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The Metropolitan Water District
of Southern California
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METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Daren E. Doff
Executive Secretary

9-5

January 11, 1994

To: Board of Directors (Engineering and Operations Committee--Information)

From: General Manager

Subject: Quarterly Status Report for the Domenigoni Valley Reservoir Project

Report

Design of the major elements of the Domenigoni Valley Reservoir is continuing and substantial progress is being made on design of the dams and hydraulic facilities. Environmental and site clearance of parcels in preparation for construction is also making good progress. Almost all the land within the reservoir area has now been acquired, and property is being obtained for Newport Road relocation and for the Eastside Pipeline.

Current activities include land acquisition, site clearing, detailed design of advance relocations and preliminary design of the dams and hydraulic facilities, geotechnical field investigations, archaeological testing and recovery, mitigation monitoring, construction of the San Diego Canal Relocation, and public information coordination.

The attached Quarterly Status Report provides information on progress of the project for the period from September through December 1993. Key information is provided on the status of major work elements, project cost and schedule status, and projected activities during the next quarter.

Board Committee Assignment

This letter is referred for information to Engineering and Operations Committee because of its interest in the storage and treatment of water, pursuant to Administrative Code Section 2431(c).

Recommendation

For information only.

J. R. Wodraska
John R. Wodraska

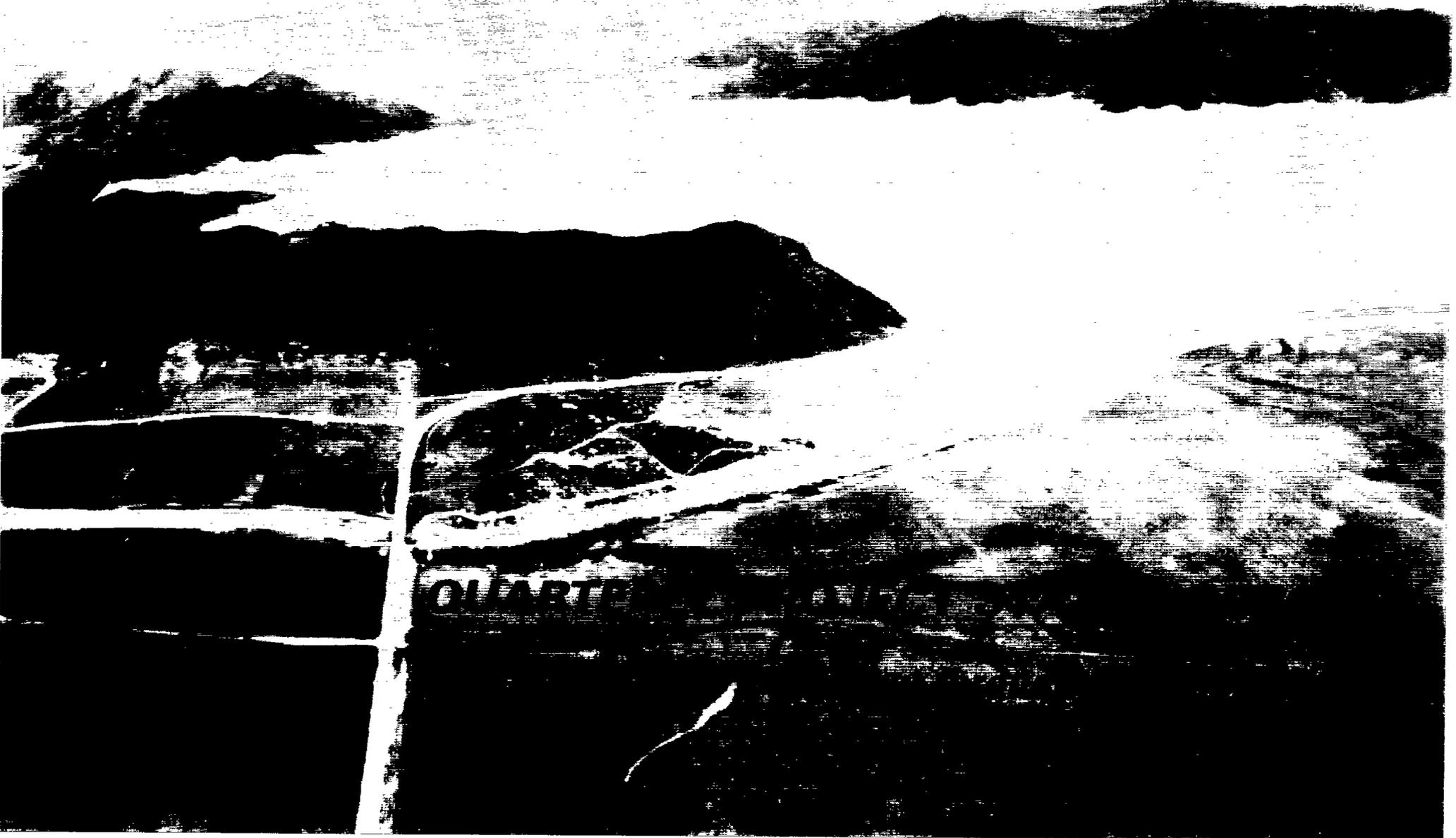
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METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Domenigoni Valley Reservoir Project



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METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Domenigoni Valley Reservoir Project

QUARTERLY PROJECT STATUS REPORT

Report # 3

October - December 1993

9-5

40005

FOREWORD

The Domenigoni Valley Reservoir will be formed by two earth/rockfill dams, 4.4 miles apart, within the Domenigoni and Diamond Valleys, plus a third saddle dam at the low point in the north rim. Associated hydraulic structures consist of an inlet/outlet tower, powerhouse, connecting tunnel, forebay, and spillway. The East Dam will be approximately 178 feet high and 10,800 feet long while the West Dam will be approximately 280 feet high and over 8,000 feet long. The total earthwork volume of the East and West Dams is approximately 85,000,000 cubic yards.

SWP water will be delivered to the reservoir via the new Inland Feeder and its extension, the new 12-foot diameter Eastside Pipeline, which will be located adjacent to the San Diego Canal. Water from the CRA will be delivered to the reservoir by the San Diego Canal. Water from the canal will be diverted into the pumping forebay below the West Dam and pumped into the reservoir by pump generating plant PG-1. The powerhouse will include up to 40 MW of power generation capacity.

Deliveries from the reservoir into the CRA will be through the 12-foot diameter Eastside Pipeline, bypassing the PG-1 generating plant. Deliveries to the San Diego Canal will be made through PG-1 and the forebay into the canal.

Relocations within the reservoir area include Newport Road and its parallel utilities, which will be relocated north of the valley, and the San Diego Canal, which currently crosses the valley under the axis of the West Dam, and will be relocated west of the dam.

Under the first broad application of multi-species preservation planning, two separate wildlife reserves have been established to protect and enhance the region's wildlife, including a variety of rare plants and animals. The Multi-Species Habitat Conservation Plan for this project includes approximately 9,000 acres. The Santa Rosa Plateau includes 1,700 acres purchased by Metropolitan. The Plateau was developed from an innovative environmental mitigation banking agreement that protects numerous sensitive and endangered species for this and for future projects. In addition, another 1,800 acres of recreation and open space area are being planned for camping, hiking, riding, golfing, fishing, boating, and swimming in special lakes separated from the main reservoir. Extensive archaeological investigation and recovery operations are underway in the region to recover and preserve artifacts from past Native American settlements.

When completed, the new reservoir will nearly double the amount of surface storage available in Metropolitan's service area to provide a more reliable delivery of imported water during peak summer months, droughts, and emergencies. It will cover 4,500 acres and hold 800,000 acre feet, or 269 billion gallons of water.

DOMENIGONI VALLEY RESERVOIR AND FACILITIES

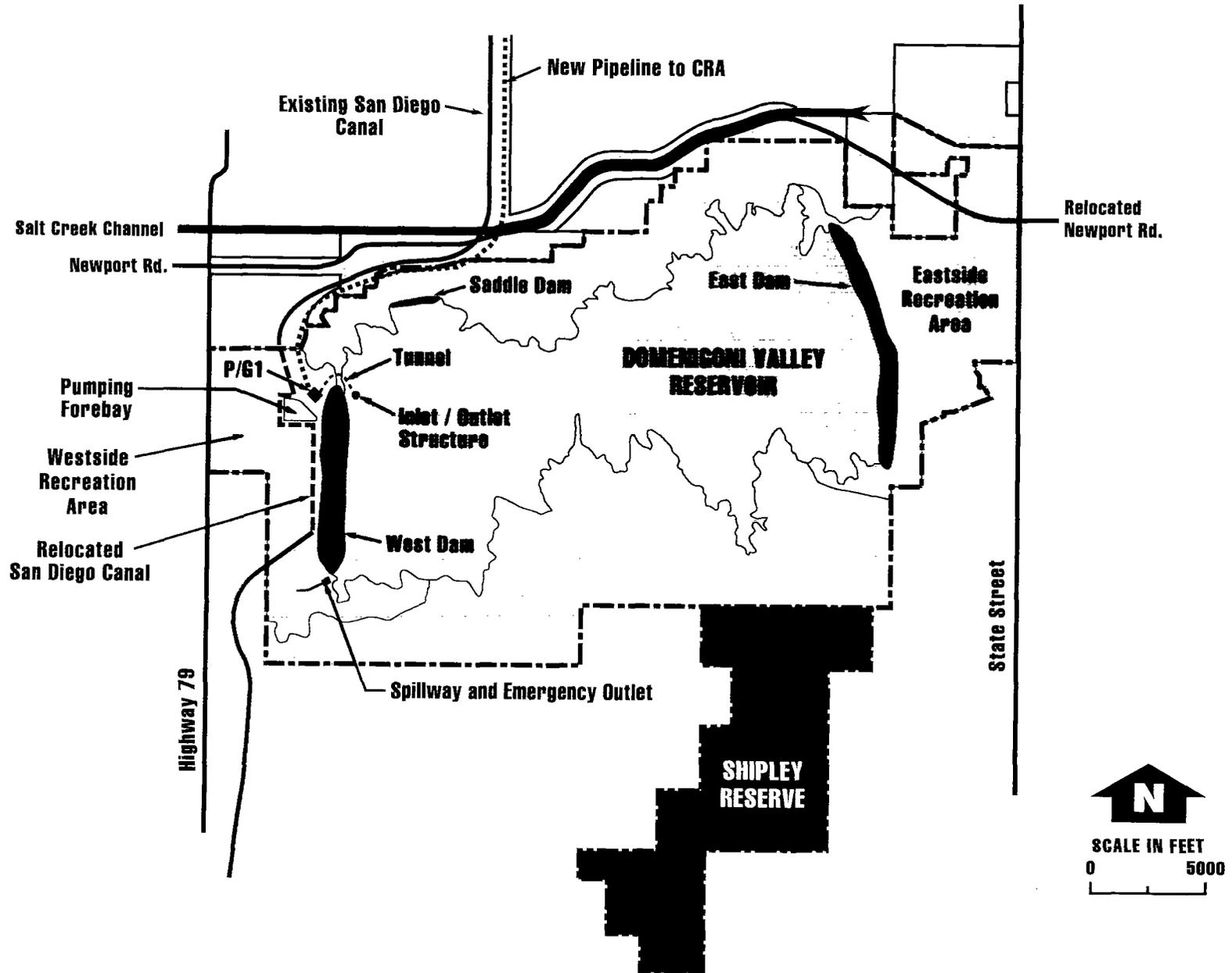


TABLE OF CONTENTS

PROGRESS SUMMARY

MAJOR ACCOMPLISHMENTS THIS QUARTER

OVERVIEW OF PROJECT ELEMENTS

- Land and Right-of-Way Acquisition
- Environmental Mitigation
- Hazardous Materials Remediation
- Historical Investigations
- Prehistoric Investigations
- Public Awareness and Recreation
- Dam Design - Ebasco Design Services
- Pump-Generating Plants & Hydraulic Features - Ebasco Design Services
- Newport Road Relocation
- Eastside Pipeline
- San Diego Canal Relocation

COST SUMMARY

- Project Financial Profile
- Cumulative Cash Flow - Total Project
- Cumulative Cash Flow - Current Fiscal Year
- Annual Cash Flow

SCHEDULE SUMMARY

MBE/WBE AND LOCAL PARTICIPATION

RIGHT-OF-WAY AVAILABILITY

- Property Acquisition Status

ISSUES AND POTENTIAL RESOLUTIONS

GOALS FOR NEXT QUARTER

Domenigoni Valley Reservoir Progress Summary

Design

Land

Newport Road

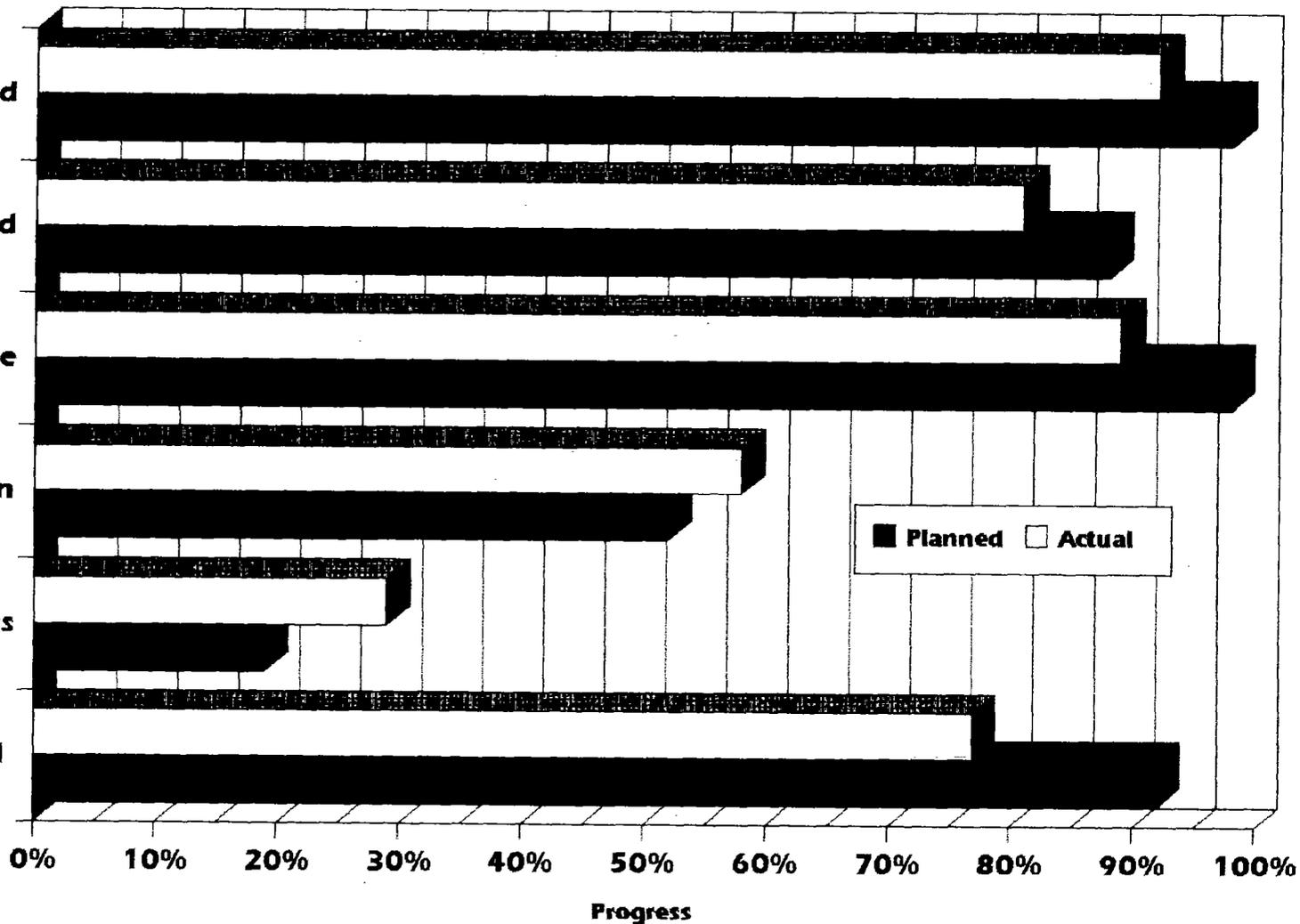
Eastside Pipeline

Dam Design

Pumps & Hydraulics

Construction

San Diego Canal



MAJOR ACCOMPLISHMENTS THIS QUARTER

Design

General

- Submitted the draft Phase B Geotechnical Reports for the East, West and Saddle Dams.
- Completed in situ soil testing in the West Dam exploratory trench.
- Conducted an inspection of the East, West and Saddle dam sites with grouting specialist, Ken Weaver to evaluate hydraulic conductivity and test data.
- Completed the initial dam breach inundation studies for two school sites in Menifee Union School District. Submitted a draft report for MWD review.
- Issued Temporary Visitor Center plans and specifications for final engineering approval.
- Received the Feasibility Study from Economic Research Associates on the Permanent Visitor Center and made presentations to MWD management.
- Approved the baseline CPM schedule for the Ebasco design contract.
- Awarded a contract to EDAW, Inc. for Landscape Screening design.
- Prepared an initial construction packaging report for dam construction, for internal Metropolitan discussion.
- Awarded a contract to Inland Asphalt Coating and Space Leasing Co. , a joint venture, for construction of the Field Office and core storage buildings.

MAJOR ACCOMPLISHMENTS THIS QUARTER (continued)

Dams

- Submitted Alternative Configuration Reports for all three dams (including stability and deformation reports) for use at the Board of Consultants meetings held in early November. The recommended configuration of an earth core, rockfill dam, for all three dam sites, was accepted by the Board.
- Submitted the Table of Contents for the General Design Memorandums (GDM) of the East, West, and Saddle dams.
- Initiated dynamic response analysis and Newmark Seismic deformation analysis in the West Dam area.
- Revised the draft characterization of key seismic sources and analyzed both new and existing microseismic and strong motion records of the East Dam.
- Evaluated subsurface soil and rock conditions in the East and West Dam areas.
- Prepared the following draft reports for Ebasco internal review:
 - Alternative Axis Report
 - Precedents for Rockfill Dams
- Submitted the following draft reports for Metropolitan review:
 - Foundations Grouting Report
 - Saddle Dam Interim Alternatives Report
 - Precedents For Embankment Dams Founded On Alluvium Foundations
 - Key Seismic Sources Characterization Report
- Submitted the following final reports to Metropolitan:
 - West Dam Axis Alternatives Report
 - West Dam Interim Alternatives Study
 - East Dam Alternatives Study

MAJOR ACCOMPLISHMENTS THIS QUARTER (continued)

Foundation Cutoff Alternatives Report
Stability Analyses of East and West Dam Alternatives

- Initiated the following reports:
 - Seepage Analyses of East and West Dam Alternatives
 - East and West Dam Alternatives Stability Analyses (interim report)
 - Seismic Deformation Analyses of West Dam Alternatives (interim report)
 - Comparative Cost Estimates for East and West Dam Alternatives Study
 - Alternative Dam Configurations (draft report)
- Initiated seismic deformation analyses for all dams.
- Completed comparative cost estimates for alternative dam configurations.

Pump-Generating Plants and Hydraulic Facilities

- Submitted the following draft reports for Metropolitan review:
 - Hydraulic Emergency Release Report (second draft)
 - Surface Water Flow Mitigation Plans & Procedures
 - Inlet/Outlet Hydraulic Model Study
 - Inlet/Outlet Tower Gates & Valves Alternatives Study
 - Inlet/Outlet Tower Configuration Study
 - Forebay Configuration Study
 - PG-1 Major Equipment Contracting Options Study
 - PG-1 Baseline Surface Water Hydrology Report
 - PG-1 Site Arrangement Study
 - PG-1 Hydraulic Transient Study

MAJOR ACCOMPLISHMENTS THIS QUARTER (continued)

G2 Site Selection Study
G2 Bypass Selection Study
G2 Unit Selection Study
G2 Generation Feasibility Study
G2 Water Rejection Systems Study
G2 Transmission System/Switchyard Configuration Study
G2 Hydraulic Transient Study
Instrumentation Configuration Study
SCADA Systems Interface Study
Runoff and Sedimentation Control Plans
Colorado River Aqueduct Pressurization Protection Report

- Prepared the System Design Specification (SDS) for PG-1 Major Equipment, for internal review.
- Issued the groundwater monitoring well installation RFP to bidders; received the proposals and began the evaluation.
- Evaluated additional Inlet/Outlet Tower configurations as requested by Metropolitan to investigate two valve vs. four valve per tier arrangements, as well as alternative wet well configurations.
- Coordinated proposed ground water monitoring well locations with recreation planning, dam borrow and spoil area plans, and temporary property lease arrangements.
- Performed aerial reconnaissance in support of the emergency release routing study. Began the Emergency Release Routing Study.
- Initiated discussions with the Eastern Municipal Water District on the use of reclaimed water to augment the construction water supply.

MAJOR ACCOMPLISHMENTS THIS QUARTER (continued)

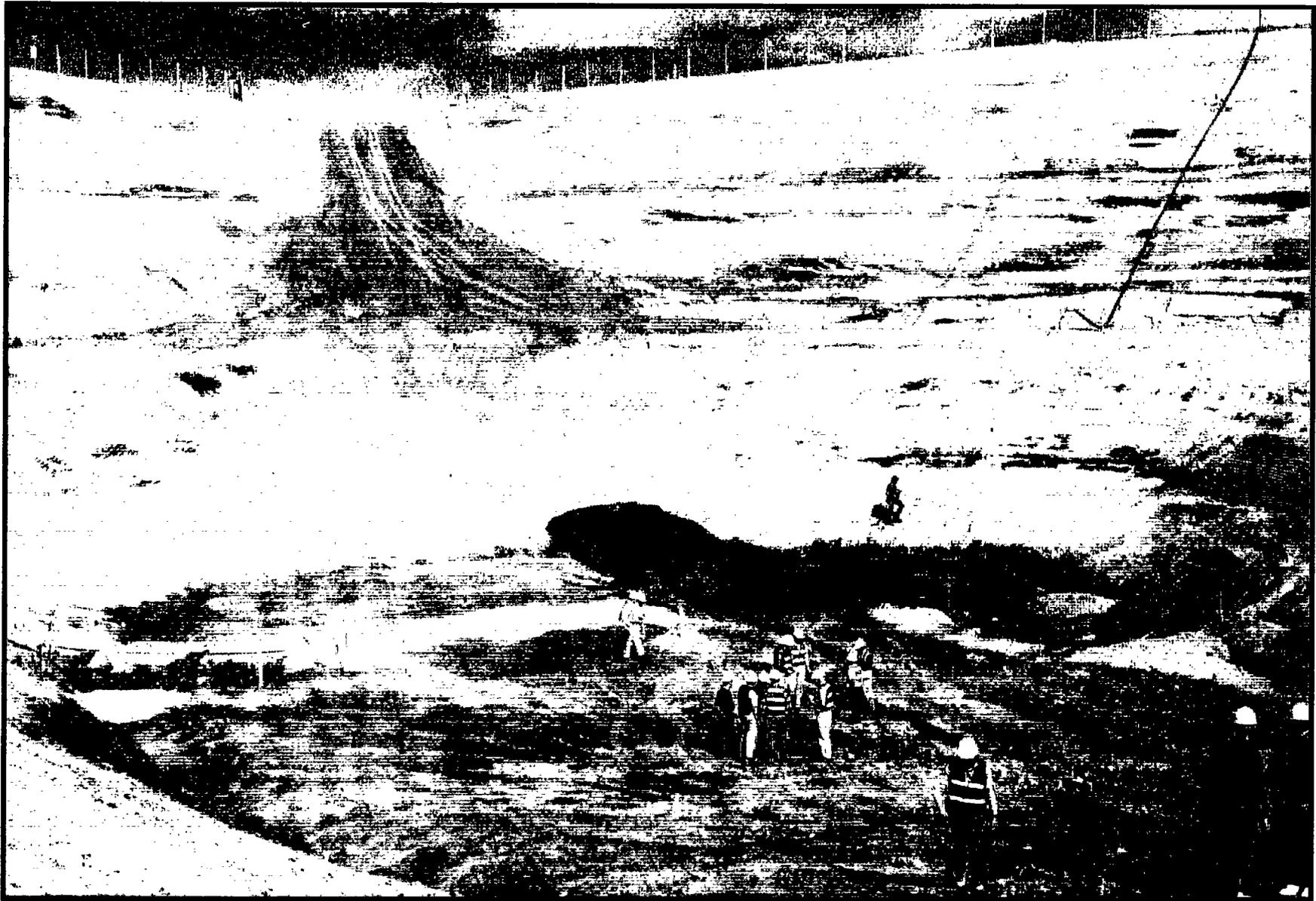
Field Geotechnical Investigation

East Dam Area

- Completed 21 rotary wash boring holes and 34 rock core boring holes, including soil sampling, rock coring and rock packer testing. Have now completed all scheduled rotary wash probe borings along the dam toes.
- Completed dozer road excavation and excavation trenches.
- Excavated a trench to bedrock along the upstream toe and performed geologic mapping of this trench area.
- Completed test well drilling and installation of piezometers.
- Conducted a review of fault hazards with representatives of DSOD on the Rawson Canyon fault exposures, east lineament, East Dam toe trenches, and south siphon fault trenches.
- Updated the geologic mapping of the north abutment, central hills and south abutment.
- Performed alluvial bucket auger and backhoe test pit work in the dam footprint.

West Dam Area

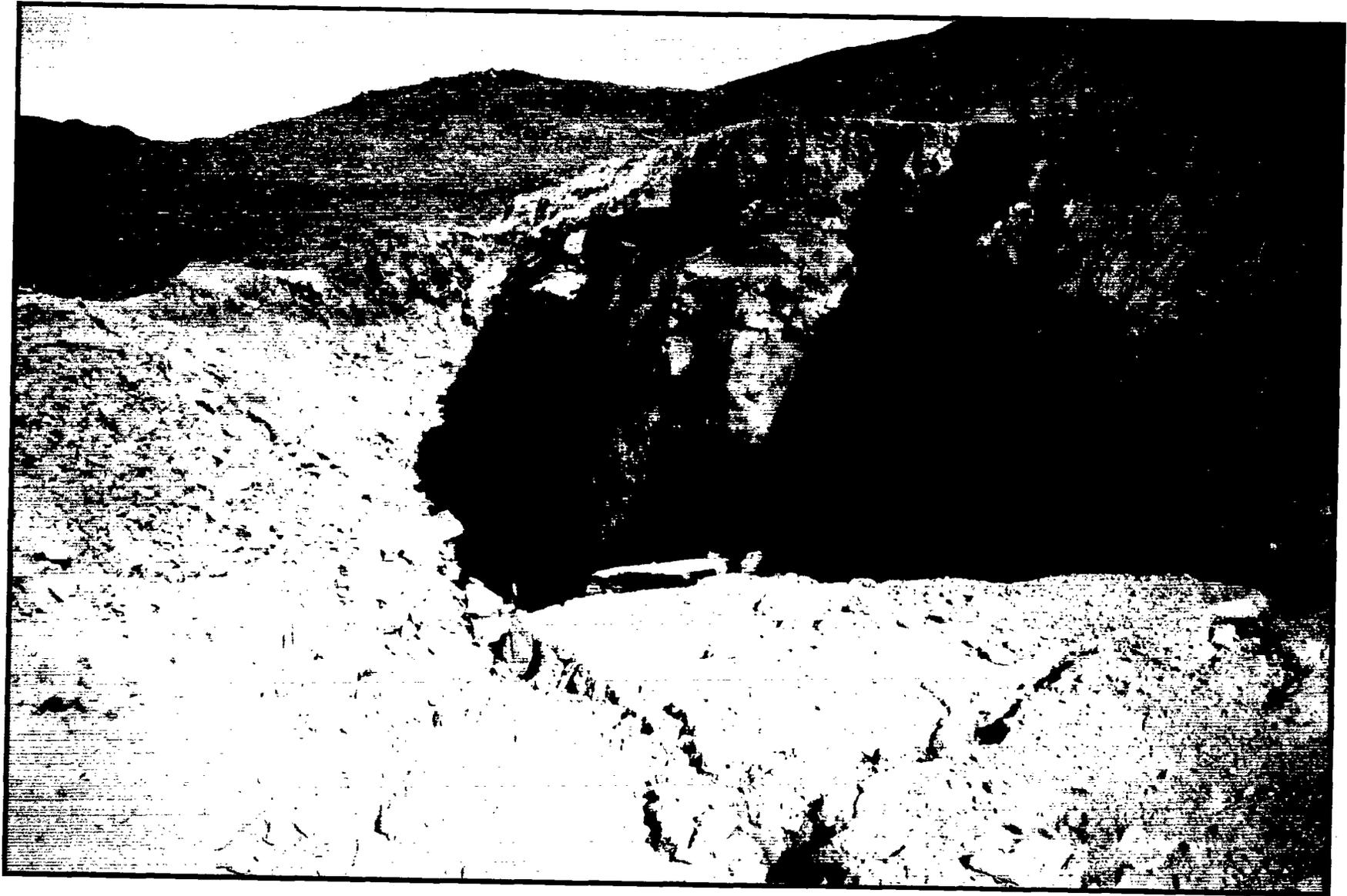
- Completed pressure meter tests in the alluvium.
- Conducted inspection, with two DSOD representatives, at the north and south abutments.
- Exploratory Trench:
 - Completed the exploratory trench down to the 75' below ground surface.
 - Sampled composite soils on trench slopes.



Exploratory Trench Excavation at West Dam



Test Blast Sequence at Borrow Area # 2 (S.W. Hillside)



Post-Blast Condition of Rock (Borrow Area # 2)

MAJOR ACCOMPLISHMENTS THIS QUARTER (continued)

- Drilled 93 rotary wash holes to bedrock from the trench bottom, and conducted density and shear tests.
- Conducted inspections by the Ebasco Internal Review board, and members of the Board of Consultants and DSOD.

- The borings, geophysical tests, and observations confirmed the adequacy of the foundation at the two deep alluvial channels.
- Completed 32 rotary wash boring holes and 24 rock core boring holes in the dam footprint area.
- Completed geologic mapping of the center knoll area.
- Performed seismic refraction and dozer road excavation in the Scheenstra area (Parcel 161).

Saddle Dam Area

- Evaluated foundation stripping depths.
- Performed downhole seismic velocity tests.
- Completed Saddle Dam access roads to borehole locations.
- Excavated dozer roads in saddles in the North Rim area and performed geologic mapping of dozer cuts.
- Completed all rock core borings in the dam footprint area.

Borrow Areas

- Completed rock test blasts in Borrow Areas 2 and 5.

MAJOR ACCOMPLISHMENTS THIS QUARTER (continued)

- Completed planning, and prepared bid documents for, the rock test blast in Borrow Area 3.
- Completed rock core borings and seismic refraction surveys in Borrow Areas 2, 3, and 5.
- Completed alluvial borrow test borings and test pits in Borrow Area 1.
- Performed downhole seismic tests in Borrow Area 3 core holes.
- Completed initial geostatistical analyses of alluvial soils.
- Began alluvial borrow composite sample blending and index testing.

North Rim Area

- Potential fault investigation - made dozer cuts in Saddles 5 and 6 on the eastern area of the North Rim along the most likely projections of the inactive Rawson Canyon fault. Began reconnaissance mapping of the Sage lineament. Compiled geophysical data across lineament L-30. Completed three test pits in this area to investigate suspected old pedogenic soil.
- Excavated dozer roads in saddles in the North Rim area and performed geologic mapping of dozer cuts.
- Performed one rock core boring with packer testing at Saddle 5.

Hydraulic Structures

- Completed seismic refraction surveys.
- Completed 3 rotary wash borings and two rock core borings at the G-2 site. Conducted lab tests of soil samples.

MAJOR ACCOMPLISHMENTS THIS QUARTER (continued)

- Completed 4 rotary wash borings at the Forebay/Afterbay site.

Advance Relocations/Construction

Newport Road Relocation

- Submitted the 90% drawings to Metropolitan, Riverside County Transportation Department, the Riverside County Flood Control District, and the City of Hemet.
- Delivered the revised, joint Newport Road /Salt Creek Channel MOU to local agencies, incorporating provisions approved by the Board of Directors and earlier comments received from the local agencies.
- Submitted NPDES documentation to the State Water Resources Control Board, required for excavation within the Salt Creek Flood Control Channel.
- Submitted the preliminary utility relocation drawings to the utility companies.
- Provided comments on the draft Negative Declaration for the Salt Creek Channel Improvements. Recirculation is being performed by the City of Hemet.
- Received preliminary approval from the Riverside County Planning Commission for the road realignment and associated changes to the General Plan. Awaiting final approval from the County Commissioners.
- Completed the Newport Road Geotechnical Report and submitted it to Metropolitan for review and comment. This report is the first of four geotechnical deliverables.

Eastside Pipeline

- Issued 90% drawings and specifications for review and comment.

MAJOR ACCOMPLISHMENTS THIS QUARTER (continued)

- Completed the draft Supplemental EIR, conducted Metropolitan internal review and issued the report for public review.
- Began geotechnical investigations for Darlene Lane and the Secondary Inlet.
- Incorporated comments to the Darlene Lane improvements and resubmitted the plans to the County of Riverside for final approval.
- Received plans and a cost estimate from Southern California Edison for relocation of interfering power poles. Issued a purchase requisition to SCE authorizing initiation of relocation work.
- Finalized the Secondary Inlet alignment and design.
- Met with the Department of Fish and Wildlife Service to discuss biological mitigation needs.
- Resolved Salt Creek Channel blow-off connections with the City of Hemet and the Eastern Municipal Water District.

San Diego Canal Relocation

- Obtained access to the Scheenstra property and completed all demolition and grading operations in the former Scheenstra dairy area.
- Completed concrete placements for the South Siphon deck sections. Stripped the South Siphon deck, walkways and falsework. The South Siphon is now complete.
- Installed the Radial Gate wall concrete placements, radial gate hoist anchor bolts and union embeds. Completed the structural backfill. The radial gate structure is now complete and ready for radial gate installation.
- Completed dewatering operations at the South Siphon area.

MAJOR ACCOMPLISHMENTS THIS QUARTER (continued)

- Completed all structure backfill operations throughout the canal relocation area.
- Began placement of canal lining from north to south and completed 68% of the work.
- Completed Electrical Control Building block walls and roof.
- Completed removal of EMWD's existing 21" Diamond Valley Pipeline.

Program Management

- Developed a draft procedure for curating paleontology resources discovered during construction to the San Bernardino County Museum.
- Issued the Configuration Control procedure for management review; completed drafts on all remaining procedures.
- Established an on-line correspondence access system on the computer network to allow secretaries access to all correspondence.
- Finalized amendments to the recreation planning, interpretative planning and Native American Indian agreements.
- Negotiated with the selected paleontology consultant, San Bernardino County Museum.
- Revised the Right of Way meeting format to ensure coverage of all potential ROW issues.
- Completed purchase of Eastern Municipal Water District (EMWD) facilities within the reservoir area.
- Reviewed and incorporated the Design Team's updated work plan into the master schedule.
- Began collecting, archiving, indexing and storing project photographs and slides in the project library.

MAJOR ACCOMPLISHMENTS THIS QUARTER (continued)

- Processed the first comments through the newly-established on-line Design Review Comments Tracking System.
- Completed preliminary review of the University of California at Riverside biological research contract for the Multi-Species Habitat Reserve.

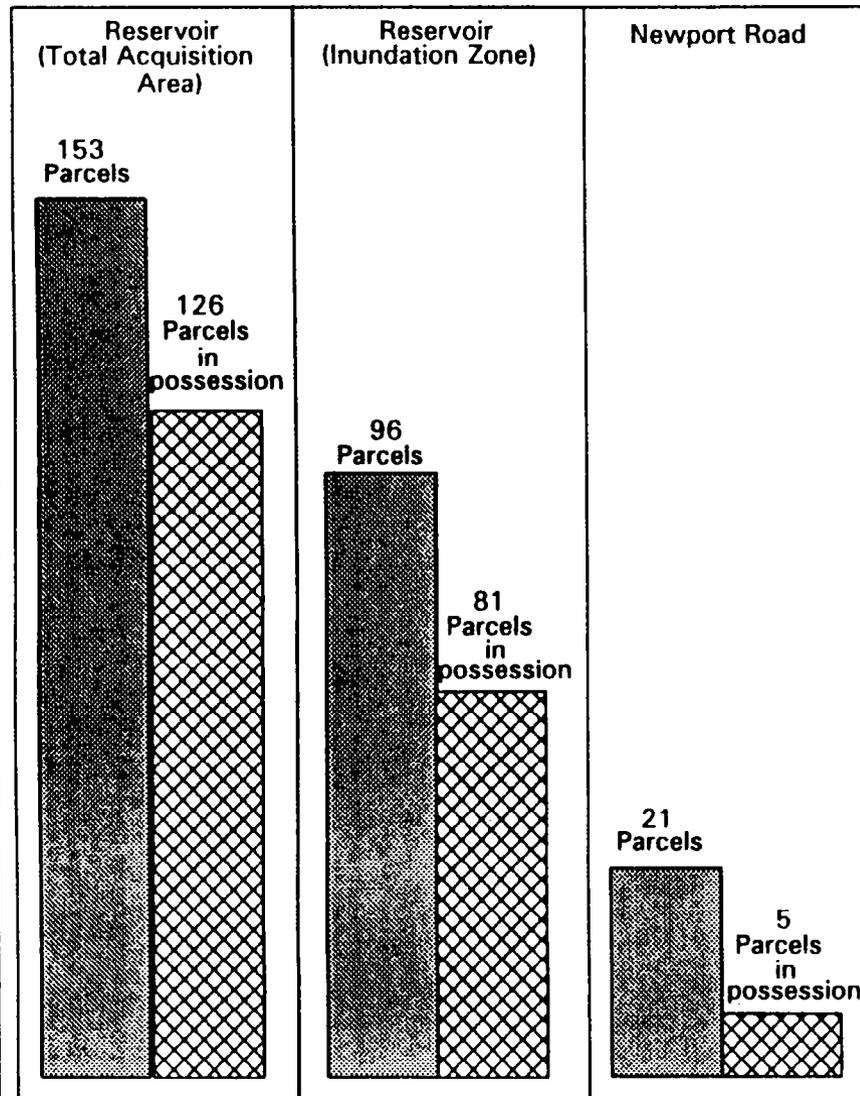
Land Acquisition

- Acquired 11 additional parcels for a total of 131 parcels to date, which is equivalent to 86% of the total parcels, and 96% of the required reservoir land area. Parcels acquired during this quarter were:

<u>Parcel #</u>	<u>Owner</u>
89	Garrett
115	Nishino
181	Darling
213	Wagner
221	Virk
223	Ontiveros
237	McRae
335	Garrett
339	Wagner
645	Modoc Cattle Co.
677	Garrett

- Successfully relocated the Scheenstra Dairy to Visalia, allowing San Diego Canal work to proceed on the property.

LAND AND RIGHT-OF-WAY ACQUISITION



COMMENTS

DOMENIGONI VALLEY PROPERTY

Land area acquired = 96%
 Parcels acquired = 86%

NEWPORT ROAD

- Appraisals, offers, and settlements are proceeding. All possible entry permits have been obtained.
- Several large parcels have been acquired this quarter.

LANDSCAPE SCREENING

- The ROW Division is making offers on the landscape parcels. The parcels along State Street are nearing settlement.

EASTSIDE PIPELINE

- A Supplemental EIR is being processed to allow for the additional permanent ROW, and provide for sufficient access to accommodate the alignment change and the Secondary Inlet addition. Certification of the SEIR is expected by February 1994. A public meeting will be held January 18, 1994.
- The schedule for acquiring the ROW will extend to June 94. The construction Notice to Proceed is scheduled for the same time period.
- Appraisals are proceeding. Entry permits are supporting the schedule requirements.

ENVIRONMENTAL MITIGATION

Administration

- Completed the draft Supplemental Environmental Impact Report (SEIR) for the proposed modifications to the Eastside Pipeline realignment. Submitted the draft SEIR to the State and distributed it for public review on December 21 for a 30-day review period.

Biological Resources

- Conducted a tour for representatives of the California Department of Fish and Game, the U. S. Fish and Wildlife Service, independent fire ecologists, and the news media, prior to beginning research and restoration of the South Rim burned habitat area.
- Developed mitigation plans for the revised supply pipeline alignment and the Secondary Inlet addition. These revisions are consistent with the City of Hemet General Plan, which should expedite their acceptance.
- Completed the biological portion of the Eastside Pipeline SEIR.
- Completed the preliminary report assessing the impact of the Winchester fire on the local wildlife and habitat.

Multi-Species Habitat Reserve

- Approximately 6,000 acres of the Multi-Species Reserve were burned in the October 26-27 Winchester fire in Riverside County. Investigations have determined that the fire has not affected the status of biological resources mitigation. Plans for habitat recovery are underway, as well as plans for conducting research into the effects of the fire and the pattern and rates of recovery.
- Began comprehensive prehistoric and historic archaeological surveys in the Shipley Reserve and portions of the Lake Skinner Reserve in support of recreation trail development. Survey work was 50% complete at the end of December.

ENVIRONMENTAL MITIGATION (continued)

- Began preparation of a comprehensive study plan for the Multi-Species Reserve with the U. S. Fish and Wildlife Services, the California Department of Fish and Game, UC Riverside, San Diego State University and the Nature Conservancy.
- Began construction of the Lake Skinner equestrian trail in the Lake Skinner portion of the Reserve.
- Received approval from the Reserve Management Committee for additional geotechnical investigations in the Reserve area.
- Completed improvements to the Lake Skinner Road through the Shipley Reserve, providing access for researchers and land managers.

Cultural Resources

Prehistoric

- Submitted final Survey Report Nos. 2, 3, 4, and 5 to SHPO for acceptance. Four survey reports are now complete; nine remain to be completed.
- Received SHPO comments on the final draft Survey Report No. 5.
- Submitted the final draft Survey Report No. 7 (Newport Road) to Metropolitan for review and comment.
- Submitted the initial draft Survey Report No. 8 (Lake Skinner Equestrian Trails) and No. 13 (Eastside Pipeline) to Metropolitan for review and comment.
- Received SHPO acceptance of the final Testing and Evaluation Report No. 1 (23 sites). One report is complete; eight reports remain to be completed.

ENVIRONMENTAL MITIGATION (continued)

- Submitted the first draft Data Recovery Report (2 sites- Borrow Areas 1 and 2) for Metropolitan review and comment.
- Completed data recovery for a prehistoric village site in hard rock Borrow Area 5.
- Began archaeological surveys in the Shipley Reserve and portions of the Lake Skinner Reserve. These surveys are being undertaken now to take advantage of the extensive vegetation clearing on the Reserve caused by the October fire. Field archaeologists have discovered a prehistoric village site and artifacts, which remain largely undisturbed due to the long-term private ownership of the Shipley property.
- Reached agreement on terms between Metropolitan and representatives of the Native American Community for reburial of human remains and artifacts recovered from the project area. Prepared a Board letter authorizing Metropolitan to enter into a formal agreement with the Native Americans.
- Discovered one additional prehistoric site on November 15 during excavation of the middle borrow area for the San Diego Canal. Simple artifacts were retrieved and removed, and the site was cleared for construction work.

Historic

- Submitted the final Historic Testing and Evaluation Report No. 1 to SHPO for acceptance.
- Submitted the revised draft Research and Design Report to SHPO for review and comment.
- Received comments from SHPO on the second draft Testing and Evaluation Report No. 2 and on the draft Remote Sensing Report (Scheenstra Property).
- Submitted the second draft Testing and Evaluation Report No. 3 to Metropolitan for review and comment.

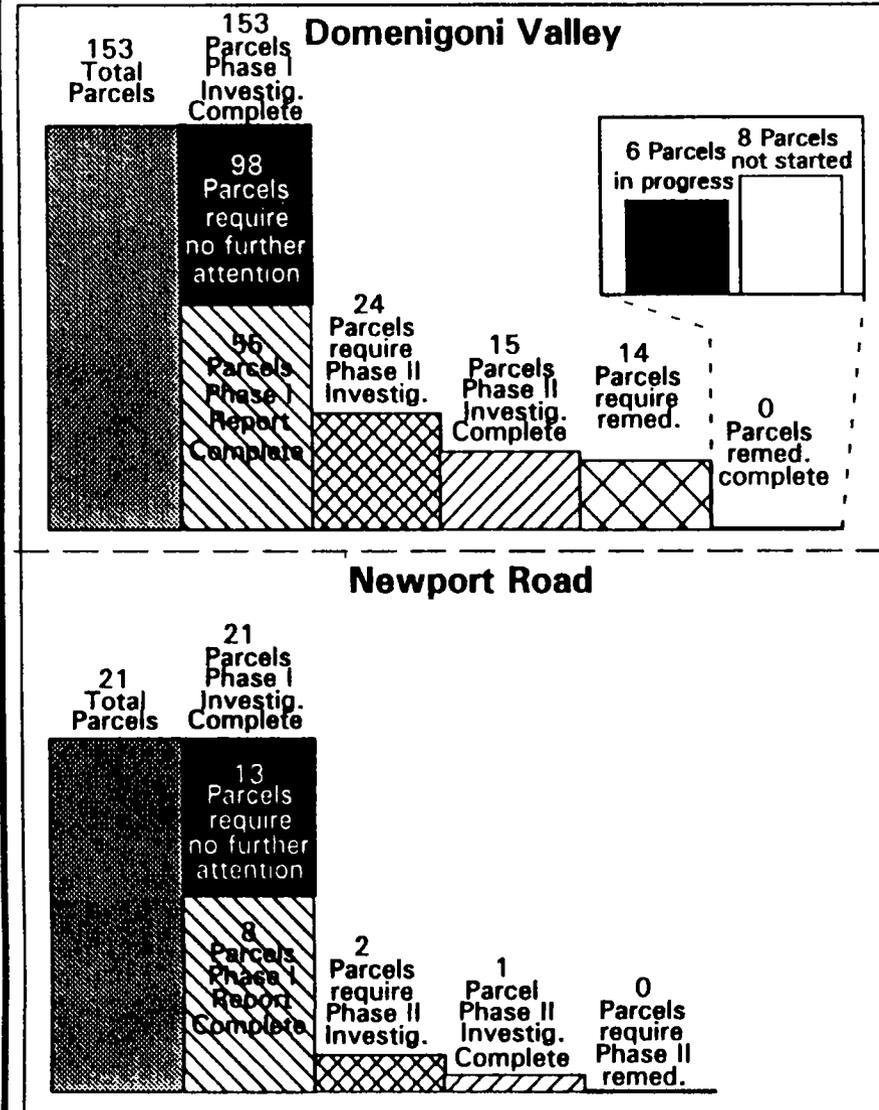
ENVIRONMENTAL MITIGATION (continued)

- Submitted the first draft Testing and Evaluation Report No. 4 to Metropolitan for review and comment.
- Began testing of the last known historic site at the Peccorini house and granary located in the central valley.

Paleontological Resources

- Completed excavation monitoring at the San Diego Canal construction site.
- Found woolly mammoth tusks in the northern borrow pit adjacent to the San Diego Canal construction site. The intact tusks were jacketed and removed to the San Bernardino Museum. One of the tusks was in very good condition and generated media attention.
- Bone fragments of a mastodon, extinct horse, and extinct camel were been found in the San Diego Canal borrow pit.

HAZARDOUS MATERIALS REMEDIATION BLACK AND VEATCH

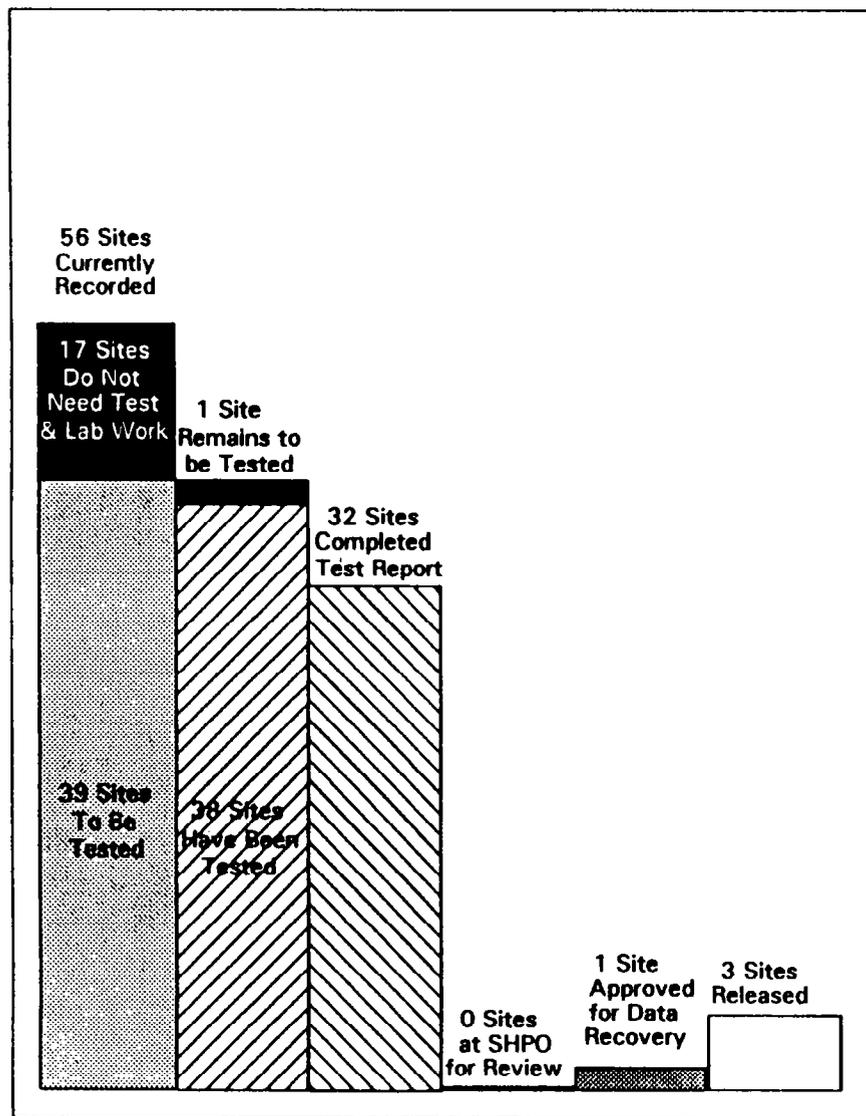


COMMENTS

- Nine Phase II assessments are in progress within DVR take line.
- Lead/Asbestos surveys were performed on twenty four structures. 133 structures have been surveyed.
- ECD began bioremediation of contaminated soil at the Searl Ranch.
- ECD began the bench scale pilot program for lead removal at the Searl Rifle Range.

HISTORICAL INVESTIGATIONS

GREENWOOD & ASSOCIATES



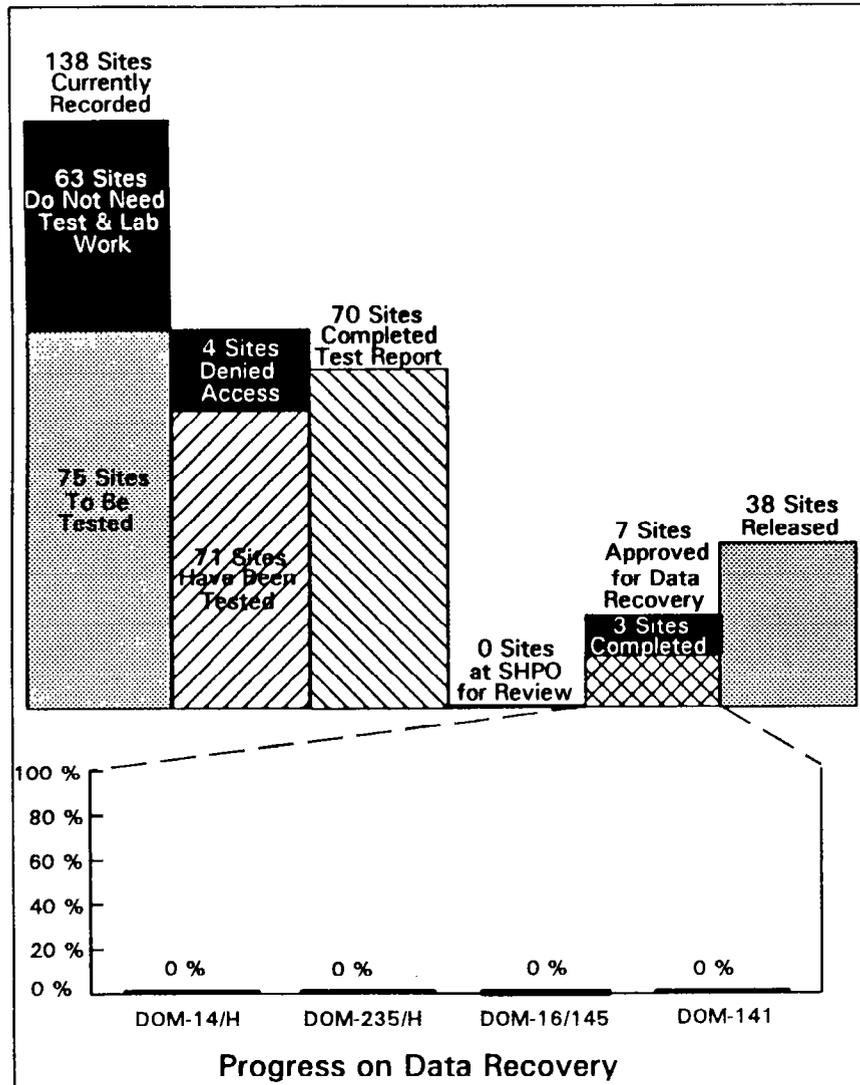
COMMENTS

Status of Reports:

- **Research and Design Report** - Under review by SHPO.
- **Remote Sensing Report (Scheenstra Property)** - Final report in preparation.
- **Testing and Evaluation Reports (TER) - 6 Total**
 - TER #1 (1 Site) Final report in preparation
 - TER #2 (4 Sites) Final report in preparation
 - TER #3 (11 Sites) Draft report under review by MWD
 - TER #4 (9 Sites) Draft report under review by MWD
 - TER #5 (7 Sites) Draft report in preparation
 - TER #6 (7 Sites) Draft report in preparation

PREHISTORIC INVESTIGATIONS

INFOTEC RESEARCH, INC.



COMMENTS

- Submitted Revised Draft Report, Cultural Resources Survey Report 7, (Newport Road Realignment) to MWD for submittal to SHPO for review and comments.
- Received comments from SHPO, Final Draft Report Prehistoric Archaeological Testing and Evaluation Report Number 5. No changes to this Final Draft Report were requested by SHPO. Infotecs recommendations for Phase-3 Data Recovery excavations at DOM-16/145, DOM-141, and DOM-235/H were approved by SHPO.
- Infotec initiated a complete archaeological survey of the Shipley Reserve and portion of the Lake Skinner Reserve located north of Middle Creek in support of recreation trail development.
- Presented a 5 hour tour of site DOM-13/H to the children and families from the Pechanga and Soboba Indian Reservations. Approximately 100 individuals attended the tour.

Notes:

1. Number of Data Recovery Sites has increased to 7. Three of these sites are 100% complete. Work on the other 4 sites has not yet been initiated.

PUBLIC AWARENESS AND RECREATION

Public Awareness

- The Government Relations Branch made three presentations this quarter to the Eastern Municipal Water District (20 in attendance), the Chevron Retirees Association in Hemet (30 in attendance), and to the Camelot Retirement Club in Hemet (20 in attendance).
- The Metropolitan Speaker's Bureau made 5 presentations: to the Glendale Sunrise Rotary Club (audience: 50); to the Cal State Long Beach - Friends of Civil Engineering Club (audience: 40), to the UCLA Geology Department-t Conservation and Natural Resources- (audience:85); and to the Glendora Sunrise Rotary Club (audience:50).
- One helicopter tour was conducted this month for members of the California Senate, Department of Agriculture, the Water Resources Committee and staff.
- Domenigoni Valley Reservoir project management made a presentation to the ASCE of San Diego (audience: 40).
- Issued press releases and notifications for the test blasts at the reservoir site.
- Coordinated TV and press coverage of the discovery of woolly mammoth tusks.
- Located a site for the San Diego Canal relocation dedication ceremonies.
- Arranged with Infotec to conduct two field trips for children from the local Native American reservation.
- Initiated planning with the Riverside Parks & Open Space District on Metropolitan funding for the Santa Rosa Plateau pilot field trip program for local school children.
- Public Affairs conducted 9 inspection trips for members of the following agencies: Calleguas Municipal Water District, Rincon MWD (Escondido), Rainbow MWD (Fallbrook), Moulton Niguel Water District, Irvine Ranch Water District, Santiago College; and the cities of Garden Grove, Orange, Long Beach, Yorba Linda, Pasadena, Buena Park, El Toro, La Palma, San Fernando and Tustin.

PUBLIC AWARENESS AND RECREATION (continued)

- Seventy-four (74) people visited the Domenigoni Valley Reservoir Information Office. The highest public interest (42) continued to be the project description.
- Received 231 inquiries on the toll-free telephone line, which is a 41% increase over the previous quarter:
 - 49 resulted in the mailing of brochures
 - 24 were placed on the mailing list
 - 10 were resolved by providing specific project information
 - The number of callers responding to each category of recorded information was:

- Construction	98
- Recreation	88
- Project Description	69
- Multi-Species Reserve	32
- Archaeology	25

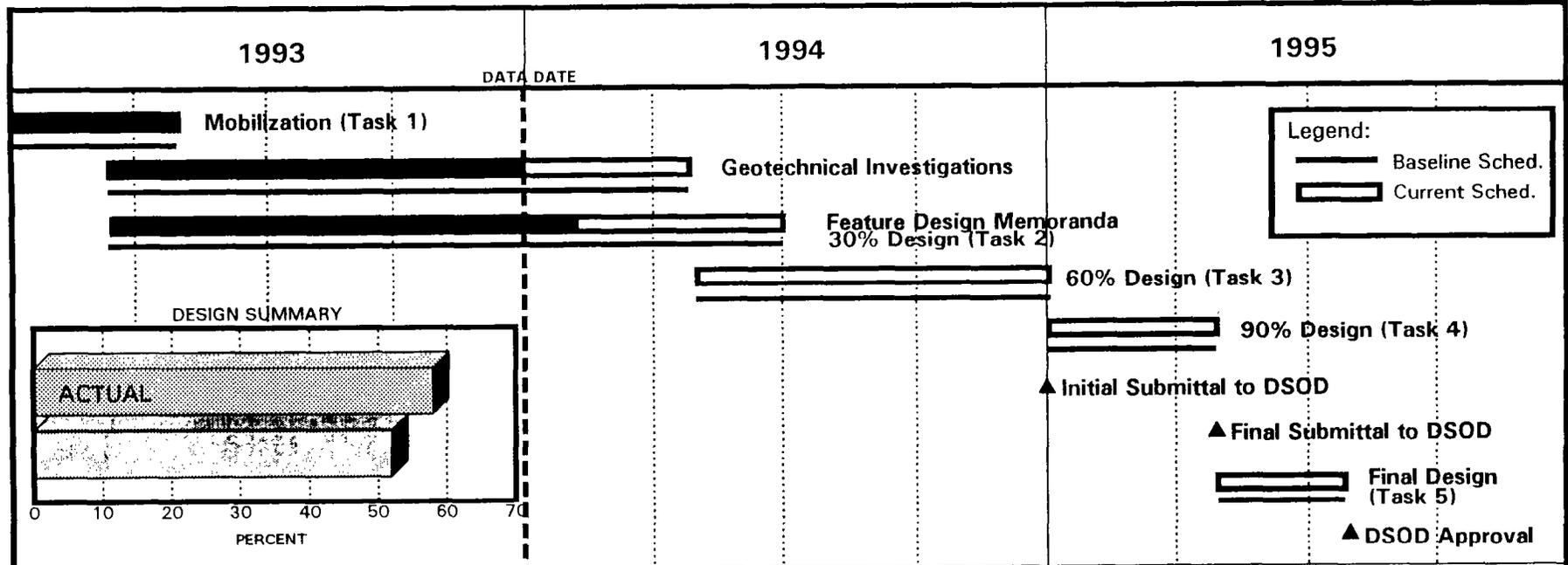
Recreation

- Conducted the third workshop of the Recreation Working Group to establish recreation proposals within the target budget. A consensus is expected to be reached following one more meeting in February, 1994.
- Conducted the third meeting of the Agricultural sub-group of the Recreation Working Group to evaluate the draft proposal for agricultural land use in the recreation areas.
- Met with Metropolitan Water Quality and Operations regarding Metropolitan's response to the Department of Fish and Game on a fish habitat in the reservoir. Also discussed a proposal for use of San Diego Canal rubble for development of a fish habitat in the reservoir.
- Initiated study of management structures for recreation facilities that could involve both public and non-public entities.

PUBLIC AWARENESS AND RECREATION (continued)

- Prepared study plan for additional revenue and economic feasibility evaluations of specific recreation facilities.
- Coordinated with the dam design team to:
 - Review Plans to deposit spoil in the recreation areas for recreation benefits.,
 - Locate project construction access roads that could subsequently serve as recreation access roads.
 - Develop design alternatives in the West Recreation Area to accommodate emergency release water from the Forebay.

DAM DESIGN
EBASCO SERVICES INC.



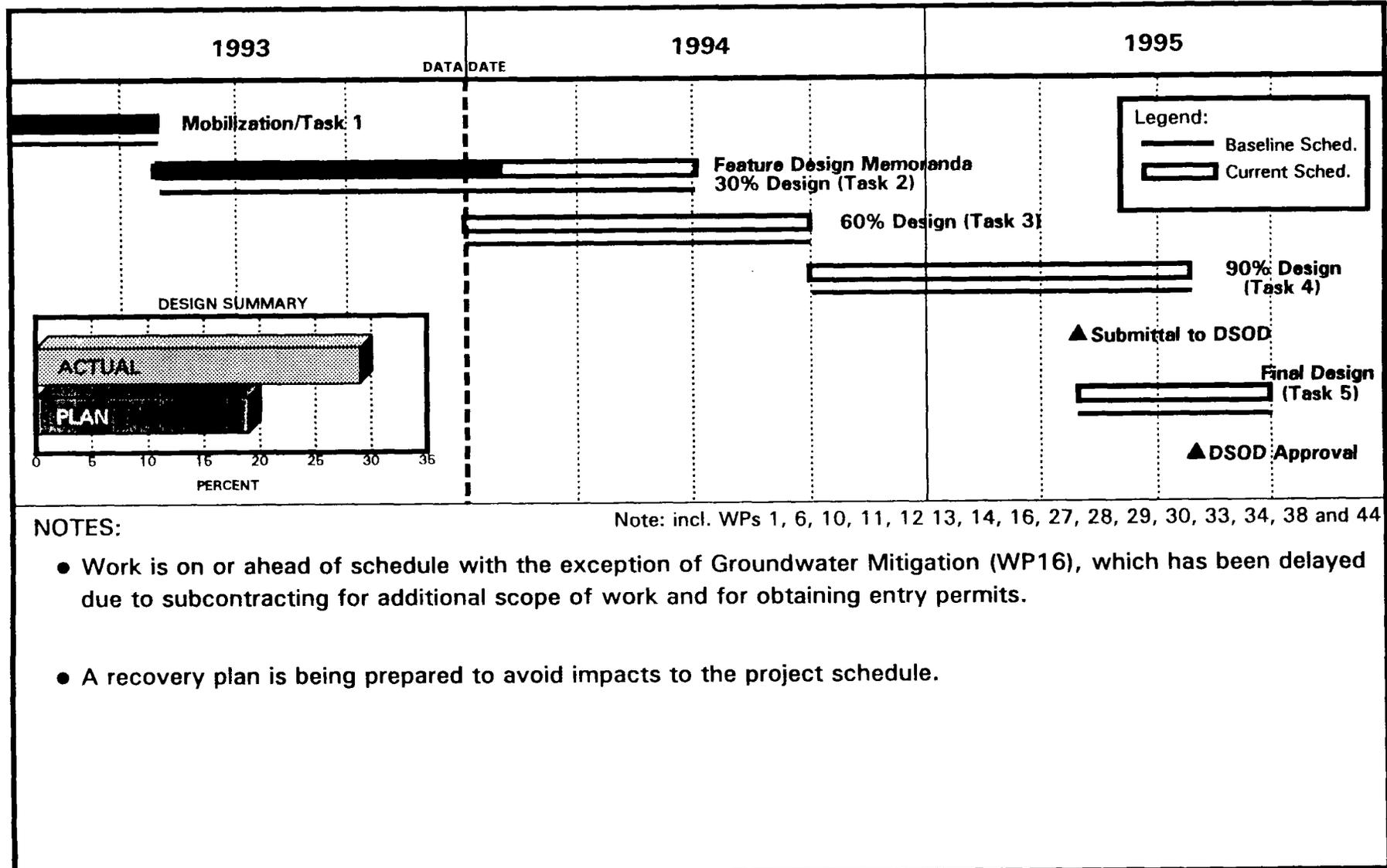
Note: incl. WPs 7, 8, 9, 20, 21, 25, 39 and 42

NOTES:

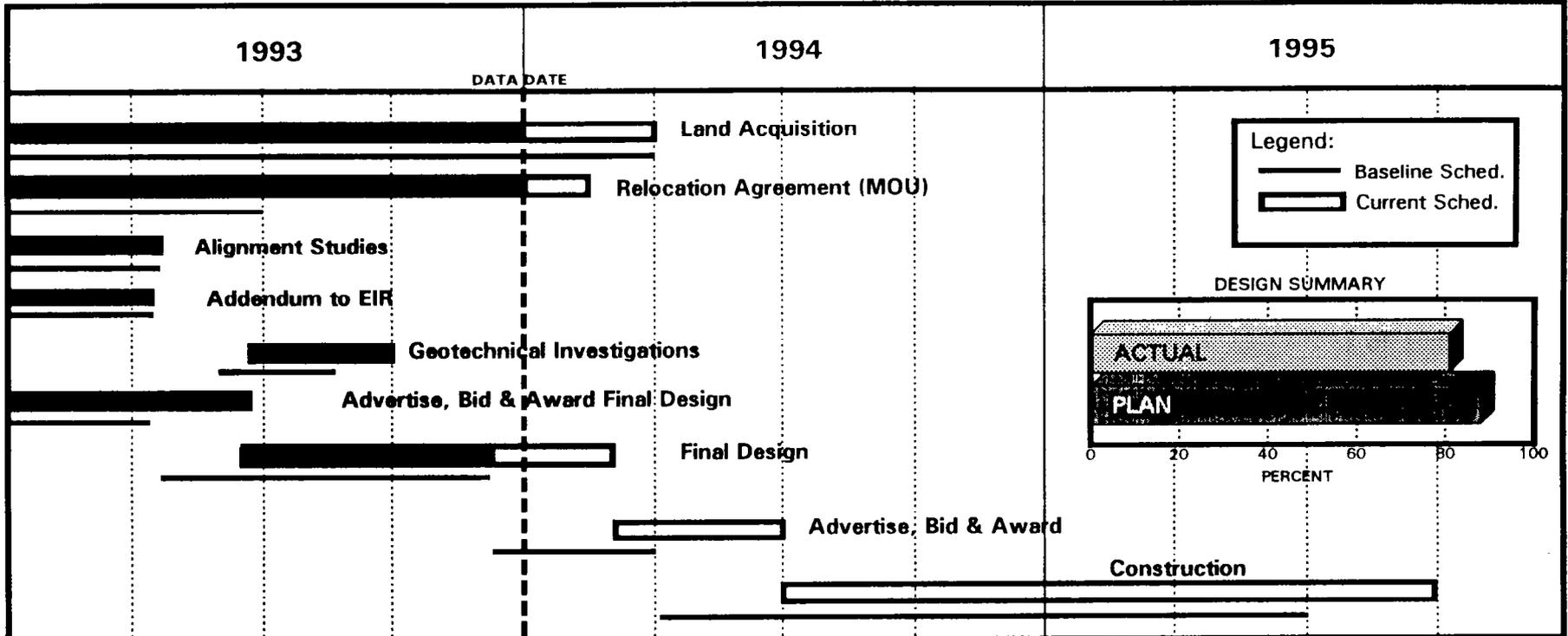
- Significant progress was made this quarter towards the development of selected cross sections for the three dams.
- Design delays have been recovered through the application of additional resources and expediting of information from the Phase B field geotechnical investigations.
- Due to the difficulty of drilling in this area, the North Rim geotechnical investigations are being delayed until the beginning of January when 2 rigs can be utilized.

PUMP-GENERATING PLANTS & HYDRAULIC FEATURES DESIGN

EBASCO SERVICES, INC.



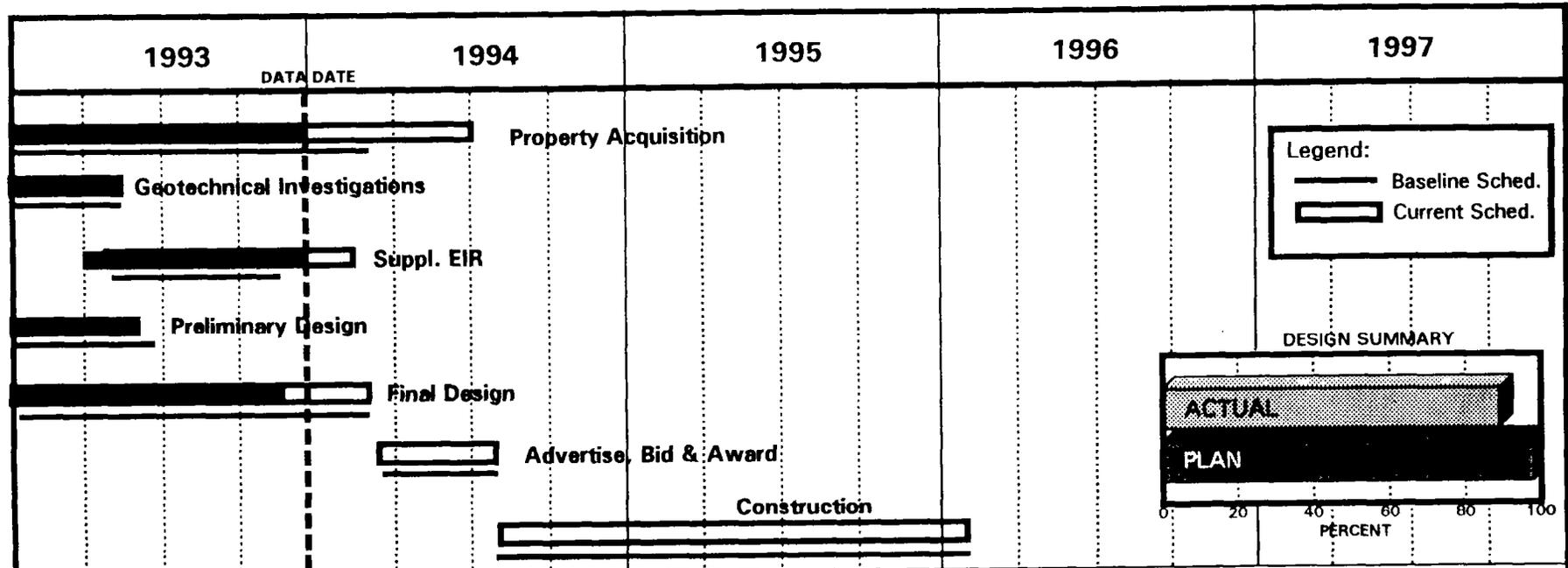
NEWPORT ROAD RELOCATION



NOTES:

- The 90% drawing submittal was made on 15 December 1993, which is 4 weeks behind schedule.
- The final MOU is anticipated in February.
- The geotechnical investigations have been completed.
- Construction is scheduled to begin in July of 1994.

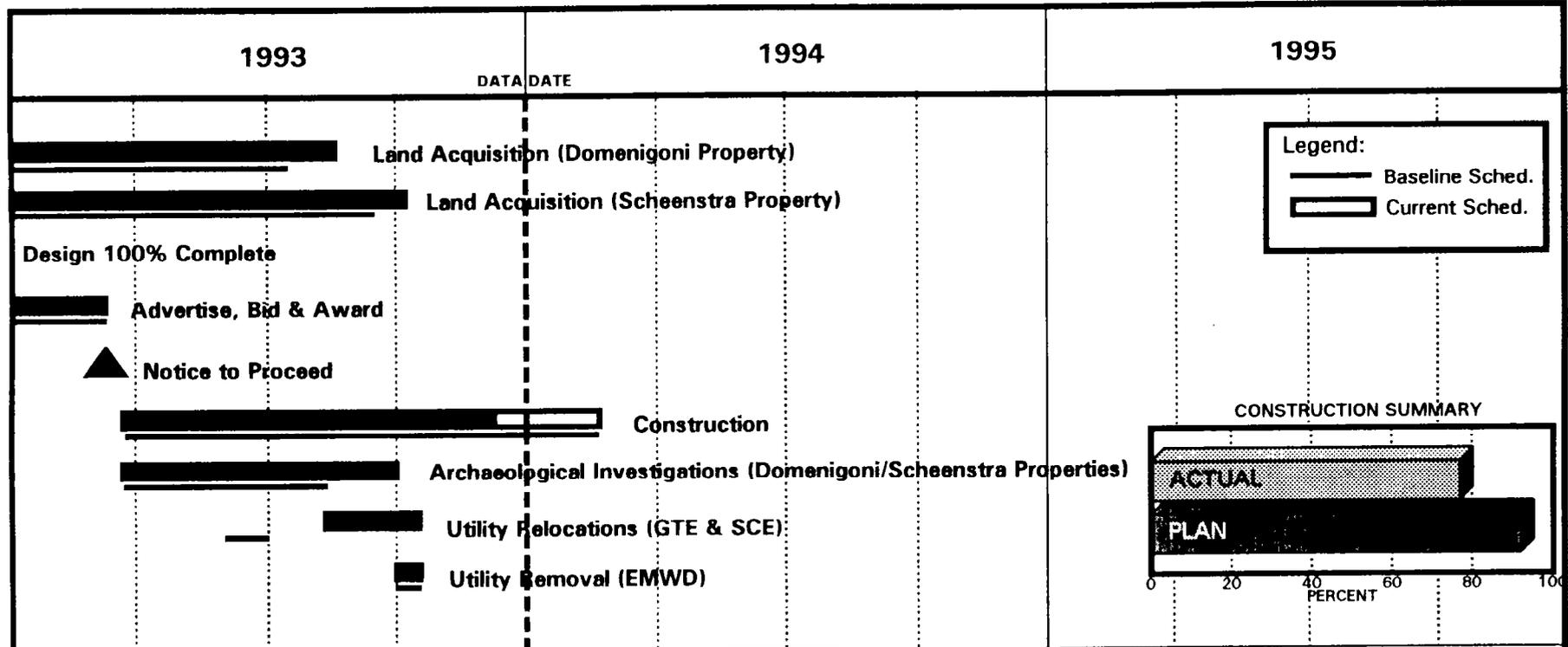
EASTSIDE PIPELINE



NOTES:

- Design work is two months behind schedule. Unanticipated interface requirements at the Secondary Inlet have delayed design completion until the end of January.
- Approval of the SEIR has slipped to mid-February. Offers on property can begin in January, after receipt of draft SEIR comments.
- The June construction date is still achievable, but the probability has slipped to 80%.
- Planned real estate acquisition dates through June 94 must be met to maintain the construction schedule.

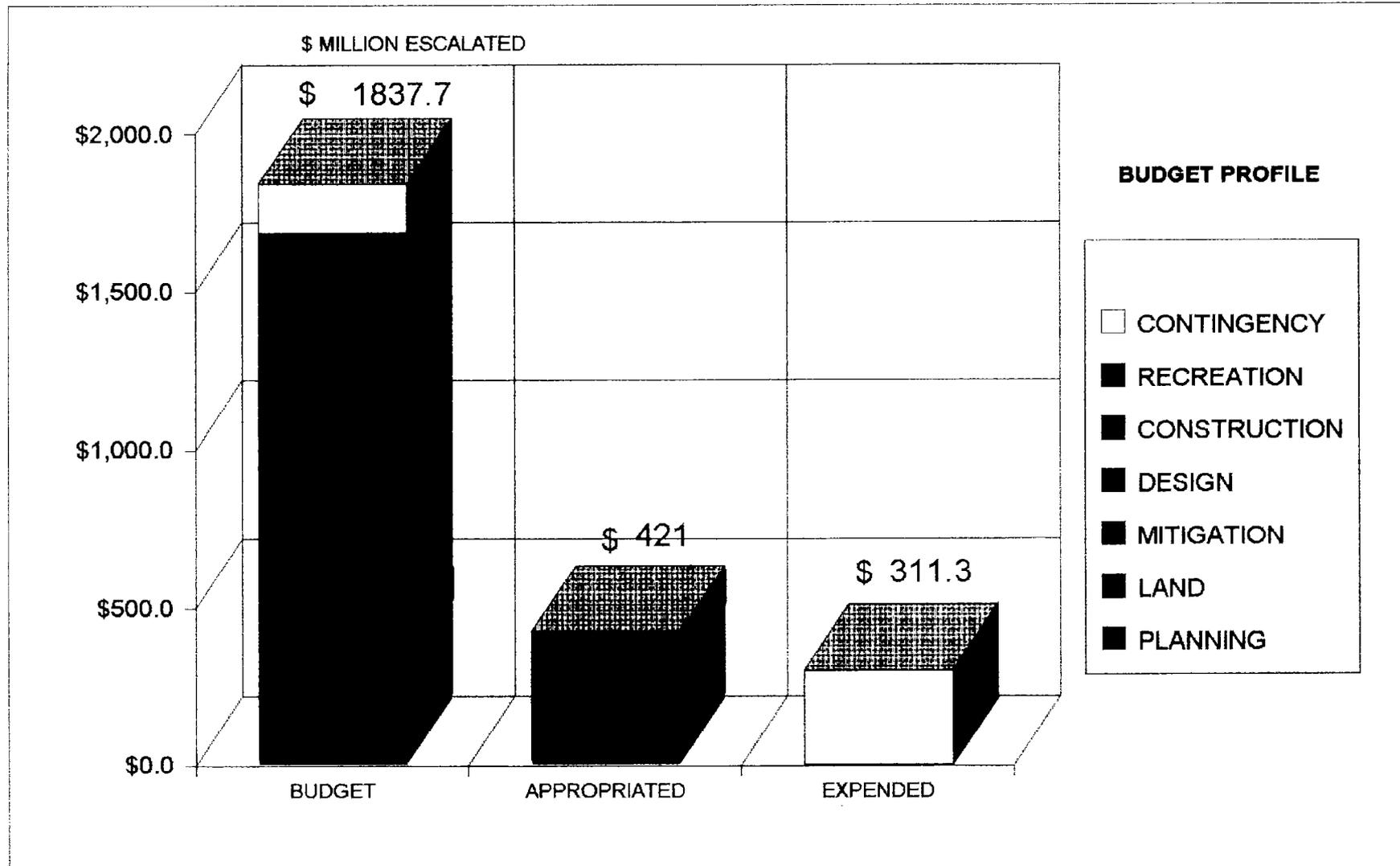
SAN DIEGO CANAL RELOCATION



NOTES:

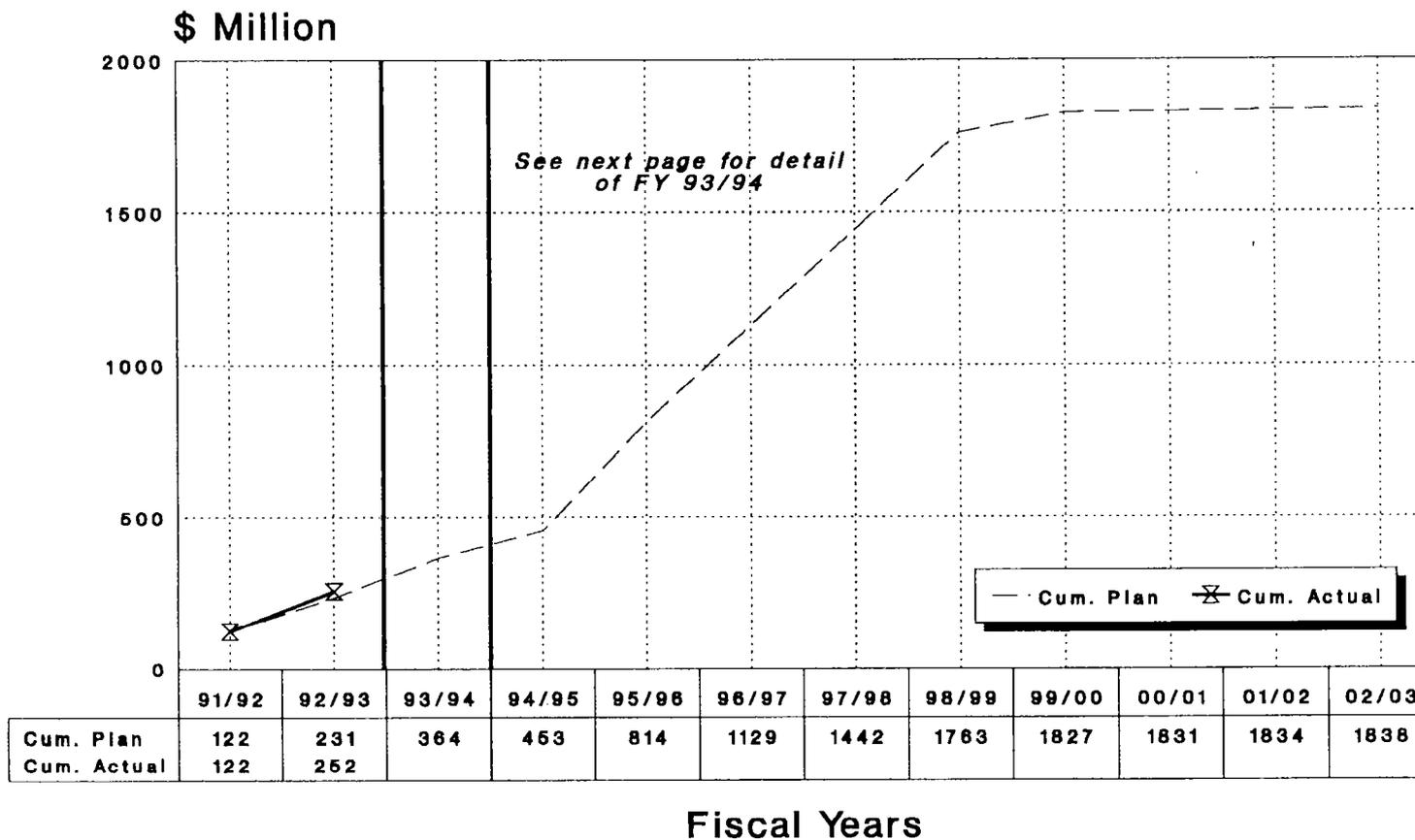
- Significant progress was made during December. Only one work day was lost due to rain. The current state of completion remains 1 month behind schedule.
- Anticipated completion is forecast to be on target for mid-February.
- Completed structural backfill operations throughout the canal relocation area.
- Canal lining and trimming is 68% complete.
- Embankment work is proceeding on two shifts with a Monday through Saturday work week in order to expedite the completion of canal lining operations.

FINANCIAL PROFILE



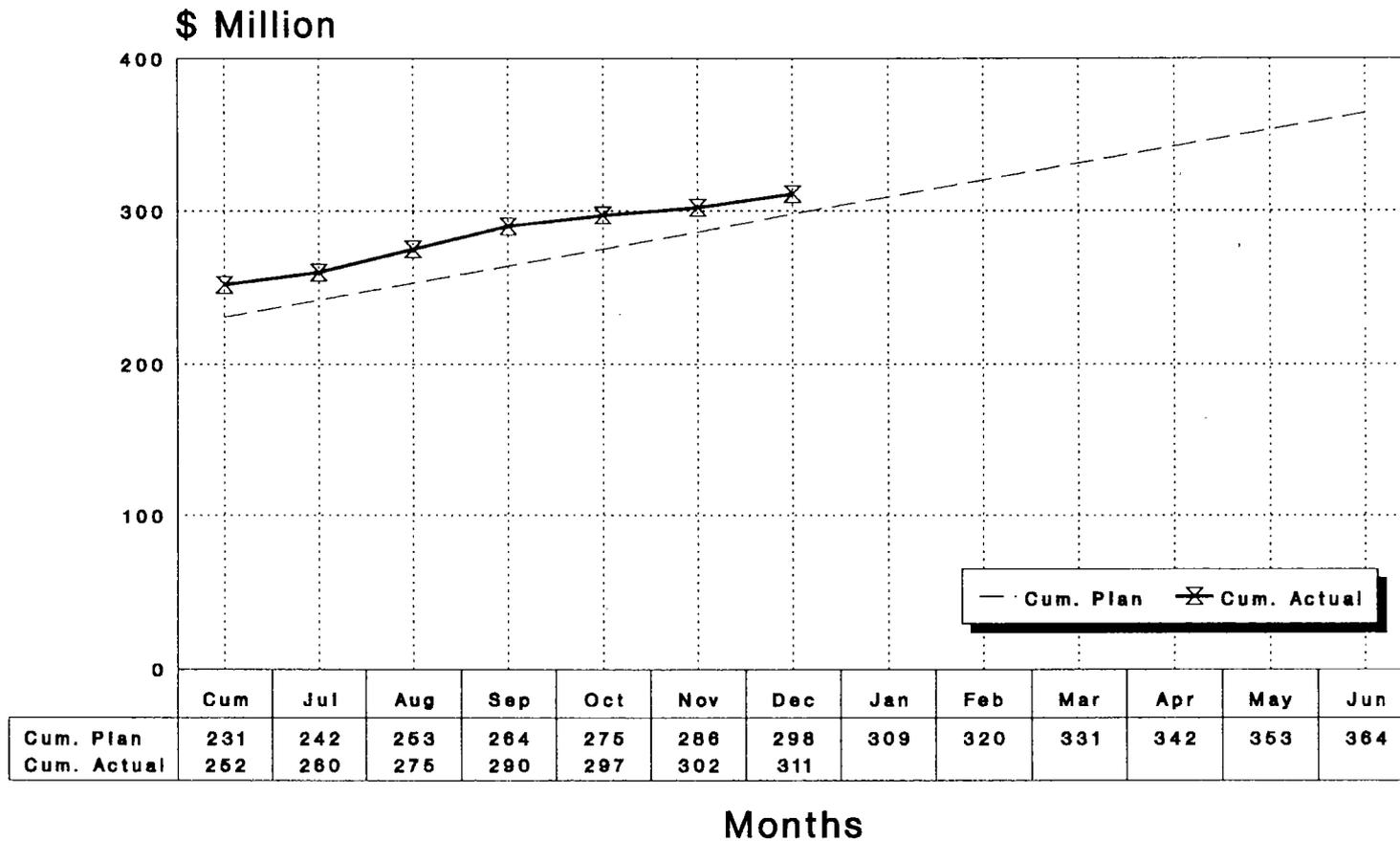
TOTAL PROJECT CASH FLOW

Cumulative (FY 1993/1994)



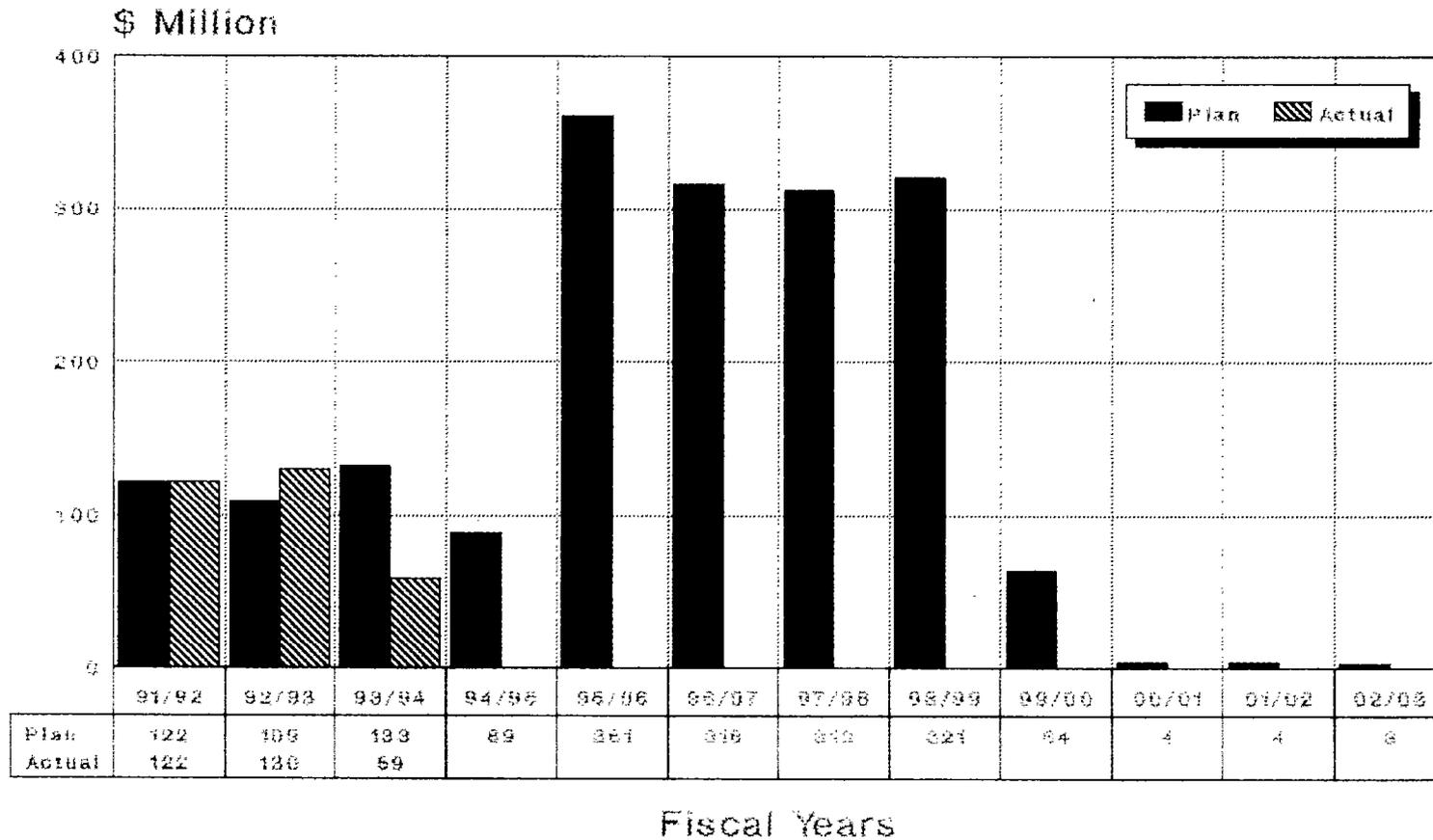
TOTAL PROJECT CASH FLOW

Cumulative (FY 1993/1994)

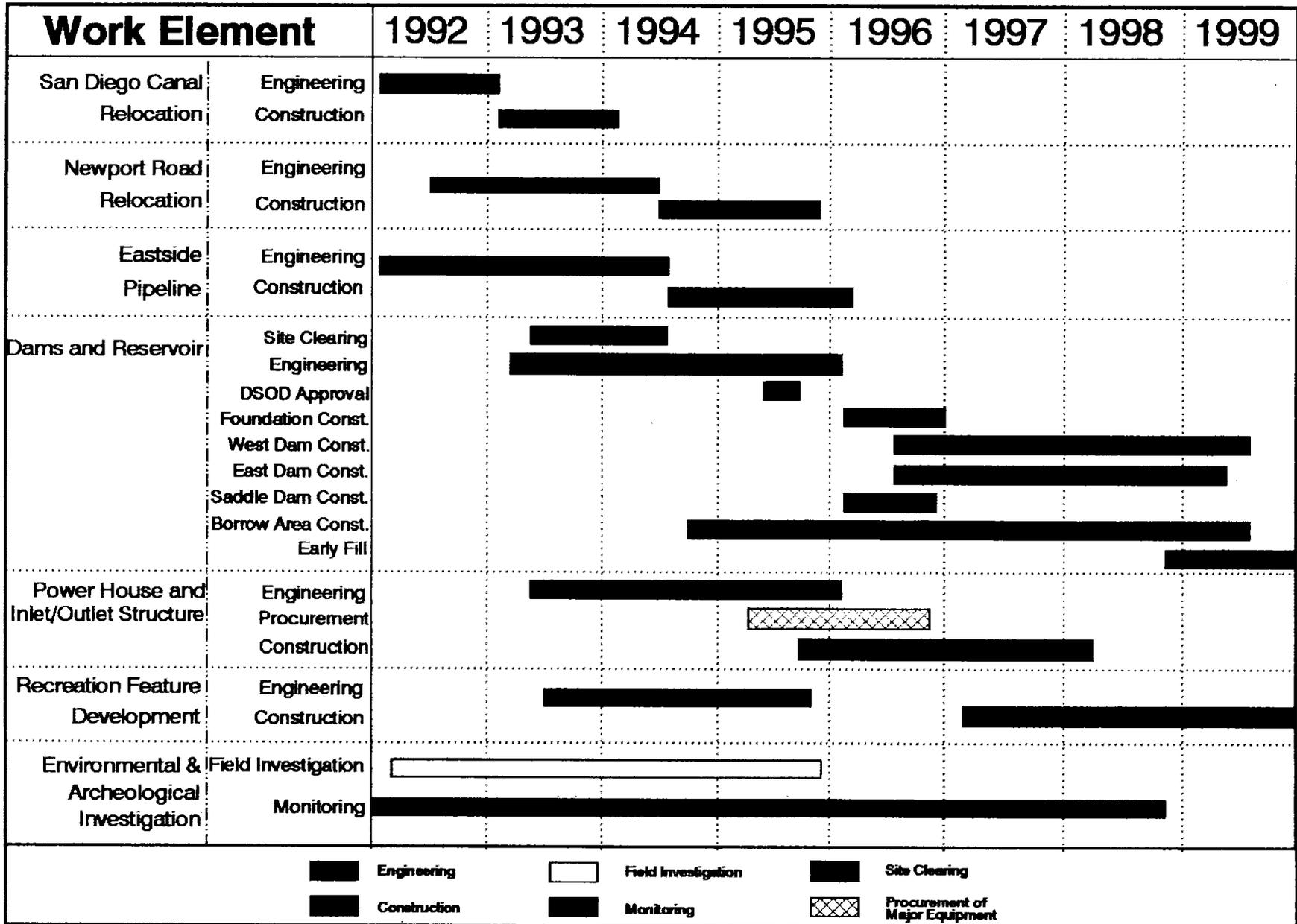


TOTAL PROJECT CASH FLOW

Annual (FY)



NOTE 1: FY 92/93 OVERRUN DUE TO ADDITIONAL LAND ACQUISITION
 NOTE 2: FY 93/94 ACTUAL \$ REPRESENTS COSTS THRU REPORT DATE.



MBE/WBE AND LOCAL PARTICIPATION

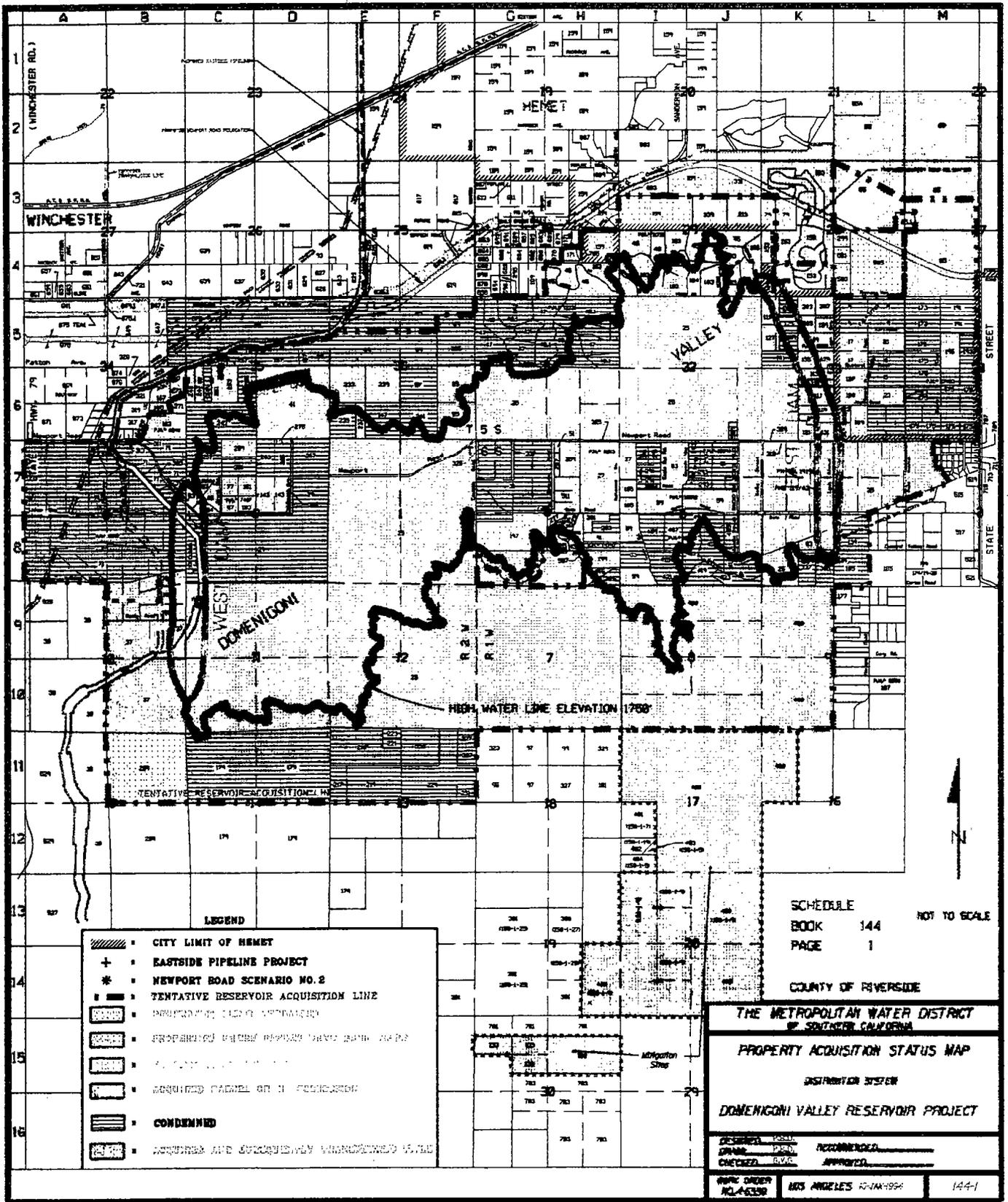
The project team is committed to strong MBE/WBE participation and to a minority affirmative action program. Targets have been established contractually for some participants, and are strongly encouraged for others.

CURRENT MBE/WBE PARTICIPATION

Company	Metropolitan	Ebasco	Parsons
Act I		X	
Amvigor Engineering Services	X		
Fay Tech Services	X		X
Greenwood Associates	X		
Cordoba Corporation			X
American Caisson, Inc.		X	
BSI Consultants, Inc.		X	
CJ Drilling Supply		X	
CVS Wood Workings, Inc.		X	
Dean Ryan Consultants		X	
E. W. Moon Incorporated		X	X
H2O to Go		X	
Lamary & Associates		X	
Mitchell Snow, Inc.		X	
Pitcher Drilling		X	
PMI Co., Inc.		X	
San Diego Drilling		X	
Sunroad Kearny Mesa Ford		X	
Tri County Drilling		X	
Virgil Baker Company		X	

PERCENT FINANCIAL PARTICIPATION

Company	Cumulative Participation		
	MBE	WBE	Local
Ebasco	11.2%	2.2%	2.3%
Parsons	5.3%	3.4%	0.0%
NBS/Lowry	28.9%	0.0%	0.0%
Total	10.7%	2.1%	1.8%



PROPERTY ACQUISITION STATUS (DECEMBER)

ISSUES AND POTENTIAL RESOLUTIONS

ISSUE

POTENTIAL RESOLUTION

- Increased scope of work for the Eastside Pipeline due to additional permanent right-of-way acquisition and addition of the Secondary Inlet, requiring a Supplemental Environmental Impact Report (SEIR) and extension of the design period. Work on plans and specifications is continuing. Design documents will be completed adequately in advance of planned advertise dates. Offers or proposals will be made following receipt of public comments. Design completion, advertising, award recommendation, and Board approval are planned to coincide with final property acquisition by July 1994.

GOALS FOR NEXT QUARTER

Design

General

- Perform a value engineering study to reduce the cost of the Temporary Visitor Center and revise the plans and specifications.
- Revise the Temporary Visitor Center design to substitute a fire detection system for the fire protection sprinkler system. Resubmit as the 100% design with drawings, specifications, and the cost estimate. Put the contract out to bid.
- Issue the NTP to Asphalt Coating and Space Leasing Co. for Field Office construction. The scheduled construction period is 140 work days with completion in June 1994.
- Issue the final draft Fugitive Dust Control Plan for submittal to SCAQMD.
- Finalize the report on precedents for dams on bedrock foundations and seismic case histories for the Dam Alternatives Study.
- Select a consultant for the construction Owner Controlled Insurance Program to develop and implement Metropolitan insurance requirements prior to the beginning of construction.

Dams

- Prepare updated dam design information for the Board of Consultants meetings scheduled for January 18-20.
- Submit the General Design Memorandums (GDMs) for the 3 dams.
- Prepare draft Bedrock Foundation Excavation Reports for all three dams.

GOALS FOR NEXT QUARTER (continued)

- Submit draft Dam Design Criteria for internal review.
- Complete the draft General Design Memorandums (GDMs) for the 3 dams and begin Final Design Memorandum (FDM) preparation.
- Complete the development of seismic parameters, including time histories for the East and West Dams and initial dynamic response analysis and Newmark seismic deformation analysis for the West Dam.
- Submit the following draft reports for Metropolitan review:

Draft and final General Design Memorandums for the East, West, and Saddle dams
Draft Bedrock Foundation Excavation Report for the Saddle Dam

- Submit the following final reports to Metropolitan:

Precedents for Dams on Bedrock Foundations (including seismic case histories)
Key Seismic Sources for the Fault Hazards Study of the East Dam
Core Cutoff Alternatives Report for the Saddle Dam

Pump Generating Plants and Hydraulic Facilities

- Submit the following draft studies and reports:
 - Draft Clearing and Grubbing FDM
 - PG-1 Unit Selection Study
 - PG-1 Hydraulic and Emergency Release System Study
 - PG-1 Transmission System/Switchyard Configuration Study
 - PG-1 System Design Specifications
 - PG-1 Major Equipment System Design Specifications

GOALS FOR NEXT QUARTER (continued)

PG-1 Site Arrangement Report
PG-1 Cost Schedule and Cost Estimate
G-2 Unit Selection Study
G-2 Hydraulic Transient Study
G-2 Site Arrangement Study
G-2 Powerhouse Layout
G-2 Transmission System/Switchyard Study
G-2 Bypass System Selection Study
Forebay Lining Alternatives Study
Forebay Configuration Study
Forebay Spillway Configuration Study
Forebay Lining, Stability, and Slope Protection Study
Tunnel Alternative Portal & Alignment Study
Tunnel Lining Alternative Study
Spillway Alternative Configuration & Alignment Study
Spillway Probable Maximum Flood Study
Inlet/Outlet Tower Valve and Gate Selection Study

- Prepare a Request for Proposal for the Inlet/Outlet Tower Hydraulic Model.
- Submit the following FDM's for Metropolitan review:
 - 01 Clear and Grub/Demolition
 - 11 Forebay
 - 34 Spillway
 - 44 Site Development and Access Roads
- Award the Groundwater Monitoring Well subcontract and begin monitoring for input to the groundwater model.

GOALS FOR NEXT QUARTER (continued)

Field Geotechnical Investigation

- Submit the final Field Geotechnical Investigation Phase B Reports for the dams, borrow areas and hydraulic structures. Work on the North Rim will continue into January.
- Complete the Field Geotechnical Program and demobilize field activities.

East and West Dams

- Complete remaining lab tests of soil samples.
- Finalize geologic mapping, and fault hazard studies.
- Perform any additional borings and test trenches as approved.
- West Dam - Partially backfill the exploratory trench, remove pumps and piping, and prepare the draft report.

Saddle Dam

- Perform any additional borings and test trenches as approved.
- Complete geological mapping and additional trenches.

Borrow Areas

- Prepare testfill base and begin rock testfills from Borrow areas 5, 2, and in mid-January.
- Complete all onsite and offsite lab testing of rock and soil samples.

GOALS FOR NEXT QUARTER (continued)

- Complete the alluvial test fill.
- Prepare draft reports on all rock test blasts and rock test fills.
- Review available data and plan preliminary alluvial borrow exploration between the East Dam and State Street.
- Prepare specifications for concrete aggregate and dam filter materials to be crushed from Borrow Area 2 materials.

North Rim

- Complete rock core drilling and packer testing.

Hydraulic Structures

- Perform rotary wash borings at G-2 site and amend the Phase B reports as necessary.
- Perform rotary wash borings at the G-2 site.

Advance Relocations / Construction

Newport Road Relocation

- Receive and incorporate public agency plan check comments into the drawings and resubmit to the agencies for their further review. Locate, define and enclose a designated borrow area on Parcel 89 for contingency purposes.
- Obtain final approval of the MOU by all involved agencies.
- Make arrangements with EMWD for relocation of their facilities at Newport Road and the Salt Creek Channel.

GOALS FOR NEXT QUARTER (continued)

- Prepare an Engineering Change Order to reflect the current scope of work, cost and schedule.
- Finalize the construction specifications for Newport Road and the Salt Creek Channel.
- Obtain approval to acquire the Douma Dairy property following completion of justifying documentation.
- Complete new drawings, based on current topographic data, to determine the drainage requirements along Douma Dairy.
- Obtain possession of the Garrett property and assess the suitability of site facilities for the construction office.
- Complete the hydraulic design for the Salt Creek extension and finalize the drawings for the channel.
- Finalize the intersection designs for Highway 79, Warren Road, Sanderson Avenue and State Street.
- Finalize the bridge design for the San Diego Canal and the Lyon Avenue crossing.

Eastside Pipeline

- Complete the Secondary Inlet interface design.
- Complete the plans and specifications with a coordination sign-off by the design branches scheduled for January 20.
- Prepare the bid documents and cost estimate by March 1.
- Issue a memorandum to acquire 25' of permanent easement at selected areas. Receive comments and incorporate into a final memo for signature.
- Conduct public hearings for the SEIR on January 18 and submit the SEIR for Board approval at the February Board meeting. Prepare the final SEIR.

GOALS FOR NEXT QUARTER (continued)

- Complete the flood control plan and utility location plan.

San Diego Canal Relocation

- Complete all construction work by February 10, weather permitting. Work remaining consists of:
 - Finishing the canal lining, which is now 68% complete.
 - Completing the remaining embankment at the south end.
 - Installing the radial gate.
 - Completing the transitions to the South Siphon.
 - Completing installation of embedded electrical conduits and tie-ins.
 - Installing the perimeter security fence.
 - Stockpiling embankment material at both ends of the canal for use during the tie-in shutdown.
- Construct the tie-in to the existing San Diego Canal at the north and south ends.

Program Management

- Prepare the refined construction packaging plan.
- Finalize the contract with UC Riverside to oversee research efforts at the Multi-Species Reserve.
- Review the Historic and Prehistoric reports prior to transmittal to SHPO.
- Develop a database to coordinate property leases with design, recreation and construction requirements.
- Finalize the facilities purchase agreement with EMWD.

GOALS FOR NEXT QUARTER (continued)

- Provide program management requirements at the kickoff meeting for Field Office construction. Receive and input schedule information.

Mitigation

- Continue development of a comprehensive Reserve Management Plan
- Continue construction of the Lake Skinner Equestrian Trail.
- Receive Board authorization and enter into a reburial agreement with the Native American Community.
- Finalize the contract with the San Bernardino County Museum for paleontological monitoring during construction.

Multi-Species Reserve

- Prepare Requests for Proposals for biological survey of the Reserve.
- Develop a fire management plan for Lake Skinner.

Prehistoric

- Bring the Prehistoric Archaeology Cultural Resource Reports up to the following stages of completion:

Survey Report Nos 1-4: Final reports sent to SHPO in 4thQ 93

Survey Report Nos. 5, 6, and 7: Send final reports to SHPO

Survey Report Nos. 8 and 9: Send draft reports to SHPO

Survey Report No. 10: Send second draft to MWD

Survey Report Nos. 11 and 12: Send first draft reports to MWD

Survey Report No 13: Send final report to SHPO

Testing and Evaluation Report Nos. 1-4: Final reports sent to SHPO in 4thQ 93

GOALS FOR NEXT QUARTER (continued)

Testing and Evaluation Report Nos 5 and 6: Send final reports to SHPO

Testing and Evaluation Report No. 7: Send draft report to SHPO

Testing and Evaluation Report No. 8: Send draft report to MWD

- Finalize a formal reburial agreement with the Native American community following approval by the Board of Directors.
- Complete the archaeological surveys in the Shipley Reserve and Lake Skinner area.
- Submit the revised draft Letter Clearance Report for Phase 3 Data Recovery Excavations for 2 sites in the hard rock borrow areas for Metropolitan submittal to SHPO for review and comment.
- Complete data recovery excavations at the West Dam footprint. (This excavation will complete fieldwork in the high priority construction areas.)
- Begin data recovery excavations at sites in low priority construction areas. Four sites have been recommended to Metropolitan for data recovery.

Historic

- Bring the Prehistoric Archaeology Cultural Resource Reports up to the following stages of completion:

Research and Design Report: Send final report to SHPO

Testing and Evaluation Report Nos. 1 and 2: Send final reports to SHPO

Testing and Evaluation Report Nos. 3 and 4: Process SHPO comments to draft report

Testing and Evaluation Report No. 5: Send draft report to SHPO

Testing and Evaluation Report No. 6: Begin preparation

- Issue the final draft Fugitive Dust Control Plan to the South Coast Air Quality Management District.

GOALS FOR NEXT QUARTER (continued)

Land Acquisition

- Begin development of a methodology for evaluating hazardous materials remediation costs for demolition or preparation for auctions, against potential returns through auctions. The results will determine the most cost-effective approach for disposal of hazardous material affected structures.
- Develop database to coordinate property leases with design, recreation and construction requirements.
- Continue to obtain parcels in the priority sequence identified by the field and reported on the Domenigoni Parcel Status Report.
- Continue to work towards the goal of relocating all commercial property owners by July of 1994.
- Conduct fourth auction of homes and equipment in February.

Public Awareness

- Finalize plans for the San Diego Canal Relocation dedication ceremony.
- Initiate arrangements for paleontological artifacts display in Hemet Library.
- Publish the 2nd Update Bulletin, the Project Fact Sheet and Environmental brochure.

Recreation

- Evaluate the results of the December 4 Recreation Working Group Workshop and revise the draft recreation plans for evaluation by Metropolitan and the Recreation Working Group.
- Prepare for and conduct the February Recreation Working Group workshop with the goal of reaching a consensus on a Recreation Plan within the proposed budget.

GOALS FOR NEXT QUARTER (continued)

- Prepare a draft Recreation Operation and Management Plan, consistent with the successful performance guidelines, for evaluation by Metropolitan.
- Prepare additional economic analyses in response to the Recreation Working group proposals.