

DRAFT
ENVIRONMENTAL IMPACT REPORT

for the

SACRAMENTO ARMY DEPOT
REDEVELOPMENT PLAN

State Clearinghouse Number: 94122038



March 1995

Lead Agency:

Sacramento Housing and Redevelopment Agency

Environmental Consultant:

GAIL ERVIN CONSULTING

Contributions by:

Michael Brandman Associates

PAR Environmental Services

Fowkes and Associates

SACRAMENTO HOUSING AND REDEVELOPMENT AGENCY

MEMORANDUM

DATE: March 2, 1995

TO: Interested Persons and Responsible/Trustee Agencies

FROM: Gail M. Ervin *GME*
Acting Environmental Coordinator

SUBJECT: SACRAMENTO ARMY DEPOT REDEVELOPMENT PLAN DRAFT
ENVIRONMENTAL IMPACT REPORT

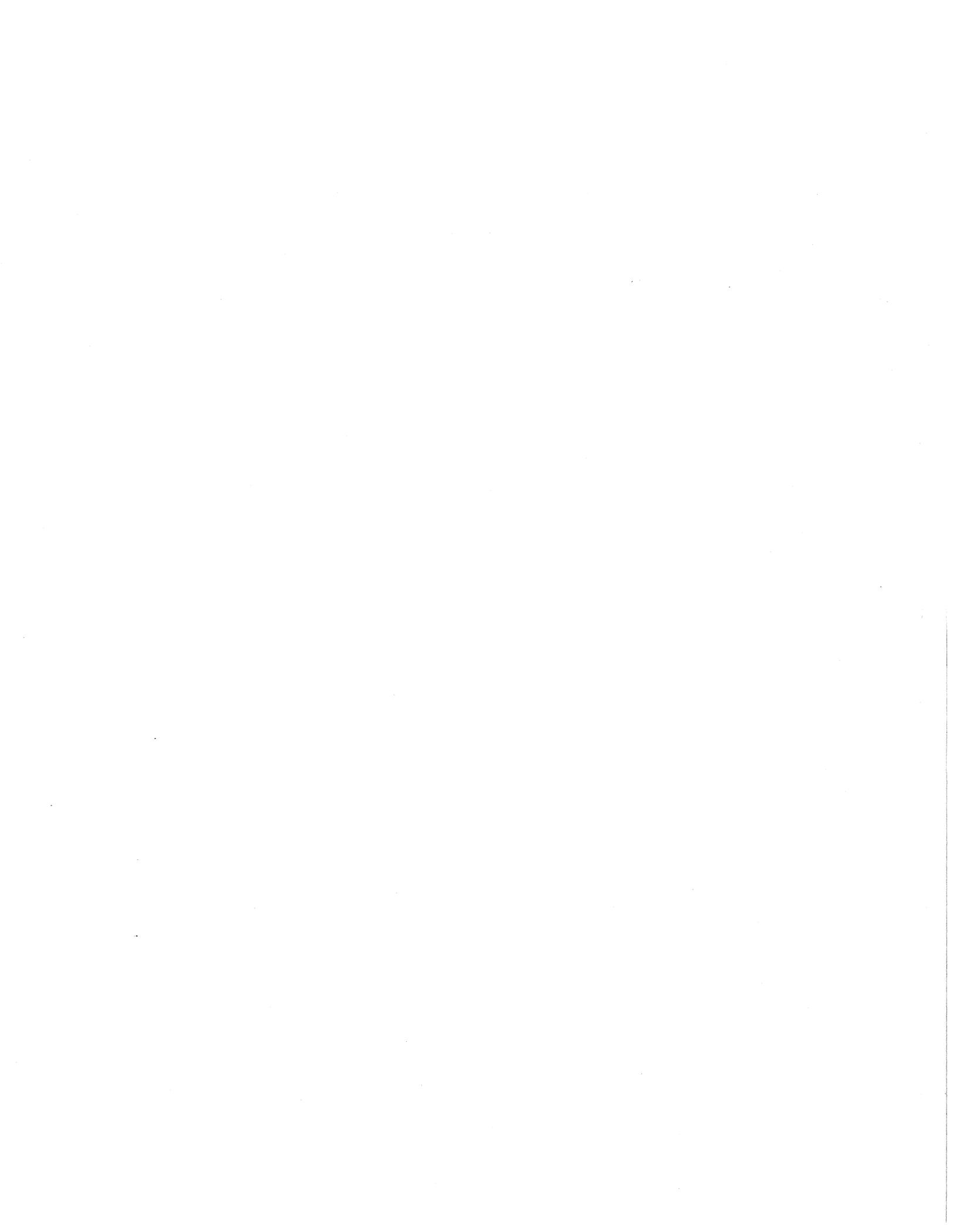
NOTICE is hereby given that a Draft Environmental Impact Report (DEIR) has been prepared by the Sacramento Housing and Redevelopment Agency and is available for public review pursuant to State CEQA Guidelines.

LOCATION: The proposed Project Area is bounded by 14th Avenue to the north, Elder Creek Road on the south, Power Inn Road on the west, and slightly east of Florin-Perkins Road on the east.

GENERAL DESCRIPTION: The proposed Project consists of the adoption and implementation of a Redevelopment Plan for the Sacramento Army Depot Redevelopment Project Area (Project Area), in accordance with the California Community Redevelopment Law. The Project Area encompasses approximately 1,420 acres in the City of Sacramento. The proposed Redevelopment Plan provides for development and rehabilitation of the Project Area in accordance with the City of Sacramento General Plan and the South Sacramento Community Plan. The Redevelopment Plan provides for public improvements within the Project Area, including circulation improvements, such as traffic signals, street lights, and street improvements; water, sewer, and flood control improvements throughout the Project Area; and other improvements such as curbs, sidewalks and gutters on local streets, and transit capital improvements.

REVIEW: The DEIR can be reviewed at the Sacramento Housing and Redevelopment Agency, 630 I Street, 2nd Floor, Environmental Office, Sacramento, California 95814. **Comments must be received no later than 5:00 pm, April 18, 1995.** A public hearing will be held on this DEIR by the Sacramento Housing and Redevelopment Commission on April 5, 1995, 6:00 pm, at 600 I Street, Sacramento.

Questions or comments regarding the DEIR should be directed to Gail M. Ervin, Acting Environmental Coordinator, at the above address, or by phone at (916) 989-0269.



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for the

SACRAMENTO ARMY DEPOT
REDEVELOPMENT PLAN

State Clearinghouse Number: 94122038

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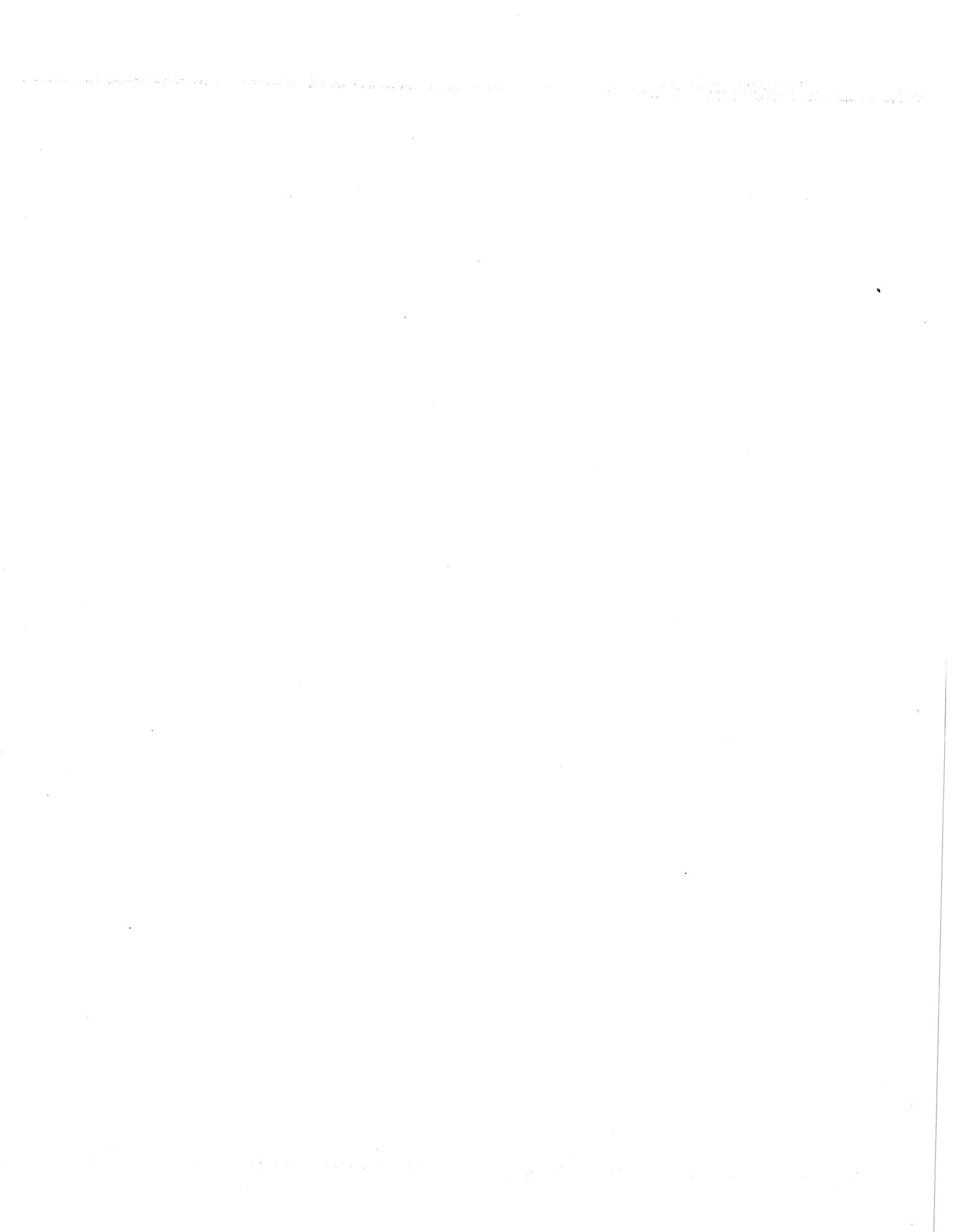
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1.0

Introduction



1.0 INTRODUCTION

1.1 PROJECT UNDER REVIEW

The proposed project is the adoption and implementation of a Redevelopment Plan for approximately 1,420 acres in the City of Sacramento. The proposed Sacramento Army Depot Redevelopment Project Area (Project Area) is bounded by 14th Avenue to the north, Elder Creek Road on the south, Power Inn Road on the west, and slightly east of Florin-Perkins Road on the east. The area is currently developed with a former Army depot facility, industrial and heavy commercial uses, and a small number of residential uses.

Among the purposes of the Redevelopment Plan would be the provision of incentives for investment in the area. Under the California Community Redevelopment Law, the area would be eligible for tax-increment financing, which would generate revenues for the construction and rehabilitation of low- and moderate-income housing and industrial properties, as well as infrastructure improvements. While no specific land use changes have been proposed as part of the Plan, development of the Project Area consistent with the City of Sacramento General Plan and Community Plans could result in the conversion of non-conforming uses, as well as infill development. Proposed public improvements include the improvement of streets in the area, water and sewer upgrades, and transit improvements.

1.2 BACKGROUND TO EIR PREPARATION

Section 15021 of the California Environmental Quality Act (CEQA) Guidelines requires governmental bodies in California to ". . . give major consideration to preventing environmental damage . . . in regulating public or private activities"

For a proposed activity or "project" subject to CEQA, such consideration is accomplished through the preparation of a series of environmental documents. An Initial Study is prepared that determines the potential for significant environmental impacts. If the Initial Study determines that the project may have a significant effect on the environment, an Environmental Impact Report (EIR) is prepared. If the Initial Study determines that the project will not have a significant effect on the environment, or that mitigation measures added by the project sponsor will reduce the effects to a level of insignificance, a Negative Declaration is prepared.

Under the CEQA Guidelines, the agency with the primary role in carrying out or approving a project is designated as the Lead Agency, and other agencies with "discretionary approval power" over the project are identified as Responsible Agencies. The Redevelopment Agency of the City of Sacramento (Agency) is the designated Lead Agency for approval of the proposed Redevelopment Plan. The Sacramento Housing and Redevelopment Agency (SHRA) serves as staff to the Agency. Other agencies with discretionary approval power or involved in review of the Project are listed in Section 1.6.

1.3 PURPOSE OF THE DOCUMENT

This document is a program EIR, prepared to evaluate the potentially significant effects of activities and development pursuant to the proposed Sacramento Army Depot Redevelopment Plan. Use of a program EIR allows the Agency to evaluate the impacts of the proposed Redevelopment Plan at a comprehensive level of detail, focusing on areawide and cumulative impacts and programmatic mitigation measures. Potential direct impacts that could result from public improvements and facilities projects proposed as part of the Plan are also evaluated.

According to CEQA Guidelines Section 15180(a), "All public and private activities or undertakings pursuant to or in furtherance of a redevelopment plan constitute a single project, which shall be deemed approved at the time of adoption of the redevelopment plan by the legislative body." CEQA Guidelines Section 15180(b) states, "An EIR on a redevelopment plan shall be treated as a program EIR with no subsequent EIRs required for individual components of the redevelopment plan unless a subsequent EIR or a supplement to an EIR would be required. . . ."

This document, then, will serve as the environmental baseline for subsequent approvals pursuant to implementation of the Redevelopment Plan. Additional environmental review for those approvals could be required if 1) the actions proposed are not encompassed by the Redevelopment Plan, 2) substantial changes occur with respect to conditions in the area or other circumstances, or 3) new information becomes available that indicates additional or more severe significant effects.

The EIR is the public document used to analyze the adverse environmental effects of a proposed project, to indicate ways to reduce or avoid possible environmental degradation, and to identify alternatives to the project that would reduce or avoid the significant adverse effects of the proposed project. The EIR must also disclose: significant adverse environmental impacts that cannot be avoided; growth-inducing impacts; effects found not to be significant; and significant cumulative impacts of past, present and reasonable anticipated future projects. An EIR is an informational document used in the local planning and decision-making process. It is not the purpose of an EIR to recommend either approval or denial of a project.

The Sacramento Army Depot Redevelopment Plan EIR has been prepared in compliance with CEQA and the environmental guidelines of SHRA. This document has been compiled from a variety of sources, including published and unpublished studies, applicable maps, aerial photographs and independent field investigations. The information in this report is subject to review by SHRA, the City of Sacramento, other interested and responsible agencies, and the public.

1.4 DOCUMENTS INCORPORATED BY REFERENCE

Land use in the Project Area is governed by applicable City of Sacramento plans, policies, and ordinances. The environmental impacts of growth in the Project Area were assessed in the applicable environmental documents prepared for the City of Sacramento General Plan and the Sacramento Army Depot Reuse Plan. This information is summarized as necessary throughout the text, and the following documents are hereby incorporated by reference:

City of Sacramento General Plan, City of Sacramento, January 1988.

Draft and Final Environmental Impact Reports, City of Sacramento General Plan, City of Sacramento, March 1987 and September 1987.

The South Sacramento Community Plan, August 1986.

City of Sacramento Zoning Ordinance. Revised July 1987.

Florin Perkins Enterprise Zone Environmental Impact Report

Draft Environmental Impact Reports: Land Use Planning Policy within the 100-year Flood Plain in the City and County of Sacramento. September 1989.

Reuse Plan for the Sacramento Army Depot, City of Sacramento, presented June 20, 1994.

Sacramento Army Depot Reuse Plan, Draft Environmental Impact Report, City of Sacramento, June 1994

Final Environmental Impact Statement, Sacramento Army Depot Disposal and Reuse, Department of the Army, October 1994.

Air Quality Thresholds of Significance, January 1995, Sacramento Metropolitan Air Quality Management District.

Official Register Containing Structures of Architectural or Historical Significance, City of Sacramento, October 6, 1983.

Copies of the documents may be reviewed at:

Sacramento Housing and Redevelopment Agency
630 I Street
Sacramento, CA 95814

1.5 PUBLIC REVIEW

The Agency issued an Initial Study/Notice of Preparation (NOP) for the EIR on the Project on December 13, 1994, and circulated the NOP for a 30 day comment period. The Initial Study indicated that the Project would have the potential to have significant environmental effects, and that therefore, the preparation of an EIR would be necessary. The purpose of the NOP was to solicit guidance from the Responsible Agencies and other parties as to the scope of the EIR. Eight responses to the NOP were submitted by individuals, groups, and public agencies. Copies of the Initial Study/NOP and responses are included as Appendix A and B, respectively.

The Draft EIR will be available for public review for 45 days. During this period, comments on the EIR's accuracy and completeness may be submitted by public agencies, other groups, and concerned individuals. Written comments should be submitted to Ms. Gail M. Ervin, Acting Environmental Coordinator, Sacramento Housing and Redevelopment Agency, 630 I Street, Sacramento, California 95814. Oral comments can be made at a public hearing on the Plan, to be scheduled and publicly noticed by SHRA. All oral and written comments relevant to the content of the Draft EIR received during the public comment period will be addressed in the Final EIR.

1.6 INTENDED USES OF THE EIR

The EIR will be used by the following public agencies in the adoption of the proposed Sacramento Army Depot Redevelopment Plan and approval of implementation activities thereunder:

- ▶ City Council of the City of Sacramento;
- ▶ Redevelopment Agency of the City of Sacramento;
- ▶ Sacramento Housing and Redevelopment Commission;
- ▶ Planning Commission of the City of Sacramento;
- ▶ All Departments of the City of Sacramento who must approve implementation activities undertaken in accordance with the Redevelopment Plan; and
- ▶ All other agencies who may approve implementation activities.

The EIR will be used in the adoption of the Redevelopment Plan and the adoption of and approval of any of the following Project implementation activities that may be necessary:

- ▶ Approval of Disposition and Development Agreements;
- ▶ Approval of Owner Participation Agreements;
- ▶ Approval and funding of public facilities and improvements projects;
- ▶ Sale of tax increment and/or other bonds, certificates of participation and other forms of indebtedness;
- ▶ Acquisition and demolition of property;
- ▶ Rehabilitation of property;

- ▶ Relocation of displaced occupants;
- ▶ Approval of certificates of conformance;
- ▶ Approval of development plans, including zoning and other variances and conditional use permits; including those low and moderate income housing units;
- ▶ Issuance of permits and other approvals necessary for implementation of the Redevelopment Plan.

1.7 FREQUENTLY USED ACRONYMS

A list of acronyms and abbreviations either used in this EIR or frequently found in environmental documents is detailed in Table 1.1, below.

TABLE 1.1: FREQUENTLY USED ACRONYMS AND ABBREVIATIONS

<u>Acronym/ Abbreviation</u>	<u>Definition</u>
ADT	Average Daily Traffic
Ambient Noise Levels	The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
cfs	Cubic feet per second
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
CNPS	California Native Plant Society
CO	Carbon monoxide
COE	U.S. Army Corps of Engineers

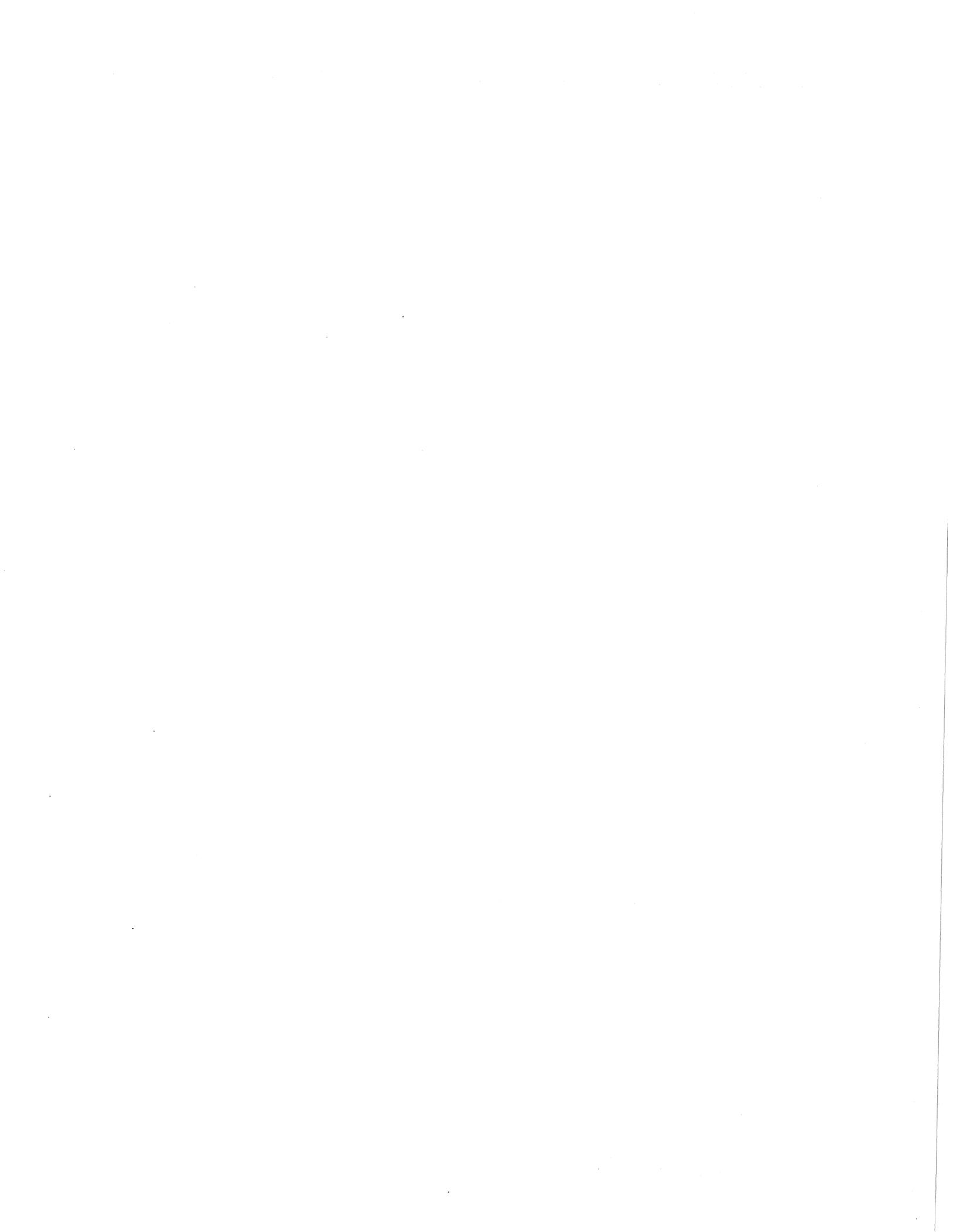
TABLE 1.1: FREQUENTLY USED ACRONYMS AND ABBREVIATIONS (continued)

<u>Acronym/ Abbreviation</u>	<u>Definition</u>
dBA Decibel, dB	A-Weighted Decibel A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
DEIR	Draft Environmental Impact Report
DU	Dwelling Unit
DWR	Department of Water Resources (California)
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
HMD	Hazardous Materials Division (Sacramento County)
HUD	U.S. Department of Housing and Urban Development
L_{dn}	Day-Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.
L_{eq}	Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1-hour, 8-hour and 24-hour sample periods.
LOS	Level of Service
MSL	Mean sea level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
Noise Exposure Contours	Lines drawn about a noise source indicating constant levels of noise exposure. CNEL and L_{dn} contours are frequently utilized to describe community exposure to noise.
NPDES	National Pollutant Discharge Elimination System

TABLE 1.1: FREQUENTLY USED ACRONYMS AND ABBREVIATIONS (continued)

<u>Acronym/ Abbreviation</u>	<u>Definition</u>
PM ₁₀	Particulate Matter (nominally 10 _m and smaller)
PPM	Parts per million
RWQCB	Regional Water Quality Control Board (Central Valley)
SCS	Soil Conservation Service (U.S. Department of Agriculture)
SHRA	Sacramento Housing and Redevelopment Agency
SMAQMD	Sacramento Metropolitan Air Quality Management District
Sound Level	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and gives good correlation with subjective reactions to noise.
SR	State Route
TI	Tax Increment
UBC	Uniform Building Code
UPRR	Union Pacific Railroad
USFWS	U.S. Fish and Wildlife Service

SOURCE: Sacramento Housing and Redevelopment Agency



2.0

Summary



2.0 SUMMARY

2.1 PROJECT DESCRIPTION

The proposed Project consists of the adoption and implementation of a Redevelopment Plan for the Sacramento Army Depot Redevelopment Project Area (Project Area), in accordance with the California Community Redevelopment Law. The Project Area encompasses approximately 1,420 acres in the City of Sacramento. The Project Area is bounded by 14th Avenue to the north, Elder Creek Road on the south, Power Inn Road on the west, and slightly east of Florin-Perkins Road on the east.

The proposed Redevelopment Plan provides for development and rehabilitation of the Project Area in accordance with the City of Sacramento General Plan and the South Sacramento Community Plan. Alternative uses would require a General Plan Amendment prior to development. The Redevelopment Plan provides for public improvements within the Project Area (to be undertaken by the Redevelopment Agency of the City of Sacramento, hereinafter referred to as "Agency", and/or other agencies), including circulation improvements, such as traffic signals, street lights, and street improvements; water, sewer, and flood control improvements throughout the Project Area; and other improvements such as curbs, sidewalks and gutters on local streets and bus shelters.

Redevelopment Plan implementation could encourage additional development or redevelopment of industrial and commercial uses in the Project Area. It is estimated that Plan implementation would remove existing barriers to growth and thus would allow for the addition of about 1,877,774 square feet of industrial space throughout the Project Area, consistent with the City General Plan.

The provisions of the Redevelopment Plan would be effective for 30 years after the Plan is adopted by the City of Sacramento. An implementation plan must be included in the report submitted to the City Council and Redevelopment Agency prior to adoption of the Redevelopment Plan. The implementation plan must describe specific goals and objectives of the Agency, specific projects, including a program of actions and expenditures to be made within the first or next five years of the plan, and a description of how these projects will alleviate blight. As resources become available, the public improvements to be undertaken within that timeframe will be specified. The program for implementation of designated public improvements must be updated within the Implementation Plan every five years.

2.2 SUMMARY OF PROJECT ALTERNATIVES

NO PROJECT ALTERNATIVE

Under the No-Project Alternative, the proposed Redevelopment Plan for the Project Area would not be adopted. The public improvements proposed as part of the Plan and other Redevelopment Plan programs would not be implemented. Private development could continue to occur within the Project Area, but it is likely that less development would occur than if the Redevelopment Plan were implemented.

To the extent that development occurs within the Project Area, this alternative would result in the same types of impacts as the Project. However, because this alternative would likely result in less development than the Project, it would have fewer impacts than the Project in some areas. The alternative could result in impacts related to deteriorating conditions (such as substandard buildings and deficient infrastructure), because the public improvements and other Plan programs designed to improve conditions would not be implemented. Cumulative impacts relating to regional development (such as traffic congestion on Project Area streets) would still occur.

CONSIDERATION OF OTHER ALTERNATIVES

Three alternatives were considered but rejected as infeasible, as summarized below:

Alternative Public Actions. During preparation of the Redevelopment Plan alternative strategies for redevelopment of the Project Area were considered. Based on field surveys and capital improvement plans for the City, Agency staff evaluated alternative public improvements and facilities to be included in the Redevelopment Plan. Many of the proposed actions are mitigation measures which were adopted with the Sacramento Army Depot Reuse Plan. It was determined that the list of proposed public improvements and facilities represented the best mix of actions, consistent with the goals and objectives of the Redevelopment Plan, to assist in the redevelopment of the Project Area. It is for that reason that this EIR does not consider an alternative list of public improvements and facilities.

Alternative Location. CEQA requires that an alternative location for a proposed project be analyzed if one is available that could lessen potential adverse impacts associated with the proposed project. Because of the nature of the proposed Redevelopment Plan, which is to alleviate blight in this particular area and remove barriers to growth and encourage economic recovery, there are no other locations that could accommodate the project objectives. A location outside of the City and Project Area is not appropriate, thus this is not a feasible alternative.

Alternative Funding Mechanisms. This alternative considers utilization of revenue sources other than tax increment financing to fund public improvements in the Project Area. The transition from a 50 year old military complex to an attractive employment center will require

significant infrastructure improvements for the area. Federal, State, County and City programs exist which may initiate similar development without the need for redevelopment tax increment financing. However, the City has attempted to alleviate blight in the Project Area using these funding tools, with limited success. These other sources have been found either insufficient or unavailable for funding the public actions and improvements needed. Due to the uncertainty of available outside funding for necessary public improvements and other mitigation and the lack of housing provisions, the stated goals and objectives of the Redevelopment Plan would not be assured. Therefore, this alternative is considered infeasible.

2.3 SUMMARY OF IMPACTS

Table 2.1 presents a summary of the impacts of the proposed Redevelopment Plan, identified mitigation measures, and the level of significance after mitigation.

**TABLE 2-1, page 1
SUMMARY OF
ENVIRONMENTAL EFFECTS**

**S = Significant
LS = Less than Significant;
PS = Potentially Significant
SU = Significant Unavoidable**

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
4.1-1. The Redevelopment Plan is compatible with existing and planned uses in and surrounding the Project Area.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.1-2 The Redevelopment Plan would be consistent with existing Project Area zoning designations and land uses on and adjacent to the Project Area.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.1-3 The Redevelopment Plan would be consistent with adopted plans and policies for the Project Area.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.2-1 The proposed Redevelopment project is consistent with the City General Plan and Reuse Plan approvals, and proposes no land use changes or population increases above those planned levels. The proposed Redevelopment improvements would construct, reconstruct, install or upgrade control devices, street lights, transit shelters, roadways and roadway extensions. These projects will help ameliorate circulation problems in the Project Area over the life of the Project.	LS	Since no significant impacts were identified, no mitigation is required.	LS

TABLE 2-1, page 2
SUMMARY OF
ENVIRONMENTAL EFFECTS

S = Significant
 LS = Less than Significant;
 PS = Potentially Significant
 SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
4.2-2 Development encouraged by redevelopment activities could increase demand for transit services. The Project includes funding for transit capital improvements and a future light rail station to serve General Plan buildout, as well as other improvements that could improve pedestrian access and safety.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.3-1 Construction and demolition activities related to public and private project occurring under the Redevelopment Plan could generate fugitive dust, but at levels below SMAQMD significance thresholds.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.3-2 Hydrocarbon emissions from construction activities would increase contributions to regional HC emission totals, but at levels below SMAQMD significance thresholds.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.3-3 The expected development and subsequent traffic levels (and associated emissions increases) occurring as a direct result of Redevelopment Plan implementation would increase vehicle and stationary source emissions, but within the volumes contemplated by the SGPU and SADEIR. Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of previous findings.	S	When the SGPU and SADEIRs were adopted, Findings of Fact and a Statement of Overriding Considerations were adopted by the City Council regarding cumulative air quality impacts.	SU
4.3-4 Implementation of the Redevelopment Plan may increase non-criteria air pollutant emissions.	LS	Since no significant impacts were identified, no mitigation is required.	LS

TABLE 2-1, page 3
SUMMARY OF
ENVIRONMENTAL EFFECTS

S = Significant
 LS = Less than Significant;
 PS = Potentially Significant
 SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
4.3-5 The expected development and subsequent traffic levels (and associated emissions increases) occurring as a direct result of Redevelopment Plan implementation would increase cumulative vehicle and stationary source emissions, but within the volumes contemplated by the SGPU and SADEIR. Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of previous findings.	S	When the SGPU and SAD EIRs were adopted, the Findings of Facts made Statements of Overriding Considerations regarding cumulative air quality impacts.	SU
4.4-1 Noise from construction activities under the Redevelopment Plan would be a short-term impact that could raise ambient noise levels above recommended standards and have an intrusive and disturbing noise effect at nearby sensitive receptor locations.	S	When the SGPU EIR was adopted, the Findings of Facts made Statements of Overriding Considerations regarding for temporary construction noise impacts in designated urbanized areas.	SU
4.4-2 Implementation of the Redevelopment Plan could contribute to an incremental increase in traffic-generated noise levels at some sensitive receptor locations, consistent with previously approved growth.	LS	Since no significant impacts were identified, no mitigation is required.	LS

TABLE 2-1, page 4
SUMMARY OF
ENVIRONMENTAL EFFECTS

S = Significant
 LS = Less than Significant;
 PS = Potentially Significant
 SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
<p>4.5-1 At this time, improvements and growth development plans for the Sacramento Army Depot Redevelopment plan do not include modifying or impacting the historical site of the Cartopassi Place. However, avoidance over the 35 year life of the Plan may not possible considering the industrial character of the surrounding area and the goals and objectives of the Redevelopment Plan. In addition, some of the resources within the Project Area, while not examined in this document, are rapidly approaching 50 years of age (e.g., the Proctor and Gamble facility opened in the early 1950s) and could be modified or destroyed.</p>	<p>PS</p>	<p>(a) Prior to permitting the removal of structures in the Project Area that are more than 50 years old, or alteration of such structures in a manner inconsistent with the Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Standards), the Agency shall conduct archival research to determine whether such structures could be considered to be important historic resources. If it appears that the sites are historical features, they shall be recorded on standard Historic Resources Inventory forms with a scale drawing, photographs, and a location on a USGS topographic map. The Agency shall comply with the requirements of the City of Sacramento's Design Review Guidelines Plan and the Design Review and Preservation procedures contained in City of Sacramento Ordinance No. 91-018.</p> <p>(b) For all rehabilitation work on structures over 50 years old, the Agency, in conjunction with the City Planning and Development Department shall follow the stipulations outlined in the Programmatic Agreement with regard to physical changes to the structure, or shall require the use of the State Historic Building Code and replacement of historic elements with in-kind materials.</p>	<p>LS</p>

TABLE 2-1, page 5
SUMMARY OF
ENVIRONMENTAL EFFECTS

S = Significant
LS = Less than Significant;
PS = Potentially Significant
SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
4.5-2 There is a potential for redevelopment activities to affect archaeological resources.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.6-1 Redevelopment activities could result in the removal of native oaks in the Project Area.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.6-2 Redevelopment activities could result in the removal of foraging and nesting habitat for the burrowing owl.	PS	(a) Consistent with the measure adopted for the Depot Reuse Plan, prior to the approval of any development project within the Project Area the Agency and/or the City shall review the project for the occurrence of any burrowing owl nests that may be disturbed or lost due to construction activities. If the City of Sacramento determines that burrowing owl nests would not be affected by the construction of the proposed project, then no further mitigation would be required.	LS

**TABLE 2-1, page 6
SUMMARY OF
ENVIRONMENTAL EFFECTS**

S = Significant
 LS = Less than Significant;
 PS = Potentially Significant
 SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
		<p>(b) If the City or Agency determines that the construction of a proposed development project may affect a known or existing burrowing owl nest, the project applicant shall consult with DFG and/or USFWS in order to conduct a burrowing owl survey. This survey shall be conducted on the project site by a qualified biologist in accordance with the most current DFG/USFWS guidelines or protocols and shall be completed during the appropriate survey period. Of the species specific surveys do not identify any burrowing owl habitats or burrowing owls on the project site, then no further mitigation would be required.</p> <p>(c) If burrowing owls or burrowing owl habitat are identified within an area that may be disturbed by the construction of a development project, then the project applicant in consultation with the City of Sacramento, DFG, and USFWS, shall prepare and implement a mitigation plan in accordance with any applicable State and/or Federal statutes or laws that reduces the impact to a level of insignificance.</p>	

TABLE 2-1, page 7
SUMMARY OF
ENVIRONMENTAL EFFECTS

S = Significant
LS = Less than Significant;
PS = Potentially Significant
SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
<p>4.6-3 Redevelopment activities may occur in plowed and disced fields that historically held vernal pool habitat. Anticipated actions under the Redevelopment Plan are not anticipated to result in jeopardy to the continued existence of the vernal pool fairy shrimp or tadpole shrimp, or in destruction or adverse modification of their habitats. Completion of USFWS consultation on a project-by-project basis is required of all individual projects.</p>	<p>LS</p>	<p>Since no significant impacts were identified, no mitigation is required.</p>	<p>LS</p>
<p>4.6-4 Anticipated actions under the Redevelopment plan could result in the removal or destruction of jurisdictional wetlands within the Project Area.</p>	<p>LS</p>	<p>All wetlands identified in the Project Area were previously identified and mitigated in the Reuse Plan and subsequent agreements with the Corps of Engineers.</p>	<p>LS</p>

**TABLE 2-1, page 8
SUMMARY OF
ENVIRONMENTAL EFFECTS**

S = Significant
 LS = Less than Significant;
 PS = Potentially Significant
 SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
<p>4.7-1 Increased surface water runoff could exceed existing drainage system capacity and contribute to localized flooding.</p>	<p>S</p>	<p>(1) The City of Sacramento shall review each development application within the Project Area for effects on drainage facility capacity. Each project reviewed shall identify the rate and amount of surface water runoff generated by proposed development and the effects on drainage facility capacity. Modifications to existing facilities and new facilities to regulate rate and volume of runoff released to Morrison Creek shall be identified, and each project shall pay a fair share portion of any improvement identified. Drainage facilities could include, but would not be limited to:</p> <ul style="list-style-type: none"> (a) The expansion or modification of existing storm drain facilities; (b) Single-project detention basins; or (c) The preservation of natural drainage areas. 	<p>LS</p>

**TABLE 2-1, page 9
SUMMARY OF
ENVIRONMENTAL EFFECTS**

**S = Significant
LS = Less than Significant;
PS = Potentially Significant
SU = Significant Unavoidable**

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
		<p>(2) The City of Sacramento shall continue to coordinate with the United States Army Corps of Engineers and the County of Sacramento to assess the level of flood protection provided by the Morrison Creek Flood Control System.</p> <p>(3) The City of Sacramento shall participate in the development of alternatives to increase the capacity of the Morrison Creek Flood Control System to accommodate existing flows, and flows which would result from future development. These alternatives may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> a) raising levees, b) channel widening, c) floodwalls; and d) detention basins. 	
<p>4.7-2 Development encouraged by redevelopment activities could increase the number of structures and persons at risk of flood hazards. However, the City requires all new structures to be built above the existing 100-year base flood elevation (BFE). Where a structure is proposed for below the BFE, the developer is required to sign a new construction agreement.</p>	<p>LS</p>	<p>Since no significant impacts were identified, no mitigation is required.</p>	<p>LS</p>
<p>4.7-3 Activities resulting from redevelopment plan implementation could increase sediment impacts on streams.</p>	<p>LS</p>	<p>Since no significant impacts were identified, no mitigation is required.</p>	<p>LS</p>

TABLE 2-1, page 10
SUMMARY OF
ENVIRONMENTAL EFFECTS

S = Significant
 LS = Less than Significant;
 PS = Potentially Significant
 SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
4.7-4 Activities resulting from redevelopment plan implementation could increase peak storm runoff flows and volumes, altering the existing receiving water quality.	S	4.7-4 The Redevelopment Agency shall require that each redevelopment project include as part of the project design Best Management Practices, approved by the City's Utilities Department and in compliance with the City's NPDES permit, which mitigate for urban contaminants in storm water runoff.	LS
4.8-1 Development encouraged by redevelopment activities could increase demand for fire and emergency services.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.8-2 Without adequate safety measures included in the planning and design of new rehabilitation and construction that would occur with the Project, crime rates and the demand for police services could increase, resulting in a cumulative impact on police protection service levels.	PS	4.8-2 Prior to final approval, all public agency projects included as part of the Project and any agency sponsored private development projects shall be required to submit conceptual plans to the Police Department for review of adequate safety in project design. The public or private entity shall work with the Police Department to include measures such as Crime Prevention through Environmental Design (CPED) in final development plans. Typical CPED design criteria include adequate lighting, commercial visibility, and the encouragement of proprietary responsibility.	LS

TABLE 2-1, page 11
SUMMARY OF
ENVIRONMENTAL EFFECTS

S = Significant
LS = Less than Significant;
PS = Potentially Significant
SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
4.8-3 Development encouraged by redevelopment activities could increase indirect demand for school services in other parts of the city.	LS	Since no significant impacts were identified, no mitigation is required. Any indirect increase in demand for schools throughout the City resulting from increased employment in the Project Area would be mitigated by compliance with the General Plan as a function of residential development.	LS
4.8-4 Development encouraged by redevelopment activities could increase the amount of solid waste flow to the County landfill.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.8-5 The list of potential redevelopment public improvements includes the upgrade and repair of existing water trunk lines and replacement of local collectors as development takes place, as well as the construction of a transmission main along Florin-Perkins Road from Folsom Boulevard to Fruitridge Road.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.8-6 The proposed Project would provide funding for construction of relief sewer lines and new sewer construction where flows are less than one mgd.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.8-7 Development encouraged by redevelopment activities could increase demand for gas and electric services.	LS	Since no significant impacts were identified, no mitigation is required.	LS

TABLE 2-1, page 12
SUMMARY OF
ENVIRONMENTAL EFFECTS

S = Significant
 LS = Less than Significant;
 PS = Potentially Significant
 SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
<p>4.9-1 Although hazardous substance handling and remediation is highly regulated, redevelopment in a historically industrial area could expose construction workers to previously unidentified contamination.</p>	<p>PS</p>	<p>(a) If the potential for contamination is suspected, construction activities shall stop and sampling shall be conducted by qualified personnel, in accordance with all applicable regulations to determine the constituent levels and the extent of the contamination.</p> <p>(b) If contamination is identified, remediation and disposal procedures shall be undertaken by qualified personnel in accordance with all applicable regulations, and in coordination with all applicable regulatory agencies.</p> <p>(c) If asbestos fibers are suspected or identified in soils or existing building materials, then additional sampling shall be performed prior to any construction activities to identify asbestos-containing materials that may be contained in building materials or obscured behind walls, above ceilings, and beneath floors.</p> <p>(d) Demolition activities affecting asbestos-containing material shall be performed by a licensed asbestos abatement contractor with properly trained personnel in accordance with all applicable federal, state and local regulations.</p>	<p>LS</p>
<p>4.9-2 Development within the Project Area could increase the number of industrial and commercial facilities handling hazardous materials within the Project Area.</p>	<p>LS</p>	<p>Since no significant impacts were identified, no mitigation is required.</p>	<p>LS</p>

TABLE 2-1, page 13
SUMMARY OF
ENVIRONMENTAL EFFECTS

S = Significant
LS = Less than Significant;
PS = Potentially Significant
SU = Significant Unavoidable

Impact Statement	Level of Significance Without Mitigation	Mitigation Measure	Level of Significance with Mitigation
4.9-3 Development within the Project Area could increase the number of industrial and commercial facilities handling hazardous waste within the Project Area.	LS	Since no significant impacts were identified, no mitigation is required.	LS
4.9-4 Development within the Project Area could increase the number of industrial and commercial facilities handling hazardous materials, and result in a cumulative increase in hazardous substance disposal requirements within the County.	LS	Since no significant impacts were identified, no mitigation is required.	LS

3.0

Project Description

3.0 PROJECT DESCRIPTION

3.1 INTRODUCTION

The information presented in this section is based on a draft of the Redevelopment Plan for the Sacramento Army Depot Redevelopment Project, the Preliminary Report on the Proposed Redevelopment Plan (1994), the Sacramento Army Depot Reuse Plan and EIR (1994), the Sacramento Army Depot Reuse Environmental Impact Statement, U.S. Army (October, 1994), the Notice of Preparation prepared by the Sacramento Housing and Redevelopment Agency on December 13, 1994, and discussions with SHRA staff.

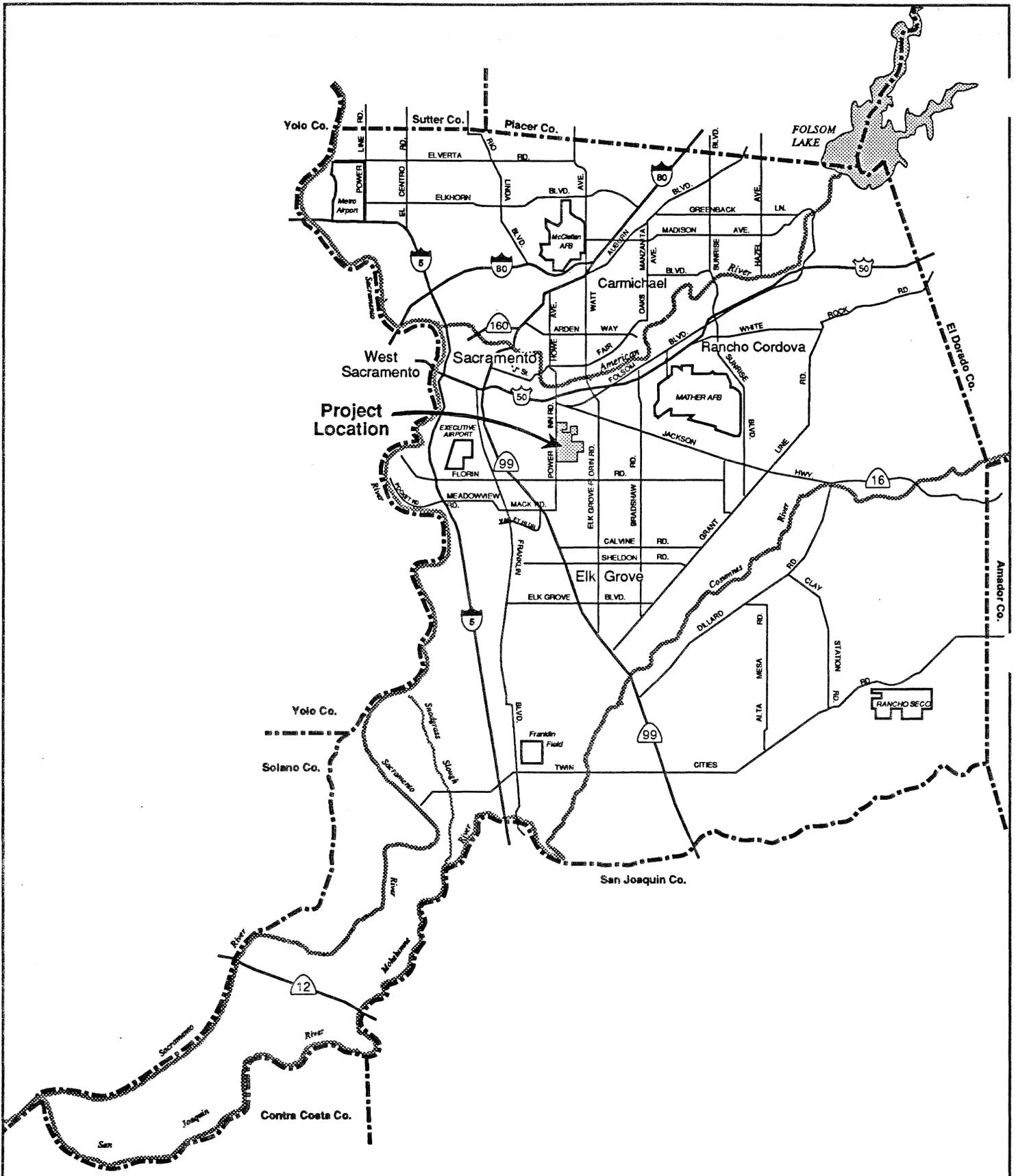
3.2 PROJECT LOCATION

The Sacramento Army Depot Redevelopment Plan Project Area ("Project Area") is located in the City of Sacramento, approximately seven miles southeast of downtown Sacramento. The location of the Project Area in relation to Sacramento County is shown in Figure 3.0.1. The Project Area encompasses approximately 1,420 acres, and is bounded by Elder Creek Road to the south, Power Inn Road to the west, 14th Avenue to the north, and primarily Florin-Perkins Road to the east. The boundary of the proposed Project Area is illustrated in Figure 3.0.2.

3.3 PROJECT BACKGROUND

The proposed Project Area incorporates an industrialized portion of the South Sacramento community. The existing development in the Project Area consists of medium and heavy industrial, heavy commercial, and some scattered residential. Much of the development in the northern and western part of the Project Area consists of small industrial and heavy commercial users in tilt-up construction, with some large industrial users such as Proctor and Gamble. Approximately 32 acres in the Project Area are vacant (Katz-Hollis, 1995). The Sacramento Army Depot is located in the southern part of the Project Area and encompasses 485 acres. Existing land uses at the Depot generally include administrative/community services, cantonment/recreation and training, and industrial. A large portion of the Depot area and facilities (210 acres) is currently being rehabilitated for use by Packard Bell in early 1995.

The proposed Redevelopment Plan is intended to encourage development of industrial and commercial sectors to replace the development lost with closure of the Depot. To facilitate the conversion from military to civilian use, amendments were made to the General Plan for the Sacramento Army Depot Reuse Plan. Assumptions were made at that time for land use distributions by acreage and development density, and the Environmental Impact Report for the Sacramento Army Depot Reuse Plan (SADEIR) based its analysis on the assumption that 3 million square feet of industrial space would be developed, resulting in 7,500 employees



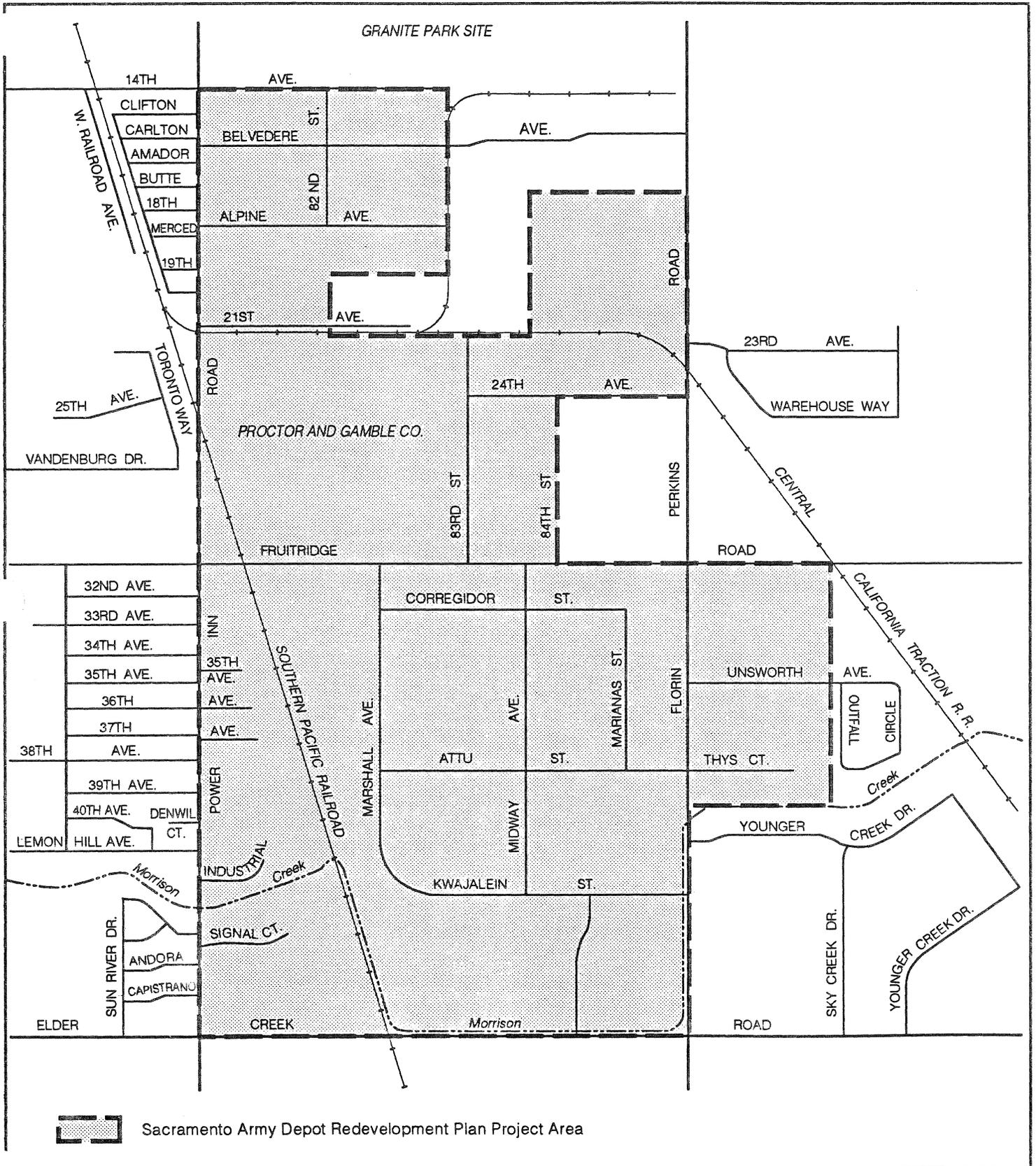
Source: County of Sacramento Department of Environmental Review and Assessment 1994

Regional Location

Sacramento Army Depot Redevelopment Plan EIR

FIGURE 3.0-1





Source: Michael Brandman Associates 1994

Project Area

FIGURE 3.0-2

Sacramento Army Depot Redevelopment Plan EIR

NOT TO
SCALE



at the Depot site. Subsequent to approval of the General Plan amendments, Packard Bell signed a lease to ultimately use 287 acres, consisting of approximately 2.9 million square feet of the former Depot, with approximately 3,000 to 4,800 employees. Packard Bell is presently rehabilitating 1.8 million sf for current use, with the additional 1,110,780 sf reserved for either future expansion or other industrial use. No changes to the General Plan land use designations are proposed as a part of the Redevelopment Plan.

3.4 PROJECT OBJECTIVES

Certain goals and objectives have been identified in connection with the Project, the accomplishment of which will attain the purposes of the California Community Redevelopment Law. In general, the goals and objectives of redevelopment in the Project Area are as follows:

1. The establishment, by effective use of the redevelopment process, of a planning and implementation framework that will ensure the proper, long-term development of the Sacramento Army Depot area.
2. The elimination and prevention of the spread of blight and deterioration, and the conservation and rehabilitation of the Project Area in accordance with the General Plan, applicable specific plans, and local codes and ordinances.
3. The conversion of existing military facilities to effective, economic public and private use.
4. The replanning, redesign and development of underdeveloped or poorly developed areas that are underutilized or improperly utilized.
5. The promotion of new private sector investment and strengthening of the economic base of the Project Area by redevelopment and rehabilitation of structures and installation of needed site improvements.
6. The provision for increased sales taxes, business license fees, and other fees, taxes and revenues to the City of Sacramento.
7. The elimination or amelioration of certain environmental deficiencies, such as insufficient off-street and on-street parking, storm water drainage, and other similar public improvements, facilities and utilities deficiencies adversely affecting the Project Area.
8. The creation and development of local job opportunities and the preservation of the existing employment base.

Redevelopment of the Project Area pursuant to the Preliminary Plan and the above goals and objectives will attain the purposes of the California Community Redevelopment Law: (1) by the elimination of areas suffering from the economic dislocation and disuse; (2) by the replanning, redesign and/or redevelopment of areas which are stagnant or improperly utilized, and which would not be accomplished by private enterprise acting alone without public participation and assistance; (3) by protecting and promoting sound development and redevelopment of blighted areas, and the general welfare of citizens of the City by remedying such injurious conditions through the employment of appropriate means; and (4) through the installation of new or replacement of existing public improvements, facilities, and utilities in areas that are currently inadequately served with regard to such improvements, facilities, and utilities.

3.5 PROJECT CHARACTERISTICS

The proposed project is the adoption and implementation of the Redevelopment Plan for the Sacramento Army Depot Redevelopment Project Area in accordance with the California Community Redevelopment Law ("CRL").

The Sacramento Army Depot Redevelopment Plan ("Project") is proposed to eliminate conditions of blight caused by the closure of Sacramento Army Depot by revitalizing and upgrading the industrial and commercial properties, and public properties/facilities for civilian reuse. Redevelopment activities could include: removal or rehabilitation of buildings characterized by age and obsolescence, mixed character or shifting uses, defective design and character of physical construction, and deterioration; elimination of parcels of irregular form, shape or inadequate size which make development problematic; improvements to the circulation system, streets, sidewalks, curbs, and gutters; upgrading the wastewater system, drainage and water system facilities; landscape, lighting and signage improvements; and construction of public facilities. The redevelopment of the Project Area and implementation of the Redevelopment Plan is intended to eliminate blight and blighting conditions within the Project Area which currently prevent the full and effective use of the land.

The Sacramento Housing and Redevelopment Agency ("Agency") is responsible for the preparation of the redevelopment plan, owner participation and preferences rules, an environmental impact report on the redevelopment plan and other materials that document the need for redevelopment and the financial feasibility of implementing a redevelopment program.

The proposed Redevelopment Plan authorizes the Agency to undertake in the Project Area over the life of the Plan the redevelopment actions and activities listed below:

1. The acquisition of real property (by eminent domain if necessary) as may be needed to carry out the Plan throughout the Project Area.

2. The management and operation of such property under the ownership and control of the Agency until it is resold.
3. The relocation and re-housing of displaced occupants and displaced businesses.
4. The demolition or removal of buildings and improvements.
5. The rehabilitation and preservation of buildings and structures.
6. The installation, construction, expansion, addition, extraordinary maintenance or reconstruction of streets, utilities and other public improvements and public facilities.
7. The execution of agreements with owners and occupants of property desiring to participate in the project in accordance with the Redevelopment Plan.
8. The disposition of land to private developers and public agencies for the construction of new improvements in accordance with the Redevelopment Plan.
9. Redevelopment of land by private enterprise and public agencies for uses in accordance with the Plan.
10. Rehabilitation, development or construction of low and moderate income housing within the Project Area and City.
11. The establishment and retention of controls, restrictions and covenants running with the land so that property will continue to be used in accordance with the Redevelopment Plan.

In addition to the above, the Agency is required to replace on a one-for-one basis within four years any low and moderate income housing units destroyed or removed from the market by the Project, and to expend 20 percent of all tax increment revenues received from the Project on preserving, improving and increasing the supply of low and moderate income housing in the community.

PUBLIC IMPROVEMENTS

Implementation of the proposed Redevelopment Plan may include the following public improvements and public facilities that benefit the Project Area and surrounding areas:

- A. Traffic Circulation Improvements
 1. Add Turn or Through Lanes at:
 - a. Power Inn Road at 14th Avenue

- b. Fruitridge Road at 65th Avenue
 - c. Power Inn Road at Fruitridge Road
 - d. Power Inn Road at Elder Creek Road
 - e. Power Inn Road at Florin Road
 - f. Fruitridge Road at Florin-Perkins Road
 - g. Folsom Boulevard and Jackson Highway
 - h. Folsom Boulevard and Florin-Perkins Road
 - i. Elder Creek Road at 65th Avenue
 - j. Elder Creek Road and Power Inn
 - k. Elder Creek Road and Florin Perkins
2. Traffic Signal Installation at:
- a. South Watt at Fruitridge Road
 - b. South Watt at Elder Creek Road
 - c. Florin-Perkins Road and Jackson Highway
 - d. Florin-Perkins Road and Thys Court
 - e. Florin-Perkins Road and Elder Creek Road
 - f. Florin-Perkins Road Interconnect
 - g. Power Inn Road and 14th Avenue
 - h. Power Inn Road and Fruitridge Road
 - i. Power Inn Road and Lemon Hill
 - j. Power Inn Road and Elder Creek Road
 - k. Fruitridge Road and Depot Entrances
 - l. Fruitridge Interconnect
3. Street Widening:
- a. Power Inn Road
 - b. Fruitridge Road
 - c. elder Creek Road
 - d. 65th Street
 - e. Florin-Perkins Road
 - f. South Watt Avenue
 - g. 82nd Street
 - h. 21st Avenue
 - i. Unsworth Avenue
 - j. Thys Court
 - k. Unnamed Street between Thys Court and Unsworth
 - l. Other interior streets as required
4. Installation of Streets and Signals on the Depot
5. Curbs, Gutters and Sidewalks
6. Street Lights
- B. Water Distribution Improvements**
1. Upgrade and repair existing water trunk lines, and replace local collectors as development takes place.
 2. Construct transmission main along Florin-Perkins Road from Folsom Boulevard

to Fruitridge Road.

C. Sewer and Flood Control Improvements

1. Upgrade and repair existing wastewater and storm drain facilities, and provide detention basins or replace local collectors as development takes place.
2. Capacity improvements to Morrison Creek.

D. Other Improvements

1. Transit stop improvements.
2. Future light rail station on the California Traction Line.

The above summary of public improvements may not be complete in that other public improvement projects may be proposed by the Redevelopment Agency.

Redevelopment of the Project Area, including public improvements and facilities, will potentially be financed through: tax increment revenues allocated to the Agency pursuant to the Redevelopment Plan; costs borne by private developers; City funds; federal revenue sharing and economic development grants; Regional Sanitation funds; and any other funding becoming available to the Agency. The Report to the City Council on the proposed Redevelopment Plan, of which the Final EIR will be a part, will include detailed explanations of the method of financing and the economics of the project.

POTENTIAL PRIVATE ACTIONS

The proposed Redevelopment Plan may encourage additional development in industrial and commercial sectors throughout the Project Area. Redevelopment of existing uses or development of new uses would be consistent with applicable adopted plans and zoning, including the City of Sacramento General Plan, City Zoning Ordinances, and various Community Plans. Optimum buildout is that amount of new development that is likely or would be permitted to occur; it is not the amount of development that theoretically could occur if every parcel in the Project Area were developed to the maximum density permissible under the General Plan and zoning. In the Project Area outside of the Depot, optimum buildout is assumed to include 766,994 sf of new industrial development. Within the Depot, 1,110,780 sf of industrial space is estimated to be developed, for a total of 1,877,884 sf of new industrial development over the life of the Project.

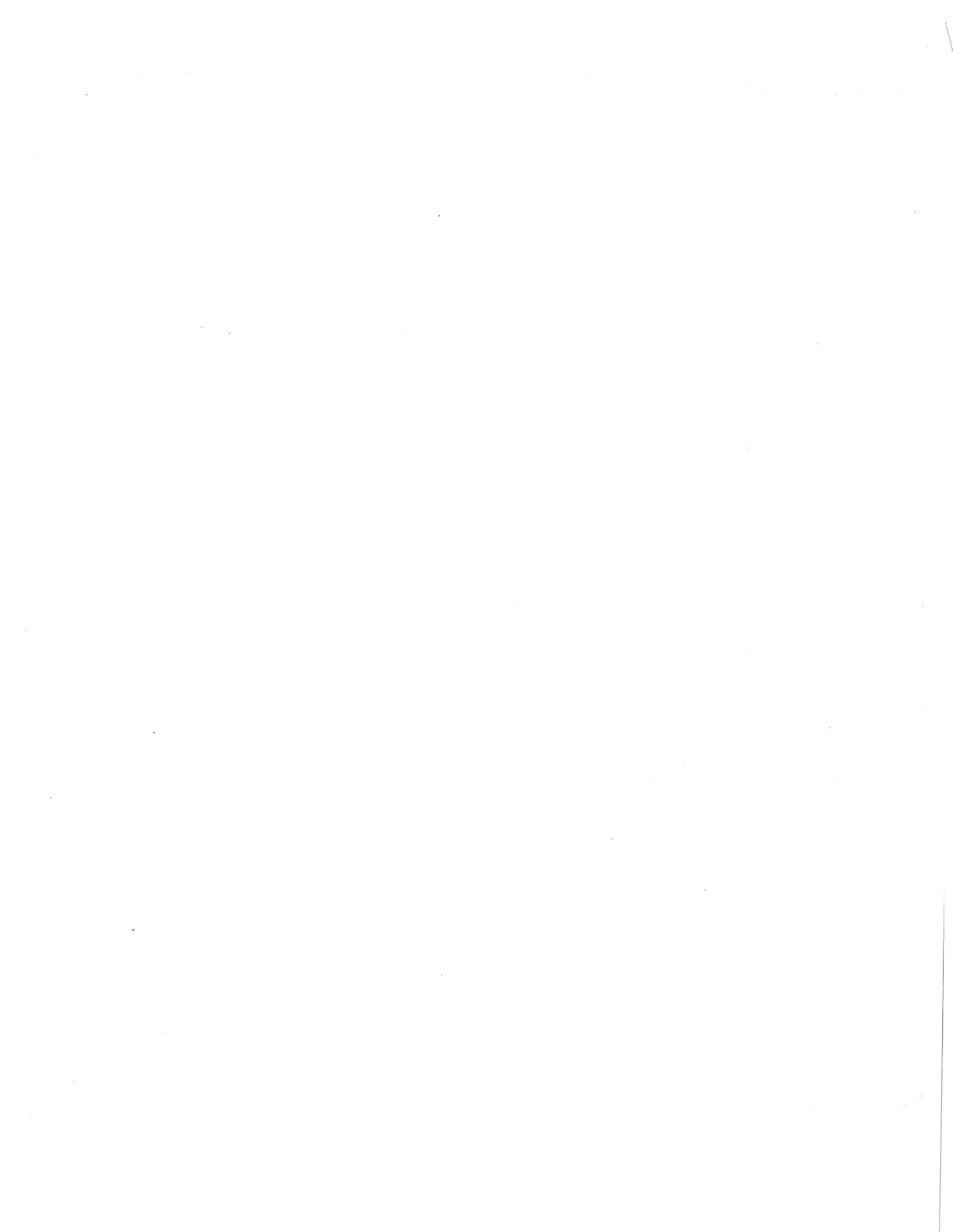
Because these estimates are based only on Project Area development during the life of the Redevelopment Plan, they include both new development and the recycling of existing properties. New development would occur as infill development on vacant and underutilized parcels scattered throughout the Project Area. With the exception of the public improvements listed above, the Redevelopment Plan does not propose actual construction or redevelopment of any specific structures.

SCHEDULE

While the Agency's ability to use eminent domain is terminated after the twelfth year of the project, the non-financial provisions of the Redevelopment Plan would be effective for 30 years after the Plan is adopted by the City of Sacramento. The Agency can incur debt for 20 years, then continue to collect tax increment revenue up to 45 years if the project still has debt. The actions authorized by the Plan could be carried out at any time while the Plan is effective. To implement the Redevelopment Plan and prioritize the expenditure of resources, the Agency will adopt Five-Year Implementation Plans throughout the term of the Plan. At present, no schedule has been specified for the implementation of the public improvements proposed in the Plan.

4.0

Environmental Analysis



4.0 ENVIRONMENTAL ANALYSIS

4.0.1 INTRODUCTION TO THE ANALYSIS

As stated previously, this EIR is being prepared as a "Program EIR" pursuant to Section 15168 of the CEQA Guidelines. The Initial Study and Notice of Preparation identified the following issues to be evaluated in the EIR:

- Land Use, Plans and Policies
- Transportation and Circulation
- Air Quality
- Noise
- Cultural Resources
- Biological Resources
- Hydrology and Water Quality
- Public Services
- Public Health and Safety

4.0.2 PRESENTATION OF THE IMPACT ANALYSIS IN THE EIR

This EIR presents an integrated assessment of the potential direct, indirect and cumulative effects of adopting and implementing the proposed Redevelopment Plan. Direct effects are those attributable to the actions carried out by the Agency or other public agencies under the Plan, including the public improvements proposed as part of the Plan. Indirect impacts are those attributable to urban development that may be induced by implementation of the Redevelopment Plan. Cumulative effects are "two or more individual impacts which, when considered together, are considerable or which compound or increase other environmental impacts." In this EIR, the analysis of cumulative effects takes into account projected regional (City-wide) development that, when considered with development of the Project Area, could result in additional or increased environmental impacts. It is important to note that the Redevelopment Plan requires all development to be consistent with City General Plan goals, policies, and land use designations, and that all development occurring under the Redevelopment Plan will be subject to City land use, building, health, and safety regulations.

Impacts are identified and determined to be significant or less-than-significant. According to CEQA Guidelines Section 15382, a significant impact is ". . . a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project. . . ." For each category of physical conditions evaluated in this EIR, criteria for significance have been developed, using the CEQA Guidelines; SHRA, and City standards; or the "significance thresholds" of federal, state, regional, or local agencies. Impacts considered to be significant meet the criteria for significance for each category of physical conditions.

- Industrial
- Heavy Commercial or Warehouse
- Parks, Recreation, Open Space

The draft Redevelopment Plan requires all uses to be consistent with the City General Plan and ordinances, resolutions, and laws (Sacramento Housing and Redevelopment Agency, 1995).

The Agency projected potential future development in the Project Area based on market demand and the availability of suitably zoned land. The Project Area is anticipated to accommodate an additional 1,877,774 square feet of industrial development based on market demand and the availability of suitably zoned land (Katz-Hollis, 1995). The Redevelopment Plan does not identify potential areas for renovation or re-use of existing uses, since such structures are already occupied.

4.1.3 APPLICABLE LAND USE DESIGNATIONS

Sacramento General Plan Update

The General Plan designates the Project Area as Heavy Commercial or Warehouse, Industrial, Public Quasi-Public Miscellaneous, and Parks Recreation, Open Space (Figure 4.1-2). The General Plan includes the following definition for uses in these land use categories:

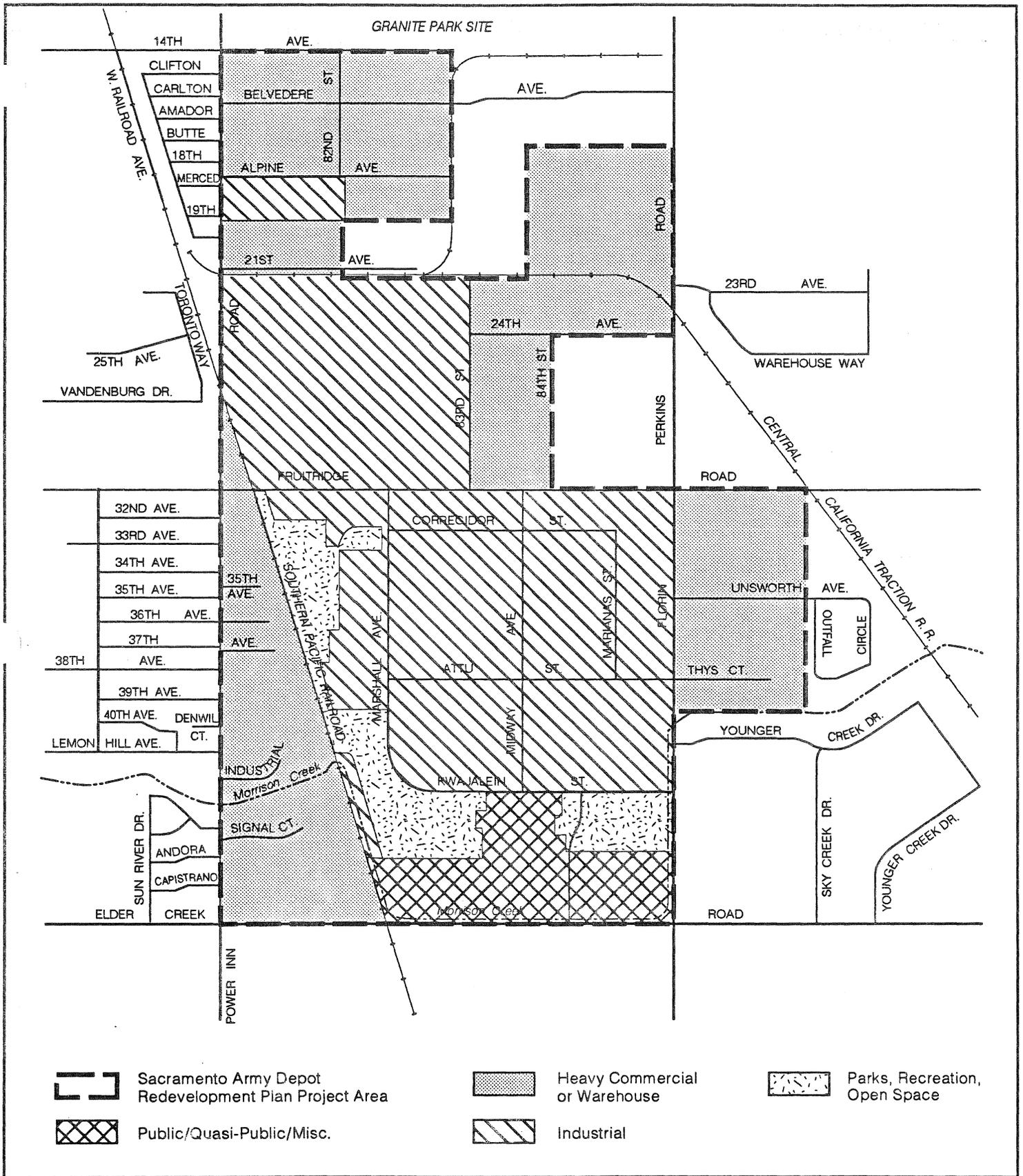
Heavy Commercial or Warehouse: This designation includes lands developed with heavy commercial (printing, bakeries, laundries, etc.), warehousing/distribution, and some light manufacturing activities. Office uses are allowed up to 25 percent of gross floor area, but are typically developed at 10 percent. Office uses of greater than 25 percent require a Special Permit and may be considered on a case-by-case basis.

Industrial Manufacturing: Includes lands designated for most industrial manufacturing processes and activities. Office uses are limited to 25 percent of gross floor area without a Special Permit. This would be a "general industrial" designation that could be applied to most industrial activities that are not warehousing/distribution or employee intensive uses. Types of manufacturing which could be allowed are not regulated by the specific naming of acceptable or unacceptable use, but instead are limited only as far as they do or do not meet specific performance standards.

Public Quasi-Public Miscellaneous: There are a number of public or quasi-public facilities in addition to a portion of the former Army Depot area which serve the Sacramento area, such as McClellan Air Force Base and the North Natomas Sports Complex. The City has limited control over the on-going operations of these facilities.

South Sacramento Community Plan

The South Sacramento Community Plan designates the Project Area as industrial, with the exception of 83.1 acres of Open Space in the former Depot area. The South Sacramento Community Plan includes the following definition for uses in these land use categories:



Source: U.S. Army Corps of Engineers, Sacramento District 1994; *Sacramento Army Depot Disposal and Reuse Environmental Impact Statement*, Draft, January 1994, Sacramento, California, technical assistance from Ebasco Services, Incorporated, Sacramento, California; EIP Associates, 1994.

General Plan Land Use Designations

Sacramento Army Depot Redevelopment Plan EIR

FIGURE 4.1-2

NOT TO
SCALE



Parks and Open Space

This Community Plan designation accommodates both park and recreational lands as well as general open space (for example, power line easements, natural parkway corridors along streams and some private recreational or open space areas such as golf courses). Zoning categories for parks and open space correspond to the surrounding zoning. For example, a neighborhood park in a single-family residential neighborhood will be zoned R-1, along with the surrounding residential parcels. Any deviation from a park use will require Community Plan and General Plan amendments.

Industrial

This Community Plan designation provides for a wide range of uses that fall within the industrial category, such as manufacturing, food processing or warehousing. Compatible zoning categories are M-1(S) and M-2(S). The (S) overlay indicates that a 25 foot landscaped setback is required.

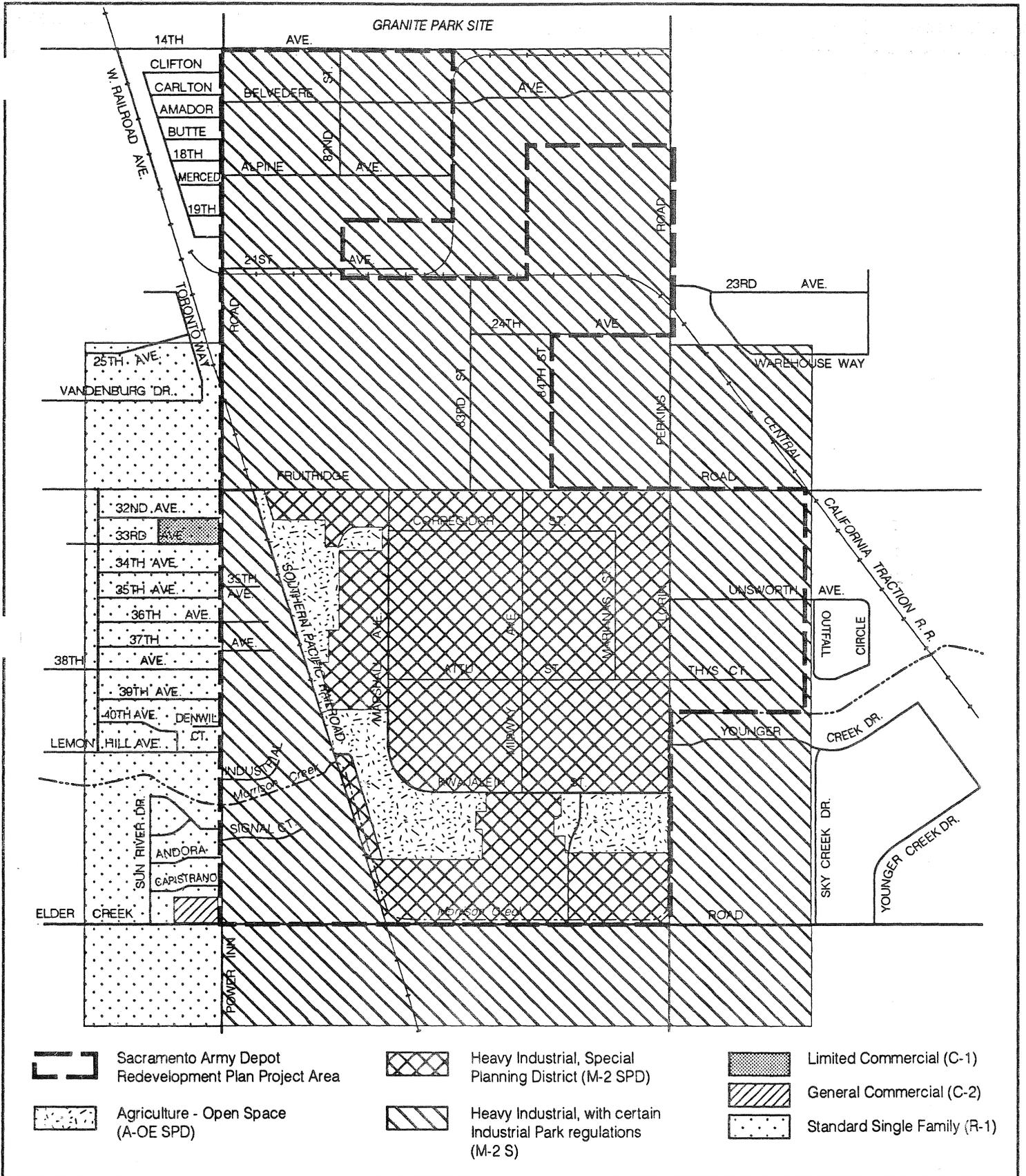
Zoning

The purpose of the City's Zoning Ordinance is to regulate the use of land, buildings, or other structures for residences, commerce, industry, and other uses required by the community. Additionally, the Zoning Ordinance regulates the location, height, and size of buildings or structures, yards, courts, open spaces, amount of building coverage permitted in each zone, and population density. The Zoning Ordinance's purpose also includes dividing the City of Sacramento into zones of such shape, size, and number best suited to carry out the Ordinance's regulations and to provide for their enforcement, and ensure the provision of adequate open space for aesthetic and environmental amenities.

Most of the Project Area is designated M-2(S), Heavy Industrial Zone (see Figure 4.1-3). The City of Sacramento Zoning Ordinance (No.2550, Fourth Series, as amended) establishes the Army Depot Reuse Project Area as an M-2 (SPD) Heavy Industrial Zone, Special Planning District, and Agriculture-Open Space (A-OS). The M-2(S) and (SPD) zones permit the manufacture or treatment of goods from raw materials. The M-2(SPD) zone has certain regulations designed to obtain industrial park developments that are in keeping with the modern concept of attractive, landscaped industrial plants. The "S" designation refers to a 25 foot setback requirement.

4.1.4 APPLICABLE LAND USE PLANS AND POLICIES

As noted above, the City of Sacramento General Plan (1988) and its implementing Zoning Ordinance are the governing land use documents in the Project Area. The Project Area also falls within the South Sacramento Community Plan (SSCP) area. The City of Sacramento compiles demographic and housing information for this Community Plan area. The SSCP contains its own separate land use designations and policies for the SSCP area. These are required to be consistent with the General Plan.



Source: U.S. Army Corps of Engineers, Sacramento District 1994; *Sacramento Army Depot Disposal and Reuse Environmental Impact Statement*, Draft, January 1994, Sacramento, California, technical assistance from Ebasco Services, Incorporated, Sacramento, California; EIP Associates, 1994.

Project Area Zoning

FIGURE 4.1-3

City of Sacramento General Plan (SGPU)

The SGPU was adopted on January 19, 1988, concluding a 3-year planning effort. The SGPU replaced the heavily amended 1974 General Plan for Sacramento and brought many pressing local issues into a contemporary framework for action. The SGPU is a 20-year policy guide for physical, economic and environmental growth and renewal of the City. It is composed of goals, policies, programs and actions that are based on an assessment of current and future needs and available resources. The General Plan is the City's principal tool for evaluating public and private building projects and municipal service improvements.

A total of nine sections are contained within the SGPU. The Residential Land Use Element contains goals and policies pertaining to residential development in the City of Sacramento (adjacent to the Project Area), while the Commerce and Industry Land Use Element performs an analogous function for commercial and industrial development and is also intended to promote the City's economic growth. Although there are no designated residential parcels within the Project Area, the Redevelopment Plan would generate tax increment funds which must be dedicated to affordable housing. These funds would be spent in accordance with the goals and policies of the Residential Land Use Element.

Commerce and Industry

The Commerce and Industry Land Use Element addresses a broad range of economic activities, facilities, and support systems that constitute Sacramento's economic base. It presents Sacramento's program for fostering economic development and ensuring the continued vitality of the City's commercial and industrial districts.

The SGPU identifies the following overall goals for Commercial and Industry land use in Sacramento:

- Goal B:** Promote the re-use and revitalization of existing developed areas, with special emphasis on commercial and industrial districts.
- Goal C:** Promote new employment opportunities, particularly for the under employed and economically disadvantaged.
- Goal D:** Promote economic vitality and diversification of the local economy.

The SGPU identifies the following relevant specific goals, and policies for Commercial and Industry land use in Sacramento:

HEAVY COMMERCIAL/WAREHOUSE INDUSTRIAL AREAS

- Goal A:** Maintain and strengthen Sacramento's role as a major West Coast warehousing/distribution center.

Policy 1: Provide adequate land for expansion of existing facilities and opportunities for new warehousing/distribution activities.

Policy 2: Assist private interests to maintain and strengthen the competitive advantages of Sacramento's warehousing/ distribution industry.

INDUSTRIAL/MANUFACTURING AREAS

Goal A: Continue to identify and attempt to minimize potential adverse impacts from increased industrial development.

Policy 1: Allow industrial development only in those areas where potential impacts can be expected to be minimized.

Policy 2: Prohibit industrial uses within the American River Parkway. Also, prevent incompatible industrial development adjacent to the American and Sacramento River Parkways.

Residential Land Use Element

The Residential Land Use Element of the City of Sacramento General Plan contains the following overall goals:

Goal A: Maintain and improve the quality and character of residential

Goal B: Provide affordable housing for all income groups.

Goal C: Meet the fair share regional housing needs for all economic segments within the City.

South Sacramento Community Plan (1986)

The South Sacramento Community Plan area is a 29-square-mile area of incorporated and unincorporated lands south of downtown Sacramento. As described in the SSCP, the community plan area boundaries are Fruitridge Road on the north, Sheldon Road (and the southernmost City limits) on the south, the Union Pacific Railroad tracks on the west, and Elk Grove-Florin Road and the City limits on the east. Thus the part of the Project Area located south of Fruitridge Road is located within the South Sacramento Community Plan area. The following description of the existing community plan land use characteristics is excerpted from the City's Population and Housing Data by Community Plan Area document published by the City's Planning and Development Department, Planning Division (March, 1993).

The South Sacramento Community Plan was updated in 1986. During that process five older communities (Fruitridge, Colonial, Southgate, Lindale/Florin and Valley Hi) merged to form the new Plan Boundaries. The area is bounded on the north by Fruitridge Road, on the east by Elk

Grove-Florin Road (South Watt Avenue), on the south by Sheldon Road, and on the west by the Union Pacific Railroad. The City portion of the community consists of the northeast portion of north of Florin Road and a portion of the area west of Highway 99.

The community is served by Highway 99 which runs north and south through the middle of the area. Full interchanges are located at Fruitridge Road, 47th Avenue, Florin Road and Mack Road. The environmental review has been completed for a new partial clover-leaf interchange in conjunction with the recently constructed Cosumnes River Boulevard. The preliminary planning for an improved interchange at Sheldon Road is being undertaken.

The population has more than doubled in this community since 1975. Most of the growth has occurred south of Mack Road. Growth in the southern part of the community can be attributed to urban infrastructure improvements and the correction of flooding problems (e.g. Morrison Creek and Laguna Creek) in the area. Development in the County area (e.g. Laguna and Elk Grove) south of this community has also encouraged growth.

Growth of the South Sacramento Community has also occurred as a result of annexation activity. Historically, the Community has been the most active area of the City for annexation petitions. This is primarily driven by the improved level of municipal services in the area, particularly water service. 79 acres of industrially designated land, located east of South Watt Avenue, were annexed in 1990 and 1991. In addition, the City, at the request of affected landowners, has completed a 395+ acre annexation proposal near Cosumnes River College, in the southern portion of the Community. The ultimate land uses for that proposal are presently being addressed with a comprehensive planning process which implement the policies of the SSCP Special Planning District. There will be opportunities for residential and related commercial development.

There are several public and quasi-public facilities located in this community. These facilities are Methodist Hospital, a Kaiser Permanente Medical Complex, Cosumnes River College and the Sacramento Army Depot.

The majority of vacant land in this area is located in the Southern portion of the community. There are also large parcels of skipped over land and infill property scattered throughout the plan area.

The applicable Goals, Objectives, Policies and Actions within the Industrial Land Use Element of the SSCP which relate to the proposed project are listed below:

GOALS

- Encourage new businesses and industries to locate in the Florin-Perkins Industrial Area and in the Luther Drive area, particularly those which are labor intensive and which provide job opportunities for local residents.
- Ensure that industrial uses are designated for areas where they will have minimal adverse impacts on other types of land uses.
- Ensure that industrial uses will have a minimal adverse impact on the environment.

Policies and Implementation Measures

1. Industrial developments should be as attractive as possible. All industrially zoned land should be placed within the M-1S or M-2S zones. Landscaping and fencing on screening of storage, junk yards or other outside industrial uses should continue to be required and maintained.
2. Ensure that industrial uses are located in areas where they will impose few or no adverse impacts on other uses.
 - Concentrate new industrial uses in the Florin-Perkins area or the Luther Drive area for light industrial uses (Planning Division).
3. Remove obstacles to industrial development throughout the community, in particular, poor traffic access from freeways and visual blight.
4. Ensure that industrial uses will have minimal adverse impacts on the environment.

Other applicable goals of the South Sacramento Community Plan include:

- Accommodate growth projected for South Sacramento in an orderly and efficient manner which enhances the existing attractive features and which provides assets which the community needs;
- Encourage more variation of housing types in South Sacramento, especially to meet the needs of the two ends of the housing and income spectrum;
- Implement policies and programs, and focus current programs, to eliminate the sources of blight and incompatible land uses in South Sacramento;
- Pursue programs to encourage the maintenance of rental property;
- Encourage the planting of trees and landscaping in the community.

Florin-Perkins Industrial Area

The southern portion of the Project Area is also located within Florin-Perkins Industrial Area. Approximately half of this eight square mile industrial park is located in the South Sacramento Community Plan Area, with the remaining portion located in the East Broadway Community area. The Florin-Perkins portion of South Sacramento is bounded on the west by Power Inn Road, on the south by the current Sacramento City limits and Elder Creek Road, on the west by Elk Grove-Florin Road, and on the north by Fruitridge Road.

There are several existing land uses in the Florin-Perkins Industrial Area. The primary land uses are Heavy Commercial and Industrial, Institutional and Public Facilities, and Open

Space/Vacant Land and Agriculture, each representing approximately one-third of the total acreage. Also, scattered pockets of Low Density Residential (single family) exist throughout the area, but these represent less than five percent of the total land area.

East Broadway Community

The Project Area is located within the East Broadway Community. The East Broadway Community is the City's manufacturing and warehouse district, which maintains one of the highest employment concentrations in the City. Although it is identified as a geographically-defined planning area, no map, policies or text exist. Development in this area is regulated and guided by the General Plan and Zoning Ordinance.

Oak Park/Florin-Perkins Enterprise Zone

The Project Area is located within the Targeted Economic Development Area of the Oak Park/Florin-Perkins Enterprise Zone. The Enterprise Zone qualifies the area for a variety of benefits designed to improve the economic health of the area by providing incentives for both the expansion of businesses and the encouragement of those businesses to employ residents of an identified high unemployment area.

The Enterprise Zone is divided into three distinct categories:

- 1) The High Density Unemployment Area (HDUA) includes certain residential portions of Oak Park, Central City, Franklin Boulevard and South Sacramento. The HDUA, as defined by the State Trade and Commerce Agency, is a primary economically distressed residential area. This determination is based on poverty levels, median income, and unemployment figures. The residents of this designated area are intended to benefit from the employment opportunities created by the Zone.
- 2) The Targeted Economic Development area (TED) is composed of the industrial area bounded by Folsom Boulevard, Elk Grove-Florin Road, Power Inn Road and Florin Road, as well as the industrial area in the vicinity of Highway 50, 65th Street and 14th Avenue. The Zone provides incentives for TED businesses to hire HDUA residents and encourages new business growth in the program area.
- 3) The Neighborhood Economic Development area (NED) consists of the commercial strips along both sides of Broadway, Stockton Boulevard and Franklin Boulevard. The Zone provides opportunities to upgrade these commercial strips.

Sacramento Army Depot Reuse Plan

The Sacramento Army Depot Reuse Plan was adopted by the City Council in October, 1994. This Plan is a guiding framework intended to lead the Depot from its role in protecting the national security to one which serves the interest of the local community economically,

culturally and environmentally. Although the intended use of a large portion of the site by Packard Bell has altered many of the details of the Plan, the Plan has been adopted as originally conceived to provide guidance for development of the site in the event that Packard Bell vacates the site at any time. The portions of the area not under Packard Bell's control are subject to the guidelines specified in the Plan.

The Land Use Plan includes development standards and design guidelines that:

- ▶ Define districts within the reuse area;
- ▶ Specify appropriate land uses within the development;
- ▶ Encourage reuse of existing structures for building "recycling";
- ▶ Specify design parameters of new structures;
- ▶ Define a continuous pedestrian circulation system that encourages walking and alternative modes of transportation;
- ▶ Provide a strong tree and landscape concept that creates a pedestrian-scaled and tree-shaded environment; and
- ▶ Sensitively integrate natural resource areas as open space within the reuse area.

4.1.5 IMPACTS WITH THE PROPOSED REDEVELOPMENT PLAN

Methodology

This section is divided into three separate analyses: 1) Compatibility with Land Use, 2) Zoning Consistency, and 3) Consistency with Adopted Plans and Policies. Environmental impacts resulting from General Plan land use development facilitated by the Redevelopment Plan are discussed in the respective environmental categories (e.g., Traffic Section for significant traffic impacts and Air Quality Section for air quality impacts). An inconsistency is identified if the proposed Redevelopment Plan is inconsistent with the City's Comprehensive Zoning Ordinance or any applicable adopted plans. This section differs from other discussions in that plan consistencies are addressed as opposed to environmental impacts and mitigation measures. This discussion complies with Section 15125 (b) of CEQA Guidelines which requires EIRs to discuss inconsistencies as part of the environmental setting.

Significance Criteria

Compatibility with Land Use

The land use analysis used in this DEIR evaluates the Project in comparison with the type

and no mitigation measures are provided.

4.1-1 Consistency with existing and planned land uses in and surrounding the Project Area

4.1-2 Consistency with zoning

4.1-3 Consistency with adopted plans and policies

No significant or potentially significant land use impacts would occur with project implementation and no mitigation is necessary.

4.1.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The project would result in less-than-significant impacts related to land use and therefore, no significant adverse impacts would occur.

4.2 TRANSPORTATION AND CIRCULATION

4.2.1 INTRODUCTION

This section presents a summary of the comprehensive circulation analysis prepared for the Sacramento Army Depot Reuse Plan EIR (SADEIR). That analysis provided an assessment of circulation conditions associated with future development at the Depot site following closure of the Sacramento Army Depot. The adopted Reuse Plan enables transfer of land from federal ownership to private ownership, and subsequent industrial development.

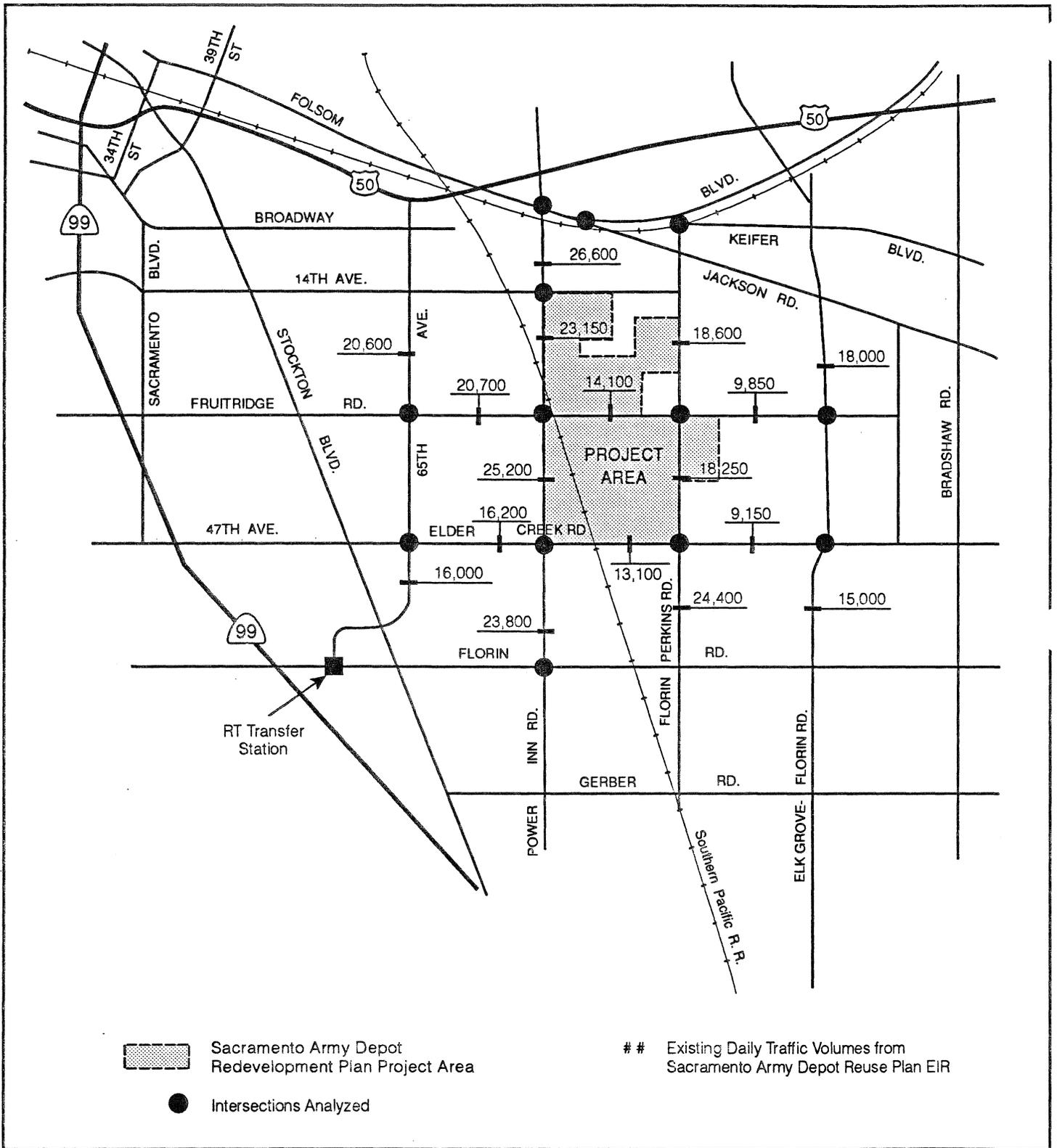
The SADEIR included a detailed evaluation of existing circulation conditions in the Project Area and vicinity and an analysis of projected traffic conditions considering a year 2010 planning horizon. The circulation study area and existing traffic volumes are illustrated on Figure 4.2-1. Circulation system impacts as well as mitigation measures required to accommodate development of the Depot were identified. Mitigation measures were adopted and a statement of overriding considerations was made regarding unavoidable cumulative traffic impacts.

Travel characteristics associated with recent activity at the Army Depot site were quantified to serve as a basis for evaluating the net impacts of future development potential on the site. Existing intersection and roadway volumes were inventoried in Spring 1993 within the study area, which includes the Redevelopment Project Area. In addition, traffic operations at the site were quantified using traffic count data gathered at entrances to the site and through discussion with Army Depot staff regarding employee travel characteristics and shift schedules. Future traffic projects were developed using the regional traffic model developed for the Sacramento Metropolitan Area (SACMET traffic model).

Major streets in southeast Sacramento providing circulation to the site and linking the site to the regional street and highway system were evaluated in the analysis. The report focused on thirteen (13) key intersections in the study area which are largely representative of overall circulation conditions and govern peak period traffic flows through this portion of Sacramento. Transit facilities serving the area were also identified.

The methodology employed in the SADEIR analysis used existing technical resources. Traffic counts provided by the City of Sacramento were supplemented with daily traffic counts and peak hour intersection counts throughout the study area.

Reuse development alternatives analyzed for the site included: (1) the proposed project, consisting of industrial uses with the potential for 7,500 employees on the site, (2) a higher density alternative consisting of employment center uses with the potential for 14,600 employees on the site and (3) the "no project" alternative which assumes only "care-taker" uses on the site. The "proposed project" was approved in October, 1994, and mitigation



Source: Michael Brandman Associates, 1995.

Circulation Study Area

Sacramento Army Depot Redevelopment Plan EIR

FIGURE 4.2-1

NOT TO SCALE



measures were adopted in a mitigation monitoring plan. The Redevelopment Plan incorporates these mitigation measures as a part of the Redevelopment Project, by proposing to assist in the funding and implementation of these mitigation measures.

Since adoption of the SADEIR, the actual development intensities have changed with leasing of much of the site by Packard Bell. This reduces the number of anticipated employees generated from the site and, subsequently, the Project Area, significantly. Current projections for ultimate employment at the Depot are now less than 5,000. When combined with the anticipated long-term employee projections for the remainder of the Project Area of 1,334, for a total of 6,334, the SADEIR traffic analysis becomes a worst-case cumulative analysis for the Project Area that overstates potential impacts.

DEFINITIONS

The following is a description of roadway terms used within this section (City of Sacramento, General Plan Update 1986):

- Interchange: An interchange is a grade separated roadway that provides access between the street system and the freeway system. An interchange permits access to both sides of the freeway. Interchanges can be identified as being diamond or cloverleaf, labeled by the configuration of the interchange's design of the on- and off-ramps.
- Bulb Ramp: A bulb ramp provides access from the street system to the freeway system, but does not provide access to both sides of the freeway.
- Freeway: A freeway is a grade separated roadway with limited access. State Route 99 is an example.
- Expressway: An expressway is a roadway with limited access, few cross streets (and no cross streets without signals), limited driveway access (restricted by distance and no residential driveways), and no on-street parking. Mack Road is an example.
- Arterial: An arterial is a facility that provides intra-city transportation and inter-region transportation for large volumes of vehicles, and provides access to abutting properties. Franklin Boulevard is an example.
- Minor Arterial: A minor arterial is a roadway that connects major facilities, but has more access than an Arterial. Parking is allowed, but may be limited. Access is restricted, with no residential driveways except multi-family or when adequate sight distance is created. Bruceville Road is an example.

Collector: The purpose of a collector is to connect residential uses to the major street system.

Local: The purpose of a local street is to serve the interior neighborhood.

4.2.2 SETTING

EXISTING STREET AND TRANSPORTATION SYSTEM

The Project Area is located in the southeastern portion of the City of Sacramento. Regional access to the Project Area is provided by Highway 50 approximately one mile to the north and Highway 99 three miles to the west. A grid system of arterial streets located on one mile spacing provides circulation through the study area and links the Project Area to the regional highway system. Major streets providing circulation through the study area are discussed below.

East/West Streets

14th Avenue provides east/west circulation along the northern boundary of the Project Area, linking Power Inn Road in the east to 12th Avenue and Highway 99 in the west. The roadway is planned to be ultimately extended to the east to Florin Perkins Road.

Fruitridge Road is an east/west arterial linking Interstate 5 in the west to Elk Grove Florin Road at the eastern City Limit. Through the majority of study area, the roadway provides four travel lanes with a center turn lane. East of Florin Perkins Road, Fruitridge Road transitions to two travel lanes. This segment of the roadway is currently striped for two travel lanes, however, segments of the road have been improved in conjunction with adjacent development. The roadway crosses through the Project Area and provides direct access to the former Depot property via two signalized intersection locations (i.e., at an alignment with the Proctor Gamble entrance and at 84th Street).

Elder Creek Road is an east/west facility bordering the south end of the Project Area linking Highway 99 and Franklin Boulevard in the west to Bradshaw Road in Sacramento County east of the City Limit. West of Power Inn Road, the roadway provides four travel lanes with a center turn lane. East of Power Inn Road, Elder Creek Road transitions to three and to two travel lanes. West of Stockton Boulevard, the roadway is designated as 47th Avenue and terminates at 24th Street west of Highway 99.

Florin Road is a major east/west arterial traversing South Sacramento one mile south of the Project Area. The facility links I-5 and the pocket area in the west and extends approximately seven miles into Sacramento County to the east, ultimately terminating at Sunrise Boulevard.

North/South Streets

Florin Perkins Road is a north/south five lane facility (four travel lanes with center turn lane) bordering most of the east side of the Project Area, linking Florin Road in the south to Folsom Boulevard in the north. The roadway provides direct access to the Depot site via a signalized intersection at Thys Court and an unsignalized driveway north of Elder Creek Road.

Power Inn Road is a north/south arterial bordering the western edge of the Project Area. Power Inn Road provides a link to Highway 50 and becomes Howe Avenue north of the highway. To the south, Power Inn Road extends beyond the City Limits to Calvine Road in Sacramento County. In the vicinity of the Project Area, Power Inn Road provides four travel lanes with a center turn lane.

Elk Grove Florin Road is a north/south arterial one mile east of the Project Area extending into Sacramento County to the south and transitioning to become Watt Avenue in the north. The roadway currently provides two travel lanes through the study area.

65th Street is designated as an expressway and provides north/south circulation through the study area one mile west of the Project Area. The facility extends from Highway 50 in the north to Florin Road in the south. West of the Project Area, 65th Street provides four travel lanes with a raised median.

Existing Transit Service

Regional Transit (RT) presently provides transit service throughout the Sacramento Metropolitan area. Current transit service in the vicinity of the study area consists of both bus and light rail service, although light rail service is located approximately one half mile to the north of the Project Area.

Light Rail

Regional Transit Metro light rail service is provided adjacent to Folsom Blvd approximately 1/2 mile north of the Project Area. The **Power Inn** and **College Greens** light rail stations provide access to the Metro line in the vicinity of Power Inn Road and Florin-Perkins Road respectively. Service is provided on 15 minute headways throughout the weekday, and 31 minute frequencies in the evenings. Peak period light rail capacity consists of approximately 500 persons per four car train (Palmere, 1995).

The RT Transit Master Plan identifies potential LRT corridors in the Sacramento region. The California Traction Company (CTC) railroad right-of-way from its junction at the College Greens LRT station to Grant Line Road has been identified as a potential LRT and/or bus corridor, with a station/stop at the CTC-Fruitridge Road

junction. Any level of LRT or bus service provided in this corridor will be dependent upon many factors, including, but not limited to, the following:

- ▶ Land use development within the corridor at residential densities and commercial intensities to sustain transit service,
- ▶ Residential and commercial site designs to enhance access to transit facilities, and
- ▶ Adequate capital and operating financial resources to construct and operate the transit mode and level of service desired.

Bus Service

The RT Board of Directors approved system-wide bus service changes in September 1994 designed to improve service frequencies and simplify bus service on major streets in Sacramento. Bus service is provided directly to the Project Area along Fruitridge Road via Route 51. Route 51 in turn provides transfers to Routes 50, 54, 55, 57, 61, 62, 67, 68, and 81 via the transfer station located near Florin Road and 65th Street. Monday through Friday, Route 51 operates with 30 minute frequencies during the day. In addition, a new route was added which operates with 30 minute frequencies along Florin-Perkins, Fruitridge, and Power Inn Roads and Folsom Boulevard in a clockwise direction, providing direct service through the Project Area to the Army Depot site from both Power Inn and College Greens light rail stations (Palmere, 1995).

Bicycle and Pedestrian Facilities

According to the proposed *City/County Bikeways Master Plan*, the section of Power Inn Road through the Project Area is designated to ultimately be a Class II on-street bikeway (implementation timeframe greater than 10 years). Striping is proposed to be provided four feet from the curb for bicyclists with signs designating the outside lanes as shared bicycle and vehicle lanes. The Proposed Master Plan also indicates bikeways located on Fruitridge, Elder Creek Road (Class II, 5 years), and 14th Avenue. In addition, the Reuse Plan anticipates that pedestrian and bicycle trails will be integrated into the open space areas. Six foot bike paths will be provided on all primary roadways.

EXISTING INTERSECTION OPERATIONS AND TRAFFIC VOLUMES

Traffic volumes in the study area reflect the directionality of commuter activity and traffic flows associated with commercial and residential activity to the west and south of the site, as well as circulation to regional facilities to the north and west (ie., Highways 50 and 99 respectively). To assess existing traffic conditions, existing daily and peak hour traffic count information was compiled. Daily traffic volumes are a useful indicator of the overall

magnitude of traffic and can be used to generally identify overall traffic conditions. As such, daily traffic volumes are the basis for analysis for major planning documents, such as the City of Sacramento General Plan. Daily 24 hour traffic counts were performed throughout the study area and supplemented with available counts provided by the City of Sacramento Transportation Division.

Thirteen (13) critical intersection locations were identified for analysis in the report. Intersection study locations, peak hour volumes and daily roadway segment volumes throughout the study area were identified. Peak hour counts at key area intersections were also conducted during the A.M. and P.M. peak traffic hours. Counts were performed in two hour intervals (7:00 - 9:00 A.M., 4:00 - 6:00 P.M.) to obtain the maximum one hour interval. Peak traffic volumes generally occur from about 7:15 - 8:15 A.M. and 4:30 - 5:30 P.M. at the majority of study intersections.

Where available, operations have been described in terms of the peak hour Volume to Capacity (V/C) ratio as well as Level of Service (LOS). The V/C ratio indicates the amount of capacity utilized, with 1.0 representing 100 percent utilization. The LOS provides a letter grade which describes the quality of flow, ranging from the best conditions (LOS A) through extreme congestion associated with at- or over-capacity conditions (LOS F). Table 4.2-1 lists the V/C ratios associated with each LOS (for signalized intersections) and provides a description of anticipated traffic conditions at each grade. All of the major Project Area intersections are signalized. As discussed below, the Redevelopment Plan provides for signalization of additional Project Area intersections in order to improve traffic flow.

As shown in Table 4.2-1, LOS "A", "B", and "C" are considered satisfactory to most motorists, while LOS "D" is marginally acceptable. LOS "E" and "F" are associated with congestion and delay and are unacceptable to most motorists. Currently, the City of Sacramento has adopted LOS "C" as an operational threshold beyond which mitigations are required to support additional development. For those intersections which already operate at "D", "E", or "F", significant impacts are defined by an increase in the V/C of 0.02 or more due to traffic added by a specific project or development. The signal warrant criteria used to define LOS at unsignalized intersections for the SADEIR study was based upon peak hour volume criteria. However, the City does not use V/C ratio increments to determine significant impacts at unsignalized intersections, but rather when the level of service degrades from "C" to "D", or "D" to "E", and so on.

Table 4.2-2 identifies the existing intersection levels of service and Table 4.2-3 identifies existing roadway levels of service in the circulation study area.

**TABLE 4.2-1 - Level of Service Description
Signalized Intersection Evaluation**

Level of Service	Average Stopped Delay per Vehicle (Seconds)	Description
A	0.0 - 5.0	<i>Level-of-service A</i> describes uncongested operation, all queues clear in a single-signal cycle. $V/C = 0.00-0.60$
B	5.1 - 15.0	<i>Level-of-service B</i> describes operations with delay in range of 5.1 to 15.0 sec per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay. $V/C = 0.61-0.70$
C	15.1 - 25.0	<i>Level-of-service C</i> describes operations with delay in the range of 15.1 to 25.0 sec per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping. $V/C = 0.71-0.80$
D	25.1 - 40.0	<i>Level-of-service D</i> describes operations with delay in the range of 25.1 to 40.0 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable. $V/C = 0.81-0.90$
E	40.1 - 60.0	<i>Level-of-service E</i> describes operations with delay in the range of 40.1 to 60.0 sec per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences. $V/C = 0.90-1.00$
F	≥ 60.0	<i>Level-of-service F</i> describes operations with delay in excess of 60.0 sec per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels. $V/C = >1.00$

SOURCE: Highway Capacity Manual, Special Report 209, Transportation Research Board, 1985.

**TABLE 4.2-2
EXISTING INTERSECTION LEVELS OF SERVICE**

Location	Intersection Control	A.M. Peak Hour		P.M. Peak Hour	
		LOS	V/C	LOS	V/C
1. Folsom Blvd/Power Inn Rd	signal	D*	0.81	F*	1.07
2. Folsom Blvd/Jackson Hwy/ Notre Dame Dr	signal	B	0.64	B	0.65
3. Folsom Blvd/Florin Perkins Rd/ Julliard Dr	signal	B	0.61	B	0.63
4. 14th Avenue/Power Inn Rd	signal	B	0.65	D*	0.82
5. Fruitridge Rd/65th Street	signal	C	0.74	B	0.64
6. Fruitridge Rd/Power Inn Rd	signal	B	0.67	D*	0.81
7. Fruitridge Rd/Florin Perkins	signal	A	0.45	A	0.58
8. Fruitridge Rd/Elk Grove Florin	4-way stop	E**	0.89	E**	0.87
9. Elder Creek Rd/65th Street	signal	B	0.66	B	0.65
10. Elder Creek Rd/Power Inn Rd	signal	B	0.61	C	0.79
11. Elder Creek Rd/Florin Perkins	signal	A	0.51	A	0.54
12. Elder Creek/Elk Grove Florin	4-way stop	D	0.84	D**	0.84
13. Florin Rd/Power Inn Rd	signal	C	0.80	E*	0.96

LOS = Level of Service (City standard = LOS "C", v/c = 0.80 or better).
V/C = Volume to Capacity Ratio.
* Exceeds City standards for acceptable signalized intersection operation.
** Signalization warranted based upon peak hour approach volume.

SOURCE: kd Anderson Transportation Engineering, 1994; Sacramento Army Depot Reuse Plan EIR

**TABLE 4.2-3
EXISTING ROADWAY LEVELS OF SERVICE**

Roadway Segment	Daily Volume	Number Lanes*	Level of Service "C"/"E" Thresholds	LOS	Volume to Capacity
Fruitridge Road					
65th to Power Inn	20,700	4	24,000/30,000	B	0.69
Power Inn to Florin Perkins	14,100	4	24,000/30,000	A	0.47
Fl. Perkins to E.G. Florin	9,850	2**	12,000/30,000	B	0.66
Elder Creek Road					
65th to Power Inn	16,200	4	24,000/30,000	A	0.54
Power Inn to Fl. Perkins	13,100	2**	12,000/15,000	D	0.87
Fl. Perkins to E.G. Florin	9,150	2**	12,000/15,000	B	0.61
65th Street					
Fruitridge to 14th Ave	20,600	4	24,000/30,000	B	0.69
South of Elder Creek	16,000	4	24,000/30,000	A	0.53
Power Inn Road					
Folsom to 14th	26,600	4	24,000/30,000	D	0.89
14th Ave to Fruitridge	23,150	4	24,000/30,000	C	0.77
Fruitridge to Elder Creek	25,200	4	24,000/30,000	D	0.84
Elder Creek to Florin Rd	23,800	4	24,000/30,000	C	0.79
Florin Perkins Road					
North of Fruitridge Rd	18,600	4	24,000/30,000	B	0.62
Fruitridge to Elder Creek	18,250	4	24,000/30,000	B	0.61
Elder Creek to Florin Rd	22,400	4	24,000/30,000	C	0.75
Elk Grove Florin Rd					
North of Fruitridge Rd	18,000	2	12,000/15,000	F	1.20
South of Elder Creek Rd	15,000	2	12,000/15,000	E/F	1.00

Number of lanes indicates number of through travel lanes on roadway segment.

** Indicates worst-case section of this roadway segment, portions of the segment have been widened.

Bold indicates unacceptable LOS operation.

SOURCE: kd Anderson Transportation Engineering, 1994; Sacramento Army Depot Reuse Plan EIR

4.2.3 CUMULATIVE SETTING

The City of Sacramento adopted the Reuse Plan to enable transfer of the majority of the current Sacramento Army Depot site from federal to private ownership and to facilitate industrial redevelopment on the site of this closing military facility. The assumptions for future development analyzed in the SADEIR included the development of as much as 3,704,470 square feet of building space, which would have resulted in the employment of as many as 7,409 people. The 90 anticipated employees on the public/quasi public land brought the total potential employment on the site to approximately 7,500. The open space portion of the site would be utilized for drainage facilities and/or habitat preservation.

Since adoption of the SADEIR, much of the Depot site has been leased to Packard Bell and the actual development intensities have changed. Current projections for employment at the Depot now are closer to 5,000, not 7,500. The anticipated long-term increase in employees for the Project Area are approximately 6,334.

Roadways

Cumulative traffic roadway and intersection conditions within the study area are shown in Tables 4.2-4 and 4.2-5. Identified Levels of Service assume roadway and intersection geometrics as is currently in place.

In general, Year 2010 traffic projections will result in the majority of roadway segments and all of the study intersections operating at or near theoretical capacity without mitigation. This assumes current roadway and intersection geometrics. This is true with or without development of the proposed reuse alternative for the site. Projected operations are further discussed below.

Transit Impacts

Potential impacts to transit service were estimated considering the location of the site, current and future transit service in the area, and attaining the City of Sacramento's 35 percent trip reduction ordinance. Based upon these factors, a transit component of five percent was estimated to represent a reasonable projection of potential transit demand for the site.

It was determined in the SADEIR that additional employees would create a demand for increased transit service along Route 51 and adjoining connector routes. Based upon current 30 minute headways, this volume could not be accommodated during commute hours. Other related non-employee trips generated by the site may also use transit to some degree, however, employee commute trips would represent the primary transit demand component. Mitigation measures were identified and adopted with the SAD Reuse Plan, as outlined below. Subsequent to approval of the Reuse Plan, RT improved service from the Depot area to the LRT stations as previously noted.

**TABLE 4.2.4
CUMULATIVE YEAR 2010 INTERSECTION LEVELS OF SERVICE**

Intersection	Control	Cumulative Conditions				Cumulative Plus Depot Reuse				V/C Change	
		A.M. Peak		P.M. Peak		A.M. Peak		P.M. Peak		A.M.	P.M.
		LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C		
1. Folsom Blvd/Power Inn Rd	signal	F	1.68	F	1.74	F	1.65	F	1.78	-0.03	0.04
2. Folsom Blvd/Jackson Hwy/Notre Dame Dr	signal	E	1.00	F	1.05	F	1.00	F	1.07	0.0	0.02
3. Folsom Blvd/Florin Perkins Rd/Julliard Dr	signal	F	1.21	E	0.93	F	1.31	E	0.95	0.10	0.02
4. 14th Ave/Power Inn Rd	signal	F	1.09	F	1.35	F	1.21	F	1.38	0.12	0.03
5. Fruitridge Rd/65th St	signal	E	0.99	F	1.29	F	1.17	F	1.20	0.18	-0.09
6. Fruitridge Rd/Power Inn Rd	signal	F	1.56	F	1.53	F	1.61	F	1.53	0.05	0.0
7. Fruitridge Rd/Florin Perkins Rd	signal	F	1.27	F	1.08	F	1.27	F	1.12	0.0	0.04
8. Fruitridge Rd/Elk Grove Florin	new signal	F	1.71	F	1.36	F	1.69	F	1.45	-0.02	0.09
9. Elder Creek Rd/65th St	signal	F	1.21	F	1.10	F	1.22	F	1.13	0.01	0.03
10. Elder Creek Rd/Power Inn Rd	signal	F	1.05	F	1.06	F	1.11	F	1.14	0.06	0.08
11. Elder Creek Rd/Florin Perkins	signal	B	0.68	E	0.92	D	0.89	F	1.05	0.21	0.13
12. Elder Creek Rd/Elk Grove Florin	new signal	F	1.91	F	1.68	F	1.92	F	1.75	0.01	0.07
13. Florin Rd/Power Inn Rd	signal	F	1.32	F	1.29	F	1.36	F	1.43	0.04	0.14

LOS = Level of Service (City standard = LOS "C", v/c = 0.80 or better).

V/C = Volume to Capacity Ratio.

Bold indicates unacceptable LOS operation.

SOURCE: kd Anderson Transportation Engineering, 1994; Sacramento Army Depot Reuse Plan EIR, 1994.

TABLE 4.2-5

CUMULATIVE YEAR 2010 ROADWAY LEVELS OF SERVICE
WITH DEPOT REUSE

Roadway Segment	Travel Lanes	Cumulative Base Condition		Year 2010 Plus Depot Reuse		Volume Change	V/C Change
		ADT	LOS	ADT	LOS		
Fruitridge Road							
65th to Power Inn	4	32,260	F	33,700	F	1,440	0.05
Power Inn to Fl. Perkins	4	36,410	F	37,800	F	1,390	0.05
Fl. Perkins to E.G. Florin	4*	30,660	F	32,500	F	1,840	0.06
Elder Creek Road							
65th to Power Inn	4	27,650	E	31,800	F	4,150	0.14
Power Inn to Fl. Perkins	4*	20,660	B	23,400	C	2,740	0.09
Fl. Perkins to E.G. Florin	4*	20,320	B	21,200	C	880	0.03
65th Street							
Fruitridge to 14th	4	44,140	F	44,400	F	260	0.01
South of Elder Creek	4	37,650	F	38,500	F	850	0.03
Power Inn Road							
Folsom to 14th Ave	4	60,280	F	63,100	F	2,820	0.09
14th Ave to Fruitridge	4	40,830	F	43,300	F	2,470	0.08
Fruitridge to Elder Creek	4	33,210	F	34,400	F	1,190	0.04
Elder Creek to Florin Rd	4	18,510	B	20,500	B	1,990	0.07
Florin Perkins Road							
North of Fruitridge Rd	4	32,880	F	34,400	F	1,520	0.05
Fruitridge to Elder Creek	4	21,800	C	23,700	C	1,900	0.06
Elder Creek to Florin Rd	4	21,110	C	22,600	C	1,490	0.05
Elk Grove Florin Road							
North of Fruitridge Rd	2	66,000	F	68,600	F	2,600	0.09
South of Elder Creek Rd	2	73,050	F	75,800	F	2,750	0.09

* Assumes completion of partially constructed roadway segments.
Bold indicates unacceptable LOS operation.

SOURCE: kd Anderson Transportation Engineering, 1994;
Sacramento Army Depot Reuse Plan EIR, 1994.

4.2.4 SADEIR CONCLUSIONS

The SADEIR concluded that the development of the Sacramento Army Depot in accordance with the Reuse Plan would result in significant impacts on level of service standards at the following locations:

Intersections projected in the SADEIR to violate LOS E:

- Intersection Power Inn Road/Folsom Boulevard (Project Specific)
- Power Inn Road/14th Avenue (Project Specific)
- Fruitridge Road/65th Street (Project Specific)
- Power Inn Road/Fruitridge Road (Project Specific)
- Power Inn Road/Elder Creek Road (Project Specific)
- Power Inn Road/Florin Road (Project Specific)
- Elk Grove Florin Road/Fruitridge Road (Project Specific)
- Elk Grove Florin Road/Elder Creek Road (Project Specific)
- Folsom Boulevard/Power Inn Road (Cumulative)
- Folsom Boulevard/Jackson Highway (Cumulative)
- Folsom Boulevard/Florin Perkins Road (Cumulative)
- Power Inn Road/14th Avenue (Cumulative)
- Fruitridge Road/65th Street (Cumulative)
- Fruitridge Road/Power Inn Road (Cumulative)
- Fruitridge Road/Florin Perkins Road (Cumulative)
- Fruitridge Road/Elk Grove Florin Road (Cumulative)
- Elder Creek Road/65th Street (Cumulative)
- Elder Creek Road/Power Inn Road (Cumulative)
- Elder Creek Road/Florin Perkins Road (Cumulative)
- Elder Creek Road/Elk Grove Florin Road (Cumulative)
- Florin Road/Power Inn Road (Cumulative)

Roadway segments projected in the SADEIR to violate the level of service standard of significance:

- Power Inn Road, Folsom Boulevard to Florin Road (Project Specific)
- Elder Creek Road, Power Inn Road to Florin Perkins Road (Project Specific)
- Elk Grove Florin Road, north of Fruitridge Road and south of Elder Creek Road (Project Specific)
- Fruitridge Road (Cumulative)
- Elder Creek Road, 65th Street to Power Inn Road (Cumulative)
- 65th Street, south of Elder Creek Road (Cumulative)
- Power Inn Road, Folsom Boulevard to Elder Creek Road (Cumulative)
- Florin Perkins Road, north of Fruitridge Road (Cumulative)
- Elk Grove Florin Road, north of Fruitridge Road and south of Elder Creek Road (Cumulative)

To reduce the significant impacts of the Reuse Plan to less than significant levels, mitigation measures were adopted with the Mitigation Monitoring Plan. Those mitigation measures have been incorporated into the Redevelopment Project as potential redevelopment activities.

The SADEIR also concluded that cumulative projected growth in conjunction with the Reuse Plan would result in unsatisfactory roadway operations at many locations throughout the study area. These impacts were reduced, but not mitigated to less than significant levels. A statement of Overriding Considerations was adopted for cumulative roadway impacts.

4.2.5 IMPACTS WITH THE PROPOSED REDEVELOPMENT PLAN

Significance Criteria

Roadway System

The criteria for determining whether a project will create a significant impact to the roadway system is based on the degradation of the intersection or freeway ramp LOS. The City of Sacramento has identified LOS C as the threshold condition for intersections. A significant impact will result if the addition of project trips cause conditions at an intersection to change from LOS C (or better) to LOS D (or worse). At locations where LOS D (or worse) conditions presently exist or are projected for the cumulative scenarios, no threshold has been established for the delay range in seconds. The City uses a change in volume to capacity ratio of 0.02 or greater (as a result of the addition of project trips) as the threshold of significance.

Transit System

Regional Transit has concluded that a significant impact to the transit system would occur when the ridership exceeds the transit system capacity, if the project will increase the ridership on the transit system. Additional localized and regional air quality emissions are potential environmental impacts that may result from exceeding transit capacity (more people may choose against using transit if buses are crowded).

Bikeway System

An impact would result to bikeways if the development of a project eliminated an existing bikeway or hindered the placement of a future bikeway (i.e. planned bikeways within the Sacramento Bikeway Master Plan, January 1977). As is the case with transit, the environmental effects associated with impacted bikeways are associated with the potential for additional air quality emissions.

Impact Statements

Project Specific and Cumulative Traffic. Development encouraged by the Redevelopment Plan must be consistent with the City General Plan. The General Plan traffic studies, as updated in the SADEIR, assume total buildout by 2010 with civilian reuse of the Depot including 7,500 employees. Due to a change in circumstances since SADEIR analysis (Packard Bell assumption of much of the available Depot land), anticipated development within the Depot area is significantly less than this buildout projection (less than 5,000 employees). Anticipated growth facilitated with the Redevelopment Plan would therefore generate a total of approximately 6,334 employees for the traffic study area. The impacts identified in the SADEIR are greater than those anticipated for the Project Area. The levels of significance identified for each impact is not anticipated to change.

Localized circulation impacts not addressed at this programmatic level will be addressed on a project specific level, and any decreases in level of service related to future specific developments will be required to be mitigated consistent with City policy. Since the Redevelopment Plan does not propose to intensify land uses beyond those planned for in the City General Plan, or develop specific traffic generating projects in the Project Area, a quantitative analysis of intersection-specific traffic impacts due to Redevelopment Plan implementation in the context of this programmatic Environmental Impact Report is not warranted. The Redevelopment Project provides for potential funding of circulation improvements which were included in the SADEIR as mitigation measures, as well as other circulation improvements for the Project Area recommended by the City Transportation Division:

A. Traffic Circulation Improvements

1. Add Turn or Through Lanes at:
 - a. Power Inn Road at 14th Avenue
 - b. Fruitridge Road at 65th Avenue
 - c. Power Inn Road at Fruitridge Road
 - d. Power Inn Road at Elder Creek Road
 - e. Power Inn Road at Florin Road
 - f. Fruitridge Road at Florin-Perkins Road
 - g. Folsom Boulevard and Jackson Highway
 - h. Folsom Boulevard and Florin-Perkins Road
 - i. Elder Creek Road at 65th Avenue
 - j. Elder Creek Road and Power Inn
 - k. Elder Creek Road and Florin Perkins
2. Traffic Signal Installation at:
 - a. South Watt at Fruitridge Road
 - b. South Watt at Elder Creek Road
 - c. Florin-Perkins Road and Jackson Highway
 - d. Florin-Perkins Road and Thys Court

- e. Florin-Perkins Road and Elder Creek Road
 - f. Florin-Perkins Road Interconnect
 - g. Power Inn Road and 14th Avenue
 - h. Power Inn Road and Fruitridge Road
 - i. Power Inn Road and Lemon Hill
 - j. Power Inn Road and Elder Creek Road
 - k. Fruitridge Road and Depot Entrances
 - l. Fruitridge Interconnect
3. Street Widening:
- a. Power Inn Road
 - b. Fruitridge Road
 - c. elder Creek Road
 - d. 65th Street
 - e. Florin-Perkins Road
 - f. South Watt Avenue
 - g. 82nd Street
 - h. 21st Avenue
 - i. Unsworth Avenue
 - j. Thys Court
 - k. Unnamed Street between Thys Court and Unsworth
 - l. Other interior streets as required
4. Installation of Streets and Signals on the Depot
5. Curbs, Gutters and Sidewalks
6. Street Lights

Several of these improvements encroach on or will be constructed within the right-of-way of State Route 16 (Jackson Highway). These improvements include the widening of Florin-Perkins Road, Power Inn Road and intersection improvements where these two roads meet SR16. All construction and improvements, including road, sewer, water and transit improvements that will take place within state right-of-way, will require an encroachment permit from Caltrans. *The proposed Redevelopment project is consistent with the City General Plan and Reuse Plan approvals, and proposes no land use changes or population increases above those planned levels. The proposed Redevelopment improvements would construct, reconstruct, install or upgrade control devices, street lights, transit shelters, roadways and roadway extensions. These projects will help ameliorate circulation problems in the Project Area over the life of the Project and would result in less than significant project specific and cumulative traffic impacts (4.2-1).*

Transit System. Development encouraged by redevelopment activities could increase the demand for transit service, although not beyond those levels anticipated in the SADEIR. The City of Sacramento's trip reduction ordinance seeks to obtain a 35 percent alternative commute mode goal which will increase transit use throughout the Project Area. Although attainment of this goal does not necessarily correspond to a 35 percent reduction of vehicle trips, the impact of the full 35 percent reduction was also assumed in the SADEIR analysis.

The Project includes funding for transit capital improvements and a future light rail station to serve General Plan buildout, as well as other improvements that could improve pedestrian access and safety. Therefore, impacts to transit service would be less-than-significant (4.2.2).

4.2.6 MITIGATION MEASURES

The numbering shown below corresponds to the impact(s) identified in the preceding discussion.

Less-than-significant impacts would occur with the proposed project in the areas noted below and no mitigation measures are provided.

4.2-1 Project specific and cumulative traffic

4.2-2 Transit system

No significant or potentially significant impacts would occur with project implementation and no mitigation is necessary.

4.2.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The project would facilitate development consistent with adopted plans and policies, which have been determined to result in significant cumulative increases in traffic congestion and adverse roadway and intersection levels of service. The expected development and subsequent traffic levels occurring as a direct result of Redevelopment Plan implementation are within the volumes contemplated by the SGPU and SADEIR. The SADEIR concluded that cumulative projected growth in conjunction with the Reuse Plan would result in unsatisfactory roadway operations at many locations throughout the study area. These impacts were reduced, but not mitigated to less than significant levels. When the SGPU and SADEIRs were adopted, the Findings of Facts made Statements of Overriding Considerations regarding transportation impacts. Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of these findings.

4.3 AIR QUALITY

4.3.1 INTRODUCTION

This air quality evaluation includes a description of the Sacramento Air Basin, a discussion of the pollutants impacting air quality, information on standards for air quality planning, a summary of the air quality methodology and analysis prepared for the SADEIR, and an impact analysis and mitigation discussion which includes a discussion of previous environmental reviews applying to the Project Area. These discussions will focus on the existing and long-range settings, with and without the proposed redevelopment.

4.3.2 SETTING

There are several important factors which determine local and regional air quality. The most critical are the quantity, type, and location of pollutant sources. Topographical, climate, and meteorological conditions are also important.

CLIMATE/METEOROLOGY

The primary factors that determine air quality are the locations of air pollutant sources and the amounts of pollutants emitted. Regional climate and local meteorology, however, are also important. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The topographic and atmospheric characteristics of the Sacramento Valley tend to inhibit the dispersal of air pollutants.

The Project Area is located within Sacramento County, which is part of the Sacramento Valley Air Basin (SVAB). The SVAB is under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Regional meteorological conditions are greatly influenced by the topography of the SVAB. The Valley is relatively flat, bordered by mountains to the east, west and the north. Air enters the Valley through the Carquinez Strait, moving across the Delta and flowing into the SVAB, bringing with it pollutants from the heavily populated San Francisco Bay Area. Wind directions and speeds reflect the channeling effect of the mountain ranges.

The climate of the Sacramento Valley is characterized by hot, dry summers and cool, rainy winters. During the winter, the North Pacific storm track intermittently dominates Valley weather. Fair weather alternates with periods of extensive clouds and precipitation. Also characteristic of Valley winter weather are periods of dense and persistent low-level fog, which are most prevalent between storms. During the summer, the Sacramento Valley becomes nearly isolated from the Pacific storm track due to the relatively constant position of the Pacific High.

From May to October, the region's intense heat and sunlight lead to high ozone (O₃) concentrations. Summer inversions are strong and frequent, but are less troublesome than those that occur in the fall. They often are the result of marine air pushing under an overlying warm air mass, and generally are accompanied by a brisk afternoon wind that provides good ventilation. By contrast, autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not facilitate adequate dispersion of air pollutants.

Wind direction determines the direction in which air pollutants are transported, while wind speeds determine the amount of air available for diluting emissions (light winds limit the dilution resulting from transport away from pollution sources). Surface wind speeds and direction in Sacramento are about ten miles per hour, mainly from the south-southwest (about 37 percent of the time) (CARB, 1989). Temperatures in Sacramento (Mather Field) range from a mean maximum of 70 degrees Fahrenheit (°F) to a mean minimum of 49° F (NCAA, 1990).

AIR QUALITY RULES, REGULATIONS AND STANDARDS

Federal

Regulation of air quality is achieved through both federal and state ambient air quality standards and emissions limits for individual sources of air pollutants. The Federal Clean Air Act (CAA) required the US Environmental Protection Agency (EPA) to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for the six "criteria" air pollutants, ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter (PM₁₀), and lead (Pb). These pollutants are called "criteria" air pollutants because the standards satisfy criteria specified under the Clean Air Act.

Pursuant to the 1990 CAA Amendments (CAAA), the EPA has classified Air Basins, or portions thereof, as either "attainment" or "nonattainment" for each criteria air pollutant, based on whether or not the NAAQS have been achieved. A State Implementation Plan (SIP) is required by the Federal CAA as a mechanism for states with non-attainment areas to demonstrate how federal standards will be met. Projects receiving federal funds must demonstrate conformity with applicable SIPs. Thus, conformity is based on demonstrating compliance with federal air quality standards.

Sacramento is designated non-attainment for O₃, CO and PM₁₀. The Sacramento O₃ non-attainment area is currently designated as a serious non-attainment area for both the federal and state ozone standards. The Sacramento CO non-attainment area is classified as a moderate non-attainment area which requires attainment of the federal CO standards by December 1995. The SMAQMD expects to request redesignation to CO attainment status since there have been no violations of the federal CO standards within the last three years. In addition, Sacramento has recently been designated as moderate non-attainment for the federal PM₁₀ standards. This classification requires the SMAQMD to submit a PM₁₀ SIP by

July, 1995. This SIP must demonstrate attainment of the federal PM_{10} standard by 2000 (Ormandy, 1995).

The CAA required that non-attainment regions prepare plans to attain the NAAQS by 1982. If this was not feasible, a new plan had to be completed by 1982 that demonstrated attainment of the standards by 1987. The SVAB could not demonstrate attainment of the NAAQS by 1982, and so, in 1982, an Air Quality Maintenance Plan for the SVAB was adopted and incorporated into the SIP. The Air Quality Maintenance Plan outlined policies for the reduction of emissions from the use of motor vehicles and from stationary sources. In 1988, the EPA formally disapproved the Plan, due to its inability to meet the federal ozone standard. As part of State requirements, the SMAQMD published the 1991 Air Quality Attainment Plan which fully incorporates and replaces the 1982 document (SMAQMD, 1991).

The EPA adopted interim policies regarding post-1987 non-attainment areas. These policies gave non-attainment areas until the end of 1990 to revise the SIP to demonstrate attainment and maintenance of the standards. Although the state submitted the revised SIP, the SIP was not approved. In response to a lawsuit, the EPA issued a proposed Federal Implementation Plan (FIP) for the Sacramento area on February 15, 1994 (further discussed below). This FIP applies to all of Sacramento, El Dorado and Yolo counties, the northeast portion of Solano County, and the southern portion of Sutter County. The FIP was promulgated in February 1995, and will be implemented within two years unless the current SIP, submitted in November 1995, is determined to be adequate.

Regulation of toxic air contaminants (TACs), termed Hazardous Air Pollutants (HAPs) under federal regulations, is achieved through Federal and State controls on individual sources. Federal law defines HAPs as non-criteria air pollutants with short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects. The 1977 CAA Amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare. The 1990 CAA Amendments offer a technology-based approach of reducing air toxics. Under the 1990 CAA Amendments, designated HAPs are regulated under a two-phase strategy. The first phase involves requiring facilities to install Maximum Achievable Control Technology (MACT). MACT would include measures, methods and techniques, such as material substitutions, work practices, and operational improvements, aimed at reducing toxic air emissions (Falcone, 1993). MACT standards already exist in draft form for six of the 174 source categories (under the air toxics program, facilities having similar operating processes are grouped into categories), and are to be promulgated for the others incrementally in the years 1994 (39 categories), 1997 (62 categories), and 2000 (67 categories). The second phase of control involves determining the residual health risk represented by an air toxics emissions source after implementation of MACT standards. Residual risk standards are to be set within eight or nine years after MACT standards for a source category are set.

State

The Air Resources Board (ARB), California's state air quality management agency, regulates mobile emissions sources, and oversees the activities of local Air Pollution Control Districts (APCDs) and regional Air Quality Management Districts (AQMDs). The ARB regulates local air quality indirectly by having established State Ambient Air Quality Standards (SAAQS) and vehicle emission standards, by conducting research activities, and by planning and coordinating activities.

California has adopted ambient standards that are more stringent than the Federal standards for the criteria air pollutants. Under the California Clean Air Act (CCAA), patterned after the Federal Act, areas have been designated as attainment or nonattainment with respect to the SAAQS. The SVAB has been designated as nonattainment for O₃, CO, and PM₁₀ with respect to the State standards (SMAQMD, 1995). O₃ and CO are categorized as "serious" non-attainment with respect to the State air quality standards, while PM₁₀ has not been categorized yet.

Each county in the SVAB has been required by the CCAA to develop an air quality attainment plan in order to meet attainment status for the nonattainment criteria pollutants. The SMAQMD accordingly has developed an Air Quality Attainment Plan that describes its strategies to reach attainment status (SMAQMD, 1991). The plan does not, however, project attainment of air quality standards by 1999. Under the CCAA, Air Districts must then provide emission reductions of five percent per year averaged over consecutive three-year periods. Air Districts also are required to demonstrate that all feasible air pollution control measures are being adopted.

California State law defines TACs as air pollutants having carcinogenic effects. Assembly Bill (AB) 1807 (the Tanner Bill, passed in 1983) established the State Air Toxics Program and the methods for designating certain air toxics as TACs. A total of 18 substances have been designated TACs under the law, and an additional eight are currently under review. In 1992, AB 2728, which requires the State to adopt the Federal HAPs as TACs for control purposes, was signed into law. Several HAPs have already been identified as TACs. Non-HAPs will continue to be evaluated by the Air Resources Board as part of an ongoing program to identify harmful substances.

The Air Toxics Hot Spots Information and Assessment Act of 1987 (AB2588) provides for the regulation of over 200 air toxics, including all of the designated TACs; under the Act, sources emitting more than 10 tons per year of any criteria air pollutant must estimate and report their toxic air emissions to the local Air Districts. The local Air Districts then prioritize facilities on the basis of emissions, and high-priority facilities are required to submit a health risk assessment and communicate the results to the affected public if their health risk potential is over a specified threshold. The purpose of AB 2588 is to identify and inventory toxic air emissions, and to communicate the potential for adverse health effects to the affected public.

Local: Sacramento Metropolitan Air Quality Maintenance District (SMAQMD)

The Project Area is under the jurisdiction of the SMAQMD, which regulates air quality through its permit authority over most types of stationary emission sources and through its planning and review activities. As required by the CCAA, SMAQMD has published its 1991 Air Quality Attainment Plan. The Plan addresses the CCAA requirement to attempt to bring the District into compliance with the State ambient air quality standards. The Plan focuses on O₃ and CO. The Plan includes carefully planned strategies for progressive reduction of air pollutants by promoting active public involvement, by encouraging compliance through positive influence and behavior, and through public education in both the public and private sectors.

Sacramento County is part of the Sacramento Air Quality Maintenance Area (SAQMA), which also includes Yolo County and parts of Placer and Solano Counties. Each county has adopted individual programs to reduce air pollution. These locally adopted programs, along with the programs of county APCDs and requirements for restrictions on automobiles by the CARB, form the Air Quality Plan for the Air Basin required by the CAA Amendments of 1977. The original Plan established air pollution control strategies intended to attain federal air quality standards by the December 31, 1987 deadline. The EPA disapproved the 1982 Air Quality Maintenance Plan on December 1, 1988 based on the inability of the Sacramento Plan to demonstrate attainment of federal ozone standards in the near future.

Passage of the CCAA and CAAA seemed to cloud the requirements of EPA toward areas with disapproved plans. As noted earlier, a lawsuit was filed charging that EPA should intervene within nonattainment areas to impose a plan to achieve attainment within timeframes contained in the CAA of 1977. The case was appealed to the U.S. Supreme Court, but was not accepted for review. A lower court's ruling is in force which required the EPA to create a Federal Implementation Plan for the SAQMA. That FIP was promulgated in February 1995, and will be implemented by 1997 unless the State Implementation Plan adopted in November 1994 is found by the EPA to be adequate.

The steps to achieve attainment have not been determined, but will likely require significant emissions reductions in both stationary and mobile sources. It is possible that the EPA may place an emissions cap (bubble) over transportation centers and require emission reductions. The sources within the bubble would have flexibility in deciding how the reductions would be best achieved. However, it is anticipated that many of the FIP measures will be substituted by SIP measures, thus ensuring state and local control of air pollution regulations (Ormandy, 1995). Both the SIP and FIP seek compliance with federal ozone standards by 2005, although the Sacramento area is currently classified as a serious non-attainment area which requires attainment by 1999. Attainment by 2005 assumes re-classification, or "bump-up" of the SAQMA from "serious" to "severe".

POLLUTANTS

The air quality of a region is determined by the quantities and type of pollutants emitted and by the concentrations and accumulations of those pollutants under the influences of local meteorology and topography. Meteorologic conditions, such as wind speed and direction, temperature gradients, and inversions and precipitation, interact with the physical features of the landscape to determine the movement and dispersion of air pollutants. The 1986-2006 Sacramento General Plan Update Environmental Impact Report (SGPU EIR) identified urban emission sources as the primary source for existing air quality problems. Major sources of air pollutants in the Sacramento Area are: vehicle exhausts, solvent use, pesticide application, petroleum processing, transfer and storage, industrial processes, and agricultural and waste burning. The automobile is the largest single source category for carbon monoxide, hydrocarbons and oxides of nitrogen.

Criteria Air Pollutants

Air quality standards have been established for six ambient air pollutants, commonly referred to as "criteria" air pollutants. The standards were primarily set to protect human health and welfare and were named because the United States Environmental Protection Agency (EPA) publishes criteria documents to justify the choice of each standard. The "criteria" air pollutants for which federal and state ambient standards have been established are ozone (O₃), carbon monoxide (CO), nitrogen oxide (NO_x), sulfur dioxide (SO₂), respirable particulate matter (PM₁₀) and lead (Pb). Air quality is a function of the criteria pollutants emitted locally, the existing regional ambient air quality, and the meteorological and topographic factors which influence the intrusion of pollutants into the area from sources outside the immediate vicinity. The state and federal air quality standards are presented in Table 4.3-1.

Ozone (O₃)

The Federal O₃ standard is violated occasionally in some parts of the Valley and, therefore, the SVAB is in nonattainment for O₃. Violations of the State standard are more frequent. Ozone is a secondary pollutant produced through photochemical (sunlight) reactions of emitted hydrocarbons and nitrogen oxides. Motor vehicles are a major source of hydrocarbons and nitrogen oxides. O₃ levels in Sacramento have exceeded the standards regularly over the past five years.

Carbon Monoxide (CO)

CO is an odorless, invisible gas usually formed as the result of incomplete combustion of organic substances. CO concentrations are influenced by the spatial and temporal distributions of vehicular traffic, wind speed and atmospheric mixing. High levels of CO can impair the transport of oxygen in the bloodstream, thereby aggravating cardiovascular disease and causing fatigue, headaches, and dizziness. Heavily traveled and congested intersections at urbanized locations can experience CO standard violations and result in localized CO "hot spots," especially during the winter months. According to the SMAQMD, measured CO

levels at Sacramento have not exceeded the Federal and State eight-hour CO standard for the last three years.

Particulate Matter (PM₁₀)

Particulate matter (PM₁₀) refers to particulates with an aerometric diameter of less than ten microns. Sources of PM₁₀ include stationary point sources, such as fuel combustion and industrial processes; fugitive sources, such as dust from agricultural sources and traffic on paved and unpaved roads; wind erosion from open land; and transportation sources, such as automobiles. Particulate concentrations near residential sources generally are higher during the winter, when more fireplaces are in use and meteorological conditions prevent the dispersion of directly emitted contaminants. According to a recent study conducted in the Bay Area, about 40 percent of PM₁₀ emissions during winter are from residential fireplaces (Fairley, 1992). In Sacramento County, agricultural burning would be a major contributor to local PM₁₀ concentrations. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility. The PM₁₀ 24-hour state standard has been violated regularly in the Project Area during the past five years.

**TABLE 4.3-1
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS¹**

Pollutant	Averaging Time	California Standard ²	Federal Standards ³	
			Primary ⁴	Secondary ⁵
Ozone	1-hour	0.09 ppm	0.12 ppm	0.12 ppm
Carbon Monoxide	1-hour	20.00 ppm	35.00 ppm	35.00 ppm
	8-hour	9.00 ppm	9.00 ppm	9.00 ppm
Nitrogen Dioxide	1-hour	0.25 ppm	---	---
	Annual Average	---	0.053 ppm	0.053
Sulfur Dioxide	1-hour	0.25 ppm	---	---
	3-hour	---	---	1300 µg/m ³
	24-hour	0.04 ppm	365 µg/m ³	---
	Annual Average	---	80 µg/m ³	---
Suspended Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³	150 µg/m ³
	Annual Geometric Mean	30 µg/m ³	---	---
	Annual Arithmetic Mean	---	50 µg/m ³	50 µg/m ³
Sulfates	24-hour	25 µg/m ³	---	---
Lead	30 Day Average	1.5 µg/m ³	---	---
	Calendar Quarter	---	1.5 µg/m ³	1.5 µg/m ³
Hydrogen Sulfide	1-hour	0.03 ppm	---	---
Vinyl Chloride	24-hour	0.010 ppm	---	---
Visibility Reducing Particles ⁶	1 Observation	---	---	---

¹Concentration expressed first in units in which it was promulgated. Equivalent units given in parenthesis are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

²California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM₁₀, and visibility reducing particles, are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded.

³National standards, other than ozone and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

⁴National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the Environmental Protection Agency.

⁵National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the implementation plan is approved by the EPA.

⁶This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range when relative humidity is less than 70 percent.

⁷Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent.

SOURCE: California Air Resources Board, 1991.

EXISTING AIR QUALITY

The ARB's regional air quality monitoring network provides information on average concentrations of criteria air pollutants. The maximum ambient pollutant concentration summaries for the criteria air pollutants for which the region is in nonattainment (O₃, CO and PM₁₀), collected at the ARB air quality monitoring stations nearest the Project Area (CARB, 1988-1992) are presented in Tables 4.3-2 and 4.3-3. Table 4.3-2 presents the data measured over four years from the Sacramento-Del Paso Manor station. Table 4.3-3 presents the maximum data from the Citrus Heights-Sunrise station. While the O₃ and PM₁₀ concentrations shown in the table are expected to be representative of air quality in the Project Area, the CO concentrations shown in the table would likely be higher than in the Project Area (because the data are from the El Camino / Watt station, which is in a location with relatively higher traffic volumes). Motor vehicle traffic on local roads and highways is the major source of air pollution in the Project Area.

**TABLE 4.3-2
NUMBER OF DAYS CALIFORNIA AMBIENT AIR QUALITY
STANDARDS WERE EXCEEDED AND HIGHEST CONCENTRATIONS FROM
1989-1992 AT DEL PASO MANOR STATION**

Pollutant	Averaging Time	1989		1990		1991		1992	
		Days	Max	Days	Max	Days	Max	Days	Max
Ozone	1-hour	10	0.12	21	0.15	27	0.18	21	0.13
Carbon Monoxide	1-hour	0	15.0	0	12.0	0	11.0	0	9.0
	8-hour	13	13.0	4	11.3	0	11.0	0	7.3
Nitrogen Dioxide	1-hour	0	0.13*	0	0.09	0	0.17	0	0.19
	Annual	0	0.021*	0	0.017	0	0.028*	0	0.014
Sulfur Dioxide	1-hour	0	0.04*	0	0.04	0	0.03	0	0.02
	3-hour	0	0.036*	0	0.036	NA	NA	NA	NA
	24-hour	0	0.012*	0	0.014	0	0.03	0	0.012
	Annual	0	0.002*	0	0.001	NA	NA	0	0.001
PM ₁₀	24-hour	12	142.0	13	187.0	11	127.0	5	84.0
	Annual	a	33.2*	0	28.6	a	31.9*	0	24.4*

a Exceeded the standard for the year.

* Indicates that an insufficient number of valid data points were collected to meet EPA and/or CARB criteria for representativeness.

NA Indicates no measurements are available.

SOURCE: California Air Resources Board, *California Air Quality* 1989-1992.

TABLE 4.3-3

**NUMBER OF DAYS CALIFORNIA AMBIENT AIR QUALITY
STANDARDS WERE EXCEEDED AND HIGHEST CONCENTRATIONS FROM
1989-1992 AT CITRUS HEIGHTS STATION**

Pollutant	Averaging Time	1989		1990		1991		1992	
		Days	Max	Days	Max	Days	Max	Days	Max
Ozone	1-hour	12	0.12	21	0.15	23	0.15	21	0.13
Carbon Monoxide	1-hour	0	9.0	0	10.0	0	8.0	0	9.0
	8-hour	0	6.9	0	6.5	0	8.05	0	5.1
Nitrogen Dioxide	1-hour	0	0.09	0	0.13	0	0.11*	0	0.10
	Annual	0	0.019	0	0.020	0	0.021*	0	0.019
PM ₁₀	24-hour	14	139.0	19	153.0	15	98.0	10	89.0
	Annual	b	35.6	b	36.0	b	34.1	0	29.3*
Sulfates ^a	24-hour	0	4.6	0	5.1	0	4.9	0	3.9
Lead	30-day	0	0.05	NA	NA	NA	NA	NA	NA
	Quarter	0	0.05	NA	NA	NA	NA	NA	NA

^a Sulfates are measured at this station, however sulfur dioxide is not.

^b Exceeded the standard for the year.

* Indicates that an insufficient number of valid data points were collected to meet EPA and/or CARB criteria for representativeness.

NA Indicates no measurements are available.

SOURCE: California Air Resources Board, *California Air Quality Data*, 1989-1992.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Land uses such as schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because the young, the old, and the infirm are more susceptible to respiratory infections and other air-quality-related health problems than the general public. Residential land uses are considered sensitive to air pollution, as residents, including the young and the elderly, could be exposed to ambient air pollutant concentrations that could cause adverse health impacts. There are no hospitals, schools or convalescent homes located within the Project Area, and only fifteen residential units in non-conforming residential uses.

4.3.3 SADEIR AND GPUEIR CONCLUSIONS

When the Sacramento General Plan Update was adopted, the Findings of Fact adopted with the EIR made certain assumptions concerning long-range development in the City. These assumptions allowed for increased development to the year 2010 (buildout assumptions) and assumed that an increase in development would occur throughout the City. The SGPU assumed that there would be a certain amount of intensification of the existing land uses in the Project Area. The expected development and subsequent traffic levels (and associated emissions increases) occurring as a direct result of Redevelopment Plan implementation are within the volumes contemplated by the SGPUEIR and SADEIR.

When the SADEIR was adopted, the Findings of Fact adopted with the EIR included a Statement of Overriding Considerations regarding the following impacts:

- ▶ Vehicle trips associated with the proposed project will generate ROG and NO_x emissions that would contribute to regional ozone levels. Traffic associated with use of the project site is estimated to produce 484.8 pounds per day of ROG, while producing 453.1 pounds per day of NO_x. Because Sacramento is a non-attainment area for ozone, this increase over existing setting is considered a significant and unavoidable impact.
- ▶ Traffic associated with the proposed project will result in 1017.8 pounds per day of PM₁₀. An increase of PM₁₀ levels would impact surrounding land uses, motorists, and pedestrians. Sacramento is considered a non-attainment area for PM₁₀. Therefore, the project's contribution to existing impacts will be significant and unavoidable.
- ▶ Traffic associated with the proposed project and cumulative development will result in increased levels of PM₁₀. An increase of PM₁₀ levels would impact surrounding land uses, motorists, and pedestrians. An increase of PM₁₀ levels would also reduce the ability of the SVAB to meet attainment standards for PM₁₀. The proposed project was identified as having a significant and unavoidable impact to project specific PM₁₀ problems.

4.3.4 IMPACTS WITH THE PROPOSED REDEVELOPMENT PLAN

Air quality impacts can result from construction, as well as operational activities. Construction emissions would have a short-term effect, while operational emissions would continue to affect air quality throughout the lifetime of the Project. The primary source of criteria air pollutant emissions that could result from implementation of the Redevelopment Plan would be increased vehicular traffic resulting from anticipated Plan-induced increases in commerce and employment in the Project Area. It should be noted, however, that the expected development and subsequent traffic levels (and associated emissions increases) occurring as a direct result of Redevelopment Plan implementation are within the volumes contemplated by the SGPU and SADEIR. Air pollutant emissions also result from stationary

sources, such as dry cleaners and bakeries, and from natural gas and electricity used for space heating and lighting. Industrial and commercial operations also generate non-criteria air pollutants, such as toxic air contaminants and odorous substances.

Significance Criteria

Appendix G of the CEQA Guidelines states that a project would normally have a significant air quality impact if it would cause the violation of air quality standards, contribute substantially to existing or projected air quality violations, or expose sensitive receptors to substantial concentrations of air pollutants. Additionally, the SMAQMD uses an emissions significance threshold criteria of 85 pounds per day (lbs/day) of reactive organic compounds (ROG), 85 lbs/day of nitrogen oxides (NO_x) and 275 lbs/day of PM₁₀ (SMAQMD 1994).

Methodology

Ozone

As discussed in the Setting section, ozone is a regional air quality problem. Ozone impacts are not limited to the area where they originate from. The State Air Resources Board has classified the Sacramento Region as a non-attainment area for ozone; therefore, an increase of ozone above the existing setting would be a significant impact and would require mitigation to reduce the significance of the impact.

Carbon Monoxide

The SADEIR modeled six intersections for carbon monoxide levels within the study area. These intersections were:

- Power Inn Road and Folsom Boulevard
- Fruitridge Road and Elk Grove-Florin Road
- Fruitridge Road and Power Inn Road
- Fruitridge Road and Florin-Perkins Road
- Elder Creek Road and Power Inn Road
- Elder Creek Road and Florin-Perkins Road

Using the California Department of Transportation's dispersion model CALINE 4, CO level estimates were measured at the above intersections. The model estimated existing CO concentrations for the existing setting, Year 2010 setting without the Reuse Plan, and Year 2010 setting with the Reuse Plan. Receptor locations were chosen for each of the above intersections, and the traffic volumes calculated by kd Anderson Transportation Engineers were input into the model to determine the CO levels at these receptor locations (kd Anderson). The one-hour and eight-hour average CO thresholds are set by state and federal standards for ambient air quality levels (previous Table 4.3-4). A violation of these standards is a significant impact. The analysis measured for both one-hour and eight-hour violations of the state and federal standards using AM and PM peak hour traffic movements at the

selected intersections.

Particulate Matter

The normal activities involved with traffic circulation, demolition and the construction of buildings would increase the amount of PM_{10} in the air. The State Air Resources Board has classified the Sacramento Region as a non-attainment area for PM_{10} ; therefore, an increase of PM_{10} above the existing setting would be a significant impact and would require mitigation to reduce the significance of the impact.

The estimated PM_{10} emissions for the SADEIR analysis were generated by using the URBEMIS-3 Air Quality Model. PM_{10} impacts generated by construction activities would continue as long as the phase of work. Construction activities are discussed qualitatively. Potential emission sources were listed, but no emission calculations were made.

Impact Statements

Construction Impacts. Construction and demolition activities related to public and private projects occurring under the Redevelopment Plan could generate fugitive dust. Dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the prevailing weather. A large portion of the total construction dust emissions from a particular development project would result from equipment traffic over temporary roads at the construction site. Other sources of fugitive dust during construction would include excavation, earth movement, grading, and wind erosion from exposed surfaces.

Since the specifications and timing of individual development projects are not known, an effort was not made to quantify construction dust emissions. Since the region is already non-attainment for PM_{10} , with regular and frequent violations of the 24-hour State standard occurring over the past five years, the State 24-hour PM_{10} standard is sometimes exceeded in the vicinity of construction sites during construction. Air pollution-sensitive land uses and activities adjacent to construction sites may also be exposed more frequently to ambient dust concentrations that exceed the ambient standards.

In order to reduce construction-phase dust emissions, standard dust abatement measures are routinely required by the City outside of the CEQA process. The Sacramento City Code includes regulations (Sections 09.381, 09.382) that regulates construction activities that lead to PM_{10} impacts. Such measures typically include watering all construction sites as necessary to reduce dust emissions, covering stockpiles and haul trucks, sweeping dirt from paved surfaces, and suspending earthmoving activities on very windy days. *The SMAQMD sets an emission threshold of 275 pounds per day, which roughly equates to a range of 465,000 square feet of new industrial park development to 840,000 square feet of new manufacturing space. Much of the increase development in the Depot area is reuse of existing structures which, although involves rehabilitation, does not involve the kind of grading activities which result in significant PM_{10} impacts. Whereas the total development projection for the Project*

Area is 766,994 square feet of new industrial construction phased over the 35 year life of the Plan, short-term construction related impacts are expected to be less-than-significant (4.3-1).

Construction Emissions. Motor vehicles emit exhaust fumes that adversely affect the air quality of a region. Exhaust emissions during construction of individual development projects would result from construction-related on-site vehicular traffic, such as construction equipment and machinery operations, material haul operations, and automobiles transporting workers to and from each site. Exhaust emissions from construction vehicles would vary depending on the type of equipment, duration of use and the number of transport trips for people and materials.

Hydrocarbons (HC) would be emitted by asphalt or oil-based architectural coatings used in construction completed under the Redevelopment Plan. The Plan includes proposed roadway improvements along numerous streets in the project area. Asphalt and other paving operations on these roads would generate hydrocarbon emissions. New structures might use architectural coatings, with the potential for hydrocarbon emissions. Regulation 4, Rules 441, 442, and 453 of the SMAQMD's Rules and Regulations deal with organic solvents, architectural coatings, and asphalt emissions.

Hydrocarbon emissions from construction activities would be a short-term impact. Their relative contribution to regional HC emission totals would likely not be substantial. Additionally, the substances used would need to be in conformance with the SMAQMD's requirements for hydrocarbon emissions. Hydrocarbon emissions from construction activities, therefore, would have a less-than-significant effect on air quality (4.3-2).

Vehicle and stationary source emissions. Long-term air quality would be adversely affected by air pollutant emissions from both mobile and stationary sources. Project Area population and employment increases would generate vehicular trips and air pollutant emissions. Trip generation rates would vary by land use.

Because growth in the Project Area would be consistent with adopted plans, implementation of the Redevelopment Plan would not result in emissions beyond those planned for by the SMAQMD in their attainment date projections. The SMAQMD, however, has not been able to demonstrate attainment by 1999. Emissions generated in the Project Area, by adding substantial quantities of HC and NO_x (O₃ precursors) to a region that is non-attainment for O₃, would contribute to potential violations of the O₃ standard and would delay the SMAQMD's efforts to attain the air quality standards. Total cumulative Project Area emissions (including those directly attributable to development occurring under the Redevelopment Plan) may exceed the SMAQMD's significance thresholds.

The installation of traffic signals, bus shelters and construction of improvements to roadways throughout the project area, proposed as part of the Redevelopment Plan, would help to mitigate cumulative adverse air quality effects. Transportation Systems Management (TSM) programs and Transportation Control Measures (TCM) are also adopted and enforced by the City of Sacramento for individual developments within the Project Area. *The expected*

development and subsequent traffic levels (and associated emissions increases) occurring as a direct result of Redevelopment Plan implementation are within the volumes contemplated by the SGPU and SADEIR. When the SGPU and SADEIRs were adopted, Findings of Fact and a Statement of Overriding Considerations were adopted by the City Council regarding cumulative air quality impacts (4.3-3). Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of these findings.

Non-criteria air pollutant emissions. The non-criteria air pollutants of concern due to redevelopment activities would be toxic air contaminants (TAC) and odorous substances. TAC emissions would occur from both mobile and stationary sources, while odorous emissions would result mainly from stationary sources. Because the types of businesses that would be developed under the Redevelopment Plan have not been clearly specified, it would be speculative to try to evaluate TAC and odorous emissions from the future operations of those facilities.

TAC emissions from stationary sources would be subject to close scrutiny by the SMAQMD, through the air quality permit process as well as the AB 2588 program. New stationary sources would have to meet stringent air pollution control requirements under the air quality permit process. Under the AB 2588 program, facilities using toxic substances would be required to quantify potential toxic emissions, and high-priority facilities would be required to conduct a health risk assessment. The air quality permit process and the AB 2588 process, therefore, would enable the SMAQMD to regulate and control stationary source emissions; this would apply to both toxic air contaminants and odorous emissions. In addition, future mobile emissions (and associated TAC emissions) are expected to decline as a result of cleaner fuel combustion processes and trip reduction through transportation control measures.

Depending on the proximity of sensitive land uses and wind conditions, odorous emissions from existing and new facilities could be a problem. The SMAQMD would respond to specific public complaints, and would require facilities emitting odorous substances to rectify and remedy the offensive event(s), and to control emissions from the source. *Non-criteria air pollutant emissions from the implementation of the Redevelopment Plan, therefore, are not expected to be a source of major concern, and would result in less-than-significant impacts (4.3-4).*

Cumulative air quality effect. Air pollutant emissions from the Project would incrementally add to regional emission totals. The SMAQMD, in its Attainment Plan, does not project the attainment of O₃ standards by 1999. Though the Project would remove existing barriers to growth which would allow development in the Project Area consistent with adopted plans (and would not create sources of air pollution in excess of those originally planned for), new growth currently contributes to the continuation of the nonattainment status, and delays the SMAQMD's efforts to reach attainment. To the extent that Project Area emissions would postpone the attainment of ambient air quality standards, it would contribute toward a significant cumulative air quality impact. While Project Area CO concentrations would not increase substantially, the development stimulated by the Redevelopment Plan could

contribute to localized ambient CO standard violations at certain locations. *The expected development and subsequent traffic levels (and associated emissions increases) occurring as a direct result of Redevelopment Plan implementation are within the volumes contemplated by the SGPU and SADEIR. When the SGPU and SAD EIRs were adopted, the Findings of Facts made Statements of Overriding Considerations regarding cumulative air quality impacts (4.3-5).* Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of these findings.

4.3.5 MITIGATION MEASURES

The numbering shown below corresponds to the impact(s) identified in the preceding discussion.

Less-than-significant impacts would occur with the proposed project in the areas noted below and no mitigation measures are provided.

4.3-1: Fugitive dust resulting from construction activities

4.3-2: Emissions from construction activities

4.3-4: Non-criteria air pollutant emissions

Previous statements of overriding considerations were adopted with the SADEIR and the SGPU for *significant, or potentially significant* impacts related to the following impacts, which are applicable to the Redevelopment Area:

4.3-3 Vehicle and stationary source emissions

4.3-5 Cumulative air quality impacts.

4.3.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The project would facilitate development consistent with adopted plans and policies, which have been determined to result in significant cumulative increases in vehicular trips and air pollutant emissions. The expected development and subsequent traffic levels (and associated emissions increases) occurring as a direct result of Redevelopment Plan implementation are within the volumes contemplated by the SGPU and SADEIR. When the SGPU and SADEIRs were adopted, the Findings of Facts made Statements of Overriding Considerations regarding vehicle and stationary source emissions and cumulative air quality impacts. Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of these findings.

4.4 NOISE

4.4.1 INTRODUCTION

The relevant standards for noise are contained within the Health and Safety Element of the City of Sacramento General Plan, the Noise Ordinance or the Sacramento City Code, and in the California State Building Code, Title 24, Chapters 2-35. These standards were used to evaluate the need for Project Area mitigation measures, for present, and for projected future environmental noise levels. This analysis is based on noise levels projected for buildout in the Project Area in the SGPUEIR.

4.4.2 SETTING

Ambient noise is the total noise associated with a given environment, and usually includes all sources both near and far. Environmental noise is usually measured in A-weighted decibels (dBA).¹ Decibels and other technical terms are defined in Table 4.4-1. Some representative noise sources and their corresponding noise levels are shown in Table 4.4-2. Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Typical noise descriptors, used to describe time-averaged noise levels, include the energy-equivalent noise level (L_{eq}), the day-night average noise level (L_{dn}), and the community noise equivalent level (CNEL).² Both the L_{dn} and CNEL noise descriptors are commonly used in establishing noise exposure guidelines for specific land uses.

Noise levels are measured on a logarithmic scale, and therefore, are not added in the usual arithmetic manner. A doubling of sound energy results in a three-dBA increase in noise levels, which is the smallest change in noise level detectable by the average person. For example, in areas where existing noise levels are dominated by traffic, a doubling in the volume of vehicular traffic will increase ambient noise levels by three dBA. A noise level increase of ten dBA is perceived as being twice as loud.

¹ A decibel (dB) is a logarithmic unit of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure level (commonly called "sound level") measured in decibels. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels.

² L_{eq} , the energy equivalent noise level, is the equivalent steady-state continuous noise level which, in a stated period of time, would contain the same acoustic energy as the time-varying sound level actually measured during the same period. L_{dn} , the day-night average noise level, is a calculated noise descriptor based on average hourly noise levels (L_{eq}) over a 24-hour period. Noise between 10:00 p.m. and 7:00 a.m. is weighted by adding 10 dBA to take into account the greater annoyance of nighttime noise. CNEL, the community noise equivalent level, is similar to L_{dn} , but an additional five dBA "penalty" is added to evening noise (7:00 p.m. to 10:00 p.m.). L_{dn} and CNEL are considered equivalent for most planning purposes.

**TABLE 4.4-1
DEFINITIONS OF ACOUSTICAL TERMS**

TERM	DEFINITIONS
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dB	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
L_{10} , L_{50} , L_{90}	The A-weighted noise levels that are exceeded 10%, 50%, and 90% of the time during the measurement period.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels in the night between 10:00 pm and 7:00 am.
Day/Night Noise Level, L_{dn}	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
Day/Night Noise Level, L_{dn}	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

SOURCE: City of Sacramento

**TABLE 4.4-2
TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY**

At a Given Distance From Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Impression
	140		
Civil Defense Siren (100')	130		
Jet Takeoff (200')	120		Pain Threshold
	110	Rock Music Concert	
Pile Driver (50')	100		Very Loud
Ambulance Siren (100')			
	90	Boiler Room	
Freight Cars (50')		Printing Press Plant	
Pneumatic Drill (50')	80	In Kitchen With Garbage Disposal Running	
Freeway (100')			
	70		Moderately Loud
Vacuum Cleaner (10')	60	Data Processing Center	
Department Store			
Light Traffic (100')	50	Private Business Office	
Large Transformer (200')			
	40		Quiet
Soft Whisper (5')	30	Quiet Bedroom	
	20	Recording Studio	
	10		Threshold of Hearing
	0		

SOURCE: City of Sacramento

The noise level experienced at a receptor depends on the distance between the source and the receptor, presence or absence of noise barriers and other shielding devices, and the amount of noise attenuation (lessening) provided by the intervening terrain. For line sources, such as motor vehicle traffic, noise decreases by about 3.0 to 4.5 dBA for every doubling of the

distance from the roadway. Conversely, noise increases by approximately 3.0 to 4.5 dBA when the distance to the roadway is halved. For point or stationary noise sources, such as electric motors, a noise reduction of 6.0 to 9.0 dBA is experienced for each doubling of the distance from the noise source.

The amount of noise attenuation depends to a large extent on the sound absorptive characteristics of the intervening terrain. Soft earth with vegetative cover provides a 4.5 dBA attenuation with every doubling of the distance from line sources, while hard exposed surfaces provide a noise attenuation of only 3.0 dBA. For point sources, the corresponding noise attenuation would be 9.0 dBA and 6.0 dBA. Noise barriers or shielding devices that break the line of sight between the source and the receptor would generally provide a noise attenuation of about 5.0 - 10.0 dBA.

NOISE REGULATIONS, PLANS AND POLICIES

The Project Area is under the jurisdiction of the City of Sacramento, and the applicable planning document is the Noise Element. Major roadway-related noise would also be under the jurisdiction of the California Department of Transportation (Caltrans).

The City of Sacramento has prepared a Noise Element in accordance with Government Code Section 65302(f). Figure 4.4-1 shows the land use compatibility guidelines for various community noise environments developed by the City of Sacramento (City of Sacramento, 1988). The City's Noise Element also establishes maximum acceptable interior and exterior noise levels for new development. Exterior noise levels at single- and multi-family homes should be 60 dBA, L_{dn} , or less. At schools, the interior noise levels should be 40 dB or less during the noisiest hour in a regular school day. Maximum instantaneous exterior noise levels at schools should be 85 dB or less. The City of Sacramento has also adopted a Construction Noise Ordinance which identifies time-averaged community noise levels and standards acceptable for specific land uses (City of Sacramento, 1976). This ordinance is primarily geared towards controlling noise from construction activities. According to the noise ordinance, construction activities are to be scheduled between 7:00 a.m. and 6:00 p.m. Monday through Saturday, and from 9:00 a.m. to 6:00 p.m. on Sundays.

Title 24, Part 2 of the California Code of Regulations is concerned with transportation and industrial noise sources, and specifically regulates the maximum allowable interior noise level for hotels, motels, and multi-family housing. In areas affected by transportation and industrial noise, Title 24, Part 2 establishes noise limits that apply to dwellings other than detached single-family dwellings. It also establishes standards for sound insulation of separating walls, corridor walls, and floor/ceiling assemblies in multi-family residential construction.

Figure 4.4-3

MAXIMUM ACCEPTABLE INTERIOR AND EXTERIOR NOISE LEVELS FOR NEW DEVELOPMENT WITHOUT MITIGATION					
Noise Source	Land Use	Applicable Area		State Requirements ¹	Noise Element Requirements
		Interior	Exterior		
Traffic or fixed source (industrial, plants, etc.)	Single-family	x		None	$L_{dn} \leq 45$ dB ²
	Single-family		x	None	$L_{dn} \leq 60$ dB in backyards
	Multifamily ³	x		$L_{dn} \leq 45$ dB	$L_{dn} \leq 45$ dB
	Multifamily		x	None	$L_{dn} \leq 60$ dB in common outdoor use areas
	Schools	x		None	Noisiest hourly $L_{eq} \leq 40$ dB during school day
	Schools		x	None	$L_{dn} \leq 60$ dB
	Libraries	x		None	Noisiest hour $L_{eq} \leq 45$ dB
	Libraries		x	None	None
Aircraft	Single-family	x		None	$L_{dn} \leq 45$ dB and maximum instantaneous levels of ≤ 50 dBA in bedrooms and ≤ 55 dBA in other habitable rooms ²
	Single-family		x	CNEL ≤ 65 dB (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan AFB	CNEL ≤ 60 dB for Metro Airport CNEL ≤ 65 dB for all others
	Multifamily	x		$L_{dn} \leq 45$ dB	$L_{dn} \leq 45$ dB and maximum instantaneous levels of ≤ 50 dBA in bedrooms and ≤ 55 dBA in other habitable rooms ²
	Multifamily		x	CNEL ≤ 65 dB (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan AFB	CNEL ≤ 60 dB for Metro Airport CNEL ≤ 65 dB for all others
	Schools	x		None	Noisiest hourly $L_{eq} \leq 40$ dBA during school day
	Schools		x	CNEL ≤ 65 dB (State Aeronautics Noise Standards) requirement does not apply to Mather and McClellan AFB	CNEL ≤ 60 dB for Metro Airport CNEL ≤ 65 dB for all others
	Libraries	x		None	Noisiest hour $L_{eq} \leq 45$ dB
	Libraries		x	None	None
Rail traffic	Single-family	x		None	$L_{dn} \leq 45$ dB and maximum instantaneous levels of ≤ 50 dBA in bedrooms and ≤ 55 dBA in other habitable rooms ²
	Single-family		x	None	$L_{dn} \leq 60$ dB
	Multifamily	x		$L_{dn} \leq 45$ dB unless there are less than 4 trains per day between 7 AM and 10 PM and there are no trains between 10 PM and 7 AM	$L_{dn} \leq 45$ dB and maximum instantaneous levels of ≤ 50 dBA in bedrooms and ≤ 55 dBA in other habitable rooms ²
	Multifamily		x	None	$L_{dn} \leq 60$ dB
	Schools	x		None	Noisiest hourly $L_{eq} \leq 40$ dB during school day
	Schools		x	None	Maximum instantaneous levels ≤ 85 dBA
	Libraries	x		None	Noisiest hour $L_{eq} \leq 45$ dB
	Libraries		x	None	None

¹ Projects for which U.S. Department of HUD financing is requested are subject to HUD noise requirements. The noise element requirements listed in this table are at least as stringent as the HUD requirements.

² The requirement for interior noise exposure is triggered when the exterior L_{dn} exceeds 60 dB.

³ Multifamily includes hotels, motels, apartment houses and dwellings other than detached single-family dwellings as defined by Title 24, Part 2, California Administrative Code.

SOURCE: City of Sacramento General Plan, 1987

City of Sacramento - Sacramento General Plan Update

The Noise Element of the City of Sacramento's General Plan contains the City's goals and policies for controlling and reducing environmental noise in the City of Sacramento. The following goals and policies are applicable to the Project Area:

Goal A: Future development shall be compatible with the projected year 2016 noise environment.

Policy 1: Require an acoustical report for any project which would be exposed to noise levels in excess of those shown normally acceptable in [Figure 4.4-1].

Policy 2: Require mitigation measures to reduce noise exposure to the "normally acceptable levels" [Figure 4.4-1] except where such measures are not feasible.

Policy 3: Land uses proposed where the exterior noise levels would be below the "normally acceptable" limit may be approved without any requirement for interior or exterior mitigation measures.

Goal C: Eliminate or minimize the noise impacts of future development on existing land uses in Sacramento.

Policy 1: Review projects that may have noise generation potential to determine what impact they may have on existing uses. Additional acoustical analysis may be necessary to mitigate identified impacts.

The noise element also contains a section entitled "Noise Assessment Report Guidelines". These guidelines state that "mitigation measures should be considered if the project would increase the L_{dn} at a noise sensitive location by more than 4 dB or cause the overall level to exceed that considered normally acceptable for the land use category or be expected to generate significant adverse community response." The noise element finds an L_{dn} of 60 dB or lower to be normally acceptable for residential development, schools, and churches. [Figure 4.4-1] shows the land use compatibility standards for community noise environments in the City of Sacramento.

Policy 2: Enforce the Sacramento Noise Ordinance as a method to control noise from sources other than transportation sources.

EXISTING NOISE ENVIRONMENT

Transportation-related noise sources, primarily automobiles, buses, and trucks, determine ambient noise levels over most of the Project Area. Ambient noise levels are determined primarily by road traffic on major local roadways, such as Power Inn Road, 14th Avenue, Florin-Perkins Road, Fruitridge Road and Elder Creek Road.

Data from noise measurements taken for the SGPU EIR (Exhibit AA-11) indicate that ambient noise levels along Elder Creek Road, Fruitridge Road, Power Inn Road, Florin-Perkins Road, and 14th Avenue range from 65 to 72 dBA, L_{eq} at 75 feet, which are above 60 dBA, L_{eq} at 100 feet recommended exterior noise level standard for residential land uses, and along Power Inn Road, may be above the 70 dBA, L_{eq} at 100 feet recommended exterior noise level standard for industrial land uses. As the distance from major traffic noise sources increases, the noise level decreases.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both time and insulation from noise) and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks and outdoor recreation areas are generally more sensitive to noise than are commercial and industrial land uses, and would be treated as sensitive receptors for this project. The major noise-sensitive land use categories include (1) tracts of land, including outdoor concert pavilions, where quiet is an essential element in their intended purpose; (2) residences and buildings where people normally sleep; and (3) institutional land uses with primarily daytime and evening use, such as schools, libraries, churches and active parks, where it is important to avoid interference with such activities as speech and concentration.

For the Redevelopment Plan, sensitive receptors would include residential land uses, schools, churches, libraries, hospitals and other noise-sensitive land uses or activities in the Project Area that would be adversely affected by noise generated by buildout of the Project Area. However, the Project Area is almost entirely industrial. Except for eleven residential structures grandfathered into the existing industrial area, there are no other sensitive receptors within the Project Area. Residential uses and an elementary school are located west of the Project Area, across Power Inn Road. These uses would be sensitive to increased ambient noise levels.

4.4.3 IMPACTS WITH THE PROPOSED REDEVELOPMENT PLAN

Significance Criteria

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if it would increase substantially the ambient noise levels of adjoining areas. The community noise impacts of a project are evaluated on the basis of the absolute increase in noise levels due to the project, and on the relationship between the changed noise environment and local land use noise-compatibility guidelines. Thresholds of significance are those established by Title 24 standards and by the City Noise Element and Noise Ordinance.

Implementation of the Redevelopment Plan would have a significant impact if the resulting development would increase the ambient noise levels at sensitive receptor locations by five or more decibels. If existing noise levels are above the City-recommended noise compatibility standards, a project-generated noise level increase of three dBA would be significant. In addition, exposure of existing sensitive receptors to project-case noise levels exceeding the City noise compatibility standards would be considered to be a significant impact. Noise from construction would be considered significant if construction activities were to raise ambient noise levels at adjacent sensitive receptor locations above recommended standards, or would have an intrusive and disturbing effect at adjacent sensitive receptor locations for extended periods of time.

According to CEQA, a project would also normally have a significant effect on the environment if it would conflict with adopted environmental plans and goals of the community where it is located. Thus, implementation of the Redevelopment Plan would have a significant noise impact if it would introduce new noise-sensitive receptors in areas where ambient noise levels are above the recommended noise compatibility standards.

Impact Statements

Construction noise. Construction activities related to public and private projects undertaken as a result of the Redevelopment Plan could result in an increase in ambient noise levels during construction. Preliminary ground work activities would involve excavation, grading, earth movement, stockpiling, and haul-vehicle travel. Construction activities such as asphalt and foundation laying, building construction and finishing operations would also generate noise. Construction equipment would generate vehicular noise. Construction-related material haul would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. Construction equipment and activities would likely have more of an intrusive and disturbing effect on nearby sensitive receptors than actually raise time-averaged noise levels.

Table 4.4-3 shows typical noise levels for different construction stages; Table 4.4-4 shows typical noise levels for construction equipment. Assuming a maximum noise level of 90 dBA, L_{eq} , (no pile driving or rock drilling) at about 50 feet from the source, and a noise attenuation of about six dBA for every doubling of the distance, noise levels from construction activities would drop to about 60 dBA, L_{eq} , (the maximum normally acceptable noise level in residential areas) at about 1,500 feet from the source. (This worst-case estimate assumes that sound waves travel undisturbed from the source to the receptor over ground that has poor sound absorptive properties. Local terrain characteristics, such as earth berms that provide a shielding effect by blocking the line of sight to noise sources, and soft vegetation-covered earth with good sound absorptive tendencies, would reduce noise propagation.) Under a worst-case scenario, then, noise-sensitive land uses or activities within about 1,500 feet of Project Area construction sites could be exposed to noise levels above the recommended standards during the construction period. In sites where pile driving would be required, residential receptors within about 7,000 feet of the construction site could be exposed to noise levels above the recommended standards during pile driving operations.

**TABLE 4.4-3
TYPICAL CONSTRUCTION NOISE LEVELS**

Construction Phase	Noise Level (dBA, L _{eq})/a/
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

/a/ Average noise levels 50 feet from the noisiest source and 200 feet from the rest of the equipment associated with a given construction phase.

SOURCE: Bolt, Beranek, and Newman, 1971, *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*, prepared for U.S. Environmental Protection Agency.

**TABLE 4.4-4
TYPICAL CONSTRUCTION EQUIPMENT SOUND LEVELS**

Typical sound level Construction Equipment	(dBA at 50 ft)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Jackhammer	88
Scraper	88
Dozer	87
Paver	89
Generator	76
Piledriver	105
Rock Drill	98
Pump	76
Pneumatic Tools	85
Backhoe	85

SOURCE: Federal Register, 1974, Vol. 39, No: 121.

The construction schedules for individual development projects carried out under the Redevelopment Plan would vary from project to project. The duration of construction noise effects and the impacts, therefore, would not be the same for all activities or parcels of land to be developed. Given the lack of specific construction schedule information, construction noise impacts at nearby sensitive receptors cannot be quantified at this stage of the process.

Noise from construction activities under the Redevelopment Plan would be a short-term impact. The City noise ordinance would help to reduce the impact by limiting construction activities to certain hours. However, because of the potential for construction activities to raise ambient noise levels above recommended standards and to have an intrusive and disturbing noise effect at nearby sensitive receptor locations, the impact would be significant. This is a significant/unavoidable impact which was recognized in the SGPU EIR; the City Council adopted Findings and a Statement of Overriding Considerations for temporary construction noise impacts in designated urbanized areas (4.4-1).

Traffic Noise. By removing existing barriers to growth, the Redevelopment Plan will stimulate increased employment growth in the Project Area. It would also help to remove barriers to development of industrial properties, which would result in increased traffic volumes along major roadways and local streets. However, such growth would be consistent with the City General Plan land use designations and policies, and is therefore anticipated and addressed by existing plans, policies, and ordinances. The increase in trips along a particular roadway would depend on the number of additional trips generated (which would depend on the types of land uses developed), and the distribution of these trips on the area roadway network (which would depend on future land use patterns).

In areas where ambient noise levels are determined primarily by traffic noise, traffic volumes would have to double for noise levels to increase by three dBA, which is the threshold of audibility for the human ear. Sensitive receptors along the heavily traveled major roadways are currently exposed to noise levels above the recommended standards. Additional traffic on these roadways would incrementally increase the magnitude of impact. Less traveled interior roads could experience a substantial increase in traffic-generated noise levels without exceeding the recommended standard.

Table 4.4-5 shows calculated noise levels along selected roadways for existing conditions (1993), and for cumulative conditions in 2010 with General Plan buildout. Noise levels were calculated for receptors approximately 75 feet from the center of the road.

TABLE 4.4-5
NOISE LEVELS ALONG SELECTED ROAD SEGMENTS
 Noise levels, dBA, L_{eq} /a/

Road Segment	Existing (1993)	Cumulative Projected General Plan Buildout (2010)
Fruitridge Road	68	73
Elder Creek Road	65	72
Power Inn Road	71	73
Florin-Perkins Road	70	79

/a/ A reference distance of 75 feet from the center of the road was assumed for the calculations.

SOURCE: Sacramento General Plan Update EIR, August 1993.

General Plan buildout would result in a noticeable noise level increase of 5 dBA along Fruitridge Road, 7 dBA along Elder Creek Road, and 9 dBA along Florin-Perkins Road when compared with existing traffic conditions. However, only a small fraction of the additional noise would be caused by projects constructed under the Redevelopment Plan. In addition, the Plan provides for the rehabilitation of substandard housing in adjacent residential areas, which could bring such structures into compliance with current code, thus mitigating future noise impacts. The majority of the noise level increases would be generated by normal growth occurring in the Project Area and surrounding region. Noise levels along Power Inn Road, which separates the Project Area from the residential areas, are already above 70 dBA which is in the normally unacceptable range. Cumulative increases with General Plan buildout would not be noticeable (i.e., less than a three dBA increase). *Although implementation of the Redevelopment Plan could contribute to an incremental increase in traffic-generated noise levels at some sensitive receptor locations, this growth was considered in the SGPU. The Redevelopment Plan would result in a less-than-significant increased vehicular noise impact on sensitive receptors (4.4-2).*

4.4.4 MITIGATION MEASURES

The numbering shown below corresponds to the impact(s) identified in the preceding discussion.

Less-than-significant impacts would occur with the proposed project in the areas noted below and no mitigation measures are provided.

4.4-2 Increased vehicular noise on sensitive receptors

A previous statement of overriding considerations was adopted with the SGPU for *significant, or potentially significant* impacts related to the following impact, which is applicable to the Redevelopment Area:

4.4-1 Temporary construction noise

4.4.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The project would result in less-than-significant impacts related to noise and therefore, no significant adverse impacts would occur. Temporary construction noise is significant and unavoidable, and such impacts were recognized for urban areas in the General Plan. When the SGPU was adopted, the Findings of Facts made Statements of Overriding Considerations regarding temporary construction noise. Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of these findings.

4.5 CULTURAL RESOURCES

4.5.1 INTRODUCTION

The following description of cultural resources in the proposed project area is based upon literature reviews, consultations, information obtained from the North Central Information Center of the California Archaeological Inventory at California State University, Sacramento (NCIC, CSUS) and the *Sacramento Army Depot Disposal and Reuse Final EIS* (Department of the Army, October 1994). The analysis will include a description of the existing conditions, the methodology used for evaluation, the impacts associated with the project, and the mitigation measures that will be necessary to reduce impacts to a less-than-significant level.

The purpose of the cultural resource investigation was to identify potential prehistoric, historic, and cultural resources that may be located within the proposed project boundaries. The cultural resources inventory was carried out in compliance with the California Environmental Quality Act (CEQA) Appendix K.

Based upon previous cultural resources work in the area (Department of the Army 1994), there is the potential for historical properties to be present within the project area. Given the potential for historic properties to be located within the project area and the possibility that these historic properties might qualify as important sites, PAR ENVIRONMENTAL SERVICES, INC. (PAR) was retained to conduct archival research and a historical and architectural survey of the proposed project. Fieldwork consisted of a windshield survey and inventory of the parcel's built environment. The architectural inventory was completed on December 20, 1994.

4.5.2 HISTORIC SETTING

The project is located in the lower Sacramento Valley. Elevations range from 35 to 40 feet above mean sea level within the project area. Prior to the development of man-made levees along the Sacramento River in the 1860s and 1870s, a vast oak woodland/ grassland savannah covered much of the project area. The prehistory and ethnohistory of the area has been previously discussed in the *Final Environmental Impact Statement for the Sacramento Army Depot Disposal and Reuse* that was prepared by the Department of the Army in 1994.

The physical environment of the Project Area has been greatly altered by human modification over the past 150 years. Specifically, the urbanization of the City of Sacramento has greatly altered the pre-1850 environment. On a larger scale, the deposition of deep alluvial soils over the past 10,000 years has buried any early archaeological resources (Johnson, 1974).

PREHISTORY/ETHNOGRAPHY

At the time of the earliest European contact with Spanish explorers and missionaries, the Sacramento area lay within the territory of the Nisenan tribe, also known as the Southern Maidu. The Nisenan inhabited villages on the banks of the American and Sacramento Rivers and major tributaries, and subsisted on staple foods including freshwater clams, acorns, salmon, deer, and elk. Nisenan villages recorded in the Sacramento area in the early historic period include the villages of Pususne, Sekumni, Kadema, Momol, Sama and Yalisumni. The largest known settlement historically was at the village of Sama, located near the Sacramento River in the southeastern part of the City.

Settlements were concentrated along waterways on old river terraces or on isolated elevated points of land. The Nisenan population in pre-contact times is thought to have numbered around 9,000. Euro-american penetration into the Sacramento Valley during the latter half of the 19th century initiated a series of changes which were later to prove devastating to Native American populations.

Archaeological sites, features, or artifacts that may remain from prehistoric activity include village sites, structures, middens, mortars and pestles, arrowheads, grinding stones, knives, pipes, and a variety of hand implements.

Contact period

Indigenous populations flourished for thousands of years in the Sacramento Valley. However, an epidemic in the 1830s, coupled with the influx of European settlers in the mid 1800s drastically reduced the native population. Subsequent years of agricultural activity and development have obliterated or obscured the archaeological remains from these early periods.

The first Europeans to reach northern California were the early Spanish explorers and subsequent Franciscan and Jesuit Missionaries. The Sacramento area began to be settled by the early 1830s, with early settlers such as Sutter and Sheldon obtaining land grants from the Mexican government. With the discovery of gold came an influx of non-native people to the area. As gold mining declined, these people turned to alternative vocations, particularly agriculture. By the 1850s many of the large land grants in Sacramento had been sold off in smaller parcels to various individuals.

HISTORY

The historical development of Sacramento and its nearby communities is characterized by periods of growth spurred by economic events, both local and national. Essentially the offspring of California gold fever, Sacramento blossomed overnight when James Marshall discovered the precious metal in the tailrace of John Sutter's sawmill at Coloma in 1848. The rest of the nineteenth century was a period of entrenchment, when large-scale public works projects were undertaken to protect the city from flooding, affluent citizens built extravagant

homes, monumental public buildings were erected, and the City established itself as a self-supporting agricultural center (Brown et al. 1994).

The turn of the century brought with it new technology that further shaped the development of the region. The electric streetcar and the automobile fostered growth well beyond the nineteenth-century limits of the City. A building boom that lasted until World War I resulted in the establishment of a number of neighborhoods in the vicinity of the Depot. This area continued to develop during the "Roaring Twenties," a period of great prosperity throughout the nation. Development slowed in the early years of the Depression, but by the mid-1930s Sacramento, with the help of federally-funded projects, continued to grow. The onset of World War II brought even more economic opportunities to the area, but local residential construction virtually ceased for the duration of the war. This created an enormous demand for housing when the war was over, and a building boom ensued (Brown et al. 1994).

Project Area History

The Gold Rush washed over the City of Sacramento relatively quickly and left in its wake a diversified economic base and a hearty population committed to establishing a state capital deserving of its name. The remainder of the nineteenth century saw the infilling of the existing city and the establishment of the first suburbs.

By the early 1860s Sacramento had established itself as an agricultural center by being a large producer of a variety of fruits and nuts, and it managed to permanently capture the state fair in 1861. The area south of the City was well established as an agricultural center by the end of the century. A General Land Office survey from 1865 shows fences, roads, houses and a hotel in the vicinity of the project area. Within the Project Area two houses are plotted. A map of Sacramento County dated 1894 indicates that land south of Broadway, including the Army Depot, was planted in fruit orchards, vegetables, grain including wheat and hops, berries, and vineyards (McClatchy 1894).

Manufacturing in the City had also grown substantially since the Gold Rush years of the 1850s. By 1880 Sacramento had most varieties of industry, from the manufacturing of artificial limbs to yeast cakes. The larger factories were concentrated on the edges of the City. In the vicinity of the Army Depot, the Brighton Distillery was in operation in 1875 and produced 10,000 gallons of brandy that year (Thompson and West 1880).

Transportation systems in the Sacramento area expanded greatly during this time period, engendering much of the wealth within the City as well as the growth of nearby communities. In 1862, the Western Pacific Railroad was incorporated to build a line from San Jose to Sacramento via Stockton (McGowan and Willis 1983:180). This line bisects the Army Depot. Many of the communities south of Sacramento, such as Florin, Elk Grove, and Galt, sprang up along this line. The Western Pacific was taken over by the Central Pacific in 1870. These railroads were consolidated under Southern Pacific in 1877 (Woodward and Smith 1991:82).

Infilling, Expansion, and the First World War: 1900-1918

Concurrent with technological and transportation advances in the early years of the twentieth century, Sacramento experienced a building boom that resulted in the expansion of city limits and the establishment of a number of new neighborhoods. At the turn of the century, the area outside the City was largely undeveloped and still devoted to large land holdings (Boyd 1903; Sacramento County 1870-1939; United States Geological Survey [USGS] 1909). Maps from 1908 to 1918 show the inexorable forward march of expansion as more and more tracts of land were subdivided as far south as Florin Road (Miller 1918; Phinney 1908, 1911; Sacramento County 1870-1939; Wood and Tatum 1912).

By 1911, three subdivisions had been created within the Army Depot project area (Table 4.5-1). The Kennedy Acres subdivision was located on the south side of 14th Avenue between Power Inn Road and 82nd Street. The Cedarhurst subdivision was located east of Power Inn Road and south of the Kennedy Acres subdivision. The R. Whittenbrock Estate Company's subdivision was located east of Florin Perkins Road between Fruitridge Road and Elder Creek Road. Each subdivision had moderate lot sales, however County records show little if any improvements being made to the land (Sacramento County 1870-1939).

TABLE 4.5-1 - Historical Subdivisions in the Army Depot Project Area

Name	Earliest Date	Source	Comments
Kennedy Acres	ca. 1911	Sacramento County Assessors Maps	Fifty-one lots. Limited residential construction in this neighborhood through at least the 1930s. Land value assessed at \$400 per lot in 1991/1912.
Cedarhurst	ca. 1911	Sacramento County Assessors Maps	Eight 5-acre lots. All appear to have sold by 1912.
R. Whittenbrock Estate Company	ca. 1991	Sacramento County Assessors Maps	Sixteen 20-acre lots.

"The Roaring Twenties": 1919-1929

Sacramento experienced another economic and building boom in the 1920s (Leland 1989:67; Reed 1923:35), reflecting the general prosperity that the nation as a whole was enjoying. The automobile took hold during this decade and by 1929 the ratio of cars to citizens was almost one to three (McGowan and Willis 1983:77). New neighborhoods were established during

this time, old subdivisions were filled in, and the City expanded in all directions. Within the Project Area the "town" of Polk is shown on the 1927 *Map of Sacramento County* by Kenyon Company. However, no other references to Polk have been located and it is probable that Polk consisted of a railroad loading dock and little else. Most of the parcels in the project area, with the exception of the Kennedy Acres and Cedarhurst subdivisions, remained large, and totalled 20 to 80 acres. In 1921, the Sacramento Timber and Box Company was located along the east side of 82nd Street between 14th Avenue and Alpine Avenue (Sacramento County 1870-1939). Small farm type development was still the primary land use.

Depression and World War II: 1929-1945

Sacramento's diverse economic base rescued it from being devastated by the nationwide economic depression that began with the stock market crash of 1929 (Leland 1989:75; McGowan and Willis 1983:81). Sacramento benefitted in some ways during these years from the federal New Deal projects. Federal funds helped pay for public buildings, parks, bridges, roads, and the municipal airport among other things (McGowan and Willis 1983:83). Despite the slow economy, however, residential building continued in the 1930s. Some of the subdivisions that had been established in the 1920s were filled in during this period. By 1930, the Red River Lumber Company was located at the former site of the Sacramento Timber and Box Company (Sacramento County 1870-1939).

The Army Depot came into being during this time period. The Sacramento Advanced Communications Zone depot was established in January 1942 at the California State Fairgrounds by the Army's Western Defense Command. In June of 1942, the Army renamed it the California Quartermaster Sub-depot and moved it to a series of warehouses on North 7th Street. The Army renamed it the Sacramento Signal Depot and added a maintenance division to repair electronic gear in 1943. The Depot was moved to its present location in 1945. Before construction, the depot site contained nine separate parcels, each with at least one dwelling. The landowners raised fruit and vegetables (Wirth Environmental Services 1987). At first, the Depot's primary function was to receive and store material returning from overseas after the war. The land surrounding the Army Depot, however, was still devoted to agriculture and was occupied by farmsteads and fields.

The Modern Era: 1946-Present

Building activity soared in the Sacramento area after the war, but the focus shifted from near downtown to the eastern suburbs. Suburban growth was fostered by the enormous number of people returning from the war and the fact that little or no residential building had occurred during the early 1940s (McGowan and Willis 1983:88). The suburbanization of Sacramento has continued throughout the last three decades. The 1960s and 1970s saw the development of the Sacramento freeway system, which connected the suburbs to the City and beyond. Much of the residential and industrial development to the west of the Depot has occurred in recent years (USGS 1954, 1967, 1980). The Proctor & Gamble facility was built

around 1952 and went into operation in 1953. This facility is located within the project area east of Power Inn Road and north of Fruitridge Road. Proctor & Gamble manufactured industrial soaps and chemicals until 1994. Now, industrial chemicals are their only product (Madrid, personal communication 1995). A more recent flurry of construction has resulted in the construction of a number of warehouses and some commercial enterprises in or adjacent to the Project Area.

Since the late 1940s the Depot has primarily been used for the storage and maintenance of electronic equipment. The final name change occurred in 1962 when it became the Sacramento Army Depot.

4.5.3 EXISTING SETTING

The National Register of Historic Places (1992) shows no entries for the Project Area. The closest entries in the listing of Californian Historical Landmarks (1990) are the site of Sutterville (#593), a community laid out by John Sutter in 1844, and Camp Union (#666) of the 5th Infantry Regiment in 1861. Both sites are in the vicinity of Sutterville Road and Land Park Drive approximately two miles west of the northern portion of the Project Area. The California Inventory of Historic Resources, (1976) also lists the Sutterville site (Cultural Resources Unlimited, 1993). Cultural resources inventories did not record any cultural resources within the Project Area.

In 1994 the United States Army Corps of Engineers conducted a study of the Sacramento Army Depot and found that none of the buildings met National Register criteria as an important resource. The State Office of Historic Preservation concurred with this finding. The current study documented resources outside of the Army Depot boundary but within the areas of the Sacramento Army Depot Redevelopment Project Area. A total of 11 architectural resources that were built before 1946 were included in this investigation (Figure 4.5-1):

Kennedy Acres

- Army Depot #1 (8196 14th Avenue)
- Army Depot #2 (8200 14th Avenue)
- Army Depot #3 (3909/3911 82nd Avenue)
- Army Depot #4 (3915 82nd Street)
- Army Depot #5 (8110 Alpine Avenue)
- Army Depot #6 (8150 Alpine Avenue)
- Army Depot #7 (8152 Alpine Avenue)

Whittenbrock Estates Company

- Army Depot #8 (8554 Unsworth Avenue)
- Army Depot #9 (8560 Unsworth Avenue)
- Army Depot #10 (8590 Unsworth Avenue)
- Army Depot #11 (8596 Unsworth Avenue)

SACRAMENTO EAST, CA
1967, PHOTO REVISED 1980
7.5 MINUTE SERIES (TOPOGRAPHIC)



SCALE 1:24000

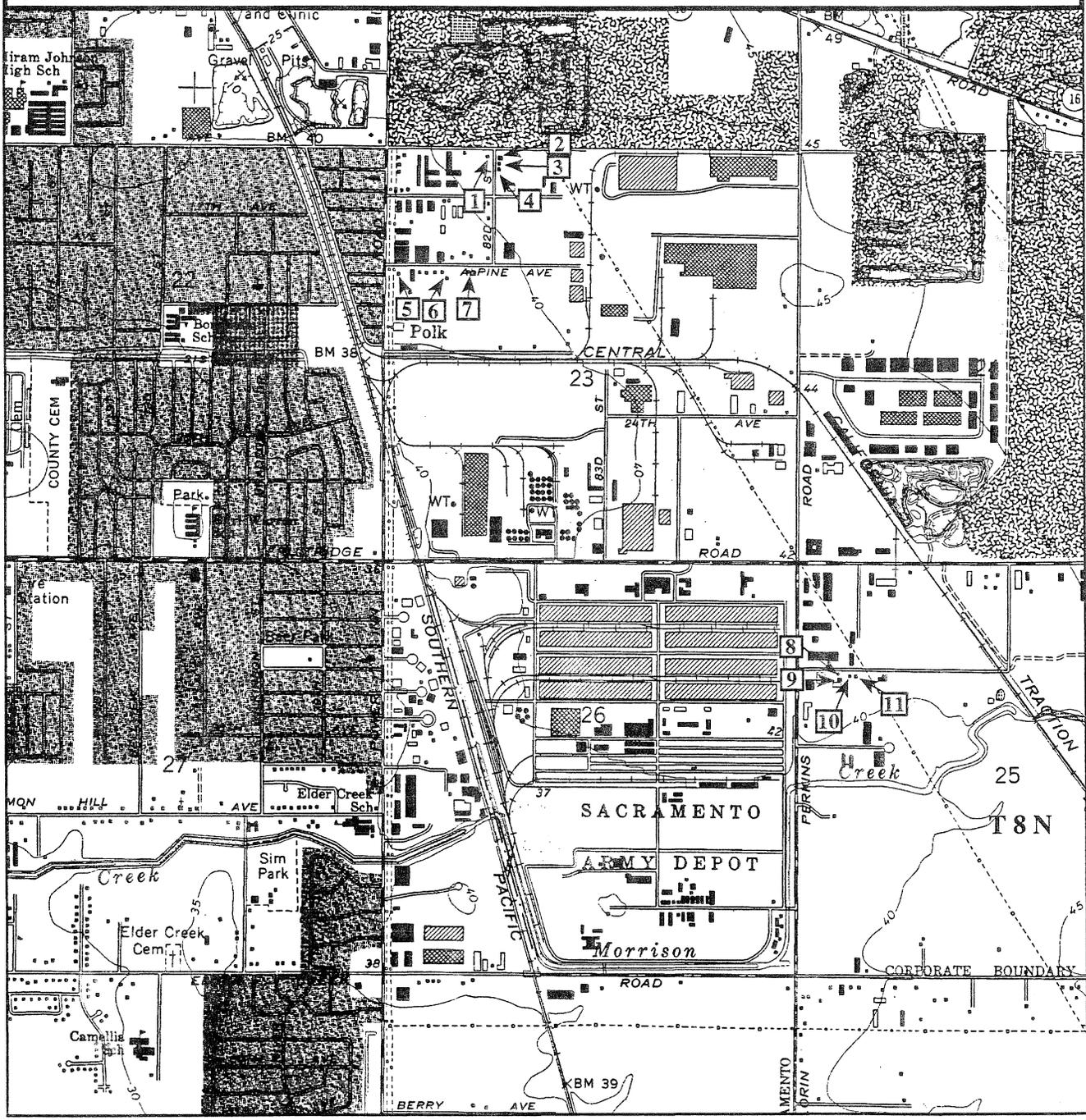
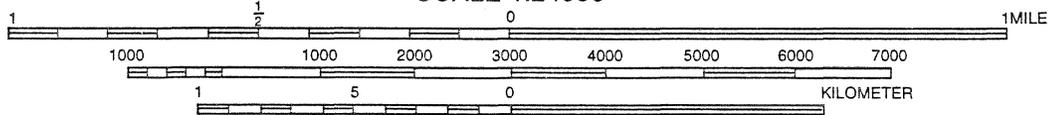


Figure 4.5-1. Historic Building Locations.

Seven of the resources are located within the boundaries of the historical Kennedy Acres Subdivision. The remaining four are included in the Whittenbrock Estate subdivision. The buildings and structures were built between circa 1915 and 1929 at a time when rural development was booming within Sacramento County. Generally, the houses are modest in size and reflect the Craftsman-style of architecture that was commonly employed in the region between 1903 and 1925. Many of the houses have a detached one or two car garage associated with the structure and are surrounded by mature vegetation, including fruit and nut trees and conifers.

Ten of the architectural resources do not retain sufficient integrity, or lack adequate historical associations and architectural elements, and are not considered important resources under CEQA, National Register or California Register of Historic Places. These properties have been thoroughly described, photographed, and documented. The use of the area is presented in the *Historical Property Survey of the Sacramento Army Depot Redevelopment Plan EIR (Appendix C)*. Copies of the original photographs taken of the complexes, the forms, and the report will be filed with the NCIC and SAMCC. This information will be available to avocational and professional historians and the general public. Therefore, no further work is recommended at these resources.

Cartopassi Place (8196 14th Avenue)

The Cartopassi Place is representative of a southern Sacramento County rural subdivision. The house, a one-story, square Craftsman cottage, has been maintained through the years and retains a high degree of integrity. It is surrounded by open land, mature fruit and nut trees, and other vegetation, thus maintaining a strong sense of time and place. The recent industrial development that has occurred in the area to the detriment of the other houses has yet to encroach near this house. The front facade faces 14th Avenue and a levee and retains a rural historical sense of time and place. As such, this property appears to meet California Register of Historic Places and CEQA criteria on a local level as a representative example of the subdivision development in this area of the county.

4.5.4 REGULATORY CONTEXT

The City's history is evidenced at various historic sites, structures, and collections throughout the City. Historic resources of major importance are inventoried and regulated by federal, state, and city governments through the registers outlined below.

- ▶ National Register of Historic Places - The National Historic Preservation Act requires important historic and prehistoric resources to be listed in the National Register of Historic Places (16 USC Section 470 et seq.).
- ▶ California Historical Landmarks and Points of Historic Interest - The State Historical Resources Commission inventories historic landmarks and points of interest (Public Resources Code, Section 5020 et seq.).

- ▶ Preservation of Historic Structures Ordinance - Under a City Ordinance, the Design Review and Preservation Board inventories structures and areas to be preserved within the City of Sacramento. This list, known as the City of Sacramento's Official Register Containing Structures of Architectural or Historical Significance, breaks up historical structures into "Priority" and "Essential" categories.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) of 1970 mandates that significant effects to cultural resources be determined during the project planning stage. Cultural resources include prehistoric or historical archaeological sites, paleontological resources, or properties of historical, cultural, or architectural significance to a community, ethnic or social group. In accordance with CEQA, Appendix G, a significant effect would be identified as something that would disrupt or adversely affect a cultural resource, except as part of a scientific study.

National Historic Preservation Act of 1966

It is possible that redevelopment activities may sometimes use federal funds or require a federal permit. Any project that affects federally owned, managed, or permitted lands necessitates compliance with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations. Section 106 compliance requires the inventory and evaluation of properties using criteria established for the National Register of Historic Places (36 CFR 60.6 [48 R 46306]). These criteria are outlined below.

The quality of significance in American history, architecture, archaeology and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and;

- (a) That are associated with events that have made a significant contribution to the broad pattern of our history; or
- (b) That are associated with the lives of persons significant in our past; or
- (c) That embody the distinct characteristics of a type, period, method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or;
- (d) That have yielded, or may be likely to yield, information important in prehistory or history.

Integrity is based on significance: why, where and when a property is important. Ultimately, the question of integrity is answered by whether or not the property retains the identity for which it is significant. Sites younger than fifty years, unless of exceptional importance, are not eligible for the National Register.

California Register of Historical Resources

In addition to CEQA and the National Register, resources must also be evaluated in terms of their eligibility for inclusion in the recently-created California Register of Historical Resources (A.B. 2881). The Register supplements CEQA in defining what constitutes a significant cultural resource, and contains guidelines and criteria for determining the significance at the local level. Currently, properties eligible for listing in the National Register of Historic Places automatically qualify for the California Register. Resources that do not meet National Register criteria, but retain state or local values could also be included in the California Register. Although the criteria for listing in the California Register are not finalized, it is logical to assume that any property meeting CEQA or National Register criteria as an important resource would qualify for the California Register. In light of these criteria and guidelines, impacts to resources located within the Army Depot Redevelopment project are discussed below.

SHRA Programmatic Agreement with the State Office of Historic Preservation and the Advisory Council on Historic Preservation

SHRA has signed a Programmatic Agreement with the State Office of Historic Preservation and the Advisory Council on Historic Preservation (Agreement) regarding historic properties affected by the use of federal funds. The Agreement sets stipulations for all projects involving the exterior or interior rehabilitation of residential and commercial structures and assisted entirely or in part by funding from the U.S. Department of Housing and Urban Development (HUD). Where federal funds are used on projects in the Project Area, this Agreement will regulate mitigation for effects on historic properties.

City of Sacramento General Plan

The City of Sacramento General Plan contains the following goals and policies related to cultural resources:

Goal D: Work with the County of Sacramento to identify, protect, and enhance physical features and settings that are unique to the area to the maximum extent feasible.

Policy 2: Work with all interested parties to protect ancient burial grounds threatened by development activity and preserve their artifacts, either on-site or at a suitable relocation, to the extent feasible.

4.5.5 IMPACTS WITH THE PROPOSED REDEVELOPMENT PLAN

Significant historic cultural resources are inventoried by the federal, state, and local governments through the National Register of Historic Places, the California Historical Landmark Registration, the Points of Historical Interest Registration, and the City of Sacramento's official register.

Significance Criteria

The following Guidelines from Appendix G of the California Environmental Quality Act (CEQA) are used to determine the significance of impacts on cultural resources due to a proposed project:

The project will normally have a significant effect on the environment if it will:

- (a) Conflict with adopted environmental plans and goals of the community where it is located;
- (b) Disrupt or adversely affect a prehistoric or historic archaeological site or property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as part of a scientific study.

Appendix K of the CEQA Guidelines further defines criteria for assessing the significance of potential impacts to archaeological resources. The mere presence of an archaeological resource alone is not enough to establish significance. Any cultural resources found on a project site would require evaluation to determine potential effects which would require mitigation in accordance with CEQA requirements. Each site or feature must be evaluated on its own to determine its importance as defined in Section III of CEQA, Appendix K. According to CEQA, an "important archaeological resource" is one which:

- A. Is associated with an event or person of:
 - 1. Recognized significance in California or American history, or
 - 2. Recognized scientific importance in prehistory;
- B. Can provide useful information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions;
- C. Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind;
- D. Is at least 100 years old and possesses substantial stratigraphic integrity; or

- E. Involves important research questions that historical research has shown can be answered only with archaeological methods.

While Appendix K of the CEQA Guidelines provides criteria for assessing archaeological "importance," CEQA lacks specific criteria for assessing the significance of historic structures which are not archaeological resources (i.e., standing structures). There are no established local criteria for assessing historic significance. Instead, criteria used for assessing historic significance are these developed and used by the US Department of the Interior for the National Register of Historic Places:

The quality of significance in American history, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. that have yielded, or may be likely to yield, information important in prehistory or history.

For this project, these guidelines are interpreted as follows:

An impact on cultural resources due to Redevelopment Plan implementation would be considered potentially significant if cultural resource features are identified in the Project Area, and the identified features or sites meet any of the criteria for an important archaeological resource outlined above. A significant impact would result if the project as proposed would result in the degradation or destruction of an important archaeological or historic resource, or if human activity resulting from redevelopment activities have the potential to disrupt the integrity of an identified resource.

Methodology

The archival research effort focused on identifying potential and previously recorded cultural resources within the Project Area. Several repositories were consulted during this effort (Table 4.5-2). In addition, PAR examined an extensive in-house history and archaeology library for this region.

Table 4.5-2 - Individuals and Organizations Contacted during Prefield Research

Repositories/Individuals	Information Examined/Sought
California State Library, Sacramento (California Room/Government Publications)	Historic county and United States Geological Survey maps, county histories, information files, photographic collection
U.S.D.I., Bureau of Land Management, Sacramento	General Land Office survey plats
Sacramento Archives and Museum Collection Center (SAMCC)	Assessment plats and assessment tax books
California State University, Sacramento, North Central Information Center (NCIC)	Cultural and historical resource reports

Historical maps, primary data, and general histories formed the core of the research effort for historical and architectural resources. Research conducted for the architectural inventory focused on identifying properties constructed prior to 1946 that would be potentially significant under CEQA and the National Register. Owners, functions, and dates of construction for buildings or structures within the Project Area were determined. Primary and secondary sources, including maps, assessment rolls and plats, and county histories were helpful. Tax assessment plats and rolls for the County of Sacramento dating from the 1850s to 1939 were examined to establish patterns of development, as well as the presence or absence of individual structures located within the Project Area at various points in time.

The architectural inventory focused on 11 historical structures located during a windshield survey of the parcel, as noted previously. During this survey, the exterior facades of each building or structure were examined and architectural descriptions were completed in the field. The descriptions detailed the current condition, any addition or modifications, and the original configuration, where identifiable. Photographs were taken of all historical buildings, and State of California inventory forms were completed for each property. Data on the forms included the architectural description, list of alterations and modifications, historical significance, and assessment of significance. These forms, accompanied by original photographs, will be filed at the North Central Information Center and Sacramento Archives and Museum Collection Center.

Impact Statements

Historic Resources. Implementation of the proposed Redevelopment Plan could indirectly result in the removal, destruction, or alteration of structures that may be of historic interest. *At this time, improvements and growth development plans for the Sacramento Army Depot Redevelopment plan do not include modifying or impacting the historical site of the Cartopassi Place. However, avoidance over the 35 year life of the Plan may not possible considering the industrial character of the surrounding area and the goals and objectives of*

the Redevelopment Plan. In addition, some of the resources within the Project Area, while not examined in this document, are rapidly approaching 50 years of age (e.g., the Proctor and Gamble facility opened in the early 1950s). This would be a potentially significant impact (4.5-1).

Cultural Resources. Redevelopment activities and development resulting from implementation of the Plan could encounter cultural resources during construction. According to the NCIC, possible areas of prehistoric use may occur along Morrison Creek and its tributaries. Unfortunately, these places have been graded and built upon, thereby making surface inspection impossible and increasing the likelihood that the deposits have been destroyed. Although the likelihood of encountering cultural remains during construction is fairly low, such disruption would likely result in the permanent loss of potentially important cultural resource data.

Prehistoric cultural resource issues in the City of Sacramento area are addressed through the City's environmental review and permit processing procedures, as well as state law. The City Planning Division maintains a map of known prehistoric archaeological resources and archaeologically sensitive areas. When development is proposed in one of these areas, an archaeological report may be required to be appended to any entitlement application and the City's standard archaeological resource mitigation measures may be required as a condition of approval. If subsurface prehistoric or historical archaeological remains are discovered during excavation or construction on the site, the City requires that work in the affected areas shall stop immediately and a qualified archaeologist and a representative of the Native American Heritage Commission shall be consulted to develop, if necessary, further mitigation measures to reduce any archaeological impact to a less-than-significant level before construction continues. In addition, according to Section 7050.5 of the Health and Safety Code, in the event human remains are discovered during excavation, work must stop immediately and the County Coroner must be contacted. Section 5097.94 and 5097.98 of the Public Resources Code require consultation with the Native American Heritage Commission, protection of Native American remains, and notification of most likely descendants. SB 447 (Chapter 404, Statutes of 1987) also protects Native American remains or associated grave goods. *Whereas there are numerous existing policies, procedures and ordinances controlling developments's impact on archaeological resources in the City, the potential for redevelopment activities to adversely affect archaeological resources is less than significant (4.5-2).*

4.5.5 MITIGATION MEASURES

The numbering shown below corresponds to the impacts identified in the preceding discussion.

Less-than-significant impacts would occur with the proposed project in the areas noted below and no mitigation measures are provided.

4.5-2 Archaeological resources

Mitigation measures are provided below for *significant, or potentially significant* impacts related to historic resources:

- 4.5-1 (a) Prior to permitting the removal of structures in the Project Area that are more than 50 years old, or alteration of such structures in a manner inconsistent with the Secretary of Interior's *Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Standards)*, the Agency shall conduct archival research to determine whether such structures could be considered to be important historic resources. If it appears that the sites are historical features, they shall be recorded on standard Historic Resources Inventory forms with a scale drawing, photographs, and a location on a USGS topographic map. The Agency shall comply with the requirements of the City of Sacramento's Design Review Guidelines Plan and the Design Review and Preservation procedures contained in City of Sacramento Ordinance No. 91-018.
- (b) For all rehabilitation work on structures over 50 years old, the Agency, in conjunction with the City Planning and Development Department shall follow the stipulations outlined in the *Programmatic Agreement* with regard to physical changes to the structure, or shall require the use of the State Historic Building Code and replacement of historic elements with in-kind materials.

4.5.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the above mitigation measures, impacts to historic resources would be reduced to a less-than-significant level.

4.6 BIOLOGICAL RESOURCES

4.6.1 INTRODUCTION

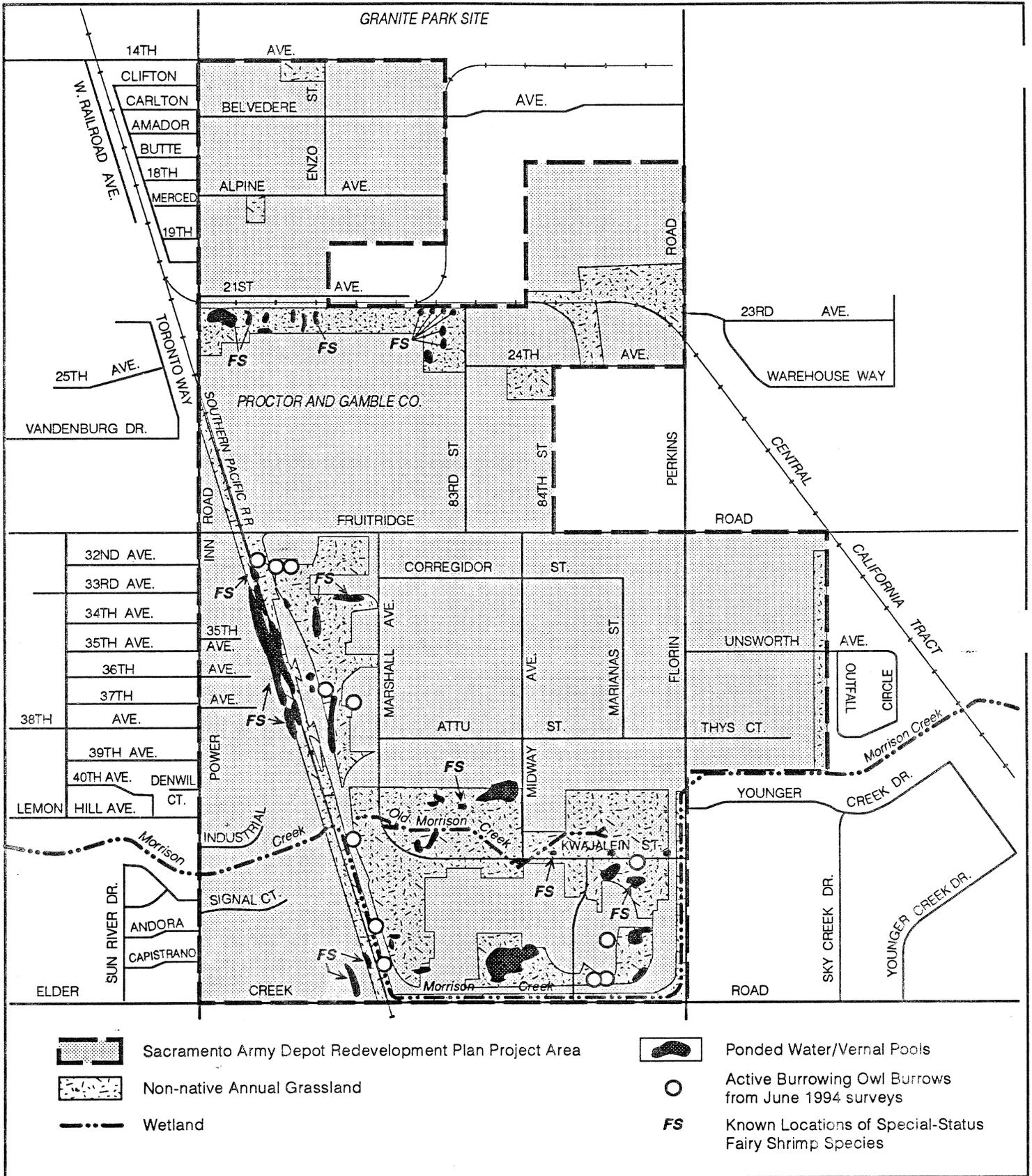
This section is based upon a biological study prepared by Michael Brandman Associates (MBA) as well as data base searches and previous biological studies conducted for the Project Area, including the *Sacramento Army Depot Reuse Plan Draft Environmental Impact Report* (City of Sacramento, 1994), *Sacramento Army Depot Final Environmental Impact Statement* (Department of the Army, 1994), *Sacramento Army Depot Redevelopment Plan Initial Study* (Sacramento Housing and Redevelopment Agency, 1994), and *Final Vernal Pool Fairy Shrimp Surveys at Proctor and Gamble Cogeneration Plan Site and SMUD Transmisison Line Corridor* (SMUD, 1993).

Prior to conducting field work, the following on-line data bases were searched to obtain more information on sensitive species that have occurred in the vicinity of the Project Area: the California Department of Fish and Game's (CDFG) *California Natural Diversity Data Base* (CNDDDB or *RareFind*), the *Wildlife Habitat Relationships* (WHR) system, and the California Native Plant Society's (CNPS) electronic *Inventory of Rare and Endangered Vascular Plants*.

MBA biologists conducted a reconnaissance-level survey of all representative habitats within the Project Area on December 22, 1994. Special attention was paid to areas that could potentially support special-status floral and faunal species. Habitats encountered during the survey were characterized by dominant and subdominant plant species, and assessed for their suitability and value to wildlife. The regulations and policies that pertain to the protection of biological resources, and descriptions of habitat types and the representative plant and animal species found within the Project Area are discussed below.

4.6.2 SETTING

The 1,420-acre Project Area encompasses approximately 245 acres of undeveloped land, including 195 acres of annual grassland, 49 acres of landscaped vegetation, and 1.4 acres of jurisdictional wetlands (Figure 4.6-1). The Sacramento Army Depot and urban development comprises the remainder of the Project Area. Approximately 197 acres of the total undeveloped acreage occurs on the Sacramento Army Depot site. The remaining 48 acres of undeveloped land is divided into several non-contiguous parcels. The Project Area is surrounded by urban, commercial, and residential development.



Source: Michael Brandman Associates (1994) and Sacramento Army Depot Disposal and Reuse Final EIS (1994)

Vegetation and Special-Status Species Map

FIGURE 4.6-1

Sacramento Army Depot Redevelopment Plan EIR

NOT TO SCALE



REGULATORY AND POLICY FRAMEWORK

Special Status Species Protection

Special status species include those listed by the federal or state governments as endangered, threatened, or candidates for listing, or those listed by the California Native Plant Society (CNPS) as rare or endangered. These species have varying degrees of legal protection under both the Federal and California Endangered Species Acts (FESA and CESA), and the California Environmental Quality Act (CEQA). Please refer to Appendix C for further explanation of the legal protection and classification of special status species.

Wetlands Protection

Section 404 of the Federal Clean Water Act regulates discharge of fill material into "waters of the United States," which include wetlands. The US Army Corps of Engineers (COE) is responsible for permitting any project that proposes filling of between one and ten acres of wetlands. To determine which wetlands are subject to COE jurisdiction, three criteria are considered: 1) evidence of inundation or saturation by surface or groundwater for at least two weeks during an average rainfall year, 2) a prevalence of wetland vegetation (hydrophytes) if the site is undisturbed, and 3) the presence of typical wetland (hydric) soils.

City of Sacramento Tree Ordinance

The City of Sacramento Tree Ordinance (City of Sacramento, 1979) protects heritage trees on public and private lands. Heritage trees are defined in the Ordinance as trees that (1) are native and have a trunk circumference of 36 inches or more or non-native and have a trunk circumference of 100 inches or more measured 4.5 feet above ground level; (2) are healthy; and (3) conform to generally accepted horticultural standards of shape for the species. Decisions on heritage tree removal permits are based first on tree size, then the location and health of the tree (Fitch, 1993a).

The City Tree Ordinance also contains provisions for the protection of street trees growing on City property or within a maintenance strip. Property owners are required to obtain a permit to trim or remove a street tree. As a condition of the permit, replacement of the removed tree may be required. Please see Appendix C for more information regarding the specific replacement requirements of the Tree Ordinance.

City of Sacramento General Plan

Policy 10 of the City's General Plan (1988), Open Space and Natural Resource Conservation, includes the following section relevant to the Project:

It is the policy of the City to conserve and protect natural resources and planned open space areas, and to phase the conversion of agricultural lands to planned urban uses.

The City will continue to provide open space for the preservation and conservation of natural resources. . . . The City will conserve riparian forests and grassland vegetation. . . . The City will protect planned open space areas that support wildlife habitat

In addition, the Conservation and Open Space Element of the General Plan contains goals and policies related to the preservation of natural resources within the city. The following goals are relevant to the Project. The full text that includes the policies associated with each goal is provided in Appendix A.

- Goal A: Implement the Master Plan for Park Facilities and Recreation Services.
- Goal B: Retain the riparian woodlands and grassland vegetation along the waterways and floodways in North Natomas and South Sacramento insofar as possible.
- Goal D: Work with the County of Sacramento to identify, protect and enhance physical features and settings that are unique to the area to the maximum extent feasible.

PROJECT AREA HABITAT RESOURCES

Annual Grassland

Annual grasslands are scattered throughout the Project Area, but the largest and least disturbed grasslands are found on the Sacramento Army Depot site. Elsewhere, the grassland habitat has been degraded by plowing, leveling, and refuse dumping. Plant diversity in this habitat is relatively low and dominated by non-native, herbaceous weeds such as wild oat (*Avena fatua*), red brome (*Bromus rubens*), and soft brome (*Bromus mollis*). Although these grasslands are mostly devoid of trees and shrubs, several small Valley oaks (*Quercus lobata*) are present in the northwest corner of the Sacramento Army Depot.

Several of the common wildlife species typically associated with grasslands in the Central Valley were observed by MBA biologists during the field survey. These species include mourning dove (*Zenaidura macroura*), western meadowlark (*Sturnella neglecta*), ring-necked pheasant (*Phasianus colchicus*), and black-tailed jackrabbit (*Lepus californicus*).

Wetlands

Two types of wetland habitats are found within the Project Area: freshwater emergent wetland and ponded water. Prior biological studies have identified several of the ponded water areas on, and adjacent to, the Sacramento Army Depot as degraded vernal pools (Army, 1994). Most of these pools occur in grasslands in the southern half, and along the northwestern boundary, of the Depot. The pools in these areas are relatively small and shallow; however, they do support flora and fauna (including special-status shrimp species)

endemic to vernal pools.

During field surveys, MBA biologists did not locate definitive vernal pools elsewhere within the Project Area. An area of shallow ponded water was observed in the northwest portion of the property owned by Proctor and Gamble, however, this area has been extensively disced. Soil, hydrological, and biological characteristics normally attributed to vernal pools were not present in this area. However, studies prepared for a proposed cogeneration plant in the northeast corner of the Proctor and Gamble site also identified several ponded water and vernal pool areas in the grasslands along the northern portion of the Proctor and Gamble site. Previously conducted surveys in 1993 revealed the presence of two special status species of fairy shrimp in several of these pools (Ebasco, 1993).

Freshwater emergent wetland is confined to the bed and bank of the Old Morrison Creek channel on the laser test range within the Depot, and along the channelized portion of Morrison Creek near the southern boundary of the Project Area. Emergent vegetation is sparse or absent along most of the two channels, probably because of flood control maintenance and the channel's concrete lining.

Landscaped Vegetation

Landscaped vegetation, including lawns, planted trees, and shrubs, is maintained on the Sacramento Army Depot, and surrounds some of the industrial and commercial buildings elsewhere within the Project Area. The largest landscaped areas are associated with recreational facilities (softball fields and sports track) and the administration buildings on the Sacramento Army Depot (Army, 1994). Landscaped vegetation is usually not considered a significant biological resource but it does provide habitat for wildlife species adapted to urban environments.

SPECIAL-STATUS BIOLOGICAL RESOURCES

Discussed within this section are species and habitats known to occur, or potentially occurring, within the Project Area, and that are afforded special recognition by federal, state, or local resource conservation agencies and organizations. Table 4.6-1 lists the special-status species potentially occurring or known to occur within the Project Area. Sources consulted for the classification of sensitive resources are:

TABLE 4.6-1 SPECIAL-STATUS SPECIES KNOWN TO OCCUR OR POTENTIALLY OCCURRING WITHIN THE PROJECT AREA					
SPECIES	C N P S	U S F W S	C D F G	POTENTIAL FOR OCCURRENCE	HABITAT
PLANTS					
DWARF DOWNINGIA (<i>Downingia pusilla</i>)	2	--	--	Not observed or expected to occur within the project area.	vernal pools
BOGG'S LAKE HEDGE-HYSSOP (<i>Gratiola heterosepala</i>)	1 B	C2	CE	Not observed or expected to occur within the project area.	vernal pools
SLENDER ORCUTT GRASS (<i>Orcuttia tenuis</i>)	1 B	C2	--	Not observed or expected to occur within the project area.	vernal pools
SANFORD'S ARROWHEAD (<i>Sagittaria sanfordii</i>)	1 B	C2	--	Not observed or expected to occur within the project area.	shallow freshwater marsh and swamps
INVERTEBRATES					
VERNAL POOL FAIRY SHRIMP (<i>Branchinecta lynchi</i>)	--	FT	--	Known to occur within the project area.	vernal pools
VERNAL POOL TADPOLE SHRIMP (<i>Lepidurus packardii</i>)	--	FE	--	Known to occur within the project area.	vernal pools
CALIFORNIA LINDERIELLA (<i>Linderiella occidentalis</i>)	--	C2	--	Known to occur within the project area.	vernal pools
VALLEY ELDERBERRY LONG-HORN BEETLE (<i>Desmocerus californicus dimorphus</i>)	--	FT	--	Not expected within the project area; no suitable habitat.	elderberry shrubs
AMPHIBIANS					
CALIFORNIA TIGER SALAMANDER (<i>Ambystoma californiense</i>)	--	C1	CSC	Not observed or expected to occur within the project area.	vernal pools
WESTERN SPADEFOOT TOAD (<i>Scaphiopus hammondi</i>)	--	--	CSC	Not observed or expected to occur within the project area.	vernal pools
REPTILES					
NORTHWEST POND TURTLE (<i>Clemmys marmorata marmorata</i>)	--	C2	CSC	Not expected within the project area; no suitable habitat.	shallow freshwater
GIANT GARTER SNAKE (<i>Thamnophis gigas</i>)	--	FT	CE	Not expected within the project area; no suitable habitat.	shallow freshwater

**TABLE 4.6-1
SPECIAL-STATUS SPECIES KNOWN TO OCCUR OR POTENTIALLY OCCURRING
WITHIN THE PROJECT AREA**

SPECIES	C N PS	U S F W S	C D F G	POTENTIAL FOR OCCURRENCE	HABITAT
BIRDS					
TRICOLORED BLACKBIRD <i>(Agelaius tricolor)</i>	--	C2	CSC	Not expected to nest within the project area; no suitable habitat	Nests in freshwater marsh emergent vegetation.
BURROWING OWL <i>(Speotyto cunicularia)</i>	--	--	CSC	Known to occur within the project area.	Valley and foothill grasslands.
SWAINSON'S HAWK <i>(Buteo swainsoni)</i>	--	--	ST	Not expected to nest within the project area; no suitable habitat.	Nests in riparian woodlands and large oaks.
<p>California Native Plant Society (CNPS) Listing Categories: 1B Plant Rare, Threatened, or Endangered in California and elsewhere 2 Plant Rare, Threatened, or Endangered in California, but more common elsewhere</p> <p>U.S. Fish and Wildlife Service (USFWS) Federal Listing Categories: FE Federal Endangered FT Federal Threatened C1 Category 1 candidate for federal listing; information sufficient to support a proposal for federal listing. C2 Category 2 candidate for federal listing; information insufficient to support proposal for federal listing.</p> <p>California Department of Fish and Game (CDFG) State Listing Categories: CE California Endangered CT California Threatened CSC California Species of Special Concern</p> <p><i>Source: Michael Brandman Associates 1995</i></p>					

- ▶ **Plants** -- U.S. Fish and Wildlife Service (USFWS 1990), CDFG (1990), CNDDDB (1994), and CNPS -- Smith and Berg (1998)
- ▶ **Wildlife** -- USFWS (1990), CDFG (1990), CNDDDB (1993), and Williams (1986)
- ▶ **Habitats** -- CNDDDB (1994) and Holland (1986)

Special-Status Plants

A review of the CNDDDB and previous biological studies conducted on the Sacramento Army Depot and Proctor and Gamble site indicates that four special-status plants have been known to occur in the vicinity of the Project Area. All four species occur in vernal pools and other wetland habitats. Two plants, Bogg's Lake hedge-hyssop (*Gratiola heterosepala*) and slender orcutt grass (*Orcuttia tenuis*), are state-listed Endangered. The other two species, dwarf downingia (*Downingia pusilla*) and Sanford's arrowhead (*Sagittaria sanfordii*), are USFWS candidates (Category 2) for federal listing as Threatened or Endangered. Surveys were conducted for these and other special-status plants on the Sacramento Army Depot in 1991; no special-status plants were observed during these surveys (Army, 1994). MBA has determined that special-status plants are unlikely to occur on the Project Area because habitat is marginally suitable and previously conducted surveys for these species have had negative results.

Special-Status Wildlife

Vernal Pool Shrimp

There are three special-status vernal pool shrimp species known to occur in vernal pools within the Project Area: the federally-listed Endangered vernal pool tadpole shrimp (*Lepidurus packardii*); the federally-listed Threatened vernal pool fairy shrimp (*Branchinecta lynchi*); and the federal candidate (Category 2) California linderiella (*Linderiella occidentalis*) (City of Sacramento 1994). All three species live in vernal pools or other isolated wetlands associated with grassland habitat. The vernal pool fairy shrimp is known to occur at five locations on the Sacramento Army Depot, and in several locations on the Proctor and Gamble site. The vernal pool tadpole shrimp occurs just outside the western perimeter of the Sacramento Army Depot. California linderiella, identified in three locations on the Sacramento Army Depot, has recently been withdrawn for listing by USFWS because a determination was made that the species is not likely to become either threatened or endangered in the foreseeable future. The locations of vernal pools known to support special-status shrimp species are shown on the previous Figure 4.6-1.

During reconnaissance surveys on the Sacramento Army Depot, MBA biologists confirmed the presence of vernal pools known to support special-status vernal pool shrimp. However, MBA did not conduct any focused surveys for these species. MBA did not locate any vernal pools in grasslands outside the Depot within the remainder of the Project Area. The areas of ponded water located on the Proctor and Gamble site historically supported the vernal pool fairy shrimp and the California linderiella shrimp. However, much of the grassland on the site has been recently disced. Plowed and disced fields that historically held vernal pool habitat are not known to support fairy shrimp populations (USFWS 1994). Therefore, special-status shrimp species are not expected to occur in the disced grasslands located on the Proctor and Gamble site. However, fairy shrimp could still occur in the drainage ditches or in undisced pools on the site.

Burrowing Owl

The burrowing owl (*Speotyto cunicularia*) is considered a Species of Special Concern by CDFG. The Sacramento Army Depot has been called a "regional refuge" for the burrowing owl because surrounding habitat has been replaced by industrial and residential development (Army, 1994). Burrowing owls occupy annual grasslands on the Sacramento Army Depot and could inhabit other grasslands within the Project Area. There are at least 12 active burrow sites, and an estimated 8 to 14 pairs of owls are present on the Sacramento Army Depot. Active owl burrows identified in June 1994 surveys (Army, 1994) are shown in previous Figure 4.6-1. During reconnaissance surveys conducted by MBA, no additional burrowing owls or active owl burrows were found on the Sacramento Army Depot or in the remainder of the Project Area. However, California ground squirrel burrows that could potentially be inhabited by burrowing owls were found elsewhere, especially on the banks of the Morrison Creek channel and along field edges.

Other Special-Status Wildlife

In addition to the species discussed above, four other special-status wildlife species have been identified as occurring or potentially occurring within the Project Area: the state- and federally-listed Threatened giant garter snake (*Thamnophis gigas*); the federally-listed Threatened Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*); the state-listed Threatened Swainson's hawk (*Buteo swainsoni*); and the federal candidates (Category 2) California tiger salamander (*Ambystoma californiense*) and tricolored blackbird (*Agelaius tricolor*). MBA has concluded that it is unlikely that any of these species are nesting or breeding within the Project Area because of the absence of suitable habitat. Swainson's hawk

and tricolored blackbird could occasionally forage within the Project Area, but there are no recent nesting records for either species in the vicinity of the site (CNDDDB 1994). Therefore, neither of these species is expected to occur within the Project Area.

Jurisdictional Wetlands

Wetlands that have been delineated pursuant to ACOE procedures and determined to be under U.S. Army Corps of Engineers (ACOE) jurisdiction are protected by the Clean Water Act. Wetland delineations were completed on the Sacramento Army Depot in 1991 and 1994 and identified 0.87 acre of vernal pools and 0.5 acre of wetlands within the Morrison Creek channel (Army, 1994). An undetermined acreage of freshwater emergent wetland is associated with the Morrison Creek channel along the southern boundary of the Depot. Some of the depressions, drainage ditches, and pooled areas on the Proctor and Gamble site could also be considered jurisdiction wetlands.

4.6.3 IMPACTS WITH THE PROPOSED REDEVELOPMENT PLAN

Significance Criteria

Section 15065(a) of the California Environmental Quality Act (CEQA) Guidelines specifies that a lead agency shall find that a project may have a significant effect on the environment when the project has the potential to "...substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal...." Appendix G of the CEQA Guidelines provides examples of impacts that normally are considered significant, including those that would:

- ▶ "substantially affect a rare or endangered species of animal or plant or the habitat of the species";
- ▶ "interfere substantially with the movement of any resident or migratory fish or wildlife species";
- ▶ "substantially diminish habitat for fish, wildlife or plants."

CEQA Guidelines Section 15380 further defines "rare or endangered species" as those species officially listed as threatened, endangered, or rare under Federal or California law. In

addition, the Guidelines provide that plant or animal species may be treated as "rare or endangered" even if not on one of the official lists if:

- ▶ “its survival and reproduction in the wild are in immediate jeopardy”;
- ▶ it exists “in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens”; or
- ▶ it “is likely to become endangered in the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened'“ under Federal law.

However, recent case law (*Sierra Club vs. City of Gilroy*, 1990 222 Cal. App. 3d.30, 47) may be interpreted as providing discretion to the lead agency as to whether a species is to be considered "rare or endangered" despite meeting one or more of these criteria.

Given these standards, the Redevelopment Project would be considered to have a significant adverse impact on biological resources if it would result in a substantial loss of or disruption to special status plant or animal species, their habitat, or breeding grounds; would cause a change in species composition, abundance or diversity beyond that of normal variability; or would indirectly result in the measurable degradation of sensitive habitats (e.g., wetlands, riparian corridors, vernal pools, oak woodlands)¹. For example, impacts to breeding and foraging habitat of listed threatened or endangered species (e.g., valley elderberry longhorn beetle) would be considered significant.

Section 15370 of the CEQA Guidelines stipulates that mitigation measures must be capable of avoiding the impact, minimizing the impact by limiting the proposed action, rectifying the impact by restoring the impacted environment, or reducing or eliminating the impact over time, such as through off-site mitigation. This tiered mitigation approach is adhered to in the following impact analysis.

¹ Redevelopment projects within the Project Area are not expected to affect (e.g., fill) Morrison Creek or its two major tributaries. Consequently, impacts to these potential jurisdictional "Waters of the U.S." are not anticipated, and no mitigation is necessary.

Impact Statements

Loss of Native Oak Trees: Public activities and potential private development under the Project could result in the removal of heritage and street trees, as defined in the City of Sacramento Tree Ordinance. A grove of six young Valley oak trees are located near the northwest boundary of the Sacramento Army Depot. These trees have been identified as heritage trees under the City of Sacramento Tree Ordinance (Section 45.042.211 of the Sacramento City Code). Removal of heritage oak trees would require a permit under Section 45.04.218 of the Sacramento City Code (City of Sacramento 1994b). Consultation with the Director of the City of Sacramento Department of Recreation and Parks is required to apply for a permit to remove or prune a street tree or heritage tree, or to affect the soil within the dripline of a heritage tree. The City ordinance does not currently require replacement of street trees or heritage trees except on an individual case basis as part of the permitting process. *Adherence to City Code would result in less than significant impacts to native oaks in the Project Area (4.6-1).*

Loss of an Active Burrowing Owl Nest. The removal or destruction of an active burrowing owl nest (or any active raptor nest) is considered a violation of the California Department of Fish and Game Code (Section 3503.5). This impact would also be considered significant under CEQA. Although burrowing owl surveys have been conducted on the Sacramento Army Depot, additional surveys would be required to determine the status of burrowing owls elsewhere within the Project Area. *Redevelopment activities could result in the removal of foraging and nesting habitat for the burrowing owl. This would be a potentially significant impact (4.6-2).*

Loss of Special-Status Vernal Pool Shrimp Habitat. Loss of habitat supporting vernal pool fairy shrimp and vernal pool tadpole shrimp would be considered a significant impact because they are protected under the federal Endangered Species Act. Although California linderiella is not listed as Threatened or Endangered, loss of supporting habitat for this special-status shrimp species would also be considered significant under CEQA.

The vernal pool habitat located in the Project Area is located within and adjacent to the Depot, and on the Proctor and Gamble site. Preservation of this habitat on the Depot has been incorporated into reuse plans in cooperation with the Department of Defense and the USFWS. None of the five known locations of the threatened vernal pool fairy shrimp habitat at or adjacent to the Depot would be lost under the adopted reuse plan. Four locations would be in the designated Open Space and the fifth would be protected by a deed restriction preventing modification of the pool and its catchment. Potential habitat for the endangered tadpole shrimp would remain in the Open Space area. Fairy shrimp habitat identified at the Proctor and Gamble

cogeneration site is under consultation with the USFWS to determine any necessary mitigation.

No vernal pools were identified in grasslands outside the Depot within the remainder of the Project Area. Plowed and disced fields that historically held vernal pool habitat are not known to support fairy shrimp populations (USFWS 1994). Anticipated actions under the Redevelopment Plan thus are not anticipated to result in jeopardy to the continued existence of the vernal pool fairy shrimp or tadpole shrimp, or in destruction or adverse modification of their habitats. Completion of USFWS consultation on a project-by-project basis will further ensure protection and less than significant impacts (4.6-3).

Loss of Jurisdictional Wetlands: Section 404 of the Federal Clean Water Act restricts (without prior notification or approval from ACOE) placement of dredge or fill material in waters of the U.S. and other jurisdictional wetlands. If wetlands would be affected, either an individual permit or a nationwide permit may be required, depending on the amount of fill. In addition, if wetlands along Morrison Creek would be affected by the project, a Section 1601 Streambed Alteration Agreement may be requested by CDFG.

Except for some ponded water located on disced fields at the Proctor and Gamble site, all wetlands identified in the Project Area were previously identified and mitigated in the Reuse Plan and subsequent agreements with the Corps of Engineers. The Reuse Plan designates over 83 acres as open space to preserve existing wetlands. In addition, the reestablishment of the Old Morrison Creek alignment will be considered as part of a Master Drainage Study to be completed prior to the sale of land on the site. Two restorative options have been reviewed by the City, both including establishment of the creek near its historic alignment. Natural vegetation would be provided to enhance the reestablished creek. Any future development activities on the Proctor and Gamble site would be subject to ACOE and CDFG requirements. *Anticipated actions under the Redevelopment plan would not result in the significant removal or destruction of jurisdictional wetlands within the Project Area, resulting in a less than significant impact on jurisdictional wetland resources (4.6-4).*

4.6.4 MITIGATION MEASURES

The numbering shown below corresponds to the impacts identified in the preceding discussion.

Less-than-significant impacts would occur with the proposed project in the areas noted below and no mitigation measures are provided.

- 4.6-1 Loss of native oak trees
- 4.6-3 Loss of special-status vernal pool shrimp habitat
- 4.6-4 Loss of jurisdictional wetlands

Mitigation measures are provided below for *significant, or potentially significant* impacts related to the loss of an active burrowing owl nest.

4.6-2 The following mitigation measure was adopted for the SAD Reuse Plan, and should be readopted for the balance of the Project Area:

- (a) Consistent with the measure adopted for the Depot Reuse Plan, prior to the approval of any development project within the Project Area the Agency and/or the City shall review the project for the occurrence of any burrowing owl nests that may be disturbed or lost due to construction activities. If the City of Sacramento determines that burrowing owl nests would not be affected by the construction of the proposed project, then no further mitigation would be required.
- (b) If the City or Agency determines that the construction of a proposed development project may affect a known or existing burrowing owl nest, the project applicant shall consult with DFG and/or USFWS in order to conduct a burrowing owl survey. This survey shall be conducted on the project site by a qualified biologist in accordance with the most current DFG/USFWS guidelines or protocols and shall be completed during the appropriate survey period. Of the species specific surveys do not identify any burrowing owl habitats or burrowing owls on the project site, then no further mitigation would be required.
- (c) If burrowing owls or burrowing owl habitat are identified within an area that may be disturbed by the construction of a development project, then the project applicant in consultation with the City of Sacramento, DFG, and USFWS, shall prepare and implement a mitigation plan in accordance with any applicable State and/or Federal statutes or laws that reduces the impact to a level of insignificance.

4.6.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the above mitigation measures, impacts to biological resources would be reduced to a less-than-significant level.

4.7 HYDROLOGY AND WATER QUALITY

4.7.1 INTRODUCTION

This section of the EIR addresses potential impacts resulting from implementation of the Redevelopment Plan on local and regional hydrologic characteristics including flooding and drainage, and surface water quality. Some of the information presented in this section has been obtained through a review of the *Sacramento Army Depot Reuse Plan Environmental Impact Report* (SADEIR) and the *City of Sacramento General Plan EIR* (SGPU DEIR). In addition, the Inland Surface Water Quality Control Plan prepared by the State Water Resources Control Board and the Sacramento River Basin Plan of the Central Valley Regional Water Quality Control Board were incorporated into the regulatory background discussion.

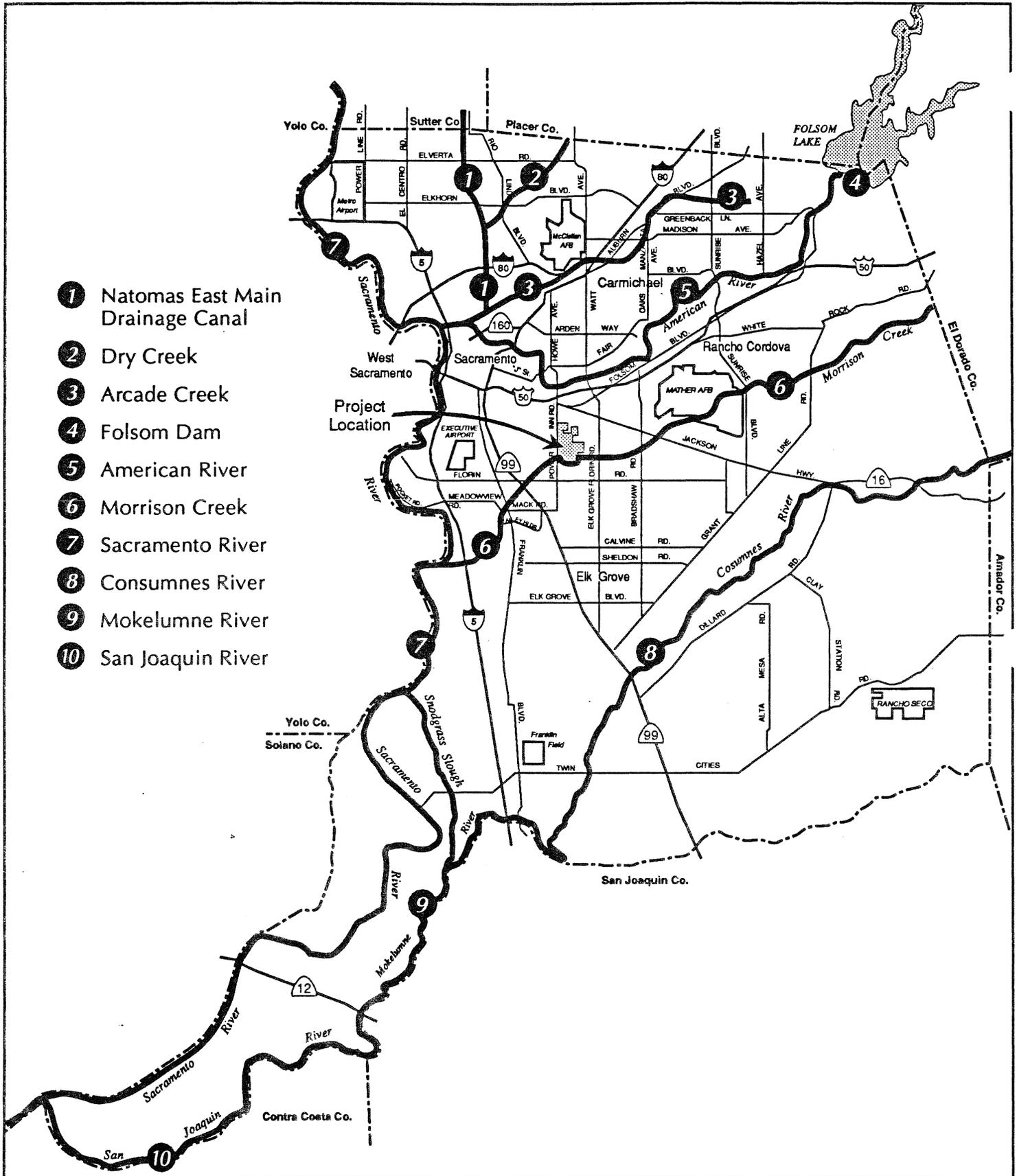
4.7.2 SETTING

SURFACE HYDROLOGY/DRAINAGE

Regional

The City of Sacramento is located at the confluence of the Sacramento River and the American River in the Sacramento River Basin. The Sacramento Basin encompasses about 26,500 square miles and is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Delta-Central Sierra area to the south. The average runoff from the Basin is estimated to be 21.3 million acre-feet per year. The melting snowpack in the Sierra Nevada maintains streamflow during most of the summer. The Sacramento River (which flows along the western border of Sacramento County) is the principal stream in the Basin. Major tributaries to the Sacramento River are the Pit and McCloud Rivers, which join the Sacramento River from the north, and the Feather and American Rivers, which are tributaries from the east. The American River flows west through Sacramento County discharging into the Sacramento River just north of downtown Sacramento. Numerous tributary creeks flow from the east and west.

Six small tributaries of the Sacramento River pass through and provide drainage for the Sacramento area. These tributaries include Dry Creek, Magpie Creek, and Arcade Creek in the northern portion of the City, and Morrison Creek, Elder Creek, and Laguna Creek in the southern portion of the City (see Figure 4.7-1). The tributaries in the southern portion of the City join to form a single Sacramento River tributary (SGPU DEIR, p. W-1). Forty miles south of Sacramento, the Sacramento River joins the San Joaquin River which drains into the San Francisco Bay.



- ① Natomas East Main Drainage Canal
- ② Dry Creek
- ③ Arcade Creek
- ④ Folsom Dam
- ⑤ American River
- ⑥ Morrison Creek
- ⑦ Sacramento River
- ⑧ Consumnes River
- ⑨ Mokelumne River
- ⑩ San Joaquin River

Source: Sacramento County Planning and Community Development Department.

Sacramento Waterways

FIGURE 4.7-1

Sacramento Army Depot Redevelopment Plan EIR



Local

The City of Sacramento's stormwater drainage system consists of a network of natural channels, canals, levees, subsurface drains, and pumping stations which ultimately drain into the Sacramento and American Rivers. The Project Area is located in the Morrison Creek Stream Group Basin. Morrison Creek borders the Project Area on the southeastern, southern and southwestern boundary; the original creek channel has been diverted to a flood channel. The predominant natural drainage pattern in the Morrison Creek Stream Group Basin is to the southwest. However, creek drainage in the Project Area is to the west.

Storm runoff from the Project Area (excluding the Depot site) is conveyed via a separate (from the sanitary sewer) system to Morrison Creek. Subsurface pipes convey runoff to drainage channels that discharge to Morrison Creek. A few locations are served by open drainage ditches that are routed to other piped segments. The portion of the Project Area contributing to Morrison Creek is a small area near the downstream end of the 180-square-mile Morrison Creek Stream Group drainage basin.

The existing drainage system for the Sacramento Army Depot consists of stormwater outfalls, catch basins, drop inlets and manholes. The drainage pipes range in size from sixty-inches to three-and-a-half inches in diameter. The underground system outfalls, one sixty-inch and one thirty-inch drain into Morrison Creek and are designed to drain the industrial and administrative areas. Surface drainage consists of seven discharge outfalls into Morrison Creek and is designed to drain all other areas of the site (Willdan, 1994). The storm drains in the northeast and southeast sections of the industrialized area flow to outfalls on the eastern boundary. The remaining industrial areas drain to the west. The lower field drains to the west into the old Morrison Creek channel and the minor outfalls drain areas adjacent to Morrison Creek on the east, west and southern boundaries. It is anticipated that the existing drainage system is adequate for future planned development at the project site. (SADEIR).

The discharge points from the Project Area to Morrison Creek is approximately 5.5 miles upstream of Beach Lake. Morrison Creek flows south through the Beach - Stone Lakes system, and runoff is ultimately discharged through Snodgrass Slough and the Mokelumne River to the Sacramento-San Joaquin Delta. The other contributing areas to the Beach Lake system include the communities of Florin, Elk Grove, Laguna, Franklin, Point Pleasant and Hood, as well as the Sacramento Army Depot, Mather Field and rural areas in the eastern and southern portion of the watershed.

FLOODING AND FLOOD CONTROL

Regional Flooding

The Project Area lies within the geologic floodplain of the Sacramento and American River systems, although it is above the lowest, most recently active floodplain. The artificial levees along the American and Sacramento rivers separate the Project Area from the active channels.

Studies conducted since the record-breaking floods of February 1986 have shown that large flood flows may occur in the American and lower Sacramento River System much more frequently than previously thought. Evaluations of the existing regional flood control system determined that it provides significantly less than 100-year protection (US Army Corps of Engineers (COE), 1992). Regionally-generated flooding in the Project Area has been assumed to result from a levee failure along either the east levee of the Sacramento River or the south levee of the American River. Ongoing efforts to provide adequate regional protection for this portion of Sacramento County have focused on levee stabilization along the Sacramento River, and increased upstream storage capacity and/or levee improvements in the American River.

Reconstruction of the Sacramento River levee in the Greenhaven/Pocket area (west of the Project Area) has been completed. The COE will complete riverwall improvements south of the Tower Bridge in 1995, and levee improvements for the North Natomas area should be completed by 1996. However, the reconstruction project was designed to guarantee protection up to a design water elevation; if that elevation is exceeded (i.e., American River flows are too high), protection on the Sacramento levee system is not assured (Pineda, 1993).

The Sacramento Area Flood Control Agency (SAFCA) has been working with the COE to develop alternative flood controls for the American River. These alternatives include some combination of the following: levee improvements along the lower American River, modifications to Folsom Dam and/or reservoir, a flood control facility at Auburn Dam, and/or reoperation of Folsom Dam in coordination with upstream storage facilities. These options will undergo public review and comment in early 1995, and a preferred alternative will be submitted to Congress for funding.

Morrison Creek System Flooding

Historical land use changes and modifications to the natural drainage system of the Morrison Creek Stream Group watershed have contributed to locally-generated flooding and flood control problems in portions of the watershed, and in the Beach-Stone Lakes system. The reach of Morrison Creek through the Project Area has an engineered channel with levees which according to the latest (CDM) study can no longer contain the existing 100-year flows. Downstream of the Project Area, the Morrison Creek and Beach-Stone Lakes systems are not capable of accommodating the 100-year runoff under existing conditions.

The City and County of Sacramento have performed extensive levee and channel improvement work along Morrison Creek and some reaches of Laguna, Elder, Florin, Unionhouse, Elk Grove and Strawberry Creeks. These features protect various reaches of the streams (primarily in the upper reaches or portions with urban development). Levees along the right bank of lower Morrison Creek and the Beach Lake levees provide local flood protection in the Meadowview and Freeport areas of the City. Improvements have been restricted to particular locations, and were constructed over a period of many years (some features have been built since the 1986 flood, but many were constructed much earlier). Therefore, the flood control system is not yet an integrated, comprehensive system that provides 100-year protection to all areas.

There are no existing federal flood control projects within the Morrison Stream Group drainage basin. At the request of the City of Sacramento, the COE prepared a reconnaissance report evaluating several alternatives for improving flood protection along the larger Morrison Stream Group creeks, and whether there is a federal interest in such a flood control project. Alternatives currently being evaluated by the COE and the City include raised levees, widened and/or lined channels, floodwalls, and detention basins. At the present time, the City has an adopted drainage criteria that include provisions that drainage systems (for new development and major alterations) be designed to convey flows from the 10-year storm, and that runoff from the 100-year storm be contained without damage to structures.

The City is also considering alternative uses for the historic Morrison Creek corridor through the Depot area, as outlined previously in the Land Use section. The City is considering a joint use corridor located in the bottomland area. The suggested 150-foot wide joint use corridor would be located on the north side of Kwajalein Street, crossing the Depot at or near the alignment of historic Morrison Creek. The corridor would be used for flood control and drainage, and stormwater quality control, and well as stream restoration, habitat preservation and environmental mitigation (Brent, 1995).

The Sacramento County Water Resources Division (WRD) has initiated locally-funded interim improvement alternatives downstream of the Project Area which include raising levees along Morrison Creek downstream of Mack Road to address channel capacity problems (Farber, 1993).¹ WRD is also currently preparing a drainage master plan for the upper Morrison Creek watershed, to include measures that would prevent the release of storm runoff to the lower portion of the watershed from increasing above present levels.²

¹ Levee improvements to increase channel capacity will alleviate peak flow overbanking or levee-breeching hazards, but will not address the volumetric storage and backwater problems of the Beach-Stone Lakes system.

² The Drainage Master Plan is expected to focus on preventing future adverse impacts from upstream development in the County, not remediating existing conditions. Implementation of the plan would be expected sometime after final planning, environmental review, and fee collection.

WRD has also prepared the Morrison Creek Mining Reach Drainage Master Plan, which evaluates a range of alternatives for managing storm water runoff after proposed aggregate mining along Morrison Creek is completed. The "mining reach" of Morrison Creek extends from the south boundary of Mather Field, south and west to Hedge Avenue. WRD's Drainage Master Plan responds to aggregate mining applications which collectively would result in mining of the entire 100-year floodplain over nearly the entire mining reach; development of these aggregate resources is consistent with the County General Plan.

The proposed mining would lower the elevation of a mile-wide corridor centered on Morrison Creek by 20 to 60 feet. This lowered area would be bisected by the existing grades of Jackson Highway and Bradshaw Road near their intersection. Since mid-1991, WRD and the mining companies have evaluated a full range of potential alternatives, and have screened them to a few which are economically and financially feasible for the mining companies. The remaining alternatives include some combination of:

- ▶ an aqueduct across the two mined pits;
- ▶ drop structures to spill high flows to the pits;
- ▶ dedicated open space for detention of the spilled flood waters; and
- ▶ pumps to return the detained water to the creek channel after a flood.

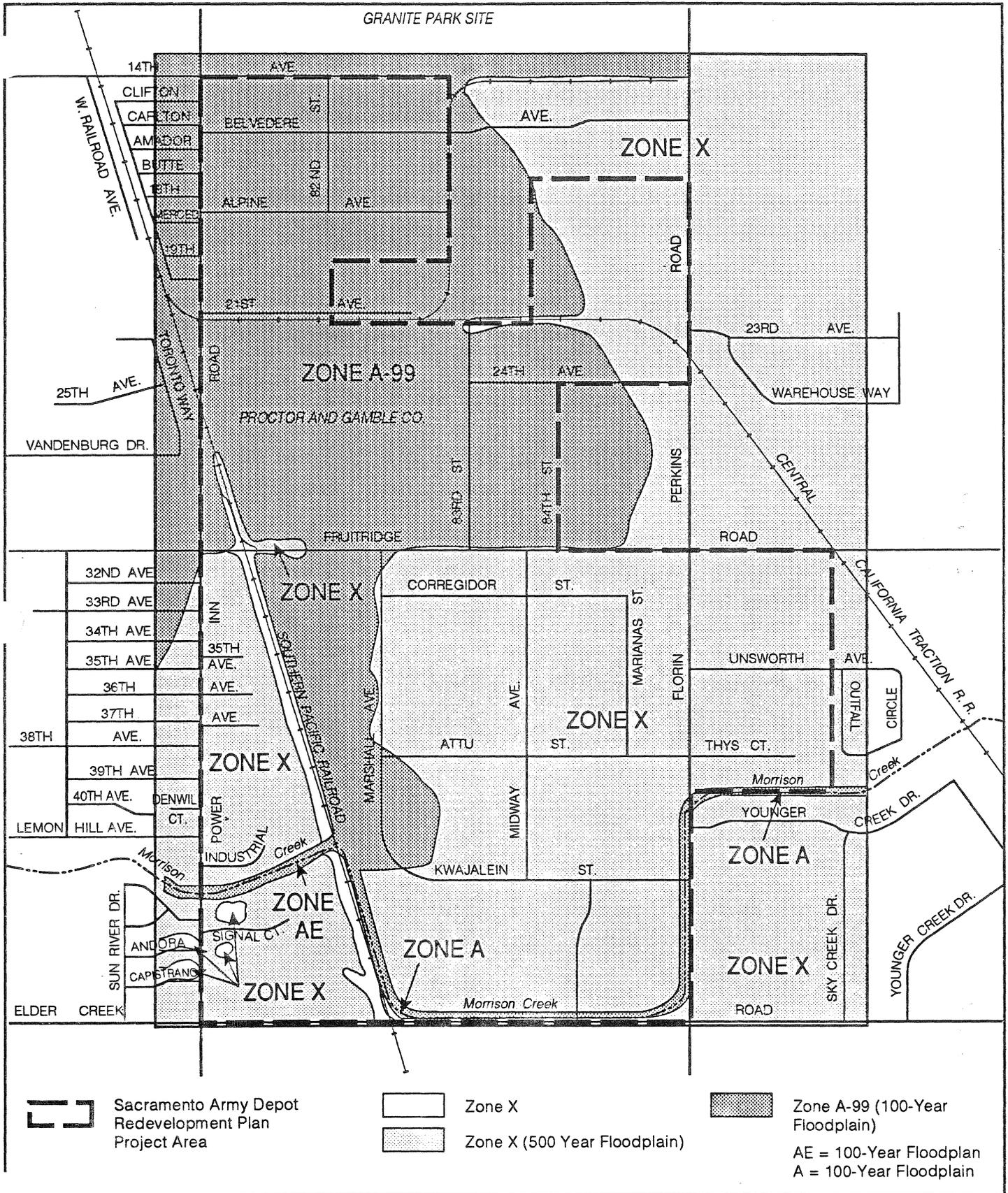
The detention basins might be dry in most years, or a permanent lake might be maintained from year to year. The aqueduct would convey all flows up to a specified design storm event. The area required for detention could be in the range of 400 to 800 acres.

The draft Drainage Master Plan, including a recommended alternative, is being coordinated with aggregate mining applications, and is currently undergoing environmental review.

Flood Hazard

Potential flood hazards within the Project Area include: (1) regionally-generated flooding from a Sacramento/American River levee system failure, and (2) localized flooding due to undersized or ineffective storm drainage systems.

The physical risk of flooding due to a Sacramento/American River levee failure would continue to exist without reoperation of the Folsom Dam and Reservoir, or the provision of other upstream storage. The Federal Emergency Management Agency's (FEMA) designated 100-year floodplain areas (A99 zones) shown in Figure 4.7-2 are zones that would be subject to such regionally-generated floodwaters. Although the current voluntary reoperation of Folsom Dam and Reservoir is expected to continue, FEMA floodplain designations (and therefore all development policies and insurance rates stemming from them) may not be altered until some time after formal approval of the reoperation by the US Bureau of Reclamation (Devereux, 1993).



Source: Michael Brandman Associates 1995

100-Year Floodplain

FIGURE 4.7-2

Localized flooding has previously occurred in certain areas along Morrison Creek during high-intensity storms (e.g., February 1986, January 1990, January 1995), and could occur during large storm events in the future given existing drainage facilities. Although the regional flood control strategies and improvements will provide flood protection from potential levee-failure scenarios, they will not address localized flood hazards. As noted above, the City of Sacramento is conducting an infrastructure improvement study to determine the existing capacity in various storm drainage basins and develop a priority list for the master planning of storm drainage improvements for the future.

The 1986 floods inundated the southern part of the Sacramento Army Depot. Flood scenarios used by FEMA combined levee breaches with heavy rains, which resulted in portions of the Project Area being included in the 100-year flood plain. The majority of the Project Area is designated as Zone X. Zone X is defined as an area; (1) subject to the 500-year flood, (2) an area of the 100-year flood with average depths of less than one foot or with drainage areas less than one mile square and/or (3) an area protected by levees from the 100-year flood. The Sacramento Army Depot also contains areas designated as Zones A and A-99 (100-year floodplain), which are described below.

Flood Plain Regulations

In late 1988, FEMA was in the process of revising the 1986 FIRMS based on data collected by the Corps following the record storm of February 1986. This new data indicated that the levees along the Sacramento River did not meet FEMA criteria for stability and the flood control system along the American River and its tributaries provided less than the minimum 100-year level of protection required under the National Flood Insurance Program. Based on this new data, FEMA prepared new FIRMS delineating a 100-year flood plain that encompassed much of the City of Sacramento, with flooding in the affected areas ranging from one to 25 feet in depth.

Because of the perception that promulgation of these new FIRMS would have a severe impact on the local economy and would undermine Sacramento's ability to mount an effective flood protection effort, the local community, through its representatives in Congress, sought legislative relief from the FEMA mapping process. In response, Congress enacted special legislation directing FEMA to regulate the Sacramento area based on the flood elevations shown on the then-effective 1986 FIRMS. This legislation was enacted in October 1988 for a period not to exceed four years.

FEMA's response to this legislation was to issue new FIRMS showing the boundaries of the new 100-year flood plain designated as a "special use" A99 Zone. This zone designation is normally reserved for flood-prone areas that meet the "adequate progress" requirements of Section 1307(e) of the National Flood Insurance Act. The "A" portion of this zone designation indicates that the area is within the 100-year flood plain. The "99" portion indicates that the area is making adequate progress toward the achievement of a 100-year level of protection, and may therefore be relieved from the need to elevate new structures above the water level that would be reached in the event of a 100-year storm (base flood

elevation). This "99" designation thus removes the need to show base flood elevations, and none are shown in the A99 Zone.

In 1993, however, Congress denied authorization for both construction of the Auburn Dam and the interim re-operation of Folsom Reservoir. FEMA then notified the City that adequate progress had not been made toward carrying out a plan to reduce the increased flood risk, which was the basis for the A99 zone designation. On November 9, 1992, FEMA issued preliminary revised FIRMs covering the Sacramento area with new "AR" designation, discussed below. The new FIRMs are intended to reflect the actual risk and depth of flooding from a 100-year storm event. These new maps show that some areas, designated previously as protected from a 100-year storm by a flood protection system under construction on the 1989 FIRMs, are no longer protected. The new maps show a designation for areas that are subject to flooding including flood elevations. However, these new maps have not been adopted, thus the A99 designations are currently still in effect.

Designated A99 zones in the City of Sacramento are not subject to FEMA building requirements for development in the 100-year flood plain, such as those required for areas designated A Zones. In order to assure proper flood plain management within the designated A99 zones, the City was required to develop a land use policy for those areas designated as A99 in compliance with the Special Legislation for the Sacramento area contained in the McKinney Homeless Assistance Act of 1988 (Human Resources Code 524).

City of Sacramento Flood Control Policy

Under applicable provisions of the Sacramento City Code, new development in a designated A99 Zone is permitted provided building permit applicants, by agreement with the City, assume the risk of all flood-related damage to any permitted new construction, and agree to notify subsequent purchasers of the flood risk. Ordinance 90-005 amended Articles XXVI and XXVII of Chapter 9 of the Sacramento City Code relating to new construction in areas of the 100-year floodplain refer to the notice and waiver requirements for those places within the Project Area located within the A99 Zone. The Ordinance also reaffirms the City's commitment to not designate any increases in urbanized areas of the 100-year floodplain beyond lands already so designated in the General Plan.

AR Zone Legislation

When Congress failed to authorize the American River Flood Control Project, it instead enacted legislation as part of the 1992 Defense Appropriation Act (DOD legislation) which directs the Corp to continue to studying long term options available to the community, and to proceed with the levee improvement work needed around the Natomas Basin. Congress also adopted legislation which created a new "AR" flood zone designation which applies to Sacramento and other similar areas, whose certified 100-year or greater flood protection system has been decertified as a result of new hydraulic or other data.

As noted earlier, FEMA has issued preliminary revised FIRMs covering the Sacramento area that include the AR zone. The AR zone delineates the new 100-year flood plain and establishes the flood insurance and development regulations that apply within this zone. Qualifying communities may use the AR zone designation provided they apply to FEMA and demonstrate that their flood protection system will be restored within a specified time period based on a plan acceptable to FEMA.

Under legislation, flood insurance in the AR zones is mandatory. Existing flood insurance rates in communities deemed eligible for AR zone status as of January 1, 1992 are frozen until such time as FEMA promulgates new rules specifically applicable to the AR zone. At that time, residents who have effective policies will be allowed to maintain them at current rates, while residents who do not have effective policies, or who subsequently allow their policies to lapse, may be required to obtain new policies at roughly double the existing rate.

FEMA may require that new structures be elevated up to three feet above existing grade in areas where the base flood elevations do not exceed five feet, where the new construction occurs on an infill site, qualifies as rehabilitation of an existing structure, or constitutes redevelopment of a previously developed area. However, the legislation prohibits FEMA from requiring these new elevations for improvements to existing structures. The legislation imposes no limits on FEMA in promulgating flood plain management criteria for areas where the base flood elevation exceeds five feet and the new construction does not meet any of the above criteria.

FEMA A Zones (except A99)

FEMA requirements for residential development in a designated A Zone include raising the first floor to or above the base flood elevation (100-year). Requirements for nonresidential structures include the following:

- elevate the lowest floor (including the basement) to or above the base flood level; or
- together with attendant utility and sanitary facilities, design so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
- require that fully enclosed areas below the lowest floor that are subject to flooding be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

WATER QUALITY

Surface Water

The City relies on surface water for its water supply. Conversion of land from agricultural use to urban land use within the SGPU area has had an effect upon surface water quality. Cessation of the application of agricultural herbicides, pesticides, and fertilizers improves the quality of irrigation and natural runoff draining these agricultural lands. Yet, urbanization within the SGPU area degrades surface water quality. This degradation results both from construction activities in the short-term and from urban occupancy in the long term. Grading and construction result in increased erosion and increased transportation of sediment into streams. Certain construction activities can result in transportation of pollutants from construction areas to nearby surface water bodies. The degree of construction related impacts to surface water quality is dependant upon the timing of various construction activities. Construction during the rainy season (October-April) maximizes sediment and other pollutant levels that could degrade water quality. The short-term effect that construction has upon water quality is also dependent upon the implementation of proper disposal practices. Long-term impacts to surface water and groundwater quality occur as a result of industrial, community, and residential development.

Urban Runoff

A number of studies have been conducted as part of the Nationwide Urban Runoff Program (NURP) to characterize urban runoff quality. Heavy metals were observed to be the most prevalent priority pollutant constituents. Concentrations in urban runoff were found to exceed EPA ambient water quality criteria and drinking water standards in many cases. Organic priority pollutants were also identified, but at a lower frequency and at lower concentrations than the heavy metals.

Constituents found in urban runoff vary during a storm event, from event to event at a given site, and from site to site within a given area. Variances can be the result of differences in rainfall intensity and occurrence, geographic features, the land use of a site, and vehicle traffic.

There are varied concentrations of pollutants carried in urban runoff. The pollutant concentration of urban runoff is typically highest during the first major rainfall event after the dry season. This event is known as the "first flush". The "first flush" can carry a variety of accumulated pollutants. Oil, grease, heavy metals, sediment, pesticide residues, and fecal coliform bacteria from roadways, parking lots, rooftops, and other surfaces are the primary pollutants in urban runoff. Runoff is most commonly deposited into waterways next to paved surfaces. Pollutant concentrations in urban runoff are extremely variable and are dependent upon storm intensity, land use, elapsed time since the previous storm, and the volume of runoff.

Sacramento River Quality

The Sacramento River is classified as having numerous beneficial uses, including municipal and agricultural water supply, recreation and fisheries. The river system, as a whole, is the largest and most important freshwater habitat in the State, supporting many fish species. Water quality within the river is classified as "good" to "impaired" in the reach from Red Bluff to the Delta. Upstream water management and use can affect the quality of water in the river. Regulation of stream flow by federal and state flood control and storage facilities reduces high water flows and increases summer and fall flows, substantially lessening water quality variations. Extensive irrigated agriculture along the Sacramento River tends to contribute to degraded river water quality. During the spring and fall, irrigation return flows are discharged to drainage canals that flow into the river; during the winter, local runoff also flows over agricultural lands, increasing the turbidity in the water and introducing herbicides and pesticides (City of West Sacramento, GP DEIR, 1990). Water quality in the numerous streams and drainage tributary to the River (including Morrison Creek) is primarily based on surrounding land use. Urban runoff can also have a major effect on the river's water quality.

Samples taken at the City of Sacramento water intake indicate that river water in the vicinity of the intake has very low concentrations of total dissolved solids and has dissolved concentrations of heavy metals below laboratory analytical detection limits. The River has historically been highly turbid and naturally carries high sediment loads. During peak regional storm events, the river's total sediment load can increase by several times its average levels (SGPU DEIR, 1986).

Morrison Creek Water Quality

Water quality in Morrison Creek is influenced by the surrounding land uses. For example, in areas where residents and rural uses are adjacent to the stream, runoff carry loads of nutrients such as fertilizers, pesticides, and sediments from landscaped agricultural irrigation. In more commercial areas, where the surrounding land uses would contain more parking lots and roadway areas, runoff to the stream would be characterized by oil, grease, and heavy metals. At the Sacramento Army Depot, runoff into Morrison Creek would be predominantly characterized by oil, grease, and heavy metals due to the roads and industrial operations. Runoff could also contain fertilizers and pesticides from landscaped areas.

4.7.3 REGULATIONS AND PERMITS

SURFACE WATER QUALITY REGULATIONS

The State of California Department of Water Resources has water quality standards that are required by Section 303 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. The Water Quality Control Plan, or Basin Plan, prepared by the Regional Water Quality Control Board has established water quality standards and objectives for the Sacramento River and its tributaries. These standards are in keeping with the State of California standards. In cases where the Basin Plan does not contain a standard for a

particular pollutant, other criteria are used to establish a standard. Other criteria may be applied from State Water Resources Control Board documents (e.g., the Inland Surface Waters Plan, and the Pollutant Policy Document) or from EPA water quality criteria developed under Section 304(a) of the Clean Water Act.

Inland Surface Water Quality Standards

The SWRCB has developed water quality objectives for inland surface waters (California Water Resources Control Board, 1991). Included among the provisions of these objectives are: (a) that all point and non-point discharges must comply with identified water quality objectives; and (b) that effluent limits are to be imposed, either through National Pollutant Discharge Elimination Permit System (NPDES) permits or Waste Discharge Requirements (WDRs), such that the water quality objectives shall not be exceeded in the receiving water outside a designated mixing zone.

Sacramento River Basin Water Quality Control Plan

As previously described, water quality objectives have been established for the Sacramento River (and its tributaries including Morrison Creek) which are contained in the 1991 Sacramento River Basin Plan prepared by the CVRWQCB in compliance with the federal CWA and the state Porter-Cologne Water Quality Control Act. The Basin Plan establishes water quality objectives, and implementation programs to meet stated objectives and to protect the beneficial uses of water in the Sacramento River Basin.

Table 4.7-1 lists the paraphrased water quality objectives adopted by the CVRWQCB in the Basin Plan (Central Valley Regional Water Quality Control Board, 1991). Specific objectives are not established for Morrison Creek, therefore, the objectives listed are those for the Sacramento River, the nearest downstream water body with specified objectives.

The 1991 Inland Surface Waters Plan (ISWP) established water quality objectives for priority pollutants which are more stringent than those water quality objectives in the Basin Plan. Therefore, the more stringent objectives are applied to discharges which contain priority pollutants.

EPA STORM WATER DISCHARGE PERMITTING REGULATIONS

As previously discussed, the Clean Water Act prohibits the discharge of pollutants to navigable waters from a point source unless authorized by a NPDES permit. With respect to pollutants in storm water discharges, the CWA currently only requires two sizes of municipalities, large (population 250,000 or above) and medium (population 100,000 to 250,000), certain industrial activities, and certain construction activities to obtain permit coverage. The EPA has not yet adopted regulations for small municipalities with populations of less than 100,000.

**TABLE 4.7-1
WATER QUALITY OBJECTIVES FOR MORRISON CREEK**

Constituent	Objective
Bacteria	Shall not exceed a geometric mean of 200/100ml
Biostimulatory	Less than concentrations that cause a Substances [nutrients] nuisance
Dissolved Oxygen	Greater than 7.0 mg/l (monthly median) from June 1 to November 15, greater than 5.0
Oil and Grease	Shall not cause a nuisance or otherwise adversely affect beneficial uses
PH	Shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5
Pesticides	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.
Sediment	Suspended sediment load shall not be altered in such a manner as to cause nuisance
Temperature	Shall not be increased more than 5 degrees F above ambient
Toxicity	Nontoxic
Turbidity	Permissible increase dependent on ambient level, not to exceed 10 NTUs where ambient is less than 100 NTUs
SOURCE:	Water Quality Objectives for Sacramento River, as adopted by Central Valley Regional Water Quality Control Board, 1991. (Specific objectives have not been established for Morrison Creek; however, because Morrison Creek is a tributary to the Sacramento River, the above objectives are applicable.)

The City of Sacramento has obtained a NPDES permit from the State Water Resources Control Board under the requirements of the Environmental Protection Agency and Section 402 of the Clean Water Act. The goal of this permit is to reduce pollutants found in urban stormwater runoff. The Federal Environmental Protection Agency (EPA) requires construction projects exceeding five acres to obtain an NPDES Stormwater Permit before commencing construction. The State of California has adopted a general permit that must be obtained by this project to satisfy the Federal EPA requirement. Therefore, no construction is allowed to begin until the state general permit is obtained by the developer. This general permit requires the permittee to employ "Best Management Practices" (BMP's) before, during, and after construction. The City has a list of BMP's necessary to accomplish the goals of this permit. The primary objective of the BMP's is to reduce nonpoint source pollution into waterways. These practices include structural and source control measures for residential and commercial areas, and BMP's for construction sites. Components of the BMP's include:

- Maintenance of structures and roads
- Flood control management
- Comprehensive development plans
- Grading, erosion and sediment control ordinances
- Inspection and enforcement procedures
- Educational programs for toxic material management
- Reduction of pesticide use
- Specific structural and non-structural control measures

BMPs are approved by the City's Department of Utilities before beginning construction (The BMP document is available from the Department of Utilities, Engineering Services Division, 5770 Freeport Boulevard, Suite 100, Sacramento, California).

California General Industrial Storm Water Permit

The SWRCB adopted a General Industrial Storm Water Permit which covers specific industries. The general permit requires industrial dischargers to (1) eliminate illicit discharges of storm water to storm water system, (2) develop and implement a storm water pollution prevention plan (SWPPP), and (3) perform monitoring of discharges to storm water systems. The SWPPP should include (1) source identification, (2) practices to reduce pollutants, (3) an assessment of potential pollution sources, (4) a materials inventory, (5) a preventive maintenance program, (6) spill prevention and response procedures, (7) general storm water management practices, (8) employee training, (9) facility inspection, (10) record keeping, and (11) elimination of unpermitted non-storm water discharges to the industrial storm water system.

California General Construction Activity Storm Water Permit

As of October 1, 1992, general storm water discharge permits are required by the State for storm water discharges associated with construction activities involving the disturbance of five acres or more. Construction on sites less than five acres are required to obtain a permit if part of a larger development or land sale. Landowners are responsible for obtaining and complying with the permits, but may delegate duties associated with them to developers and contractors by mutual consent.

Permit applicants are required to prepare, and retain at the construction site, a SWPPP which includes a description of (1) the site, (2) erosion and sediment controls, (3) means of waste disposal, (4) implementation of approved local plans, (5) control of post-construction sediment and erosion control measures and maintenance responsibilities, and (6) non-storm water management controls. Dischargers are also required to inspect their construction sites before and after storms to identify storm water discharge associated with construction activity and to identify and implement controls where necessary.

The City conditions all construction activities which will disturb five acres or more of land. The project applicant must file a Notice of Intent for coverage and comply with requirements contained in the State General Construction Activity Storm Water Permit. All erosion, sediment and pollution control measures to be implemented must be approved by the City's Department of Utilities prior to the commencement of construction activities. In addition, staging of heavy equipment must be established so that spills of oil, grease or other petroleum by-products do not discharged into the stream course. All machinery must be properly maintained and cleaned to prevent spills.

City of Sacramento Construction Site Storm Water Controls

All grading activities associated with site development within the City of Sacramento are also required to follow the Grading Permit requirements defined in the City's Grading, Erosion and Sediment Control Ordinance (GESC)(Ord.93-068). The City GESC Ordinance defines the requirements for grading plans, erosion and sediment control plans, housekeeping practices as well as standards for cuts, fills, setbacks, drainage and terracing, and erosion control. These requirements ensure that development sites are graded such that new topography makes a smooth transition to existing adjacent topography. City Ordinance includes grading requirements that control excessive runoff during construction. Developers are required to carry out dust and soil erosion and sediment control measures before, during, and after the construction phase of development. Implementing accepted dust control practices, revegetating or covering exposed soils with straw or other materials, constructing ingress/egress roads and adopting measures to prevent construction vehicles from tracking mud onto adjacent roadways, covering trucks containing loose and dry soil, and providing interim drainage measures during the construction period are measures are intended to minimize soil erosion and fugitive dust emissions so that a less-than-significant impact upon water quality results from site development.

Post-construction BMPs as approved by the Department of Utilities for the long-term enhancement of stormwater runoff will be implemented for all activities in the Project Area. BMPs must be approved before construction may begin.

4.7.4 SADEIR CONCLUSIONS

The following impacts were determined to be less-than-significant in the Sacramento Army Depot Reuse Plan EIR, and have applicability to the remainder of the Redevelopment Project Area:

- ▶ **Flood Risks.** Approval of the proposed project could allow development within the 100-year flood plain. However, any new construction must be developed in compliance with the City of Sacramento Flood Control Policy for development within the 100-year flood plain (A99 Zone).
- ▶ **Water Quality - Construction:** Potential construction related activities for development of the proposed project would be performed in compliance with the City of

Sacramento Grading, Erosion and Sediment Control Ordinance, and would be required to file for a Notice of Intent for coverage with requirements contained in the State General Construction Activity Storm Water Permit. Because construction activities would be in compliance with the regulations outlined above, the effect on receiving waters is considered to be a less-than-significant impact.

- ▶ **Water Quality - Runoff:** The project site is registered as a general permittee under the Statewide General Industrial Activity Stormwater Discharge Permit (5A34S0061-10/23/92) under standard limitations for BMP's, monitoring and reporting requirements, as well as under limits (standards) for the Clean Water Act, 40 CFR for hazardous substances. Stormwater is discharged to Morrison Creek under an NPDES permit. The proposed project would be developed and operated in compliance with municipal NPDES regulations.

4.7.5 IMPACTS WITH THE PROPOSED REDEVELOPMENT PLAN

Significance Criteria

Flooding

According to CEQA, a project will have a significant hydrologic impact if it will "create a potential public health hazard . . .". Additionally, the Land Use Planning Policy Within the 100-year Storm Event Floodplain in the City and County of Sacramento Draft EIR states that "a significant impact would occur, if, as the result of the project, any deaths and/or property damage occurred during a 100-year storm event or lesser flood...". For the Land Use Planning EIR, the value of property was estimated and the percent of damage to structures was estimated. These estimations resulted in the establishment of the standard percent of structures damaged in the event of a 100-year storm event flood. The 100-year frequency is the nationally accepted threshold. For purposes of this EIR, a significant hydrologic impact is identified when the project, alternatives, or cumulative development would expose people to flood impacts resulting from less than 100-year storm events.

Water Quality

Redevelopment Plan activities and projects will have a significant impact on the environment if they result in a substantial degradation of water quality, or contamination of a public water supply. For the purposes of this EIR, impacts to water quality are considered significant if water quality objectives or beneficial uses as established by USEPA, the Water Resources Control Board and/or the Regional Water Quality Control Board are exceeded or impaired respectively.

Drainage

Drainage facilities serving the project area include the City's underground drainage system,

as well as surface creeks and tributaries that are utilized for transmitting surface drainage. The existing capacity of the drainage facilities serving the project area are exceeded during storm events. Therefore, any additional runoff flowing into the drainage facilities serving the project area is considered a significant drainage impact.

Impact Statements

Drainage - Increased Storm Runoff. Public activities and private development occurring as a result of Redevelopment Plan implementation could increase the area of impervious surfaces, which in turn could increase storm runoff peak flows and volumes. An increase in storm runoff volumes and peak flows generated by additional Project Area development could contribute to localized flooding hazards within the project area, and to downstream capacity problems, for both the City's local drainage system and the lower Morrison Creek and the Beach Lakes-Stone Lakes system.

Although precise land use changes on given parcels are not known at this time, it is probable that existing vacant parcels would be converted to urban uses and that some areas of existing residential or commercial/industrial use could be modified or converted in a manner that would increase the surface area covered by buildings, pavement, or other relatively impervious surfaces. However, it is important to note that such development would occur consistent with existing plans, policies, and ordinances, and that such development may or may not be directly associated with the proposed Redevelopment Plan.

In addition, if public activities or potential private development under the Project requires the placement of engineered fill for the purposes of raising base floor elevations for floodproofing or for mitigating soil constraints, the fill could displace runoff storage volume and could aggravate localized flooding problems. Rehabilitation of existing structures, or new development on parcels in areas currently designated by FEMA as floodprone, might use floodproofing measures that include the placement of engineered fill to raise base floor elevations. Potential engineering solution(s) for shrink-swell clays, shallow hardpans, low strength soils or other constraints also include the placement of engineered fill. If these technical practices were carried out, residual impacts on local floodwater storage could occur in an area with existing local drainage problems, and could adversely affect the depth and frequency of inundation on adjacent lands.

The City Public Works Department has the authority to require project-specific drainage plans that would typically include: on-site drainage features such as gravel infiltration beds, pervious landscaped areas, or detention/retention facilities. Any development in the Project Area, whether Agency-sponsored or not, would be required to implement drainage strategies as determined by the City in consultation with Sacramento - Yolo Mosquito and Vector Control District.

Development of the proposed project, including both future individual redevelopment projects and in conjunction with the urban development in the Morrison Creek watershed, would increase the amount of impervious surface, increasing the rate and amount of surface water

runoff entering the existing drainage system. *Increased surface water runoff could exceed existing drainage system capacity and contribute to localized flooding. This is considered to be a significant impact (4.7-1).*

Flood Risks. Public activities and private development stimulated by Redevelopment Plan implementation could increase the number of structures and persons at risk of flood hazards from regionally-generated flooding (levee break scenarios). Under present flood control conditions, the Project Area is theoretically protected from the 100-year flood, given the recent completion of the Sacramento Levee Stabilization project and the voluntary reoperation of Folsom Dam that is assumed to continue. Current voluntary reoperation of the Folsom Dam and Reservoir is expected to provide continuous flood protection until such time as a formal agreement is reached. Until the FEMA designations are changed, all areas within the City of Sacramento in the designated floodplain are subject to highly restrictive development policies and ordinances and higher insurance rates. *The City requires all new structures to be built above the existing 100-year base flood elevation (BFE). Where a structure is proposed for below the BFE, the developer is required to sign a new construction agreement, thus flood risks are considered to be less-than-significant (4.7-2).*

Water Quality - Runoff. Redevelopment activities and development encouraged by redevelopment would include the construction of roadways and structures which would involve grading, excavation or other construction-related activities which could cause soil erosion at an accelerated rate during storm events. As previously described, sediment from erosion can have long and short-term effects on water quality in affected streams including increased municipal/industrial water treatment costs for turbidity removal, adverse impacts on fish and wildlife habitat, impaired recreation and aesthetic values, reduced water pump life due to abrasion, and increased flooding hazard due to reduced channel capacity. Other potential sources for water quality degradation during construction activities is the use of heavy machinery and other construction equipment which can increase the amounts of heavy metals, oil, grease, and other petroleum hydrocarbons in receiving waters.

Construction activities which disturb more than five acres of land are required to obtain, and comply with the State General Construction Activity Storm Water Permit. As described in the setting discussion, compliance with the Permit would require the implementation of BMPs. Furthermore, all grading activities would also be required to follow the City Grading Permit requirements. *Because activities resulting from redevelopment plan implementation would be developed and operated in compliance with municipal NPDES regulations, the impact to receiving waters is considered to be less-than-significant (4.7-3).*

Water Quality - Surface Runoff (Cumulative). Public activities and private development occurring as a result of Redevelopment Plan implementation could increase storm runoff peak flows and volumes, altering the existing receiving water quality. The primary sources of storm water pollution includes roadways, automobiles, landscaping, industrial activities, non-storm water connections to the drainage system, accidental spills and illegal dumping. Runoff from roadway and parking lots could contain levels of oil, grease, and heavy metals.

Runoff from landscaped areas could contain concentrations of nutrients, i.e. fertilizers and pesticides. Concentrations of contaminants in runoff, particularly heavy metals, commonly exceed the water quality objectives set in the ISWP and the Sacramento River Basin Plan. Depending on the ambient water quality within a water body, there may be insufficient dilution available to reduce concentrations to acceptable levels.

The proposed project in combination with other development in the South Sacramento area would increase the amount of impervious surface. The associated increase in surface runoff would most likely contain heavy metals, oil, grease, petroleum by-products, and nutrients at levels which exceed existing conditions, and adversely affect water quality in Morrison Creek.

As discussed in the setting section, the City of Sacramento has obtained a NPDES permit. The goal of this permit is to reduce pollutants found in urban stormwater runoff. The NPDES permit requires the use of "Best Management Practices" (BMP's). The City has a list of BMP's necessary to accomplish the goals of this permit, as discussed in the setting section. The primary objective of the BMP's is to reduce non-point source pollution into waterways. These practices include structural and source control measures for residential and commercial areas, and BMP's for construction sites. *However, these BMPs do not address all projects, nor do they address all runoff from on-going operations. Thus, cumulative impacts to receiving waters due to urban development are considered to be significant (4.7-4).*

4.7.6 MITIGATION MEASURES

The numbering shown below corresponds to the impacts identified in the preceding discussion.

Less-than-significant impacts would occur with the proposed project in the areas noted below and no mitigation measures are provided.

4.7-2 Flood risks

4.7-3 Water quality - surface runoff

Mitigation measures are provided below for *significant, or potentially significant* impacts related to increased stormwater runoff and cumulative water quality impacts.

- 4.7-1 (1) The City of Sacramento shall review each development application within the Project Area for effects on drainage facility capacity. Each project reviewed shall identify the rate and amount of surface water runoff generated by proposed development and the effects on drainage facility capacity. Modifications to existing facilities and new facilities to regulate rate and volume of runoff released to Morrison Creek shall be identified, and each project shall pay a fair share portion of any improvement identified. Drainage facilities could include, but would not be limited to:

- (a) The expansion or modification of existing storm drain facilities;
 - (b) Single-project detention basins; or
 - (c) The preservation of natural drainage areas.
- (2) The City of Sacramento shall continue to coordinate with the United States Army Corps of Engineers and the County of Sacramento to assess the level of flood protection provided by the Morrison Creek Flood Control System.
- (3) The City of Sacramento shall participate in the development of alternatives to increase the capacity of the Morrison Creek Flood Control System to accommodate existing flows, and flows which would result from future development. These alternatives may include, but are not limited to, the following:
- a) raising levees,
 - b) channel widening,
 - c) floodwalls; and
 - d) detention basins.

4.7-4 The Redevelopment Agency shall require that each redevelopment project include as part of the project design Best Management Practices, approved by the City's Utilities Department and in compliance with the City's NPDES permit, which mitigate for urban contaminants in storm water runoff.

4.7.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the above mitigation measures, impacts to hydrology and water quality would be reduced to less-than-significant levels.

4.8 PUBLIC SERVICES

4.8.1 INTRODUCTION

This section evaluates the provision of public facilities and services available for implementation of the Sacramento Army Depot Redevelopment Plan. For this analysis, public facilities and services are assumed to include police and fire protection, schools, water supply, wastewater conveyance and treatment, solid waste, natural gas, and electricity. The analysis in this section is based on existing documentation, including the Sacramento Army Depot Reuse Plan EIR, and personal communications with City of Sacramento staff.

4.8.2 SETTING

FIRE PROTECTION SERVICES

The Sacramento City Fire Department provides fire protection and emergency medical services to the Project Area (Brocchini and Klembeck 1995). The Fire Department consists of a total of 444 sworn officers and 26 civilians, and a total of 66 pieces of specialized equipment, such as aerial platforms, aerial ladder trucks, and multi-purpose Hazardous Material Units. The Department's 23 fire stations serve an area of 142.5 square miles and 432,403 people. Every fire station is equipped with an engine. Ten of the City's fire stations contain a truck company in addition to an engine. A four person team, consisting of one captain, one driver, and two firefighters is assigned to each engine and truck.

The Fire Department is constantly purchasing new equipment as well as hiring new firefighters. Currently, the ratio is 1.0 firefighters per 1,000 population.

Average response time for emergency calls is 4.2 minutes (Klembeck, 1995). The Fire Department's goal is to maintain response times of 3 or 4 minutes throughout the service area.

The Fire Department uses population size, square footage of structures, frequency of calls requiring a response time and distance to determine its needs. Time and distance are considered the most important factors because effectiveness in saving lives and property is dependent upon the response time being less than four minutes (Duncan, 1993).

Fire protection services for the Project Area are provided by the City of Sacramento Fire Department, Fruitridge District (SFD). Primary response for the Project Area is shared by five fire stations in the vicinity. Table 4.8-1 provides the station names, locations, equipment and staffing, and distances and response times from the stations to the Project Area. These facilities and response times are considered adequate by the SFD.

**TABLE 4.8-1
FIRE STATIONS SERVING THE PROJECT AREA**

Station Name and Location	Minimum Staffing	Basic Equipment	<i>Distance from Project Area Border Estimated Response Time to Border/1/</i>
Station 9 5801 Florin-Perkins Road	4 full-time firefighter s	pumper engine /3/ ladder truck	<i>3 miles 3-7 minutes</i>
Station 10 5642 - 66th Street	4 full-time firefighter s	pumper engine /3/ water wagon /4/ Ambulance /5/	<i>1 mile 2 minutes</i>
Station 21 3301 Julliard Drive	4 full-time firefighter s	pumper engine /3/ water wagon /4/	<i>3 miles 4 minutes</i>
Station 8 5990 H Street	4 full-time firefighter s	pumper engine /3/ ladder truck, rescue truck	<i>5 miles 6 minutes</i>
Station 6 3301 Martin L.K.	8 full-time firefighter s /2/	pumper engine /3/ ladder truck, rescue truck, ambulance /5/ hazmat /5/ Equipment /2/ water wagon/4/	<i>7-8 miles 6 minutes</i>

/1/ Distances are approximate, based on shortest feasible route to the border of the Project Area. Response times are estimated and depend on ongoing calls, availability of station personnel, road and traffic conditions, and other variables. Response times and distances to locations inside the Project Area boundaries would be slightly greater than shown.

/2/ Consisting of a four-member firefighting team and a four-member hazardous materials (Hazmat) team. The Hazmat team provides hazardous material response and standard firefighting duties.

3/ A pumper engine is a heavy duty fire truck which includes a 1,250-gallon-per-minute pump and 750-gallon water tank.

/4/ A water wagon has a small pump and a 500 gallon tank.

/5/ Beginning March 1, 1995

SOURCE: City of Sacramento Fire Department, 1995.

The City of Sacramento owns and maintains a municipal fire alarm system that runs through the Project Area. The fire alarm system operates from electrical wires and cables supported by a combination of SMUD, Pacific Bell and City-owned utility poles (Brocchini, 1995).

Water required for fire suppression in the Project Area is supplied by fire hydrants connected to local water mains throughout the Area. Additional water is carried by the fire equipment responding to the fire. The existing water supply for fire protection services in the Project Area is currently very good (Brocchini, 1995).

In addition to fire protection service, the SFD provides emergency medical treatment in the City. The SFD provides this service to the Project Area north of 47th Avenue. All field personnel of the City SFD are trained in the provision of "First Responder" emergency medical treatment. Backup paramedic medical treatment, supplied by a private ambulance service under contract to the City, is provided to meet the City's emergency medical needs. Beginning March 1, the SFD will be providing paramedic medical treatment.

The SCFD also has equipment designed to fight multi-story buildings, including a 150-foot aerial ladder used for high rises. Buildings over 150 feet are required to construct rooftop helicopter pads (50 feet by 50 landing pad with 100 feet of clear space on all sides) so that emergency equipment can be flown in to access stories above 150-foot level. Buildings over 75 feet must also conform to the State of California Highrise Code regarding such items as sprinkler systems. The Uniform Fire Code is the basis for many of the standard fire safety requirements for all proposed developments. As is the case with the Sacramento Police Department, the Sacramento Fire Department participates in the environmental review process by reviewing project design and recommending design features or other measures that reduce the potential for fire safety problems.

POLICE PROTECTION SERVICES

Police protection services within the City of Sacramento are furnished by the City of Sacramento Police Department. The Police Department maintains three stations. The Central Station is downtown at 6th and I Streets, and the second station is at 29th Avenue and Franklin Boulevard (the Joseph E. Rooney Police Facility). Operations for the area north of Highway 50 are deployed from the William Kinney Police Facility at 3550 Marysville Boulevard. The Department has an authorized strength of 585 sworn officers. Additional officers are paid for by other entities such as the Sacramento Housing and Redevelopment Agency for dedicated areas. The Department has 366 non-sworn staff for support and administrative functions. The current authorized strength represents a decrease of officers from the high strength of previous years. Declines in the authorized strength are attributed to reduced funding for the Department (Heenan, 1995).

At the present time, the ratio of police officers is 1.5 officers for every 1,000 population. This is less than the target ratio of 2 officers per 1,000 population prescribed by federal statistics for other cities and counties within the nation. The combined effects of growth in

population and budget deficiencies causing cutbacks in police staffing have resulted in the ratio dropping.

The Police Department has divided the City into four geographic sectors in order to provide protective services. The Police Department changes the size of the districts within the four sectors approximately every 2 years to reflect population growth, crime, and other factors which require boundary adjustment. Each sector is divided into separate patrol districts with a sergeant overseeing law enforcement activities. Every patrol district is assigned a squad car with one or more officers. In addition, officers on bicycles are also used in some areas.

The staffing level maintained by the Police Department at any particular time of day is determined based on historical information. The frequency of calls for a given portion of the day is the basis used for assigning officers. The highest level of calls have historically occurred during 9:30 p.m. to 3 a.m. Therefore, during this period, the most officers are on duty. From 3 a.m. to 7 a.m., the number of calls has been historically low. As a result, the least number of officers are on duty during this time period. From 7 a.m. to 9:30 p.m., the number of calls gradually increases and the number of officers on duty gradually builds up to the maximum level once more.

The Police Department offers a comprehensive range of protective services such as patrol, suppression, traffic enforcement and investigation, including a variety of specialized programs such as a Special Weapons Assault Team (SWAT), Explosive Ordinance Disposal (EOD or bomb disposal), and the Special Crime Prevention/Suppression program. In addition to these programs, the Department takes an active role in crime prevention through the Crime Prevention through Environmental Design program. This program requires new development to coordinate with the Community Resources Division of the Police Department to facilitate public safety through appropriate design of new residential and commercial developments.

Police service for the Project Area is provided by the Sacramento Police Department's Joseph P. Rooney Police Facility, located on Franklin Boulevard near Fruitridge Road. All officers patrolling the Project Area are based at the facility, which also serves as the Police Department's regional operation center for the southern portion of the City (the area south of Highway 50). The Police Department headquarters, at 7th and I Streets in Downtown Sacramento, serves as the operation center for all other portions of the City.

The Project Area is within Patrol District 35. The most common crime problems in this area are commercial burglaries and robberies, traffic congestion and traffic hazards. Estimated emergency response time within Patrol District 35 is two to seven minutes for a Priority 1 response request, depending on other pending response requests; the importance of the calls relative to any pending calls; and road conditions. This response time is considered adequate by the Police Department (Heenan, 1995).

SCHOOLS

Public Schools (K-12)

The Sacramento City Unified School District (SCUSD) and Elk Grove Unified School District (EGUSD) provide kindergarten through twelfth grade educational services in the Project Area. The SCUSD serves most of the Project Area, while EGUSD serves the small area located east of Florin-Perkins Road.

SCUSD operates 40 K-6 schools, ten 7-8 middle schools, five high schools, and two continuation schools. The latest enrollment figures available for the District show 49,669 students in grades K-12 as of October, 1994. The capacity for the District, including modulars, is reported to be 54,000 students. Thus, the District can accommodate approximately 4,331 more students before it reaches capacity (S. Norwood, 1995).

EGUSD operates 27 K-6 schools (including two schools that will open in the fall of 1995), 5 middle schools, including one that will open in the fall of 1997), 5 high schools (including one that will open in the fall of 1997), and 4 continuation schools. The latest enrollment figures show 33,928 students in grades K-12 as of October 12, 1994. The capacity for the district is reported to be 34,295 students. Thus, the District can accommodate only 367 more students before it reaches capacity (Pendleton, 1995).

According to a study prepared for the SCUSD, all schools in the District currently operate at, or over designed capacity (Public Economics, 1993, and Rodriguez, 1993). EGUSD also operates over capacity. Current capacities, enrollments, and addresses for all schools are provided in Table 4.8-2 (Norwood, Pendleton 1995). Although Table 4.8-2 shows current enrollments below capacities for each school listed, most schools in the Project Area use interim modular classrooms (portables). While the portables temporarily create adequate classroom capacity, the additional students utilizing the classroom space tend to overburden the original design capabilities of most other facilities and infrastructure at the school (i.e., inadequate food service, lunch room, general events, bathroom, and recreational space and facilities, etc.). Therefore, even with adequate current classroom capacities, most schools in the Project Area have exceeded their designed capacities.

The District's standards for school facilities require that temporary classrooms be replaced with permanent rooms when funds are available. Other support facilities such as restrooms and cafeterias must be provided. However, a statewide funding shortfall hinders the ability of local school districts to construct new facilities. With these considerations, schools within South Sacramento, the area encompassing the Project Area, are considered to be extremely crowded, especially elementary schools (Rodriguez, 1993).

There are five elementary schools serving the Project Area and two middle schools. Although there are no high schools directly within the Project Area, there are three high schools in the vicinity that serve Project Area students.

TABLE 4.8.2
CAPACITIES AND ENROLLMENTS OF PUBLIC SCHOOLS SERVING
THE PROJECT AREA

School/Education Level	Permanent Facility Capacity	Current Enrollment /1/	Capacity with Modulares /2/
Elementary School (K-6)			
Florin Elementary 7300 Lara Drive	633	641	--
Samuel Kennedy Elementary 7037 Briggs Drive	804	923	--
David Reese Elementary 7600 Lindale Drive	784	1,023	--
Sierra Enterprise Elementary 5501 Hedge Avenue	469	630	--
Joseph Bonnheim Elementary /3/ 7300 Marin Avenue	269	593	639
Total Elementary	4,060	5,503	
Middle Schools (7-8)			
Will C. Wood /3/ 6201 Lemon Hill Avenue	1,044	1,134	1,209
James C. Rutter 7350 Palmerhouse Drive	1,284	1,618	--
Total Middle	2,328	2,752	
Florin High School 7956 Cottonwood Lane	1,622	2,433	--
Senior High Schools (9-12)			
Hiram Johnson /3/ 6879 14th Avenue	1,833	2,135	2,688
Total Senior High	3,605	4,825	

/1/ As of October 28, 1994 for SCUSD and October 12, 1994 for EGUSD.

/2/ Although this table shows current enrollments below capacities for each school listed, most schools in the Project Area use interim modular classrooms (portables). While the portables temporarily create adequate classroom capacity, the additional students utilizing the classroom space tend to overburden the original design capabilities of most other facilities and infrastructure at the school (i.e., inadequate food service, lunch room, general events, bathroom, and recreational space and facilities, etc.). Therefore, even with adequate current classroom capacities using modulares, most schools in the Project Area have exceeded their designated capacities.

/3/ SCUSD - all other schools listed are within the EGUSD.

SOURCE: Sacramento City Unified School District, January 26, 1995. Elk Grove Unified School District Accounting Department, January 26, 1995.

The Districts have been collecting school impact fees from the builders of new residential, commercial and industrial buildings within the boundaries of each District. These fees are \$1.71 (SCUSD) and \$2.95 (EGUSD) per square foot for residential dwellings and \$0.28 per square foot for commercial and industrial buildings in both districts, and have been authorized by the State of California for the construction of new or temporary school facilities. With the current impact fee structure providing only approximately 25-50 percent of the funds necessary to construct needed permanent and temporary school facilities, the impact fee structure does not meet District needs. For this reason, the Districts are investigating other methods of financing new facilities, including the establishment of Community Facilities Districts as authorized under Mello-Roos legislation¹ (Public Economics, Inc., 1993; Berg, 1993).

City General Plan Policies for Schools

The policies and implementation measures outlined below are contained in the City's General Plan (1988). These policies are expected to be sufficient to provide adequate school facilities to accommodate General Plan growth.

Goal A Continue to assist school districts in providing quality education facilities that will accommodate projected student enrollment growth.

Policy 1 Assist school districts with school financing plans and methods to provide permanent schools in existing and newly developing areas in the City.

Policy 2 Involve school districts in the early stages of the land use planning process for the future growth of the City.

Policy 3 Designate school sites on the General Plan and applicable specific plans of the City to accommodate school district needs.

Policy 5 Continue to assist in reserving school sites based on each district's criteria, and upon the City's additional locational criteria as follows:

Locate elementary schools on sites that are safely and conveniently accessible, and free from heavy traffic, excessive noise and incompatible land uses.

Locate schools beyond the elementary level adjacent to major streets. Streets that serve as existing or planned transit corridors should be considered priority locations.

Locate all school sites centrally with respect to their planned attendance areas.

¹ A Community Facilities District is a special financing entity through which local government is empowered to levy special taxes and issue bonds.

COMMUNITY COLLEGES

The Los Rios Community College District provides post-secondary educational services for the Project Area. The closest community college campus is Sacramento City College at 3835 Freeport Boulevard (at Sutterville Road), which is two miles northwest of the Project Area. Classes are also held at the Sacramento Executive Airport on 24th Street, two miles west of the Project Area (Diamond, 1995).

During the 1993-1994 school year, the District had an enrollment of 33,740 full-time equivalent students (FTES). Based on a Department of Finance estimate of the District population and average population per household, the current enrollment level equates to 0.079 students per household (Diamond, 1995). Required new building square footage per full-time student has been calculated using the District relationship between FTES and "assignable square feet" (ASF) of building space in the district. An assignable square foot is generally defined as building space usable to directly provide service for which it was constructed. For the District, the current relationship is 50 ASF per FTES (Public Economics, Inc., 1993).

SOLID WASTE

City Collection

The Solid Waste Division of the Sacramento Public Works Department collects most of the solid waste in the project vicinity and disposes of it in the County landfill at Keifer Boulevard. By City ordinance, all putrescible (spoilable) solid waste must be picked up by City collectors. Private rubbish collectors are also licensed to collect nonputrescible wastes (dry goods and construction waste) in the North Sacramento Area.

As the City landfill at 28th and A Streets has recently reached capacity, all solid waste collected in the City is now hauled to the County landfill at Keifer Boulevard.

County Landfill

The annual capacity of the County's Keifer Boulevard Facility (landfill) is 1,000,000 tons per year. Recently, the discovery of wetlands and endangered species at the County landfill site has impacted estimates of remaining capacity and life span. The County landfill had an estimated life span of 25 to 30 years before wetlands were discovered. The estimated life span is now 5-7 years due to approximately 350 acres having been removed from the total landfill size to avoid destroying wetlands. This projected life span is based upon the generation of 1,000,000 tons of solid waste per year, and does consider the addition of the City's solid waste production.

The County of Sacramento Public Works Department is proceeding with acquiring another 430-acre site next to the County landfill. Use of this acreage would result in a total of 730

acres and would prolong the landfill life span of the landfill to 25 to 30 years. Before any additional acreage can be used as landfill, a new operating permit must be submitted and approved by the Regional Water Quality Control Board and the State Integrated Waste Management Board. This permit process is estimated to take more than one year. It is anticipated that interim recycling efforts will reduce the amount of waste disposed of at the County's landfill.

Regulatory Provisions

The California Integrated Waste Management Act of 1989 (AB 939) mandates that cities develop source reduction and recycling plans. It is the goal of this plan for cities to divert 25 percent of the waste stream from going to landfills by 1996, and to divert 50 percent of the waste stream from going to landfills by the year 2000.

In compliance with AB 939, the City of Sacramento's Comprehensive Zoning Ordinance has provisions pertaining to solid waste recycling. In 1991, an amendment was added (Section 34) to the Zoning Ordinance to address recycling and solid waste disposal requirements for new and existing developments. The ordinance requires that all commercial, office, industrial, public/quasi-public, and 5-unit or more multiple family residential developments prepare a recycling program before issuance of a building permit. The recycling program must include a flow chart depicting the routing of recycled materials, and a site plan specifying the location and design components and storage locations associated with recycling efforts. A construction plan to specify the recyclable materials being used in the construction of the proposed structures, a demolition plan specifying the proposed recycling of reusable or recyclable building materials in the demolition of any existing structures, and an educational program about recycling are items that are part of the required recycling program.

Solid waste generated by new development can affect existing operations by decreasing the useful life of existing landfills, or not conforming to local recycling and source reduction goals required by AB 939. The City of Sacramento Solid Waste Division considers a project to have a significant impact when it is estimated to produce more than 500 tons of solid waste annually.

WATER SERVICE

The City of Sacramento provides water service to the Project Area. The City has water rights to 326,800 acre-feet of water per year (AFY) from the Sacramento and American rivers. Of this, the Sacramento Municipal Utility District (SMUD) has rights to 15,000 AFY. Therefore, the City's available surface water supply is 311,800 AFY. Approximately 40 wells in the northern portion of the City provide an additional 23,000 AFY to the City's supply. About 100,000 acre-feet or 32 percent of available supplies were consumed by the city water users during 1990. This translates into an average daily consumption rate of about 108 million gallons (mgd) (CCOMWP, 1994).

The City's current annual water rights are estimated to be adequate to meet increased demands in the time frame covered in the 1988 Sacramento General Plan Update, which extends to 2006. The City will continue to have rights to meet the current demand, but could lose the portion of Sacramento River water rights that is not used. In 1988, the State extended to the City its water rights for another 10 years to preclude this possibility. The original deadline for the requirement of full use of the Sacramento River water rights was 1960. This deadline has been extended five times.

There are three treatment plants in operation within the City. The Fairbairn Water Treatment Plant (FWTP), located adjacent to the California State University, Sacramento campus, diverts and treats water from the American River. This plant, constructed in 1964, has a capacity of 91 mgd and provides water to the Project Area (Gosse, 1995). The Sacramento River Water Treatment Plant (SRWTP), located adjacent to the Project Area approximately one-third mile below the confluence of the Sacramento and American Rivers, began operation in 1924 and has an expanded treatment capacity of 135 mgd. The underflow of the Sacramento River is collected and treated by the Riverside Water Treatment Plant located near the west end of William Land Park. Because this plant can only divert and treat approximately 25 cfs, and treatment is costly, the City of Sacramento intends to decommission the plant when additional treatment capacity is available elsewhere.

The amount of water that can be supplied to the City is dependent on the capacity of the City's three surface water treatment plants. Current and planned capacity of the treatment plants far exceeds the phased buildout of the Project Area; however, the cumulative use of treated water for General Plan buildout levels will require additional treatment plant capacity. An impact that requires the capacity of a water treatment plant to be increased is considered a significant impact. Since each additional development uses up available treatment plant capacity, each development has an impact on the City's ability to supply water.

The City's Department of Utilities, Division of Water has a policy of serving all planned developments within the City boundary that are part of the City's General Plan, thereby allowing the City to plan future treatment facilities in advance of the required demand. Eventually, the City's water rights to the Sacramento and American Rivers may be the limiting factor of future development; however, treatment capacity is currently the deciding factor in determining a level of significant impact on the City's Water System.

Water distribution infrastructure is maintained by the City of Sacramento Department of Utilities, Field Services Division. City water service in the Project Area is provided via several distribution mains generally located below the major roadways in the area and distributed locally by 4- to 8-inch mains (Gosse, 1995). These distribution mains in turn connect into several transmission mains located at Power Inn Road, Florin-Perkins Road, Fruitridge and Elder Creek. The transmission mains connect to the Fairbairn Water Treatment Plant.

There is a proposed transmission main to be constructed by the City on Florin-Perkins Road from Folsom Boulevard to Fruitridge, which would service the Project Area. This main will be constructed when development of this area warrants its construction (Paxton, 1995). Distribution mains to individual projects are to be constructed by developers pursuant to the Design and Procedures Manual.

SEWER SERVICE

Sewage treatment for the City of Sacramento is provided by the Sacramento Regional County Sanitation District (SRCSD). The SRCSD was formed in the mid-1970s as a result of the Sacramento Regional Wastewater Management Program. The Wastewater Management Program consolidated over a dozen treatment facilities and virtually eliminated effluent discharge into local waterways. Over 900,000 people are provided sewer service by the SRCSD. The SRCSD is responsible for the operation of all regional interceptors and wastewater treatment plants, while local collection districts maintain the systems that transport sewage to the regional interceptors.

The regional collection system and wastewater treatment for the Project Area is provided by the County Sanitation District No. 1 (CSD-1). This CSD-1 system serves the unincorporated urban areas within the County and portions of the City of Sacramento. The County Public Works Department, Water Quality Division is responsible for the operation and maintenance of both the SRCSD and County wastewater collection systems.

From the collection system and regional interceptors, sewage flows ultimately reach the Sacramento Regional Wastewater Treatment Plant (SRWTP), which is located south of the City of Sacramento east of Freeport Boulevard. The SRWTP has an existing treatment capacity of approximately 181 million gallons per day (mgd) of seasonal dry-weather flow and 392 mgd of peak wet-weather flow (SRWTP Master Plan Draft Update, 1995). This expanded capacity is anticipated to serve a projected year 2005 service area population of approximately 1.6 million people (James, 1995).

Existing sewer infrastructure serving the Project Area includes local gravity sewers that collect wastewater from various sources in the Project Area, and connect to larger gravity feed sewer mains which join the trunk outfall line. Local sewer lines are generally located within right of ways of the Project Area's street system.

Most of the existing sewer in the Project Area was built in the 1940s and 1950s. The joints between the pipe sections for pipe constructed during that time tend to be leaky, resulting in infiltration causing higher water treatment costs or exfiltration contaminating ground water supplies.

GAS AND ELECTRICITY SERVICES

Gas

The Pacific Gas and Electric Company (PG&E) provides natural gas service to the entire Project Area; the Sacramento Municipal Utility District (SMUD) provides electrical service to the entire Project Area.

Gas service is supplied to the City of Sacramento by the Pacific Gas and Electric Company (PG&E), an investor-owned public utility, via a combination of low pressure (1 psi) and a medium pressure (30 psi) pipelines. PG&E is responsible for the transmission and distribution of gas to much of northern and central California. Low pressure pipelines are being phased out and replaced by medium pressure pipelines. Most of the gas distribution pipelines are located in public street rights of way (Rangel, 1995). Sacramento Division staff have indicated that PG&E will install distribution facilities, as needed, according to California Public Utilities Commission rules, and that PG&E has adequate supplies of gas available to meet the needs of development in the City.

PG&E owns and maintains a natural gas distribution system throughout the Project Area. Gas service is provided via four high pressure gas feeder mains running along Power Inn Road, Fruitridge Road, Florin-Perkins Road and 14th Avenue. These feeder mains supply gas to distribution mains below most streets in the Project Area. The Sacramento Army Depot owns the internal distribution system on the Depot site.

Electricity

Electrical service to the Project Area is provided by the Sacramento Municipal Utility District (SMUD). SMUD operates a comprehensive system of power substations and transmission facilities across the Sacramento Valley, providing service via overhead and underground electrical transmission lines to all areas served by the company. SMUD's system of power lines and substations provides continual service for the City of Sacramento. Utility easements and transmission lines are located throughout the City, providing virtually every parcel with electrical service. SMUD has lead agency responsibilities for any electrical system improvements within the project area.

SMUD has generating capacity of 659 megawatts (MW) in hydroelectric plants, 187 MW in thermal plants, and 2 MW in photovoltaic plants. SMUD has purchased power sources totaling 1310 MW from PG&E, Western Systems, So. Cal Edison and others. These sources can provide a total of 2158 MW of power capacity. SMUD is also constructing up to five cogeneration plants which, if implemented, have the potential to add several hundred MW of additional capacity to SMUD system.

Existing SMUD facilities in the Project Area include various overhead electrical lines and substations. Substations serving the Project Area are located north of 14th Avenue; west of

Power Inn Road on Amador; west of Florin-Perkins Road just south of Belvedere Avenue; near Proctor & Gamble on 83rd Avenue; just off 24th avenue south of the railroad tracks; and in the southwest corner of Power Inn Road and Elder Creek Road. There is also a power station serving the Sacramento Army Depot located on Attu Street. The substation was upgraded to its present capacity to accommodate increased load requirements (Corbeil, 1995).

Energy Regulations and Policies

The energy consumption of new buildings in California is regulated by the State Building Energy Efficient Standards, known as Title 24. These standards are contained in the California Code of Regulations, Title 24, Part 2, Chapter 2-53. Enforcement of the regulations is addressed in the California Code of Regulations, Title 20, Chapter 2, Subchapter 4, Article 1. Title 24 applies to all new construction of both residential and non-residential buildings, and regulations energy consumed for heating, cooling, ventilation, water heating, and lighting.

Compliance with Title 24 can be achieved through either a "performance" or "prescriptive" approach. Title 24 establishes the maximum amount of energy that can be consumed by new buildings. This is considered an energy budget, and is based on the building type and size and the climatic zone in which it is located. The calculated energy consumption may exclude energy obtained from non-depletable resources. Compliance with the Title 24 standards is considered the performance compliance approach. Using the prescriptive approach, a building must comply with prescribed design requirements that have been designed to meet the applicable energy budgets. This approach allows the builder to choose from a variety of alternative component packages that specify features such as insulation, glazing, lighting, shading, and water and space heating systems. In both cases, there are also certain mandatory requirements that must be fulfilled.

4.8.3 IMPACTS WITH THE PROPOSED REDEVELOPMENT PLAN

Significance Criteria

The following criteria from Appendix G of the CEQA Guidelines are used to determine the significance of impacts of the Project regarding public services:

“the project will normally have a significant effect on the environment if it will:

- (a) Conflict with adopted environmental plans and goals of the community where it is located;
- (e) Breach published national, state, or local standards relating to solid waste or litter control;
- (f) Substantially degrade water quality;
- (g) Contaminate a public water supply;
- (h) Substantially degrade or deplete ground water resources;

- (n) Encourage activities which result in the use of large amounts of fuel, water, or energy;
- (o) Use fuel, water, or energy in a wasteful manner;
- (s) Extend a sewer trunk line with capacity to serve new development; or
- (w) Conflict with established recreational, education, religious or scientific uses of the area.”

Methodology

In order to estimate the project-related demand for, and impact upon public services, service providers were consulted to determine if implementation of the proposed project (assuming buildout of the Project Area combined with proposed public actions as presented in Section 3, Project Description) would require additional personnel, equipment, or facilities or would place any special demands on the provider’s ability to deliver services. Project impacts were also considered relative to established standards for the provision of adequate services.

The Redevelopment Plan would induce infill growth based on Countywide market demand. This growth would still occur in other areas of the City and County with or without the project, thus the following analysis looks at Project Area specific impacts. Secondly, growth impacts have been addressed by the City in its General Plan, which has been incorporated by reference.

Impact Statements

Fire Protection Services. Implementation of the Project would increase the demand for fire protection and emergency services in the Project Area. However, the City of Sacramento Fire Department has indicated that the Project would not create a substantial burden on the Department’s ability to maintain adequate fire protection and emergency services (Klembeck, 1995). *Although the Project would result in slightly greater industrial densities served by existing fire stations in the Project Area, the need for fire and emergency services should not be substantially increased since the Project would reduce existing fire hazards through rehabilitation of substandard residential, commercial, and industrial buildings. Additionally, the Redevelopment Plan proposes water system and hydrant improvements as needed. Substantial new construction would be subject to review and approval by the Fire Department to assure adequate fire safety design and fire service capability. Thus, implementation of the Redevelopment Project would have a less-than-significant impact on fire protection services (4.8-1).*

Police Protection Services. Implementation of the Project could increase the degree of industrial and commercial development in the Department's service area, thereby increasing the demand for police protection services. The Redevelopment Project would not, however, result in an increase in residential development within the Project Area, nor an increased residential population. The Police Department has the opportunity to submit suggestions for safety measures to the City during project design review. However, incremental

development, as would occur with the Project, is not reviewed by the Department for adequate crime prevention features. *Without adequate safety measures included in the planning and design of new rehabilitation and construction that would occur with the Project, crime rates and the demand for police services could increase, resulting in a cumulative impact on police protection service levels which would be potentially significant (4.8-2).*

Schools. Under AB 1290 (1993), the State recognized the potential adverse impact on schools from redevelopment, and mitigated that effect by specifically providing a net increase in funding for school capital improvements. The legislature specifically found in Article 16.5, Section 31, amending Section 33607.5 (g)(2) of the Health and Safety Code, that “(n)otwithstanding any other provision of law, a redevelopment agency shall not be required, either directly or indirectly, as a measure to mitigate a significant environmental effect or as part of any settlement agreement or judgment brought in any action to contest the validity of a redevelopment plan pursuant to Section 33501, to make any other payments to affected taxing entities, or to pay for public facilities that will be owned or leased to an affected taxing entity.”

Implementation of the Project would not increase the demand for public school services in the Project Area. There is no residential zoning within the Project Area, and existing residential uses are non-conforming uses which could be relocated over the term of the Redevelopment Plan.

The use of 20 percent set-aside funds for housing would be used to rehabilitate or construct infill housing in adjacent residential areas. This would be in compliance with General Plan goals and policies, as well as zoning. Goals and policies adopted as mitigation measures for the City's General Plan Update (1988) were determined to mitigate impacts of growth on schools to less than significant levels. These policies and measures are the responsibility of the City to implement for the Project Area and vicinity. *Any indirect increase in demand for schools throughout the City resulting from increased employment in the Project Area would be mitigated by compliance with the General Plan as a function of residential development. Therefore, implementation of the Redevelopment Plan would have a less-than-significant impact on schools (4.8-3).*

Solid Waste. Implementation of the Project could ultimately increase the amount of solid waste flow to the Sacramento County Kiefer Road Landfill. However, the Project would not result in development levels different than those currently allowed under the City General Plan. Strict compliance with the City's Section 34 of the Zoning Ordinance is required for public improvements, demolition of structures and new construction. This section of the Zoning Code also removes architectural barriers to recycling at the front end of construction and promotes the recycling of construction debris. *The amount of solid waste generated by implementation of the Project would have a less-than-significant impact on landfill capacity (4.8-4).*

Water Service. Private development that could occur as a result of Plan implementation would result in increased demand for water service in the Project Area. Buildout of the area will require improvements to the existing water distribution system. *The list of potential redevelopment public improvements includes the upgrade and repair of existing water trunk lines and replacement of local collectors as development takes place, as well as the construction of a transmission main along Florin-Perkins Road from Folsom Boulevard to Fruitridge Road. Therefore, impacts to water service would be less-than-significant (4.8-5).*

Sewer Service. Private development that could occur as a result of Plan implementation would result in increased demand for sewer service in the Project Area. Buildout of the area will require improvements to the existing sewer system. *The proposed Project would provide funding for construction of relief sewer lines and new sewer construction where flows are less than one mgd. In addition, future users of the sewer system will be subject to connection fees based on the quality and strength of the wastewater discharge to the sewer system, and on the acreage of the parcel being redeveloped. In-lieu fees will be assess base on parcel frontage. Therefore, impacts to sewer service would be less-than-significant (4.8-6).*

Gas and Electrical Services. Public agency actions taken to implement the Redevelopment Plan, and private development that could occur as a result of Plan implementation, would result in increased demand for gas and electric services in the Project Area, and could result in the need for improvements to existing gas and electric facilities. Development within the Project Area would not generate a demand which would require SMUD or PG&E to secure new energy sources beyond their current suppliers. PG&E and SMUD have indicated their willingness to provide improvements needed to adequately serve General Plan growth in infill areas. *When individual development plans are submitted for approval, the City requires site specific review of utility requirements and potential service impacts, and requires that applicants coordinate with utility providers. Projects are conditioned for necessary facility upgrades and right-of-way easements. Therefore, impacts to gas and electrical services are less-than-significant (4.8-7).*

4.8.4 MITIGATION MEASURES

The numbering shown below corresponds to the impacts identified in the preceding discussion.

Less-than-significant impacts would occur with the proposed project in the areas noted below and no mitigation measures are provided.

- 4.8-1 Fire protection services
- 4.8-3 Schools
- 4.8-4 Solid waste
- 4.8-5 Water service
- 4.8-6 Sewer service
- 4.8-7 Gas and electrical service

Mitigation measures are provided below for *significant, or potentially significant* impacts related to police services:

4.8-2 Prior to final approval, all public agency projects included as part of the Project and any agency sponsored private development projects shall be required to submit conceptual plans to the Police Department for review of adequate safety in project design. The public or private entity shall work with the Police Department to include measures such as Crime Prevention through Environmental Design (CPED) in final development plans. Typical CPED design criteria include adequate lighting, commercial visibility, and the encouragement of proprietary responsibility.

4.8.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the above mitigation measures, impacts to public services would be reduced to a less-than-significant level.

4.9 PUBLIC HEALTH AND SAFETY

4.9.1 INTRODUCTION

This section addresses the anticipated effects of known or suspected hazardous substance storage, transportation and contamination on redevelopment activities in the Project Area. In the Sacramento Army Depot area, the extent of contamination and necessary remediation activities have been well defined, and are described in the *Sacramento Army Depot Reuse Plan EIR* and the *Sacramento Army Depot Disposal and Reuse Final EIS*. Remediation of both soil and groundwater is expected to proceed regardless of development. However, other areas of the Project Area may be contaminated, and require further assessment.

The development of projects in areas of contamination present a wide range of environmental issues related to the compatibility of hazardous substances remediation and the implementation of development within the Project Area. The primary concern is the potential increased risk to human health and the environment from exposure to existing soil and/or groundwater contamination due to construction and development phasing, and during the life of a project.

Included in this section is an overview of hazardous substances regulations, a description of the types of contaminants found or suspected based on historic land uses, a description of identified and suspected sites of contamination, and a description of remediation and monitoring activities, ongoing or planned, in the Project Area. Other aspects of hazardous substances discussed include the risk of exposure due to existing or proposed industrial uses. In addition to soil contamination, issues posed by groundwater contamination and remediation are addressed.

4.9.2 SETTING

DEFINITION OF HAZARDOUS SUBSTANCES

Under Title 22 of the California Code of Regulations (CCR), a hazardous material is defined as a substance or combination of substances that may either cause, or significantly contribute to, an increase in mortality or an increase in serious, irreversible, or incapacitating, illness; or pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Chapter 11, Article 2, Section 66261.10).

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. According to Title 22 of the California Code of Regulations, hazardous materials and hazardous wastes are classified according to four properties: toxic,

ignitable, corrosive, and reactive (CCR, Title 22, Chapter 11, Article 3).

Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability, or even death. Toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, and other adverse health effects, depending on the level of exposure. Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). *Ignitable substances*, such as gasoline, hexane and natural gas, are hazardous because of their flammable properties. *Corrosive substances*, such as sulfuric (battery) acid and lye, can damage other materials or cause severe burns upon contact. *Reactive substances*, such as explosives, pressurized canisters, and pure sodium metal (which reacts violently with water), may cause explosions or generate gases or fumes.

Soil that is excavated from a site containing hazardous substances is a hazardous waste if it exceeds specific CCR Title 22 criteria. Remediation (cleanup) of hazardous wastes found at a project site is generally required if those materials are excavated. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

HAZARDOUS MATERIAL REGULATORY FRAMEWORK

Table 4.9-1 lists federal, state and local regulatory agencies that oversee hazardous substances management and the statutes and regulations that they administer. The following discussion contains a summary review of regulatory controls pertaining to hazards, including federal, state and local laws and ordinances pertaining to hazardous substances management and cleanup.

Federal

The United States Environmental Protection Agency (US EPA) is responsible for enforcing regulations at the Federal level pertaining to hazardous substances and wastes. The primary Federal hazardous waste and substance laws are contained in the Resource Conservation and Recovery Act of 1976 (RCRA), and in the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). These laws require that responsible parties report any known hazardous waste contamination of soil or groundwater to the US EPA. Any contamination that threatens public health or the environment must be remediated by the responsible party according to certain standards set by the US EPA.

Federal statutes pertaining to hazardous materials and wastes are contained in the Code of Federal Regulations (40 CFR). The regulations contain specific guidelines for determining whether a waste is hazardous, based on either the source of generation or the properties of the waste. Determination of standards for remediation of soil and groundwater contamination is performed on a case-by-case basis. However, Federal guidance exists for determining acceptable levels of residual contaminants in soil and groundwater.

TABLE 4.9-1

SUMMARY OF HAZARDOUS MATERIALS REGULATORY AUTHORITY

Regulatory Agency	Jurisdiction	Authority
FEDERAL AGENCIES		
Dept. of Transportation	Federal	National Transportation Act - Code of Federal Regulations (CFR) 49
Environmental Protection Agency	Federal	Federal Water Pollution Control Act Clean Air Act Resource Conservation & Recovery Act (RCRA) Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) Superfund Amendments & Reauthorization Act (SARA) Federal Insecticide, Fungicide & Rodenticide Act
Occupational Safety & Health Administration	Federal	Occupational Safety and Health Act & CFR 29
STATE AGENCIES		
Dept. of Toxic Substances Control	State	Hazardous Waste Control Law Hazardous Materials Release Response Plans/Inventory Law Acutely Hazardous Materials Law Sherman Food, Drug and Cosmetic Law Underground Storage Tanks Law California Code of Regulations (CCR) Titles 17, 19, and 22
Dept. of Industrial Relations (CAL-OSHA)	State	California Occupational Safety & Health Act, CCR Title 8
State Water Resources Control Board & Regional Water Quality Control Board	State	Porter-Cologne Water Quality Act
Health & Welfare Agency	State	Safe Drinking Water & Toxic Enforcement Act
Air Resources Board & Air Pollution Control District	State	Air Resources Act
Office of Emergency Services	State	Hazardous Materials Release Response Plans/Inventory Law
Dept. of Fish & Game	State	Fish & Game Code
Dept. of Food & Agriculture	State	Food & Agriculture Code
State Fire Marshal	State	Uniform Fire Code, CCR Title 19
COUNTY AGENCIES		
Sacramento Co. Environmental Mgmt Dept. Hazardous Materials Division	County	CCR Title 22
SOURCE: EIP Associates, 1991.		

State

The US EPA has delegated much of its regulatory authority to individual states wherever adequate state regulatory programs exist. The Department of Toxic Substances Control (DTSC), within the California Environmental Protection Agency, enforces statewide hazardous materials and waste regulations in California in cooperation with the US EPA.

State hazardous materials and waste laws are contained in the CCR, Title 22. California hazardous materials and waste laws incorporate Federal standards, but are stricter in many respects. For example, the California Hazardous Waste Control Law (HWCL), the State equivalent of RCRA, contains a broader definition of hazardous materials and waste than does Federal regulation. Regulations implementing the HWCL list 791 hazardous chemicals and 20 to 30 relatively common materials that may be hazardous; establish criteria for identifying, packaging and labeling hazardous wastes; prescribe management of hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

In addition, the California Hazardous Substance Account Act, essentially the equivalent of CERCLA, contains a provision for designation of State funds to clean up sites where private funding is unobtainable.

The State Hazardous Materials Release Response Plans and Inventory Law of 1985 (the Business Plan Act) requires that any facility that handles over 500 pounds of hazardous materials in one year prepare a Business Plan for emergency response to a release or threatened release of a hazardous material. (Business Plans are also known as Hazardous Materials Management Plans.) The contents of the Business Plan must include details of the facility, including floor plans; an inventory of hazardous materials handled or stored on the site; an emergency response plan that includes procedures for immediate notification of the administering agency and local emergency rescue personnel, mitigation of a release to minimize any potential harm, and evacuation of the site; and a training program in safety procedures and emergency response for new employees and an annual refresher course for all employees.

Business Plans must be reviewed and, if necessary, updated biennially. A substantial change in a hazardous material handler's operations would require that an updated plan be submitted to the administering agency within 30 days of the change. Hazardous material inventory forms must be updated annually.

The Hazardous Waste Source Reduction and Management Review Act of 1989 (SB 14) contains provisions designed to reduce the generation of hazardous waste at its source, reduce the release of chemical constituents to the environment, and provide documentation of hazardous waste management information for use by state and local governments. For waste management, most local jurisdictions in California have a Solid Waste Management Plan and a Hazardous Waste Management Plan that provide guidance for the handling and disposal

of wastes generated. The California Integrated Waste Management Act of 1989 (AB 939) also requires counties to take an integrated approach to waste management by preparing Integrated Waste Management Plans. In addition, under the terms of State legislation passed in 1989, AB 3777-LaFollette, the responsible local agency is to be provided with a Risk Management and Prevention Plan (RMPP). A RMPP is the sum total of programs aimed at minimizing acutely hazardous substance incident risks.

The California Safe Drinking Water and Toxics Enforcement Act (Proposition 65) does not apply to hazardous wastes directly, but requires that businesses warn employees and other individuals of exposures to State-listed substances that cause cancer, birth defects, or other reproductive harm. Businesses are also prohibited from knowingly discharging listed substances into water or land where the substance could get into drinking water.

Local

In Sacramento County, the Hazardous Materials Division of the County Environmental Management Department is the agency with primary responsibility for regulating the handling of hazardous materials and wastes. A number of other agencies also are involved in the regulation of these substances at the County and local level, as outlined in the *Sacramento County Hazardous Waste Management Plan* (Sacramento County Environmental Management Department and Planning and Community Development Department, 1989). A few of the major regulatory agencies and their jurisdictions are briefly mentioned below.

The Project Area is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The RWQCB is authorized by the State Water Resources Control Board to enforce the provisions of the Porter-Cologne Water Quality Control Act of 1969, which incorporates Federal water protection laws. That Act gives the RWQCB the authority to require groundwater investigations when the quality of the groundwaters or surface waters of the State have been or could be threatened, and to remediate the site if necessary. The RWQCB provides oversight of soil and groundwater cleanup investigations, especially for sites contaminated by substances other than petroleum products. The RWQCB certifies completion of the investigation and cleanup in soil and groundwater pollution cases and also provides regulatory control for the disposal of groundwater to storm drains.

For sites requiring remediation, the level of site cleanup is determined on a case-by-case basis by the State, regional or local agency having jurisdiction. The concerned agency determines the level and extent of required cleanup, based on the specific site conditions and surrounding land uses. State cleanup standards can be more restrictive than Federal standards; both State and Federal standards are used to determine cleanup levels. Cleanup standards employed by the RWQCB can be more stringent than those used by EPA or DTSC, and are region-specific. Chapter 6.34 of the Sacramento County Code, and Chapter 16 of the Sacramento City Code (Ordinance No: 88-012) establish standards for the construction and monitoring of facilities used for the underground storage of hazardous substances.

If soils containing hazardous materials are excavated, the Sacramento Metropolitan Air Quality Management District (SMAQMD) may impose specific requirements on such activities to protect ambient air quality from dust or airborne contaminants. SMAQMD Regulation 8, Rule 40 limits emissions of organic compounds from soil contaminated with petroleum or other volatile organic chemicals (SMAQMD, 1992). Rule 40 describes acceptable procedures for the aeration of contaminated soil and the control of emissions during the removal of underground tanks. Provisions of Rule 40 apply at specific sites during the handling of contaminated soil. SMAQMD requirements also cover asbestos abatement during building demolition.

HAZARDOUS SUBSTANCES HANDLING REQUIREMENTS

Federal

The RCRA established a federal hazardous waste "cradle-to-grave" regulatory program that is administered by EPA. Under the RCRA, EPA regulates the generation, transportation, treatment, storage and disposal of hazardous substances.

The RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle-to-grave" system of regulating hazardous substances. The HSWA specifically prohibits the use of certain techniques for the disposal of some hazardous substances.

Under the RCRA, individual states may implement their own hazardous waste management programs as long as they are consistent with, and at least as strict as, the RCRA. EPA must approve state programs intended to implement the RCRA requirements.

State

In California, approval of the state hazardous waste management program is still pending, so both state and federal hazardous substances laws apply. The state program was created by the enactment of the HWCL, which is administered by the DTSC. The DTSC regulations govern generation, transportation and disposal of hazardous substances.

Regulations implementing the HWCL list 791 hazardous chemicals and 20 or 30 more common substances that may be hazardous; establish criteria for identifying, packaging and labeling hazardous substances; prescribe management of hazardous substances; establish permit requirements for hazardous substances treatment, storage, disposal and transportation; and identify hazardous substances that cannot be deposited in landfills.

Under both the RCRA and the HWCL, the generator of a hazardous waste must complete a manifest that accompanies the waste from the point of generation to the ultimate treatment, storage or disposal location. The manifest describes the waste, its intended destination, and other regulatory information about the waste. Copies must be filed with the DTSC.

Generators must also match copies of waste manifests with receipts from the treatment, storage or disposal facility to which it sends waste.

HAZARDOUS MATERIAL WORKER SAFETY REQUIREMENTS

Properties found to be contaminated are subject to special worker safety requirements to protect construction workers during demolition and excavation, and to protect site investigation and cleanup workers who are performing site studies or site remediation activities. In both instances, site safety plans are required by Federal and State Occupational Safety and Health Administration (OSHA) requirements. Such site safety plans typically include provisions for safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency response and fire prevention plan preparation.

The California Occupational Safety and Health Administration (Cal/OSHA) and the Federal Occupational Safety and Health Administration (Fed/OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. Cal/OSHA assumes primary responsibility for developing and enforcing State workplace safety regulations. Cal/OSHA regulations, as detailed in Title 8 of the California Code of Regulations, include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites.

EXISTING SOURCES OF CONTAMINATION

All industrial and heavy commercial operations in the Project Area, as permitted uses, have likely used, stored, generated, treated and disposed of significant quantities of hazardous materials and hazardous wastes. Consequently, all areas and facilities that have stored or handled such substances could, at some point during their history, have experienced unrecorded releases. Areas included in this classification are locations of past and present operations involving hazardous materials and hazardous wastes, underground storage tanks.

Because the Sacramento Army Depot has been operated as a federal military installation, the Environmental Protection Agency (EPA), Department of Defence (DOD), U.S. Army, and California EPA have been, and will continue to be, the main agencies overseeing hazardous substances investigations and remediation on the base. The DOD oversees its own program, Installation Restoration Program (IRP), which identifies, characterizes, and remediates environmental contamination at military facilities.

In 1987, the Depot was listed on the EPS's National Priorities List. The entire base was included on the list due to groundwater contamination. Remediation action areas for the Depot are areas known to contain residual hazardous wastes generated by past operations. Some areas have been remediated (Tank 2, Pesticide Mix Area, and Battery Disposal Well), and others are currently in progress. Presently eleven areas and projects are being remediated. A complete description of these activities and adopted mitigation measures can be found in the Reuse EIR.

The remainder of the Project Area includes primarily a mix of industrial and heavy commercial land uses, which can be a source of contamination within the Project Area. There are several identified contaminated sites in the Project Area. Some of these sites are under active remediation, and some are under preliminary investigation; some sites have been found to require no further action after the initial assessment.

Agency-Listed Sites in the Project Area

Federal, State, regional, and local regulatory agencies compile and maintain lists of contaminated and otherwise environmentally impaired properties within their jurisdiction. Several state, federal and local agencies maintain lists, as well as the Hazardous Materials Division of the County. The California Environmental Protection Agency (CalEPA) maintains a comprehensive list drawn from twenty individual lists. The sites identified in the Federal, State and local agency listings are shown in Table 4.9-2. While an effort was made to obtain the maximum amount of data, the list may not be complete. A summary of the pertinent listings in the Project Area includes the following:

Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS). CERCLIS is a database used by the US EPA to track activities conducted under its Superfund Program. Sites placed on the CERCLIS inventory have a potential for releasing hazardous substances into the environment. The Sacramento Army Depot is the only CERCLIS-listed site identified in the record search.

National Priority List (NPL). EPA prioritizes sites on the basis of significant risk to human health and the environment. Sites placed on the NPL receive remedial funding under provisions of the Comprehensive Environmental Response, Compensation, and Liability Act. The Sacramento Army Depot is the only NPL-listed sites identified in the Project Area.

CALSITES (previously known as the Abandoned Sites Program Information System, or ASPIS). The California Historical Site Survey Program identified certain potential hazardous waste sites by means of file searches and limited site inspections. The information has been compiled into this database by the DTSC in accordance with Section 253596 of the California Health and Safety Code. Five CALSITE-listed sources were identified in the Project Area.

TABLE 4.9-2: LISTED SITES IN THE PROJECT AREA

<u>Facility</u>	<u>Location</u>	<u>Source/a/</u>	<u>Status/b/</u>
Reed and Graham	8280 14th Ave.	Toxisite	5c
Williamette Industries	8333 24th Ave.	Toxisite	7
Markel Brothers Plumbing	8455 24th Ave.	Toxisite	Y
Western Kraft Paper Group	8333 24th Ave.	Cal/EPA Calsites	NFA
Spanda Industrial Development	8131 37th Ave	Toxisite Cortese Cal/EPA	7
G.I.Trucking	8233 Belvedere Ave.	Toxisite Cal/EPA	SSR
Berke Door & Hardware	8255 Belvedere Ave.	Toxisite Calsites	Y NFA
M & B	8137 Elder Creek Rd.	Toxisite Cal/EPA Cortese	9
Ellis Roofing	8201 Elder Creek Rd.	Toxisite	8
Safety Kleen	5761 Florin-Perkins Rd.	Toxisite	7
" "	8543 Unsworth	Cortese	
Reliable Crane & Rigging, Inc	5853 Florin-Perkins Rd.	Toxisite	7
Proctor and Gamble	8201 Fruitridge Rd.	Toxisite	9
Fleming Companies, Inc	8301 Fruitridge Rd.	Toxisite Cortese Cal/EPA	9
Hokanson Building Block Co.	4751 Power Inn Rd.	Toxisite Cal/EPA	7
M & P Truck & Auto Repair	5743 Power Inn Rd.	Toxisite Cal/EPA	9
Rainbo	5761 Power Inn Rd.	Toxisite	9
ARA Services	6211 Power Inn Rd.	Toxisite Cal/EPA	9
Martech/Metalloy Steel Foundry	8588 Thys Ct.	Toxisite Calsites Cortese CalEPA	8
Sacramento Amy Depot		CERCLIS; NPL; Calsites; Cortese; Cal/EPA; Toxisite	

/a/	Sources are defined in the accompanying text.	7 - remedial action underway
/b/	SSR - site screening required	8 - post remedial action
	WCRBT - leaking tanks	9 - case closed
	5C - pollution characterization	Y - enforcement action taken
	3B - preliminary assessment underway	NFR - No further action

SOURCE: Sacramento Toxisite Report; Cortese ; CERCLIS; NPL; Cal/EPA; Gail Ervin Consulting

California Office of Planning and Research Database (Cortese). The Cortese database is a consolidation of information from various State, regional, and local sources. It lists potential and confirmed hazardous waste or substance sites and is maintained by the State Office of Planning and Research. Cortese-listed sites are required to be identified in an EIR. Six Cortese-listed sites were identified in the Project Area.

California State Leaking Underground Storage Tanks Information System (Cal LUST). The Cal LUST database, previously maintained by the State Water Resource Control Board, is now maintained within a comprehensive list at CalEPA. Nine of the previously listed sites were identified on the CalEPA list for "No Further Action". Numerous other sites in the Project Area were also listed as "NFR", and thus not identified in this document.

The County of Sacramento maintains a list of contaminated sites within the County. The Toxisite Cleanup Program list includes information on the enforcement and remedial action undertaken, and the current status of the site. Eighteen sites were identified on the County's Toxisite list (July 1994).

4.9.3 IMPACTS OF THE REDEVELOPMENT PROJECT

Methodology

Implementation of the Redevelopment Plan would involve construction and demolition activities, and the potential development of new uses and redevelopment of existing uses. Construction activities would involve excavation and other ground preparation activities. Demolition activities would involve earthwork and in some cases excavation. Development and redevelopment in the Project Area would bring new businesses into the locale and encourage the influx of new employees and visitors.

Potential impacts on public health and safety would stem from interactions between workers or the public and the hazardous materials and wastes present in the Project Area. Construction and demolition activities were evaluated for their potential to expose construction workers to existing hazardous materials and wastes. Operational impacts were assessed on the basis of the potential for new or redeveloped uses to substantially increase the use or handling of hazardous materials and wastes.

Significance Criteria

A project impact would be considered significant if contaminated soils or materials were present in areas to be excavated or developed, or if future activities involved unmitigated handling or release of hazardous materials or wastes that posed a threat to public health or safety.

Numerous impacts were identified in the SADEIR, and mitigation measures were adopted with the mitigation monitoring plan to deal with potential impacts of redevelopment at that part of the Project Area. The following impact and mitigation discussion only refers to the remainder of the Project Area, outside the boundaries of the Depot. Mitigation measures adopted for the Depot are repeated for the Project Area as appropriate, to maintain consistency.

Impact Statements

Construction Activities. Implementation of Redevelopment activities and projects could result in the exposure of construction workers to hazardous substances present on development sites. Several sites in the Project Area have been identified as contaminated or previously contaminated. Remediation activities are complete or under way at these sites. The most likely environmental impairment would be petroleum contamination from fuel leaks or spills, or solvent contamination from industrial activities. Table 4.9-3 lists potential hazardous waste-related impacts of activities that typically occur during development. Quantitative threats to public health or safety posed by the presence of such materials could be evaluated only with a formal health risk assessment.

TABLE 4.9-3: GENERIC IMPACTS OF PROJECT ACTIVITIES

Project Activity	Contaminated Materials	Potential Impacts
Excavation and site preparation	Soil gases, soil, groundwater	Health of workers, public and/or environment
Site investigation	Soil, groundwater	Health of workers and/or public
Dewatering	Groundwater	Health of workers and/or public
Underground storage tank closure	Tank, vapor, soil	Health and safety or workers and/or public
Site remediation	Soil gases, soil, groundwater	Health of workers, public and/or environment

SOURCE: Environmental Science Associates, Inc.

If a UST were present at a development site during future construction activities, it would have to be closed in place or removed. Closure of a UST in place would likely cause minimal exposure of workers and the public to potential hazards. A UST left in the ground, however, could pose both health and safety risks, such as the exposure of workers, tank handling personnel, and the public to tank contents or vapors. Risks posed by underground storage tanks would be minimized by closing the tank according to guidelines established by the County Health Department. As mentioned earlier, the City and the County have similar guidelines regarding the underground storage of hazardous substances. Problems associated with leaking underground tanks are expected to gradually diminish in the future as federal and state legislation mandating tank testing and integrity monitoring procedures gradually take effect.

Existing structures and facilities on certain properties could be demolished prior to new construction. Such buildings could contain asbestos and PCBs, which are known to have adverse health effects. There are specific containment and handling procedures for dealing with these hazardous materials. The appropriate regulatory agencies would need to be notified in advance, and strict procedures would need to be followed for their removal and disposal. Issues regarding asbestos are also discussed in Section 4.3, Air Quality. *Although hazardous substance handling and remediation is highly regulated, redevelopment in a historically industrial area could expose construction workers to previously unidentified contamination. This would be a potentially significant impact (4.9-1).*

Increased hazardous material handling by industry and business. The implementation of the Redevelopment Plan would provide incentives to industrial and commercial facilities to develop in the Project Area, which in turn could result in an increase in the handling of hazardous materials by business. The County of Sacramento has set forth hazardous materials goals and policies in the *Sacramento County Hazardous Waste Management Plan*. The policies are designed to protect the health and welfare of the public through management and regulation of hazardous materials in a manner that focuses on preventing problems. The policies call for proper storage and disposal of hazardous wastes and materials, and endorse federal, state, and local laws and regulations that strengthen safety requirements for hazardous wastes and materials.

Industrial and commercial development in the Project Area could result in an unavoidable increase in the use of hazardous materials within the City, but would not be expected to create hazardous conditions demonstrably different from conditions already existing in the Project Area and other portions of the City.

Development within the Project Area would be subject to the following requirements, which would help to promote the proper handling of hazardous materials and ensure adequate emergency response.

- In compliance with State law (SB 14), new businesses that handle enough hazardous materials to generate wastes in reportable quantities (12,000 kilograms of hazardous waste per year or 12 kg of extremely hazardous waste per year) are required to have an approved Source Reduction Evaluation and Review Plan on file with DTSC. Qualifying new industries shall prepare such plans and file a copy with the Hazardous Materials Division.
- The Hazardous Materials Division implements its Risk Management and Prevention Program in the County by requiring businesses that handle acutely hazardous materials to prepare a written Risk Management and Prevention Program (RMPP) and file it with the County.
- The Hazardous Materials Division issues permits to businesses for handling hazardous materials, and requires businesses to prepare Hazardous Materials Management Plans (HMMPs) that detail hazards inventories, site layouts, training and monitoring procedures, and emergency response plans, all in conformance with State law.
- The Sacramento County *Hazardous Waste Management Plan* defines the County's hazardous materials emergency response capabilities and provides County-wide guidance for response to an accidental hazardous materials release. The RMPP and HMMP require 8-hour reviews and training sessions for key emergency response personnel to ensure that they are capable of meeting provisions of the *Plan* within the Project Area.

Development within the Project Area consistent with the above requirements, which would help to promote the proper handling of hazardous materials and ensure adequate emergency response, will result in less than significant impacts (4.9-2).

Generation of hazardous waste. Implementation of the Project would indirectly promote increased generation of hazardous wastes by industrial and commercial facilities that would have to be handled and disposed. Public agency actions proposed as part of the Project are not likely to increase the quantity of hazardous wastes generated; street improvements, sanitary sewer and water conveyance upgrades, for example, would generally not generate hazardous wastes.

California has taken steps to reduce commercial hazardous waste generation by passage of the Hazardous Waste Source Reduction and Management Review Act of 1989 (SB 14) (CCR, Title 22, Chapter 30, Article 6.1, Sections 66520-24). SB 14 contains provisions designed to reduce generation of hazardous waste at its source, reduce release of chemical constituents to the environment, and provide documentation of hazardous waste management information for use by State and local governments. Hazardous waste generators will meet those goals by preparation of source reduction evaluation plans and hazardous waste management performance reports. New businesses in the Project Area would be required to comply with provisions of SB 14, as applicable, to minimize commercial waste generation.

Businesses expected to locate in the Project Area could generate hazardous wastes that would add to the City's waste stream. Increased business activity in the Project Area would increase the volume of hazardous wastes that would be stored, handled, treated, and recycled within the Project Area. Waste generation parameters are specific to each business, however, and there is no generation factor for hazardous waste based on type of land use that would make the determination of quantifiable impacts feasible. In addition, growth in the Project Area would occur in accordance with the City General Plan, and is subject to all existing state, federal, and local rules, regulations, and ordinances pertaining to hazardous wastes.

The majority of hazardous wastes generated by commercial businesses are disposed of legally and properly. Typically, hazardous wastes are treated as an integral part of the disposal process. Common disposal/treatment options include oil recovery, solvent recovery, other types of recycling, solids stabilization, aqueous treatment such as precipitation and neutralization, or incineration. Recycling of hazardous wastes is favored by local agencies, but much hazardous waste still is landfilled or incinerated.

Development within the Project Area would be subject to the following requirements, which would help to promote the proper handling of hazardous wastes and reduce the amounts of wastes generated:

- ▶ According to law, the HMD requires new businesses that generate hazardous wastes in reportable quantities (12,000 kilograms of hazardous waste per year or 12 kg of extremely hazardous waste per year) to have an approved Source Reduction Evaluation and Review Plan on file. Qualifying new businesses shall prepare such plans and file them with HMD following the startup of business operations. (This requirements is also discussed under Impact 4.10.2).
- ▶ The HMD implements its Hazardous Waste Generator Program County-wide to enforce proper handling and disposal of hazardous wastes according to Federal, State, and local laws and regulations. HMD's responsibilities include permitting of hazardous waste generators, and weekly monitoring of hazardous waste storage areas.

Development within the Project Area consistent with the above requirements, which would help to promote the proper handling of hazardous materials and reduce the amount of waste generated, will result in less than significant impacts (4.9-3).

Generation of hazardous waste (cumulative). Generation of hazardous waste by new businesses in the Project Area would add to cumulative hazardous waste disposal requirements in the County. This would not be a significant impact. Cleanup and disposal of any contaminated soils within the Project Area would increase the cumulative burden on existing landfill storage capacity. However, growth in the Project Area is anticipated by the City General Plan, and new businesses would be subject to state, federal, and local regulations concerning hazardous waste generation and disposal. The proposed Redevelopment Plan does not contemplate an intensification or change in the composition of waste-generating businesses in the Project Area.

Hazardous wastes generated by newly developed businesses in the Project Area would have to be recycled, treated, or otherwise disposed with other wastes generated throughout the County, adding to the total volume. The removal of contaminated soil from the Project Area during development would also contribute to the region's waste stream.

Treatment facilities and landfill space for hazardous waste are limited. As of 1990, Federal "land ban" legislation effectively prohibits disposal of untreated wastes in landfills. Available information on past land use offers no reason to suspect that large amounts of contaminated soils are present in the Project Area. However, because hazardous waste landfill space is scarce, and environmentally acceptable hazardous waste treatment technologies have yet to be developed fully, handling of contaminated soils is an increasingly important problem. *The HMD requires new businesses that generate hazardous wastes in reportable quantities (12,000 kilograms of hazardous waste per year or 12 kg of extremely hazardous waste per year) to have an approved Source Reduction Evaluation and Review Plan on file. Qualifying new industries must prepare such plans and file them with HMD following the startup of business operations. Periodically, the City must confirm with the HMD that new businesses have filed their source reduction plans, if applicable. Therefore, the cumulative impact would be less than significant (4.9-4).*

4.9.3 MITIGATION MEASURES

The numbering shown below corresponds to the impacts identified in the preceding discussion.

Less-than-significant impacts would occur with the proposed project in the areas noted below and no mitigation measures are provided.

- 4.9-2 Increased hazardous material handling by industry and business.
- 4.9-3 Generation of hazardous waste (facility specific)
- 4.9-4 Generation of hazardous waste (cumulative)

Mitigation measures are provided below for *significant, or potentially significant* impacts related to exposure of construction workers to previously unidentified contamination.

- 4.9-1 (a) If the potential for contamination is suspected, construction activities shall stop and sampling shall be conducted by qualified personnel, in accordance with all applicable regulations to determine the constituent levels and the extent of the contamination.
- (b) If contamination is identified, remediation and disposal procedures shall be undertaken by qualified personnel in accordance with all applicable regulations, and in coordination with all applicable regulatory agencies.

- (c) If asbestos fibers are suspected or identified in soils or existing building materials, then additional sampling shall be performed prior to any construction activities to identify asbestos-containing materials that may be contained in building materials or obscured behind walls, above ceilings, and beneath floors.
- (d) Demolition activities affecting asbestos-containing material shall be performed by a licensed asbestos abatement contractor with properly trained personnel in accordance with all applicable federal, state and local regulations.

4.9.4 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of the above mitigation measures, impacts to construction workers would be reduced to a less-than-significant level.

5.0

Other CEQA Required Sections

5.0 OTHER CEQA REQUIRED SECTIONS

5.1 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS

Adoption and implementation of the proposed Sacramento Army Depot Redevelopment Plan could result in significant and unavoidable adverse environmental impacts. The Project would contribute incrementally toward the following unavoidably significant impacts:

- ▶ The SADEIR concluded that cumulative projected growth in conjunction with the Reuse Plan would result in unsatisfactory roadway operations at many locations throughout the study area. These impacts were reduced, but not mitigated to less than significant levels. A Statement of Overriding Considerations was adopted for cumulative roadway impacts. Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of these findings.
- ▶ The expected development and subsequent traffic levels would result in cumulative increased in criteria air pollutants. Emissions increases occurring as a direct result of Redevelopment Plan implementation are within the volumes contemplated by the SGPU and SADEIR. When the SGPU and SADEIRs were adopted, Statements of Overriding Considerations were adopted for cumulative air quality impacts. Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of these findings.
- ▶ Temporary construction noise is significant and unavoidable, and such impacts were recognized for urban areas in the General Plan. A previous Statement of Overriding Considerations was adopted with the SGPU for such impacts. Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of these findings.

The final determination of significant impacts will be made by the City Council of the City of Sacramento as part of their certification action.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES AND COMMITMENT OF RESOURCES

Section 15126(f) of the CEQA Guidelines requires discussion of "any significant irreversible environmental changes that would be involved in the proposed action should it be implemented." Development occurring (directly or indirectly) as a result of Redevelopment Plan implementation would require an irreversible commitment of natural resources for building construction, such as wood, refined metals, petroleum, and stone. It would result in the irretrievable commitment of energy and water to support the projected urban development that would occur. Implementation of the Redevelopment Plan would facilitate

changes in existing land uses and land use patterns, including the development of vacant parcels and conversion of areas from one type of land use to another. These changes have been anticipated in, and would be consistent with, the General Plan and Community Plans for the City of Sacramento.

The irreversible environmental changes that would occur from General Plan levels of development to non-renewable natural resources, open space, soils and geology, biological resources, transportation, visual quality and aesthetics and cultural resources were discussed in the SGPU EIR and the SADEIR. These changes would be the same for the Redevelopment Plan.

5.3 GROWTH INDUCEMENT

This section is provided in accordance with Section 15126(g) of the State CEQA Guidelines which requires discussion of potential ways in which the proposed project could induce growth, including:

- ▶ "...foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."
- ▶ "...remove obstacles to growth..." or
- ▶ "...encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively..."

Growth-inducing impacts can occur when an action leads to unplanned growth, or growth that occurs faster than envisioned by adopted public plans and policies. Currently, necessary replacement economic growth in the Project Area is stymied by abandoned land uses oriented towards military uses, and the lack of adequate public infrastructure to accommodate planned civilian land uses. Therefore, inducement of planned growth within the Project Area is a desired effect of the proposed Redevelopment Plan.

As discussed in Section 4.1 (Land Use), the proposed Redevelopment Plan activities are consistent with City of Sacramento General Plan policies. The proposed Redevelopment Plan would help to attain the City General Plan housing and economic development goals by strengthening the Project Area's economic base and improving its function, appearance and desirability as a place to work and conduct business, and by investing tax increment funds in low and moderate income housing preservation and development.

Future development in the Project Area is anticipated to result in an additional 1,500 new jobs in the Project Area. Employment growth would occur through the reuse of existing facilities at the Depot, as well as the development of vacant land designated for industrial uses. Since such growth would occur in an existing urbanized area of the City, it would result in a more efficient use of land as compared to growth that occurs at the urban fringe

or in outlying areas. Infill development also minimizes the need to extend public infrastructure and services beyond their current boundaries, thus resulting in more efficient delivery of services.

Increased employment opportunities resulting from implementation of the proposed Redevelopment Plan would also increase the demand for retail goods and services in the Project Area, and, to a lesser extent, the Sacramento region as a whole. Such demand could help to retain existing businesses in the Project Area and, potentially, induce additional economic growth in the Sacramento urban area. However, this indirect demand has been planned for the region in the General Plan. No new demand is anticipated on a regional level as a result of the Project.

5.4 CUMULATIVE IMPACTS

CEQA defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts (CEQA Guidelines, Section 15355).

This EIR has focused on the indirect impacts of Redevelopment Plan implementation, which would result primarily from stimulation of additional development of the Project Area due to infrastructure improvements and alleviation of blight. These impacts would occur over time as the result of individual development projects within the Project Area. The impacts related to development of the Project Area are considered to be indirect Project impacts (rather than cumulative impacts) because conditions within the Project Area make substantial additional development unlikely to occur without Project implementation.

For this EIR, then, cumulative impacts are considered to be those resulting from the Project, together with foreseeable development within the region. As allowed by CEQA, regional development in this case is assumed to be buildout of the City and the County General Plan areas, consistent with applicable plans and zoning. The regional development projects were used in particular to evaluate impacts to transportation and circulation, air quality, and noise.

Significant cumulative impacts identified in this EIR include the following:

- ▶ The SADEIR concluded that cumulative projected growth in conjunction with the Reuse Plan would result in unsatisfactory roadway operations at many locations throughout the study area. These impacts were reduced, but not mitigated to less than significant levels. A Statement of Overriding Considerations was adopted for cumulative roadway impacts. Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of these findings.
- ▶ The expected development and subsequent traffic levels would result in cumulative increased in criteria air pollutants. Emissions increases occurring as a direct result of Redevelopment Plan implementation are within the volumes contemplated by the

SGPU and SADEIR. When the SGPU and SADEIRs were adopted, Statements of Overriding Considerations were adopted for cumulative air quality impacts. Potential impacts resulting from implementation of the Redevelopment Plan are within the scope of these findings.

- ▶ Development of the proposed project, including both future individual redevelopment projects and in conjunction with the urban development in the Morrison Creek watershed, would increase the amount of impervious surface, increasing the rate and amount of surface water runoff entering the existing drainage system. Increased surface water runoff could exceed existing drainage system capacity and contribute to localized flooding.
- ▶ Public activities and private development occurring as a result of Redevelopment Plan implementation could increase cumulative storm runoff peak flows and volumes, altering the existing receiving water quality.
- ▶ Without adequate safety measures included in the planning and design of new rehabilitation and construction that would occur with the Project, crime rates and the demand for police services could increase, resulting in a cumulative impact on police protection service levels.

6.0 ALTERNATIVES ANALYSIS

6.1 INTRODUCTION

Section 15126(d) of the State CEQA Guidelines requires an evaluation of the effects of project alternatives that could meet the basic objectives of the project, including "... a reasonable range of alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project, and evaluate the comparative merits of the alternatives". The project objectives are stated in Section 3 of this EIR. Alternatives are used to determine whether or not a variation of the proposed project would reduce, or eliminate, significant project-induced impacts, within the basic framework of the objectives. Section 15126(d) of the Guidelines specifies that the range of alternatives is governed by the "rule of reason", requiring the evaluation of only those alternatives "...necessary to permit a reasoned choice". Further, an EIR "... need not consider an alternative whose affect cannot be reasonably ascertained and whose implementation is remote and speculative".

Potential environmental impacts for alternatives are provided as a comparison to the proposed project. The advantages and disadvantages of the alternative to the proposed project are presented. The EIR identifies the environmentally-superior alternative based on the impact analysis in accordance with Section 15126(d)(2) of the Guidelines. Should the environmentally superior alternative be the "no project", then another environmentally superior alternative among those examined (including the project) is identified. Any significant environmental impacts created exclusively by an alternative are identified.

6.2 ALTERNATIVES PREVIOUSLY CONSIDERED AND REJECTED

Three alternatives were previously considered and rejected as summarized below:

Alternative Public Actions. During preparation of the Redevelopment Plan alternative strategies for redevelopment of the Project Area were considered. The intent of the Redevelopment Plan is to assist in the conversion of the former Sacramento Army Depot from military to civilian use, consistent with land use plans adopted by the City Council. Extensive public input has been received during the base reuse planning process, and the Council has made numerous decisions that have led to the land use and facilities plans upon which the proposed redevelopment public improvements are based. The proposed redevelopment activities also serve to implement many of the mitigation measures adopted with the Sacramento Army Depot Reuse Plan EIR. It was determined by Agency and City staff that the proposed public improvements and facilities are consistent with the goals and objectives of the Redevelopment Plan, the Army Depot Reuse Plan and the City General Plan, and are necessary for redevelopment of the Project Area consistent with land use plans and mitigation of impacts previously identified. The list is general and intended to be all-inclusive of the potential activities needed to assist in the implement the reuse plan over the

life of the Redevelopment Plan. It is for that reason that this EIR does not consider an alternative list of public improvements and facilities.

Alternative Location. CEQA requires that an alternative location for a proposed project be analyzed if one is available that could lessen potential adverse impacts associated with the proposed project. The objective of the proposed Redevelopment Plan is to facilitate conversion of the former Sacramento Army Depot to civilian uses, and to alleviate blight and encourage economic recovery in the Project Area. There are no other locations that could accommodate the project objectives. Implementation of an offsite alternative to the proposed project was deemed not feasible, and no off-site alternative is evaluated in this EIR.

Alternative Funding Mechanisms. This alternative considers utilization of revenue sources other than tax increment financing to fund public improvements in the Project Area. Federal, State, County, and City programs exist may initiate similar development without the need for redevelopment tax increment financing.

These sources of alternative funding typically include mortgage revenue bonds, Community Development Block Grant Funds, Economic Development Administration Funds, State and Federal highway transportation grants, Urban Development Action Funds, revenue bonds and formation of assessment districts. Such funding sources may avoid the potential reduction of services levels for agencies that may receive less revenue if full tax increment financing is used. However, given the recent budget limitations at all levels of government, each of these alternative sources of funds has its own unique limitations on use, application requirements, eligibility requirements, and funding priorities. The City also has limited influence over funding programs operated by other agencies. In addition, economic conditions in the Project Area make it difficult to introduce assessment districts and their costs on property owners. The City has attempted to alleviate blight in the Project Area using these funding tools, with limited success. In addition, the infrastructure needs for converting an aging and obsolete military base to civilian use are significant, and the unique circumstances with regard to public conveyances, military ownership, civilian reuse of a military airfield and long-term toxic clean-up constraints on property transfers make it difficult to introduce assessment districts and their costs on future property owners. Thus, the use of tax increment financing has been proposed because the other sources have been found insufficient to fund the public actions and improvements needed.

Without sufficient funding for redevelopment activities, necessary public improvements and other mitigation may not be constructed. The lack of necessary public improvements along with increased growth, both in the Project Area and in adjacent areas, may create new or exacerbate potentially significant impacts on existing and new development.

If consistently available, alternative funding mechanisms could encourage development similar in scale and scope to the Redevelopment Project. Impacts associated with such development would be similar to those of the proposed project. However, the continued availability of outside sources of funding cannot be guaranteed over the 35 year life of the

Redevelopment Plan. If outside funding mechanisms are relied upon for necessary public improvements, and those funds are no longer available, the inability to provide necessary public improvements will significantly impact new and existing development. Although development may proceed consistent with the General Plan and zoning, other impacts relating to inadequate infrastructure and continued blight could increase. Furthermore, redevelopment law requires 20 percent of tax increment to be set aside for the development and improvement of low and moderate-income households. Outside sources of funding may not provide comparable provisions for this public need.

Due to the uncertainty of available funding for necessary public improvements and other mitigation and the lack of housing provisions, the stated goals and objectives of the Redevelopment Plan would not be assured. Therefore, this alternative is considered infeasible.

6.3 NO PROJECT ALTERNATIVE

Under the No-Project Alternative, the proposed Redevelopment Plan for the Project Area would not be adopted. The public improvements proposed as part of the Plan (roadway, water, sewer, drainage, transit), and other Redevelopment Plan programs (such as industrial rehabilitation, business development assistance and low- and moderate-income housing assistance) would not be implemented.

Private development could continue to occur in the Project Area. New development would be consistent with the City General Plan, applicable Community Plans, and City zoning designations and requirements. The extent to which such development would occur is unknown. It is possible that the Project Area could become fully developed, with the same level of development occurring as would occur under the proposed Redevelopment Plan. However, given the existing conditions in the Project Area (the presence of blighted areas, need for upgraded infrastructure, and poor socioeconomic conditions), it is unlikely that the same level (or types) of development would occur. In fact, it is likely that conditions in the Project Area could lead to further deterioration and declines in Project Area development and employment.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Due to the unique nature of a Redevelopment Plan, which involves no land use modifications but is a legal tool and a financial mechanism to eliminate blight in a targeted area and facilitate planned development, no other alternatives have been developed for this project. In most cases, the public projects identified with the Redevelopment Plan are intended to mitigate existing problems and barriers to planned growth within the Project Area. By providing mitigation for existing infrastructure and contamination problems caused by the Project Area's previous use as a military base, and mitigating problems identified with reuse of the base at General Plan densities, the Redevelopment Plan is the environmentally superior

alternative.

6.5 COMPARISON OF IMPACTS

The following discussion presents a comparison of the impacts of the No Project Alternative to the impacts of the proposed Project (adoption and implementation of the Sacramento Army Depot Redevelopment Plan). The discussion is limited to those impacts for which there would be differences between the Project and the alternative. No project-related significant unmitigable impacts were identified for the proposed Redevelopment Plan or its alternative. Impacts from the proposed project would be indirect, caused by growth that could result as project activities improve conditions in the Project Area. Unmitigable impacts identified relate to cumulative impacts as a result of General Plan growth in the Project Area and the surrounding City. However, since implementation of the proposed Redevelopment Plan is expected to improve existing blighted conditions and socioeconomic deterioration more effectively than the No Project Alternative, it is considered to be the environmentally superior project.

ALTERNATIVE 1

Land Use, Plans and Policies

Under the No-Project Alternative, existing development activities would continue to occur in the Project Area, consistent with adopted plans and policies. Existing non-conforming and deteriorated land uses would be more likely to remain, with no formalized mechanism for their rehabilitation or removal. While the current City General Plan industrial and economic development goals would remain in place, achievement of these goals would be attenuated by the lack of infrastructure improvements and incentives for private sector investment that would occur under the proposed Redevelopment Plan. The Project Area's current economic and social difficulties would probably continue in the absence of any explicit remedial actions. Potential closure or relocation of local businesses could result in additional Project Area and regional employment losses, as well as continued disinvestment, blight, and social decline in the Project Area.

Circulation

A lower level of new development (or further deterioration) could result, in the short term, in slightly less traffic within the Project Area. However, cumulative conditions in the Project Area would continue to worsen with regional growth. Under the No Project Alternative, the City would have to use other resources to provide the traffic improvements proposed as part of the Plan.

Air Quality

A lower level of new development could result in fewer air quality impacts from

construction, including the generation of fugitive dust.

The No Project Alternative would result in smaller increases (or potentially, decreases) in employment, and thus, lower emissions of criteria pollutants from stationary and mobile sources in the Project Area. However, the Project Area is considered an "infill site" where development should occur to reduce vehicle miles traveled in the City. This alternative could ultimately result in worsened cumulative conditions in the airshed, as development moved outward and vehicles miles traveled increased.

Noise

A lower level of new development could result in fewer noise impacts from construction. This alternative would result in smaller increases (or potentially, decreases) in employment, and thus, potentially lower traffic-generated noise levels (although there would still be higher noise levels from cumulative traffic increases). There could also be fewer employee populations exposed to unacceptable average ambient noise levels. However, fewer substandard buildings would be upgraded under this Alternative, such as the residential structures across Power Inn Road, and as a result, some buildings could still provide inadequate noise reduction.

Cultural Resources

Decreased Project Area development activity under this alternative could reduce the potential for disruption of important historic cultural or historic features, which is an indirect effect of Redevelopment Plan implementation. However, since development occurring consistent with the adopted City General Plan could also disrupt important resources, the extent and severity of cultural resources impacts related to this alternative and the Proposed Project would be comparable.

Biological Resources

The No Project Alternative could result in fewer impacts to native oaks, potential burrowing owl nesting and foraging habitat, and vernal pool resources, if development in the Project Area is minimized.

Hydrology and Water Quality

This alternative could result in less of an increase in impervious surfaces, and less displacement of runoff storage volume by engineered fill. There could be correspondingly fewer impacts on localized and downstream flooding, although a corresponding amount of development could occur elsewhere in the drainage shed. Improvements to the existing storm drainage system would not be implemented, and as a result, local drainage capacity would not be increased.

This alternative could also result in fewer persons and structures exposed to flood hazards from regionally-generated flooding. Until the FEMA designation is changed, lands within the Project Area would still be subject to highly restrictive development policies and ordinances.

Public Services

This alternative could result in less demand for fire protection and emergency services than the Project, based on less local population. However, because fewer substandard buildings would be rehabilitated, and water system improvements (hydrant pressure) would not be made, the alternative could result in continued fire hazards within the Project Area and adjacent residential areas (that would be reduced under the Project).

The No Project Alternative could result in less demand for police protection services than the Project, based on new development. However, because there would be fewer new and redeveloped buildings, there would be less potential to incorporate Crime Prevention through Environmental Design into Project Area uses. In addition, continued blight and negative socioeconomic conditions in the Area could result in a continuation of crime problems within the Area (or further increases in crime), resulting in a higher actual demand for services.

The No Project Alternative would not result in the replacement or upgrading of deficient water and sewer lines, and impacts to water and sewer service could occur as a result.

Public Health and Safety

This alternative could result in less construction, and therefore, the exposure of fewer construction workers to hazardous materials. A lower level of development would also result in less of an increase in the generation and handling of hazardous materials and wastes by commercial and industrial facilities. However, with less investment occurring in the Project Area, less funding and incentives would be available for remediation of existing contaminated sites.

7.0

Report Preparation

7.0 REPORT PREPARATION

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9.0

Appendices

APPENDIX A

Notice of Preparation

SACRAMENTO HOUSING AND REDEVELOPMENT AGENCY

MEMORANDUM

DATE: December 13, 1994

TO: Interested Persons and Responsible/Trustee Agencies

FROM: Gail M. Ervin, Acting Environmental Coordinator *gme*

SUBJECT: **NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE SACRAMENTO ARMY DEPOT REDEVELOPMENT PLAN**

The Redevelopment Agency of the City of Sacramento (Agency) is the Lead Agency for the preparation of an Environmental Impact Report (EIR) for the adoption of a Sacramento Army Depot Redevelopment Plan.

The project description, location and the probable environmental effects are contained in the attached materials. A copy of the Initial Study is included.

Interested persons are invited to comment on the Notice of Preparation (NOP) in order to assure their concerns are addressed in the EIR. The Agency needs to know the views of Responsible and Trustee agencies as to the scope and content of the environmental information which is germane to the agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering permits or other approvals for the project.

Please review the proposed EIR focus, scope and content. Should you feel that additional topics should be addressed in the EIR and you wish to respond, due to the time limits mandated by state law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response by January 13, 1995 to the following address:

Gail M. Ervin, Acting Environmental Coordinator
Sacramento Housing and Redevelopment Agency
630 I Street,
Sacramento, CA 95814

If you have any questions, please call me at (916) 989-0269.