \$151.4 million, or 56 percent of total revenues. Volumetric revenues were \$108.2 million, or 33 percent of total revenues.

Municipal Water District of Orange County

MWDOC is one of Metropolitan's member agencies, and provides wholesale water service for most of Orange County. MWDOC has a long-term purchase order commitment with Metropolitan. More than half its supply comes from Metropolitan; the rest is obtained from groundwater basin production and recycling.

MWDOC collects a Retail Meter Charge of \$5.75 per meter per month in FY2010/11 for all meters served by its subagencies. In the FY2010/11 budget, the Retail Meter Charge is projected to collect \$3.5 million, or 64 percent of total revenues. The Water Increment Charge is an add-on for Metropolitan water sold. In FY2010/11 the Water Increment Charge is \$6.75 per acre-foot, and it is projected to collect \$1.8 million in revenue. These figures exclude Metropolitan charges such as the RTS, Capacity Charge, and volumetric sales, which are collected as a pass through.

Tampa Bay Water

Tampa Bay Water is a wholesale water utility serving southwest Florida. More than half its supply comes from groundwater sources; the rest is surface water, and some desalination. Variable O&M costs are 17 percent of total costs and are recovered via volumetric rates. The rest of the costs are deemed to be fixed, and they are recovered by allocating them to the member agencies based on past water usage with a true-up. In FY2010/11 the budgeted fixed revenue is \$124 million, or 82 percent of total revenues. Volumetric charges collect 17 percent of the total revenues.

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Solano County Water Agency

Solano is a wholesale water utility. Its member agencies include seven municipalities and three irrigation districts. The member agencies have long-term contracts with Solano for wholesale water service but also have their own sources of water, mainly surface and groundwater. Solano County Water Agency is a SWP and CVP contractor. Solano's biggest expenditure is the SWP payments, which total approximately one third of total expenditures in FY2009/10.

Fixed revenues come from property taxes. In FY2009/10, property tax revenues were \$15.8 million, or 84 percent of total revenues. Water sales were \$2 million. Other revenues were \$1 million.

Kern County Water Agency

KCWA is a wholesale water agency, and the second largest SWP contractor. KCWA's wholesale customers are comprised of 13 member agencies and one water district, and they have long-term contracts for water purchases with KCWA. KCWA is a signatory to the CUWCC and its Best Management Practices. KCWA water supply comes from groundwater basins, surface water (Kern River), and the SWP. Almost 75 percent of their total expenditures are for their SWP payments. KCWA recovers its water delivery costs from its member agencies based on project entitlements. Member agencies pay for 100 percent of their entitlement regardless of the amount of water delivered, with a true-up for variable power costs. In FY2008/09, KCWA's fixed revenues included water charges of \$97.6 million and \$24.7 million from property taxes, or 85 percent of total revenues. Other revenues collected 15 percent of the total revenues.

Massachusetts Water Resources Authority

MWRA is a water and wastewater wholesaler. Its water supply comes from two naturally-filled reservoirs. Due to its natural, undeveloped watersheds around the reservoirs, the water is clean and requires little treatment. MWRA is required by its Act to balance its budget annually by establishing user assessments for water and sewer services to cover the cost of service. For its water utility, its net revenue requirement is collected from its member agencies based on past water use, with a two-year lag. This is in effect a fixed charge, and in FY2010/11 it amounts to \$180 million, or 93 percent of total revenues. A volumetric rate is being calculated annually but it is not being charged for water deliveries.

Conclusion

Water agencies with high cost, fixed supply contracts typically utilize property taxes, plus monthly connection charges and growth charges for new development, to derive fixed revenue sources. Water agencies with their own groundwater/surface supplies or low supply cost, typically rely less on fixed charges, do not assess property taxes, and use volumetric rates to recover their costs.