- **Board of Directors**
  Engineering and Operations Committee

January 8, 2002 Board Meeting

8-3

Subject

Authorize $8.22 million for four Capital Investment Plan program appropriations to implement improvements to maintain and enhance the reliability of the Colorado River Aqueduct (Approp. 15373, 15374, 15384 and 15385)

Description

The Colorado River Aqueduct (CRA) is a 242-mile conveyance system designed to transport water from Lake Havasu on the Colorado River to Lake Mathews. The CRA consists of 5 pumping plants, 63 miles of concrete-lined canal, 55 miles of cut and cover conduit, and 124 miles of tunnels, inverted siphons, reservoirs and pumping plant piping. The CRA was originally designed to operate at a maximum capacity of 1,605 cubic feet per second (cfs) with a later increase to 1,800 cfs with all 9 pumps operating. Modifications implemented in the 1980s enabled the system to be operated at the same maximum capacity of 1,800 cfs with only 8 pumps operating.

The CRA conveyance structures have been in operation for more than 60 years. In the mid-1980s, major rehabilitation work was performed on the pump units at each of the five pumping plants. The balance of the system is now in need of major refurbishment as the result of wear and tear and due to operation of the system for prolonged periods in excess of its original design capacity. In addition, some equipment needs to be replaced to improve operational efficiency. Staff recommends that the rehabilitation, repair or replacement of equipment and facilities as described below be undertaken to ensure continued reliable performance of the CRA. Consistent with Metropolitan's approach of managing projects in the most cost-effective manner and providing opportunities for staff, Metropolitan forces will perform those tasks that are critical to overall program success including project management, preparation of drawings and specifications, field coordination, and data collection and evaluation. Consultant agreements will be used for preparation of the CEQA documentation and aerial mapping.

Recommended Improvements

The four recommended programs were identified through Metropolitan's Infrastructure Reliability and Protection Plan (IRPP) which was initiated in fiscal year 2000/01. In August 2001 the Board authorized the initial investigation of specific CRA projects within the programs. At this time, some of those projects are ready to proceed into final design and construction. Additional CRA projects are to begin the initial investigation as described below.

CRA Conveyance Reliability Program (Approp. 15373)

This program was established to address reliability concerns with the CRA canals, tunnels, siphons, reservoirs and their associated structures. Initial studies were previously authorized for the four projects listed below. Authorization for final design and pre-construction activities is recommended for the four projects.

- Canal Lining Repairs and Associated Work, Phase 1
- Reservoir Lining Repairs and Spillway Modifications, Phase 1
- Trash Rack Replacement at Eagle Mountain, Iron Mountain and Hinds
- Head-Gate Structure Leak and Gate Repairs at all Pumping Plants

Authorization is recommended for program planning, study, and preliminary design for the following additional conveyance projects:

- Canal Lining Repairs and Associated Work, Phase 2
- Reservoir Lining Repairs and Spillway Modifications, Phase 2
- Sand Trap Modification at Eagle Mountain
- Sand Trap Repairs and Rehabilitation at Iron Mountain, Eagle Mountain and Hinds
- Seismic Study of Eagle Mountain Pumping Plant Siphons

CRA Pumping Plant Reliability Program (Approp. 15374)

This program was established to address reliability concerns with the pumps and the supporting auxiliary systems. Initial studies were previously authorized for the CRA Pumping Plant Reliability Program. Staff now recommends proceeding with final design and construction of the following components of the Program:

- Auxiliary Water System Repairs
- Intake Pumping Plant Instrumentation Replacement

CRA Electrical/Power System Reliability Program (Approp. 15384)

This program was established to address reliability concerns with 230 kV transmission system, power and telephone transmission system, and lightning arrester systems. Authorization is recommended for program planning, study, and preliminary design for the following projects:

- Upgrade 230 kV Transformer Protection Relays at all Pumping Plants
- 230 kV Circuit Breaker Installation at Iron Mountain Pumping Plant
- Power and Phone Transmission Line Replacement at Copper Basin and Gene Pumping Plant
- Repair/Replace 6.9 kV Transformer Bushings at Gene Pumping Plant
- Repair/Replace 230 kV Circuit Breakers at all Pumping Plants
- Lightning Arrester Repair or Replacement at all Pumping Plants

CRA Discharge Containment Program (Approp. 15385)

This program was established to address concerns with waste discharges at the CRA pumping plants which have the potential to expose Metropolitan to regulatory actions or fines in the event of a discharge. Authorization is recommended for program planning, study, and preliminary design for the following projects:

- Desert Septic System
- Pump House Oil Containment
- Chemical Delivery Unloading Pad Containment

The four capital programs identified above have been evaluated and recommended by the Capital Investment Plan (CIP) Evaluation Team and are included in the Capital Budget for FY 2001/02. The environmental documentation for those projects that are entering the study phase will be developed prior to returning to the Board for final design or construction authorization. See **Attachment 1** for the Detailed Report, **Attachment 2** for the Financial Statement, and **Attachment 3** for the location map.

Policy

Metropolitan Water District Administrative Code § 5108: Capital Project Appropriation

California Environmental Quality Act (CEQA)

The proposed projects previously identified in the four Capital Investment Plan programs have been examined as stipulated by CEQA and the State CEQA Guidelines. Some of the proposed projects were evaluated in a Mitigated Negative Declaration, while others were deemed exempt from CEQA. The proposed projects have been grouped together by their similar CEQA determinations and discussed below.

CRA Conveyance Reliability Program (Approp. 15373): Canal Lining Repairs and Associated Work, Phase 1; Reservoir Lining Repairs and Spillway Modifications, Phase 1; Trash Rack Replacement at Eagle Mountain, Iron Mountain and Hinds; and Head-Gate Structure Leak and Gate Repairs at all Pumping Plants

To comply with CEQA, Metropolitan as the Lead Agency prepared a Mitigated Negative Declaration (MND) on these four proposed projects within one Capital Investment Plan program. The MND was distributed for a 30-day public review period starting on October 26, 2001. Copies of the MND, including the Initial Study and Environmental Checklist form, are available in the Executive Office. **Attachment 4** provides documentation that the MND was circulated for the mandatory 30-day public review period and that no comment letters were received. As stated in the State CEQA Guidelines (Section 15074), the Board of Directors is required to review and consider the MND, the Initial Study, and any written comments received during the public review period prior to the adoption of the MND. Adoption of the MND is dependent on the finding by the Board, based on the whole record before it, there is no substantial evidence that, with the mitigation measures required by the MND, the proposed projects will have a significant impact on the environment. In addition, the MND reflects the Lead Agency's independent judgment and analysis. The Mitigation Monitoring and Reporting Program (MMRP), **Attachment 5,** required under CEQA Section 21081.6 must also be adopted by the Board prior to project approval.

The CEQA determination is: Review and consider the information in the MND, Initial Study, and comments received during the public review period; adopt the MND for the four proposed projects; and adopt the MMRP.

CRA Pumping Plant Reliability Program (Approp. 15374): Auxiliary Water System Repairs; and Intake Pumping Plant Instrumentation Replacement

The two proposed projects are categorically exempt under the provisions of CEQA. The proposed activities involve the funding of two projects within one Capital Investment Plan program to replace existing support systems at the CRA facilities with no expansion of use and no possibility of significantly impacting the physical environment. As such, the two proposed projects qualify under a Class 1 Categorical Exemption (Section 15301 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the two proposed projects qualify under a Categorical Exemption (Class 1, Section 15301 of the State CEQA Guidelines).

CRA Conveyance Reliability Program (Approp. 15373): Canal Lining Repairs and Associated Work, Phase 2; Reservoir Lining Repairs and Spillway Modifications, Phase 2; Sand Trap Modification at Eagle Mountain; Sand Trap Repairs and Rehabilitation at Iron Mountain, Eagle Mountain and Hinds; and Seismic Study of Eagle Mountain Pumping Plant Siphons

CRA Electrical/Power System Reliability Program (Approp. 15384): Upgrade 230 kV Transformer Protection Relays at all Pumping Plants; 230 kV Circuit Breaker Installation at Iron Mountain Pumping Plant; Power and Phone Transmission Line Replacement at Copper Basin, Gene Pumping Plant; Repair/Replace 6.9 kV Transformer Bushings at Gene Pumping Plant; Repair/Replace 230 kV Circuit Breakers at all Pumping Plants; and Lightning Arrester Repair or Replacement at all Pumping Plants

CRA Discharge Containment Program (Approp. 15285): Desert Septic System; Pump House Oil Containment; and Chemical Delivery Unloading Pad Containment

The 14 proposed projects are categorically exempt under the provisions of CEQA. The proposed activities, i.e., to appropriate funding for the program planning, study, preliminary design, and preparation of environmental documentation for the 14 proposed projects in the three Capital Investment Plan programs, will consist of basic data collection, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded. As such, the proposed projects qualify under a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed projects qualify under a Categorical Exemption (Class 6, Section 15306 of the State CEQA Guidelines).

Board Options/Fiscal Impacts

Option #1

Adopt the CEQA determinations for all projects described herein and appropriate $8.22 million in budgeted funds.

Fiscal Impact: $8.22 million of budgeted CIP funds under the following appropriations:

- Appropriation 15373 (CRA Conveyance): $3,250,000 budgeted
- Appropriation 15374 (CRA Pumping Plants): $4,289,000 budgeted
- Appropriation 15384 (CRA Electrical/Power): $410,000 budgeted
- Appropriation 15385 (CRA Discharge Containment): $271,000 budgeted

Option #2

Do not perform studies, design, procurement or installation of equipment, or construction of required improvements at the CRA facility locations described within this board action.

Fiscal Impact: $0 for the current FY 2001/02 budget. This option increases the risk to maintaining reliable operation of the CRA.

Staff Recommendation

Option #1

Roy L. Wolfe — 12/13/2001

Roy L. Wolfe — *Date*

Manager, Corporate Resources

Ronald R. Gastelum — 12/17/2001

Ronald R. Gastelum — *Date*

Chief Executive Officer

Attachment 1 – Detailed Report

Attachment 2 – Financial Statement

Attachment 3 – Project Location

Attachment 4 – State Clearinghouse Letter

Attachment 5 – Mitigation Monitoring and Reporting Program

BLA #1286

Detailed Report

Purpose/Background

The CRA conveyance structures have been in operation for more than 60 years. In the mid-1980s, staff performed major rehabilitation work on the pump units at each of the five pumping plants. The balance of the system is now in need of major refurbishment. In 2000, Metropolitan staff initiated the Infrastructure Reliability and Protection Plan (IRPP). The purpose of the IRPP is to evaluate Metropolitan's infrastructure – pumping plants, water treatment plants, conveyance systems, and all associated components – to ensure that Metropolitan can continue to supply reliable, high-quality drinking water to its entire service area.

Staff formed a team to implement the IRPP for the CRA conveyance system. The system includes the CRA canals, tunnels, siphons, reservoirs, pumps, pump support systems, power and electrical protection systems, and containment and waste discharge systems. During the September – October 2000 IRPP investigation phase, the team obtained input from all staff levels to identify system or component vulnerabilities and risks. The team also performed physical inspections and reviewed maintenance records. Initial projects were developed and proposed to repair, replace, or rehabilitate systems, structures, or equipment to reduce risks to Metropolitan and increase system reliability. In addition a long-term systematic evaluation of the CRA was initiated to assess system reliability. The initial projects and studies were evaluated and recommended by the CIP Evaluation Team and are included in the Capital Budget for FY 2001/02. The projects are organized into four programs as described in the FY 2001/02 CIP. Metropolitan staff will conduct the work authorized by this board action, with the exception of aerial mapping and preparation of the CEQA documentation which will be performed by consultants.

Recommended Improvements

CRA Conveyance Reliability Program (Approp. 15373)

In August 2001, the Board approved the initial funding of Approp. 15373 and authorized program planning, studies, preliminary design and preparation of environmental documentation for implementation of four projects in this program. These projects included:

- Canal Lining Repairs and Associated Work, Phase 1
- Reservoir Lining Repairs and Spillway Modifications, Phase 1
- Trash Rack Replacement at Eagle Mountain, Iron Mountain and Hinds pumping plants
- Head-Gate Structure Leaks and Gate Repairs at all pumping plants.

At this time, staff recommends authorization to proceed with final design and pre-construction activities in advance of construction for the four projects listed above.

Staff also recommends authorization to proceed with program planning, studies, and preliminary design for the following CRA Conveyance Reliability Program projects:

- Canal Lining Repairs and Associated Work, Phase 2.

This project is comprised of the following components: (1) increasing the freeboard of the CRA canal; (2) repairing the low section of the canal at Mile 33.4; (3) restoring the canal weirs; (4) stabilizing the bedrock at Mile 77; and (5) restoring the canal radial gates and operation of the spillways. These repairs are required because operation of the CRA up to 1,800 cfs (as compared to the original design of 1,605 cfs) has reduced the canal freeboard to less than 6 inches. This enhanced operating condition has negated the operation of weirs and affected the operation of radial gates and spillways. The bedrock stabilization at Mile 77 is required to prevent boulders, rocks, and debris from sliding into the canal.

- Reservoir Lining Repairs and Spillway Modifications, Phase 2

The spillways at the reservoirs at Iron and Eagle Mountain were originally designed for an aqueduct system capacity of 1,605 cfs. With the present flow capability of up to 1,800 cfs, the spillway capacities need to be evaluated to insure the reliability of the CRA.

- Sand Trap Modification at Eagle Mountain

The CRA's sand traps were originally designed for a flow of 1,605 cfs. With the current flow capability of up to 1,800 cfs, the flow pattern into the sand traps has changed. Hydraulic studies need to be performed to determine ways to improve the sand trap efficiency based on the current flow conditions.

- Sand Trap Repairs and Rehabilitation at Iron Mountain, Eagle Mountain and Hinds

The CRA sand traps have deteriorated over their 60 plus years of operation and are in need of refurbishment. The original sand trap cleaning equipment is still in operation and no major rehabilitation has been performed on this important cleaning equipment. Both refurbishment of the sand trap and rehabilitation/replacement of the sand trap cleaning equipment are needed to insure the reliability of the CRA.

- Seismic Study of Eagle Mountain Pumping Plant Siphons

The siphon is partially exposed and therefore is not structurally stable. A study is needed to determine the seismic safety, structural stability, and reliability of the siphon and implement any needed repairs to insure the reliability of the CRA.

Attachment 2 shows the breakdown of the total estimated costs for these projects.

CRA Pumping Plant Reliability Program (Approp. 15374)

The CRA conveyance system includes five pumping plants--Intake, Gene, Iron Mountain, Eagle Mountain, and Hinds. Each plant includes nine pumping units. CRA pumping capacity was installed in several phases with the last units installed in 1959. CRA capacity at that time was 1,605 cfs. Metropolitan initiated a program in 1962 to increase pump capacity. Pump modifications, combined with the addition of canal curbing, and reduction of biological fouling of concrete surfaces, resulted in an increase in CRA capacity. Today, CRA pumping capacity is approximately 1,800 cfs. In 1984-1985, Metropolitan staff implemented the Colorado River Aqueduct Pumping Plant Rehabilitation project. This project was based upon findings from equipment inspections that indicated the pumping units were approaching the end of their expected useful life. The balance of the pump plant equipment and systems are now in need of major refurbishment.

During the September – October 2000 IRPP investigation phase, staff documented numerous items related to the pumping units and auxiliary systems that are currently in need of repair, refurbishment, or replacement. In August 2001, the Board approved funding and authorized program planning, studies, preliminary design and preparation of environmental documentation for these projects. This work included an investigation of long-term needs and identification of future projects at the pumping plants. Based on the initial results of these studies and the critical need for some repairs and upgrades, staff recommends proceeding with final design and construction on portions of two CRA Pumping Plant Reliability Program projects: Auxiliary Water System Repairs and Intake Pumping Plant Instrumentation Replacement.

- Auxiliary Water System Repairs

The circulating water system (an auxiliary water system) at each pumping plant is comprised of pumps, storage tanks, piping, valves and appurtenances. Reliable operation of this system is crucial to maintaining continuous pump operation. Certain deficiencies were identified for immediate corrective actions which include repair of deteriorated concrete water storage tanks; replacement of leaking cooling water supply pipes to the pumps and motors; and replacement of deteriorated emergency supply valves.

- Intake Pumping Plant Instrumentation Replacement

With the installation of modernized equipment, this project will allow more effective use of the recently installed desert portion of the SCADA system for a number of operations activities. Currently, the existing SCADA

system has capabilities to remotely monitor and control the CRA power transmission system, monitor a portion of the pumping plant functions, and control the pumping plant headgates. The recommended new equipment will allow the plant staff to utilize the SCADA system's additional capability to support remote monitoring and control of the pump units. However, even with these improvements, the remote pump operation will be limited to normal startup and shutdown sequences at this time. Metropolitan maintains a "load-shed" contract with Southern California Edison (SCE). The contract requires Metropolitan to shut down the main pumping units at the Intake Pumping Plant within 10 minutes of a notice to shed load. This project will enable remote shutdown of the pumping units to meet this commitment with SCE. Additional automation, beyond normal startup and shutdown of the pumps, will be implemented in the future as part of the Control System and Automation Master Plan.

This project is the first phase of what is expected to be a multi-phased program to modernize the support systems at all five of Metropolitan's CRA pumping plants. Although the same equipment at the other desert pumping plants is similarly in need of replacement, it is recommended to stage the replacement for several reasons. First, the remote monitoring and control capability is urgently needed at the Intake plant because of the SCE load-shed contract. Secondly, studies are currently underway to more explicitly define the level of automation/SCADA control at all Metropolitan facilities, including the pumping plants. With the new equipment, the Intake plant can be used as a prototype to develop a control strategy that will maximize the benefit of remote operation.

Attachment 2 contains the breakdown of the total estimated costs for these projects.

CRA Electrical/Power System Reliability Program (Approp. 15384)

During the field investigations, staff have documented numerous items related to the electrical power systems that were in need of repair, refurbishment, or replacement. Staff recommends the authorization and approval of funding for program planning, study, and preliminary design for the six projects described below and continuation of the long-term study. Staff will return to the Board for authorization and funding at a later date for final design and construction of these projects. The recommended projects include the following:

- Upgrade 230 kV Transformer Protection Relays at all Pumping Plants

The protection relays for the 230kV transformers were provided at the time of the original installation of the transformers. The existing protection relays require frequent maintenance and it is becoming increasingly difficult to find replacement parts. In addition, testing of the existing relays is time consuming and requires the capacity of a pumping plant to be decreased to 4-pump capacity to perform the testing. It is recommended that the protection relays be replaced with new state-of-the-art equipment that provides for rapid replacement, enhanced transformer monitoring capability, and self-checking features.

- 230 kV Circuit Breaker Installation at Iron Mountain Pumping Plant

Currently the main electrical power feed for the Iron Mountain Plant has only a single disconnect switch in the Camino West Line. This switch is used to isolate the plant from the 230 kV power feed from Hoover Dam. Presently, the disconnect switch is unable to automatically isolate the plant when faults occur on the Camino West Line. Accordingly, there is a delay in returning the pumping plant to service when these faults occur. This leads to spilling of up to 300 AF of water during transients and other switching operations. It is recommended that a 230 kV gas circuit breaker be added at the Iron Mountain to allow automatic switching.

- Power and Phone Transmission Line Replacement at Copper Basin, Gene Pumping Plant

Currently power and phone lines are routed on wooden poles from the Copper Basin Outlet Structure to the Copper Basin Dam. The wooden pole structures are deteriorated to the point that failure could occur. If this power source fails the indication and control functions would be lost requiring local manual control of the facilities. It is recommended that the poles be replaced. During the project planning, alternate locations of the poles will be studied to facilitate future access for maintenance.

- Repair/Replace 6.9 kV Transformer Bushings at Gene Pumping Plant

The 6.9 kV bushings on the 230/69/6.9 kV transformers at the Gene Pumping Plant have aged and are leaking. In this condition, moisture can leak past the bushings and enter the transformer thereby resulting in degradation of the transformer oil and potentially damaging the high cost transformers. The study will examine the potential for repairing the bushings versus the complete replacement of the bushings.

- Repair/Replace 230 kV Circuit Breakers at all Pumping Plants

Each plant has two 50 percent capacity circuit breakers. The components of the existing circuit breakers are aged and prone to failure leading to trips of the breakers and the loss of up to one half of the pumping plant's capacity. Obtaining replacement parts for the aging equipment is difficult. This project will either replace the existing circuit breakers with modern gas circuit breakers or will upgrade the existing breakers.

- Lightning Arrester Repair or Replacement at all Pumping Plants

Electrical tests indicate degradation of 230 kV, 69 kV and 6.9 kV lightning arresters. Spare parts for the aging equipment are no longer available and thus the arresters must be replaced. As part of the investigation, the location of the new arresters will be studied to determine if a new location will provide better equipment protection.

Attachment 2 shows the breakdown of the total estimated costs for these projects.

CRA Discharge Containment Program (Approp. 15385)

Each of the CRA's five pumping plants have several types of discharge locations, each of which have the potential to discharge waste products. The discharge locations have been identified as having the potential to expose Metropolitan to regulatory actions or fines in the event that a waste discharge occurs. At the time of construction of those discharge locations, the discharge was not regulated.

During field investigations, staff documented numerous items related to waste and chemical containment that were in need of repair or modification. Staff recommends the authorization and funding of the program planning, study, and preliminary design for the three projects described below. Staff will return to the Board for authorization and funding at a later date for final design and construction of these projects. The recommended projects include the following:

- Desert Septic System

The showers and the sinks in the pump houses are currently discharged to the sumps in the pump houses. To meet water quality criteria, this project will identify means to redirect the showers and sinks to the existing septic tank system at each of the pumping plant sites.

- Pump House Oil Containment

The lubricating oil reservoir is located within the lower levels of the Pump Plants. In the event of a major leak in the reservoir, oil could enter the discharge valve sumps, together with wash water that may leak in around the suction valve in the main pump house. The discharge is now directed to the desert recharge basin which, under current regulations, could result in regulatory action against Metropolitan. This project will identify means to contain potential oil spills and meet current regulatory requirements.

- Chemical Delivery Unloading Pad Containment

Sodium hypochlorite disinfectant is required at each Pump Plant to ensure periodic disinfection of the conveyance water. The hypochlorite double-walled tank storage is refilled periodically from a tanker, using a hose filling system, but without containment under the chemical delivery area. Containment is recommended where chemicals could spill to the environment. This project will evaluate the containment provisions at each pump plant.

Attachment 2 shows the breakdown of the total estimated costs for these projects.

Financial Statement for CRA Conveyance Reliability Program

The financial statement for Board Action No. 2 authorizing final design activities in advance of construction, and program planning, feasibility studies, and preliminary design for the CRA Conveyance Reliability Program projects described in this board action (Approp. 15373) is as follows:

	BOARD ACTION NO. 1 (Aug. 2001)	BOARD ACTION NO. 2 (Jan. 2002)
Labor		
Owner Costs (Program Management and support)	$ 275,000	$ 1,145,000
Studies and Preliminary Design	505,000	1,225,000
Final Design		240,000
Professional and Technical Consultants		900,000
Incidental Expenses	5,000	25,000
Remaining Budget	135,000	635,000
Total	**$ 920,000**	**$ 4,170,000**

FUNDING REQUEST

Program Name:	Colorado River Aqueduct Conveyance Reliability Program		
Source of Funds:	Construction Funds (possibly General Obligation, Revenue Bonds, Pay-As-You-Go)		
Appropriation No.:	15373	**Board Action No.:**	2
Requested Amount:	$ 3,250,000	**Capital Program No.:**	01204-I
Total Appropriated Amount:	$ 4,170,000	**Capital Program Page No.:**	E-12
Total Program Estimate:	$ 14,500,000	**Program Goal:**	I-Infrastructure Reliability

Financial Statement for CRA Pumping Plant Reliability Program

The financial statement for Board Action No. 2 authorizing final design and construction for two CRA Pumping Plant Reliability Program projects as described in this board action (Approp. 15374) is as follows:

	BOARD ACTION NO. 1 (Aug. 2001)	BOARD ACTION NO. 2 (Jan. 2002)
Labor		
Owner Costs (Program Management and support)	$ 59,000	$ 391,200
Studies and Preliminary Design	500,000	500,000
Final Design		465,200
District Forces Construction		1,640,000
Materials and Supplies		1,260,000
Incidental Expenses	5,000	15,800
Equipment		15,200
Remaining Budget	84,000	649,600
Total	**$ 648,000**	**$ 4,937,000**

FUNDING REQUEST

Program Name:	Colorado River Aqueduct Pumping Plant Reliability Program		
Source of Funds:	Construction Funds (possibly General Obligation, Revenue Bonds, Pay-As-You-Go)		
Appropriation No.:	15374	**Board Action No.:**	2
Requested Amount:	$ 4,289,000	**Capital Program No.:**	01210-I
Total Appropriated Amount:	$ 4,937,000	**Capital Program Page No.:**	E-14
Total Program Estimate:	$ 11,900,000	**Program Goal:**	I-Infrastructure Reliability

Financial Statement for CRA Electrical/Power System Reliability Program

The financial statement for Board Action No. 1 authorizing program planning, studies, and preliminary design for six CRA Electrical/Power Systems Reliability Program projects described in this board action (Approp. 15384) is as follows:

	BOARD ACTION NO. 1 (Jan. 2002)
Labor	
Owner Costs (Program Management and support)	$ 150,000
Studies and Preliminary Design	185,000
Incidental Expenses	25,000
Remaining Budget	50,000
Total	**$ 410,000**

FUNDING REQUEST

Program Name:	Colorado River Aqueduct Electrical/Power Systems Reliability Program		
Source of Funds:	Construction Funds (possibly General Obligation, Revenue Bonds, Pay-As-You-Go)		
Appropriation No.:	15384	**Board Action No.:**	1
Requested Amount:	$ 410,000	**Capital Program No.:**	01207-I
Total Appropriated Amount:	$ 410,000	**Capital Program Page No.:**	E-19
Total Program Estimate:	$ 7,800,000	**Program Goal:**	I-Infrastructure Reliability

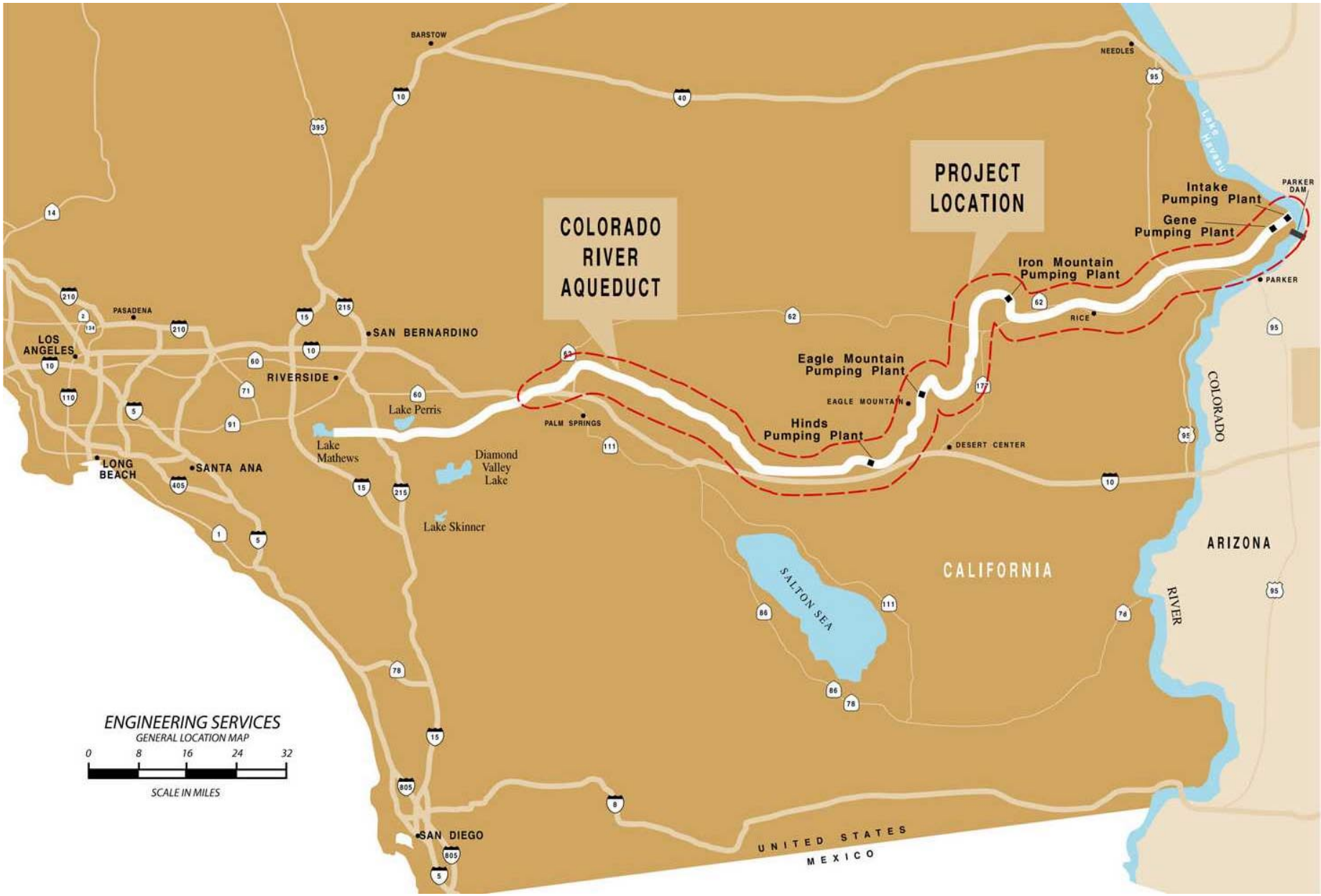
Financial Statement for CRA Discharge Containment Program

The financial statement for Board Action No. 1 authorizing program planning, studies, and preliminary design for three CRA Discharge Containment Program projects described in this board action (Approp. 15385) is as follows:

	BOARD ACTION NO. 1 (Jan. 2002)
Labor	
Owner Costs (Program Management and support)	$ 100,000
Studies and Preliminary Design	116,000
Incidental Expenses	30,000
Remaining Budget	25,000
Total	**$271,000**

FUNDING REQUEST

Program Name:	Colorado River Aqueduct Discharge Containment Program		
Source of Funds:	Construction Funds (possibly General Obligation, Revenue Bonds, Pay-As-You-Go)		
Appropriation No.:	15385	**Board Action No.:**	1
Requested Amount:	$ 271,000	**Capital Program No.:**	01209-R
Total Appropriated Amount:	$ 271,000	**Capital Program Page No.:**	E-20
Total Program Estimate:	$ 4,690,600	**Program Goal:**	R-Regulatory – Other


COLORADO RIVER AQUEDUCT
PROJECT LOCATION
Intake Pumping Plant
Gene Pumping Plant
Iron Mountain Pumping Plant
Eagle Mountain Pumping Plant
Hinds Pumping Plant
BARSTOW
NEEDLES
PARKER DAM
PARKER
RICE
EAGLE MOUNTAIN
DESERT CENTER
PALM SPRINGS
PASADENA
LOS ANGELES
SAN BERNARDINO
RIVERSIDE
LONG BEACH
SANTA ANA
SAN DIEGO
Lake Perris
Lake Mathews
Diamond Valley Lake
Lake Skinner
Lake Havasu
COLORADO RIVER
SALTON SEA
CALIFORNIA
ARIZONA
UNITED STATES
MEXICO
ENGINEERING SERVICES
GENERAL LOCATION MAP
0 8 16 24 32
SCALE IN MILES

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

Gray Davis
GOVERNOR

Steve Nissen
DIRECTOR

November 29, 2001

Michael Melanson
Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, CA 90012

Subject: Colorado River Aqueduct Conveyance Reliability Program, 2002 Shutdown Repairs
SCH#: 2001101146

Dear Michael Melanson:

The State Clearinghouse submitted the above named Negative Declaration to selected state agencies for review. The review period closed on November 26, 2001, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Senior Planner, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
916-445-0613 FAX 916-323-3018 WWW.OPR.CA.GOV/CLEARINGHOUSE.HTML

Colorado River Aqueduct
Conveyance Reliability Program
2002 Shutdown Repairs

MITIGATION MONITORING AND REPORTING PROGRAM

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

November 2001

Metropolitan Report No. 1177 – Volume II

1.0 INTRODUCTION

The California Environmental Quality Act (CEQA) requires all state and local agencies to adopt mitigation monitoring and reporting programs when adopting a mitigated negative declaration (Public Resources Code Section 21081.6). This Mitigation Monitoring and Reporting Program (MMRP) satisfies the requirements of CEQA and the State CEQA Guidelines as they relate to the Mitigated Negative Declaration for the Colorado River Aqueduct Conveyance Reliability Program, 2002 Shutdown Repairs (Program)[1] prepared by The Metropolitan Water District of Southern California (Metropolitan). The MMRP[2] will be used by Metropolitan staff responsible for ensuring compliance with mitigation measures associated with the Program.

The Mitigated Negative Declaration for the Program identified mitigation measures designed to reduce or avoid potentially significant air quality effects by the Program to a less-than-significant level. Section 2 of this document also identifies the specific mitigation monitoring and reporting requirements including the party responsible for implementing the mitigation measure, the implementation phase, the monitoring activity, the monitoring period, the frequency of monitoring, the party responsible for monitoring the mitigation measure and any required outside agency coordination.

2.0 MITIGATION MEASURES AND MONITORING REQUIREMENTS

The following section describes the five mitigation measures for air quality identified in the Mitigated Negative Declaration. Implementation of these mitigation measures would reduce air quality impacts to a less-than-significant level. Monitoring is to be completed concurrent with implementation of relevant phases of project planning and construction. The following table summarizes the required mitigation measures. The page thereafter details the monitoring activity required to ensure implementation of the mitigation measures.

[1] The Metropolitan Water District of Southern California. 2001. *Colorado River Aqueduct Conveyance Reliability Program 2002 Shutdown Repairs/Mitigated Negative Declaration.* SCH #2001101146. Metropolitan Report No. 1177 – Volume I. November 2001.

[2] The Metropolitan Water District of Southern California. 2001. *Colorado River Aqueduct Conveyance Reliability Program 2002 Shutdown Repairs/Mitigation Monitoring and Reporting Program.* Metropolitan Report No. 1177 – Volume II. December 2001.

TABLE 1 MITIGATION MEASURE SUMMARY COLORADO RIVER AQUEDUCT PROJECT	
Category	**Mitigation Measure**
AIR QUALITY	AQ Measure 1: Construction equipment will be shut off to reduce idling when not in direct use.
	AQ Measure 2: Construction equipment shall be maintained and properly tuned and operated in a manner so as to reduce peak emission levels.
	AQ Measure 3: Construction methods will include dust reduction activities including the use of water trucks onsite and water sprayers during construction activities.
	AQ Measure 4: During construction water will be sprayed on all unpaved haul roads in use three times in every 24-hour period.
	AQ Measure 5: Traffic speeds on all unpaved roads will be reduced to 20 mph or less.

AIR QUALITY

ADVERSE IMPACT

Violate any air quality standard or contribute to an existing or projected air quality violation? The finding in the Mitigated Negative Declaration is less-than-significant with the following mitigation measures incorporated.

MITIGATION PLAN

Reference Number: **AQ Measure 1**

AQ Measure 2

AQ Measure 3

AQ Measure 4

AQ Measure 5

Mitigation: **AQ Measure 1: Construction equipment will be shut off to reduce idling when not in direct use.**

AQ Measure 2: Construction equipment shall be maintained and properly tuned and operated in a manner so as to reduce peak emission levels.

AQ Measure 3: Construction methods will include dust reduction activities including the use of water trucks onsite and water sprayers during construction activities.

AQ Measure 4: During construction water will be sprayed on all unpaved haul roads in use three times in every 24-hour period.

AQ Measure 5: Traffic speeds on all unpaved roads will be reduced to 20 mph or less.

Party Responsible for Implementing Mitigation: THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Implementation Phase: Construction

MONITORING AND REPORTING PLAN

Monitoring Activity: Environmental monitors will be onsite during construction and will monitor construction activities. Monitors will prepare daily reports documenting the implementation of AQ Measures 1-5, above. Non-compliance with any of these measures will be reported immediately to the Resident Engineer for action and documented in the daily report.

Monitoring Period: Construction

Frequency: Daily

Party Responsible for Monitoring Activity: THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Outside Agency Coordination: None

Agency Names: N/A