June 14, 1999

To: Board of Directors (Special Audit Committee—Action)
(Executive Committee—Action)

From: General Manager ______________________

Auditor ______________________

General Counsel ______________________

Subject: Receive and File the Audit Report on the Eastside Reservoir Project and Accept the General Manager's Response to Auditor's Findings and Recommendations

RECOMMENDATION(S)

It is recommended that the Board:

1. Accept the final Vargas Lopez Audit Report on the Eastside Reservoir Project and bring closure to the external audit process initiated by the Board in October 1998.

2. Accept the General Manager's May 7, 1999, response to the audit and management actions.

EXECUTIVE SUMMARY

The final draft report on the audit of the Eastside Reservoir Project by Vargas, Lopez and Company, LLP (Vargas Lopez) was presented to the Special Audit Committee on April 20, 1999, and to the Executive Committee on April 26, 1999. The Board of Directors received the final report on May 11, 1999, together with the General Manager's May 7, 1999, response to the final audit report. The Board took no action on those documents at that time since the matters were scheduled to be discussed at the Senate Select Committee on Southern California Water Districts' Expenditures and Governance on May 26, 1999.

The Senate Select Committee has conducted hearings on the Eastside Reservoir Project audit and has considered the Auditor's final audit report and the General Manager's response. The matter is now being submitted to the Special Audit Committee and Executive Committee for acceptance of the Auditor's final report and management's response and actions.

DETAILED REPORT

At its meeting on October 13, 1998, Metropolitan's Board of Directors considered the information contained in an October 7, 1998, Report on the Financial Status of the Eastside Reservoir Project from Metropolitan's General Manager. This report indicated that an increase in the existing $1.972 billion project appropriation of about 11 percent ($220 million) would be necessary to fund the remainder of the Eastside Reservoir Project costs through project completion. This report disclosed that project expenditures through August 1998, totaled about $1.519 billion. Due to the projected magnitude of the project appropriation increase, as well as concerns over the timeliness of the disclosure of such information and other factors, the Board of Directors directed Metropolitan staff to provide clear, understandable monthly reports covering both the Eastside Reservoir Project and the $1.2 billion Inland Feeder Project and to verify cost information through an outside independent audit overseen by the Board's Special Audit Committee.

The Special Audit Committee developed the scope of work and issued a Request for Proposal (RFP) in November 1998. They conducted interviews of the candidate firms on November 30, 1998, and the firm of Vargas Lopez was selected to conduct the audit. A contract for services was entered into with Vargas Lopez in December 1998. The selected firm submitted a proposed audit work plan in January 1999, and on January 19, 1999, the Special Audit Committee approved the base-level Eastside Reservoir Project audit plan submitted by Vargas Lopez. The plan included the six audit tasks included in the scope of services, which are summarized below:

1. Determine whether the Eastside Reservoir Project costs incurred to date were accurately reported, in all material respects, using accounting methods specified for verification purposes, and whether those costs, including contingency funds, were properly authorized.

2. Review the chronology of expenditures to date to determine the time when cost overruns were projected (excluding disputed contractor claims) and to whom and when cost overruns were reported, and actions taken, if any.

3. Review Eastside Reservoir Project management cost tracking and reporting practices (excluding disputed claims) and make appropriate recommendations for change.

4. Provide perspectives on the amount of the projected budget increase envisioned by Metropolitan's management and the project management team in order to complete the project (excluding disputed claims).

5. Prepare a written report to the Metropolitan Board of Directors which, at a minimum, summarizes the objectives and scope of engagement, and describes significant audit findings, and related recommendations for corrective actions.

6. Make audit results presentations to Metropolitan's Board of Directors and various Board committees at the request of Metropolitan Special Audit Committee.

The Metropolitan Auditor and General Counsel served as joint agreement administrators for the audit contract with Vargas, Lopez and Company, LLP. A draft report was prepared and presented by Vargas Lopez to the Special Audit Committee on April 20, 1999, and to the

Executive Committee of the Board on April 26, 1999. On May 11, 1999, the final audit report and the General Manager's response were received by the Board, but no action was taken on either document at that time since the matters were scheduled to be discussed at the Senate Select Committee on Southern California Water Districts' Expenditures and Governance on May 26, 1999.

On May 26, 1999, a representative from Vargas Lopez and its subconsultant, PinnacleOne, as well as Metropolitan's General Manager and Chairman of the Board appeared before the Senate Select Committee on Southern California Water Districts' Expenditures and Governance. At that time, the Chairman indicated the Board of Directors would have the necessary time to review the final audit, along with the General Manager's response and management actions, and take final action on those documents in June. In June, the Special Audit Committee and full Board considered matters related to final payment for the services of Vargas Lopez and directed the General Manager to negotiate the final amount.

A meeting of the Special Audit Committee has been scheduled on June 29, 1999, to provide the opportunity for the committee to act to accept the final audit report and the General Manager's response and to make recommendations to the Executive Committee for the full Board's consideration on July 13, 1999.

A copy of the General Manager's response, dated May 7, 1999, is attached to this letter. Copies of the final Vargas Lopez audit report were previously distributed to all Board members on May 4, 1999. Due to the limited number of copies available, additional copies are not being distributed at this time. Directors who wish to receive another copy should contact the Executive Secretary's office and a copy will be provided.

Finally, the San Diego County Water Authority requested that additional audit tasks be performed by the Vargas Lopez firm. Under current Board procedures, the Subcommittee on Rules may refer the matter to an appropriate committee for consideration.

ADD:ng

Attachment 9-10A

Attachment 9-10A

10-28

May 6, 1999

To: Board of Directors (Executive Committee--Information)
(Special Audit Committee--Information)

From: Ronald R. Gastelum
General Manager

Subject: Response to the Report of Vargas, Lopez and Company, LLP, and Staff Analysis Regarding the Firm's Audit of the Eastside Reservoir Project

1. Introduction. This letter outlines the General Manager's response to the final report of Vargas Lopez and Company, LLP for the audit of the Eastside Reservoir Project (ESRP) and staff analysis summarizing actions which have been taken or will be taken in response to the audit.

2. Conclusions. Based on the findings of the audit report, the General Manager has concluded:

2.1 The October 1994 budget significantly underestimated the scope and cost of extensive and ongoing consultant services related to Construction Management, Design services and Program Management services.

2.2 Project Management should have requested a budget increase appropriation for unanticipated and unbudgeted costs (such as the $47 million Domenigoni land settlement) at the time such items were approved by the Board.

2.3 The fact that the ESRP contingency account combined three distinct elements (appropriated contingency assigned to budget line items, an overall program contingency for unknown developments as the project progressed, and savings from favorable bids) made it more difficult to identify and react to cost trends.

2.4 The Financial and Business Services Division should have taken a more aggressive role in reviewing the project's financial performance.

2.5 Project Management had minimal budgetary control over activities performed in certain other divisions on behalf of the ESRP project (ie. land purchases, litigation activity).

2.6 Board awareness of financial outlook reporting was obscured because report methods did not compliment overlapping responsibilities of several Board committees.

2.7 Project Management should have advised the Board of actual or anticipated project expenditures over the approved budget amount prior to the expenditure of the approved contingency funds.

3. Management Action. In order to begin to address the above conclusions, immediate management changes will be taken as follows:

   3.1 An independent consultant, reporting directly to the General Manager, will be charged with the specific responsibility of providing independent peer review of the project's financial performance and providing regular reports to the Board. The same consultant that was used to assist staff in completing the new Headquarters Building on time and within budget will be retained for this oversight role.

   3.2 The Board will continue to receive monthly reports which include line item projected expenditures, forecast completion dates, a line item variance analysis and projected contingency utilization, which reports will highlight any "bad news."

   3.3 A risk analysis is being performed to determine the adequacy of the remaining contingency prior to Board action with respect to any ESRP budget increase. Based upon present information, a budget increase to $2.192 billion will be proposed, comprised of $134 million in additional costs and a contingency of $86 million.

   3.4 Management of the ESRP recreation program has been transferred from the ESRP Project Manager to the recently appointed Director of Asset Management.

4. Additional Comments. The General Manager has determined that the audit report's conclusions with respect to the following items do not warrant any specific actions or changes at this time.

   4.1 Owner Controlled Insurance Program (OCIP). The audit report concluded that use of an OCIP may have contributed to increased costs. It should be recalled that an ad hoc committee of the Board and an independent consultant (Voller, Savage, & Associates), both concluded that use of an OCIP would "afford lower overall insurance cost; provide for better project insurance in terms, conditions, and limits of coverage; and provide Metropolitan with greater control on the entire project." In fact, based on experience to date, it is anticipated that Metropolitan will achieve total savings of $26 million on the Project due to the use of an OCIP ($18.8 million already realized and $7.2 million anticipated).

   4.2 Quality Control. The audit report concluded that Metropolitan's provision of quality control and inspection through the use of internal staff and consultants independent of the construction contractors may have contributed to increased costs. However, Metropolitan has always put a higher priority on safety than on achieving speculative and marginal cost savings. Accordingly, the project management decision not to abandon responsibility for quality control and dam safety to the same contractors whose work was under review was consistent with established Metropolitan safety standards. Moreover, when the same degree of quality control and quality assurance is assumed by construction contractors, not only are the same costs incurred but additional costs are often incurred because of the necessity of independent management oversight and review.

5. Synopsis of Increased Cost Factors. As the District moves ahead to complete the project, the reasons for the increased costs should be identified. The projected cost increases summarized below explain why work scopes evolved as the project unfolded, and why all expenditures on a 10-year capital program, (particularly related to "soft costs" such as construction management and quality control), were not completely defined in the budget.

    5.1 Work Interface Conflicts. Interfaces between portions of the work became better defined as the design proceeded. The hydraulic structure construction costs were affected by design changes resulting from long-lead items such as pumps, motors, and valves, which were fabricated during the course of the project. Regulatory requirements imposed additional costs, along with modifications to the control wiring design and similar changes resulting from the details provided in the vendor drawing submittals. To accommodate final design of these lead items, change orders were also issued to the Pumping Plant and Inlet/Outlet Tower contracts.

    5.2 Expanded Scopes. Items not identified in October 1994 later became significant. The scope of the perimeter high water road was expanded. The restoration plan for the disturbed areas outside the dams were defined. Completion work on smaller contracts was also defined.

    5.3 Regulatory and Safety Requirements. Regulatory requirements affected the level of inspection and quality control. Inspection contracts grew as a result of expanded inspection requirements for the grouting program and for increased quality control to assure the safety of the work. Other accommodations were made to provide increased inspection for unanticipated multiple shift work.

    5.4 Overall Construction Schedule. The extended construction schedule (approximately six months) required a longer construction management period.

    5.5 Design Changes. Design costs increased as a result of the expanded work during the construction period and to apply adequate staff to assure rapid turnaround of contractor submittals, vendor drawings and accompanying construction drawing changes.

    5.6 Non-Construction Related Costs. Metropolitan experienced increased costs for land acquisition due to judgments, settlements and purchases to avoid severance damages. However, part of the land Metropolitan purchased can be sold in the future to return a significant portion of the expenditures. Mitigation requirements experienced a number of scope increases. Air Quality Management Districts (AQMD) compliance for dust and noise control monitoring increased. The extent of the archaeological investigations was well above what was anticipated before the work began. Likewise the extent of the paleontological finds and required monitoring exceeded expectations. Also, the requirements for groundwater mitigation increased significantly.

    5.7 Overall Cumulative Impacts. The increased complexity of the project, combined with increased controls for costs and scheduling and the longer period of service raised the total program management costs for Metropolitan and consultants.

6. Economic Impact of Budget Increase Forecast. Because of economic factors not related to the ESRP, the anticipated budget increases on ESRP should not contribute to any near-term change in water rates. Management will propose specific cost deferrals and reductions by December 31, 1999. Further actions can be taken, but since the Board will be considering a new Strategic Plan in 1999, management recommends that conclusive cost deferral and reduction proposals should be based on that plan.

7. Miscellaneous.

    7.1 Attached is a memorandum which sets forth a detailed and technical analysis by the Chief Engineer.

    7.2 The General Manager would like to acknowledge the professionalism Vargas Lopez and PinnacleOne personnel have displayed during the past several months.

    7.3 Disputed Contractor claims were purposely excluded from the auditor's scope and the audit reports conclusions are limited accordingly.

    7.4 The General Manager intends to discuss this matter with the Special Audit and Executive committees on May 11, 1999.

Ronald R. Gastelum

APPENDIX

To: General Manager

From: Chief Engineer

Subject: Staff Analysis of the Report of Vargas, Lopez and Company, LLP, on the Firm's Audit of the Eastside Reservoir Project

The following report has been prepared as a comprehensive analysis in conjunction with Finance and Business Services, Office of the Auditor, Eastside Reservoir Project and Legal staffs.

On April 19, 1999, Metropolitan's staff received copies of a final draft report from Vargas, Lopez and Company, LLP (Vargas Lopez), regarding the firm's audit of the Eastside Reservoir Project (ESRP). The audit has been conducted over the past four months pursuant to Metropolitan's agreement with Vargas Lopez for auditing services as required by the Board of Directors. Prior to receipt of the final draft audit report, staff was given an opportunity to provide comments on a preliminary draft version of the report which had been received on April 14. Those comments were provided to Vargas Lopez on April 15 during a meeting attended by Special Audit Committee Chair Grandsen. With Mr. Grandsen's concurrence, the firm was given until 5:00pm Sunday, April 18 to deliver a final draft report for consideration by Metropolitan's Board and management.

Presentations on the contents of the final draft audit report were given by representatives from Vargas Lopez and its subcontractor, PinnacleOne, to the Special Audit Committee and the Executive Committee on April 20 and 26, respectively. With the exception of two corrected pages in Section III and a revised transmittal letter pursuant to a request on April 20 from the Special Audit Committee, the document reviewed by the Executive Committee was identical to the one provided to the Special Audit Committee.

Subsequent to the Executive Committee meeting of April 26, Vargas Lopez finalized its audit report and transmitted the report to Metropolitan in a letter dated May 3, 1999. That final report has been transmitted to your Board by a separate letter dated May 4, 1999, by the Auditor and General Counsel, who served as joint agreement administrators for the audit services agreement.

OVERALL COMMENTS

With respect to the financial verification portion of the Vargas Lopez engagement, Metropolitan's Auditor has indicated that the Vargas Lopez audit report was properly prepared in accordance with Generally Accepted Auditing Standards and the terms of Metropolitan's audit services agreement with the firm. The Vargas Lopez audit determined that the Schedule of Costs Incurred to Date on the Eastside Reservoir Project (ESRP) as of November 30, 1998, totaling approximately $1.6 billion, was fairly presented in all material respects by Metropolitan in conformity with generally accepted accounting principles (Report Section I, page 5). The external auditors determined that "all costs associated with the project have been properly appropriated and approved" (Report Section IV, page 32) and that "the project never expended more money than appropriated" (Report Section II, page 13).

Other notable positive conclusions cited in the auditor's report include, but are not limited to:

- There was no indication that the ESRP staff or management intentionally withheld information from the Board of Directors or any governing body (including the State Legislature) (Report Section IV, page 31 and Section II, page 12).

- The auditors were impressed by the quality of staff and management associated with the project from the Assistant Chief Engineer on down (Report Section IV, page 31).

- The budget increase forecast was presented to the Board approximately 14 months prior to the necessity for a budget increase. (Report Section II, page 13, Item 6).

It is important to note that ESRP is a massive project with a variety of components, any one of which would be a major construction project on its own. The three dams will require the movement of 160 million cubic yards of earth and rock material (7^{th} largest dam embankment project). The 250-foot high, 9 tier, 18-valve input/output tower and 12 bay pumping plant are each significant structures. The project requires absolute levels of dam safety. By the time the reservoir is complete in early 2000, some 35 construction contracts will have been let, and the services of nearly 100 consulting firms and services contractors will have been required. Coordination of these efforts is a complex undertaking that necessitates significant project management effort and ongoing design and scope modification. The staff has been supported by a distinguished 5 member Board of Consultants representing premiere expertise in geology, seismology, hydrology and dam design,

COMMENTS ON THE CONTENTS OF EACH SECTION OF THE AUDIT REPORT AND RESPONSES TO CONCLUSIONS OR RECOMMENDATIONS CONTAINED IN THOSE SECTIONS

Section I Schedule of Costs Incurred to Date on the Eastside Reservoir Project (ESRP) as of November 30, 1998 (with Independent Auditors' Report Thereon).

The auditor concluded that:

- The Schedule of Costs Incurred to Date on the Eastside Reservoir Project (ESRP) as of November 30, 1998, totaling approximately $1.6 billion, was fairly presented in all material respects by Metropolitan in conformity with generally accepted accounting principles (Report Section I, page 5).
- "all costs associated with the project have been properly appropriated and approved" (Report Section IV, page 32) and
- "the project never expended more money than appropriated" (Report Section II, page 13).

Staff comments not needed.

Section II - Review of Chronology of Expenditures and Reporting of Projected ESRP Budget Increase to the Board of Directors.

Section II - Overall Comments

With one notable exception, the audit information on the chronology of expenditures and reporting is accurate in terms of the information available during the course of the project and how this information was communicated to Management and the Board. The auditor correctly concludes that:

- The first indication of a projected forecast cost increase occurred in the December 1997 ESRP Monthly Project Status Report consistent with the memo from Dennis Majors. (Report section II, page 12)
- The Monthly Project Status Report was provided to management throughout the course of the project. The items attributable to the forecast cost increase were disclosed to Metropolitan management throughout the course of the work in the Monthly Project Status Report. (Report Section II, page 12)
- The ESRP staff worked from December 1997 to August 1998 to research the full extent of the cost increase. (Report Section II, Page 12,Item a) Adequate contingency was available through April 1998 to absorb the projected costs identified; however, in May it became apparent that available contingency was not adequate to complete the project. An option was explored for transferring the Inland Feeder Pressure Control Structure and Eastside Pipeline costs to the Inland Feeder Project (IFP) from ESRP. (Report Section II, Page 6, Para.3) This option was rejected. The remaining costs of the project extending through 2002 were identified and carefully reviewed leading to a verbal response to a director's question at the Engineering and Operations

committee in August 1998 that the total costs were expected to increase by 5-10%. (Report Section III, Page 27, Para. 4) An oral report was made to the Board in September 1998 identifying the potential for a $220 million increase, including contingency. The audit report recognizes that this 11% amount is well within the normal 10%-20% for projects of this nature. (Report Section IV, Page 32, Item 10)

One notable exception is the auditor's treatment of contingency as not included in the budget.

All 'favorable bid' savings should be considered overruns since each program line item estimate was for the contract bid amount plus 10%. Since the ESRP staff did not include them in the original contingency, these savings represent forecast costs no longer contemplated by the program. (Section II, page 17)

The Board approved a budget of $1.972B in October 1994 including a contingency of $136M.

Contingency normally fluctuates during the course of a complex project such as ESRP as additional work scope is identified, and as uncertainties or risks are increased or removed. It is not possible to begin a 10 year plus project with full knowledge of the scope and potential issues. Contracts are not awarded to consultants until the scope is identified, and only that amount is awarded for which there is specific scope.

In March 1996, when the continually fluctuating contingency was at its highest ($284 million), the project had recently experienced favorable bids, and staff was in the process of defining additional scope not covered in the existing contracts. This was also the time when additional inspection required for the Construction Management Consultant (SCA) and quality assurance for the safety of the dams was being assessed. At this time it would have been inappropriate to return contingency funds and reduce the budget.

To pick a point in time such as the March 1996 date referenced by the auditor as a measuring point for cost growth is misleading. The approved budget and expected expenditures were $1.972 billion, and any measure of cost growth should be measured against this amount. To later state, as the auditor does, that the project costs grew by $453 million (Section III, page 28), based on this transition period when additional scope was being defined, is incorrect and misleading.

While the auditor's summary of the project history is generally correct, there is a philosophical difference on how projects are to be managed. For example, Metropolitan takes an appropriate approach to the absolute safety of dam construction and the level of inspection required to achieve this assurance. The auditor's conclusions regarding quality control represent only one viewpoint. These differences are noted in the comments below to assist the Board in assessing the auditor's conclusions.

Section II – Page 12, Para. 2

Metropolitan management could have been aware of a potential forecast overrun as early as February 19, 1998 when the December 1997 internal ESRP monthly status report first showed an indication of a potential overrun.

The December 1997 Financial Summary referenced here showed $51 million contingency (assigned), $13 million in "Management Reserve", and a potential land revenue of $27.25 million. With positive contingency and reserve, there was no reason for Metropolitan management to be aware of a potential forecast increase. The detailed report showed current changes, but not enough to establish a trend or predict a $220 million forecast cost increase.

Section II - Page 13, Item 3

> *The fifteen-item summary prepared by D. Majors is an incomplete list of forecast overrun items and does not coincide with the chronology period as stated in the Memo by D. Majors*

The summary prepared by Dennis Majors was intended to be a summary of the major changes during the design and construction phases of the project.

Section II - Page 17, Para. 1

> *The Board and Metropolitan management are not privy to forecast information indicating these distributions/reallocations of budget, since they are given summary information such as pie charts without detailed notes.*

Each month the Monthly Project Status Report containing detailed financial information and the changes to each line item was distributed to management and staff. The quarterly reports to the Board did not include the detailed forecast information.

Section II - Page 17, Para. 2

> *All 'favorable bid' savings used should be considered overruns since each program line item estimate was for the contract bid item amount plus 10%. Since the ESRP staff did not include them in the original contingency, these savings represent forecast costs no longer contemplated in the program*

All expenditures are approved by the Board as required by the Metropolitan Administrative Code. As ESRP and most other major construction projects have experienced, bids on large civil works contracts awarded to the low bidder and containing considerable underground work, normally require changes as a result of unforeseen conditions. These contracts often contain unit price items for estimated quantities of earthwork that cannot be precisely determined. There are necessary scope additions that had to be made as work progressed and underground conditions were revealed. It is not common practice on underground projects with uncertainty to reduce the reserve or contingency solely on the basis of favorable bids, and the Board has never indicated a desire to do so. The forecast cost of the program always reflects our best assessment at the time of the circumstances of the project.

Section II - Page 17, Para. 6

> *The ESRP monthly status reports are difficult to read and do not have a straightforward Executive Summary noting whether or not the project is on time and within budget.*

Staff recognizes that more descriptive explanation of the results of financial analysis would be helpful and will continue to work with the Board to improve the comprehension of the information.

Section II - Page 18, Para. 4

> *In order to have a complete forecast to complete, these open-ended consulting contract costs needed to be inclusive of all costs to the end of the program and not just to the extent of time limited assignments.*

Long-term service contracts are often awarded on the basis of annual work plans. These contracts are awarded for specific scopes, budgets and periods of time, rather than for an unscoped larger amount. During ESRP status reports at the Engineering and Operations Committee meetings, areas were identified where additional funding might be needed to cover potential costs. This approach allows Metropolitan to adjust the services periodically and maintain control of scope, instead of awarding contracts for large amounts where the scope is not fully defined. The Board incrementally approved funds for individual contracts as the scope was better defined. Professional service contracts such as Construction Management, where the split of services between Metropolitan and SCA was evolving, and the Archaeology and Paleontology contracts, where the intensity of monitoring was unknown at the time of award, are appropriate examples. In both cases, forecasts of the projected costs were maintained in the monthly reports.

Section III - Review of ESRP Management Cost Tracking and Reporting Practices.

Section III - Page 25, Item 6

> *The ESRP staff did not appear to be responsive to management given the fact that the overrun was known in January 1998. It took the ESRP project management nine months to determine the extent of the overrun and to prepare a plan of action for resolution of the problem.*

The audit report notes that the staff conducted an analysis of the full extent of the potential forecast cost increase before notifying the Board. (Report Section II, Page 12, Items a and b) During this time they reviewed the entire program for any other forecast increases which could occur before the end of the job, evaluate options to correct the causes of the increases, contemplated transfer of work to the Inland Feeder Project, and then notified the Board when these analyses were complete. Presentations to the Board were cancelled in July to allow further time to refine the information. Management and staff have a responsibility to seek accurate and complete information and alternative solutions. Any other actions would be considered unresponsive.

Section III - Page 25, Item 7

> *At the outset of the program, ESRP project management elected to transfer risk from the contractors to Metropolitan through the establishment of the Owner Controlled Insurance Program (OCIP). The latter was responsible for approximately 78% forecast overrun in "other than construction" costs.*

The election to establish an OCIP was made in order to achieve cost savings and enhance worker's safety. This decision was made based upon a study by an Ad Hoc Committee of the Board and reviewed by an independent consultant (Voller, Savage, & Associates) who concluded in a written report dated October 22, 1993 that an OCIP would "afford lower overall insurance cost; provide for better project insurance in terms, conditions, and limits of coverage; and provide Metropolitan with greater control on the entire project." Metropolitan realized an estimated $18.8 in reduced ESRP construction costs by implementing the OCIP and are expected to realize an additional $7.2 million from favorable claims experience. These savings are a direct reduction of construction costs and not a part of "other than construction costs."

Section III - Page 25, Item 8

> *Design, Construction Management, Program Management and Paleontological consulting contracts were written to be open-ended and only partially appropriated at the outset of the program*

These contracts are not open-ended. Please refer to the response on page 12 for the item in Section II – Page 18, Para. 4.

Section III - Page 25, Item 9

> *Contingency risk analysis is required to determine if calculated contingency amount will be sufficient to cover the remaining risk associated for the program*

Staff concurs that a contingency based on risk analysis would provide an improved forecast to the Board and will prepare this analysis.

Section III - Page 25, Item 10

> *Project management group did not perform contingency trend analysis from March 1996 to November 1998.*

Contingency has been regularly tracked and reported to the Board through the quarterly reports to the Engineering and Operations Committee. However, staff agrees that further analysis of contingency utilization would provide increased and more reliable information to the Board and has been preparing these analysis beginning October 1998. Information on available contingency utilization is provided in the current Monthly Reports.

Section III - Page 25, Item 11

> *Based on the trend analysis approximately $500M of contingency money, consisting of bid savings and original budget contingency, had been spent before any action was taken.*

The statement that nearly $500 million of contingency has been spent is misleading. The maximum contingency amount was $284 million in 1996, and this was only for a short period when several favorable bids were received before additional scope was identified to the project. Most of the contingency has not been "spent." It is included as a part of the project forecast. All expenditures are approved in advance by the Board

Section III - Page 25, Item 12

> *One contingency account is used to cover each overrun from different cost categories as opposed to allocating contingency per line items, which if implemented, would enhance control over budget and disbursements.*

Contingency was budgeted on a line items basis in accordance with Board policy and reported as such in the Monthly Reports. Unallocated contingency was not allocated to line items but was carried in a "Management Reserve". The intent and usage of contingency is consistent with the audit findings.

Section III - Page 27, Para. 5

> *Comments expressed by Director Miller and Gary Snyder indicate that any overrun not exceeding 30% is acceptable. If this is usually the case due to the nature of the work, this additional 30% overrun should have been included in the original estimate.*

Based on industry trends, a larger contingency on the two dam contracts would have been appropriate; however, it should be noted that the Chief Engineer never indicated that a 30% cost growth was acceptable, but rather stated that a 30% cost growth on projects of this nature are not unusual.

Section III - Page 27, Para. 6

> *The overall percentage cost overrun for each line is based upon November 30, 1998 forecast cost compared to the $1.972B budget in October 1994 and the March 1996 budget (point in time when the contingency was at its highest level of $284,687,328). The overrun range is between 17% and 28%.*

The October 1994 budget of $1.972 billion contains contingency and expenditures up to this amount are not considered a forecast cost increase. The March 1996 comparison does not contain contingency, which incorrectly overstates the forecast expenditure growth. A consistent comparison would show a projected 11% increase over the $1.972 billion budget as reported in September 1998.

Section III - Page 28, Para. 1

> *Typically, overhead, such as design and construction management, and non-construction items, such as land purchase and environmental mitigation, are estimated as a percentage of the total construction budget.*

The statement is applicable to normal construction projects. Variations in the extent of the services and the nature and complexity of the project often make such estimates based on historical data inaccurate. Better estimates are prepared based on scope of work that can be defined. We believe this is the case for ESRP.

Section III - Page 28, Para. 4

> *Any construction work above the original contact amount is considered an overrun.*

Many of our larger construction contracts contain significant unit price components, which are not considered forecast cost increases to the contract. Please see the comment on page 12 for Section II - Page 18, Para. 4.

Section III - Page 28, Para. 4

> *According to the ESRP Monthly Reports or March 1996, the project contingency reached its highest level at $285M. Therefore the forecast project cost, given the consistent $1.972B budget, was at its lowest point at $1.687B ($1.972B less $285M). Comparing the $1.687B to the forecast project cost of $2.140B shows the complete picture of the overrun of $453M ($2.140B less $1.687B).*

The analysis makes the same inconsistent comparison between a current budget with contingency and an earlier expenditure forecast without contingency. The statement that there is a $453 million overrun significantly overstates the correct cost increase.

The postulated $453 million "overrun" assumes that every favorable bid represents a true reduction in pricing, not a commercial strategy to be recouped later through anticipated changes. In fact, the scope of the project developed over time and contracts were awarded for known elements, at pricing which reflected the known scope, not the total scope of the particular category of work. Remaining funds were held in abeyance, pending further scope definition, and not declared surplus. This would have been irresponsible. As noted earlier, these funds were carried in a “Management Reserve” account.

Section III - Page 29. Para. 1

> *ESRP management could have known that the contingency account was being overrun in the summer of 1996, within the first 3 months of tracking the data.*

Over $200 million of contingency was available during the summer of 1996, giving no indication that the contingency account was being overrun.

Section IV - Perspectives on Projected ESRP Forecast Budget Increase.

Section IV – Overall Comments

In summary, we agree with the auditor that all costs expended on the project were for the betterment of the project and were correctly appropriated. The original 1991 project budget when escalated was reasonably accurate, particularly when viewed against the scope of the project envisioned. Almost all of the additional costs to the project that have occurred over the last eight years have not been from increased costs to accomplish the same amount of work. They have occurred almost entirely from scope additions for items unable to be accurately estimated eight or nine years ago. In this sense they are not cost overruns for the same scope of work, as frequently described, but scope additions for additional land purchases, unexpected archaeological and paleontological mitigation work, and increased levels of inspection. This is not at all unusual for a project with a large amount of underground work which is publicly bid to a number of construction and service contractors. Most of these increases were funded through savings from favorable bids.

Section IV - Page 31, Item 4

> *Based on our analysis and experience, we believe there is the potential for the cost overrun to exceed $220 million.*

Given the reduced level of unknowns at this stage of the project, and not considering the potential of contractor's claims, there is also the possibility that the forecast cost increase will be below $220 million.

Section IV - Page 32, Item 12

> *In the financial 'big picture', the scope of work never changed, only the execution of the details.*

The scope of the project has changed significantly over the last eight years. The concept that the "big picture" i.e., the fact that we are building three dams, an inlet/outlet and pump house, did not change over eight years, obscures the many details that evolved and changed during the course of the project. These changes required staff to react, make timely decisions, and modify the scope to meet the evolving needs. Many of the mitigation and planning decisions made during the early years of the project resulted in significant cost and schedule reductions from what could have occurred had the project experienced major interruptions or disruptions common to other major public works projects.

Section V - Other Comments and Recommendations.

Staff's responses to the auditors' Management Comment Recommendations are presented in the same order as presented in Section V of the audit report, as follows:

Recommendation No. 1 (Page 34):

Metropolitan should implement additional reporting items such as 1) contingency usage trend analysis with a projection based on the trend, which would be accompanied with management's explanation of why the trend is valid or not; and 2) contract disbursement trend compared to forecasted disbursements with analysis of trend. These additional reporting items could be integrated into the monthly reporting package to enable the Board of Directors to see trends of the project and inquire as to their impact.

Response:

Staff concurs with the intent but not the methodology of Recommendation 1. Required contingency should be based on an assessment of remaining risk. A better trend analysis than the assignment of contingency in the forecast would be an analysis of the changes in the expenditure forecast.

Staff concurs with Recommendation 2. The expenditures forecast to date versus the estimate of remaining work, which we now prepare, seems to accomplish this objective. Earned value forecast reporting already reveals trends in quantities or work performance that could affect the work forecast, and it is a part of the forecasting process.

Recommendation No. 2 (Page 35):

Metropolitan should consider 1) designating one of the Board of Director committees to oversee Metropolitan's major capital improvement projects; and 2) requesting that project managers prepare a verbal presentation to the full Board of Directors on a regular basis or when major forecast or contingency changes occur.

Response:

This is a Board decision.

Recommendation No. 3 (Page 35):

The ESRP staff should prepare updated written standardized procedures that document how the monthly ESRP financial reports are prepared. This will facilitate the review and analysis of ESRP performance.

Response:

Staff concurs with this recommendation. The Project Management Manual for ESRP contains written procedures, which establish the reporting mechanisms to Metropolitan staff and the Board. The manual will be updated to reflect recent changes in financial reporting procedures.

Recommendation No. 4 (Page 35):

Staff of the Finance and Business Services Division should regularly review financial reports prepared by ESRP to ensure that ESRP is in conformance with Metropolitan's financial policies and within budget; and ESRP reports accurately reflect the financial status of the project. The Audit Department should also perform such reviews periodically.

Response:

Staff concurs with the recommendation. Staff of the Finance and Business Services Division has already begun the process of reviewing conformance with Metropolitan's financial reports prepared by the ESRP staff to ensure they are accurate, in conformance with Metropolitan's financial policies and within budget.

The Auditor also concurs with this recommendation and has indicated that the Audit Department's ongoing, multi-year ESRP audit program will be appropriately modified to include periodic reviews of the ESRP financial reports for accuracy.

Recommendation No. 5 (Page 36):

The Project Management Information System should be reconciled to the general ledger system on a monthly basis.

Response:

Staff concurs with the recommendation. In conjunction with staff's response to Recommendation No. 4, staff of the Finance and Business Services Division will reconcile ESRP data in the Project Management Information System to the general ledger on a monthly basis.

Recommendation No. 6 (Page 36):

Metropolitan should develop an additional early warning financial risk assessment mechanism (contingency trend analysis) to identify trends that may lead to budget overruns.

Response:

Staff concurs with the recommendation. A risk assessment analysis has been instituted for each line item in the financial statement. These assessments are reflected in the contingency analysis for the entire project. As stated in the response to Recommendation No. 1, the trend analysis will be based on changes to the expenditure forecasts resulting from scope additions and contingency will be adjusted to reflect remaining risk on the project.

Recommendation No. 7 (Page 37):

Metropolitan should develop a system for accounting and reporting other contingency usage by cost category and summary report should be provided to the Board of Directors periodically.

Response:

Staff concurs with the recommendation. The line item explanation for contingency is contained in the Monthly Project Status Report to the Board. Contingency will be assessed for overall adequacy reflecting remaining project risk.

Recommendation No. 8 (Page 37):

Real Estate Services Branch should develop a system that establishes control over disbursements made for the parcels of land purchased for the project.

Response:

Staff concurs with the recommendation. Each parcel is appraised prior to acquisition. A comprehensive report by parcel and owner will be prepared.

Recommendation No. 9 (Page 37):

All relevant expenditures should be added to the total cost of a specific parcel of land purchased, and all related source documents should be kept in the real estate files.

Response:

Staff concurs with the recommendation. The total cost of parcel acquisition can be prepared in a comprehensive report.