

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

April 8, 2003 Board Meeting

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**9-1**

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**Subject**

Approve changes to Metropolitan's Bond Refunding Guidelines

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**Description**

As part of the 2003 update to Metropolitan's Long Range Finance Plan, staff has been reviewing and analyzing Metropolitan's financial policies and guidelines to determine if changes may benefit Metropolitan and its member agencies. As a result of that analysis, staff recommends that Metropolitan's bond refunding guidelines be modified to provide additional opportunities for current and advance refundings of Metropolitan's bonds in a variety of interest rate environments. The existing guidelines have served Metropolitan well, but they limit Metropolitan's ability to take full advantage of the call option value on Metropolitan's outstanding bonds. The proposed changes to the guidelines will enable Metropolitan to take full advantage of favorable market conditions and identify additional refunding candidates that under existing guidelines could not be refunded.

**Proposed Enhancements to Bond Refunding Guidelines**

Staff recommends that Metropolitan's bond refunding guidelines be modified to provide additional opportunities to take advantage of different interest rate environments to refund existing debt and lower ongoing debt service costs. The proposed changes would enable Metropolitan to take greater advantage of the call option on outstanding bonds and provide for a larger number of bonds that could be efficiently refunded. In addition, the guidelines change would allow staff and its finance team to more accurately identify bonds that could be refunded for savings. Under existing market conditions, these improvements would enable Metropolitan to refund another \$274 million of bonds for an additional net present value savings of \$15 million. These changes have been reviewed by Metropolitan's financial advisor and banking team. In addition, these proposed changes were discussed with member agency finance staff on February 7, 2003.

**Existing Bond Refunding Guidelines**

Metropolitan's existing refunding guidelines were approved by the Board as part of the 1995 update to the Long Range Finance Plan. The existing guidelines provide refunding targets based on net present-value savings (after fees and expenses) generated by the refunding transaction. Refundings are executed if a transaction meets the following targets:

- Current refundings** (the call date of the refunded bonds is within 90 days of the refunding transaction) must generate net present value savings equal to **3 percent** of the refunding bond proceeds or par amount.
- Advance refundings** (transactions where the call date of the refunded bonds is greater than 90 days) must generate net present value savings equal to **5 percent** of the refunding bond proceeds or par amount. This reflects the fact that advance refundings have more time before the call date and more chance that interest rates may move in a more favorable direction. Therefore, the target is set higher than a current refunding.
- Refundings with swaps, caps/collars or other derivative products** as part the refunding bonds (sometimes called synthetic refundings) must generate net present value savings equal to at least **7 percent** of the refunding bond proceeds or par amount. The higher target reflects the additional risk of such transactions in terms of counterparty risk, termination risk, and other event risks.

Savings requirements for advance refundings are greater than savings requirements for current refundings because the requirement recognizes the time value to Metropolitan of the existing call options (call premiums paid by Metropolitan) associated with outstanding debt. Higher savings requirements for synthetic refundings reflect additional net present value savings required to offset the greater risks to Metropolitan associated with interest rate swaps such as tax risk and counterparty risk. The existing guidelines have served Metropolitan well, allowing Metropolitan to take advantage of market opportunities to current, advance, and synthetically refund outstanding debt obligations and achieve debt service savings. Refunding opportunities in the municipal capital markets enabled Metropolitan to lower outstanding fixed rate debt costs to less than 4.80 percent.

However, as the overall cost of Metropolitan's debt obligations has decreased, so have the opportunities to further decrease the cost of Metropolitan's debt given existing refunding guidelines. Since Metropolitan's cost of outstanding fixed rate debt is at historically low levels, and the existing refunding guidelines limit the opportunities for Metropolitan to take advantage of historically low interest rates in the municipal bond market, staff examined various methods to modify and customize Metropolitan's bond refunding guidelines to provide greater flexibility and take advantage of interest rate markets.

### **Proposed Changes in Bond Refunding Guidelines**

Proposed changes in these targets are based on the value of the call option that Metropolitan retains when it issues bonds. Metropolitan typically issues bonds that are callable at specified dates like ten years after the initial date of issuance. The time value of that option declines as the maturity date gets closer. Simply put, if the bond matures tomorrow and interest rates are significantly higher than the coupons on the bond, the likelihood of refunding the bond on the maturity date is zero. On the other hand, if the maturity date is seven years away, there is still a good chance that interest rates will decline to levels that make a refunding transaction economically feasible.

As Metropolitan's debt costs have decreased, opportunities to refund bonds are decreasing. The proposed changes would help Metropolitan take advantage of refunding opportunities in very low interest rate markets, while raising the bar for a refunding in higher interest rate markets. The changes also will help Metropolitan to take full advantage of the call feature on its outstanding debt. The policy starts with the previously adopted standard of 3 percent net present value savings and then adjusts the 3 percent target on a bond by bond basis for time to call and maturity; the overall level of interest rates; and the use of interest rate swaps as part of the refunding structure. The methodology is summarized in [Attachment 1](#). Staff evaluated a number of alternatives and recommends these changes in the refunding guidelines to ensure Metropolitan continues to have the flexibility it needs to reduce the cost of debt over time.

### **Policy**

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Board authority required to modify or change existing financial guidelines and policies.

Metropolitan's bond refunding guidelines were established through the 1995 update of the Long Range Finance Plan.

### **California Environmental Quality Act (CEQA)**

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CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not subject to CEQA because it involves other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines).



## The Metropolitan Water District of Southern California

### Proposed Adjustments to Bond Refunding Guidelines

In distinguishing between bond refunding candidates, the time value of a potential refunding candidate is not considered under the existing guidelines. The longer the period of time between the issuance date of a refunding bond and the call date of the refunded bonds, the higher the potential present value savings that may be generated (as there is a longer period of time for interest rates to decline). In addition, the existing refunding guidelines do not consider the impact on potential present value savings of the time between the call date and the maturity date of a potential refunding candidate.

Negative arbitrage in the refunding escrow is another factor that impacts the ability of Metropolitan to refund debt. Generally, the existence of negative arbitrage in a refunding escrow reduces the amount of net present value savings, thereby reducing the economics of a refunding transaction. The following steps are proposed to be used to determine whether a bond would be considered a refunding candidate:

1. Step One: As previously noted, Metropolitan’s weighted average cost of debt is already low. As such, future refunding opportunities are limited unless municipal interest rates approach levels never before realized. A base savings target of 3 percent (equal to the existing target for current refundings) appears reasonable for Metropolitan at this time before adjustments.
  
2. Step Two: Since 1992, the Bond Buyer Revenue Bond Index (RBI) has fluctuated between 5.02 percent and 7.37 percent. Although Metropolitan’s long-term debt trades below the RBI, the RBI is a good indicator of overall municipal interest rate levels at any given time. Step two of this methodology requires Metropolitan to adjust the percentage savings target by a percentage that is based on the level of municipal rates reflected in the RBI. The following table determines the adjustment factors given current interest rate levels in relation to historical interest rate levels.

<b>RBI Index Compared to Historical Levels (a)</b>	<b>Adjustment Factor</b>
Lowest 10 <sup>th</sup> percentile	minus 2.0%
Between 10 <sup>th</sup> and 20 <sup>th</sup> percentile	minus 1.5%
Between 20 <sup>th</sup> and 30 <sup>th</sup> percentile	minus 1.0%
Between 30 <sup>th</sup> and 40 <sup>th</sup> percentile	minus 0.5%
Between 40 <sup>th</sup> and 60 <sup>th</sup> percentile	no adjustment
Between 60 <sup>th</sup> and 70 <sup>th</sup> percentile	Plus 0.5%
Between 70 <sup>th</sup> and 80 <sup>th</sup> percentile	Plus 1.0%
Between 80 <sup>th</sup> and 90 <sup>th</sup> percentile	Plus 1.5%
Greater than 90 <sup>th</sup> percentile	Plus 2.0%

(a) Assumes RBI data over the prior (rolling) ten-year period.

By recognizing the relationship between current interest rate levels and historical interest rate levels in the municipal market, Metropolitan can justify more aggressive refunding targets in historically low interest rate periods, and conversely more conservative refunding targets during periods of higher interest rate levels.

3. **Step Three:** Synthetic financial products (such as interest rate swaps) offer Metropolitan the opportunity to lower the overall costs of financing. However, there are manageable risks not associated with a “plain vanilla” bond refunding associated with the use of synthetic financial products. Those risks need to be recognized when determining refunding targets for transactions involving interest rate swaps. For purposes of quantifying the impact on the refunding savings target of synthetic financial products, step three entails adding 3 percent to the refunding savings target when tax risk to Metropolitan is associated with the transaction (e.g., a libor based interest rate swap) or if an option product is used in the transaction. Two percent is added to the refunding savings target if the swap has no tax risk or embedded options. The 2 percent refunding savings target represents additional savings required by Metropolitan due to risks associated with interest rate swaps such as basis risk, counterparty risk, and termination risk. The following table summarizes the additional savings required for step three:

<b>Risks Associated with Synthetic Financial Products</b>	<b>Adjustment Factor</b>
The interest rate swap agreement does <b><u>not include tax risk or an option product</u></b>	Plus 2%
The interest rate swap agreement <b><u>includes tax risk or an option product</u></b>	Plus 3%

4. **Step Four:** The duration of the refunding candidate impacts the overall level of savings associated with a bond refunding, since savings from refunding a bond are realized during the period from the call date to the maturity of the bond. Therefore, refunding candidates with shorter time periods between the call date of the bond and the maturity date of the bond will have comparatively lower savings potential than maturities with longer time periods from the call date to the maturity of the bond. Thus, refunding candidates with shorter time periods between the call date of the bond and the maturity date of the bond will reduce the refunding savings target by subtracting a percentage from the savings target. Conversely, refunding candidates with relatively longer time periods between the call date of the bond and the maturity date of the bond will contribute to an increase in the refunding savings target by adding a percentage to the savings target. A graduated adjustment factor may be used under this methodology to recognize the savings disparity between shorter and longer time periods between the call date and the maturity date of a bond. The following table lists the adjustment factors required under step four:

<b>Period of Time Between Call Date and Maturity Date of a Bond</b>	<b>Adjustment Factor</b>
less than six months	minus 0.50%
greater than six months / less than one year	minus 0.25%
greater than one year / less than two years	- zero -
greater than two years / less than three years	Plus 0.25%
greater than three years / less than four years	Plus 0.50%
greater than four years / less than five years	Plus 0.75%
greater than five years / less than ten years	Plus 1.00%
greater than ten years / less than fifteen years	Plus 1.25%
greater than fifteen years	Plus 1.50%

5. Step Five: In a bond refunding transaction, proceeds from the refunding bonds are placed in an escrow account and used to purchase direct obligations of the United States Government. The principal amount of the escrow plus interest earnings ensures debt service payments on the refunded bonds. The escrow account is an irrevocable pledge by Metropolitan to secure payments to the bondholders of the refunded bonds. Metropolitan realizes savings by refunding “high coupon” bonds (the “refunded bonds”) with lower coupon “refunding bonds.” By law, the escrow can only earn the interest rate associated with the “new” refunding bonds, that is the lower rate. Therefore, since the higher coupon on the refunded bonds must be paid, the escrow account requires more funds, which results in a greater issue size and conversely a lower savings level. Not only the absolute level of interest rates affects savings from a bond refunding, but also by changes in the shape of the yield curve. As such, the opportunity to realize savings from a refunding are affected not only by the interest rate on the refunded bonds and the interest rate on the refunding bonds, but by the interest rate in the escrow account.

Since the yield in an escrow account cannot be higher than the yield on the refunding bonds, the structuring of the escrow has a significant impact on the savings associated with each refunding candidate. Positive arbitrage exists when the yield in the escrow account is higher than the yield on the refunding bonds. Negative arbitrage exists when the yield in the escrow account is lower than the yield on the refunding bonds. Escrow accounts may also experience inefficiencies when the maturity and interest payment dates of the refunded bonds do not exactly match the escrow receipts. Therefore, since negative arbitrage and escrow inefficiencies impact the savings in a refunding transaction, the impact of the economics of the escrow account must be included in the calculation of the percentage savings target.

In order to include the impact of the economics of an escrow account on the percentage savings target, the calculated percentage savings target for each refunding candidate must be **net** of the impact of the escrow account. A simplified method of determining the impact of the escrow on the refunding candidate will be incorporated in the process by assuming a separate escrow account for each bond. The impact of the escrow account on the refunding candidate can then be isolated on a bond-by-bond basis. If the analysis results in an economic impact to the savings associated with the refunding candidate, then the impact will be netted off the percentage savings target to determine the “net refunding savings target” for each bond, and to determine if the bond is an eligible refunding candidate.