MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

INFORMATION

- **Board of Directors**
  Budget, Finance, Investment and Insurance Committee

November 8, 2005 Board Meeting

9-2

Subject

Proposed Treated Water Capacity Charge

Description

In March 20005, the Board approved water rates and charges to be effective January 1, 2006. As part of that action, the Board directed staff to work with the member agencies and Budget, Finance, Investment, and Insurance Committee to evaluate a treated water capacity charge to be considered by the Board in January 2006, to be effective January 1, 2007.

Staff prepared a white paper describing such a charge (**Attachment 1**) and is working with the member agencies to determine the feasibility of a treated water capacity charge. This letter summarizes the results to date.

A Treated Water Capacity Charge (TWCC) would recover capital financing costs for Metropolitan's five treatment plants in meeting peak day treated water demands. These costs, currently estimated to be $37.3 million, are recovered by the treatment surcharge. The proposed design of the TWCC is the same as the existing Capacity Charge, which recovers peak distribution system costs. The TWCC would be levied as a per cubic-foot-second (cfs) rate on a member agency's total maximum day treated water flow placed on the system between May 1 and September 30.

As with the existing Capacity Charge, the TWCC would be based on the trailing three-year peak-day demand. This structure provides an incentive to reduce peaks and allows member agencies to accurately budget costs incurred. Because the TWCC is levied on maximum day flow instead of the annual volume of deliveries, member agencies that place higher peak demands on the system (relative to average demands) would pay a greater share of the costs of meeting treated water peak demand. Currently, all treated water costs are recovered by the treatment surcharge, a per acre-foot volumetric rate. As such, only a limited price signal is in place to encourage local agencies to most effectively develop and utilize local resources and local system capacity to reduce peak-day demands on Metropolitan's treatment plants.

As an example, if the TWCC were part of the existing rate structure and in effect as of January 1, 2005, the TWCC would recover about $37.3 million of treated water service costs currently allocated to the treatment surcharge revenue requirement. The treatment surcharge for full service deliveries, which is currently $112 per acre-foot and is increasing to $122 per acre-foot on January 1, 2006, would decrease to $92 per acre-foot. The portion of the bundled treated replenishment and treated agricultural rates also would decrease from $97 per acre-foot and $98 per acre-foot, respectively, to $92 per acre-foot. The TWCC would have been levied on a maximum day treated water flow of 3,245 cfs for the May 1-September 30 periods during 2002, 2003 and 2004. At this rate of flow, the TWCC would be $11,500 per cfs. Had the TWCC been in place, and assuming no change in member agency operations for the three years used to assess the TWCC, member agency impacts range from a 25 percent decrease in the cost of treatment service to a 102 percent increase in the cost of treatment service. The estimates are shown in Table 4 of **Attachment 1**. In addition, the white paper describes a transition period to enable member agencies to prepare for the new charge.

The expected benefits of the TWCC include more closely linking peaking costs to agencies that peak on the system; providing more visibility on the cost of treatment capacity; and providing a more efficient price signal to member agencies. The white paper also concludes that the TWCC is practical to implement and administer for both Metropolitan and its members and is consistent with Metropolitan's role as a regional provider.

Policy

Metropolitan Water District Administrative Code Section 4400: Classification and Rates

Fiscal Impact

TWCC would be revenue neutral for Metropolitan.

10/5/2005
Brian G. Thomas *Date*
Chief Financial Officer

10/17/2005
Dennis B. Underwood *Date*
CEO/General Manager

Attachment 1 – Proposed Treated Water Capacity Charge Draft White Paper

BLA #3946

Metropolitan Water District of Southern California

Draft White Paper

Proposed Treated Water Capacity Charge

October 3, 2005

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Executive Summary

In March 2005, the Board directed staff to work with the member agencies and the Budget, Finance, Investment, and Insurance Committee to evaluate the potential to implement a treated water capacity charge to be effective January of 2007. This paper provides background and analysis of this charge.

A Treated Water Capacity Charge (TWCC) would recover the portion of the capital financing costs for Metropolitan's five treatment plants incurred to meet peak day treated water demands. These costs are estimated to be $37.3 million in 2006 and are currently recovered by the treatment surcharge. The proposed design of the TWCC is the same as the existing Capacity Charge, a charge that recovers peak distribution system costs. The TWCC would be levied as a per cubic-foot-second (cfs) rate on a member agency's total maximum day treated water flow placed on the system between May 1 and September 30.

As with the existing Capacity Charge, the TWCC would be based on the trailing three-year peak-day demand. This structure provides an incentive to reduce peaks, and allows member agencies to budget for costs. Because the TWCC is levied on maximum day flow instead of the annual volume of deliveries, member agencies that place higher peak demands on the system would pay a greater share of the costs of meeting treated water peak demand. Currently, these costs are recovered by the treatment surcharge, a per acre-foot volumetric rate. As such, only a limited price signal is in place to encourage local agencies to most effectively utilize and develop local resources and local system capacity to reduce peak-day demands on Metropolitan's treatment plants. If the Board were to implement such a charge, staff recommends that the charge be phased in over a three-year period to ensure all member agencies have the opportunity to address operational changes in their system.

In order to estimate the impact of such a charge on other rates, as well as to provide an example of impacts on member agencies with different peaking factors, the 2006 year was selected as an example. If the TWCC were part of the existing rate structure and in effect as of January 1, 2006, about $37.3 million of treated water service costs currently allocated to the treatment surcharge revenue requirement would be recovered by the TWCC. The treatment surcharge for full service deliveries, which is currently $112 per acre-foot and is increasing to $122 per acre-foot on January 1, 2006, would decrease to $92 per acre-foot. The portion of the bundled treated replenishment and treated agricultural rates would also decrease from $97 per acre-foot and $98 per acre-foot, respectively, to $92 per acre-foot. The TWCC would have been levied on a maximum day treated water flow of 3,245 cfs for the May 1-September 30 periods during 2002, 2003, and 2004. At this rate of flow the TWCC would be $11,507 per cfs. Had the TWCC been in place, and assuming no change in member agency operations for the three years used to assess the TWCC, member agency impacts range from a 25% decrease in the cost of treatment service to a 102% increase in the cost of treatment service. These impacts have to be considered in the context of the particular circumstances that led to high peak-day demands, and that with planning, agencies would be able, in many cases, to manage their systems to reduce peak-day demands. Estimated impacts for 2005/06 are provided in Table 5.

Background

Recent Policy History of Treated Water Peak Demands

Metropolitan has considered the use of capacity or peaking charges in the past. In December 1993, the Board adopted a series of recommendations on rate structure improvements, including the design of a treated water peaking charge to encourage member agencies to reduce treated water demands on Metropolitan's system. Implementation of a treated water peaking charge was deferred as a result of member agency rate refinement discussion held in June 1996. From 1999 through 2001, the issue of using pricing to encourage the most effective use and development of local resources and capacity in order to defer and reduce imported water system expansion costs was revisited during the design of the current rate structure. The issue was in part addressed by the implementation of a Capacity Charge that currently recovers about $32 million in capital financing costs incurred to meet peak-day demands on the distribution system.

Treatment Plant Usage

Metropolitan currently owns and operates five treatment plants within the imported water system that over the past ten years have treated between 1,146 acre-feet of imported water in 1999 to 1,573 acre-feet of water in the more recent high sales year of 2004. Table 1 provides general statistics on the usage of Metropolitan's five treatment plants during calendar year 2004.

Table 1. Water Treatment Plant Usage Calendar Year 2004

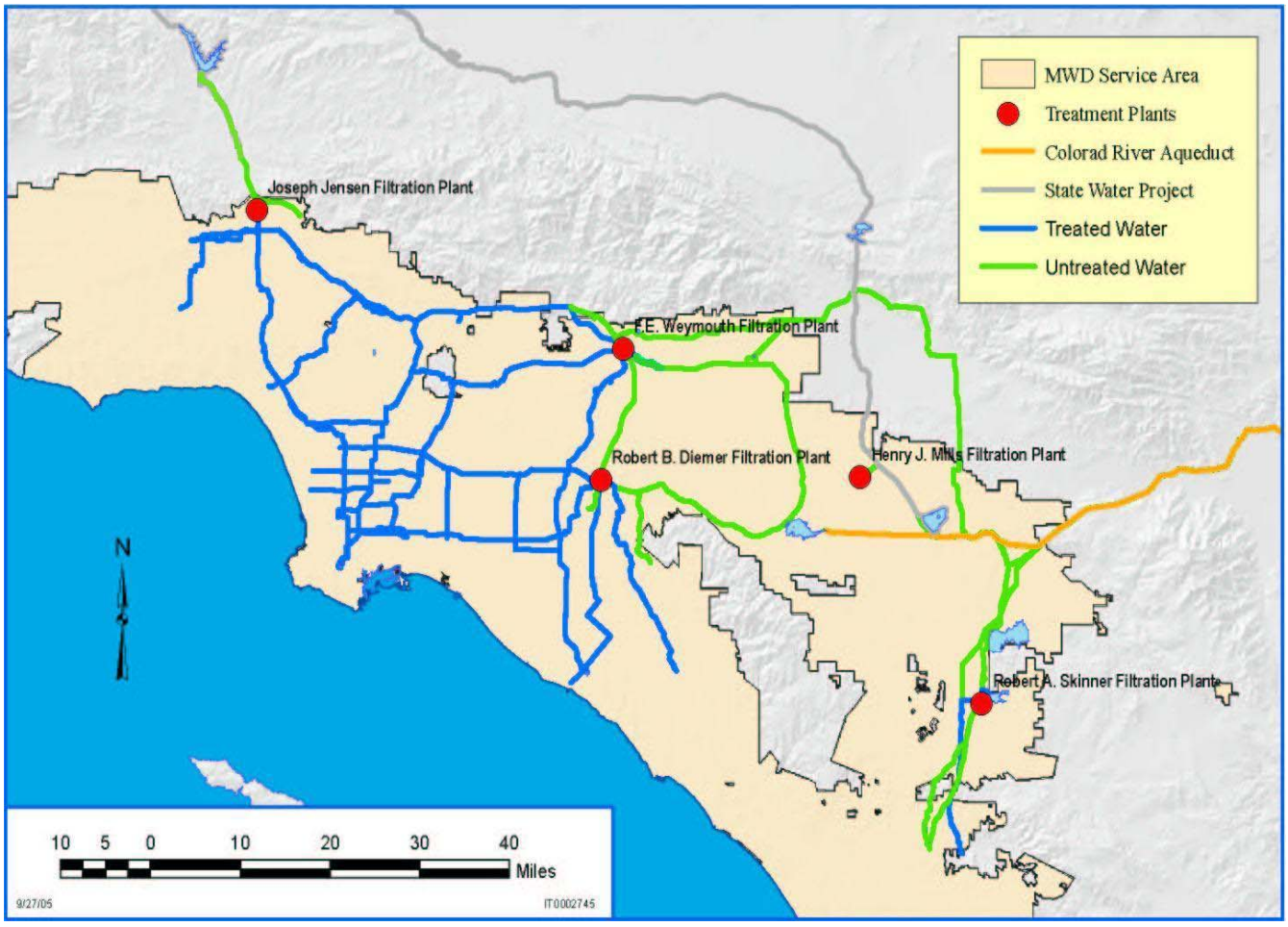
Treatment Plant	Design Capacity (cfs)	Average Demand (cfs)	Peak day* (cfs)	Capacity Factor	Peak Factor
Diemer	803	372	729	46%	1.96
Jensen	1163	680	940	58%	1.38
Mills	505	124	214	25%	1.73
Skinner	806	471	811	58%	1.72
Weymouth	803	395	588	49%	1.49

* Peak day average flow

With exception of the Mills Treatment Plant, all of the plants have a capacity factor of 46% or greater. The load factor is calculated by dividing the average demand by the design capacity and expresses the relative use of a given plant assuming a constant average demand level. Peak factors range from 1.38 at the Jensen Plant to 1.96 at the Diemer Plant. The peak factor is calculated by dividing the peak day by the average day and expresses, as a multiple, the amount of plant capacity in excess of average demand that is used to meet peak-day demands.

Figure 1 illustrates the location of the five treatment plants within Metropolitan's imported water system. Treated water distribution lines are shown in blue and untreated water distribution lines are shown in green. To further illustrate current treatment plant usage, Appendix 1 provides the ratio of daily peak demand to plant design capacity by treatment plant.

Figure 1. Metropolitan's Treatment Plants and the Imported Water Distribution System



Treated Water Demand and Capital Facilities Planning

Member agency demands for imported treated water service vary significantly depending on local weather, hydrology, composition of retail demands and the availability of local resources and system capacity to meet peak-day demands. Treated water deliveries, on average, account for 65 percent of total annual water deliveries. Since fiscal year 1989/90 annual treated water demands have averaged 1.27 million acre-feet per year. Maximum annual treated water demands of 1.54 million acre-feet occurred in fiscal year 2004. All but one of Metropolitan's member agencies has access to treated water service. By member agency, treated water deliveries account for between 0 percent and 100 percent of each agency's imported water deliveries. Figure 2 illustrates total treated and untreated deliveries to all member agencies since 1990. Table 2 summarizes treated water deliveries from 1990 through 2004 by member agency, including peak demand.

Figure 2. Total Deliveries of Treated and Untreated Water

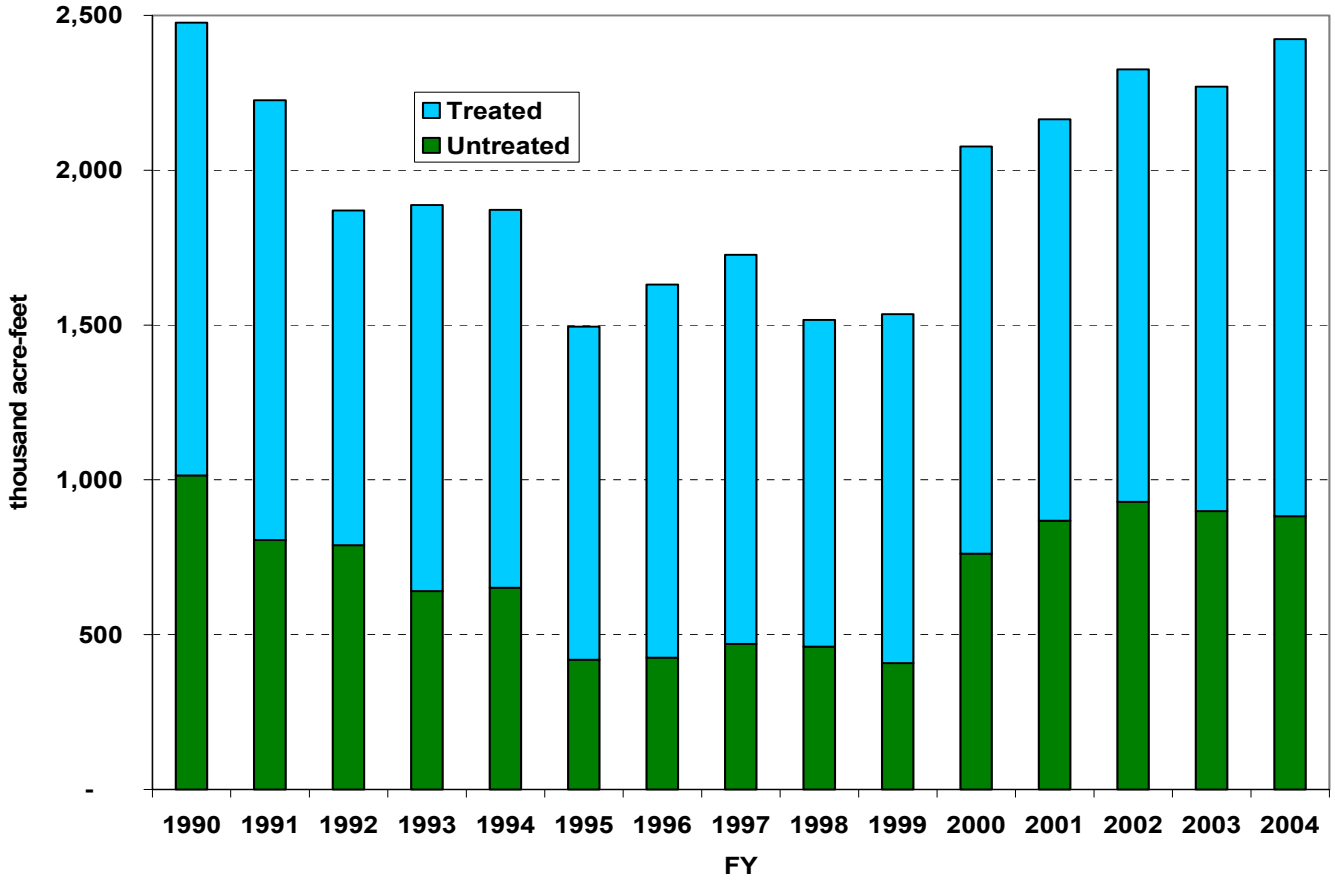


Table 2. Member Agency Treated Water Usage 1990 through 2004

	1990-2004 (acre-feet)			2002-2004 (cfs)			
Member Agency	**Average Annual**	**Maximum Annual**	**Minimum Annual**	**Average Day**	**Max Day**	**Peak factor**	**Peak day**
Anaheim	13,211	31,611	4,641	15	39	2.5	8/27/2003
Beverly Hills	13,282	14,867	12,188	20	30	1.5	9/19/2004
Burbank	15,186	22,839	8,154	23	41	1.8	8/11/2003
Calleguas	103,698	121,883	84,347	205	259	1.3	7/16/2004
Central Basin	75,831	99,814	64,712	108	150	1.4	7/19/2004
Compton	4,046	5,620	2,892	6	12	2.1	8/29/2003
Eastern	64,192	94,405	43,234	156	228	1.5	7/14/2004
Foothill	10,358	14,831	7,766	19	30	1.6	5/3/2004
Fullerton	9,610	15,173	5,713	19	28	1.5	8/28/2004
Glendale	26,270	29,135	21,948	39	60	1.5	8/7/2003
Inland Empire	0	0	0	0	0	-	-
Las Virgenes	20,028	24,882	15,293	33	47	1.4	5/4/2004
Long Beach	46,139	57,560	34,700	44	72	1.7	9/27/2004
Los Angeles	97,319	236,598	32,119	111	176	1.6	7/14/2002
MWDOC	226,047	328,447	155,811	390	516	1.3	8/13/2003
Pasadena	20,300	25,339	12,143	46	76	1.6	7/10/2002
San Diego CWA	225,099	288,911	159,961	493	639	1.3	5/4/2004
San Fernando	395	1,049	0	0	0	-	-
San Marino	1,172	1,998	442	3	7	2.4	5/6/2004
Santa Ana	15,238	21,771	7,135	23	40	1.7	8/9/2002
Santa Monica	9,699	14,444	4,689	21	37	1.7	9/27/2003
Three Valleys	47,900	65,424	35,155	126	174	1.4	8/18/2003
Torrance	21,071	23,804	16,386	32	46	1.4	8/7/2004
Upper San Gabriel	11,871	27,675	5,967	40	71	1.8	8/29/2003
West Basin	155,052	184,679	140,064	225	260	1.2	8/15/2003
Western MWD	38,413	80,297	19,909	144	209	1.4	7/29/2004
Total				2,340	3,245	1.4	

Following updates to the region's Integrated Resources Plan (IRP), Metropolitan and the member agencies initiated a facilities planning exercise commonly referred to as the System Overview Study. The last System Overview Study was completed in 1996 and was the planning foundation for much of the system expansion work now under way or recently completed.

The System Overview Study relies on member agency level forecasts of retail demands and estimates of local supply development to arrive at demands on Metropolitan's system. Expected member agency dry-year demands are multiplied by a historic member agency peak demand factor to arrive at an estimate of high demand. The high demand estimate is used for purposes of timing and sizing system expansion capital projects. To the extent that local resources and local system capacity can be more effectively utilized and further developed to reduce the overall level of dry-year imported water demand and reduce peak-day demands, investments in the expansion of Metropolitan's imported water treatment and distribution system can be deferred or reduced. Results of the ongoing System Overview Study are summarized in Table 3. Table 3 shows the amount of additional capacity and on-line dates for the expansion of two existing treatment plants currently under way and identifies the potential need to construct two additional treatment plants to serve portions of Riverside, Orange and San Diego counties.

Table 3. Expansion of Existing Treatment Plants and Potential Need for Additional Treatment Plants

Facility	Additional Capacity (cfs)	On-line Date	Costs (in 2005 $ millions)
Eagle Valley WTP*	388	2018-2025	476
Lakeview WTP*	310	2018	476
Skinner module 7**	124	2009	143
Mills upgrade ***	257	2008	71
Total	1,079		1,165

*Potential new treatment plants identified by ongoing System Overview Study

**Skinner module 7 under construction

*** Mills upgrade will allow use of full nominal ozone capacity of 505 cfs. Current Mills capacity of modules 3&4 is 248 cfs.

In addition to allocating a greater share of costs incurred to meet peak demand to agencies that place greater peak demands on the system, by encouraging member agencies to reduce peak-day demands, the TWCC may influence the timing of potential capital facilities that were identified in the System Overview Study. As an example, an assumed reduction in current peak-day demand of about 5% in Riverside County and about 3% in Orange County defers the need for the Lakeview and Eagle Valley water treatment plants 6 and 10 years, respectively, from the dates shown above.

Treated Water Costs

The 2005/06 Cost of Service Study (COS Study), published in January 2005 as Attachment 1 to the CEO's Recommendation for Rates and Charges to be effective January 1, 2006 estimated Metropolitan's 2005/06 treated water costs to be $176 million or 15% of total costs. This amount is partially offset by $15 million in revenue offsets including property tax revenue used to pay Metropolitan's outstanding G.O. bond debt service allocated to treatment plants and interest income. With allocated administrative and general costs of $13 million, the result is a treated water net revenue requirement of $174 million that has to be recovered by the treatment surcharge and treated replenishment and treated agricultural water rates.

Metropolitan's treated water revenue requirement has been increasing at an annualized rate of 9.3% per year since 1999/00 due to several factors including: (1) increasing costs for chemicals and power driven by increasingly stringent water quality regulations and the challenges of operating treatment plants using a higher blend of State Project Water with Colorado River Water; (2) inflation in operating and maintenance costs; (3) repair, rehabilitation and upgrade costs for aging treatment infrastructure; (4) treated water capacity expansion costs, and (5) the ozone retrofit program. Figure 3 illustrates the historic trend in the treated water revenue requirement and the expected future revenue requirement through 2008/09. To help recover the increase in treated water costs, the treatment surcharge has also started to rise. By 2007 the treatment surcharge will again be fully recovering the treated water revenue requirement. Figure 4 illustrates the trend in the treatment surcharge with and without the implementation of a TWCC in 2007.

Figure 3. Treated Water Net Revenue Requirement

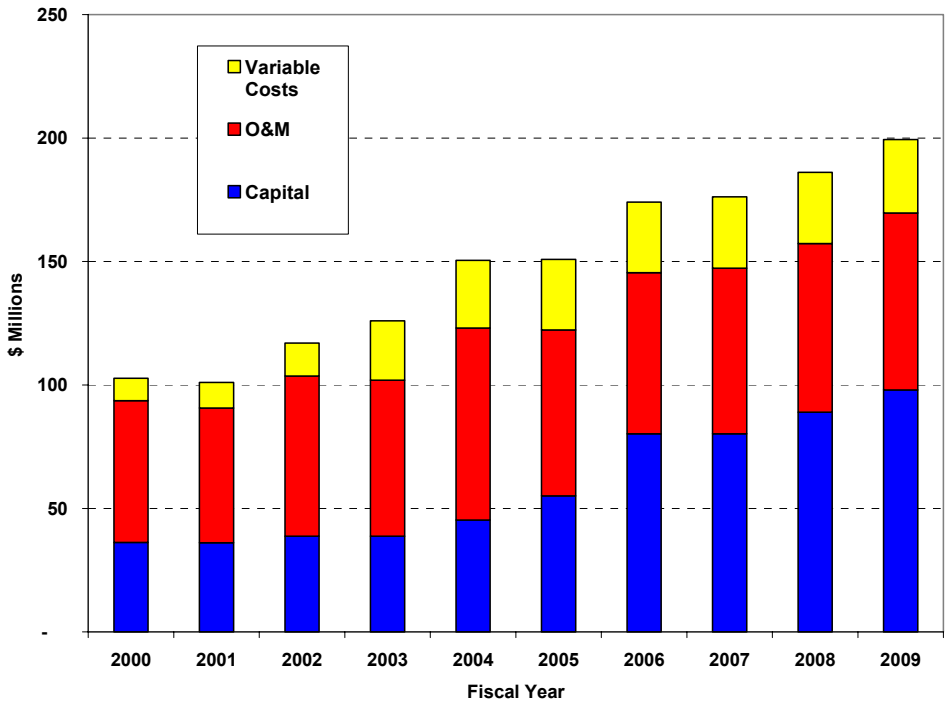
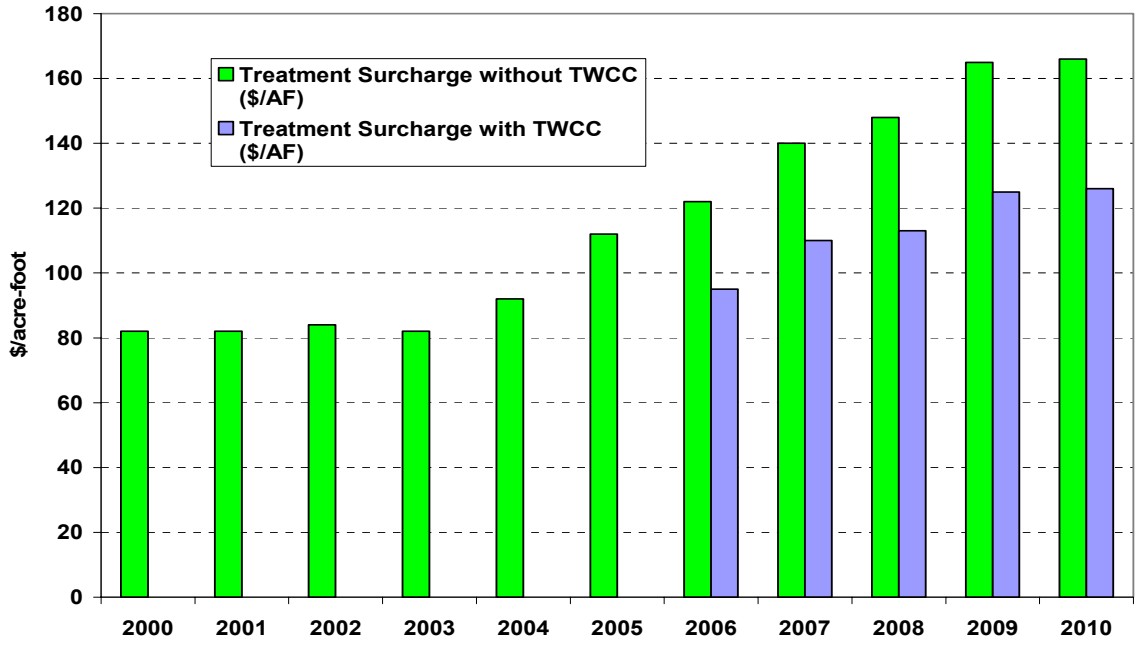


Figure 4. Treatment Surcharge for Full Service Deliveries



Cost of Service Method

In addition to providing information on how the treated water revenue requirement is identified (cost functionalization), most importantly for the purposes of determining the appropriate amount of cost to recover from the TWCC, the COS Study classifies costs based on the reasons for which they were incurred. Consistent with American Water Works Association (AWWA) ratemaking guidelines, Metropolitan's costs are classified into demand, commodity (fixed and variable), standby, and hydroelectric classes. Through cost classification, a portion of the treatment surcharge revenue requirement is identified as being incurred to meet peak day treated water demands. This portion is referred to as "demand" related. Using an embedded cost of service ratemaking approach, the amount of the treated water revenue requirement incurred to meet peak-day demands is most appropriately recovered through a rate or charge that allocates a greater share of these costs to customers that place relatively more peak-day demand on the treatment plants than other customers.

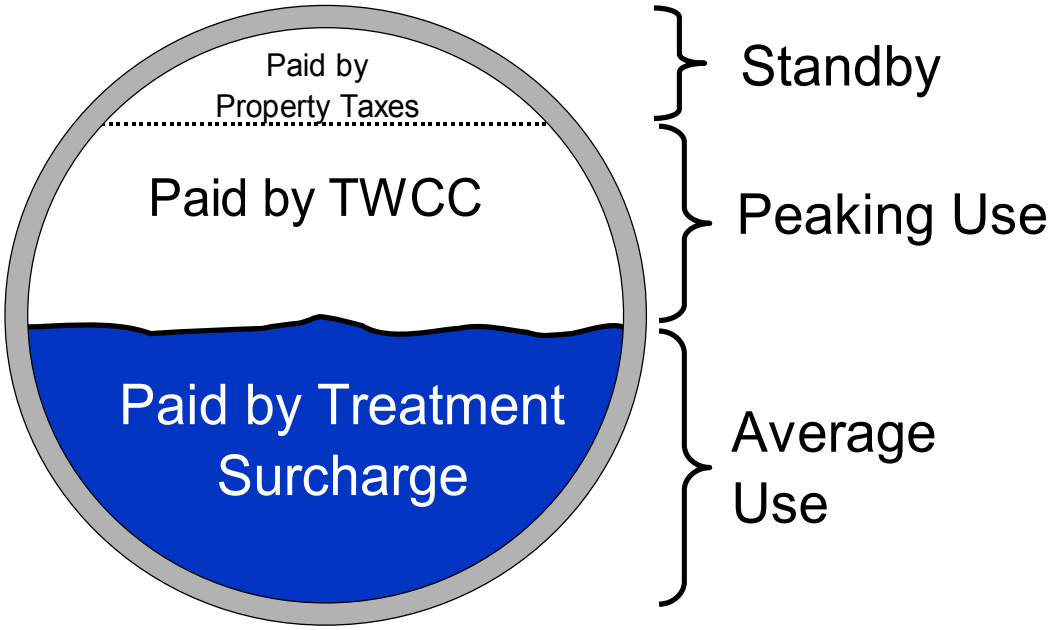
Since fixed operations and maintenance costs do not vary significantly with demand and operating costs that vary with demand (e.g. chemicals, power, and sludge disposal) are most appropriately recovered through a commodity rate, cost classification is only applied to capital financing costs.

To arrive at shares used to classify treatment plant capital financing costs incurred to meet average day versus peak-day demands, the average day system-wide treated water demand for the ten calendar years ending December 30, 2005 (1,795 cfs) was divided by the total design capacity of all the treatment plants (4,080 cfs). Based on this calculation, 44% of the available treatment plant capacity is used to meet average annual demands. Therefore, 56% is available to meet peak-day demands.

Figure 5 uses a cross section of a pipeline to illustrate the basic principles of capital cost allocation. Treatment capital costs, which are associated with serving average loads, are classified as fixed

commodity capital. These costs are recovered through the treatment surcharge. Treatment capital costs that are associated with serving peak demands are classified as demand capital. Property tax revenues offset a portion of the demand (peak or standby and growth related) capital costs. The remaining demand capital costs would be recovered through the TWCC.

Figure 5. Proposed Treatment Capital Cost Recovery

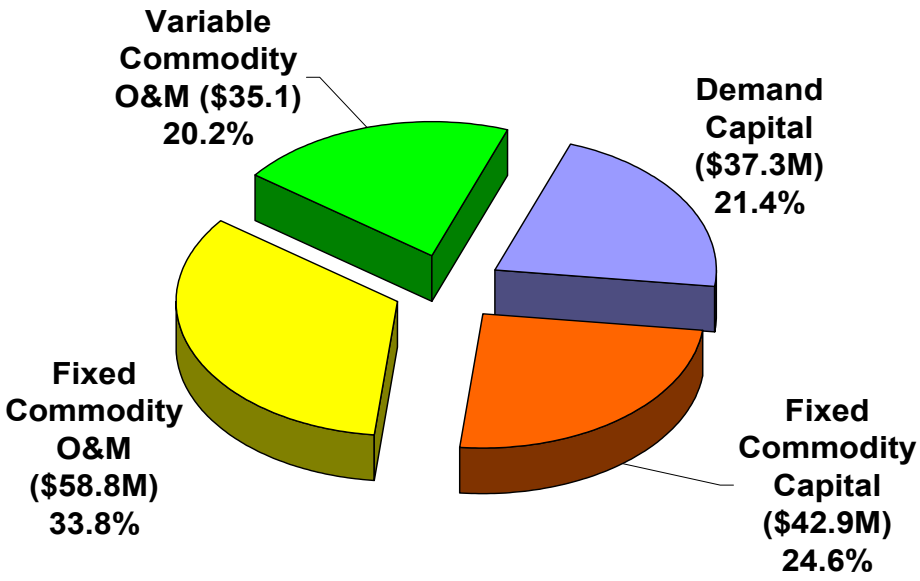


In 2005/06, the net revenue requirement for treatment is $174.1 million, of which $80.2 million is treatment capital costs and $93.9 million is for Operations and Maintenance (O&M). Of the total treatment revenue requirement, $37.3 million is classified as demand-related, and $136.8 million is commodity-related. The demand-related portion is the capital financing costs incurred to meet peak demands and should be allocated to member agencies in a manner that recovers proportionally more of this cost from agencies that place a greater peaking burden on the treatment plants. Commodity-related costs are further broken down into fixed demand and variable demand. Fixed commodity costs include both capital and O&M costs. A summary breakdown of costs by classification is given in Table 4 below. Figure 6 summarizes the classified treatment revenue requirement for 2005/06.

Table 4. Treatment costs classification FY 2005/06 (in $ millions)

	Operations and Maintenance		Capital		
	Variable Commodity	Fixed Commodity	Demand	Fixed Commodity	TOTAL
Costs	32.5	56.4	46.3	40.5	175.7
Offsets	0	-0.9	-13.3	-0.8	-15
Admin. & General	2.6	3.3	4.3	3.2	13.4
Net Revenue Requirement	35.1	58.8	37.3	42.9	174.1

Figure 6. Classified Treatment Net Revenue Requirement FY 2005/06



Treated Water Capacity Charge Design

Under the embedded cost of service method, there are several ways to design a rate or charge to recover costs incurred to meet peak demands.

Two common methods are a capacity charge and a peak surcharge. Both of these methods were evaluated as part of the design of the current rate structure. A peak surcharge is calculated by dividing costs incurred to meet peak demands by the amount of the total peak demand that is in excess of average demands. This rate is then levied on demands in excess of average demands.

A capacity charge recovers costs incurred to meet peak demands across all capacity used. Customers using relatively more capacity in excess of average use pay proportionally more. A trailing peak is used to reflect the fact that peak day use is affected by weather. Currently, Metropolitan uses a three-year trailing peak.

To stabilize member agency costs and simplify rate setting, the proposed TWCC utilizes the capacity charge approach. This same approach is used for the existing Capacity Charge. The current Capacity Charge is levied on peak-day demands for the May 1 through September 30 period for the previous three calendar years preceding the most recent year. The Capacity Charge recovers the portion of capital financing costs for the distribution service function incurred to meet peak-day demands. The Capacity Charge is expected to recover $32.4 million in 2005/06.

For calendar years 2002 through 2004 the three-year maximum peak-day treated water demand for the May 1 through September 30 period is 3,245 cfs. The treatment capacity charge is calculated by dividing the demand-related treated water revenue requirement of $37.3 million by the treated water peak-day demand. For 2005/06 this charge would be $11,507 per cfs.

Member agency impacts

Table 4 shows the estimated impact of a treatment capacity charge for each member agency, assuming the TWCC was in place during 2005/06 and that member agencies placed the same treated water demands on the system as they did during the May 1 through September 30 periods of 2002, 2003 and 2004.

Table 5

2005/06 Treated Water Service Cost
with and without a Treated Water Capacity Charge

Rate	2005/06 Estimated Treated Sales (acre-feet)			Treatment Surcharge Only Cost				Treatment Surcharge and Treated Water Capacity Charge							
								Treated Water Capacity Charge Cost		Treatment Surcharge Cost			Total		
				$122.00	$97.00	$98.00			$11,500	$92.00	$92.00	$92.00			
	Full Service	Agriculture	Replenishment	Full Service	Agriculture	Replenishment	Total	Three-Year Trailing Peak (cfs)		Full Service	Agriculture	Replenishment		Increase/(Decrease) in Cost	
Anaheim	6,857	0	0	$ 836,543	$ -	$ -	$ 836,543	39	$ 443,176	$ 630,836	$ -	$ -	$ 1,074,011	237,469	**28.4%**
Beverly Hills	12,065	0	0	1,471,872	0	0	1,471,872	30	345,932	1,109,936	0	0	1,455,868	-16,004	-1.1%
Burbank	13,499	0	0	1,646,834	0	0	1,646,834	41	472,578	1,241,875	0	0	1,714,453	67,619	**4.1%**
Calleguas	107,002	5,321	4,914	13,054,289	516,099	481,532	14,051,919	259	2,982,279	9,844,218	489,496	452,050	13,768,043	-283,876	-2.0%
Central Basin	61,208	0	3,229	7,467,320	0	316,420	7,783,741	150	1,720,190	5,631,094	0	297,048	7,648,331	-135,409	-1.7%
Compton	4,332	0	0	528,477	0	0	528,477	12	134,313	398,523	0	0	532,836	4,360	0.8%
Eastern	79,401	3,420	0	9,686,925	331,746	0	10,018,671	228	2,621,782	7,304,894	314,646	0	10,241,322	222,651	2.2%
Foothill	10,686	0	640	1,303,690	0	62,760	1,366,451	30	348,514	983,111	0	58,918	1,390,542	24,092	1.8%
Fullerton	9,851	15	0	1,201,803	1,455	0	1,203,258	28	321,108	906,278	1,380	0	1,228,766	25,508	2.1%
Glendale	25,658	0	0	3,130,333	0	0	3,130,333	60	689,960	2,360,579	0	0	3,050,539	-79,794	-2.5%
Inland Empire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Las Virgenes	21,393	0	0	2,609,976	0	0	2,609,976	47	538,836	1,968,179	0	0	2,507,015	-102,961	**-3.9%**
Long Beach	46,230	0	6,873	5,640,068	0	673,554	6,313,622	72	830,759	4,253,166	0	632,316	5,716,241	-597,381	**-9.5%**
Los Angeles	58,807	0	3,393	7,174,418	0	332,498	7,506,916	176	2,024,691	5,410,217	0	312,141	7,747,049	240,132	**3.2%**
MWDOC	226,484	805	22,560	27,631,079	78,118	2,210,922	29,920,120	516	5,937,153	20,836,552	74,092	2,075,560	28,923,356	-996,764	**-3.3%**
Pasadena	26,788	0	0	3,268,171	0	0	3,268,171	76	868,703	2,464,522	0	0	3,333,225	65,054	2.0%
San Diego	191,784	65,924	0	23,397,593	6,394,665	0	29,792,257	639	7,343,217	17,644,086	6,065,043	0	31,052,346	1,260,089	**4.2%**
San Fernando	96	0	0	11,684	0	0	11,684	0	0	8,811	0	0	8,811	-2,873	**-24.6%**
San Marino	528	0	0	64,357	0	0	64,357	7	81,631	48,532	0	0	130,163	65,806	**102.3%**
Santa Ana	13,656	0	13,070	1,666,087	0	1,280,854	2,946,941	40	454,916	1,256,393	0	1,202,435	2,913,743	-33,197	-1.1%
Santa Monica	11,893	0	0	1,450,941	0	0	1,450,941	37	424,209	1,094,152	0	0	1,518,361	67,420	**4.6%**
Three Valleys	52,582	0	0	6,415,002	0	0	6,415,002	174	1,996,102	4,837,543	0	0	6,833,644	418,642	**6.5%**
Torrance	20,156	0	0	2,459,034	0	0	2,459,034	46	527,509	1,854,354	0	0	2,381,863	-77,171	**-3.1%**
Upper San Gabri	16,255	0	0	1,983,138	0	0	1,983,138	71	815,701	1,495,481	0	0	2,311,182	328,045	**16.5%**
West Basin	146,701	0	0	17,897,496	0	0	17,897,496	260	2,995,308	13,496,472	0	0	16,491,780	-1,405,716	**-7.9%**
Western	42,407	14,311	0	5,173,653	1,388,164	0	6,561,817	209	2,401,108	3,901,443	1,316,609	0	7,619,160	1,057,343	**16.1%**
Total	**1,206,318**	**89,796**	**54,679**	**$ 147,170,783**	**$ 8,710,247**	**$ 5,358,541**	**$ 161,239,570**	**3,245**	**$ 37,319,674**	**$110,981,246**	**$ 8,261,265**	**$ 5,030,467**	**$ 161,592,652**	**353,082**	**0.2%**

Implementation

Measuring peak day demands

Treated water peaks used for billing purpose would be the maximum peak-day treated water demand during the May 1 through September 30 periods of the previous three calendar years, measured in cubic-feet per second. However, because member agencies can certify replenishment service up to six months after delivery, a one-year lag would precede the calculation of the three-year trailing peak. Over time, as a member agency reduces its peak-day demands for treated water, its Capacity Charge cost would decrease.

All classes of service that place demands on the system during the May 1 – September 30 period and that cannot be interrupted by Metropolitan within 24 hours notice would be included in measuring a member agency's peak-day demand. These classes of service include full service, agricultural, wheeling and exchanges. Since replenishment service is interruptible by Metropolitan, at any time for direct replenishment, and within 24 hours notice for in-lieu replenishment, replenishment service would not be included in the measurement of a member agencies peak-day demand. In-lieu replenishment would be deducted from daily flow data using the ratio of certified monthly in-lieu deliveries to total deliveries. This is the same measurement technique used to bill the existing Capacity Charge.

Phased approach

Since the member agencies and their customers have not had an opportunity to adjust their operations to reduce peak-day demands for treated water during the last several years in anticipation of the TWCC, a phased approach would be used to gradually work into a full three-year ratchet for the TWCC. For example, it may be most practical to adopt the TWCC in 2007 but suspend its implementation until January of 2008. In that way, the May 1 – September 30 period of 2006 would be the first peak period that would be measured for purposes of billing the TWCC. In 2009, the TWCC would include the peak periods from 2006 and 2007 and in 2010, the peak periods from 2006, 2007 and 2008 would be included.

Rate cycle and billing

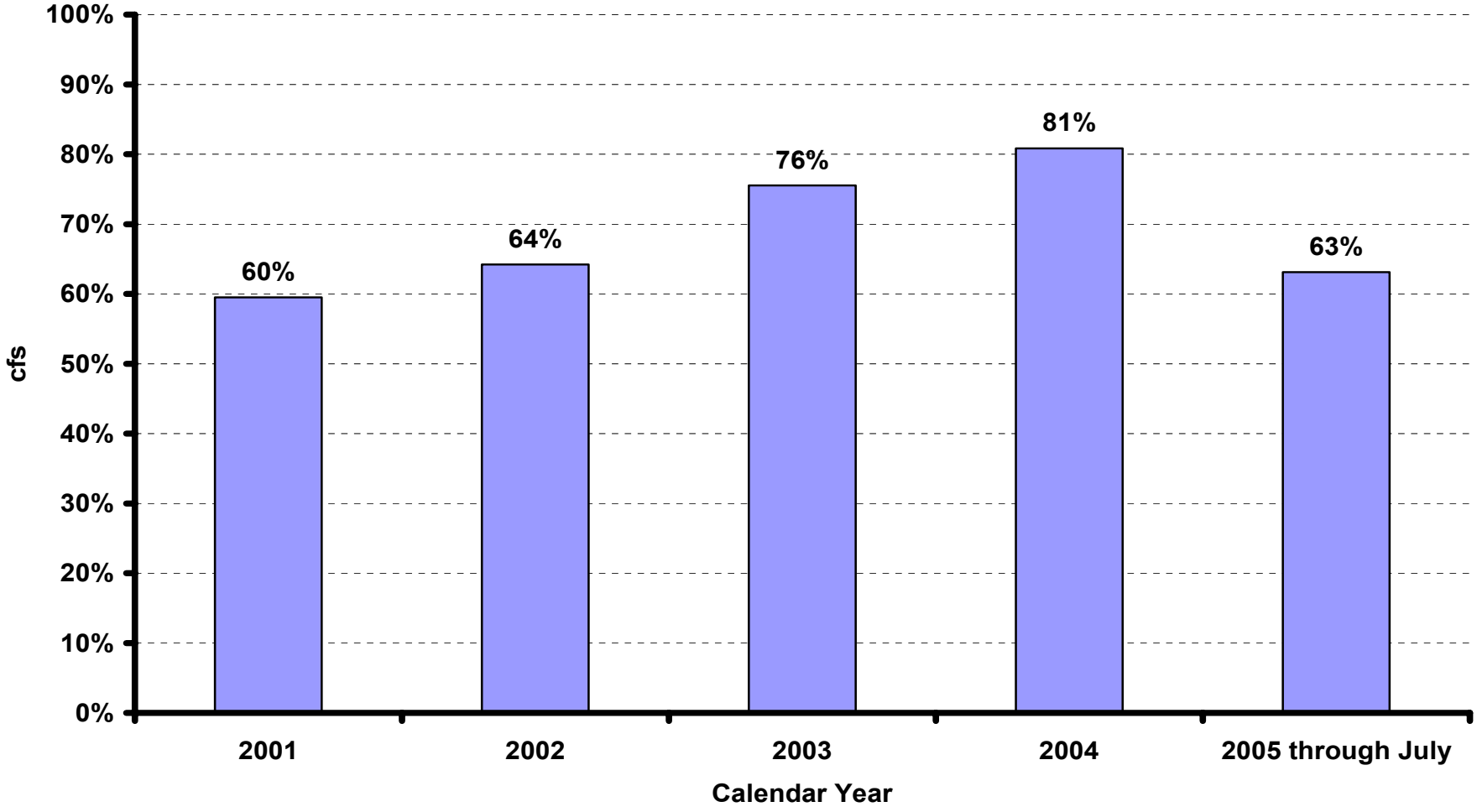
The TWCC would be evaluated annually by Metropolitan and the member agencies as part of the regular annual rate cycle. Any future adjustments to the TWCC would be based on the COS Study and approved by the Board. The member agencies would be billed on the regular monthly cycle for the TWCC and could select a monthly, quarterly, or semiannual cash flow schedule to best time payments to receipt of member agency revenues.

Evaluation

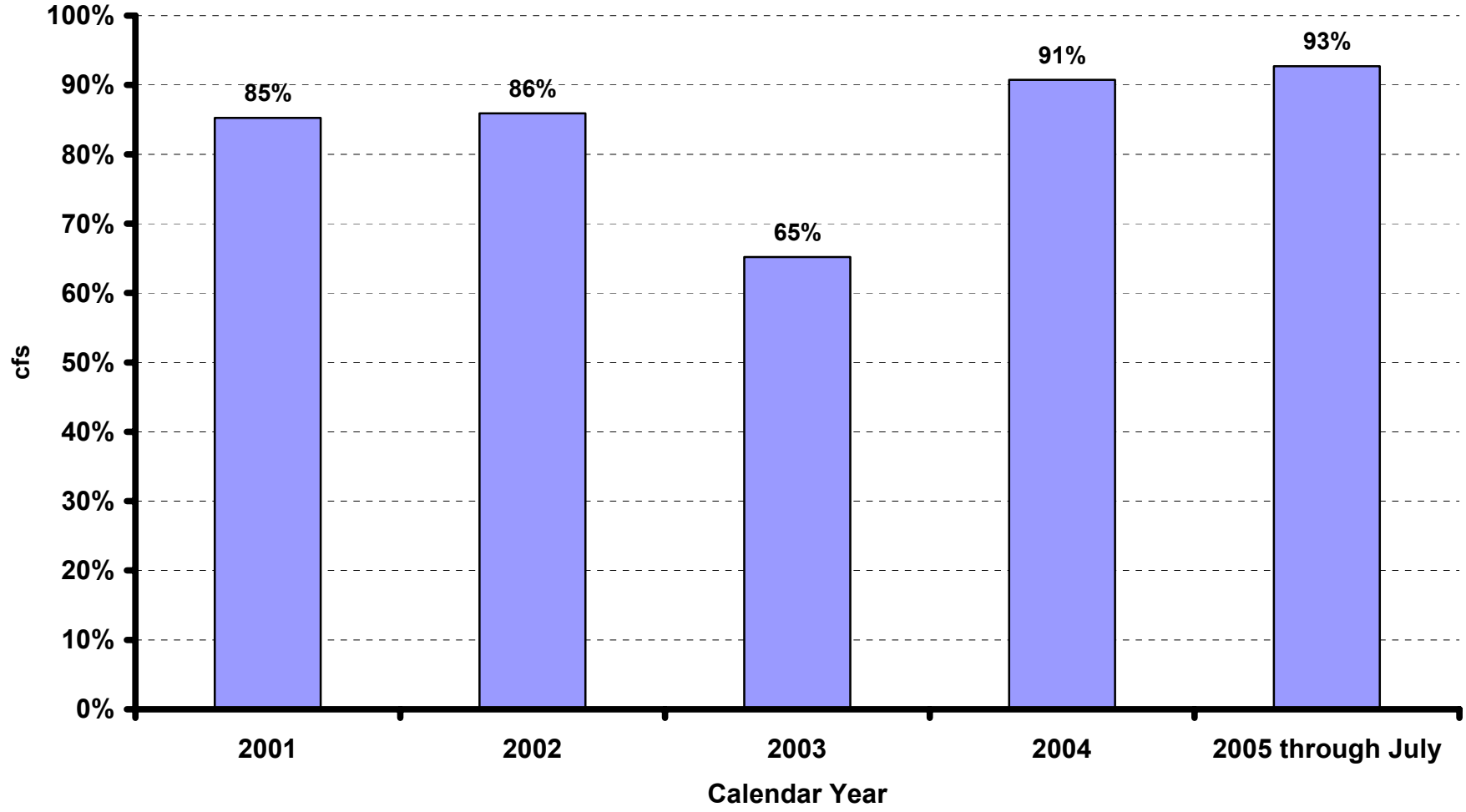
Metropolitan, working with the member agencies, would monitor and evaluate the effectiveness of the TWCC to ensure that the TWCC is having the intended effect of reducing peak-day demands on the treatment plants and is allocating a greater share of costs incurred to meet peak-day demands to member agencies that place those demands on the system.

Appendix 1

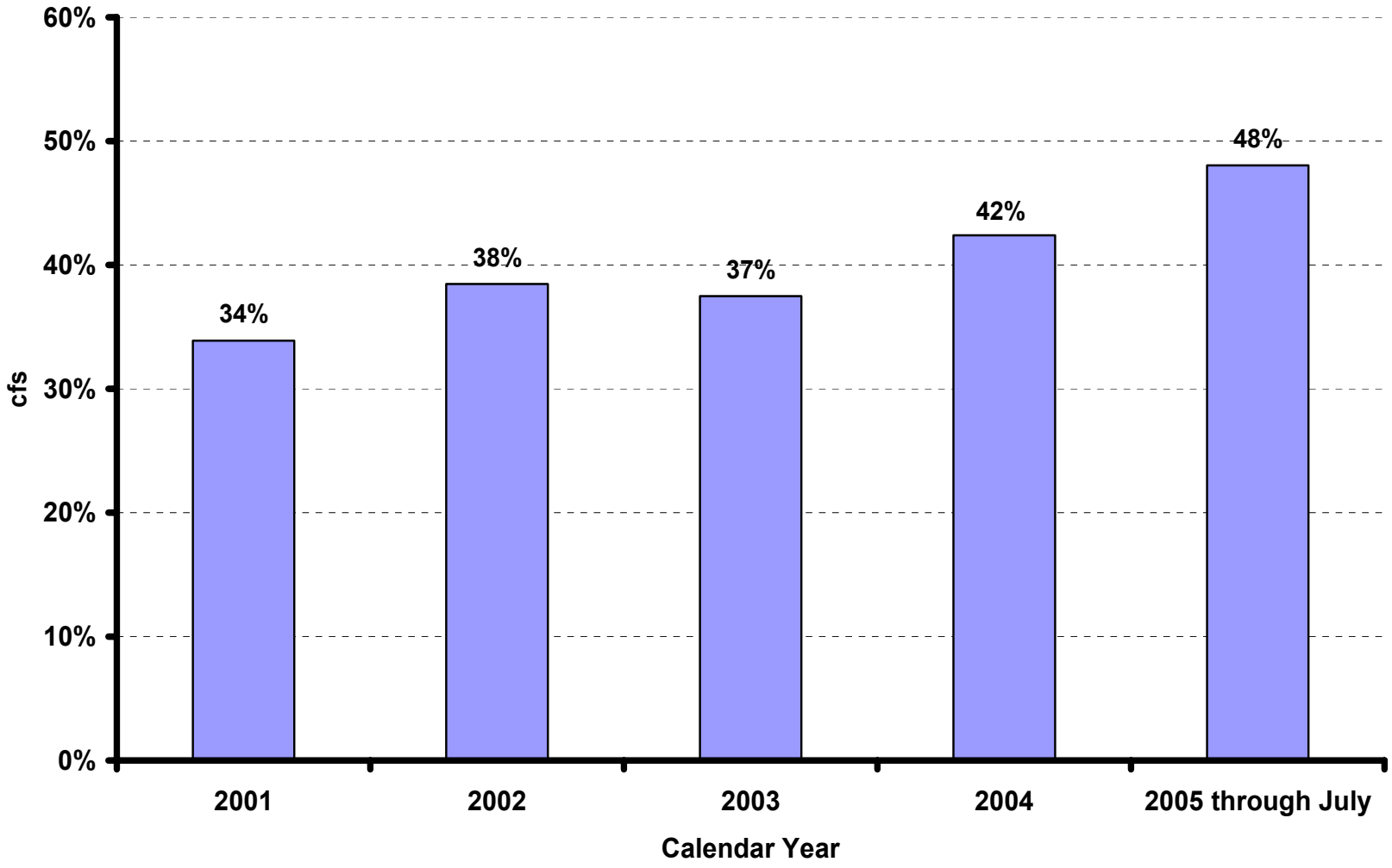
Jensen Water Treatment Plant
24 Hour Max Day Flow as Percent of Design Capacity (1163 cfs)



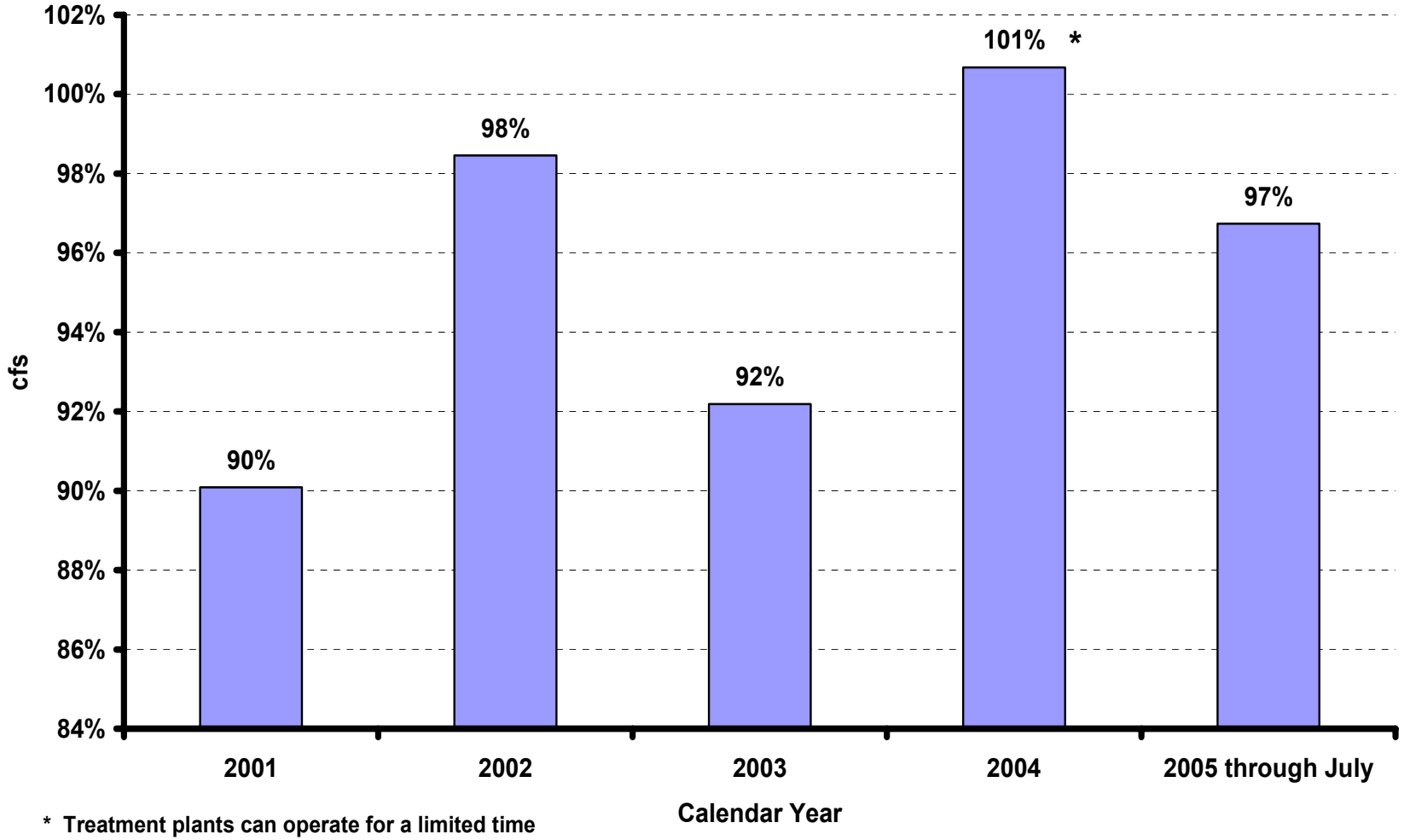
Diemer Water Treatment Plant
24 Hour Max Day Flow as Percent of Design Capacity (803 cfs)



Mills Water Treatment Plant
24 Hour Max Day Flow as Percent of Design Capacity (505 cfs)



Skinner Water Treatment Plant
24 Hour Max Day Flow as Percent of Design Capacity (806 cfs)



* Treatment plants can operate for a limited time beyond Design capacity

Weymouth Water Treatment Plant
24 Hour Max Day Flow as Percent of Design Capacity (803 cfs)