

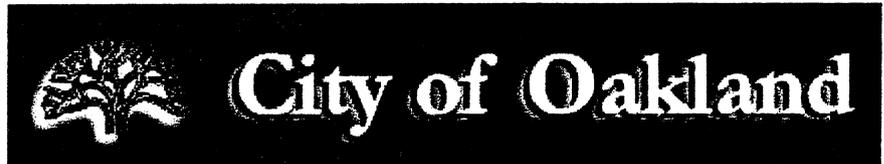
Volume No. 2: Appendices
Environmental Impact Report

for the

**Oakland Army Base Area
Redevelopment Plan**

State Clearinghouse Number 2001082058

prepared by the



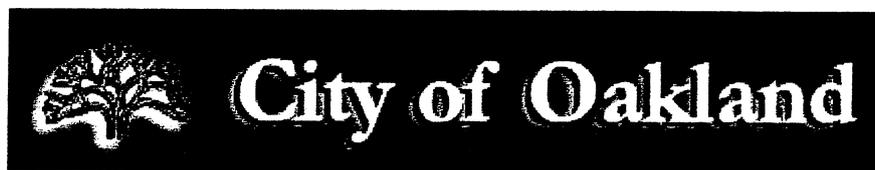
environmental consultant:

ga g. borchard & associates

APRIL 2002

Volume No. 2: Appendices
Environmental Impact Report
for the
Oakland Army Base Redevelopment Area Plan
April 2002

prepared by



with the assistance of



g. borchard & associates
6026 Colby Street
Oakland, California 94618
a small local WBE

in conjunction with

Dowling Associates, Inc., a small local firm
GAIA Consulting, Inc., a small local WBE
Luster National, Inc., a small local MBE
URS Corporation, a local firm

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 - Letter dated September 12, 2001 from the California Department of Toxic Substances Control (DTSC)
 - Letter dated September 12, 2001 from the East Bay Regional Park District (EBRPD)
 - Summary of scoping comments from September 13, 2001 Public Meeting
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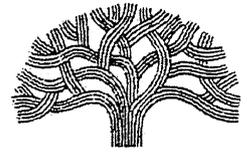
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- 1D Notice of Determination Regarding Adoption of an Alternative Baseline

Appendix 1A
Notice of Scoping Meeting and Hearing to Adopt an
Alternative Baseline



August 10, 2001

**COMBINED NOTICE OF PREPARATION, EIR SCOPING MEETING,
AND NOTICE OF INTENT TO ADOPT AN ALTERNATIVE BASELINE**

This is a notice of the following:

1. Preparation of a draft environmental impact report (EIR);
2. Intent to adopt a proposed alternative environmental baseline in accordance with §21083.8.1 of the Public Resources Code (PRC);
3. Public EIR scoping meeting; and
4. Public hearing for adoption of an alternative baseline

for the

OAKLAND ARMY BASE AREA REDEVELOPMENT PROJECT

The City of Oakland is preparing an EIR in compliance with the California Environmental Quality Act (CEQA) for the subject project.

Description. The Oakland Army Base (OARB) Area Redevelopment Project ("the project") is adoption of a 1,731-acre West Oakland redevelopment area and associated redevelopment plan, land assembly, infrastructure improvements, public access improvements, environmental improvements, land development, and required regulatory implementing actions including but not limited to a general plan amendment and rezoning. As illustrated by the enclosed figure, the OARB Redevelopment Project Area encompasses three redevelopment sub-areas: OARB (450 acres); Maritime (1,215 acres), and 16th and Wood Streets (66 acres). The redevelopment sub-areas are generally expected to be redeveloped as follows: 1) the OARB redevelopment sub-area would be developed as envisioned in the OARB Final Reuse Plan; 2) the Maritime redevelopment sub-area would be developed in accordance with the Port of Oakland's Vision 2000 Program; and 3) the 16th and Wood Street redevelopment sub-area would be developed consistent with reasonably foreseeable market demand (i.e., office and/or housing). Land use within the redevelopment area is currently industrial; anticipated land use under the project could be a combination of two or more of the following: industrial, office, retail, hotel, recreation, public access, and/or community service.

Location. As illustrated by the attached graphic, the redevelopment area is located in westernmost Oakland, and is generally bounded by the Interstate-80 approach to the Bay bridge to the north, the Oakland Inner Harbor to the south, the Oakland Outer Harbor and San Francisco Bay to the west, and Wood Street and the West Oakland community to the east.

Lead Agency. The City of Oakland.

Probable Environmental Effects. Changes in land use and visual setting; consistency with plans and policies; alteration or loss of cultural resources; exposure to seismic hazards and hazardous waste; and increased air pollution, noise, population, demand for public services and utilities, and traffic.

EIR Scoping. The City is sending this notice to members of the public, to agencies who may be responsible for approvals related to or funding of the project, and to agencies who have jurisdiction over natural resources held in trust for the people of the state that may be affected by the project. From the public, the City would like to know your views as to the scope and content of the environmental information to be considered in the EIR. From public agencies, the

City needs to know your views on the scope and content of the environmental information germane to your statutory responsibility in connection with the project. In addition, the City needs the name of a contact person at your agency.

Alternative Baseline. The physical context in which impacts of a proposed project are determined is called the "baseline." Normally, the baseline comprises those environmental conditions that exist at the time of issue of a Notice of Preparation. CEQA §21083.8.1 offers agencies preparing an EIR for reuse of a military base such as the Oakland Army Base the option to analyze impacts in the context of the physical conditions that were present at the time the federal decision became final for closure of the base. Use of such an alternative baseline can better represent the actual impact of OARB reuse when compared to the impacts of the base in full operation. The decision to close the OARB became federal law on September 28, 1995. In order to most accurately assess the type and intensity of OARB reuse impacts, the City proposes to use an alternative baseline of 1995 for the OARB portion of the project to determine impacts for the following environmental factors: traffic, air quality, water consumption, wastewater treatment, energy consumption, and schools. From the public, the City would like to know your views regarding the use of an alternative baseline. From public agencies, the City needs to know how you would address application of your regulatory policies and permitting standards to the proposed alternative baseline.

Providing Comments. You may provide written input and comment on either or both the EIR scope and the use of an alternative baseline at any time within 30 calendar days of receipt of this notice, but in any case **no later than September 19, 2001**. Please provide your written input to:

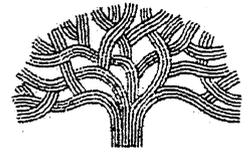
Mr. Scott Gregory, EIR Project Manager
c/o Ms. Aliza Gallo
250 Frank Ogawa Plaza, Suite 3315
Oakland, California 94612

Public Meeting. The City will conduct a joint scoping meeting on the EIR and hearing on the use of the alternative baseline at a regularly-scheduled meeting of the Oakland Planning Commission. You may learn more about the project and the issues, and may provide verbal comments at the meeting/hearing.

Combined Public Meeting
EIR Scoping Meeting/Hearing on Use of an Alternative Baseline
6:30 p.m., September 19, 2001
Oakland Planning Commission
Hearing Room 1 City Hall, One Frank H. Ogawa Plaza

How to Obtain the Draft EIR. When it publishes the Draft EIR, the City will provide the document to relevant responsible and trustee agencies, as well as to those who respond to this notice by commenting on the scope of the EIR or the use of an alternative baseline. Alternatively, you may send a written request to Mr. Scott Gregory, EIR Manager, as indicated above.

Enclosure: Map of Oakland Redevelopment Project Area and Notice of Additional Public EIR Work Session/EIR Scoping Meeting (all recipients). OARB Draft Final Reuse Plan (public agencies).



August 10, 2001

THE OAKLAND ARMY BASE (OARB) AREA REDEVELOPMENT PROJECT EIR PUBLIC SCOPING WORKSHOP

WHEN AND WHERE:

The City of Oakland will hold a public scoping workshop on the OARB Area Redevelopment Project EIR on Thursday, September 13, 2001 from 6:00 to 8:00 p.m. at the West Oakland Senior Center, 1724 Adeline Street, Oakland, California.

WHAT:

The Oakland Army Base (OARB) Area Redevelopment Project is adoption of a 1,731-acre West Oakland redevelopment area and associated redevelopment plan, land assembly, infrastructure improvements, public access improvements, environmental improvements, land development, and required regulatory implementing actions including but not limited to a general plan amendment and rezoning. The OARB Redevelopment Project Area encompasses three redevelopment sub-areas: OARB (450 acres), Maritime (1,215 acres), and 16th and Wood Street (66 acres). The redevelopment sub-areas are generally expected to be redeveloped as follows:

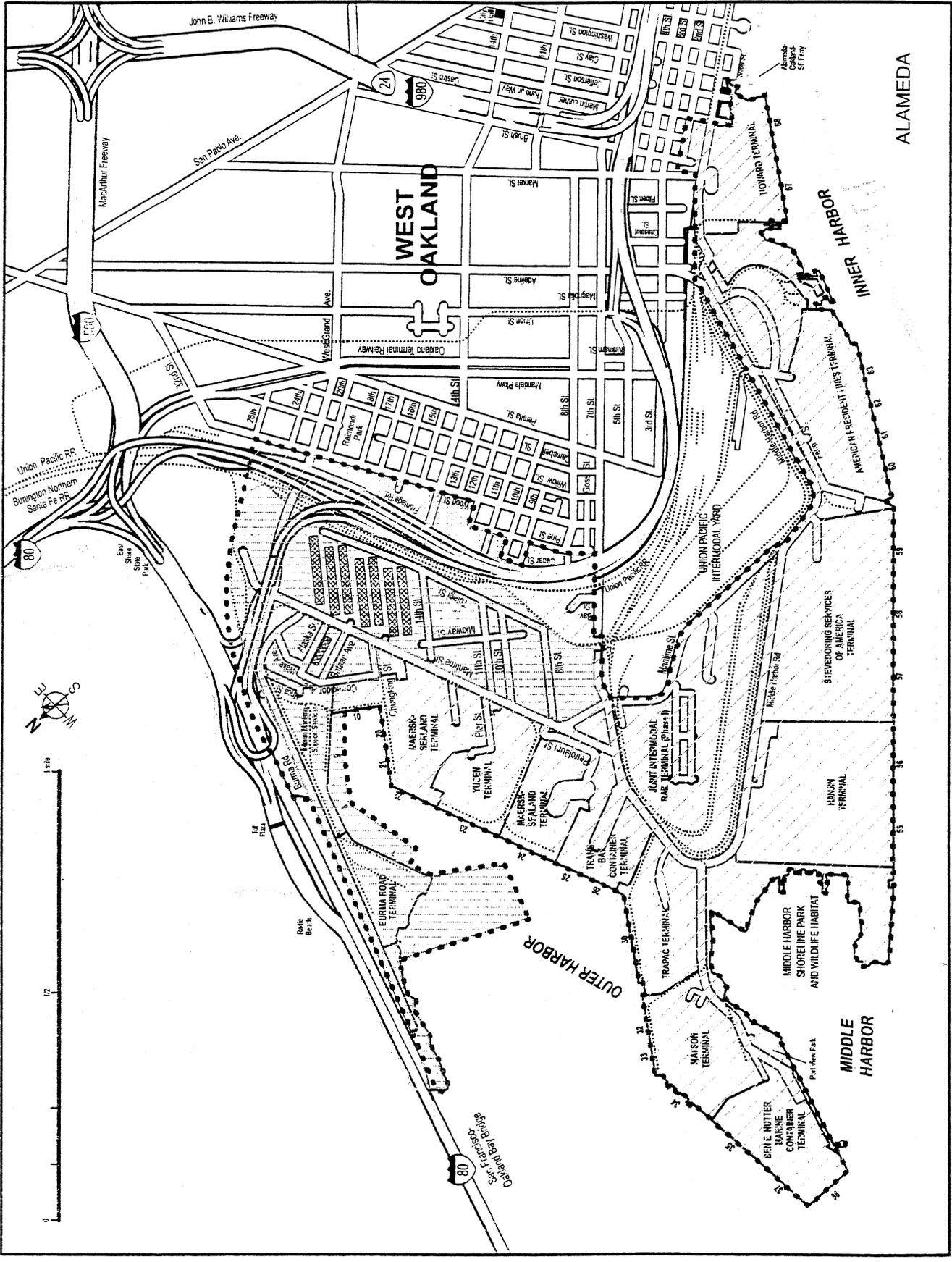
- 1) the OARB redevelopment sub-area would be developed as envisioned in the OARB Final Reuse Plan;
- 2) the Maritime redevelopment sub-area would be developed in accordance with the Port of Oakland's Vision 2000 Program; and
- 3) the 16th and Wood Street redevelopment sub-area would be developed consistent with reasonably foreseeable market demand (i.e., office and/or housing).

Land use within the redevelopment area is currently primarily industrial. Anticipated land use under the project could be a combination of two or more of the following: industrial, office, retail, hotel, recreation, public access, and/or community service.

WHY:

The City of Oakland has determined that an Environmental Impact Report (EIR) shall be required for this project. The EIR's purpose, generally, will be to inform governmental decision-makers and the public about the potential significant environmental effects of proposed activities, and to identify ways that environmental effects can be avoided or significantly reduced. The purpose of the scoping workshop will be to provide the public with an opportunity to describe topics or issues that it believes should be addressed in the EIR. Input from the scoping workshop will help identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in the EIR. All interested persons are invited to attend this workshop.

If you are unable to attend, an additional opportunity for public input will be provided at a formal scoping hearing to be held before the Oakland Planning Commission on September 19th at 6:30 p.m., Hearing Room 1 - City Hall at One Frank Ogawa Plaza (see attached notice). Alternatively, you may send your written comments on the EIR's scope to Scott Gregory, EIR Project Manager, c/o Ms. Aliza Gallo - 250 Frank Ogawa Plaza, Suite 3315, Oakland, California, 94612.



LEGEND

-  OARB Redevelopment Project Area
-  Maritime Redevelopment Sub-area
-  OARB Redevelopment Sub-area
-  16th and Wood Redevelopment Sub-area

**Combined Notice of Preparation, EIR
Scoping Meeting, and Notice of Intent to
adopt an Alternative Baseline for the
Oakland Army Base (OARB)
Redevelopment Area Project EIR.**

This is a notice that the City of Oakland will conduct a joint scoping meeting on the EIR and hearing on the use of the alternative baseline at a regularly scheduled meeting of the Oakland Planning Commission on September 19, 2001 beginning at 6:30 p.m. at Hearing Room 1 City Hall, One Frank H. Ogawa Plaza.

You may learn more about the project and the issues, and may provide verbal comments at the meeting/hearing. Alternatively, you may provide written comments on either or both of these issues. Written comments may be sent to Mr. Scott Gregory, EIR Project Manager, c/o Ms. Aliza Gallo, 250 Frank Ogawa Plaza, Suite 3315, Oakland, California 94612. Written comments must be received no later than September 19, 2001.

**The Oakland Army Base (OARB) Area
Redevelopment Project EIR
Public Scoping Workshop**

This is a notice that the City of Oakland will hold a public scoping workshop on the OARB Area Redevelopment Project EIR on Thursday, September 13, 2001 from 6:00 to 8:00 p.m. at the West Oakland Senior Center, 1724 Adeline Street, Oakland, California.

The purpose of this workshop will be to provide the public with an opportunity to describe topics or issues that it believes should be addressed in the EIR. All interested persons are invited to attend.

Appendix 1B Scoping Comments

- Letter dated September 10, 2001 from the California Department of Transportation (Caltrans)
- Letter dated September 12, 2001 from the California Department of Toxic Substances Control (DTSC)
- Letter dated September 12, 2001 from the East Bay Regional Park District (EBRPD)
- Summary of scoping comments from September 13, 2001 Public Meeting
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- Letter dated September 20, 2001 from the San Francisco Bay Conservation and Development Commission (BCDC)
- Letter dated April 8, 2002 from the East Bay Municipal Utility District (EBMUD)

DEPARTMENT OF TRANSPORTATION

P O BOX 22880
OAKLAND, CA 94622-0880
Tel: (510) 286-4444
Fax: (510) 286-5513
TDD (510) 286-4464



September 10, 2001

ALA-880-34.11
File #ALA880490
SCH #2001082058

Mr. Scott Gregory
EIR Project Manager
c/o Ms. Aliza Gallo
250 Frank Ogawa Plaza
Suite 3315
Oakland, CA 94612

Dear Mr. Gregory:

**Oakland Army Base Redevelopment Plan - Combined Notice of Preparation (NOP), EIR-
Scoping Meeting, and Notice of Intent to Adopt an Alternative Baseline**

Thank you for including the California Department of Transportation (Department) in the early stages of the environmental review process for the above-referenced project. We have examined the combined Notice of Preparation and have the following comments to offer:

The redevelopment of the former Oakland Army Base (OARB), as outlined for the Reconfigured Reuse Plan, will put heightened demands on the existing, already congested transportation infrastructure that will have to serve the new developments. Upon approval of any development program, developers and government agencies should address transportation issues and secure funding for transportation improvements. The Department, which is responsible for State highway facilities, should be involved early in the planning process. We will be looking for detailed transportation data in the Draft Environmental Impact Report (DEIR) for our review.

Specific planning elements, identified under Traffic/Infrastructure in the Supplemental Environmental Impact Statement, require coordination with the Department. These planning details relate primarily to transportation developments along Maritime Street and include the following:

- The Department has a Class II Bikeway project along Burma Road, beginning at Maritime Street. This bike path needs to tie in to a bikeway to the designated public park at the western end of the OARB. Both developments should be integrated into the San Francisco Bay Trail system.
- Maritime Street is part of the Base property and the main access road. This major roadway also serves as the main access to adjacent container terminals of the Port of Oakland. However, the basic layout for redevelopment designates a realignment of Maritime Street toward the center of the proposed development area. New access channels to the former

Base, including connections to Department transportation facilities, are envisioned as part of the redevelopment. These concepts will require close coordination of planning efforts.

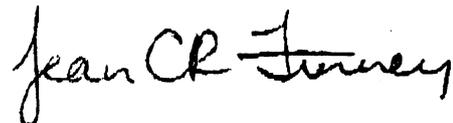
Along with impacts to Caltrans facilities, the Department urges close examination of public access and linkages, specifically public access to the future Gateway Park and the San Francisco Oakland Bay Bridge, as part of the scoping for the DEIR.

The plans for redevelopment of the former Oakland Army Base will have a significant impact on the existing transportation infrastructure. Due to long lead times for infrastructure projects, planning for adequate transportation facilities must begin at an early stage of program development. We look forward to receiving the DEIR for further comment, and to working with the Oakland Base Reuse Authority and the City of Oakland on this important project.

Should you require further information or have any questions regarding this letter, please call Paul Svedersky of my staff at (510) 622-1639.

Sincerely,

HARRY Y. YAHATA
District Director

By 

JEAN C. R. FINNEY
District Branch Chief
IGR/CEQA

c: State Clearinghouse



Department of Toxic Substances Control



Edwin F. Lowry, Director
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

September 12, 2001

Ms. Elois A. Thornton
City of Oakland
250 Frank Ogawa Plaza, Suite 3315
Oakland, California 94612

Mr. Scott Gregory
EIR Project Manager
City of Oakland
250 Frank Ogawa Plaza, Suite 3315
Oakland, California 94612

NOTICE OF PREPARATION, OAKLAND ARMY BASE, SCH# 2001082058

Dear Ms. Thornton and Mr. Gregory,

The Department of Toxic Substances Control (DTSC) has received the Notice of Preparation (NOP) dated August 10, 2001. The Amended Draft Final Reuse Plan for the Oakland Army Base dated July 23, 2001 is attached with the NOP. The City of Oakland is preparing an environmental impact report (EIR) in compliance with the California Environmental Quality Act for the project entitled "The Oakland Army Base Area Redevelopment Project." The NOP is a combined notice for the preparation of a draft EIR, the intent to adopt a proposed alternative environmental baseline, a public EIR scoping meeting, and a public hearing for adoption of an alternative baseline. DTSC is the lead regulatory agency overseeing environmental cleanup at the Oakland Army Base (OARB). DTSC has reviewed the NOP and the Reuse Plan and provides the following comments:

1. NOP, Contact Person: Please forward all future documents (e.g., draft EIR) to Mr. Henry Wong, Remedial Project Manager, DTSC, Office of Military Facilities, 700 Heinz Avenue, Suite 200, Berkeley, California 94710-2721.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at www.dtsc.ca.gov.

2. **NOP, Alternative Baseline:** The City of Oakland uses the California Public Resources Code (PRC), Section 21083.8.1 to establish a baseline for which environmental impacts would be analyzed. PRC, Section 21083.8.1(b)(1) allows a baseline be set at the time when the federal decision became final for the closure or realignment of a base. The decision to close the Oakland Army Base became federal law on September 28, 1995.

Pursuant to PRC, Section 21083.8.1(d)(2), the baseline provisions do not apply to OARB. DTSC is undertaking environmental investigation and remediation at OARB in accordance with Chapter 6.8 of, Division 20 of the California Health and Safety Code (H&SC). Please reevaluate the use of the proposed alternative baseline.

Notwithstanding the questionable applicability of PRC, Section 21083.8.1 for OARB, the environmental impact report should analyze the no project alternative for the existing conditions on the base, as it exists at the time that the environmental impact report is prepared, as well as what could be reasonably expected to occur in the foreseeable future if the reuse plan were not approved, based on current plans and consistent with available infrastructure and services.

3. **NOP, Project Description:** The NOP states that OARB encompasses 450 acres. Based on the Basewide Environmental Baseline Survey for OARB dated September 1986, the total area of OARB is 421.9 acres. Please reconcile the discrepancy.
4. **NOP, Probable Environmental Effects:** The NOP includes exposure to hazardous waste as one of the probable environmental effects which the draft EIR would be analyzed. DTSC requests the draft EIR to include the following potential impacts due to releases of hazardous substances:
 - a. The Army has not evaluated potential lead contamination in soil adjacent to structures painted with lead-based paint. DTSC collected samples from soils adjacent to a few buildings and found up to 2,100 mg/kg of lead. There is limited knowledge on the potential lead contamination in the soils adjacent to structures at OARB. However, impacts to the environment from exposure to lead resulting from transfer and reuse must be evaluated.
 - b. Building 1 is located adjacent to a site where a waste oil reclaiming plant had been before the Army's occupation. The building is sitting on top of or immediately adjacent to a hazardous substance release site with ongoing site

Ms. Elois A. Thornton and Mr. Scott Gregory
September 12, 2001
Page 3

investigation. However, impacts to the environment from exposure to hazardous substances resulting from transfer and reuse must be evaluated.

- c. The shallow groundwater at OARB generally contains elevated concentrations of metals and other hazardous constituents. Operable Unit 7 is found to be contaminated with volatile organic compounds in groundwater. DTSC would require institutional controls among other remedial alternatives to be evaluated in a feasibility study. Such controls would restrict well construction and usage of the shallow groundwater. The draft EIR should address the management of potential contaminated groundwater during project construction and redevelopment, as well as potential impacts due to exposure resulting from reuse.
5. Notice of Completion and Environmental Document Transmittal: The Notice of Completion identifies the project title as the "Oakland Army Base Redevelopment Plan." Please verify whether the project title should be the "Oakland Army Base Area Redevelopment Project."
6. Notice of Completion and Environmental Document Transmittal: The Notice of Completion includes educational development for the proposed EIR; however, the check boxes for the project issues do not include schools/universities. Please clarify and revise accordingly.

Pursuant to the California Education Code, Section 17210, any school receiving State funding must conduct environmental assessment and any necessary remediation. The EIR should discuss school siting and applicability of the California Education Code, Section 17210, and potential impacts due to exposure resulting from schools development.

7. Reuse Plan: Operable Units 1, 2, 3, 4, and 7 of OARB are currently in the remedial investigation phase of the environmental cleanup program. These operation units comprise most of the base areas. Existing data show that these operable units contain hazardous substances regulable pursuant to H&SC, Chapter 6.8, and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). As such, any removal or disposition of materials in or on the OARB property must be consistent with cleanup goals and standards which are identified in the remedial investigation and feasibility study phases of H&SC, Chapter 6.8 and CERCLA response actions.

Environmental investigations have not been completed at OARB, the suite of necessary and feasible remedial alternatives has not been identified and

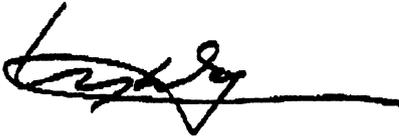
Ms. Elois A. Thornton and Mr. Scott Gregory
September 12, 2001
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evaluated, and a Remedial Action Plan that documents the preferred remedies has not been approved. It cannot, therefore, be assumed that those remedies that are ultimately determined to be necessary to protect public health and the environment from hazardous substance releases are consistent with the proposed redevelopment in the Reuse Plan.

8. Reuse Plan, Page 12: The Reuse Plan indicates that Jacobs Hall or other property might be used as transitional housing for a Workforce and Business Development Campus operated by the Homeless Collaborative. Pending the final approval of the Remedial Action Plan for the base, portion of the base might be restricted for residential reuse due to residue contamination. Siting of residential areas must be at locations with unrestricted reuse.

If you have any questions, please feel free to contact me at (510) 540-3770.

Sincerely,



Henry Wong
Remedial Project Manager
Office of Military Facilities

cc: Mr. Roger Caswell
BRAC Environmental Coordinator
Department of the Army
— Military Traffic Management Command
Oakland Army Base Transition Office
2475-D West 12th Street
Oakland, California 94607

Mr. Lester Schmittner
CESPK-ED-EB
U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, California 95814

09/18/2001 14:55 0103082855 PAGE 05
Ms. Elois A. Thornton and Mr. Scott Gregory
September 12, 2001
Page 5

cc: Ms. Xuan-Mai Tran
Remedial Project Manager
U.S. Environmental Protection Agency
Region IX
Federal Facilities Cleanup Branch
75 Hawthorne Street, (SFD-8-2)
San Francisco, California 94105

Ms. Adriana Constantinescu
Project Manager
California Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612

Ms. Aliza Gallo
Executive Director
Oakland Base Reuse Authority
700 Murmansik Street, Suite 3
Oakland, California 94607

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Port of Oakland
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Oakland, California 94604-2064

Ms. Katie Shulte Joung
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State Clearinghouse
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Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
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P.O. Box 806
Sacramento, California 95812-0806



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September 12, 2001

Mr. Scott Gregory
EIR Project Manager
c/o Ms. Aliza Gale
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612

RE: Oakland Army Base Area Redevelopment Project, NOP

Dear Mr. Gregory:

The East Bay Regional Park District has received the NOP for the Oakland Army Base Area Redevelopment Project and would like to provide the following preliminary comments:

The District has applied to the Department of the Army through the Oakland Base Reuse Authority (OBRA) for a 15 acre public benefit conveyance of Army Base property located on the sand spit to the south of the Bay Bridge, for purposes of a regional shoreline park, tentatively named Gateway Park. A map of the requested PBC is attached. The park will also be the location where the San Francisco Bay Trail converges, coming from Emeryville and other cities north of the Bay Bridge and from Downtown Oakland and Jack London Square, to run across the planned east span replacement of the Bay Bridge to San Francisco. This trail alignment is reflected in ABAG's Bay Trail Plan and the City of Oakland's General Plan, and is shown on the attached map.

The Park District supported the creation of the OARB Redevelopment Zone. The District requests that the EIR address the following topics:

- **Transportation and Circulation:**

What traffic impacts, particularly heavy truck traffic, are anticipated by reuse and redevelopment?

How will safe vehicular, bicycle and pedestrian access to the park be provided for the Bay Trail route indicated along Burma Road? Along Maritime Street?

What provisions will be made for public transit? How will the project area be connected to West Oakland, east of I-880 and to Downtown via transit? Is connection via the existing rail line feasible? What about a ferry or water taxi connection?

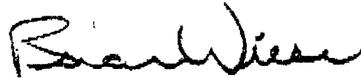
D:\GATEWAY\NOP.wpd



- **Parks and Recreation:** What degree of recreational / parkland need will be generated by the redevelopment project, and how will the project contribute to meeting that need? How will anticipated commercial development provide public access along the shoreline?
- **Utilities / Public Services:** How will the redevelopment plan provide utility infrastructure including streets, water and sewer to serve anticipated new development, including the park? How will redevelopment contribute to ongoing costs of public services including police, fire park operations and maintenance?

For your reference, I have also attached copies of the District's comments on the Army's EIS for disposal and reuse of the Army Base. The Park District appreciates the opportunity to make these preliminary comments on the scope of the EIR. Please feel free to contact me at (510) 544-2623 with questions or for further discussion.

Sincerely,



Brian Wiese
Interagency Planning

cc: Elois Thornton, CEDA
Gary Munsterman, NPS
Janet McBride, ABAG / Bay Trail

Emergyville Crescent
(Environmentally Sensitive)

Proposed East Span
Northern Alignment (N-6)

Toll Plaza

Key Pier
Station Historic
Building
(Not in
Concepts)

Requested PBC Area

Proposed
Gateway Park

Proposed
Bay Trail

Port of Oakland
Middle Harbor
Area

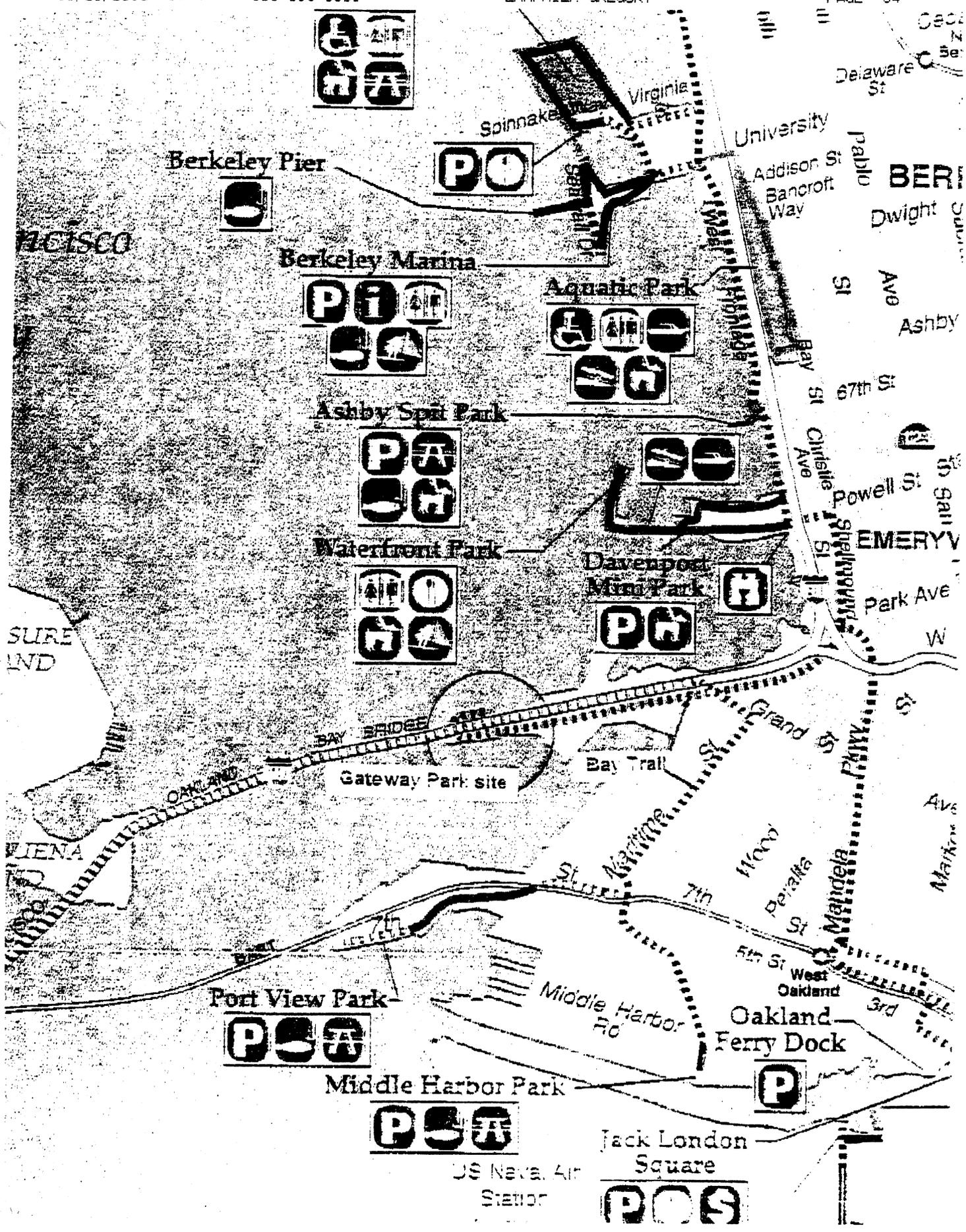


EASTBAY GATEWAY PARK PROJECT
SAN FRANCISCO / OAKLAND BAY BRIDGE
EAST SPAN NORTHERN ALIGNMENT (N-6)



0 500 Feet

EBRPD
Advanced Planning
February 24, 1999



OARB Area Redevelopment EIR

Summary of Scoping Comments from September 13, 2001 Public Meeting

ALTERNATIVES

1. Move West Grand Port support businesses/light industrial uses to the OARB property to open up the West Grand area for other higher scale uses (i.e., gateway type development).
2. Put forth the Adaptive Reuse alternative for detailed analysis.
3. Develop an alternative that reduces truck traffic in West Oakland.

IMPACT ANALYSIS

1. Assume connection from Mandela to 3rd in the Traffic Analysis.
2. Consider development of a tramway system as a way to reduce traffic congestion and air emissions.
3. As mitigation for demolition of historic structures in the OARB, use the Youth Employment Program to deconstruct the buildings and recycle the material.
4. Analyze the visual impacts of high stack containers from the Bay Bridge.
5. Reduce air emissions from trucks traveling through neighborhoods.

ALTERNATIVE BASELINE

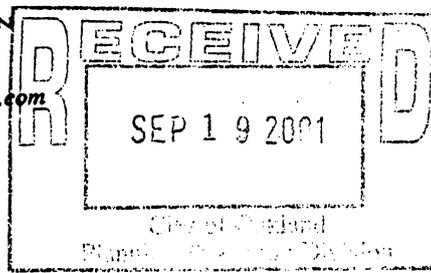
1. Comparison of 1995 and 2000 employment conditions is really irrelevant, because the people that lost their jobs in 1995 will not be the ones employed through redevelopment.

OTHER (MOSTLY PROJECT DESCRIPTION)

1. Housing should be for all levels of income (high, medium, and low).
2. The 16th and Wood sub area should include recreational amenities, including swimming pool, tennis courts, and a putting green.
3. Why does EBMUD have to pay for the land they receive due to the reconfiguration? Originally EBMUD was supposed receive the land for free.
4. Maximize public access to and along the waterfront. Include trails and connectors between the park and the community along 7th Street and West Grand Avenue.
5. No big box retail.
6. In the 16th and Wood sub area, include land uses allowing smaller scale retail.
7. New jobs created by the project should have a first right of refusal to West Oakland residents.



WEST OAKLAND COMMERCE ASSOCIATION
 P.O. Box 23612 OAKLAND, CALIFORNIA 94623
 (510) 272-WOCA (9622) FAX (925) 943-7259
 Visit www.wocajournal.com or www.westoaklandca.com



September 18, 2001

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Richard Wang
 National Recycling

Kenneth Katzoff, Chair
 Oakland Planning Commission
 Oakland City Hall
 1 Frank Ogawa Plaza
 Oakland CA 94612

Re: Army Base Reuse & Redevelopment Scoping Process

Dear Commissioners:

Judging from the lack of other submissions from anywhere else in Oakland, we have reason to believe that WOCA is the only organization in this City to have presented a comprehensive vision (in the form of our "Synergy Map") for the Uptown/Grand & Mandela/Transit Village/Jack London nexus.

It was our purpose in advancing such a vision to help others understand how the corridors between those nodes could improve to regain the commercial vitality that was their historical birthright. The Map is by no means meant to be anything other than a blueprint-in-progress to help bring focus to an area which we believe Oakland's unintentional practice of patchwork planning has left untended.

In considering the Army Base's Reuse, therefore, we believe it's important not to think in terms of just the Base itself, but to understand its fundamental relationship to that West Oakland/Downtown nexus (as per the Synergy Map), particularly as it relates to the overall economy of West Oakland. The Army has reasonably deemed, for instance, that an Economic Development Conveyance should not be made unless a maximum number of jobs is created on the Base. However, we would contend that the maximum number of jobs should more properly accrue to West Oakland as a whole, as opposed to just a certain segment of it, lest such development at the Base, no matter how well-intended, might actually contribute to the perpetuation of West Oakland's stagnancy.

The Map is evolving, and with the announcement of the Aerial Tramway to Alameda from the West Oakland BART station, suddenly the Transit Village has begun to come more into focus, not as a mere neighborhood stopover, but in a higher and better configuration — the major transportation hub and retail node it was destined to become. Accordingly, implications for the Army base are propitious. We now can anticipate that the Aerial Tramway can be extended all the way out to Middle Harbor Shoreline Park and that it will also be brought back from Alameda to Jack London Square, another of our synergy points on the Map.



OFFICERS
Norman Hooks
President

Planning Commission
September 18, 2001
Page Two

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Atlas Heating

Richard Wang
National Recycling

With the addition of such important improvements to West Oakland's otherwise ho-hum transportation grid, increases in tourism are sure to follow. People will want to fly over our Port and the Oakland Estuary to travel from the Square out to the Park and back, making the entire excursion an exciting and pleasurable experience. The hotels we all want to see built at the Square can have a economic reason for being, and the possibility of a Grand Central Station somewhere along the line between the Base and West Oakland BART as a long-sought Capitol Corridor connection with Amtrak becomes more palpable.

We trust, therefore, that the Redevelopment Scoping process will allow for a more synergistic approach and properly include all of West Oakland in its mix.

Cordially,
Steve Lowe, VP, Economic Development

encl: Reconfigured Reuse Plan Letter (9/11/01)

OARB Area Redevelopment EIR

Summary of Scoping Comments from September 19, 2001 Planning Commission Hearing

PUBLIC COMMENTS

George Lithcott (Landmarks Board)

1. EIR should identify historical assets, recommend opportunities for reuse of historical buildings, and suggest creative mitigation measures.
2. Preserve and reuse at least 2 of the Army's temporary buildings.
3. Preserve at least 2 permanent buildings (the Diesel Shop and Building #1).
4. Develop a curator exhibit within one of the preserved buildings.
5. Preserve the parade grounds as an opportunity for an urban park.
6. When taking down other buildings, save and salvage raw materials (esp. redwood timbers).
7. The Stoltz report should be made available for review by the Landmarks Preservation Board.

George Burt (WOCA)

1. OARB should be considered almost entirely for ancillary maritime support (AMS) uses.
2. It is difficult for existing maritime support uses to remain where they are located now, and impossible for them to expand their operations to meet the needs of future Port activities.
3. The Port's own trucking study indicates that the need for ancillary maritime support will far exceed the supply of available lands.
4. If lands are not dedicated to AMS, the EIR should identify the impacts associated with trucking business having to relocate a far away as Tracy, Fairfield and/or Sacramento to find available land.
5. EIR should analyze the traffic and air quality effects of relocated businesses needed to serve the Port's operations having to make long-haul trips to and from the Port from remote locations.

Steve Lowe (WOCA)

1. AMS uses are needed at the OARB.
2. Although the Army feels the need to maximize the number of job opportunities at the OARB, the City should look at the types of jobs that are needed.

3. Suggests moving existing trucking operations and related businesses to the OARB, thereby freeing opportunities for redevelopment with higher and better uses at other in-town locations (i.e., along Grand Ave. and Mandela Parkway).
4. An alternative that includes a transit village with a tram linking to Alameda needs to be considered.

PLANNING COMMISSION COMMENTS

Commissioner Jarvis:

1. Agrees that truck parking and other AMS uses should be moved to the OARB from the Prescott neighborhood.
2. More efficient for the Port.
3. Creates new opportunities for redevelopment in West Oakland.
4. Public access to the waterfront is important and must be considered as part of the Plan.
5. One alternative should be to consider conveyance of the entire OARB to the Port for their use, with the Port serving as lead agency.

Commissioner Lighty

1. Question: How will the City be able to require conditions/mitigation measures from the EIR on Port activities? One mechanism may be through subsequent land conveyance conditions from OBRA to the Port and ORA.
2. Need to study a full range of alternatives to the Reuse Plan.
3. OARB as a full-maritime use area.
4. Preservation of historic buildings.
5. Maximum development alternative should consider benefits/effects of R&D uses as compared to light industrial uses.
6. Consider an alternative that includes an expansion of AMS uses greater than indicated in current Reuse Plan.
7. Will the visual effects of containers stacked up along the side of the Bay Bridge be analyzed? Will they be gone under the proposed plan?

Commissioner Killian

1. EIR should study more alternatives than indicated in staff report.
2. Market demands may not call for high-end uses as suggested in Reuse Plan.
3. Should consider more light industrial uses or other uses not as susceptible to fluctuating market conditions.
4. EIR should consider the impact of Port development activities on the entire surrounding area.

5. Reuse Plan looks as if it were designed by committee—trying to accomplish too many competing objectives. Need a more wholistic review of the plan.
6. West Grand, Mandela and other areas outside of the defined redevelopment area need to be studied.

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION

50 CALIFORNIA STREET, SUITE 2600
SAN FRANCISCO, CALIFORNIA 94111
PHONE: (415) 352-3600
<http://www.bodc.ca.gov>

September 20, 2001

Elois A. Thornton
City of Oakland
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612

SUBJECT: Notice of Preparation for the Oakland Army Base Redevelopment Plan, SCH# 2001082058
(BCDC File Nos. CN 12-99 and AL.NO.6917.1)

Dear Ms. Thornton:

On August 17, 2001, San Francisco Bay Conservation and Development Commission (Commission) staff received the Notice of Preparation (NOP) for the Oakland Army Base (OARB) Redevelopment Plan Draft Environmental Impact Report (DEIR). The redevelopment project involves a 1,713-acre West Oakland redevelopment area, currently organized into three redevelopment sub-areas: (1) a 450-acre site that would be redeveloped according to the OARB Final Reuse Plan in a mixture of commercial, office, and light industrial uses, as well as a public park; (2) a 1,215-acre site that would be developed in accordance with the Port of Oakland's Vision 2000 Program, including the Joint Intermodal Terminal; and (3) a 66-acre site, the 16th and Wood Street redevelopment site, that would be developed for office or residential uses.

The Commission staff has reviewed the Notice of Preparation and is submitting its comments to assist in the preparation of the DEIR. Although the Commission itself has not reviewed the Notice of Preparation, the staff comments are based on the McAteer-Petris Act and the Commission's *San Francisco Bay Plan* (Bay Plan) and *San Francisco Bay Area Seaport Plan* (Seaport Plan).

Jurisdiction

The Commission's area of jurisdiction includes all tidal areas of the Bay up to the mean high tide line except in marshlands where the Bay extends up to five feet above Mean Sea Level, all areas formerly subject to tidal action that have been filled since September 17, 1965, and the "shoreline band," which extends 100 feet inland from and parallel to the Bay jurisdiction. The Commission also has jurisdiction over sites reserved for priority uses, such as ports or water-related industry.

Commission permits are required for certain activities within its area of jurisdiction, including construction, dredging, and dredged material disposal. Permits are issued if the Commission finds the activities to be consistent with the McAteer-Petris Act and the policies and findings of the Bay and Seaport Plans. In addition to any needed permits under its state authority, federal actions, permits, and grants that affect the Commission's jurisdiction are subject to consistency review by the Commission, pursuant to the federal Coastal Zone Management Act (CZMA), for their consistency with the Commission's federally-approved management program for the Bay.

Dedicated to making San Francisco Bay better.

Ms. Thornton
September 20, 2001
Page 2

The DEIR should identify BCDC's jurisdiction on project plans, as well as fully describing the portions of the redevelopment project that will require BCDC permits for implementation.

Bay Fill

The Commission may only authorize fill for any use when that fill is consistent with the McAteer-Petris Act and the Bay Plan. The placement of fill in the Bay may be authorized when it meets the fill requirements identified in Section 66605 of the McAteer-Petris Act, which states, in part, that: (1) the public benefits of fill must exceed the public detriment from the loss of water areas; (2) no alternative upland location is available; (3) the proposed fill is the minimum necessary to achieve the purpose of the fill; (4) the nature, location, and extent of any fill must minimize harmful effects to the Bay Area; (5) the fill be constructed in accordance with sound safety standards; and (6) fill should establish a permanent shoreline. The Bay Plan states that, among other things, fill may be approved for port, water-related recreation, and public access. The DEIR should identify aspects of the proposed project that would involve Bay fill and describe the amount, location, and possible environmental impacts of the fill, as well as the measures taken to minimize these potential impacts.

Public Access

The Bay Plan Policies on Public Access, in part, state: "[i]n addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline....Whenever public access to the Bay is provided as a condition of development, on fill or on the shoreline, the access should be permanently guaranteed....Public access improvements provided as a condition of any approval should be consistent with the project and the physical environment, including protection of natural resources, and provide for the public's safety and convenience.... In some areas, a small amount of fill may be allowed if the fill is necessary--and is the minimum absolutely required--to develop the project in accordance with the Commission's public access requirements...."

The DEIR should discuss the type and amount of public access that would be associated with all components of the redevelopment project. The DEIR should also describe how the public access proposed for the redevelopment project would connect to surrounding public access provided at the Port of Oakland's Middle Harbor Shoreline Park and north of the Bay Bridge in Emeryville.

Seaport Plan

On January 4, 2001, the Commission amended the Bay Plan and Seaport Plan at the request of the Oakland Base Reuse Authority and the Port of Oakland. The amendment deleted the port priority use designation for approximately 189 acres of the OBRA. The remainder of the Army Base was retained in port priority use for port ancillary support uses. The DEIR should discuss the proposed redevelopment project in the context of the Seaport Plan, as amended, and describe the uses that would occur within the portion of the site retained for port ancillary support uses.

Ms. Thornton
September 20, 2001
Page 3

Thank you for the opportunity to comment on the Notice of Preparation. We have focused on the key information that should be provided within the DEIR. Please note, however, that staff will also review the DEIR for its consistency with other Bay Plan policies, including water quality, dredging, and fish and wildlife. Should you have any questions, please feel free to contact me at (415) 352-3618.

Sincerely,



ANDREA M. GAUT
Coastal Program Analyst

AMG/mm

cc: State Clearinghouse, Office of Planning and Research; Attn: Katie Shulte Joung

April 8, 2002

Ms. Aliza Gallo, Executive Director, OBRA
City of Oakland
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612

Dear Ms. Gallo:

Re: Notice of Preparation (NOP) of a Draft Environmental Impact Report –
Oakland Army Base Redevelopment Project, Oakland, California

East Bay Municipal Utility District (District) appreciates this opportunity to comment on the Notice of Preparation (NOP) for a Draft Environmental Impact Report (EIR) for the Oakland Army Base Redevelopment Project. The District understands that the comments may be submitted at this time since the appropriate District Division did not receive a copy of the NOP when it was circulated in August 2001. In the future, environmental documents should be sent to the Senior Civil Engineer, EBMUD - Water System Planning M/S 701, P.O. Box 24055, Oakland, CA 94623.

The District has the following comments regarding water, water recycling, and wastewater services.

WATER SERVICE

The proposed project is located within the District's Central Pressure Zone (PZ). The Central PZ provides water service to customers within an elevation range of 0 to 100 feet. Based on the proposed land use and build-out potential of the Oakland Army Base, water main extensions may be required to provide water service to the proposed project. Engineering and installation of water mains often require substantial lead-time, which should be provided for in the project sponsor's development schedule. The project sponsor should contact the District's New Business Office at (510) 287-1008 and request a water service estimate to determine costs and conditions for providing water service to the proposed development.

In August 2001, the District was contacted by the Oakland Base Reuse Authority (OBRA) regarding the (OARB) Redevelopment Project. The District informed OBRA that they must request a Water Supply Assessment from the District, pursuant to Sections 10910-10915 of the California Water Code. On December 21, 2001, the District received a formal request for a Water Supply Assessment. The District completed and approved the Water Supply Assessment (enclosed) on February 13, 2002 and provided it to OBRA on February 19, 2002.

The District will not install pipelines in soil with contamination levels which would expose workers to dermal or respiratory impacts that cannot be mitigated by Level D personal protective equipment or which would generate soil or groundwater that requires disposal as a hazardous waste. The developer should make available any analytical data on the site. When the applicant applies for water service, any environmental assessment information and analytical data, if available, should also be submitted. The District will review the information and may require additional sampling and testing at the applicant's expense prior to installation near potential sources of soil contamination.

To help mitigate the impacts of additional water demands on the District's finite water supply, the District recommends that water conservation measures for both internal and external use be incorporated in the design and construction of the proposed project. The District encourages the use of equipment, devices, and methodology that furthers water conservation and provides for long-term efficient water use. The District also recommends the use of drought resistant plants, use of inert materials, and minimal use of turf areas. Due to the District's limited water supply, all customers should plan for shortages in times of drought. The project sponsor should contact the District's Manager of Water Conservation at (510) 287-0591 for more information.

WASTEWATER PLANNING

The District's Main Wastewater Treatment Plant is anticipated to have adequate dry weather capacity to treat the proposed wastewater flow from this project, provided this wastewater meets the standards of the District's Source Control Division. However, the City of Oakland's Infiltration/Inflow (I/I) Correction Program set a maximum allowable peak wastewater flow from each subbasin within the City of Oakland, and the District agreed to design and construct wet weather conveyance and treatment facilities to accommodate these flows. The District prohibits discharge of wastewater flows above the allocated peak flow for a subbasin, because conveyance and treatment capacity for wet weather flows may be adversely impacted by flows above this agreed limit. The developer for this project needs to confirm with the City of Oakland Public Works Department that there is available capacity within the subbasin flow allocation and that it has not been allocated to other developments. The projected peak wet weather wastewater flows from this project need to be determined to assess the available capacity within the subbasin and confirmation included in the EIR.

In general, the project should address the replacement or rehabilitation of the existing sanitary sewer collection system to prevent an increase in I/I. Please include a provision to control or reduce the amount of I/I in the environmental documentation for this project. The main concern is the increase in total wet weather flows, which could have an adverse impact if the flows are greater than the maximum allowable flows from this subbasin.

RECYCLED WATER

The District's Policy 73 mandates that customers use non-potable water for non-domestic purposes when it is available at reasonable cost, not detrimental to public health and not injurious to plant life, fish and wildlife. The subject project lies within the Oakland/Berkeley water reuse zone and thus could be served via the East Bayshore Recycled Water Project (EBRWP). As the City of Oakland is aware, the District has completed a facilities plan for the EBRWP. In addition, the District's Board of Directors certified the EIR for the EBRWP on June 12, 2001. The project will provide recycled water to developments in West and Downtown Oakland areas for non-potable uses. The District recommends that the city require dual plumbing for the Oakland Army Base Disposal and Reuse Project for landscaping, toilet water flushing, wash down water for warehouses, decorative fountains, and other California Department of Health Services Title 22 approved uses for tertiary treated recycled water. Use of recycled water for this project will reduce the project's demand for potable water.

In addition, to comply with California Senate Bill 2095, which went into effect on January 1, 2001, the City of Oakland's City Council approved a dual-plumbing ordinance at their January 29, 2002 meeting. The developer should confer with the City of Oakland's Planning Department to ensure compliance with this ordinance. The project sponsor should contact the District's Office of Water Recycling at (510) 287-2063 to further determine how to accommodate the use of recycled water in the design of the project.

If you have any additional questions, please direct them to Marie Valmores, Senior Civil Engineer, Water Service Planning Section, at (510) 287-1084.

Sincerely,



WILLIAM R. KIRKPATRICK
Manager of Water Distribution Planning

WRK: CDC: sb
sb02_079.doc

Enclosure

cc: Mr. Scott Gregory, EIR Project Manager
Ms. Gayle Borchard

February 19, 2002

Ms. Aliza Gallo, Executive Director
Oakland Base Reuse Authority
700 Murmansk Street, Suite 300
Oakland, CA 94607-5009

Dear Ms. Gallo:

Re: Water Supply Assessment – Oakland Army Base Redevelopment Plan
Environmental Impact Report

This letter replies to your request of December 19, 2001 for water agency consultation concerning the Oakland Army Base (OARB) Redevelopment Plan (see enclosed). The East Bay Municipal Utility District (EBMUD) appreciates the opportunity to provide this response.

Pursuant to Chapter 643, Section 10910 of the California Water Code and Section 15083.5, California Environmental Quality Act Guidelines, the project meets the threshold requirement for an assessment of water supply availability based on the potential size of the development and the following criteria: the project includes more than four million square feet of light industry, office, research and development, retail, and warehouse/distribution; as part of project approval, an amendment to the City of Oakland's (City) General Plan will be prepared by the City which would result in a net increase in the stated population density; and the City is preparing an environmental impact report for the project.

Project Area and Service History

This project area is bordered on the north by the San Francisco Bay, on the west by the Oakland Outer Harbor and Middle Harbor, on the south by the Oakland Inner Harbor. The western boundary runs along the Cypress Freeway. The project is within the City and the County of Alameda. The City's redevelopment district, which is now under the charge of the Oakland Base Reuse Authority (OBRA) encompasses approximately 1,731 acres consisting of three sub-districts:

- 1) OARB - approximately 385 acres.
- 2) The Port of Oakland maritime and rail facilities - approximately 1,300 acres.
- 3) A portion of West Oakland immediately east of Interstate 880 (16th/Wood) - approximately 46 acres.

EBMUD has provided water service to the project site since 1941 and continues to provide water service to the project area. Water service to the OARB is currently provided through two master meter accounts via a local distribution system owned and

operated by the Army. In August 2001, the Army's two water accounts were transferred to OBRA. Since this area has a long history of being provided water service by EBMUD, it does not constitute a potential new area to be served.

Because the project is located entirely within the EBMUD service area, EBMUD is the service provider to the proposed development in accordance with state law (the Municipal Utility District Act) and EBMUD's regulations.

District-wide Water Demand Projections

The water consumption of EBMUD customers has remained relatively level in recent years in spite of population and account growth. Between 1987 and the present, consumption has ranged from a high of approximately 220 million gallons per day (mgd) in 1987 to a low of 170 mgd in 1989. Based on extensive forecasting in EBMUD's Water Supply Management Plan (WSMP) and recent land use based demand forecasting, the WSMP forecast 2020 water demand of 277 mgd can be reduced to 229 mgd with successful water recycling and conservation programs that are in place. The OARB project is not expected to change the District-wide demand 2020 projection.

EBMUD Water Supply and Water Rights

EBMUD has water rights and facilities to divert up to a maximum of 325 mgd from the Mokelumne River, subject to the availability of Mokelumne River runoff and the prior water rights of other users. EBMUD's position in the hierarchy of Mokelumne water users is determined by a variety of agreements between Mokelumne water rights holders, the appropriate water rights permits and licenses which have been issued by the State, pre-1914 rights, and riparian rights. Conditions which restrict EBMUD's ability to use its 325 mgd entitlement include:

- Upstream water use by prior right holders.
- Downstream water use by riparian and senior appropriators and other downstream obligations, including protection of public trust resources.
- Drought, or less than normal rainfall for more than a year.
- Emergency outage.

During periods of drought, runoff from the Mokelumne River is insufficient to supply the 325 mgd entitlement. EBMUD studies indicate that with our current water supply and the water demands expected in 2020, deficiencies in supply of up to 67 percent could occur during droughts.

EBMUD Urban Water Management Plan

The enclosed EBMUD's 2000 Urban Water Management Plan (UWMP), adopted by the Board of Directors in Resolution No. 33242-01, includes planning level analyses at the

County and District-wide level for existing and projected water demand. A summary of EBMUD's demand and supply projections in five-year increments is provided in the table (Enclosure 3) from the UWMP. The data reflects the latest actual and forecast values.

EBMUD's evaluation of water supply availability accounts for the diversions of both upstream and downstream water right holders and fishery releases. Fishery releases are based on the requirements of a 1998 Joint Settlement Agreement (JSA) between EBMUD, US Fish and Wildlife Service, and the California Department of Fish and Game. The Federal Energy Regulatory Commission incorporated the JSA into the EBMUD hydropower license in 1989, and the California State Water Resources Control Board incorporated the flow provisions of the JSA into EBMUD's Mokelumne River water rights in 1999 through Decision 1641.

The available supply shown in the table (Enclosure 3) in years 1, 2 and 3 of a multiple year drought was determined by EBMUD's hydrologic model with the following assumptions:

EBMUD's Drought Planning Sequence is used for 1976, 1977, and 1978.

Total system storage is depleted by the end of the third year of the drought.

The diversions by Amador and Calaveras Counties upstream of Pardee Reservoir increase over time.

Releases are made to meet the requirements of senior downstream water right holders and fishery releases are made according to the JSA.

In the table, "Single Dry" year (or Year 1 of "Multiple Dry Years") is determined as a year that EBMUD would implement Drought Management Program elements at the "moderate" stage with the goal of achieving between 0 to 15 percent reduction in customer demand. Year 2 of Multiple Dry Years is determined as a year that EBMUD would implement Drought Management Program elements at the "severe" stage with the goal of achieving between 15 to 25 percent reduction in customer demand. In Year 3 of the multiple year drought, deficiencies from about 48 percent in year 2005 to about 67 percent in year 2020 are forecast to occur. Therefore, a supplemental supply is needed, which is defined by EBMUD as the additional amount of water necessary to limit customer deficiency to 25 percent in a multiple-year drought while continuing to meet the requirements of senior downstream water right holders and the provisions of the 1998 JSA.

Project Demand

Demand projections for the subject project area are included in the 2000 UWMP analysis (and were in the 1985, 1992, 1996 UWMP versions). The District projects the 2020 water demand to be approximately 1.8 mgd, which includes an estimated 0.15 mgd that can be satisfied by recycled water. The District's further refinement of OBRA's 1.5 mgd calculation includes the application of an infill development adjustment factor. The following paragraph outlines the plans that EBMUD has for acquiring additional water supply.

Ms. Aliza Gallo, Executive Director

February 19, 2002

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Supplemental Water Supply and Demand Management

In EBMUD's 1993 WSMP, three main options to meet projected water needs and to increase water reliability were identified: development of the conveyance facilities necessary to take delivery of the EBMUD-Central Valley Project contract for delivery of an American River supplemental supply, groundwater conjunctive use, and/or additional surface water storage. More recently, EBMUD signed a Memorandum of Agreement with the City of Sacramento, the County of Sacramento, and the U.S. Bureau of Reclamation to study a joint regional water project on the Sacramento River near Freeport replacing an American River diversion. A Freeport project would allow for a future groundwater conjunctive use component and, along with planned water recycling and conservation efforts, would ensure a reliable water supply to meet projected demands for current and future EBMUD customers within the current service area. Without a supplemental water supply source, deficiencies in supply are projected as noted above.

EBMUD requests that OBRA continue to discuss options with EBMUD to reduce new water demand impacts through both conservation practices and the use of recycled water. Please contact Marie A. Valmores, Senior Civil Engineer at (510) 287-1084 for further information.

Sincerely,



WILLIAM R. KIRKPATRICK
Manager of Water Distribution Planning Division

WRK:CDC:sb
sb02_035.doc

- Enclosures: 1. Letter dated December 19, 2001
2. EBMUD 2000 Urban Water Management Plan
3. EBMUD Projected Demand and Available Supply Table

cc: Board of Directors w/o Enclosure 2

Appendix 1C
September 19, 2001 Staff Report to the Oakland City Planning
Commission Regarding the OARB Redevelopment
Project Area

Case File No. DET01-06, ER01-035

Location:	Oakland Army Base Redevelopment Project Area
Proposal:	Scoping Session for a Draft EIR to receive comments about proposed redevelopment activities within the Oakland Army Base Redevelopment Project Area; Determination of Alternative Baseline Year for EIR analysis.
Applicant:	City of Oakland / Oakland Redevelopment Agency
Owner:	
Case File Number:	DET01-06, ER01-035
General Plan:	Business Mix, General Industrial / Transportation
Zoning:	M-40 Heavy Industrial, M-30 General Industrial and M-20 Light Industrial, with S-16 Industrial/Residential/Transitional combining zones.
Historic Status:	A National Register-eligible Historic District has been identified within the Redevelopment Project Area.
Environmental Determination:	An EIR is being prepared by the City as the Lead Agency on the OARB Redevelopment Plan. The Army is preparing a separate EIS on disposal and reuse actions.
Service Delivery District:	I – West Oakland
City Council District:	3
Staff Recommendation:	Receive public and Commission comments about what information and analysis should be included in the Environmental Impact Report, and determination of the baseline year to be used in the EIR analysis
For further information:	Contact: Elois A. Thornton , CEDA Base Reuse Unit, at 510-238-6284

INTRODUCTION

This staff report provides significant information regarding the Oakland Army Base (OARB) Redevelopment Project Area and the forthcoming Environmental Impact Report (EIR). To facilitate the Commission's review of this report, the following information is presented:

- Section I summarizes the background of the former OARB closure and creation of the OARB Redevelopment Project Area.
- Section II provides the Project Description for the Redevelopment Plan, including identification of the three sub-areas within the Redevelopment Project Area: 1) the former OARB sub-area, 2) the existing Port of Oakland Maritime sub-area, and 3) the 16th and Wood sub-area.
- Section III defines the purpose of the Scoping Session for the OARB Redevelopment Plan EIR.
- Section IV discusses selection of an Alternative Baseline Year for EIR analyses.
- Section V presents staff's recommendations and Findings for Commission action.

I. SUMMARY AND BACKGROUND

Summary

In September 1999 the Commission approved a *Preliminary Redevelopment Plan* for the Oakland Army Base (OARB) Redevelopment Project Area. The Final Redevelopment Plan was adopted in July 2000 pursuant to California Redevelopment Law, and the Redevelopment Project Area was created. Special provisions of the Redevelopment Law applying to redevelopment designations for military bases allow for certification of the required Environmental Impact Report (EIR) to be delayed 18 months after establishment of the Redevelopment Project Area. Accordingly, the EIR for the OARB Redevelopment Project Area – which is the subject of this staff report – is expected in early 2002. To support that effort, staff is requesting that the Commission conduct a public scoping meeting to receive comments on the prospective contents of the EIR, and to approve use of an alternative baseline year analysis for the EIR. Both of these topics are discussed in detail in this report.

Background

The OARB was developed during World War II and served as a major cargo port during the war. Thereafter, OARB continued its mission as a major shipping and rail terminal and provided key logistical support for the United States military during the Korean, Vietnam and Desert Storm operations. OARB was among the many military bases recommended for closure pursuant to the Defense Base Realignment and Closure (BRAC) Commission in 1995, and the Base officially closed in September 1999. A small caretaker unit remains on the OARB at this time, responsible for facilitating the transfer of the OARB. Also on-site is the U.S. Army Reserve enclave that was authorized by the Army to remain on the Base after closure.

Following the decision to close the OARB, the Oakland Base Reuse Authority (OBRA) was created as the Local Reuse Authority responsible for planning the reuse of closing military facilities in Oakland (the OARB and the Oak Knoll Naval Medical Center). To insure community involvement in the OARB reuse planning process, OBRA established the West Oakland Community Advisory Group (WOCAG). After collaboration with a number of other important stakeholders, OBRA produced the initial '98 *Draft Final Reuse Plan* to set forth the recommended future development scenario for the OARB in July 1998.

The San Francisco Bay Conservation and Development Commission (BCDC) *San Francisco Bay and Seaport Plan* initially designated the entire OARB as a Port Priority Use area. This designation in the *Bay and Seaport Plan* is intended to ensure that enough land is set aside in the region to support projected cargo movement activities within the Bay Area. However, this designation limited development of the Base to port and port-related activities when the site was no longer used by the military; it was not consistent with allowing for the broad range of reuse opportunities that were recommended in the '98 *Draft Final Reuse Plan*. In addition, the Port Priority Use Area designation and BCDC's related requirements allocated 100 acres of OARB property east of Maritime Street for cargo container terminal uses, which was inconsistent with a number of land use commitments that had been made during the initial preparation of the '98 *Draft Final Reuse Plan*.

Additionally, the inconsistencies between the BCDC documents and the '98 *Draft Final Reuse Plan* prevented the Army from proceeding with actions to convey the OARB to OBRA for reuse. In order to retain the opportunity for a viable economic development and job-generating project, the OARB reuse program needed to be reconfigured to a manner that assured BCDC that adequate acreage would be devoted to meeting container through-put forecasts for year 2020, and reserved remaining OARB property for other economic development uses. Essentially, under the reconfiguration, the OBRA/ORR

and the Port of Oakland exchanged previously designated areas of the Base. The OBRA/ORA will obtain approximately 186 acres of the OARB property located primarily west of a realigned Maritime Street and additional property in the vicinity of the West Grand Avenue/Maritime Street intersection for creation of a major economic development project. The Port will obtain approximately 184 upland acres located southeast of Maritime Street and 56 submerged acres to expand its maritime facilities, including the development of a Joint Intermodal Terminal (JIT).

On September 2000, the OBRA and the Port submitted a joint application to amend BCDC's *Bay and Seaport Plans* by removing the Port Priority Use and maritime terminal designations from portions of the OARB. The application, which was approved by BCDC on January 4, 2001, resulted in amending BCDC's plans and removing the Port Priority Use and maritime terminal designations from areas that would be developed by the ORA. The '98 *Draft Final Reuse Plan* was then amended to reflect the reuse program specified in the BCDC application. The Army was then able to receive a Consistency Determination from BCDC to proceed with conveyance actions. The *Amended OARB Draft Final Reuse Plan* was approved by OBRA on April 9, 2001 and further amended on July 23, 2001 to clarify the recommended property conveyances.

Simultaneously with the Reuse Plan amendment and Redevelopment designation process, the Military Traffic Management Command of the U.S. Army conducted its environmental review for the disposal and reuse of the OARB. The Army issued a *Draft EIS for the Disposal and Reuse of the OARB* in September of 1999. However, the reuse plans presented in this '99 *Draft EIS* did not meet Coastal Zone Management Act requirements as administered by the BCDC (as discussed above). Once BCDC's plans and the '98 *Draft Final Reuse Plan* were amended, the Army prepared a *Supplemental Draft EIS* to provide opportunity for public review and comment on this new information. A new section was added to the previous Draft EIS to specifically address the new *2001 Amended Draft Final Reuse Plan*. This *Supplemental Draft EIS* was issued by the Army in July 2001 and is currently in the public review and comment period.

Concurrent with the planning actions for reuse of the OARB were actions to identify impediments to future development and to provide a mechanism for funding required improvements. In late 1998, as a complement to completing the '98 *Draft Final Reuse Plan*, the ORA began efforts to designate the OARB and many surrounding underutilized industrial and Port-related properties as a Redevelopment Project Area. The resulting OARB Redevelopment Project was established in July 2000. Staff is now pursuing preparation of the required EIR to analyze the environmental effects of the proposals identified in the Redevelopment Plan. This EIR will rely, to a certain extent, upon information contained in the Army's EIS. The project description for this EIR will also be derived, in part, from the *2001 OARB Amended Draft Final Reuse Plan*.

Project Area / Property Description

The Redevelopment Project Area (Project Area) is located on the waterfront immediately south of the eastern terminus of the San Francisco/Oakland Bay Bridge, approximately 2 miles and 6.5 miles from Oakland and San Francisco central business districts, respectively. The Redevelopment Project Area consists of approximately 1,730 acres and is divided into three Sub-Areas, as shown on **Map 1** (Attachment "B").

1. **OARB Sub-Area.** The former Oakland Army Base (426 acres total; including approximately 370 acres of upland and approximately 56 acres of submerged land). According to the *2001 Amended Draft Final Reuse Plan for the OARB*, approximately 186 acres of the approximately 370 acres of

upland will become part of the City of Oakland's Gateway Development Area (see detailed description in following section). Approximately 184 acres will become part of the Port of Oakland's maritime area (see detailed description in following sections). All of the 56 acres of submerged lands would become part of the Port of Oakland's maritime area.

2. **Port Maritime Sub-Area.** The Port of Oakland's current maritime area generally lies west and south of the OARB (approximately 1,235 acres). This area includes the existing marine terminal facilities and related infrastructure along the Outer Harbor and Inner Harbor channels, as well as the former U.S. Navy Fleet Industrial Supply Center Oakland (FISCO).
3. **16th & Wood Sub-Area.** An area along the OARB's eastern boundary roughly between the I-880 freeway and Wood Street, including the former Oakland Amtrak Station and the Phoenix Iron Works site (approximately 66 acres).

Immediately accessible by the I-880 freeway, the Redevelopment Project Area designation for these areas allows the ORA and the Port to implement the City economic development strategies, including Port development plans, on an area of significant size and strategic location. Development of the OARB specifically through the Redevelopment Project represents an opportunity to take advantage of tax increment financing mechanisms to stimulate physical revitalization, as well as the creation of significant job opportunities for Oakland residents.

General Plan and Zoning Analysis

The General Plan land use designations for the redevelopment Project Area are currently "Business Mix" and "General Industrial / Transportation". The Business Mix classification is intended to create and enhance areas of the City that are appropriate for a wide variety of business and related commercial and industrial establishments. The General Industrial and Transportation classification is intended to recognize, preserve and enhance areas of the City for a wide variety of business and related establishments that may have the potential to create off-site impacts such as noise, light, glare, truck traffic and odor. The Redevelopment Project Area is zoned M-40: Heavy Industrial, M-30: General Industrial, M-20: Light Industrial and S-16: Industrial-Residential-Transitional Combining zones. These land use designations are consistent with the previous '98 Draft Final Reuse Plan. However, due to the reconfiguration of the OARB reuse plan (see discussion above), it is necessary that the General Plan and zoning be amended upon approval / adoption of the Final Reuse Plan to maintain consistency with the 2001 Amended Draft Final Reuse Plan. In preparation for these amendments, OBRA began discussions with the City Planning Department in June 2001. Under the City Charter, City zoning classifications do not apply to the Port areas.

Environmental Determination

The City has determined that an Environmental Impact Report (EIR) is required for the Project. The EIR's purpose, generally, will be to inform governmental decision-makers and the public about the potential significant environmental effects of proposed activities and to identify ways that such effects can be reduced or avoided. The Notice of Preparation (NOP) was published on August 19, 2001 (attached Exhibit "A"). This Scoping Session is being held to solicit public, Commission and Responsible Agency comments on what information and analysis should be contained in the EIR. In addition to these comments, written comments will be accepted until September 19, 2001. Written comments are encouraged in order to provide an accurate record of public comments.

II. PROJECT DESCRIPTION

OARB Redevelopment Plan for the Oakland Army Base Redevelopment Project

The *Redevelopment Plan* provides the ORA with powers, duties and obligations to implement and further the program generally formulated in the *2001 Amended Draft Final Reuse Plan for the OARB* and other programs found in the *Redevelopment Plan*. The purpose of the *Redevelopment Plan* is the redevelopment, rehabilitation and revitalization of the area within the larger boundaries of the OARB Redevelopment Project Area.

Redevelopment Plan Objectives

The *Redevelopment Plan* does not provide a precise plan, nor does it establish specific projects for redevelopment, rehabilitation and revitalization of the area. Instead, the *Redevelopment Plan* establishes a process and framework within which such specific planning efforts and projects will be identified and implemented. The primary objective of the *Redevelopment Plan* is to eliminate and prevent the spread of blight and deterioration within the Redevelopment Project Area. The activities that may be used or facilitated by the ORA in furtherance of this objective include:

1. Acquisition and subdivision of real property to provide adequate sites for mixed-use development and construction of commercial, industrial, residential, recreational and public benefit facilities;
2. Demolition or removal of certain buildings and improvements;
3. Management of any property acquired by and under the control of the Redevelopment Agency;
4. Installation, construction or re-construction of streets, utilities, and other public improvements;
5. Disposition of property for uses in accordance with the *Redevelopment Plan*;
6. Redevelopment of land by private enterprises of public agencies for uses in accordance with the *Redevelopment Plan*; and
7. Rehabilitation by future owners, their successors and the Redevelopment Agency of structures and improvements previously owned by the federal government.

Redevelopment Plan Actions

As a means to the elimination and prevention of the spread of blight and deterioration within the Redevelopment Project Area, the *Redevelopment Plan* calls for new land use and development/redevelopment activities, implementation of certain public improvements, and the expansion and preservation of affordable housing opportunities.

Land Use and Development. All new development within the former OARB Sub-Area of the Redevelopment Project Area must conform to the *OARB Final Reuse Plan*, and to City design review standards where applicable. New development within the Port of Oakland's Maritime Sub-Area south and east of the OARB is intended to meet its regional share of cargo through-put pursuant to the *San Francisco Bay and Seaport Plan*, as amended by the joint OBRA/Port application. All new development within the 16th and Wood Street Sub-Area shall conform to the City of Oakland General Plan. The following sections of this staff report discuss the land use programs for these Sub-Areas in greater detail.

Public Improvements. The *Redevelopment Plan* includes a generalized list of public improvements for which the ORA may acquire property and/or pay for, install, develop, construct or rehabilitate. These public improvements may include streets, roadways, streetscape and transit/bicycle facilities; water, sewer, storm drainage, natural gas, telecommunications and electricity distribution systems; rail system facilities; maritime facilities; parking facilities; parks, plazas and other open spaces; public services (i.e., police, fire, schools, libraries, health and human services); and public housing and shelters.

Low- and Moderate-Income Housing Fund. A percentage of gross tax increment generated within the Redevelopment Project Area will be set aside in a fund for low- and moderate-income housing. The purpose of this fund is to expand and preserve the supply of affordable ownership and rental housing in Oakland. Because only a small portion of the OARB Redevelopment Project Area may become available for residential use (i.e., portions of the 16th and Wood Sub-Area), it is anticipated that the majority if not all of the Housing Fund expenditures will occur outside of the OARB Redevelopment Project Area. Since the location of such future Housing Fund expenditures cannot be identified at this time, the EIR will not include an analysis of the development of such locations for low- and moderate-income housing opportunities. At such time as the ORA authorizes expenditures of Housing Funds, environmental review would be conducted.

A. OARB Sub-Area

As part of the overall conveyance of property from the former OARB, the Army intends to convey a total of 370 acres of upland and an additional 56 acres of submerged land to several receiving entities including:

- OBRA (approximately 305 acres). Of this total, OBRA will then convey approximately 149 acres to the Oakland Redevelopment Agency, and the other 156 acres to the Port of Oakland,
- The Port of Oakland (approximately 22 acres),
- The East Bay Regional Park District (EBRPD) (approximately 15 acres),
- The Painting and Decorating Joint Apprenticeship Training Committee (JATC) (approximately 3 acres),
- An additional 25 acres of land are to be retained, at least temporarily, under the ownership of the US Army Reserve. With the eventual re-location of the Army Reserve Units, 6 acres of these lands will revert to the Port, and 19 acres would become part of the City Gateway Development Area.
- The Port of Oakland (all of the 56 acres of submerged lands).

The eventual reuse and development of these lands is to be guided by the *OARB Final Reuse Plan*. The *2001 Amended Draft Final Reuse Plan* provides for two major areas within the former OARB; the City of Oakland's Gateway Development Area, and the Port of Oakland's Port Maritime Support Area. These two major areas are more fully described below and shown on **Map 2** (Attachment "C").

A.1: OARB Gateway Development Area

A 186-acre portion of the former OARB is anticipated to be redeveloped for a mix of economic development activities for the City of Oakland and surrounding environs. This area is in immediate proximity to the East Bay terminus of Oakland/San Francisco Bay Bridge and the I-880 freeway, and has thus been termed the "Gateway Development Area". The development plan for the Gateway

Development Area is intended to provide an attractive entry to the City of Oakland, create significant new employment opportunities, and bring new industry and business to the area.

Gateway Development Area Goals and Objectives

The development program for the Gateway Development Area is intentionally broad and subject to further refinement, but is intended to further the primary goal of the Reuse Plan. This primary goal is: *"To define a clear but flexible land use direction for the reuse of the OARB properties which best capitalizes on the Base's location, assets, and economic development potential."* Pursuant to this primary goal, the land use and development activities within the Gateway Development Area are also intended to accomplish the following major objectives:

1. To create a balanced land use pattern that best leverages the existing assets of the Oakland Army Base, supports sustainable land utilization, and enhances the quality of local development.
 - a) Provide a "menu" of acceptable land use activities that will be further refined over time by market conditions and demand as the Gateway Area is developed.
 - b) Maintain flexibility for future development by endorsing a broad envelope of probable market activities.
2. To provide sustainable, long-term job creation and economic development opportunities that provide employment and advancement opportunities for Oakland residents and businesses.
 - a) Provide opportunities for job training and educational resources (including, but not limited to, the Joint Apprenticeship Training Program and the Workforce and Business Development Campus).
 - b) Maintain and assist on-going ancillary maritime support activities (i.e., trucking operations) by designating a 15-acre site appropriately and conveniently located for such use.
3. To create high quality and vibrant land use districts which provide a safe, attractive and healthy urban environment.
 - a) Increase opportunities for public use, including but not limited to the creation of a new public park to be operated by the East Bay Regional Park District.
4. To protect, preserve and enhance environmental resources.
5. To ensure that high quality public and community services are available to serve future employees within the area and the local community.
6. Provide increased opportunities for social benefits and programs including assistance to, and accommodation for recognized homeless assistance providers.
7. To develop and implement high-quality waste management practices that minimize waste generation and maximize reuse and recycling opportunities.

Gateway Development Area Land Use Program

The land use program for the Gateway Development Area is based on the "Flexible Alternative" land use plan developed during preparation of the *2001 Amended Draft Final Reuse Plan* for the OARB. As its name implies, this land use program is intended to provide the flexibility to balance economic and

community interests for the Gateway area over time. The focus of development within the Gateway Area will include light industrial, research & development, and flex-office space uses, with high-end retail space (or a hotel) as a potential future option. The Gateway Development Area also includes certain commitments for land that have been made for public benefit and port priority uses (i.e., ancillary maritime support, job training, a park and homeless assistance programs). No housing development is provided for within the Gateway Development Area.

The actual development activity that occurs within the Gateway Development Area may vary over time from the development program described herein (see Attachment "D" for more detail). However, this description is intended to provide the maximum or "worst-case" scenario of development intensities that may be anticipated or permitted under the environmental review contained in the EIR. Of the total 186 acres of the Gateway Development Area, approximately 36 acres have been dedicated for specific uses:

- 15 acres have been dedicated to ancillary maritime uses,
- 15 acres have been dedicated to public park,
- 3 acres have been dedicated for job training opportunities (JATC), and
- approximately 3 acres have been targeted for homeless assistance programs, although some or all of these programs may eventually be located off-site of the former OARB.

This leaves a remaining 153 acres within the Gateway Development Area for economic development and redevelopment opportunities. The maximum anticipated development potential for this area according to the Reuse Plan is approximately 2,297,000 square feet of new "Flex-" uses. Therefore, the overall development intensity for this area, based on gross land availability (including land that will be needed for future roadways, pedestrian circulation, utility easements, etc...) is an FAR of 0.35.

A.2: OARB Port Maritime Sub-Area

Approximately 230 acres of the OARB Sub-Area are proposed for expansion of maritime-related facilities. Included in the approximate 230 acres are 184 acres of upland and 56 acres submerged under the Bay.

Maritime Development Area Goals and Objectives

The Port's of Oakland's overall strategic and planning goals for reuse of its portion of OARB include the following:

1. Accommodate the Port's share of regional cargo throughput demand as reflected in the BCDC Seaport Plan;
2. Respond to continuing trends and requirements in maritime container shipping by constructing modernized expanded marine terminals;
3. Provide safe, efficient, and cost-effective movement of containerized intermodal cargo between the Port of Oakland berths and rail cars;
4. Increase productivity and improve efficiency of Port marine terminals;
5. Generate revenue for Port operations and fund future growth to ensure the continued viability of the Port;

6. Provide capacity of West Coast gateway intermodal ports in case one of those ports is shut down due to an emergency (e.g., earthquake); and
7. Keep the Port competitive with other West Coast ports and increase intermodal business.

Maritime Development Area Land Use Program

Incorporation of approximately 230 acres of designated portions of the OARB and the Army Reserve property into the existing Port Area allows for improvements in Port operations. These improvements would result in significant efficiencies in the movement of cargo and consolidation of ancillary maritime uses to maximize the near-dock property in the maritime area. The proposed components of Port development on the OARB are identified below.

Relocated Maritime Street and Intersections. Maritime Street is a 4-lane roadway that runs north/south from the existing I-880/West Grand Ave intersection to 7th Street. Maritime divides into a triangular formation at the south with two legs that meet at 7th Street: what was known as the Maritime Street Extension to the east and a one-way section of Maritime Street to the west. Maritime Street serves as the western boundary for portions of the OARB. To accommodate the proposed maritime uses of the OARB, the existing Maritime Street (north of 7th Street) needs to be vacated and shifted 400 to 600 feet to the east. Current design includes a loop on the north end in the vicinity of West Grand Avenue, to improve intersection capacity, separate truck from other traffic and to avoid bifurcation of the Gateway Development Area. To the south, relocation would require reconfiguration of the existing triangular formation and relocation/reconfiguration of the existing Maritime Street/7th Street intersection. The reconfigured intersection would be an at-grade four-directional intersection, with Maritime Street running north/south, and 7th Street running east/west. Design for Relocated Maritime Street would also include a Class I bicycle facility that would connect to EBRPD's park within the Gateway Development Area, and to the regional Bay Trail.

Reconstruction of Railroad Grade Separation at 7th Street. A grade separation for railroad tracks crossing over 7th Street between Maritime Street and I-880 would be widened to accommodate additional railroad tracks, vehicular traffic above on the grade separation, and vehicular traffic below grade. Expansion would accommodate new rail lines for movement of trains onto the Port's proposed relocated Joint Intermodal Terminal. The below-grade widening of the roadway would allow for safer truck, car, pedestrian and bicycle access.

Relocated Joint Intermodal Terminal (JIT). The railroad yard for existing JIT operations (transfer of cargo to trains) would be relocated from the current site to approximately 120 acres of the OARB. The relocated facility would consist of paved and unpaved ballasted surface areas, rails and support infrastructure and would incorporate the 21 acre Knight Rail Yard. Other related modifications to tail and support trackage would be required south of 7th Street for optimal operation of the JIT. Relocation of the JIT to OARB will require relocation of the existing U.S. Army Reserve Enclave to an offsite location.

Ancillary Maritime Uses. With relocation of the JIT to the OARB site, an approximate 41-acre strip of land on the OARB footprint would remain between the Relocated JIT and the existing Outer Harbor Terminals. This site would be used temporarily for ancillary maritime support operations such as container storage, truck parking, warehousing, office, etc. In accordance with commitments made by the Port and City to the BCDC, additional designated sites for truck parking and other ancillary uses will be provided.

New Berth 21. Development of New Berth 21 would involve the construction of a containment dike across existing Berths 21, 20, 10, 9 and 8, creating one new berth where five berths exist today. Approximately 2.5 million cubic yards of material will be needed to create 29 acres of fill for Berth 21 upland. This new upland area would provide additional acreage to expand and reasonably reconfigure the existing Outer Harbor marine terminal area in conjunction with existing Port property to an ultimate 300 (approx.) acres. Development of this new Berth 21 would increase the capacity and efficiency for cargo throughput. A portion of the approximately 56 acres of submerged land from the OARB would be necessary to create Berth 21; the remainder of the 56 submerged acres will continue to be utilized for ship maneuvering, navigation and other water related and recreational uses.

B. Port of Oakland Maritime Sub-Area

The Port of Oakland Maritime Sub-Area identified in the OARB Redevelopment Plan includes approximately 1,235 acres of existing maritime facilities on Port of Oakland property. Approximately 230 acres of the OARB Sub-Area are proposed for incorporation into the Port of Oakland for expansion of maritime facilities. Incorporation of the OARB as part of the existing Port maritime facilities allows for improvements in operations that result in significant efficiencies in the movement of cargo and maximum use of near-dock property in the maritime area. Consolidation and improvements allow the Port to meet cargo throughput commitments to the Bay Conservation Development Commission in an Amended *San Francisco Seaport Plan*. Proposed components of Port development on the OARB and within the remainder of the Maritime Redevelopment Area are described below.

Maritime Support Center

At proposed buildout of the Port of Oakland Maritime Sub-Area, a Maritime Support Center (MSC) would be developed for centralized ancillary maritime support operations in a 75-acre area located in the vicinity of the existing JIT. The MSC would house activities that directly facilitate the Port's container operations, e.g., a Container Freight Station (CFS), truck parking, container/chassis repair, storage, transloading and related cargo handling and distribution operations. Other areas for maritime support services, including land for truck parking, are anticipated in addition to the designated MSC.

Terminal Expansion

With additional OARB property, the existing Seventh Street, Vision 2000 (Middle Harbor) and Outer Harbor terminal areas would be reconfigured and expanded as proposed for the BCDC *Bay and Seaport Plan* amendments. Expansion and reconfiguration of these terminals would result in larger but reduced number of container berths with greater upland area for cargo storage and transfer. The expansion would improve the efficiency of maritime operations and provide the capacity for cargo throughput expected in the BCDC *Bay and Seaport Plans*.

C. 16th and Wood Streets Sub-Area

The 16th and Wood Street Sub-Area comprises approximately 66 acres within the Redevelopment Project Area, generally located between I-880 and 32nd Street. This sub-area includes several sites that have the potential for redevelopment opportunities including the 28-acre Southern Pacific Railroad/Amtrak Central Station site and the 5-acre former Phoenix Ironworks site. Future development within this Sub-Area is anticipated to occur consistent with the current "Business Mix" General Plan designation for this area. However, the City has been made aware of a preliminary development concept plan for the Central Station site that will be incorporated into the project description for the EIR.

According to preliminary pre-application discussions with City staff, a developer (Holliday Development, LLC) has presented a preliminary development concept that would include approximately 300 to 400 housing units of live-work space and approximately 1.5 million square feet of commercial/office/R&D/retail space. This concept plan includes restoration and reuse of the Central Station to include a community event space, and a 1-acre park in front of the project.

This preliminary development concept will be included as part of the "project" to be reviewed in this EIR, although the concept plan may be altered or refined if subsequent, specific project applications for this site are received by the City. Other development and redevelopment opportunities within this Sub-Area are too speculative to be considered at this time, but the cumulative analysis will include a "full buildout" assumption consistent with the General Plan.

III. PURPOSE OF THIS SCOPING SESSION

The main purpose of the scoping session is to solicit comments from the Commission, Responsible Agencies, and the public on what types of information and analysis should be considered in the EIR. Comments about the issues that should be considered, the types of information that should be included, and the range of alternatives to the project that should be assessed are the subject of this scoping session. This scoping session is not a review or consideration of the merits of the project. There will be a full public process to consider the project itself during the EIR process. Review of the potential impacts of the project and measures to eliminate or off-set those impacts can be considered at the same time as project review, thus informing the decision-making process.

Public Comment Opportunities to Date

On September 13, 2001 City staff held an open public scoping workshop at the West Oakland Senior Center. During this workshop, public comments on the scope of the EIR were solicited, as were comments on the proposed alternative baseline for the EIR. A summary of the public comments received during this workshop will be distributed to the Planning Commission at or prior to this scoping session.

Environmental Issues to be Addressed

The Army 2001 Supplemental Draft EIS, an Opportunities and Constraints Analysis prepared for the '98 Draft Final Reuse Plan, and other planning efforts pursuant to the Reuse Plan have identified the following general list of environmental issues that will be included in the EIR:

- Geology, Soils and Seismicity
- Surface Water Quality
- Groundwater
- Bay Fill
- Noise
- Biological Resources and Wetlands
- Land Use and Design
- Aesthetics
- Consistency with Plan and Policies
- Recreation and Public Access
- Traffic and Transportation, including roadways, intersection LOS, transit and non-vehicular traffic (i.e., trains and ships), and parking
- Air Quality, including construction related effect, stationary sources and mobile source emissions
- Public services and utilities, including water supply, wastewater collection, wastewater treatment and disposal, energy

- Hazardous Materials
- Population and Employment
- treatment and disposal, energy
- Cultural Resources, including potential effects to the existing on-site National Register eligible Historic District

Alternatives to Be Considered

The '98 OARB Reuse Plan and the Army 2001 Supplemental Draft EIS both contain a number of alternatives that will form the basis of the Alternatives chapter of the EIR. Specifically, the alternatives currently contemplated for this EIR include:

1. The No Project Alternative (required under CEQA guidelines),
2. A High Intensity Alternative (including the potential for casino use),
3. A Reduced Intensity Alternative,
4. A Full Maritime Use Alternative, whereby the entire OARB would be reused for maritime purposes,
5. A Full Non-Maritime Use alternative, whereby the entire OARB would be reused for non-maritime purposes (i.e., uses similar to the "Flex-Office" land uses contained in the Amended Draft Final Reuse Plan),
6. An Impact Avoidance Alternative, structured to avoid most or all significant and unavoidable impacts through such strategies as an adaptive reuse program for existing historic district structures, and
7. A No Bay Fill Alternative that would not include the proposed new Berth 21.

IV. ALTERNATIVE BASELINE

The physical context in which impacts of a proposed project are determined is called the "baseline." Normally, the baseline comprises those environmental conditions that exist at the time of issue of a Notice of Preparation. However, in 1995 the State Legislature created special rules for CEQA compliance for military base reuse plans.¹ These special rules allow, but do not require, local agencies to consider the baseline to be the conditions associated with the military facility as it existed at the time of final federal action to close or realign the facility. Thus, lead agencies may equate the environmental setting for an EIR with an active, operational facility, or the conditions that existed before the closure decision became final. The impacts associated with reuse would therefore be compared to those of an operating military facility, and impacts that do not exceed the baseline physical conditions would not be considered significant. These rules allow local agencies and redevelopment agencies the option to build on the environmental work already completed by federal agencies pursuant to base closure or realignment EIS documents, and to recognize that military operations may be scaled back dramatically or cease altogether before local reuse decisions are made.

The June 2001 *Supplemental Draft EIS for the Disposal and Reuse of Oakland Army Base* prepared for the Military Traffic Management Command (MTMC) identifies potential impacts associated with the disposal and reuse of the OARB, recommends mitigation measures, and explores various disposal and reuse alternatives. A summary of this information is included as Attachment "E". This Supplemental

¹ CEQA Guidelines Section 15229, or Public Resources Code Section 21083.8.1, which is the statutory authorization for Section 15229.

Draft EIS also describes the environmental and socioeconomic conditions at the OARB using the baseline year of 1995. This baseline year reflects conditions at the OARB at the time of the Base Realignment and Closure Commission's 1995 recommendation to close the Base and relocate its mission. This Draft EIS used 1995 as its baseline year for comparison against the effects of Base disposal because it represents the level of Base activity during its use as a military installation, pre-closure. Starting in September 1995 a reduction in staffing and facilities at the OARB began, with the eventual cessation or relocation of all of the MTMC's missions by 1999, when the base closed.

Staff proposes to use the 1995 baseline year as described in the Army's *2001 Supplemental EIS* as the baseline for the OARB Redevelopment Project Area EIR, pursuant to *CEQA Guidelines*. Use of this baseline year will expedite preparation of the EIR by relying upon existing information as contained in the federal EIS, and will better represent the actual impact of OARB reuse when compared to the impacts of the Base in full operation. Where 1995 data is not available, the most recent available data will be used as the baseline. Specifically, current environmental conditions for hazardous or toxic wastes, substances and materials must be used as the baseline pursuant to special consideration of these issues as established under *CEQA Guidelines*.²

Staff recommends use of the alternative baseline of 1995 for the OARB-only portion of the OARB Redevelopment Project Area EIR to determine impacts for environmental factors including, without limitation, the following:

- Traffic – defined as the probable traffic demand of trips generated by 1995 OARB uses on a circulation system that includes the reconstructed Cypress Freeway (the Cypress Freeway was not completed until 1998),
- Air Quality – derived from 1994 measurements for stationary source emissions and 1995 baseline traffic for mobile source emissions,
- Water Consumption – based on a 1995 non-resident equivalent population, or as may be discovered through review of EBMUD records,
- Energy Consumption – based on the OARB's peak measured demand of just under 3 megawatts in 1995,
- Noise – based on estimates of noise-generating uses and activities occurring at the OARB in 1995,
- Population and Employment - based a total military and civilian personnel employment in 1995, and
- Schools - estimated school children living at the OARB and attending public schools.

A brief list of the types of 1995 baseline conditions that would be used in the EIR are compared to existing (year 2001) conditions at the OARB in the following matrix.

² *CEQA Guidelines* Section 15229(d)(1).

Issue:	1995 Baseline	2001 "Existing Conditions"	Relative Change
Average daily employee trip generation	6,400 trips	4,990 trips	23% decrease since 1995
LOS at on-Base intersections	LOS "C" or better	LOS "C" or better	No change
Estimated emissions of NO _x , employee trips	131 lbs./day	71 lbs./day	46% decrease since 1995, based on reduced trips and improved emissions
Estimated emissions of PM ₁₀ , employee trips	96 lbs./day	72 lbs./day	26% decrease since 1995, based on reduced trips and improved emissions
Water demand	184,000 gpd (est.)	120,000 gpd (est.)	35% decrease since 1995
On-Base Employment	2,044	1,330	35% decrease since 1995
Schools	45 children attending public school	0 children at public schools	45 student decrease since 1995

FINDINGS

Pursuant to CEQA Guidelines Section 15229 (Baseline Analysis for Military Base Reuse Plan EIRs):

- 1) The City of Oakland, as the Lead Agency, is preparing an EIR for the Project in accordance with the requirements of the *California Environmental Quality Act* (Cal. Pub. Res. Code Section 21000 *et seq.*, hereinafter "CEQA"), and the State *CEQA Guidelines* (Cal. Admin. Code Title 14, Section 15000 *et seq.*, hereinafter "CEQA Guidelines").
 - a. The City has determined that an EIR is required, and provided public notice of that determination by publication in a newspaper of general circulation on August 19, 2001.
 - b. The City also distributed a combined Public Notice of Scoping/ Notice of Preparation regarding the EIR, including information about the Project, to interested parties and Responsible and Trustee agencies, on or about August 16, 2001.
 - c. The City Planning Commission held such a duly noticed hearing on September 19, 2001, at which opportunity for public comment was given, and public comment was received on scope of the EIR, and the alternative baseline conditions for the EIR. The period for

acceptance of written comments ended at the close of the public hearing, on September 19, 2001.

2) On September 19, 2001 the Commission reviewed and considered the Notice of Adoption of Baseline Conditions and the staff report regarding proposed baseline conditions, and found that the contents of said notice and staff report and the procedures through which the notice was publicized and reviewed comply with the provisions of CEQA and the *CEQA Guidelines*, specifically Section 15229 of the Guidelines.

3) On December 16, 1999 the Army held a public hearing on the *Draft EIS for the Oakland Army Base* at the West Oakland Branch Library, and in July 2001, the Army issued a Supplemental Draft EIS. The baseline conditions contained in the two Draft EIS documents are those same 1995 baseline conditions described herein.

- a) In September 1995, OARB began experiencing a reduction in activity and personnel as a result of base closure; therefore, it was not at full activity levels throughout the year.
- b) The OARB Reuse Plan may provide approximately 8,860 new direct jobs, over 15,000 indirect jobs, on-site opportunities job training programs, and economic continuity in the use of the OARB as a major employment center within the City of Oakland. Use of the 1995 alternative baseline will support the *Redevelopment Plan* goals of eliminating blight, creating new job opportunities and providing economic congruity at the OARB. The 1995 alternative baseline will also provide a relatively even-handed assessment of the future environmental impacts associated with these economic activities generated by the reuse of this area, neither minimizing future impacts by comparing them against previously more active levels, nor over-emphasizing future impacts unduly.
- c) The City has already begun integrating the 1995 baseline into its planning efforts for the OARB, including reliance on this baseline for the *Negative Declaration of Environmental Impacts for the OARB Interim Leasing Program*, and the planning efforts for the *2001 Amended Draft Final Reuse Plan*.

4) As part of the usual process for an EIR, a Draft EIR will be published, and there will be a public review period and public hearing relating to the full content of the document. That review and comment process is separate from this action, which is confined to the adoption of baseline conditions.

ACCORDINGLY, The City Planning Commission does hereby ADOPT the baseline conditions as described herein and included in the Notice of Adoption of an Alternative Baseline, and finds that the baseline conditions have been prepared and noticed in compliance with CEQA and the *CEQA Guidelines*.

RECOMMENDATIONS:

- 1) Open the hearing, take public testimony on the scope of the EIR and the use of the Alternative Baseline.
- 2) Provide direction to staff and the EIR consultant as to the scope of the EIR.

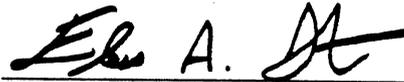
3) Adopt the Alternative Baseline and findings in support thereof.

Prepared by:



SCOTT GREGORY

OARB Redevelopment Plan EIR Project
Manager



ELOIS A. THORNTON,

Planner IV

Approved for forwarding to the
City Planning Commission:



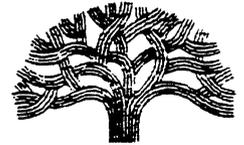
LESLIE GOULD

Director of Planning and Zoning

- Attachments:
- A. Notice of Preparation of Draft Environmental Impact Report / Notice of Adoption of Alternative Baseline
 - B. Map 1: OARB Redevelopment Project Area and Sub-Areas
 - C. Map 2: OARB Sub-Areas
 - D. Detailed Description of the Gateway Development Area Land Use Program
 - E. Summary of Information contained in the U.S. Army Supplemental Draft EIS for the Disposal and Reuse of the OARB

ATTACHMENT A

CITY OF OAKLAND



250 FRANK H. OGAWA PLAZA, SUITE 5313 □ OAKLAND, CALIFORNIA 94612-2034

Community and Economic Development Agency
Redevelopment Division

(510)238-3015
FAX (510) 238-3691
TDD (510) 839-6451

August 10, 2001

COMBINED NOTICE OF PREPARATION, EIR SCOPING MEETING, AND NOTICE OF INTENT TO ADOPT AN ALTERNATIVE BASELINE

This is a notice of the following:

1. Preparation of a draft environmental impact report (EIR);
2. Intent to adopt a proposed alternative environmental baseline in accordance with §21083.8.1 of the Public Resources Code (PRC);
3. Public EIR scoping meeting; and
4. Public hearing for adoption of an alternative baseline

for the

OAKLAND ARMY BASE AREA REDEVELOPMENT PROJECT

The City of Oakland is preparing an EIR in compliance with the California Environmental Quality Act (CEQA) for the subject project.

Description. The Oakland Army Base (OARB) Area Redevelopment Project ("the project") is adoption of a 1,731-acre West Oakland redevelopment area and associated redevelopment plan, land assembly, infrastructure improvements, public access improvements, environmental improvements, land development, and required regulatory implementing actions including but not limited to a general plan amendment and rezoning. As illustrated by the enclosed figure, the OARB Redevelopment Project Area encompasses three redevelopment sub-areas: OARB (450 acres); Maritime (1,215 acres), and 16th and Wood Streets (66 acres). The redevelopment sub-areas are generally expected to be redeveloped as follows: 1) the OARB redevelopment sub-area would be developed as envisioned in the OARB Final Reuse Plan; 2) the Maritime redevelopment sub-area would be developed in accordance with the Port of Oakland's Vision 2000 Program; and 3) the 16th and Wood Street redevelopment sub-area would be developed consistent with reasonably foreseeable market demand (i.e., office and/or housing). Land use within the redevelopment area is currently industrial; anticipated land use under the project could be a combination of two or more of the following: industrial, office, retail, hotel, recreation, public access, and/or community service.

Location. As illustrated by the attached graphic, the redevelopment area is located in westernmost Oakland, and is generally bounded by the Interstate-80 approach to the Bay bridge to the north, the Oakland Inner Harbor to the south, the Oakland Outer Harbor and San Francisco Bay to the west, and Wood Street and the West Oakland community to the east.

Lead Agency. The City of Oakland.

Probable Environmental Effects. Changes in land use and visual setting; consistency with plans and policies; alteration or loss of cultural resources; exposure to seismic hazards and hazardous waste; and increased air pollution, noise, population, demand for public services and utilities, and traffic.

EIR Scoping. The City is sending this notice to members of the public, to agencies who may be responsible for approvals related to or funding of the project, and to agencies who have jurisdiction over natural resources held in trust for the people of the state that may be affected by the project. From the public, the City would like to know your views

as to the scope and content of the environmental information to be considered in the EIR. From public agencies, the City needs to know your views on the scope and content of the environmental information germane to your statutory responsibility in connection with the project. In addition, the City needs the name of a contact person at your agency.

Alternative Baseline. The physical context in which impacts of a proposed project are determined is called the "baseline." Normally, the baseline comprises those environmental conditions that exist at the time of issue of a Notice of Preparation. CEQA §21083.8.1 offers agencies preparing an EIR for reuse of a military base such as the Oakland Army Base the option to analyze impacts in the context of the physical conditions that were present at the time the federal decision became final for closure of the base. Use of such an alternative baseline can better represent the actual impact of OARB reuse when compared to the impacts of the base in full operation. The decision to close the OARB became federal law on September 28, 1995. In order to most accurately assess the type and intensity of OARB reuse impacts, the City proposes to use an alternative baseline of 1995 for the OARB portion of the project to determine impacts for the following environmental factors: traffic, air quality, water consumption, wastewater treatment, energy consumption, and schools. From the public, the City would like to know your views regarding the use of an alternative baseline. From public agencies, the City needs to know how you would address application of your regulatory policies and permitting standards to the proposed alternative baseline.

Providing Comments. You may provide written input and comment on either or both the EIR scope and the use of an alternative baseline at any time within 30 calendar days of receipt of this notice, but in any case **no later than September 19, 2001**. Please provide your written input to:

Mr. Scott Gregory, EIR Project Manager
c/o Ms. Aliza Gallo
250 Frank Ogawa Plaza, Suite 3315
Oakland, California 94612

Public Meeting. The City will conduct a joint scoping meeting on the EIR and hearing on the use of the alternative baseline at a regularly-scheduled meeting of the Oakland Planning Commission. You may learn more about the project and the issues, and may provide verbal comments at the meeting/hearing.

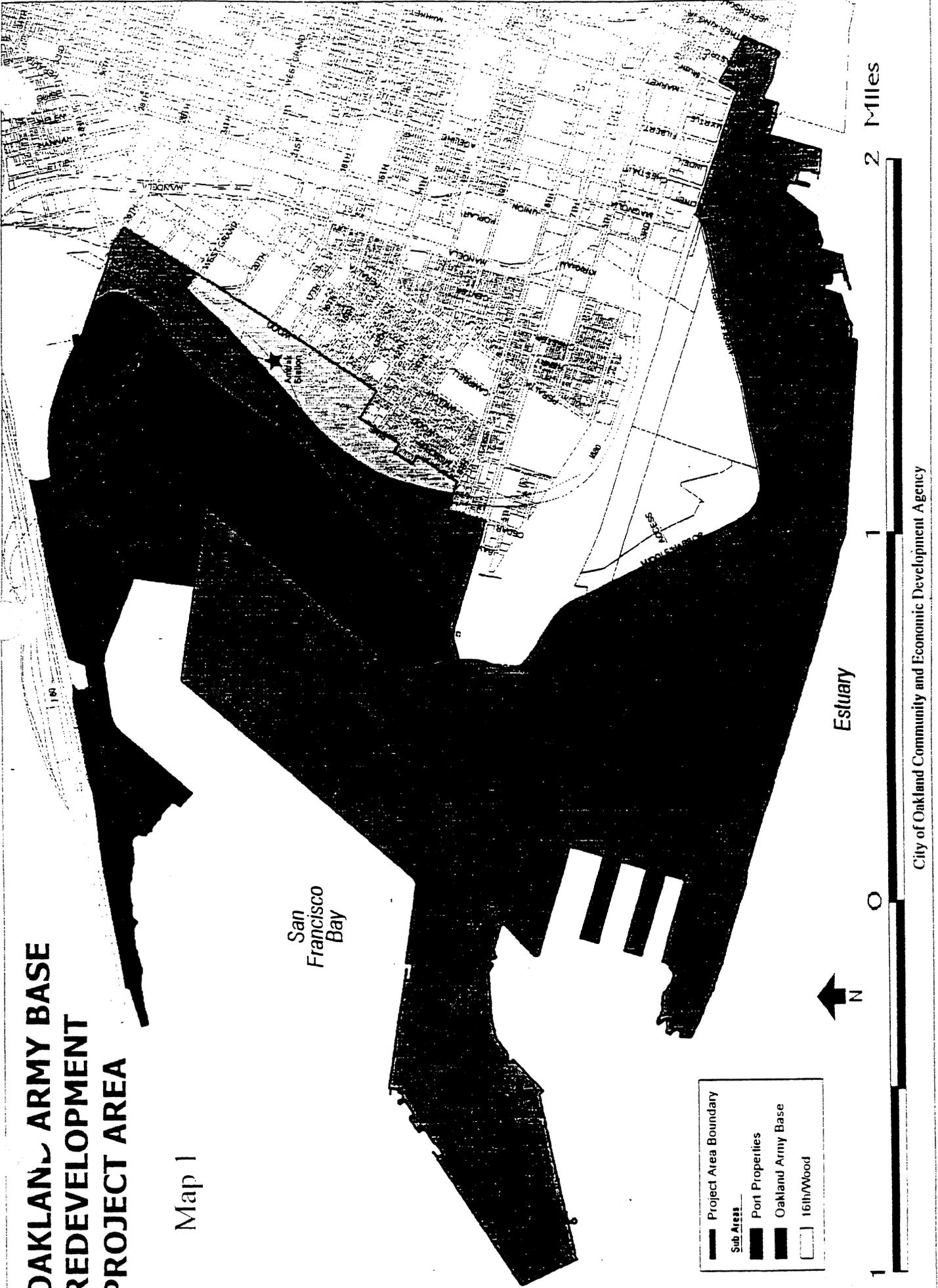
Combined Public Meeting
EIR Scoping Meeting/Hearing on Use of an Alternative Baseline
6:30 p.m., September 19, 2001
Oakland Planning Commission
Hearing Room 1 City Hall, One Frank H. Ogawa Plaza

How to Obtain the Draft EIR. When it publishes the Draft EIR, the City will provide the document to relevant responsible and trustee agencies, as well as to those who respond to this notice by commenting on the scope of the EIR or the use of an alternative baseline. Alternatively, you may send a written request to Mr. Scott Gregory, EIR Manager, as indicated above.

Enclosure: Map of Oakland Redevelopment Project Area and Notice of Additional Public EIR Work Session/EIR Scoping Meeting (all recipients). OARB Draft Final Reuse Plan (public agencies).

OAKLAND ARMY BASE REDEVELOPMENT PROJECT AREA

Map 1



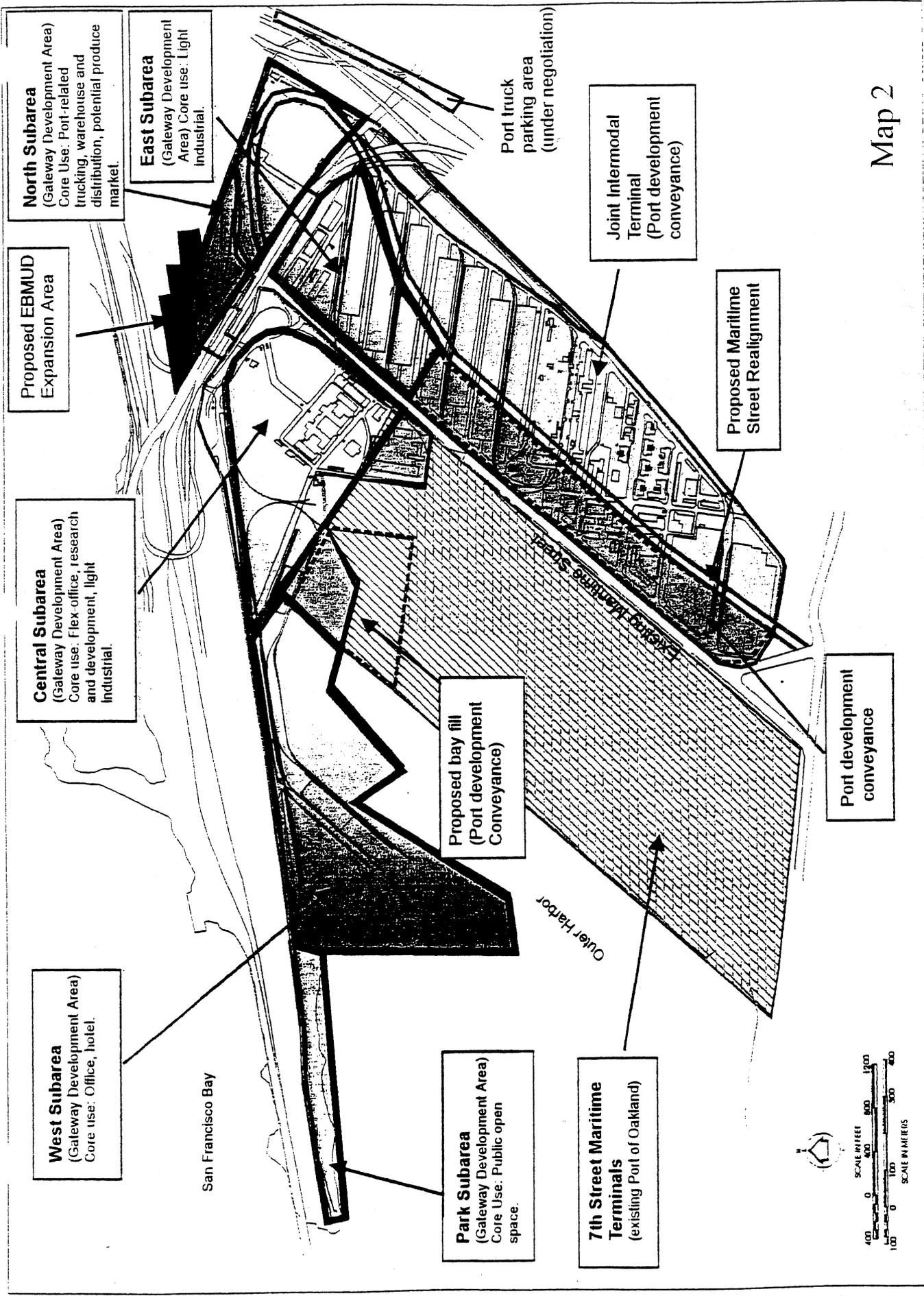
	Project Area Boundary
	Sub Areas
	Port Properties
	Oakland Army Base
	16th/Wood



Estuary

2 Miles

City of Oakland Community and Economic Development Agency



West Subarea
 (Gateway Development Area)
 Core use: Office, hotel.

Central Subarea
 (Gateway Development Area)
 Core use: Flex office, research and development, light industrial.

Proposed EBMUD Expansion Area

North Subarea
 (Gateway Development Area)
 Core Use: Port-related trucking, warehouse and distribution, potential produce market.

East Subarea
 (Gateway Development Area)
 Core use: Light industrial.

Park Subarea
 (Gateway Development Area)
 Core Use: Public open space.

7th Street Maritime Terminals
 (existing Port of Oakland)

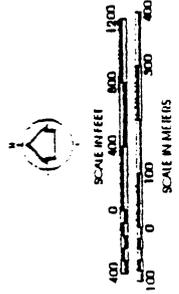
Proposed bay fill (Port development Conveyance)

Port truck parking area (under negotiation)

Joint Intermodal Terminal (Port development conveyance)

Proposed Maritime Street Realignment

Port development conveyance



Map 2

GATEWAY DEVELOPMENT AREA, PART OF THE AMENDED DRAFT FINAL REUSE PLAN FOR THE OAKLAND ARMY BASE

According to the '01 Amended Draft Final Reuse Plan for the OARB, a 186-acre portion of the former OARB is anticipated to be redeveloped for a mix of economic development activities for the City of Oakland and surrounding environs. This 186-acre portion of the former Base is in immediate proximity to the East Bay terminus of Oakland / San Francisco Bay Bridge and the I-880 freeway (see **Figure D-1**), and has thus been termed the "Gateway Development Area". The development plan for the Gateway Area is intended to provide an attractive entry to the City of Oakland, create significant new employment opportunities, and bring new industry and business to the area.

Gateway Development Area Goals and Objectives

The development program for the Gateway Development Area is intentionally broad and subject to further refinement, but is intended to further the primary goal of the *Reuse Plan*. This primary goal is:

"To define a clear but flexible land use direction for the reuse of the OARB properties which best capitalizes on the Base's location, assets, and economic development potential."

Pursuant to this primary goal, the land use and development activities within the Gateway Development Area are also intended to accomplish the following major objectives:

1. To create a balanced land use pattern that best leverages the existing assets of the Oakland Army Base, supports sustainable land utilization, and enhances the quality of local development.
 - a. Provide a "menu" of acceptable land use activities that will be further refined over time by market conditions and demand as the Gateway Area is developed.
 - b. Maintain flexibility for future development by endorsing a broad envelope of probable market activities.
2. To provide sustainable, long-term job creation and economic development opportunities that provide employment and advancement opportunities for Oakland residents and businesses.
 - a. Provide opportunities for job training and educational resources (including, but not limited to, the Joint Apprenticeship Training Program and the Workforce and Business Development Campus).
 - b. Maintain and assist on-going ancillary maritime support activities (i.e., trucking operations) by designating a 15-acre site appropriately and conveniently located for such use.
3. To create high quality and vibrant land use districts which provide a safe, attractive and healthy urban environment.

- a. Increase opportunities for public use, including but not limited to the creation of a new public park to be operated by the East Bay Regional Park District.
4. To protect, preserve and enhance environmental resources.
5. To ensure that high quality public and community services are available to serve future employees within the area and the local community.
 - a. Provide increased opportunities for social benefits and programs including assistance to, and accommodation for recognized homeless assistance providers.
6. To develop and implement high-quality waste management practices that minimize waste generation and maximize reuse and recycling opportunities.

Gateway Development Area Land Use Program

The land use program for the Gateway Development Area is based on the "Flexible Alternative" land use plan developed during preparation of the '01 *Amended Draft Final Reuse Plan* for the OARB. As its name implies, this land use program is intended to provide the flexibility to balance economic and community interests for the Gateway area over time. The focus of development within the Gateway Area will include light industrial, research & development, and flex-office space uses, with high-end retail space as a potential future option. The Gateway Development Area also include certain commitments for land that have been made for public benefit and port priority uses (i.e., ancillary maritime support, job training, a park and homeless assistance programs). No housing development is provided for within the Gateway Area.

For planning purposes, the Gateway Area is divided into five (5) separate sub-areas, each of which will provide for distinct land reuse opportunities. These sub-areas, as also shown on Figure D-1, include:

- **East Sub-Area.** This is an approximately 40-acre site located east of the existing Maritime Street and south of West Grand Avenue,
- **North Sub-Area.** This is an approximately 32-acre site located north of West Grand Avenue and south of the existing East Bay Municipal Utility District wastewater treatment plant site. This sub-area encompasses the properties currently known as the Baldwin Yard (13 acres) and the Subaru site (19 acres).
- **Central Sub-Area.** This sub-area is approximately 75 acres in size and is located south of West Grand Avenue and west of Maritime Street. This sub-area comprises the major development opportunity site within the Gateway Development Area.
- **West Sub-Area.** The approximately 25-acre triangular shaped site is bordered on two sides by the Oakland harbor, and by facilities related to the Bay Bridge on the third side.
- **Park Sub-Area.** The park sub-area is a 15-acre linear-shaped site designated for public park use, located at the eastern-most extension of the Gateway Development Area.

OAKLAND ARMY BASE Conceptual Reuse Strategy: Flexible Alternative

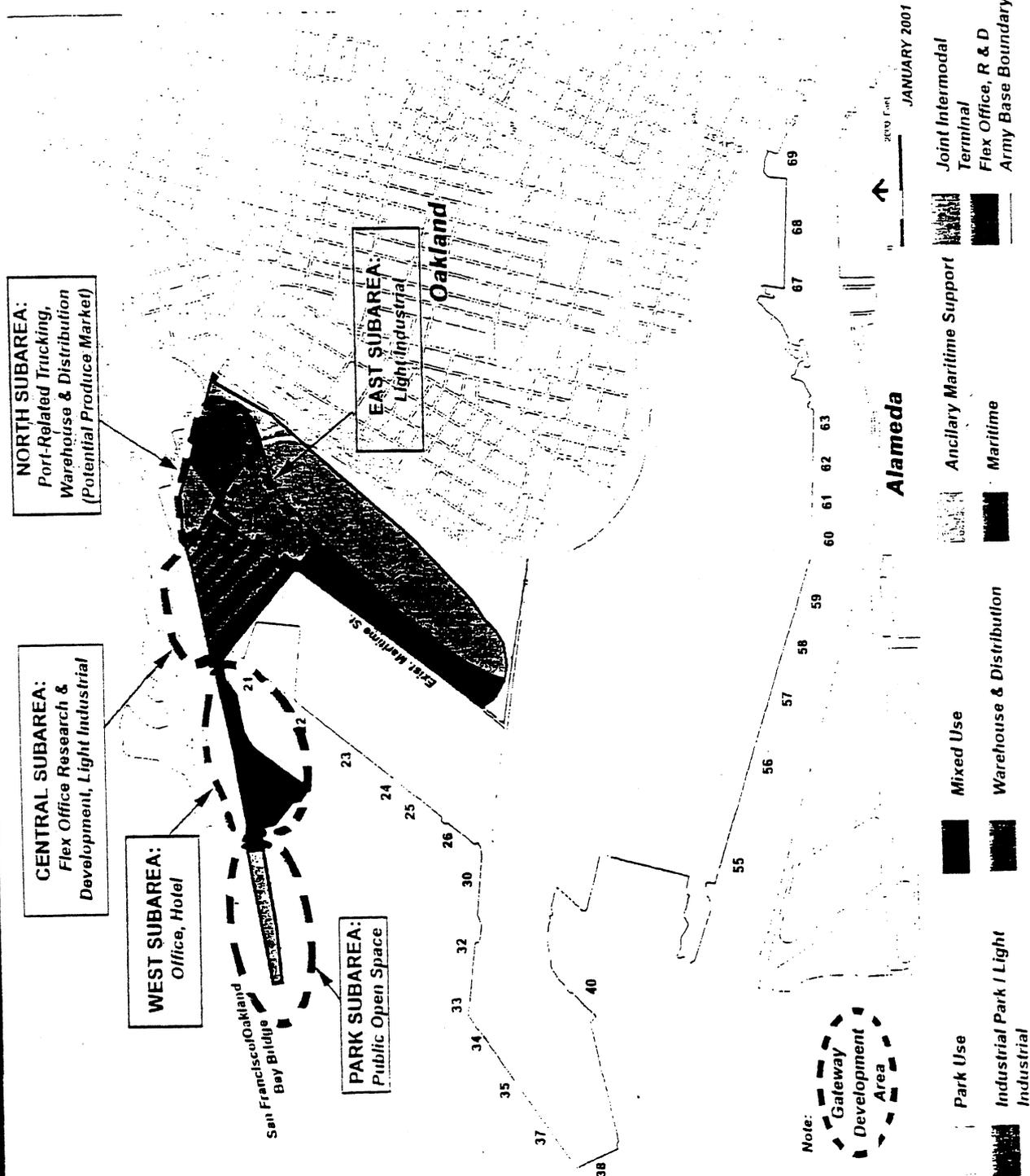


Figure D-1

Land Use Commitments

Ancillary Maritime Support

Ancillary maritime support uses include sites specifically designated for trucking, storage and distribution. These uses are intended to be in direct support of maritime activities at the Port of Oakland facilities. Port-related ancillary uses include container freight stations, transit sheds and other temporary container storage areas, freight forwarders, support transportation uses including trucking and rail yards, and customs and agricultural inspection facilities. Most of the port-related trucking businesses specialize in delivering marine containers and rail trailers. These businesses are known as local intermodal trucking companies. An average size local intermodal trucking company requires about 1 acre of yard space and about 1,000 square feet of office space. Because the marine terminals at the Port are only open during the day, many trucking firms take their containers from the Port terminal to a yard where the containers are stored to enable the trucking firms to haul the containers to their destination day and night.¹

Pursuant to the joint OBRA/Port of Oakland application to BCDC for an amendment to the *Bay Plan*, the Oakland City Council, City Manager and the Port of Oakland reached an agreement with representative of the trucking industry currently located in West Oakland to dedicate an additional 30 acres of land for truck parking and maritime support uses. The staffs of the OBRA and the Port have worked together to identify the most appropriate locations for this additional acreage, and have concluded that 15 acres shall be designated within the Gateway Development Area, and an additional 15-acres shall be designated within the Port's other properties. The 15-acres within the Gateway Development area has been identified within the North Sub-Area, at the site known as the Baldwin Yard. This site has been designated as a Port Priority Use area, specifically designated for ancillary maritime support uses.

The City Council, ORA, OBRA, and the Board of Port Commissioners have each passed resolutions dedicating additional acreage for ancillary maritime support uses and truck parking beyond the acreage committed through the *Bay Plan* amendment.

Joint Apprenticeship Training Committee Facilities

A 3-acre site within the East Sub-Area is designated for use by the Painting and Decorating Joint Apprenticeship Training Committee (JATC). This site is located in the southern portion of the sub-area, east of Maritime Street. The JATC is a fully accredited job training and apprenticeship program with 444 currently enrolled apprentices, and a goal of increasing that enrollment to 1,000. Based on projected facility requirements, the JATC would use this site to accommodate administration uses and other buildings to be used as practice labs for apprentice training.²

¹ Information derived from BCDC Staff Report to Commissioners and Alternates, prepared by Will Travis, Executive Director and Jeff Blanchfield, Chief Planner. December 29, 2000.

² Painting and Decorator's Joint Apprenticeship Training Committee, presentation materials for Public Benefit Conveyance request. August 31, 2000.

Homeless Collaborative Workforce Development Campus

BRAC federal law requires that base closure reuse programs include an accommodation to recognized providers of homeless assistance programs. OBRA and the ORA have established a formal agreement with the Homeless Collaborative, a non-profit organization, to serve as the provider of homeless assistance programs pursuant to the OARB Reuse Plan. Through the provision of supportive training and employment services to homeless and low-income persons, the Homeless Collaborative intends to enhance their long-term employability and earnings.

Under the '98 *Draft Final Base Reuse Plan*, the Homeless Collaborative was intended to occupy existing buildings within the OARB for the development of a Workforce Development Campus and for transitional housing opportunities. However, under the '01 *Amended Draft Final Reuse Plan*, the majority of the Homeless Collaborative's programs (i.e., the Workforce Development Campus) will instead be located either within the East Sub-area of the OARB, or potentially off-site.

However, until such off-site locations are established, the current land use plan for the Gateway Development Area includes accommodation for the Homeless Collaborative programs including:

- the **Alameda County Community Food Bank** may be located within the North Sub-Area,
- the **Workforce Development Campus**, including childcare facilities, will most likely be located within the East Sub-Area,
- **A Safe Place**, which provides emergency services, case management, counseling and employment services to survivors of domestic violence, will most likely be accommodated in the East Sub-area (if not off-site), and
- Housing facilities are anticipated to be developed off-site but in proximity to the Campus, with the assistance of OBRA, the City and the ORA.

Public Park

The narrow peninsula of land consisting of approximately 15 acres (including a submerged portion of land) located directly south of the Oakland touchdown of the Bay Bridge is planned as a public park. This property is approximately 2,800 feet long and between 100 and 200 feet wide, including nearly 3,000 linear feet of rocky shoreline. This sub-area would be developed as the East Bay Gateway Park by the EBRPD.

The recreation program for this park would be devoted to environmental preservation and passive outdoor recreational uses such as walking, viewing, picnicking, fishing and wildlife observation. The beach area would be used for wading, possibly swimming, wind surfing and kayak launching. Because of its urban setting and history, the park would also provide a number of cultural interpretive opportunities. It is anticipated that interpretative panels would be developed describing various cultural and historical items of interest, including:

- current operation of maritime terminals with views of shipping and container-loading activities,

- the historic San Francisco Ferry system, and the East Bay's Key System of trolleys which provided trolley service to the entire East Bay,
- construction of the original Bay bridge and information about the new Bay Bridge spans, and
- historical interpretation of the role of the Oakland Army Base, from which personnel and materials were shipped overseas during World War II and the Korean and Viet Nam conflicts.

The Park Sub-Area includes three existing utility buildings that may be retrofitted for interpretive or operational uses. A conceptual plan for the development of the East Bay Gateway Park is shown in **Figure E-2**.

The park will also provide an alignment for a segment of the San Francisco Bay Trail, a planned 400-mile trail running through nine counties around the shoreline of the San Francisco Bay. The Bay Trail segment will connect West Oakland and downtown Oakland to existing/planned segments of the Bay Trail within the nearby Eastshore State Park, along the frontage of five cities to the north, and across the Bay Bridge to San Francisco.

The EBRPD is also looking to assemble additional lands adjacent to the Army Base property to enlarge this park. Construction of a new span of the Bay Bridge is anticipated to be built immediately to the north of the existing touchdown, followed by removal of the existing bridge span located between the new bridge and the park. EBRPD is currently discussing the possibility of acquiring this additional land that will become available once the current bridge span is removed. Additionally, Caltrans plans to reconstruct the bridge toll-plaza, administration and highway maintenance facilities that are currently located immediately north of the park Sub-Area. Once these facilities are reconstructed, additional lands may become available for parking and staging areas for the park. EBRPD is currently discussing the possibility of acquiring these additional lands as well.

US Army Reserves

The 63rd Division of the U.S. Army Reserves is located on approximately 42 acres of land (approximately 26 acres within the OARB and 16 acres off-site but immediately north of the OARB). The City, Port and EBMUD are currently negotiating with the Reserves to develop a re-location plan to assist in relocation of these Reserve Units to an off-site location (potentially to Camp Parks in Dublin). Once the Army Reserve units are relocated, the ORA would acquire approximately 20 acres as part of the Gateway Development Area, the Port would acquire approximately 9 acres, and EBMUD would acquire the remainder for expansion of their wastewater treatment plant facilities.

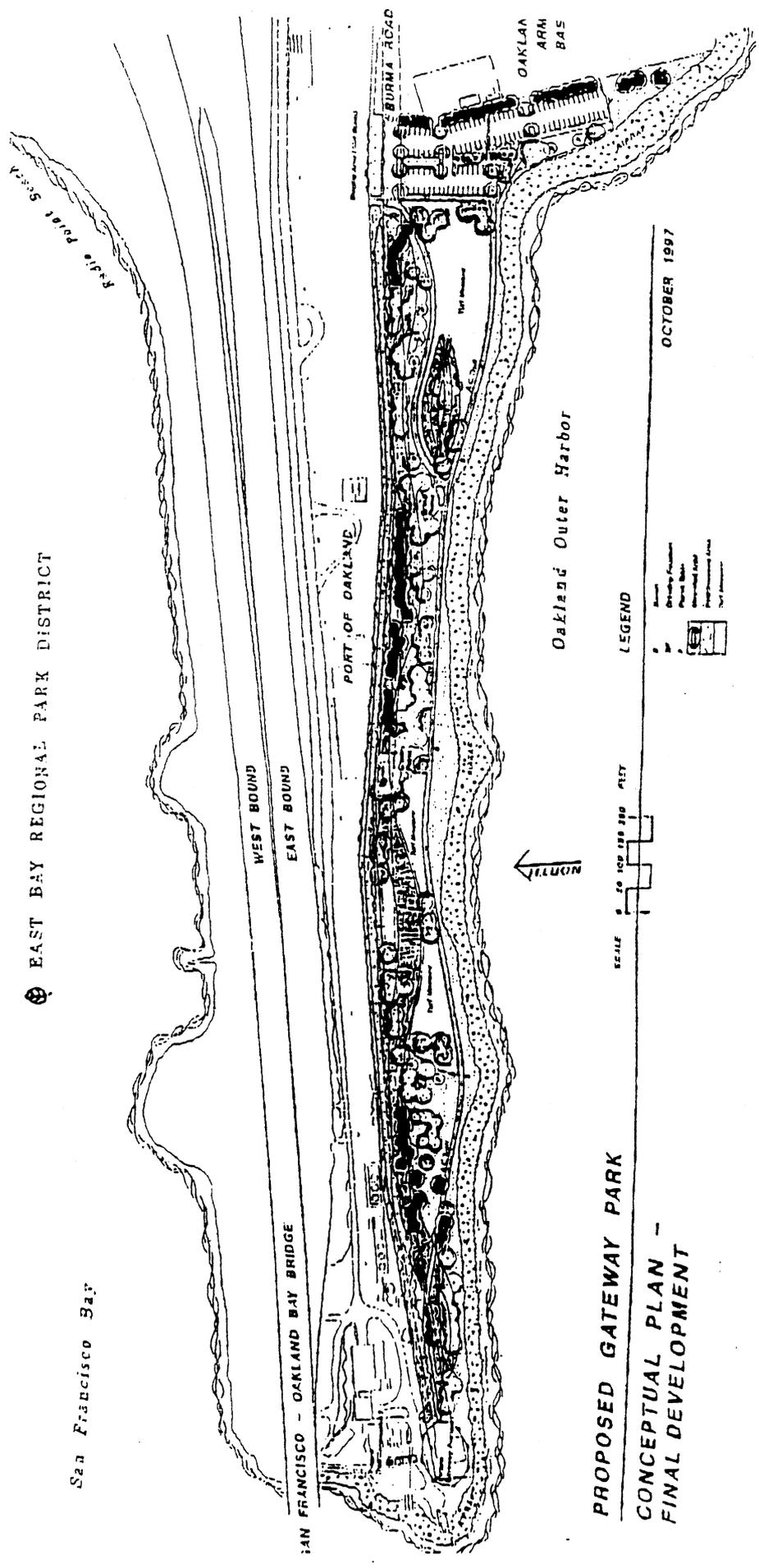


Figure D-2

Economic Development and Redevelopment Opportunities

The economic development-related land uses within the Gateway Area is described below. Although each of these land use types is unique and distinct, the land use program provides the flexibility to mix-and-match these uses throughout the Gateway Development Area. This flexibility is intended to enable specific development activities to respond to market conditions as they develop over time.

Flex-Office Use

The intent of the Flex-Office land use designation is to provide sites that are appropriate for a variety of high-quality businesses and related commercial or industrial establishments. The focus of this land use type is on office or business-related uses, but with the flexibility to accommodate research and development, environmental technology, business and health services, technology and communications uses, and hotels, if these uses are incorporated within an office or business campus-type environment. Development intensities within this land use type may vary throughout the Gateway Development Area.

Research & Development

The intent of the Research & Development land use designation is to provide sites that are appropriate for fostering the growth of emerging and existing technologies. As such, the characteristics of such land uses may include components of office use, as well as industrial, warehouse and distribution facilities. Development intensities within this land use type may vary throughout the Gateway Development Area.

Office

The intent of the Office land use designation is to provide sites that are uniquely suited for exclusive use as offices for professional, business and health services. Corporate campus-like buildings characterize this land use type. Office support uses (such as a hotel) may also be suitable land uses within this designation. Development intensities within this land use type may vary throughout the Gateway Development Area.

Light Industrial

The intent of the Light Industrial land use designation is to provide sites that are appropriate for containing manufacturing and related establishments, generally in an open and attractive setting. Specific uses may include commercial activities such as administrative, business, research and communication services, or light manufacturing activities. Development intensities within this land use type may vary throughout the Gateway Development Area.

Warehouse and Distribution

The intent of the Warehouse and Distribution land use designation is to provide sites that are uniquely suited for use as warehouse and distribution facilities (e.g., produce market)

Table ES-1c. Summary of benefits and adverse effects of the Reconfigured Reuse Plan.

Resource Area (Section References)	Differences between Reconfigured Reuse Plan and Original Reuse Plan	Reconfigured Reuse Plan
Land Use (6.3.1)	<ul style="list-style-type: none"> Inconsistency with City of Oakland General Plan (requires General Plan amendment). Potential produce market in North Subarea incompatible with odors from EBMUD facility expansion north of Base. Consistent with the CZMP. 	<ul style="list-style-type: none"> Direct <i>significant</i> long-term adverse effects.
Air Quality (6.3.2)	<ul style="list-style-type: none"> Additional rail emissions at sensitive receptor locations from Joint Intermodal Terminal (JIT) sited on east side of Base Odor nuisance at offices in Central Subarea from odor-emitting industries sited in East Subarea 	<ul style="list-style-type: none"> Direct <i>significant</i> long-term adverse effects.
Noise (6.3.3)	<ul style="list-style-type: none"> Additional noise at sensitive receptors from expanded JIT on east side of Base. Vibrations from JIT could affect potential R&D and manufacturing facilities. 	<ul style="list-style-type: none"> Direct minor short- and long-term adverse effects.
Water Resources (6.3.4)	<ul style="list-style-type: none"> Minor 	<ul style="list-style-type: none"> Direct minor long-term adverse effect to water supply.
Geology and Soils (6.3.5)	<ul style="list-style-type: none"> Seismic and settlement hazards from constructing buildings on artificial fill at Bay margin (west side of Base). 	<ul style="list-style-type: none"> Indirect minor effects from geological hazards..
Infrastructure (6.3.6)	<ul style="list-style-type: none"> Minor 	<ul style="list-style-type: none"> Direct minor long-term benefits and minor short- and long-term adverse effects.
Traffic and Transportation (6.3.7)	<ul style="list-style-type: none"> Additional improvements to public transit and alternative transportation (e.g., multi-use waterfront access trail, new ferry terminal) 	<ul style="list-style-type: none"> Direct <i>significant</i> long-term adverse effects to on-site circulation and minor long-term benefits from public transit improvements.
Hazardous and Toxic Materials (6.3.8)	<ul style="list-style-type: none"> Minor 	<ul style="list-style-type: none"> Direct minor long-term benefits and adverse effects. Indirect minor short-term adverse effects.
Permits and Regulatory Authorizations (6.3.9)	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Direct long-term benefits.
Biological Resources (6.3.10)	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Direct and indirect minor long-term adverse effects.
Cultural Resources (6.3.11)	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Direct <i>significant</i> long-term adverse effects (mitigated).
Sociological Environment (6.3.12)	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Direct minor long-term benefits and/or adverse effects.
Environmental Justice and the Protection of Children (6.3.13)	<ul style="list-style-type: none"> Additional noise from expanded JIT on east side of Base Possible location of homeless assistance facilities at equivalent off-base locations Creation of Community Trust to benefit West Oakland community 	<ul style="list-style-type: none"> Direct minor short- and long-term benefits and/or adverse effects. Indirect minor short- and long-term benefits.
Economic Development (6.3.14)	<ul style="list-style-type: none"> Higher employment and sales levels. More intensive commercial and retail uses. 	<ul style="list-style-type: none"> Direct minor short- and long-term benefits. Indirect minor short- and long-term benefits.
Quality of Life (6.3.15)	<ul style="list-style-type: none"> Multi-use waterfront access trail and additional shops and services offer additional quality of life benefits 	<ul style="list-style-type: none"> Direct minor long-term benefits.
Installation Agreements (6.3.16)	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> No effects.

due to their proximity to regional transportation facilities. Development intensities within this land use type may vary throughout the Gateway Development Area.

One of the anticipated uses within the Gateway Area includes the potential relocation of the Oakland Produce Market from its current location southeast of the Oakland Central Business District and west of Jack London Square. The Warehouse and Distribution land use type planned for the North sub-area would be consistent and compatible with such operations.

High-End Retail

The intent of the High-End Retail land use designation is to identify locations where limited, high-end only retail uses may be permitted within the Gateway Area. This land use type is intended to provide a distinction between the more standard types of retail establishments that are not anticipated, versus the high-end uses (i.e., a four-star hotel) that may be accommodated.

Summary of Gateway Development Area Land Use Program

The following Table illustrates the total maximum development program anticipated for the Gateway Development Area portion of the former Oakland Army Base. The actual development activity that occurs within this area over time may vary from the development program described herein. However, this description is intended to provide the maximum or "worst-case" scenario of development intensities that may be anticipated or permitted under the environmental review contained in this EIR.

Of the total 189 acres of the Gateway Development Area, 36 acres have been dedicated for specific uses:

- 15 acres have been dedicated to ancillary maritime uses,
- 15 acres have been dedicated to public park,
- 3 acres have been dedicated for job training opportunities (JATC), and
- approximately 3 acres have been targeted specifically for homeless assistance programs.

This leaves a remaining approximately 150 acres within the Gateway Development Area for economic development and redevelopment opportunities. The maximum anticipated development potential for this area according to the Reuse Plan is approximately 2,297,000 square feet of new "Flex-" uses. Therefore, the overall development intensity for this area, based on gross land availability (including land that will be needed for future roadways, pedestrian circulation, utility easements, etc...) is an FAR of 0.35, as shown below.

Table _ : Land Use Summary, Gateway Development Area

	Acres	Square Feet
Gateway Development Area, total acres	186	
<i>Committed Uses</i>		
JATC	3	
Homeless Collaborative	3	
Ancillary Maritime Uses	15	
Public Park	15	
Subtotal	36	
<i>Other Redevelopment Opportunity Sites</i>		
Flex-Office, Office, and/or R&D		1,528,000
Light Industrial, Warehouse and Distribution		744,000
Retail		25,000
Subtotal	150	2,297,000
		0.35 FAR

Table ES-1a. Summary of benefits and adverse effects of OARB disposal (for reuse, see Table ES-1b).

Resource Area (Section References)	No Action Alternative	Encumbered Disposal	Unencumbered Disposal
Land Use (5.2.2, 5.3.2, 5.4.2)	<ul style="list-style-type: none"> Indirect <i>significant</i> long-term adverse effects. 	<ul style="list-style-type: none"> Direct minor short-term adverse effects and direct minor short-term and long-term benefits. 	<ul style="list-style-type: none"> Direct minor short-term adverse effects. Indirect minor short-term adverse effects
Air Quality (5.2.3, 5.3.3, 5.4.3)	<ul style="list-style-type: none"> Direct minor long-term benefits. 	<ul style="list-style-type: none"> Indirect <i>significant</i> long-term impacts. 	<ul style="list-style-type: none"> Indirect <i>significant</i> long-term impacts.
Noise (5.2.4, 5.3.4, 5.4.4)	<ul style="list-style-type: none"> Direct minor long-term benefits. 	<ul style="list-style-type: none"> Indirect minor short and long-term adverse effects. 	<ul style="list-style-type: none"> Indirect minor short- and long-term impacts.
Water Resources (5.2.5, 5.3.5, 5.4.5)	<ul style="list-style-type: none"> Direct minor long-term benefits. Indirect minor long-term benefits. 	<ul style="list-style-type: none"> Indirect long-term benefits and minor short- and long-term adverse effects. 	<ul style="list-style-type: none"> Indirect minor short- and long-term impacts.
Geology and Soils (5.2.6, 5.3.6, 5.4.6)	<ul style="list-style-type: none"> Indirect minor long-term benefits. 	<ul style="list-style-type: none"> Indirect minor short- and long-term adverse effects. 	<ul style="list-style-type: none"> Indirect minor short- and long-term adverse effects.
Infrastructure (5.2.7, 5.3.7, 5.4.7)	<ul style="list-style-type: none"> Indirect minor, long-term benefits and adverse effects, but net minor, long-term adverse effect. 	<ul style="list-style-type: none"> Indirect minor long-term benefits, and indirect minor short- and long-term impacts. 	<ul style="list-style-type: none"> Indirect minor long-term benefits, and indirect minor short- and long-term impacts.
Traffic and Transportation (5.2.8, 5.3.8, 5.4.8)	<ul style="list-style-type: none"> Direct minor long-term benefits. Indirect minor adverse effects 	<ul style="list-style-type: none"> Indirect <i>significant</i> long-term impacts. 	<ul style="list-style-type: none"> Indirect <i>significant</i> long-term impacts.
Hazardous and Toxic Materials (5.2.9, 5.3.9, 5.4.9)	<ul style="list-style-type: none"> Direct minor long-term benefits. 	<ul style="list-style-type: none"> Direct and indirect minor long-term benefits. 	<ul style="list-style-type: none"> Direct and indirect minor long-term benefits.
Permits and Regulatory Authorizations (5.2.10, 5.3.10, 5.4.10)	<ul style="list-style-type: none"> No effects. 	<ul style="list-style-type: none"> Direct and indirect minor long-term benefits. 	<ul style="list-style-type: none"> Indirect minor long-term benefits.
Biological Resources (5.2.11, 5.3.11, 5.4.11)	<ul style="list-style-type: none"> Indirect minor long-term benefits. 	<ul style="list-style-type: none"> Direct minor long-term impacts. Indirect minor long-term benefits. 	<ul style="list-style-type: none"> Direct minor long-term impacts. Indirect minor long-term benefits.
Cultural Resources (5.2.12, 5.3.12, 5.4.12)	<ul style="list-style-type: none"> Indirect minor short- and long-term adverse effects (mitigated). 	<ul style="list-style-type: none"> Direct minor long-term impacts (mitigated). 	<ul style="list-style-type: none"> Direct minor long-term impacts (mitigated). Indirect minor long-term impacts (mitigated).
Sociological Environment (5.2.13, 5.3.13, 5.4.13)	<ul style="list-style-type: none"> Indirect minor long-term benefits and adverse effects. 	<ul style="list-style-type: none"> Direct minor long-term benefits. Indirect minor long-term benefits and impacts. 	<ul style="list-style-type: none"> Direct minor long-term benefits. Indirect minor long-term benefits and impacts.
Environmental Justice and the Protection of Children (5.4.13)	<ul style="list-style-type: none"> No effects. 	<ul style="list-style-type: none"> No effects. 	<ul style="list-style-type: none"> No effects.
Economic Development (5.2.14, 5.3.14, 5.4.14)	<ul style="list-style-type: none"> Direct minor long-term adverse effects. Indirect minor long-term adverse effects. 	<ul style="list-style-type: none"> Direct minor short- and long term benefits. Indirect minor short- and long-term benefits. 	<ul style="list-style-type: none"> Direct and indirect minor short- and long-term benefits.
Quality of Life (5.2.15, 5.3.15, 5.4.15)	<ul style="list-style-type: none"> No effects. 	<ul style="list-style-type: none"> Indirect minor long-term benefit. 	<ul style="list-style-type: none"> Indirect minor long-term benefits and impacts.
Installation Agreements (5.2.16, 5.3.16, 5.4.16)	<ul style="list-style-type: none"> Indirect minor long-term adverse effects. 	<ul style="list-style-type: none"> Indirect minor long- and short-term impacts. 	<ul style="list-style-type: none"> Indirect minor long- and short-term impacts.

ATTACHMENT E

Table ES-1b. Summary of benefits and adverse effects of the six OARB reuse alternatives evaluated in the Draft EIS.

Resource Area (Section References)	Reuse Alternative 1	Reuse Alternative 2	Reuse Alternative 3
Land Use (5.2.2, 5.3.1, 5.4.2)	<ul style="list-style-type: none"> Direct <i>significant</i> long-term adverse effects. 	<ul style="list-style-type: none"> Direct minor long-term adverse effects. 	<ul style="list-style-type: none"> Direct <i>significant</i> long-term adverse effects.
Air Quality (5.2.3, 5.3.2, 5.4.3)	<ul style="list-style-type: none"> Direct minor long-term benefits. 	<ul style="list-style-type: none"> Direct minor long-term benefits. 	<ul style="list-style-type: none"> Direct minor long-term benefits.
Noise (5.2.4, 5.3.3, 5.4.4)	<ul style="list-style-type: none"> Direct minor short- and long-term adverse effects. 	<ul style="list-style-type: none"> Direct minor short- and long-term adverse effects. 	<ul style="list-style-type: none"> Direct minor short- and long-term adverse effects.
Water Resources (5.2.5, 5.3.4, 5.4.5)	<ul style="list-style-type: none"> No effects. 	<ul style="list-style-type: none"> No effects. 	<ul style="list-style-type: none"> No effects.
Geology and Soils (5.2.6, 5.3.5, 5.4.6)	<ul style="list-style-type: none"> No effects. 	<ul style="list-style-type: none"> No effects. 	<ul style="list-style-type: none"> No effects.
Infrastructure (5.2.7, 5.3.6, 5.4.7)	<ul style="list-style-type: none"> Direct minor long-term benefits and minor short-term adverse effects. 	<ul style="list-style-type: none"> Direct minor long-term benefits and minor short-term adverse effects. 	<ul style="list-style-type: none"> Direct minor long-term benefits and minor short-term adverse effects.
Traffic and Transportation (5.2.8, 5.3.7, 5.4.8)	<ul style="list-style-type: none"> Direct long-term benefits. 	<ul style="list-style-type: none"> Direct minor long-term benefits. 	<ul style="list-style-type: none"> Direct minor long-term adverse effects to regional traffic and <i>significant</i> direct adverse impacts on-site circulation.
Hazardous and Toxic Materials (5.2.9, 5.3.8, 5.4.9)	<ul style="list-style-type: none"> Direct minor long-term benefits and adverse effects. Indirect minor short-term adverse effects. 	<ul style="list-style-type: none"> Direct minor long-term benefits and adverse effects. Indirect minor short-term adverse effects. 	<ul style="list-style-type: none"> Direct minor long-term benefits and adverse effects. Indirect minor short-term adverse effects.
Permits and Regulatory Authorizations (5.2.10, 5.3.9, 5.4.10)	<ul style="list-style-type: none"> Direct long-term benefits. 	<ul style="list-style-type: none"> Direct long-term benefits. 	<ul style="list-style-type: none"> Direct long-term benefits.
Biological Resources (5.2.11, 5.3.10, 5.4.11)	<ul style="list-style-type: none"> Direct and indirect minor long-term adverse effects. 	<ul style="list-style-type: none"> Direct and indirect minor long-term adverse effects. 	<ul style="list-style-type: none"> Direct and indirect minor long-term adverse effects.
Cultural Resources (5.2.12, 5.3.11, 5.4.12)	<ul style="list-style-type: none"> Direct <i>significant</i> long-term adverse effects (mitigated). 	<ul style="list-style-type: none"> Direct <i>significant</i> long-term adverse effects (mitigated). 	<ul style="list-style-type: none"> Direct <i>significant</i> long-term adverse effects (mitigated).
Ecological Environment (5.2.13, 5.3.12, 5.4.13)	<ul style="list-style-type: none"> Direct minor long-term benefits. Indirect minor short- and long-term adverse effects. 	<ul style="list-style-type: none"> Direct minor long-term benefits and/or adverse effects. 	<ul style="list-style-type: none"> Direct minor long-term benefits.
Environmental Justice and the Protection of Children (5.4.14)	<ul style="list-style-type: none"> Direct minor short-term adverse effects. Indirect minor short- and long-term benefits. 	<ul style="list-style-type: none"> Direct minor short- and long-term adverse effects. Indirect minor short- and long-term benefits. 	<ul style="list-style-type: none"> Direct minor short-term adverse effects. Indirect minor short- and long-term benefits.
Economic Development (5.2.14, 5.3.13, 5.4.15)	<ul style="list-style-type: none"> Direct minor short- and long-term benefits. Indirect minor short- and long-term benefits. 	<ul style="list-style-type: none"> Direct minor short- and long-term benefits. Indirect minor short- and long-term benefits. 	<ul style="list-style-type: none"> Direct minor short- and long-term benefits. Indirect minor short- and long-term benefits.
Quality of Life (5.2.15, 5.3.14, 5.4.16)	<ul style="list-style-type: none"> Direct minor long-term benefits. 	<ul style="list-style-type: none"> Direct minor long-term benefits and adverse effects. 	<ul style="list-style-type: none"> Direct minor long-term benefits.
Installation Agreements (5.2.16, 5.3.15, 5.4.17)	<ul style="list-style-type: none"> No effects. 	<ul style="list-style-type: none"> No effects. 	<ul style="list-style-type: none"> No effects.

Reuse Alternative 4	Reuse Alternative 5	Reuse Alternative 6
<ul style="list-style-type: none"> • Direct minor long-term adverse effects. 	<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects. 	<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects. • Indirect <i>significant</i> adverse effects.
<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects. 	<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects. 	<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects.
<ul style="list-style-type: none"> • Direct minor short- and long-term adverse effects. 	<ul style="list-style-type: none"> • Direct minor short- and long-term adverse effects. 	<ul style="list-style-type: none"> • Direct minor short-term adverse effects and <i>significant</i> long-term adverse effects.
<ul style="list-style-type: none"> • Direct minor long-term adverse effect to water supply. 	<ul style="list-style-type: none"> • Direct minor long-term adverse effect to water supply. 	<ul style="list-style-type: none"> • Direct minor long-term adverse effect to water quality. Direct <i>significant</i> long-term adverse effect to water supply.
<ul style="list-style-type: none"> • No effects. 	<ul style="list-style-type: none"> • No effects. 	<ul style="list-style-type: none"> • Minor, long-term adverse effects.
<ul style="list-style-type: none"> • Direct minor long-term benefits and minor short- and long-term adverse effects. 	<ul style="list-style-type: none"> • Direct minor long-term benefits and minor short- and long-term adverse effects. 	<ul style="list-style-type: none"> • Direct minor long-term benefits; minor short-term adverse effects; and <i>significant</i> long-term adverse effects.
<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects to on-site and regional traffic. 	<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects to on-site circulation. 	<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects to on-site and regional traffic.
<ul style="list-style-type: none"> • Direct minor long-term benefits and adverse effects. • Indirect minor short-term adverse effects. 	<ul style="list-style-type: none"> • Direct minor long-term benefits and adverse effects. • Indirect minor short-term adverse effects. 	<ul style="list-style-type: none"> • Direct minor long-term benefits and adverse effects. • Indirect minor short-term adverse effects.
<ul style="list-style-type: none"> • Direct long-term benefits. 	<ul style="list-style-type: none"> • Direct long-term benefits. 	<ul style="list-style-type: none"> • Direct long-term benefits.
<ul style="list-style-type: none"> • Direct and indirect minor long-term adverse effects. 	<ul style="list-style-type: none"> • Direct and indirect minor long-term adverse effects. 	<ul style="list-style-type: none"> • Direct and indirect minor long-term adverse effects.
<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects (mitigated). 	<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects (mitigated). 	<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects (mitigated).
<ul style="list-style-type: none"> • Direct minor long-term benefits and/or adverse effects. 	<ul style="list-style-type: none"> • Direct minor long-term benefits and/or adverse effects. 	<ul style="list-style-type: none"> • Direct <i>significant</i> long-term adverse effects and minor long-term benefits.
<ul style="list-style-type: none"> • Direct minor short-term and long-term benefits and minor short-term adverse effects. • Indirect short- and long-term benefits. 	<ul style="list-style-type: none"> • Direct minor short- and long-term adverse effects. • Indirect minor short- and long-term benefits. 	<ul style="list-style-type: none"> • Direct minor short- and long-term adverse effects. • Indirect minor short- and long-term benefits.
<ul style="list-style-type: none"> • Direct minor short- and long-term benefits. • Indirect minor short- and long-term benefits. 	<ul style="list-style-type: none"> • Direct minor short- and long-term benefits. • Indirect minor short- and long-term benefits. 	<ul style="list-style-type: none"> • Direct <i>significant</i> effects on sales and employment. • Indirect minor short- and long-term benefits.
<ul style="list-style-type: none"> • Direct minor long-term benefits. 	<ul style="list-style-type: none"> • Direct minor long-term benefits. 	<ul style="list-style-type: none"> • Direct minor long-term benefits.
<ul style="list-style-type: none"> • No effects. 	<ul style="list-style-type: none"> • No effects. 	<ul style="list-style-type: none"> • No effects.

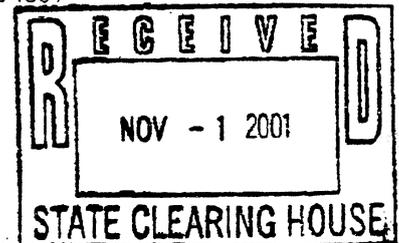
Appendix 1D
Notice of Determination Regarding Adoption of an
Alternative Baseline

Notice of Determination
Adoption of Alternative Baseline for the Oakland Army Base Portion of the
Oakland Army Base Area Redevelopment Plan EIR
(Pursuant to Public Resources Code § 21083.8.1)

To: County Clerk
County of Alameda

Office of Planning and Research
State Clearinghouse
1400 Tenth Street
Sacramento, CA 95812-3044

From: City of Oakland
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94607



Oakland Army Base Area Redevelopment Project EIR

Project Title:

2001082058	Ms. Elois A. Thornton, City of Oakland	(510) 238-6284
State Clearinghouse Number (If submitted to Clearinghouse)	Lead Agency Contact Person	Area Code/Telephone

City of Oakland, Alameda County

Project Location (include county)

Project Description: The Oakland Army Base (OARB) Area Redevelopment Project includes adoption of about a 1,731-acre OARB Redevelopment Area and associated redevelopment plan, land assembly, infrastructure improvements, public access improvements, environmental improvements, land development, and required regulatory implementing actions including but not limited to a General Plan amendment and rezoning. The OARB Redevelopment Project Area encompasses three redevelopment sub-areas: the Oakland Army Base sub-area, the Port of Oakland Maritime sub-area, and the 16th and Wood Streets sub-area. Future development within the OARB sub-area will be consistent with the OARB Final Reuse Plan.

The City of Oakland, as the Lead Agency, is preparing an EIR for the Project in accordance with the requirements of the *California Environmental Quality Act (CEQA)*, *Public Resources Code Section 21000 et seq.* The City has determined that an EIR is required, and provided public notice of that determination, combined with a Public Notice of Scoping/Notice of Preparation/Notice of Adoption of Baseline Conditions regarding the EIR to interested parties and Responsible and Trustee agencies, on or about August 16, 2001.

Alternative Baseline: *CEQA Section 21083.8.1* offers agencies preparing an EIR for reuse of a military base such as the Oakland Army Base the option to analyze impacts in the context of the physical conditions that were present at the time the federal decision became final for

closure of the base. Use of such an alternative baseline can better represent the actual impact of base reuse when compared to the impacts of the base in full operation. The decision to close the OARB became federal law on September 28, 1995. In order to most accurately assess the type and intensity of OARB reuse impacts, the City intends to use an alternative baseline of 1995 for the OARB portion of the project to determine impacts for the following environmental factors: traffic, air quality, water consumption, wastewater treatment, energy consumption, population/employment, noise and schools.

The City of Oakland as Lead Agency, on September 19, 2001, has made the following findings regarding the above-described project:

- [T] The City provided public notice of the intended adoption of Baseline Conditions for the OARB Area Redevelopment Plan EIR to interested parties and Responsible and Trustee agencies on or about August 16, 2001.
- [T] The City Planning Commission held a duly noticed hearing on September 19, 2001, at which opportunity for public comment was given, and public comment was received on the scope of the federal EIS being prepared for the project, the scope of the City's EIR and the alternative baseline conditions for the EIR. The Commission also reviewed and considered the Notice of Adoption of Baseline Conditions and the staff report regarding proposed baseline conditions. The Commission found that the contents of the notice and staff report, and the procedures through which the notice was publicized and reviewed, complied with the provisions of CEQA and the *CEQA Guidelines*, specifically *CEQA Guidelines Section 15229*.
- [T] The City adopted the 1995 baseline year as described in the Army's *2001 Supplemental EIS* as the baseline for the OARB portion of the OARB Redevelopment Project Area EIR, pursuant to *CEQA Guidelines Section 15229*. Specifically, the City intends to use an alternative baseline of 1995 for the OARB portion of the project to determine impacts for the following environmental factors: traffic, air quality, water consumption, wastewater treatment, energy consumption, population /employment, noise and schools. Where 1995 data is not available the most recent available data will be used as the baseline. However, current environmental conditions for hazardous or toxic wastes, substances and materials must be used as the baseline pursuant to special consideration of these issues as established under *CEQA Guidelines Section 15229(d)(1)*. The City's adoption of the alternative baseline was based on the following findings:
 1. The 1995 alternative baseline will provide an even-handed assessment of the future environmental impacts associated with economic activities generated by the reuse of the area, neither minimizing future impacts by comparing them against previously more active levels, nor over-emphasizing future impacts unduly.
 2. Use of this baseline year will expedite preparation of the EIR by relying upon existing information as contained in the federal EIS, and will better represent the actual impact of OARB reuse.
 3. Use of the 1995 alternative baseline will support the *Redevelopment Plan* goals of eliminating blight, creating new job opportunities and providing economic congruity at the OARB.

The staff report and record of adoption of the alternative baseline is available to the General Public at:

250 Frank Ogawa Plaza, Suite 3315, Oakland, California 94612

E. A. [Signature]

10.29.01

PLANNER IV

Signature (Public Agency)

Date

Title

Date received for filing:

Appendix 4.1
Consistency with Plans and Policies

- 4.1A San Francisco Bay Plan Objectives and Policies
- 4.1B San Francisco Bay Area Seaport Plan Policies
- 4.1C San Francisco Bay Trail Plan Policies
- 4.1D Oakland General Plan Objectives and Policies—Land Use and Transportation Element (LUTE)
- 4.1E Oakland General Plan Objectives and Policies—Bicycle Master Plan (BMP)
- 4.1F Oakland General Plan Objectives and Policies—Estuary Policy Plan
- 4.1G Oakland General Plan Objectives and Policies—Open Space, Conservation, and Recreation Element (OSCAR)
- 4.1H Oakland General Plan Objectives and Policies—Historic Preservation Element
- 4.1I Oakland General Plan Objectives and Policies—Housing Element
- 4.1J Oakland General Plan Objectives and Policies—Hazards Element

**4.1A San Francisco Bay
Plan Objectives and Policies**

San Francisco Bay Plan Objectives and Policies Relevant to the OARB Redevelopment District

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Objective 1	Protect the Bay as a great natural resource for the benefit of present and future generations.	✓	✓	✓
Objective 2	Develop the Bay and its shoreline to their highest potential with a minimum of Bay filling.	✓	✓	✓
Fish and Wildlife				
Policy 1	The benefits of fish and wildlife in the Bay should be insured for present and future generations of Californians. Therefore, to the greatest extent feasible, the remaining marshes and mudflats around the Bay, the remaining water volume and surface area of the Bay, and adequate fresh water inflow into the Bay should be maintained.	✓	✓	✓
Policy 2	Specific habitats that are needed to prevent the extinction of any species, or to maintain or increase any species that would provide substantial public benefits, should be protected, whether in the Bay or on the shoreline behind dikes. Such areas on the shoreline are designated as Wildlife Areas on the Plan maps.	✓	✓	✓
Water Quality				
Policy 1	To the greatest extent feasible, the Bay marshes, mudflats, and water surface area and volume should be maintained and, whenever possible, increased. Fresh water inflow into the Bay should be maintained at a level adequate to protect Bay resources and beneficial uses. Bay water pollution should be avoided.	✓	✓	✓
Policy 2	Water quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the San Francisco Bay Regional Water Quality Control Board's Basin Plan. The policies, recommendations, decisions, advice and authority of the State Water Resources Control Board and the San Francisco Bay Regional Water Quality Control Board, should be the basis for carrying out the Commission's water quality responsibilities.	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy 3	Shoreline projects should be designed and constructed in a manner that reduces soil erosion and protects the Bay from increased sedimentation through the use of appropriate erosion control practices.	✓	✓	
Policy 4	Polluted runoff from projects should be controlled by the use of best management practices in order to protect the water quality and beneficial uses of the Bay, especially where water dispersion is poor and near shellfish beds and other significant biotic resources. Whenever possible, runoff discharge points should be located where the discharge will have the least impact. Approval of projects involving shoreline areas polluted with hazardous substances should be conditioned so that they will not cause harm to the public or the beneficial uses of the Bay.	✓	✓	✓

Water Surface Area and Volume

Policy 1	The surface area of the Bay and the total volume of water should be kept as large as possible in order to maximize active oxygen interchange, vigorous circulation, and effective tidal action. Filling and diking that reduce surface area and water volume should therefore be allowed only for purposes providing substantial public benefits and only if there is no reasonable alternative.	✓	✓	
Policy 2	Water circulation in the Bay should be maintained, and improved as much as possible. Any proposed fills, dikes, or piers should be thoroughly evaluated to determine their effects upon water circulation and then modified as necessary to improve circulation or at least to minimize any harmful effects.	✓	✓	
Policy 3	Because further study is needed before any barrier proposal to improve water circulation can be considered acceptable, the Bay Plan does not include any barriers. Before any proposal for a barrier is adopted in the future, the Commission will be required to replan all of the affected shoreline and water area.	✓	✓	

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Smog and Weather				
Policy 1	To the greatest extent feasible, the remaining water volume and surface area of the Bay should be maintained.	✓		✓
Safety of Fills				
	The Commission has appointed the Engineering Criteria Review Board consisting of geologists, civil engineers specializing in geotechnical and coastal engineering, structural engineers, and architects competent to and adequately empowered to:			
	(a) establish and revise safety criteria for Bay fills and structures thereon;			
Policy 1	(b) review all except minor projects for the adequacy of their specific safety provisions, and make recommendations concerning these provisions;	✓		✓
	(c) prescribe an inspection system to assure placement of fill according to approved designs; and			
	(d) gather, and make available, performance data developed from specific projects.			
	These activities would complement the functions of local building departments and local planning departments, none of which are presently staffed to provide soils inspections.			
Policy 2	Even if the Bay Plan indicates that a fill may be permissible, no fill or building should be constructed if hazards cannot be overcome adequately for the intended use in accordance with the criteria prescribed by the Engineering Criteria Review Board.	✓		✓
Policy 3	To provide vitally-needed information on the effects of earthquakes on all kinds of soils, installation of strong-motion seismographs should be required on all future major land fills. In addition, the Commission encourages installation of strong-motion seismographs in other developments on problem soils, and in other areas recommended by the U.S. Coast and Geodetic Survey, for purposes of data comparison and evaluation.	✓		✓

Description Text of Objective, Policy

To prevent damage from flooding, structures on fill or near the shoreline should have adequate flood protection including consideration of future relative sea level rise as determined by competent engineers. As a general rule, structures on fill or near the shoreline should be above the wave runup level or sufficiently set back from the edge of the shore so that the structure is not subject to dynamic wave energy. In all cases, the bottom floor level of structures should be above the highest estimated tide elevation. Exceptions to the, general height rule may be made for developments specifically designed to tolerate periodic flooding.

Policy 4

✓ ✓

To minimize the potential hazard to Bay fill projects and bayside development from subsidence, all proposed developments should be sufficiently high above the highest estimated tide level for the expected life of the project or sufficiently protected by levees to allow for the effects of additional subsidence for the expected life of the project, utilizing the latest information available from the U.S. Geological Survey and the National Ocean Service. Rights-of-way for levees protecting inland areas from tidal flooding should be sufficiently wide on the upland side to allow for future levee widening to support additional levee height so that no fill for levee widening is placed in the Bay.

Policy 5

✓ ✓

Local governments and special districts with responsibilities for flood protection should assure that their requirements and criteria reflect future relative sea level rise and should assure that new structures and uses attracting people are not approved in flood prone areas or in areas that -will become flood prone in the future, and that structures and uses that are approvable will be built at stable elevations to assure long-term protection from flood hazards.

Policy 6

✓ ✓

Protection of the Shoreline

New shoreline erosion control projects and the maintenance or reconstruction of existing erosion control facilities should be authorized if:

Policy 1

✓

(a) the project is necessary to protect the shoreline from erosion;

Description Text of Objective, Policy

- (b) the type of the protective structure is appropriate for the project site and the erosion conditions at the site; and
- (c) the project is properly designed and constructed. Professionals knowledgeable of the Commission's concerns, such as civil engineers experienced in coastal processes, should participate in the design of erosion control projects.

Riprap revetments, the most common shoreline protective structure, should be constructed of properly sized and placed material that meet sound engineering criteria for durability, density, and porosity. Armor materials used in the revetment should be placed according to accepted engineering practice, and be free of extraneous material, such as debris and reinforcing steel. Generally, only engineered quarry stone or concrete pieces that have either been specially cast or carefully selected for size, density, durability, and freedom of extraneous materials from demolition debris will meet these requirements. Riprap revetments constructed out of other debris materials should not be authorized.

Policy 2

✓ ✓

Authorized protective projects should be regularly maintained according to a long-term maintenance program to assure that the shoreline will be protected from tidal erosion and that the effects of the erosion control project on natural resources during the life of the project will be the minimum necessary.

Policy 3

✓ ✓

Shoreline protective projects should include provisions for nonstructural methods such as marsh vegetation where feasible. Along shorelines that support marsh vegetation or where marsh establishment has a reasonable chance of success, the Commission should require that the design of authorized protective projects include provisions for establishing marsh and transitional upland vegetation as part of the-protective structure, wherever practicable.

Policy 4

✓ ✓

Dredging

Dredging should be authorized when the Commission can find:

- (a) the applicant has demonstrated that the dredging is needed to serve a water-oriented use or other important public purpose;

✓

Description Text of Objective, Policy

- (b) the materials to be dredged meet the water quality requirements of the San Francisco Bay Regional Water Quality Control Board;
- (c) important fisheries and Bay natural resources would be protected; and
- (d) the materials would be disposed in accordance with Policy 2.

Disposal of dredged materials should be encouraged in non-tidal areas where the materials can be used beneficially, or in the ocean. Disposal in tidal areas of the Bay should be authorized when the Commission can find that:

- (a) the applicant has demonstrated that non-tidal and ocean disposal is infeasible because there are no alternate sites available or likely to be available for use in a reasonable period, or the cost of disposal at alternate sites is prohibitively expensive; ✓
- (b) disposal would be at a site designated by the Commission;
- (c) the quality and volume of the material to be disposed is consistent with the advice of the San Francisco Bay Regional Water Quality Control Board; and
- (d) the period of disposal is consistent with the advice of the Department of Fish and Game and the National Marine Fisheries Service.

Policy 2

When the annual amount of dredged material proposed to be disposed in tidal areas of the Bay exceeds the disposal volume targets established by the Commission, in determining which projects to authorize, the Commission shall be guided by all relevant factors concerning the proposed projects, including, but not limited to, need for the dredging and the dredging project, regional economic impact, environmental impact, and other regional effects of the project, and the economic feasibility of using alternate disposal sites. ✓

Policy 3

To ensure adequate capacity for necessary Bay dredging projects and to protect Bay natural resources, acceptable non-tidal disposal sites should be secured and ocean disposal sites designated. Further, disposal projects should maximize use of dredged ✓

Policy 4

Description Text of Objective, Policy

material as a resource, such as creating, enhancing, or restoring tidal and managed wetlands, creating and maintaining levees and dikes, providing cover and sealing material for sanitary landfills, and filling at approved construction projects.

Once non-tidal or ocean disposal sites have been secured or designated, and prior to completion of the LTMS, the maximum feasible amount of dredged material should be disposed at non-tidal sites or in the ocean. Until non-tidal upland disposal sites are secured and ocean disposal sites designated, aquatic disposal in the Bay should be authorized at sites designated by the U.S. Army Corps of Engineers and the Commission. Dredged materials disposed aquatically in the Bay, particularly at the Alcatraz Island disposal site, should be carefully managed to ensure that the amount and timing of disposal does not create navigational hazards, adversely affect Bay currents or natural resources of the Bay, or foreclose the use of the site by projects critical to the economy of the Bay Area.

Policy 5



To protect underground fresh water reservoirs (aquifers):

- (a) all proposals for dredging or construction of work that could penetrate the mud "coves" should be reviewed by the San Francisco Bay Regional Water Quality Control Board and the State Department of Water Resources; and
- (b) dredging or construction work should not be permitted that might reasonably be expected to damage an underground water reservoir.

Policy 8



Applicants for permission to dredge should be required to provide additional data on groundwater conditions in the area of construction to the extent necessary and reasonable in relation to the proposed project.

Policy 9

Interested agencies and parties are encouraged to explore and find funding solutions for the additional costs incurred by transporting dredged materials to non-tidal upland and ocean disposal sites, either by general funds contributed by ports and other relevant parties, dredging applicants or otherwise.



Description	Text of Objective, Policy	Applies to Sub-district	
		OARB	Maritime 16 th /Wood
Policy 11	The Commission should encourage, sponsor and participate in the LTMS and other initiatives conducting research on Bay sediment movement, the effects of dredging and disposal on Bay natural resources, alternatives to Bay aquatic disposal, and funding additional costs of transporting dredged materials to non-tidal upland and ocean disposal sites.	✓	✓
Water-Related Industry			
Policy 1	Sites designated for both water-related industry and port uses in the Bay Plan should be reserved for those industries and port uses that require navigable, deep water for receiving materials or shipping products by water in order to gain a significant transportation cost advantage.	✓	✓
Policy 2	Linked industries, water-using industries, and industries which gain only limited economic benefits by fronting on navigable water, should be located in adjacent upland areas. However, pipeline corridors serving such facilities may be permitted within water-related industrial priority use areas, provided pipeline construction and use does not conflict with present or future water-transportation use of the site.	✓	✓
Policy 3	Land reserved for both water-related industry and port use will be developed over a period of years. Other uses may be allowed in the interim that, by their cost and duration, would not preempt future use of the site for water-related industry or port use.	✓	✓
Policy 4	Water-related industry and port sites should be planned and managed so as to avoid wasteful use of the limited supply of waterfront land. The following principles should be followed to the maximum extent feasible in planning for water-related industry and port use: (a) Extensive use of the shoreline for storage of raw materials, fuel, products, or waste should not be permitted on a long-term basis. If required, such storage areas should generally either be at right angles to the main direction of the shoreline or be as far inland as feasible, so other use of the shoreline may be made possible.	✓	✓

Description Text of Objective, Policy

- (b) Where large acreages are available, site planning should strive to provide access to the shoreline for all future plants and port facilities that might locate in the same area. (As a general rule, therefore, the longest dimension of plant sites should be at right angles to the shoreline.) Marine terminals should also be shared as much as possible among industries and port uses.
- (c) Waste treatment ponds for water-related industry and port uses should occupy as little land as possible, be above the highest recorded level of tidal action, and be as far removed from the shoreline as possible. d. Any new highways, railroads, or rapid transit lines in existing or future water-related industrial and port areas should be located sufficiently far away from the waterfront so as not to interfere with industrial use of the waterfront. New access roads to waterfront industrial and port areas should be approximately at right angles to the shoreline, topography permitting.

Water-related industry and port uses should be planned so as to make the sites attractive (as well as economically important) uses of the shoreline. The following criteria should be employed to the maximum extent possible:

- (a) Air and water pollution should be minimized through strict compliance with a relevant laws, policies and standards Mitigation, consistent with the Commission's policy concerning mitigation, should be provided for all unavoidably adverse environmental impacts. ✓
- (b) When bayfront hills are used for water related industries, terracing should generally be required and leveling of the hill, should not be permitted. ✓
- (c) Important Bay overlook points, and historic areas and structures that may be located in water-related industrial and port areas, should be preserved and incorporated into the site design, if at all feasible. In addition, shoreline not actually used for shipping facilities should be used for some type of public access or recreation, to the maximum extent feasible. Public areas need not be directly

Policy 5

		Applies to Sub-district	
Description	Text of Objective, Policy	OARB	Maritime 16 th /Wood
	<p>accessible by private automobiles with attendant parking lots and driveways; access may be provided by hiking paths or by forms of public transit such as elephant trains or aerial tramways.</p> <p>(d) Regulations, tax arrangements, or other devices should be drawn in a manner that encourages industries and port uses to meet the foregoing objectives.</p> <p>The Commission, together with the relevant local governments, should cooperatively plan for use of vacant and underutilized water-related industrial priority use areas. Such planning should include regional, state and federal interests where appropriate, as well as public and special interest groups. Resulting plans should include:</p>		
Policy 6	<p>(a) a program for joint use of waterfront facilities where this is beneficial and feasible;</p> <p>(b) a regulatory or management program for reserving the entire waterfront site or parcel for water-related industrial and port use; and</p> <p>(c) a program for minimizing the environmental impacts of future industrial and port development. Such plans, if approved by the relevant local governments and by the Commission, could be amended into the Bay Plan as special area plans.</p> <p>The Bay Plan water-related industrial findings, policies, and priority use areas, together with any detailed plans as described above in Policy 6 should be included as the waterfront element of any Bay regional industrial siting plan or implementation program.</p>	<p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p>
Ports			
	<p>Port planning and development should be governed by the policies of the Seaport Plan and other applicable policies of the Bay Plan. The Seaport Plan provides for:</p>		
Policy 1	<p>(a) Expansion and/or redevelopment of port facilities at Alameda, Benicia, Oakland, Redwood City, Richmond, and San Francisco, and development of new port facilities at Vallejo and Selby;</p>	<p>✓</p>	<p>✓</p>

Description Text of Objective, Policy

- (b) Further deepening of ship channels needed to accommodate expected growth in ship size and improved terminal productivity;
- (c) The maintenance of up-to-date cargo forecasts and existing cargo handling capability estimates to guide the permitting of port terminals; and
- (d) Development of port facilities with the least potential adverse environmental impacts while still providing for reasonable terminal development.

Some filling and dredging will be required to provide for necessary port expansion, but any permitted fill or dredging should be in accord with the Seaport Plan.

Port priority use areas should be protected for marine terminals and directly-related ancillary activities such as container freight stations, transit sheds and other temporary storage, ship repairing, support transportation uses including trucking and railroad yards, freight forwarders, government offices related to the port activity, chandlers, and marine services. Other uses, especially public access and public and commercial recreational development, should also be permissible uses provided they do not significantly impair the efficient utilization of the port area.

Recreation

As the population of the Bay region increases, a more people will use their leisure time in water-oriented recreation activities. Water-oriented recreation facilities such as marinas, launch ramps, beaches, and fishing piers should be provided to meet those needs. For parks, there is no practical estimate of the acreage that should be provided on the shoreline of the Bay, but it is assumed the largest possible portion of the total regional requirement should be provided adjacent to the Bay.

The Commission should also allow additional marinas, boat-launching lanes, and fishing piers elsewhere on the Bay, provided they would not preempt land or water area needed for other priority uses and provided they would be feasible from an engineering viewpoint, would not have significant adverse effects on water quality and circulation, would not result

Policy 2

Policy 3

Policy 1

Policy 2



Description **Text of Objective, Policy**

in inadequate flushing, would not destroy valuable marshes or mudflats, and would not harm identified valuable fish and wildlife resources.

The Bay Plan maps include about 5,000 acres of existing shoreline parks and 5,800 acres of new parks on the waterfront. In addition, 4,400 acres of military establishments (especially around the Golden Gate) are proposed as parks it and when military use is terminated.

Policy 3

✓ ✓

The following general standards have been used in determining locations for each type of recreational facility (and should be used as a guide in allowing additional ones):

General. Each type of facility should be well distributed around the shores of the Bay to the extent consistent with more specific criteria below. Any concentrations of facilities should generally be as close to major population centers as is feasible. Recreational facilities should not preempt sites needed for ports, waterfront industry, or airports, but efforts should be made to integrate recreation into such facilities to the extent they might be compatible. Different types of compatible public and commercial recreational facilities should be clustered to the extent feasible to permit joint use of ancillary facilities and provide greater range of choice for users.

Policy 4

✓ ✓

Marinas. (1) Marinas should be allowed at any suitable site on the Bay. Unsuitable sites are those that tend to fill up rapidly with sediment; have insufficient upland; contain valuable marsh, mudflat, or other wildlife habitat; or are subject to unusual amounts of fog. At suitable sites, the Commission should encourage new marinas, particularly those that result in the creation of new open water through the excavation of areas not part of the Bay and not containing valuable wetlands. (2) Fill should be permitted for marina facilities that must be in or over the Bay, such as breakwaters, shoreline protection, boat berths, ramps, launching facilities, pump-out and fuel docks, and short-term unloading areas. Fill for marina support facilities may be permitted at sites with difficult land configurations provided that the fill in the Bay is the minimum necessary and any unavoidable loss of Bay habitat, surface area, or volume is offset to the maximum amount feasible, preferably at or near the site. (3) No new marina or expansion of any existing marina should be approved

Description **Text of Objective, Policy**

unless water quality and circulation will be adequately protected and, if possible, improved, and an adequate number of vessel sewage pump-out facilities that are convenient in location. And time of operation to recreational boat users should be provided free of charge or at a reasonable fee, as well as receptacles to dispose of waste oil. (4) In addition, all projects approved should provide public amenities such as viewing areas, restrooms, and public parking; substantial physical and visual access; and maintenance for all facilities. Frequent dredging should be avoided.

Live-aboard boats. Live-aboard boats should be allowed only in marinas and only if: (1) The number would not exceed ten percent of the total authorized boat berths unless the applicant can demonstrate clearly that a greater number of live-aboard boats is necessary to provide security or other use incidental to the marina use; (2) The boats would promote and further the recreational boating use of the marina (for example, providing a degree of security), and are located within the marina consistent with such purpose; (3) The marina would provide, on land, sufficient and conveniently located restrooms, showers, garbage disposal facilities, and parking adequate to serve live-aboard boat occupants and guests; (4) The marina would provide and maintain an adequate number of vessel sewage pump-out facilities in locations that are convenient in location and time of operation to all boats in the marina, particularly live-aboard boats, and would provide the service free of charge or at a reasonable fee; and (5) There would be adequate tidal circulation in the marina to mix, dilute, and carry away any possible wastewater discharge. Live-aboard boats moored in a marina on July 1, 1985, but unauthorized by the Commission, should be allowed to remain in the marina provided the tests of (2), (3), (4), and (5), above, are met. Where existing live-aboard boats in a marina exceed ten percent of the authorized berths, or a greater number is demonstrated to be clearly necessary to provide security or other use incidental to the marina use, no new live-aboard boats should be authorized until the number is reduced below that number and then only if the project is in conformance with tests (1), (2), (3), (4), and (5), above.

Description Text of Objective, Policy

Launching Lanes. (1) Launching lanes should be placed where wind and water conditions would be most favorable for smaller boats. (2) Some launching lanes should be located near prime fishing areas and others near calm, clear water suitable for water skiing. (3) Additional launching facilities should be located around the Bay shoreline, especially where there are few existing facilities. These facilities should be available free or at moderate cost. Launching facilities should include adequate car and trailer parking, restrooms, and public access. (4) In marinas, launching facilities should be encouraged where there is adequate upland to provide needed support facilities. (5) Fill for ramps into the water, docks, and similar facilities should be permitted. Other fill should not be permitted.

Fishing Piers. Fishing piers should not block navigation channels, nor interfere with normal tidal flow.

Beaches. Beaches for swimming and sunbathing should generally be in warm areas protected from the wind. Some new beaches could be planned adjacent to power plants or other industrial plants that warm the nearby waters as they discharge heated water that has been used to cool industrial machinery.

Water-oriented Commercial-recreation. Water-oriented commercial-recreational establishments, such as restaurants, specialty shops, theaters, and amusements, should be encouraged in urban areas adjacent to the Bay. Some suggested locations for this type of activity are indicated on the Plan maps. Effort should be made to link commercial-recreation centers (and major shoreline parks) by a fleet of small, inexpensive ferries similar to those operating on some European lakes and rivers.

To assure optimum use of-the Bay for recreation, the following facilities should be encouraged in shore side parks and in or near yacht harbors or commercial ferryboat facilities.

Policy 5



In shore side parks. (1) Where possible, parks should provide some camping facilities accessible only by boat, and docking and picnic facilities for boaters. (2) To capitalize on

Description Text of Objective, Policy

the attractiveness of their bayfront location, parks should emphasize hiking, bicycling, riding trails, picnic facilities, viewpoints, beaches, and fishing facilities. Recreational facilities that do not need a waterfront location, e.g., golf courses and playing fields, should generally be placed inland, but may be permitted in shoreline areas if they are part of a park complex that is primarily devoted to water-oriented uses. (3) Where shoreline open space includes areas used for hunting water birds, public areas for launching rowboats should be provided so long as they do not result in overuse of the hunting area. (4) Public launching facilities for a variety of boats should be provided in shore side parks where feasible. (5) Where open areas include ecological reserves, access via catwalk or other means should be provided for nature study to the extent that such access does not excessively disturb the natural habitat. (6) Limited commercial recreation facilities, such as small restaurants, should be permitted within waterfront parks provided they are clearly incidental to the park use, are in keeping with the basic character of the park, and do not obstruct public access to and enjoyment of the Bay. Limited commercial development may be appropriate (at the option of the park agency responsible) in all parks shown on the Plan maps except where there is a specific note to the contrary.

In yacht harbors and ferryboat terminals. In or near yacht harbors or commercial ferryboat facilities, private boaters and restaurants should be encouraged where adequate shoreline land is available. Public docks for visiting boaters should be provided where feasible in order to give public access from the water.

In all recreation facilities. Access to marinas, launch ramps, beaches, fishing piers, and other recreation facilities should be clearly signed and easily available from parking reserved for the public or from public streets.

All the waterfront land needed for waterfront parks and beaches by the year 2020 should be reserved now, because delay may mean that needed shoreline will otherwise be preempted for other uses. However, recreational facilities need not be built all at once; their development can proceed in accordance with recreational demand over the years.

Policy 6



Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy 7	In addition to the major recreational facilities indicated on the Plan maps, public access should be included wherever feasible in any shoreline development, as described in the policies for Public Access to the Bay. That policy is intended to result in much more access to the Bay than can be provided by public parks alone, especially in urban areas, and to encourage private development of the shoreline.	✓	✓	
Policy 10	Because of the need to increase the recreational opportunities available to Bay Area residents, small amounts of Bay filling may be allowed for shoreline parks and recreational areas that provide substantial public benefits and that cannot be developed without some filling.	✓	✓	
Public Access				
Policy 1	In addition to the public access to the Bay provided by waterfront parks, beaches, marinas, and fishing piers, maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline, whether it be for housing, industry, port, airport, public facility, or other use, except in cases where public access is clearly inconsistent with the project because of public safety considerations or significant use conflicts. In these cases, access at other locations preferably near the project, should be provided whenever feasible.	✓	✓	
Policy 2	Public access to some natural areas should be provided to permit study and enjoyment of these areas (e.g., by boardwalks or piers in or adjacent to some sloughs or marshes). However, some wildlife may be sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided.	✓	✓	

Applies to Sub-district

OARB Maritime 16th/Wood

Description Text of Objective, Policy

Policy 3 Whenever public access to the Bay is provided as a condition of development, on fill or on the shoreline, the access should be permanently guaranteed. This should be done wherever appropriate by requiring dedication of fee title or easements at no cost to the public, in the same manner that streets, park sites, and school sites are dedicated to the public as part of the subdivision process in cities and counties.

Policy 4 Public access improvements provided as a condition of any approval should be consistent with the project and the physical environment, including protection of natural resources, and provide for the public's safety and convenience. The improvement should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline, should permit barrier free access for the physically handicapped to the maximum feasible extent, should include an ongoing maintenance program, and should be identified with appropriate signs.

Policy 5 In some areas, a small amount of fill may be allowed if the fill is necessary and is the minimum absolutely required to develop the project in accordance with the Commission's public access requirements.

Policy 6 Access to the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available.

Policy 7 Roads near the edge of the water should be designed as scenic parkways for slow-moving, principally recreational traffic. The roadway and right-of-way design should maintain and enhance visual access for the traveler, discourage through traffic, and provide for safe, separated, and improved physical access to and along the shore. Public transit use and connections to the shoreline should be encouraged where appropriate.

Policy 8 Federal, state, regional, and local jurisdictions, special districts, and the Commission should cooperate to provide new public access, especially to link the entire series of shoreline parks and existing public access areas to the extent feasible without additional Bay filling or adversely affecting natural resources. State, regional, and local agencies that

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy 9	<p>approve projects should assure that provisions for public access to and along the shoreline are included as conditions of approval and that the access is consistent with the Commission's requirements and guidelines.</p> <p>The Public Access Supplement to the Bay Plan should be used as a guide in determining whether a project provides maximum feasible public access. The Design Review Board should advise the Commission regarding the adequacy of the public access proposed.</p>	✓	✓	
Appearance, Design, Scenic Views				
Policy 1	<p>To enhance the visual quality of development around the Bay and to take maximum advantage of the attractive setting it provides, the shores of the Bay should be developed in accordance with the Public Access Design Guidelines.</p>	✓		✓
Policy 2	<p>All bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay. Maximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas, from the Bay itself, and from the opposite shore. To this end, planning of waterfront development should include participation by professionals who are knowledgeable of the Commission's concerns, such as landscape architects, urban designers, or architects, working in conjunction with engineers and professionals in other fields.</p>	✓		✓
Policy 3	<p>In some areas, a small amount of fill may be allowed if the fill is necessary and is the minimum absolutely required to develop the project in accordance with the Commission's design recommendations.</p>	✓		✓
Policy 4	<p>Structures and facilities that do not take advantage of or visually complement the Bay should be located and designed so as not to impact visually on the Bay and shoreline. In particular, parking areas should be located away from the shoreline. However, some small parking areas for fishing access and Bay viewing may be allowed in exposed locations.</p>	✓		✓

Description Text of Objective, Policy

To enhance the maritime atmosphere of the Bay Area, ports should be designed, whenever feasible, to permit public access and viewing of port activities by means of the following:

- Policy 5 (a) view points (e.g., piers, platforms, or towers), restaurants, etc., that would not interfere with port operations, and ✓
- (b) openings between buildings and other site designs that permit views from nearby roads. ✓

Access routes to Bay crossings should be designed so as to orient the traveler to the Bay (as in the main approaches to the Golden Gate Bridge). Similar consideration should be given to the design of highway and mass transit routes paralleling the Bay (by providing frequent views of the Bay, if possible, so the traveler knows which way he or she is moving in relation to the Bay). Guardrails, fences, landscaping, and other structures related to such routes should be designed and located so as to maintain and to take advantage of Bay views. New or rebuilt roads in the hills above the Bay and in areas-along the shores of the Bay should be constructed as scenic parkways in order to take full advantage of the commanding views of the Bay.

- Policy 7 ✓

Shoreline developments should be build in clusters, leaving open area around them to permit more frequent views of the Bay. Developments along the shores of tributary waterways should be Bay-related and should be designed to preserve and enhance views along the waterway, so as to provide maximum visual contact with the Bay.

- Policy 8 ✓

Towers, bridges, or other structures near or over the Bay should be designed as landmarks that suggest the location of the waterfront when it is not visible, especially in flat areas. But such landmarks should be low enough to assure the continued visual dominance of the hills around the Bay.

- Policy 10 ✓

In order to achieve a high level of design quality, the Commission's Design Review Board, composed of design and planning professionals, should review, evaluate, and advise the

- Policy 12 ✓

Description Text of Objective, Policy

Commission on the proposed design of developments that affect the appearance of the Bay in accordance with the Bay Plan findings and policies on Public Access; on Appearance, Design, and Scenic Views; and the Public Access Design Guidelines. City, county, regional, state, and federal agencies should be guided in their evaluation of bayfront projects by the above guidelines.

Local governments should be encouraged to eliminate inappropriate shoreline uses and poor quality shoreline conditions by regulation and by public actions (including development financed wholly or partly by public funds). The Commission should assist in this regard to the maximum feasible extent by providing advice on Bay-related appearance and design issues, and by coordinating the activities of the various agencies that may be involved with projects affecting the Bay and its appearance.

Policy 13

✓ ✓

Views of the Bay from vista points and from roads should be maintained by appropriate arrangements and heights of all developments and landscaping between the view areas and the water. In this regard, particular attention should be given to all waterfront locations, areas below vista points, and areas along roads that provide good views of the Bay for travelers, particularly areas below roads coming over ridges and providing a "first view" of the Bay (shown in Bay Plan Map No. 8, Natural Resources of the Bay).

Policy 14

✓ ✓

Vista points should be provided in the general locations indicated in the Plan maps. Access to vista points should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where parking or public transportation is available. In some cases, exhibits, museums, or markers would be desirable at vista points to explain the value or importance of the areas being viewed.

Policy 15.

✓ ✓

Description	Text of Objective, Policy	Applies to Sub-district	
		OARB	Maritime 16 th /Wood
	Other Uses of the Bay and Shoreline		
Policy 1	Shore areas not proposed to be reserved for a priority use should be used for any purpose (acceptable to the local government having jurisdiction) that uses the Bay as an asset and in no way affects the Bay adversely. This means any use that does not adversely affect enjoyment of the Bay and its shoreline by residents, employees, and visitors within the site area itself or within adjacent areas of the Bay or shoreline.	✓	✓
Policy 2	Accessory structures such as boat docks and portions of a principal structure may extend on piles over the water when such extension is necessary to enable actual use of the water, e.g., for mooring boats, or to use the Bay as an asset in the design of the structure.	✓	✓
Policy 6	Power distribution and telephone lines should either be placed underground (or in an attractive combination of underground lines with streamlined overhead facilities) in any new residential, commercial, public, or view area near the shores of the Bay.	✓	✓

**4.1B San Francisco Bay Area
Seaport Plan Policies**

San Francisco Bay Area Seaport Plan Policies Relevant to the OARB Redevelopment District

Description	Text of Objective, Policy	Applies to Sub-district	
		OARB	Maritime 16 th /Wood
Cargo Forecasts			
Policy 1	In order to foster economic activity, improvements should be made to the Bay Area port system to handle the forecast growth in waterborne cargo.	✓	✓
Policy 2	Proposed marine terminal development should be closely linked to the projected regional need for new facilities based upon reasonable forecasts of waterborne cargo.	✓	✓
Port Priority Use Areas			
Policy 1	Local governments and the Bay Area ports should protect port priority use areas for marine terminals and other directly related port activities through their land use planning and regulatory authority.	✓	✓
Policy 3	Uses that would impair the future use of a port priority use area that is not currently used for port purposes may be allowed only on a finite, interim basis. Interim uses should be of a nature that allows the site to be converted to port use when it is needed for marine terminal development or other port priority use. The length of the interim use period should be determined on a case-by-case basis for each site and proposed use. Factors to be considered in determining the length of the interim use should include, but are not limited to: (1) the amortization period of investments associated with the proposed use; (2) the lead time necessary to convert the site to the designated marine terminal or port use; and (3) the need for the site as measured by the Bay Area volume of the cargo type specified to be handled at that site and the available capacity at other ports in the Bay Area to accept the specified cargo.	✓	✓
Policy 4	No Bay fill should be authorized for interim uses that are not water-oriented.	✓	✓

Description Text of Objective, Policy

Marine Terminals

Bay fill authorized for development of any marine terminal must be the minimum necessary to achieve a functional terminal at the site. Marine terminal development projects must meet the criteria for Bay fill projects specified in Section 66605(c) and (d) of the McAteer-Petris Act, which are:

1. that public benefits of fill must exceed the public detriment from the loss of water area;
2. that there is no alternative upland location;
3. that the proposed fill is the minimum necessary to achieve the purpose of the fill; ✓
4. that the nature, location, and extent of any fill must minimize harmful effects to the Bay Area, such as reduction or impairment of the volume, surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources;
5. that the fill be constructed in accordance with sound safety standards;
6. that fill should establish a permanent shoreline; and
7. that the project applicant has valid title to the properties in question.

Policy 1

Future marine terminals should be developed for the type of cargo specified in this Plan at each port and port priority use area. If a port or terminal operator proposes to use a terminal for a cargo other than that designated in the Seaport Plan, the project proponent must demonstrate to the Seaport Planning Advisory Committee that the proposed project does not prevent Bay Area ports from achieving adequate cargo throughput capability to meet the 2020 projections. In reviewing such requests, the Seaport Planning Advisory Committee should make use of the cargo monitoring data that will be collected as part of the implementation of this plan (see Responsibilities of Other Agencies in Part III of this Plan).

Policy 2

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy 4	New marine terminals requiring large volumes of Bay fill should only be developed when all existing terminals are operating at maximum feasible capacity, and should involve the least possible amount of Bay fill.	✓	✓	
Policy 5	The estimates of throughput capability and the number of new berths needed to meet the 2020 cargo forecast should be used only as an approximate guide.	✓	✓	
Policy 6	To achieve the capacity needed to handle the cargo volume forecast for 2020, the port of Oakland should have 30 berths.	✓	✓	
	If cargo capacity shortfalls occur, fill for additional marine terminals not designated in this plan should not be approved by BCDC unless the project proponent can demonstrate to the satisfaction of BCDC and the Seaport Planning Advisory Committee:			
Policy 7.	<ol style="list-style-type: none"> 1. that existing berths and terminals have reached their capacity; 2. that no other feasible alternative to construction of new terminals exists; and 3. that net Bay fill included in the proposed terminal is the minimum necessary and that no alternative upland location exists. 	✓	✓	
Container Terminals				
Policy 1	Container terminal development projects for land-constrained sites should have at least 30 acres per berth of backland. Projects with intermodal service, such as the FISCO site at the Port of Oakland, should have 55 acres per berth to accommodate the higher cargo capacity of the larger ships that will be calling at those terminals.	✓	✓	
Policy 2	Projects for combined container/neo-bulk terminals should ideally have 30 acres per berth, but must have at least 20 acres per berth.		✓	

Description Text of Objective, Policy

Container terminal projects, especially intermodal terminals, should have the following four characteristics:

1. deep water channels and berths (at least -35 feet);
2. access to at least one railroad, but preferably two, and an interstate highway;
3. adequate flat backland (a minimum of 30 acres, and as much as 55 acres per berth for intermodal terminals); and
4. an agency or entity with the ability and willingness to raise the funds to build and operate the terminal. In addition, the sites should be adjacent to existing container terminals.

Policy 3



Dredging and Navigation

Ship channels, turning basins, and berths should be maintained to the depths and widths necessary to safely accommodate the kinds of ships docking at the Bay Area marine terminals if economically justified or if needed for national defense, and if such deepening or widening conforms to -State and national environmental law and policies.

Policy 3



Adequate capacity for disposal of dredged material should be provided to accommodate necessary dredging of channel and berth areas designated in the Plan. Pending completion of the Long Term Management Strategy (LTMS) for dredging, sites designated as port priority use areas on More Island that are currently being used for the disposal of dredged materials should be retained as port priority use areas and evaluated for continued designation when the recommendations of the LTMS are complete. Similarly, the Praxis site should be reserved for port priority use pending the recommendations of the LTMS concerning the site's use as a regional disposal or rehandling facility.

Policy 4



Description	Text of Objective, Policy	Applies to Sub-district	
		OARB	Maritime 16 th /Wood
	Ground Transportation		
Policy 1	Local, state and federal government actions, such as land use decisions, public works projects, or rail abandonments, should not impede access to the marine terminal sites identified in the Seaport Plan. Funding for a transportation project affecting ports or port sites should be approved or endorsed by MTC only if the project is consistent with the policies of the Seaport Plan unless there are overriding regional considerations.	✓	✓
Policy 2	The Bay Area ports, local governments and marine terminal operators should take steps to make the best possible use of existing ground transportation facilities, and should employ measures to mitigate any significant adverse environmental effects of increased traffic at existing and proposed marine terminal facilities.	✓	✓
Policy 3	Local and regional transportation planning and funding priorities should facilitate the efficient movement of goods by rail and truck to and from the Bay Area ports.	✓	✓
Policy 4	Ground transportation improvements needed primarily to serve existing or proposed marine terminals should be included in Congestion Management Agency transportation funding priorities only if such improvements and the development they serve are consistent with the policies of the Seaport Plan.	✓	✓
Policy 5	If funding agencies must choose between marine terminal-related ground transportation projects, highest priority should be given to projects that: <ul style="list-style-type: none"> • best use existing port and transportation facilities; and • best enhance the movement of Bay Area waterborne cargo. 	✓	✓
	Designations: Port of Oakland		
Policy 1	By the year 2020, the Port of Oakland should have annual cargo throughput capability of 26,439,000.	✓	✓

Applies to Sub-district

OARB Maritime 16th/Wood

Description Text of Objective, Policy

The Joint Intermodal Terminal, development of the five berths at the Fleet and Industrial Supply Center Oakland, and the potential development of the Army Terminal, along with improvements in the efficiency of the Port's container transfer equipment, gates, roads, and storage areas, should accommodate the Port's projected container shipping growth requirements for at least the next 15 years without significant Bay fill.



Policy 2

Schnitzer Steel is and should remain designated as an active dry bulk terminal as long as the facility is used for this purpose. At such time as the site is no longer needed for recycling scrap steel or other bulk shipping operations, it should first be considered for conversion to a container terminal. If Schnitzer Steel is converted to a container terminal, it should have an expected annual throughput capability of 1,520,000 metric tons.



Policy 3

**4.1C San Francisco Bay
Trail Plan Policies**

San Francisco Bay Trail Plan Policies Relevant to the OARB Redevelopment District

Description	Text of Objective, Policy	Applies to Sub-district	
		OARB	Maritime 16 th /Wood
Trail Alignment			
Policy 1	Ensure a feasible, continuous trail around the Bay.	✓	✓
Policy 2	Minimize impacts on and conflicts with sensitive environments.	✓	
Policy 3	Locate trail, where feasible, close to the shoreline.	✓	✓
Policy 4	Provide a wide variety of views along the Bay and recognize exceptional landscapes.	✓	✓
Policy 6	In selecting a route for the trail, incorporate local agency alignments where shoreline trail routes have been approved. Incorporate San Francisco Bay Conservation and Development Commission public access trails where they have been required.	✓	✓
Policy 10	In order to minimize the use of existing staging areas along the shoreline and to reduce the need for additional staging areas, the choice of trail alignment should take full advantage of available transit, including rail service (e.g., Caltrain, BART), ferries, and bus service.	✓	✓
Policy 11	Connections to other local and regional trail and bikeway systems should be actively sought in order to provide alternatives to automobile access to the Bay Trail. In particular, opportunities should be explored for trail connections to the Bay Area Ridge Trail, which is envisioned to circle the Bay along the region's ridgelines.	✓	✓
Trail Design			
Policy 12	Provide access wherever feasible to the greatest range of trail users on each segment.	✓	✓
Policy 13	Wherever possible, new trails should be physically separated from streets and roadways to ensure the safety of trail users.	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy 14	Create a trail that is as wide as necessary to accommodate safely the intended use, with separate alignments, where feasible, to provide alternative experiences.	✓	✓	✓
Policy 15	Highlight the interpretive potential of certain trail segments, including opportunities for interpretation, education, rest, and view enjoyment.	✓	✓	✓
Policy 16	Incorporate necessary support facilities, using existing parks, parking lots, and other staging areas wherever possible.	✓	✓	✓
Policy 17	Design new segments of trail to meet the highest practical standards and regulations, depending on the nature and intensity of anticipate use, terrain, existing regulations, and standards on existing portions of the trail.	✓	✓	✓
Policy 18	Minimum and maximum standards by use, width, surface, etc. should be developed, to ensure safe enjoyment of the trail and compatibility with surroundings and existing facilities, and to encourage use and design of surfaces for which long-term maintenance will be cost-effective.	✓	✓	✓
Policy 19	Design and route the trail to discourage use of undesignated trails.	✓	✓	✓
Policy 20	A consistent signing program should be established throughout the trail system, using a Bay Trail logo which will identify trails within the Bay Trail system as distinct from other connecting trails. The choice of materials used should be the concern of the individual implementing jurisdictions and agencies. The Bay Trail signing program may include necessary cautionary and regulatory signing, including warnings of seasonal trail closings and other restrictions on trail use. Interpretive signing may be provided to help educate trail users about the surrounding environment and the importance of observing trail use restrictions and staying on designated trails.	✓	✓	✓
Policy 21	The Bay Trail signing program may include necessary cautionary and regulatory signing, including warnings of seasonal trail closings and other restrictions on trail use. Interpretive signing may be provided to help educate trail users about the surrounding environment and the importance of observing trail use restrictions and staying on designated trails.	✓	✓	✓
Policy 22	The trailhead signing program may include a variety of information which will enhance the Bay Trail experience. This may include a description of the length and relative difficulty of the trail as a guide for trail users with mobility limitations, available support facilities,	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district	
		OARB	Maritime 16 th /Wood
	available access to other connecting trails, and a description of the habitat resource which emphasizes interpretive information as well as the need to observe posted trail use restrictions.		
Environmental Protection			
Policy 23	The Committee is aware of the ecological value of wetlands; in many cases, they provide habitat for a variety of endangered species. In the San Francisco Bay Area, these areas serve as a vital link in the Pacific flyway for feeding, breeding, nesting and cover for migratory birds. To avoid impacts in wetlands habitats, the Bay Trail should not require fill in wetlands, and should be designed so that use of the trail avoids adverse impacts on wetland habitats.	✓	✓
Policy 24	Future support facilities serving the Bay Trail should be designed and constructed in such a manner that they do not impact fish and wildlife resources, especially wetlands. These facilities should be located and designed in a way that no fill of wetlands will be required.	✓	✓
Policy 25	The Bay Trail should not be defined as a continuous asphalt loop at the Bay's edge, but as a system of interconnecting trails, the nature of which will vary according to the locale and the nature of the terrain and resources in the vicinity of each particular trail segment.	✓	✓
Policy 26	The path will not always follow the Bay shoreline; inland reaches may be more appropriate, especially for bicycle travel, in some parts of the San Francisco Bay region.	✓	✓
Policy 27	The path should be designed to accommodate different modes of travel (such as bicycling and hiking) and differing intensities of use, possibly requiring different trail alignments for each mode of travel, in order to avoid overly intensive use of sensitive areas.	✓	✓
Policy 28	Where the alignment of the Bay Trail may more appropriately be located away from the shoreline in order to protect particularly sensitive habitats, access to shoreline areas may be possible by connecting the Bay Trail to existing loop trails and other interpretive facilities. These access points should be planned and designed to make clear the distinction between the continuous Bay Trail and the interpretive trail. (Features may	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district	
		OARB	Maritime 16 th /Wood
	include different trail surfaces, marked entry points to interpretive areas, expanded facilities for education and shoreline interpretation, signage, regulation and enforcement of regulations.)		
Policy 29	Provision of land or funds for Bay Trail planning or construction shall not be considered mitigation for wetland losses.	✓	✓
Transportation Access Policies			
Policy 30	Bridges and roads will be important connections in the Bay Trail system, providing not only commute routes, but enhancing the recreational use of the Trail by creating trail loops which will allow a greater number of people to enjoy the Trail.	✓	✓
Policy 31	In the short term, attention should be focused on improving safe access to the bridges, possible expansion of bicycle shuttle services and public transit accommodations of bicycles to allow cross-bay access.	✓	✓
Policy 32	In the long term, unconstrained access on bridge structures is preferred. This can more easily be accomplished in planning future facilities, as long as public access is a requirement for new structures. Legislative action which would require bicycle and pedestrian access on new facilities should be actively sought.	✓	✓
Policy 33	Opportunities for cooperative funding of pedestrian and bicycle accessways should be investigated in order to make financing feasible.	✓	✓
Policy 34	Access to the trail by all forms of public transit should be strongly encouraged. Opportunities for reaching the trail by public transit should be highlighted on trail maps and promotional materials.	✓	✓
Implementation Policies			
Policy 35	Domestic pets should be prohibited on new trails if the managing agency determines that their presence would conflict with habitat values or other recreational users. This prohibition is not intended to apply to service animals such as guide dogs.	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy 36	An ongoing Bay Trail Project should be established to implement the Bay Trail Plan. The Project should be jointly sponsored by a wide range of organizations and agencies committed to realizing the vision of the Bay Trail.	✓	✓	✓
Policy 37	The Bay Trail Committee, technical committee and outreach program should be established as described in Section IV of the Bay Trail Plan.	✓	✓	✓
Policy 38	"Friends of the Bay Trail" should be established to provide widespread opportunities for the active involvement of individuals and organizations throughout the Bay Area to promote the Bay Trail.	✓	✓	✓
Policy 39	ABAG's Executive Board should continue Bay Trail Program oversight, by reviewing monitoring reports prepared by the Bay Trail Committee.	✓	✓	✓
Policy 40	The Bay Trail Committee should continue to explore the establishment of a management authority to coordinate maintenance, patrolling and liability functions for portions of the Bay Trail.	✓	✓	✓
Policy 41	Local governments and other implementing agencies should be strongly encouraged to amend relevant planning and policy documents (general plans, specific plans, zoning ordinances) to incorporate appropriate references to the Bay Trail.	✓	✓	✓
Policy 42	The Bay Trail Plan recognizes the authority of managing agencies to set policy regarding the use of trails within their jurisdiction.	✓	✓	✓
Policy 43	Since the passage of the McAteer-Petris Act in 1965 and adoption of the San Francisco Bay Plan, significant trail access to and along San Francisco Bay has been obtained for residents of the Bay Area by the San Francisco Bay Conservation and Development Commission. The Bay Trail Plan recognizes that BCDC has accomplished this without greatly interfering with wildlife values and property rights, and strongly recommends that the Commission's public access efforts be continued.	✓	✓	✓
Policy 44	In constructing the trail and implementing signing programs, agencies should be	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
	encouraged to utilize non-profit organizations (e.g., the California Conservation Corps, the East Bay Conservation Corps, the Marin Conservation Corps, the San Jose Conservation Corps, the San Francisco Conservation Corps and the Trail Center).			
Policy 45	Local agencies should be sensitive to the natural environment not only in project planning to implement segments of the Bay Trail, but also in maintaining and managing the trail once built.	✓	✓	✓
Policy 46	Agencies should be encouraged to take advantage of the wide variety of available trail financing and implementation techniques identified in the Bay Trail Plan as they undertake implementation of Bay Trail segments in their jurisdictions.	✓	✓	✓
Policy 47	The Bay Trail Committee should assist local agencies in identifying and securing funding for Bay Trail implementation.	✓	✓	✓

**4.1D Oakland General Plan Objectives and Policies
Land Use and Transportation Element (LUTE)**

**Oakland General Plan Objectives and Policies Relevant to the OARB Redevelopment District
Land Use and Transportation Element (LUTE)**

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Objective I/C1	Expand and retain Oakland's job base and economic strength.	✓	✓	✓
Policy I/C1.1	Attracting New Business. The City will strive to attract new businesses to Oakland, which have potential economic benefits in terms of jobs and/or revenue generation. This effort will be coordinated through a citywide economic development strategy/marketing plan, which identifies the City's existing economic base, the assets and constraints for future growth, target industries or activities for future attraction, and geographic areas appropriate for future use and development.	✓	✓	✓
Policy I/C1.2	Retaining Existing Business. Existing businesses and jobs within Oakland which are consistent with the long-range objectives of this Plan should, whenever possible, be retained.	✓	✓	✓
Policy I/C1.3	Supporting Economic Development Expansion Through Public Investment. The public investment strategy of the City should support economic development expansion efforts through such means as identifying target "catalyst projects" for investment, which will support the employment or revenue base of the city and providing infrastructure improvements to serve key development locations or projects, which are consistent with the goals and objectives of this Plan.	✓	✓	✓
Policy I/C1.4	Investing In Economically Distressed Areas of Oakland. Economic investment, consistent with the City's overall economic strategy, should be encouraged, and, where feasible, should promote viable investment in economically distressed areas of the City	✓	✓	✓
Policy I/C1.5	Using City-Owned Property to Stimulate Economic Development. City-owned properties should, where feasible, be utilized to stimulate economic development activities or serve as catalysts to such efforts.	✓	✓	✓

		Applies to Sub-district		
Description	Text of Objective, Policy	OARB	Maritime	16 th /Wood
Policy I/C1.9	Locating Industrial and Commercial Area Infrastructure. Adequate public infrastructure should be ensured within existing and proposed industrial and commercial areas to retain viable existing uses, improve the marketability of existing vacant or underutilized sites, and encourage future use and development of these areas with activities consistent with the goals of this Plan.	✓	✓	✓
Policy I/C1.10	Coordinating City and Port Economic Development Plans. The City and Port should mutually develop and implement a coordinated plan-of-action to support all airport and port related activities, which expand the local or regional employment or revenue base.	✓	✓	✓
Policy I/C1.11	Expanding Job Training Opportunities. The City should expand and coordinate job training opportunities for Oakland residents by supporting programs sponsored by the Oakland Unified School District, local community colleges, the Port of Oakland, and other educational institutions or vocational training establishments.	✓	✓	
Objective I/C2	Maximize the usefulness of existing abandoned or underutilized industrial buildings and land	✓	✓	✓
Policy I/C2.1	Pursuing Environmental Clean-Up. The environmental cleanup of contaminated industrial properties should be actively pursued to attract new users in targeted industrial and commercial areas.	✓		✓
Policy I/C2.2	Reusing Abandoned Buildings. The reuse of abandoned industrial buildings by non-traditional activities should be encouraged where the uses are consistent with, and will assist in the attainment of, the goals and objectives of all elements of the Plan.			✓
Policy I/C2.3	Providing Vacant or Buildable Sites. Development in older industrial areas should be encouraged through the provision of an adequate number of vacant or buildable sites designated for future development.			✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Objective I/C3	Ensure that Oakland is adequately served by a wide variety of commercial uses, appropriately sited to provide for competitive retail merchandising and diversified office uses, as well as personal and professional services.	✓		✓
Policy I/C3.1	Locating Commercial Business. Commercial uses, which serve long term retail needs of regional consumers and which primarily offer durable goods, should be located in areas adjacent to the I-880 freeway or at locations visible or amenable to high volumes of vehicular traffic, and accessible by multiple modes of transportation.	✓		✓
Policy I/C3.3	Clustering Activity In "Nodes." Retail uses should be focused in "nodes" of activity, characterized by geographic clusters of concentrated commercial activity, along corridors that can be accessed through many modes of transportation.			✓
Policy I/C3.4	Strengthening Vitality. The vitality of existing neighborhood mixed use and community commercial areas should be strengthened and preserved.			✓
Objective I/C4	Minimize land use compatibility conflicts in commercial and industrial areas through achieving a balance between economic development values and community values.	✓	✓	✓
Policy I/C4.1	Protecting Existing Activities. Existing industrial, residential and commercial activities and areas, which are consistent with long-term land use plans for the City should be protected from the intrusion of potentially incompatible land uses.		✓	✓
Policy I/C4.2	Minimizing Nuisances. The potential for new or existing industrial or commercial uses, including seaport and airport activities, to create nuisance impacts on surrounding residential land uses should be minimized through appropriate siting and efficient implementation and enforcement of environmental and development controls.	✓	✓	✓
Objective I/C5	The economic utility, employment generation, and citywide benefit of military facilities closed by the Federal Government should be maximized.	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy I/C5.1	Planning for Military Base Reuse. Plans for the reuse of military bases should encourage activities, which provide economic development expansion opportunities for the City.	✓	✓	
Policy I/C5.2	Planning for the Fleet Industrial Supply Center. The reuse of the waterfront portions of the Fleet Industrial Supply Center should emphasize maritime-, rail-, and open space-related activities.		✓	
Policy I/C5.3	Planning for the Army Base. Land reuse plans for the Oakland Army Base site shall encourage activities that will result in expanded employment opportunities and revenues for the city and the West Oakland community.	✓		
Objective T1	Provide adequate infrastructure and land for the needs of rail, shipping, commercial, and manufacturing uses, balancing this need with those of surrounding residential neighborhoods.	✓	✓	
Policy T1.1	Supporting the Port. Support the Port of Oakland's efforts to compete as a primary Port of Call for the West Coast shipping industry.	✓	✓	
Policy T1.4	Marketing Oakland. Encourage, promote, and support region-serving business, tourism industries, and businesses related to the transportation industry, to locate or relocate to Oakland.	✓	✓	✓
Objective T1.5	Reduce truck traffic impacts on residential neighborhoods.			✓
Policy T1.5	Locating Truck Services. Truck services should be concentrated in areas adjacent to freeways and near the seaport and airport, while ensuring the attractiveness of the environment for visitors, local business, and nearby neighborhoods.	✓	✓	

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy T1.6	Designating Truck Routes. An adequate system of roads connecting port terminals, warehouses, freeways and regional arterials, and other important truck destinations should be designated. This system should rely upon arterial streets away from residential neighborhoods. (See the Truck Route Diagram in Volume II of the Land Use and Transportation Element.)	✓	✓	✓
Policy T1.8	Re-routing and Enforcing Truck Routes. The City should make efforts to re-route truck traffic away from neighborhoods, wherever possible, and enforce truck route controls.	✓	✓	✓
Objective T2	Provide mixed use, transit-oriented development that encourages public transit use and increases pedestrian and bicycle trips at major transportation nodes.	✓		✓
Policy T2.4	Linking Transportation and Economic Development. Encourage transportation improvements that facilitate economic development.	✓	✓	✓
Policy T2.5	Linking Transportation and Activities. Link transportation facilities and infrastructure improvements to recreational uses, job centers, commercial nodes, and social services (i.e., hospitals, parks, or community centers).	✓	✓	✓
Objective T3	Provide a hierarchical network of roads that reflects desired land use patterns and strives for acceptable levels of service at intersections.	✓	✓	✓
Policy T3.5	Including Bikeways and Pedestrian Walks. The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realigned streets, wherever possible.	✓	✓	✓
Policy T3.7	Resolving Transportation Conflicts. The City, in constructing and maintaining its transportation infrastructure, should resolve any conflicts between public transit and single occupant vehicles in favor of the transportation mode that has the potential to provide the greatest mobility and access for people, rather than vehicles, giving due consideration to the environmental, public safety, economic development, health, and social equity impacts.	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy T3.9	Providing Parking for Transportation. The City should strive to provide parking for multiple modes of transportation throughout the city where it is needed and does not unduly disrupt traffic flow.	✓		✓
Objective T4	Increase use of alternative modes of transportation.	✓	✓	✓
Policy T4.1	Incorporating Design features for Alternative Travel. The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.	✓	✓	✓
Policy T4.8	Accommodating Multiple Types of Travel on the Bay Bridge. The City should encourage the design and engineering for the new Bay Bridge to accommodate multiple means of access and travel by automobiles, trucks, transit, bicycles, pedestrians, and future mass transit.	✓		
Policy T4.9	"Gateway" Public Access Area. The City, in concert with the East Bay Regional Park District, Port of Oakland, Oakland Base Reuse Authority, and Bay Conservation and Development Commission, should support development of a significant new "gateway" public park area at the terminus of the San Francisco/Oakland Bay Bridge east span that is accessible by auto, bicycle, or walking (See also the Open Space, Conservation, and Recreation Element).			
Objective T6	Make streets safe, pedestrian accessible, and attractive.	✓	✓	✓
Policy T6.3	Making the Waterfront Accessible. The waterfront should be made accessible to pedestrians and bicyclists throughout Oakland.	✓	✓	
Objective W1	Enhance the waterfront with a wide variety of uses. The seaport and airport should have uses, which promote its economic and transportation assets, and other waterfront areas should have multi-purpose uses including recreation, entertainment, cultural, education, economic, transportation, and residential assets.	✓	✓	

Description	Text of Objective, Policy	Applies to Sub-district	
		OARB	Maritime 16 th /Wood
Policy W1.1	<p>General Plan Conformance of Projects in the Seaport and Airport Areas. The Port shall make a written determination on General Plan conformity for each project, plan, and/or land use guideline it approves in the Port area. Prior to making such determination the Port will forward its proposed determination to the Director of City Planning, who may provide the Port with written comments within a specified time period. Any comments so provided shall be considered and responded to in writing by the Port in its conformity determination.</p> <p>For projects in the Port Area outside the seaport and airport areas, the Port's determination of General Plan conformity may be appealed to the City Council within 10 days. If not appealed within 10 days, the Port's determination shall be deemed final. If appealed, the City Council, by a vote of a least 6 members, shall make a final determination on the appeal within 30 days. The City Planning Commission shall provide recommendation to the City Council for consideration in hearing on appeal of the Port's conformity determination.</p> <p>Projects appealable to the City Council under policy are those for which and Environmental Impact Report of Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act; new construction, additions, changes in use, or, expansion of use involving 20,000 square feet or more in floor area; and public improvements in transportation or public access valued at \$250,000 or more.</p>	✓	✓
Policy W1.2	<p>Planning with the Port of Oakland. Plans for maritime and aviation operations as well as activities on all lands in Port jurisdiction should be coordinated with, and generally consistent with the Oakland General Plan.</p>	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy W1.3	Reducing Land Use Conflicts. Land uses and impacts generated from Port or neighborhood activities should be buffered, protecting adjacent residential areas from the impacts of seaport, airport, or other industrial uses. Appropriate siting of industrial activities, buffering (e.g., landscaping, fencing, transitional uses, etc.), truck traffic management efforts, and other mitigations should be used to minimize the impact of incompatible uses.	✓	✓	
Objective W2	Encourage and accommodate facilities and public linkages, which attract the public to the waterfront without endangering public safety or compromising airport and seaport operations and security.	✓		
Policy W2.1	Linking Neighborhoods with the Waterfront. All recreational activity sites along the waterfront should be connected to each other to create continuous waterfront access. Safe and direct automobile, bicycle, pedestrian and waterway access between the waterfront and adjacent neighborhoods should be created and strengthened.	✓	✓	
Policy W2.2	Buffering of Heavy Industrial Uses. Appropriate buffering measures for heavy industrial uses and transportation uses on adjacent residential neighborhoods should be developed and implemented.	✓	✓	
Policy W2.3	Providing Public Access Improvements. Public access improvements to the waterfront and along the water's edge should be implemented as projects are developed. The access improvement should conform to the requirements of the Bay Conservation and Development Commission (BCDC).	✓	✓	
Policy W2.4	Mitigation Banking. Public access that is developed in advance, by entities with future plans for waterfront project development, should be credited as meeting BCDC's public access requirement for those waterfront projects.	✓	✓	

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy W2.5	Improved Railroad Crossings. To create safe access to the water pedestrian, bicycle, and automobile railroad crossings should be provided where feasible. Crossings could include grade separations, at-grade crossings, skyway bridges, or connections between buildings.	✓	✓	
Policy W2.6	Providing Maritime and Aviation Viewing Access. Safe access to areas for viewing maritime and aviation activities without interfering with seaport and airport activities should be encouraged.	✓	✓	
Policy W2.7	Encouraging Public Transportation. Public transportation to the waterfront should be encouraged, coordinated, and strategically located. Waterfront transportation should be marketed to enhance ease of access both locally and regionally.	✓	✓	
Policy W2.10	Making Public Improvements as a Part of Projects. Physical improvements to improve the aesthetic qualities of the waterfront, and increase visitor comfort, safety, and enjoyment should be incorporated in the development of projects in the waterfront area. These amenities may include landscaping, lighting, public art, comfort stations, street furniture, picnic facilities, bicycle racks, signage, etc. These facilities should be accessible to all persons and designed to accommodate elderly and physically disabled persons.	✓	✓	
Policy W2.11	Disseminating Public Information. Waterfront development should incorporate public, educational and interpretive information for waterfront activities to encourage public knowledge and understanding of the historic, cultural, economic, and environmental context.	✓	✓	
Objective W3	Preserve the high quality and uniqueness of the natural and built environment of the waterfront.	✓	✓	

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy W3.1	<p>Requiring Consistency with Conservation Objectives and Policies. Waterfront objectives, policies, and actions regarding geology, land stability, erosion, soils, water quality, flood hazards, wetland plant and animal habitats, and air quality and pollutants, shall be consistent and in compliance with the 1996 Open Space, Conservation, and Recreation Element of the City's General Plan.</p>	✓	✓	
Policy W3.2	<p>Enhancing the Quality of the Natural and Built Environment. The function, design and appearance, and supplementary characteristics of all uses, activities, and facilities should enhance, and should not detract from or damage the quality of, the overall natural and built environment along the waterfront.</p>	✓	✓	
Policy W3.3	<p>Protecting and Preserving Wetland Plant and Animal Habitats. Native plant communities, wildlife habitats, and sensitive habitats should be protected and enhanced.</p>	✓	✓	
Policy W3.4	<p>Preserving Views and Vistas. Buildings and facilities should respect scenic viewsheds and enhance opportunities for visual access of the waterfront and its activities.</p>	✓	✓	
Objective W4	<p>Establish comprehensive approaches to waterfront issues, implementation, and monitoring efforts.</p>	✓	✓	
Policy W4.1	<p>Creating Coordinated and Comprehensive Approaches. Public agencies and jurisdictions involved in waterfront matters should work together in a cooperative and coordinated way and strive for consistency among general planning, strategic planning, and specific planning practices and programs.</p>	✓	✓	

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy W4.2	<p>Considerations for the OBRA Process. The Oakland Base Reuse Authority (OBRA) process should consider issues affecting West Oakland including: public access and public safety to the waterfront, open space, and amenities; buffering of heavy industrial and transportation uses on residential neighborhoods; and potential job creation and other economic benefits generated as a result of the Army Base re-use. (See also the Industry and Commerce Policy Framework section.)</p>	✓		
Policy W4.3	<p>Coordinating Permit Process Procedures. The City and Port should ensure that the permit process procedures for waterfront development are coordinated and efficient while providing for public notification and input.</p>	✓	✓	
Objective W5	<p>Enhance and promote the Port of Oakland as the waterfront's major economic generator for Oakland.</p>	✓	✓	
Policy W5.1	<p>Conserving Land for Airport and Seaport Use. Lands needed for maritime and aviation operations are of local, regional, national, and international importance and should be recognized as a valuable economic resource. The development of these lands to enhance maritime and aviation functions should be encouraged, and uses that would impair functional operation of the airport and seaport should not be permitted.</p>	✓	✓	

Description	Text of Objective, Policy	OARB	Maritime	16 th /Wood
	<ul style="list-style-type: none"> Defining Seaport and Airport Uses. Pursuant to the Port of Oakland's mission and the 'Trust Provisions' established by the State of California, Port controlled property within the Seaport and Airport areas should be used primarily for purposes that are unique to a modern seaport or airport, require water frontage or access to regional airspace, relate to port operations and expansion, or are dependent on proximity to maritime and/or aviation facilities. Examples of such activities include: 			
Policy W5.2	<ul style="list-style-type: none"> Cargo handling; Ship and Airplane Handling/Building/Repair; Commercial Fishing, etc. Cargo Industry Services, e.g. Warehousing, Distribution, Freight Forwarding, Container Storage and Repair, etc. Passenger Services, e.g. Ferry facilities, Shuttle and Car Rental Facilities, Reservations and Ticketing, Flight Catering, Baggage Handling, Parking, Hotels, etc. Ancillary and Support Services, e.g. Truck and Rail Operations and Associated Services, Administration, Customs, Education/Training Facilities, etc. 	✓	✓	
Objective W6	Develop the seaport and airport as northern California's major international gateway and hubs of the national, regional, and local transportation network.	✓	✓	

Description	Text of Objective, Policy	OARB	Maritime	16 th /Wood
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Maintaining a Competitive Edge. In order to maintain international stature and competitiveness, the Port should continue to develop, expand, or otherwise modernize facilities and/or support infrastructure to enhance its overall efficiency and capabilities to handle increasing amounts of cargo and passengers. Examples include:

- Outer harbor terminals expansion and modernization
- Channel deepening as necessary
- Consolidation of rail services and facilities
- Air passenger terminals expansion and modernization
- Expansion of air cargo services and facilities
- Improvement of BART/Airport access and other public transportation access
- Continued development of ferry service
- Expansion of telecommunications and utility networks

Policy W6.1

✓ ✓

Enhancing Intermodal Transportation. Transportation corridors which serve the harbor/airport terminals should be preserved and enhanced to accommodate higher capacities, service and safety levels, and intermodal connections.

Policy W6.3

✓ ✓

Capitalize on the seaport and airport for increased economic activity and jobs in Oakland.

Objective W7

✓ ✓

Developing Lands in the Vicinity of the Seaport/Airport. Outside the seaport and airport, land should be developed with a variety of uses that benefit from the close proximity to the seaport and airport and that enhance the unique characteristics of the seaport and airport. These lands should be developed with uses which can buffer adjacent neighborhoods from impacts related to such activities.

Policy W7.1

✓ ✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy W7.2	Encouraging Commercial and Industrial Uses. Other commercial and industrial uses should be encouraged at appropriate locations (Port-owned or not) where they can provide economic opportunity to the community at large.	✓	✓	
Objective N1	Provide for healthy, vital, and accessible commercial areas that help meet local consumer needs in the neighborhoods.	✓		✓
Policy N1.1	Concentrating Commercial Development. Commercial development in the neighborhoods should be concentrated in areas that are economically viable and provide opportunities for smaller scale, neighborhood-oriented retail.	✓		✓
Policy N1.2	Placing Public Transit Stops. The majority of commercial development should be accessible by public transit. Public transit stops should be placed at strategic locations in Neighborhood Activity Centers and Transit-Oriented Districts to promote browsing and shopping by transit users.	✓		✓
Policy N1.3	Locating Parking Facilities. Wherever feasible, and desired by merchants and residents, the City should construct strategically located, safe, and attractive parking facilities in Neighborhood Activity Centers. Use of in lieu fees, parking assessment districts, or other programs to pay for these facilities should be explored.	✓		✓
Policy N1.4	Locating Large-Scale Commercial Activities. Commercial uses which serve long term retail needs or regional consumers and which primarily offer high volume goods should be located in areas visible or amenable to high volumes of traffic. Traffic generated by large scale commercial developments should be directed to arterial streets and freeways and not adversely affect nearby residential streets.	✓		✓
Policy N1.5	Designing Commercial Development. Commercial development should be designed in a manner that is sensitive to surrounding residential uses.	✓		✓
Objective N2	Encourage adequate civic, institutional, and educational facilities located within Oakland, appropriately designed and sited to serve the community.	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy N2.7	Designing Community Facilities. Site design, architecture and operating practices of community facilities should be compatible with the area's desired character, and should include public art where possible.	✓	✓	✓
Objective N3	Encourage the construction, conservation, and enhancement of housing resources in order to meet the current and future needs of the Oakland community.	✓	✓	✓
Policy N3.1	Facilitating Housing Construction. Facilitating the construction of housing units should be considered a high priority for the City of Oakland.	✓	✓	✓
Policy N3.2	Encouraging Infill Development. In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.	✓	✓	✓
Policy N3.5	Encouraging Housing Development. The City should actively encourage development of housing in designated mixed housing type and urban housing areas through regulatory and fiscal incentives, assistance in identifying parcels that are appropriate for new development, and other measures.	✓	✓	✓
Policy N3.8	Required High-Quality Design. High-quality design standards should be required of all new residential construction. Design requirements and permitting procedures should be developed and implemented in a manner that is sensitive to the added costs of those requirements and procedures.	✓		✓
Policy N3.9	Orienting Residential Development. Residential developments should be encouraged to face the street and to orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings, respecting the privacy needs of residents of the development and surrounding properties, providing for sufficient conveniently located on-site open space, and avoiding undue noise exposure.			✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy N3.10	Guiding the Development of Parking. Off-street parking for residential buildings should be adequate in amount and conveniently located and laid out, but its visual prominence should be minimized.			✓
Objective N4	Actively encourage the provision of affordable housing throughout the Bay Area.	✓	✓	✓
Policy N4.1	Supporting “Fair Share” Accountability. The City is generally supportive of any efforts to establish accountability for communities that do not provide their fair share of affordable housing units.	✓	✓	✓
Policy N4.2	Advocating for Affordable Housing. The City encourages local non-profit organizations, affordable housing proponents, the business community, the real estate industry, and other local policy makers to join in efforts to advocate for the provision of affordable housing in communities throughout the Bay Area region.	✓	✓	✓
Objective N5	Minimize conflicts between residential and non-residential activities while providing opportunities for residents to live and work at the same location.			✓
Policy N5.1	Environmental Justice. The City is committed to the identification of issues related to the consequences of development on racial, ethnic, and disadvantaged socioeconomic groups. The City will encourage active participation of all its communities, and will make efforts to inform and involve groups concerned about environmental justice and representatives of communities most impacted by environmental hazards in the early stages of the planning and development process through notification and two-way communication.	✓	✓	✓
Policy N5.2	Buffering Residential Areas. Residential areas should be buffered and reinforced from conflicting uses through the establishment of performance-based regulations, the removal of non-conforming uses, and other tools.	✓	✓	✓

Description Text of Objective, Policy

Policy N5.3	Supporting Live-Work Development. The city should support and encourage residents desiring to live and work at the same location where neither the residential use nor the work occupation adversely affects nearby properties or the character of the surrounding area.	✓
Objective N9	Promote a strong sense of community within the city of Oakland, and support and enhance the district character of different areas of the city, while promoting linkages between them.	✓
Policy N9.1	Recognizing Distinct Neighborhoods. The City should encourage and support the identification of distinct neighborhoods. (Many of these neighborhoods are identified on the Structure Diagram and in the Area View section of the Plan.)	✓
Policy N9.2	Supporting Neighborhood Improvement. The City should be supportive of the efforts of local neighborhood organizations in improving their neighborhoods, by providing information, guidance, and assistance where feasible.	✓
Policy N9.5	Marking Significant Sites. Identify locations of interest and historic significance by markers, signs, public art, landscape, installations, or by other means. (See the Historic Preservation Element for treatment of historic resources.)	✓
Policy N9.7	Creating Compatible but Diverse Development. Diversity in Oakland's built environment should be as valued as the diversity in population. Regulations and permit processes should be geared toward creating compatible and attractive development, rather than "cookie cutter" development.	✓
Policy N9.8	Preserving History and Community. Locations that create a sense of history and community within the City should be identified and preserved where feasible (see the Historic Preservation Element for more information).	✓
Policy N9.9	Respecting Architectural Integrity. The City encourages rehabilitation efforts which respects the architectural integrity of a building's original style (see the Historic Preservation Element for more information).	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Objective N12	Provide adequate infrastructure to meet the needs of Oakland's growing community.	✓	✓	✓
Policy N12.1	Developing Public Service Facilities. The development of public facilities and staffing of safety-related services, such as fire stations, should be sequenced and timed to provide a balance between land use and population growth, and public services at all times.	✓	✓	✓
Policy N12.2	Making Schools Available. Adequate public school capacity should be available to meet the needs of Oakland's growing community. The City and the Oakland Unified School District (OUSD) should work together to establish a continuing procedure for coordinating residential and commercial development and exploring residential and commercial development and exploring the imposition of mutually agreed upon reasonable and feasible strategies to provide for adequate school capacity. The City and OUSD should jointly consider where feasible and appropriate, finding mechanisms such as assessment districts, Redevelopment Agency funding (AB 1290), use of surplus, City-owned land, bond issues, and adjacent or shared use of land or school facilities with recreation, libraries, child care and other public uses.	✓	✓	✓
Policy N12.4	Undergrounding Utility Lines. Electrical, telephone, and related distribution lines should be undergrounded in commercial and residential areas, except where special local conditions such as limited visibility of the poles and wires make this unneeded. They should also be underground in appropriate institutional, industrial, and other areas, and generally along freeways, scenic routes, and heavily traveled streets. Programs should lead systematically toward the eventual undergrounding of all existing lines in such places. Where significant utility extensions are taking place in these areas, such as in new subdivisions, utilities should be installed underground from the start.	✓	✓	✓

**4.1E Oakland General Plan Objectives and Policies
Bicycle Master Plan (BMP)**

**Oakland General Plan Objectives and Policies Relevant to the OARB Redevelopment District
Bicycle Master Plan (BMP)**

No.	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy 1	Create, enhance and maintain the recommended bikeway network	✓	✓	
Policy 2	Establish design and maintenance standards for all streets that recognize the needs of bicyclists	✓	✓	
Policy 3	Make efforts to obtain, redevelop, or encourage private redevelopment of unused railroad, utility, and other right-of-ways as linked, multi-use Class I bicycle paths or trails	✓	✓	
Policy 4	Include provisions for safe and direct bicycle access to special development areas and key corridors	✓	✓	
Policy 5	Promote secure and conveniently located bicycle parking at destinations throughout Oakland	✓	✓	✓
Policy 6	Support improve bicycle access to public transportation	✓	✓	✓
Policy 8	Insure the needs of bicyclists are considered in the design of new development and redevelopment projects	✓	✓	✓
Policy 10	Prior to the implementation of bikeway projects, affected residents, merchants and property owners shall be notified in writing of the potential impacts	✓	✓	✓

**4.1F Oakland General Plan Objectives and Policies
Estuary Policy Plan**

**Oakland General Plan Objectives and Policies Relevant to the OARB Redevelopment District
Estuary Policy Plan Element**

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Land Use Objectives				
Objective LU-1	Provide for a broad mixture of activities within the Estuary area.	✓		
Objective LU-2	Provide for public activities that are oriented to the water.	✓		
Objective LU-4	Develop the Estuary area in a way that enhances Oakland's long-term economic development.	✓	✓	
Objective LU-5	Provide for the orderly transformation of land uses while acknowledging and respecting cultural and historical resources.	✓	✓	
Objective LU-6	Create greater land use continuity between the Estuary waterfront and adjacent inland districts.	✓	✓	✓
Shoreline Access & Public Spaces Objectives				
Objective SA-1	Create a clear and continuous system of public access along the Estuary shoreline.	✓	✓	
Objective SA-2	Punctuate the shoreline promenade with a series of parks and larger open spaces.	✓	✓	
Objective SA-4	Develop opportunities for recreational activities that are oriented to the waterfront and serve identified neighborhood needs.	✓	✓	
Objective SA-5	Enhance natural areas along the shoreline.	✓	✓	
Objective SA-6	Encourage the development of educational and cultural programs and interpretive facilities that enhance understanding of the waterfront environment.	✓	✓	
Regional Circulation and Local Street Network Objectives				
Objective C-1	Improve and clarify regional access to Oakland's waterfront.	✓	✓	

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Objective C-4	Strengthen local circulation connections between Oakland neighborhoods and the waterfront.	✓	✓	✓
Objective C-5	Promote transit service to and along the waterfront.	✓	✓	✓
Objective C-6	Improve pedestrian and bicycle circulation.	✓	✓	✓
Objective C-7	Provide adequate parking without diminishing the quality of the urban environment.	✓	✓	✓
Estuary Planning District Policies that May be Relevant to the Redevelopment District				
Policy JL-14	Provide for increased transit service	✓	✓	✓
Policy OAK-2	Establish a well-structured, integrated system of major recreational facilities which accommodate a wide variety of activities and which take advantage of the unique waterfront setting. Promote a variety of recreational experiences.	✓	✓	✓

**4.1G Oakland General Plan Objectives and Policies Open Space,
Conservation, and Recreation Element (OSCAR)**

**Oakland General Plan Objectives and Policies Relevant to the OARB Redevelopment District
Open Space, Conservation, and Recreation Element (OSCAR)**

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Objective OS-1	Resource Conservation Areas. To conserve and appropriately manage undeveloped areas in Oakland which have high natural resource value, scenic value, or natural hazards, which preclude safe development.	✓		
Policy OS-1.1	Wildland Parks. Conserve existing City and Regional Parks characterized by steep slopes, large groundwater recharge areas, native plant and animal communities, extreme fire hazards, or similar conditions.	✓	✓	
Objective OS-2	Urban Parks, Schoolyards, and Gardens. To an urban park, schoolyard, and garden system, which provides open space for outdoor recreation, psychological and physical well-being, and relief from the urban environment.	✓	✓	✓
Policy OS-2.1	Protection of Park Open Space. Manage Oakland's urban parks to protect and enhance their open space character while accommodating a wide range of outdoor recreational activities.	✓	✓	✓
Objective OS-3	Institutional and Functional Open Space. To retain major institutional and functional open space areas and enhance their recreational and aesthetic benefits.	✓		
Policy OS-3.2	Military Base Open Space. Support provisions for park and open space areas in plans for military base re-use. At Oak Knoll Naval Hospital, designate undeveloped areas with high natural resource or scenic value as Resource Conservation Areas. Consider using existing athletic fields and recreational facilities at Oak Knoll as a new Urban Park site.	✓		
Objective OS-4	Private Open Space. To supplement public open spaces with outdoor open space for private use.			✓
Policy OS-4.1	Provision of Useable Open Space. Continue to require new multifamily development to provide useable outdoor open space for its residents.			✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy OS-4.4	Elimination of Blighted Vacant Lots. Discourage property owners from allowing vacant land to become a source of neighborhood blight, particularly in residential areas with large numbers of vacant lots.	✓	✓	✓
Objective OS-5	Linear Parks and Trails. To develop a system of linear parks and trails which			
	(a) links existing parks together;			
	(b) provides safe, convenient access to open space from residential areas and employment centers;	✓	✓	
	(c) provides places to hike, bike, and experience Oakland's scenery; and (d) provides a means of moving from one place to another without an automobile.	✓	✓	
Policy OS-5.1	Priorities for Trail Improvement. Improve trail connections within Oakland, emphasizing connections between the flatlands and the hill and shoreline parks; lateral trail connections between the hill area parks; and trails along the waterfront.	✓	✓	
Policy OS-5.3	Trail Design Principles. Plan and design all new trails in a manner which:			
	(a) environmental impacts;			
	(b) fully considers neighbor privacy and security issues;	✓	✓	
	(c) involves the local community in alignment and design; and (d) considers the needs of multiple users, including pedestrians, bicycles, and wheelchairs.	✓	✓	
Objective OS-6	Regional Planning. To integrate Oakland's open spaces with a larger system of open spaces serving the entire Bay Area, emphasizing the creation and maintenance of a regional greenbelt.	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy OS-6.1	Intergovernmental Coordination. Coordinate Oakland's open space planning with other agencies, including adjacent cities and counties, the Port of Oakland, and the East Bay Regional Park District.	✓	✓	
Objective OS-7	Shoreline Access. To increase physical and visual access to the Oakland shoreline and create new opportunities for shoreline recreation.	✓	✓	
Policy OS-7.1	Promotion of Beneficial Waterfront Uses. Require land uses along the shoreline which promote the beneficial uses of the Estuary and Bay waters, including a balanced mix of commercial shipping facilities; water-dependent industry, commerce, and transportation; recreation; water-oriented services and housing-, and resource conservation.	✓	✓	
Policy OS-7.2	Dedication of Shoreline Public Access. Support the BCDC requirements which mandate that all new shoreline development designate the water's edge as publicly accessible open space where safety and security are not compromised, and where access can be achieved without interfering with waterfront industrial and maritime uses. Where such conflicts or hazards would result, support the provision of off-site access improvements in lieu of on-site improvements. In such cases, the extent of off-site improvements should be related to the scale of the development being proposed.	✓	✓	
Policy OS-7.3	Waterfront Appreciation. Promote a greater appreciation of the Oakland waterfront by preserving and enhancing waterfront views, promoting its educational value, and, exploring new and creative ways to provide public access to the shoreline without interfering with transportation and shipping operations or endangering public safety.	✓	✓	

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy OS-7.4	<p>Waterfront Park Enhancement. Expand and enhance the City's waterfront park areas. Signage and access provisions to existing waterfront parks should be improved. Opportunities for new shoreline parks as depicted in Figure 7 (Shoreline Access) should be pursued as redevelopment along the waterfront occurs. A variety of park environments should be created, including active recreation areas, fishing piers and boating facilities, natural areas, and small "pocket" parks with landscaping and benches, all linked by linear parks or pedestrian paths emphasizing shoreline views and access.</p> <p>Lateral Access and Links to the Flatlands. Improve lateral access along the Oakland shoreline and linkages between the shoreline and nearby neighborhoods by creating a "Bay Trail" along the length of the Oakland waterfront. Where an alignment immediately along the waterfront is not possible, site the trail as close to the water as possible, with spur trails leading to the water's edge. In the transitional areas between Jack London Square and High Street, interim alignments may be designated along local streets but the ultimate goal should be an unbroken trail along the water's edge between Jack London Square and Martin Luther King, Jr. Regional Shoreline.</p>	✓	✓	
Policy OS-7.5	<p>Landform. To retain Oakland's natural features and topography wherever possible and recognize their important role in defining the character and image of the city and its neighborhoods.</p> <p>Use of Natural Features to Define Communities. Use open space and natural features to define city and neighborhood edges and give communities within Oakland a stronger sense of identity. Maintain and enhance city edges, including the greenbelt on the eastern edge of the city, the shoreline, and San Leandro Creek. Use creeks, parks, and topographical features to help define neighborhood edges and create neighborhood focal points.</p>	✓	✓	
Objective OS-9	<p>Landform. To retain Oakland's natural features and topography wherever possible and recognize their important role in defining the character and image of the city and its neighborhoods.</p> <p>Use of Natural Features to Define Communities. Use open space and natural features to define city and neighborhood edges and give communities within Oakland a stronger sense of identity. Maintain and enhance city edges, including the greenbelt on the eastern edge of the city, the shoreline, and San Leandro Creek. Use creeks, parks, and topographical features to help define neighborhood edges and create neighborhood focal points.</p>	✓	✓	
Policy OS-9.2	<p>Landform. To retain Oakland's natural features and topography wherever possible and recognize their important role in defining the character and image of the city and its neighborhoods.</p> <p>Use of Natural Features to Define Communities. Use open space and natural features to define city and neighborhood edges and give communities within Oakland a stronger sense of identity. Maintain and enhance city edges, including the greenbelt on the eastern edge of the city, the shoreline, and San Leandro Creek. Use creeks, parks, and topographical features to help define neighborhood edges and create neighborhood focal points.</p>	✓	✓	

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy OS-9.3	Gateway Improvements. Enhance neighborhood and city identity by maintaining or creating gateways. Maintain view corridors and enhance the sense of arrival at the major entrances to the city, including freeways, BART lines, and the airport entry. Use public art, landscaping, and signage to create stronger City and neighborhood gateways.	✓		
Objective OS-10	Scenic Resources. To protect scenic views and improve visual quality.	✓		
	View Protection. Protect the character of existing scenic views in Oakland, paying particular attention to: <ul style="list-style-type: none"> • views of the Oakland Hills from the flatlands; • views of downtown and Lake Merritt; • views of the shoreline; and • panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations. 	✓	✓	
Policy OS-10.1		✓		
Policy OS-10.2	Minimizing Adverse Visual Impacts. Encourage site planning for new development which minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.	✓		
Objective OS-11	Civic Open Spaces. To maintain and develop plazas, pocket parks, pedestrian walkways, and rooftop gardens in Oakland's major activity centers and enhance the appearance of these and other public spaces with landscaping and art.	✓		✓
Policy OS-11.2	New Civic Open Space. Create new civic open spaces at BART Stations, in neighborhood commercial areas, on parking garages, and in other areas where high-intensity redevelopment is proposed.	✓		✓
Objective OS-12	Street Trees. To "green" Oakland's residential neighborhoods and commercial areas with street trees.	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy OS-12.1	Street Tree Selection. Incorporate a broad and varied range of tree species which is reflected on a city-maintained list of approved trees. Street tree selection should respond to the general environmental conditions at the planting site, including climate and micro-climate, soil types, topography, existing tree planting, maintenance of adequate distance between street trees and other features, the character of existing development, and the size and context of the tree planting area.	✓	✓	✓
Objective CO-1	Soil Conservation. To protect and preserve soil as a resource for healthy plant, animal, and human life.	✓	✓	✓
Policy CO-1.1	Soil Loss in New Development. Regulate development in a manner which protects soil from degradation and misuse or other activities which significantly reduce its ability to support plant and animal life. Design all construction to ensure that soil is well secured so that unnecessary erosion, siltation of streams, and sedimentation of water bodies does not occur.	✓	✓	✓
Policy CO-1.2	Soil Contamination Hazards. Minimize hazards associated with soil contamination through the appropriate storage and disposal of toxic substances, monitoring of dredging activities, and clean-up of contaminated sites. In this regard, require soil testing for development of any site (or dedication of any parkland or community garden) where contamination is suspected due to prior activities on the site.	✓	✓	✓
Objective CO-2	Land Stability. To minimize safety hazards, environmental impacts, and aesthetic impacts associated with development on hillsides and in seismic high-risk areas.	✓	✓	✓
Policy CO-2.3	Development on Filled Soils. Require development on filled soils to make special provisions to safeguard against subsidence and seismic hazards.	✓	✓	✓
Objective CO-4	Water Supply. To maintain a water supply sufficient to meet local needs while minimizing the need to develop new water supply facilities.	✓	✓	✓
Policy CO-4.1	Water Conservation. Emphasize water conservation and recycling strategies in efforts to meet future demand.	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy CO-4.2	Drought-Tolerant Landscaping. Require use of drought-tolerant plants to the greatest extent possible and encourage the use of irrigation systems which minimize water consumption.	✓	✓	✓
Policy CO-4.3	Use of Reclaimed Water. Promote the use of reclaimed wastewater for irrigating landscape medians, cemeteries, parks, golf courses, and other areas requiring large volumes of non-potable water.	✓	✓	✓
Objective CO-5	Water Quality. To minimize the adverse effects of urbanization on Oakland's groundwater, creeks, lakes, and nearshore waters.	✓	✓	
Policy CO-5.2	Improvements to Groundwater Quality. Support efforts to improve groundwater quality, including the use of non-toxic herbicides and fertilizers, the enforcement of anti-litter laws, the clean-up of sites contaminated by toxics, and on-going monitoring by the Alameda County Flood Control and Water Conservation District.	✓	✓	✓
Policy CO-5.3	Control of Urban Runoff. Employ a broad range of strategies, compatible with the Alameda Countywide Clean Water Program, to: (a) reduce water pollution associated with stormwater runoff; (b) reduce water pollution associated with hazardous spills, runoff from hazardous material areas, improper disposal of household hazardous wastes, illicit dumping, and marina "live-aboards;" and (c) improve water quality in Lake Merritt to enhance the lake's aesthetic, recreational, and ecological functions.	✓	✓	✓
Objective CO-6	Surface Waters. To protect the ecology and promote the beneficial uses of Oakland's creeks, lakes, and nearshore waters.	✓	✓	
Policy CO-6.5	Protection of Bay And Estuary Waters. Protect the surface waters of the San Francisco Estuary system, including San Francisco Bay, San Leandro Bay, and the Oakland Estuary. Discourage shoreline activities which negatively impact marine life in the water and marshland areas.	✓	✓	

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy CO-6.6	Restriction on Bay Fill. Prohibit bay fill unless there is compelling evidence that its benefits will outweigh the environmental and other costs. In such instances, support compliance with the mitigation requirements of the Bay Conservation and Development Commission and other regulatory agencies.	✓	✓	
Objective CO-8	Wetlands. To conserve wetlands so that they may continue to provide habitat for fish and wildlife.		✓	
Policy CO-8.1	Mitigation of Development Impacts. Work with federal, state, and regional agencies on an on-going basis to determine mitigation measures for development which could potentially impact wetlands. Strongly discourage development with unmitigable adverse impacts.		✓	
Objective CO-9	Rare, Endangered, and Threatened Species. To protect rare, endangered, and threatened species from the impacts of urbanization.	✓	✓	
Policy CO-9.1	Habitat Protection. Protect rare, endangered, and threatened species by conserving and enhancing their habitat and requiring mitigation of potential adverse impacts when development occurs within habitat areas.	✓	✓	
Objective CO-11	Wildlife. To sustain a healthy wildlife population within the City of Oakland.	✓	✓	✓
Policy CO-11.1	Protection from Urbanization. Protect wildlife from the hazards of urbanization, including loss of habitat and predation by domestic animals.	✓		
Objective CO-12	Air Resources. To improve air quality in Oakland and the surrounding Bay Region.	✓	✓	✓

Description	Text of Objective, Policy	OARB	Maritime	16 th /Wood
Policy CO-12.1	<p>Land Use Patterns Which Promote Air Quality. Promote land use patterns and densities which help improve regional air quality conditions by: (a) minimizing dependence on single passenger autos; (b) promoting projects which minimize quick auto starts and stops, such as live-work development, mixed use development, and office development with ground floor retail space; (c) separating land uses which are sensitive to pollution from the sources of air pollution; and (d) supporting telecommuting, flexible work hours, and behavioral changes which reduce the percentage of people in Oakland who must drive to work on a daily basis.</p>	✓	✓	✓
Policy CO-12.2	<p>Coordinated Transportation Systems. Maintain a coordinated bus, rail, and ferry transit system which provides efficient service to major destinations and promotes alternatives to the single passenger auto.</p>	✓	✓	✓
Policy CO-12.3	<p>Transportation Systems Management. Expand existing transportation systems management and transportation demand management strategies which reduce congestion, vehicle idling, and travel in single passenger autos.</p> <p>Design of Development to Minimize Air Quality Impacts. Require that development projects be designed in a manner which reduces potential adverse air quality impacts. This may include:</p>	✓	✓	✓
Policy CO-12.4	<ul style="list-style-type: none"> • the use of vegetation and landscaping to absorb carbon monoxide and to buffer sensitive receptors; • the use of low-polluting energy sources and energy conservation measures; • designs which encourage transit use and facilitate bicycle and pedestrian travel. 	✓	✓	✓
Policy CO-12.5	<p>Use of Best Available Control Technology. Require new industry to use best available control technology to remove pollutants, including filtering, washing, or electrostatic treatment of emissions.</p>	✓		

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy CO-12.6	Control of Dust Emissions. Require construction, demolition and grading practices which minimize dust emissions.	✓	✓	✓
Policy CO-12.7	Regional Air Quality Planning. Coordinate local air quality planning efforts with other agencies, including adjoining cities and counties, and the public agencies responsible for monitoring and improving air quality. Cooperate with regional agencies such as the Bay Area Air Quality Management District (BAAQMD), the Metropolitan Transportation Commission (MTC), the Association of Bay Area Governments (ABAG), and the Alameda County Congestion Management Agency in developing and implementing regional air quality strategies. Continue to work with BAAQMD and the California Air Resources Board in enforcing the provisions of the State and Federal Clean Air Acts, including the monitoring of air pollutants on a regular and on-going basis.	✓	✓	✓
Objective CO-13	Energy Resources. To manage Oakland's energy resources as efficiently as possible, reduce consumption of non-renewable resources, and develop energy resources which reduce dependency on fossil fuels.	✓	✓	✓
Policy CO-13.1	Reliable Energy Network. Promote a reliable local energy network which meets future needs and long-term economic development objectives at the lowest practical cost.	✓	✓	✓
Policy CO-13.2	Energy Efficiency. Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.	✓	✓	✓
Policy CO-13.3	Construction Methods and Materials. Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Policy CO-13.4	Alternative Energy Sources. Accommodate the development and use of alternative energy resources, including solar energy and technologies which convert waste or industrial byproducts to energy, provided that such activities are compatible with surrounding land uses and regional air and water quality requirements.	✓	✓	✓
Objective Rec-2	Park Design and Compatibility of Uses. To ensure that park are well designed, and that facilities and activities within parks are compatible with each other, the natural environment, historic resources, and the surrounding	✓	✓	✓
Policy Rec-2.3	Environmentally-Sensitive Design. Protect sensitive natural areas within parks, including creeks and woodlands, and integrate them into park design. Require new recreational facilities to respect existing park character, be compatible with the natural environment, and achieve a high standard of design quality.	✓	✓	✓
Policy Rec-2.5	Park Visibility. Plan and design parks in a way which maximizes their visibility while minimizing conflicts between pedestrians, bicyclists, and automobiles.	✓	✓	✓
Objective Rec-10	Funding. To stabilize existing funding sources, develop new funding sources, and effectively manage park expenses.	✓		
Policy Rec-10.2	Parkland Dedication And Impact Fee. To the extent permitted by law, require recreational needs created by future growth to be offset by resources contributed by that growth. In other words, require mandatory land dedication for large scale residential development and establish a park impact fee for smaller-scale residential development, including individual new dwelling units. Calculate the dedication or fee requirement based on a standard of four acres of local-serving parkland per 1,000 residents.	✓		✓
Policy Rec-10.3	East Bay Regional Park District Benefits. Work with the East Bay Regional Park District to ensure that Oakland receives an equitable share of benefits from the District, including improved access between Oakland neighborhoods and the hill and shoreline parks.	✓	✓	✓

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16 th /Wood
Objective OS-1	Resource Conservation Areas. To conserve and appropriately manage undeveloped areas in Oakland which have high natural resource value, scenic value, or natural hazards which preclude safe development.	✓	✓	

**4.1H Oakland General Plan Objectives and Policies
Historic Preservation Element**

Description Text of Objective, Policy

Historical and Architectural Inventory. The City will establish and maintain a Historical and Architectural Inventory which covers all of Oakland. The Inventory will investigate all individual pre-1946 properties and areas throughout the City and will evaluate each property and area according to the table entitled "Historical and Architectural Inventory Rating System." The Inventory will cover the entire City as quickly as possible and an Intensive Survey that will perform detailed research and evaluation. The Reconnaissance Survey will serve as an interim Inventory for properties not yet covered by the Intensive Survey.

Policy 1.1

✓ ✓ ✓

Potential Designated Historic Properties. The City considers any property receiving an existing or contingency rating from the Reconnaissance or Intensive Surveys of "A" (highest importance), "B" (major importance), or "C" (secondary importance) and all properties determined by the Surveys to contribute or potentially contribute to an Area of Primary or Secondary Importance to warrant consideration for possible preservation. Unless already designated as Landmarks, Preservation Districts, or Heritage properties pursuant to Policy 1.3, such properties will be called "Potential Designated Historic Properties."

Policy 1.2

✓ ✓ ✓

Designated Historic Properties. The City will designate significant older properties which definitively warrant preservation as Landmarks, Preservation Districts or Heritage Properties. The designations will be based on a combination of Historical and Architectural Inventory Ratings, National Register of Historical Places criteria, and special criteria for Landmarks and Preservation District eligibility. Landmarks, properties which contribute or potentially contribute to Preservation Districts, and Heritage Properties will be called "Designated Historic Properties"

Policy 1.3

✓ ✓ ✓

Preservation Incentives and Regulations for Designated Historic Properties. The City will use a combination of incentives and regulations to encourage preservation of significant older properties and areas which have been designated as Landmarks, Preservation Districts, or Heritage Properties. The regulations will be applied according to the importance of each property, with the more important properties having stronger regulations.

Policy 2.1

✓ ✓ ✓

Description Text of Objective, Policy

Landmark and Preservation District Eligibility Criteria. Landmarks and Preservation Districts will be classified according to importance, with three classes of Landmarks and two classes of Preservation Districts. Properties eligible for each of these classifications will be as follows:

Class 1 Landmarks: Properties rated "A" under the Landmarks Preservation Advisory Board's "Guidelines for Determination of Landmark Eligibility" (the "Guidelines") and which are on or appear eligible for the National Register of Historic Places.

Class 2 Landmarks: Properties rated "B" under the Guidelines and which are on or appear eligible for the National Register of Historic Places; and properties rated "All under the Guidelines and which are not on and do not appear eligible for the National Register of Historic Places.

Policy 2.2

Class 3 Landmarks: Properties rated "B" under the Guidelines and which are not on and do not appear eligible for the National Register of Historic Places.

Class 1 Preservation Districts: All Areas of Primary Importance identified by the Intensive Survey plus other areas which meet the "Guidelines for Determination of Preservation District Eligibility."

Class 2 Preservation Districts: All Areas of Secondary Importance identified by the Intensive Survey plus other areas which meet the "Guidelines for Determination for Preservation District Eligibility".

The methodology of the Intensive Survey will be used to determine whether properties appear eligible for the National Register of Historic Places.

Landmark and Preservation District Designation Procedure.

- (a) Landmarks and Preservation Districts will be treated as zones pursuant to the Oakland Zoning Regulations and will be designated in the same manner as rezonings. Designation of Landmarks and Preservation Districts may be initiated

Policy 2.3

Description Text of Objective, Policy

by the owner(s), the Landmarks Preservation Advisory Board or the City Planning Commission. The City Planning Commission will hold a public hearing and act after either (i) receiving the proposal from the Landmarks Preservation Advisory Board (if initiated by the Board); or (ii) receiving the Board's recommendation on the proposal (if initiated by the owner(s) or Planning Commission). The Planning Commission will forward all recommendations to the City Council which will make the final decision.

- (b) For purposes of preservation regulations, designation will apply only to property exteriors and to specially-designated interiors.
- (c) Property owner notification will be required before Landmarks Board, City Planning Commission or City Council action on Landmark or Preservation District designation proposals. Initial Landmarks Board notification will be by both certified and first class mail. If a property owner does not respond to the first notification attempt, the Board, before acting on the designation proposal, will make a second attempt for that owner in the same manner as the first attempt. However, a second attempt will not be required if the Board determines that an emergency exists. An emergency will exist whenever there is significant reason to believe that immediate demolition, removal or alteration is being considered for the property proposed for designation and that such demolition, removal or alteration would adversely affect the property's Character-Defining Elements.
- (d) If a property owner submits a written Objection to a proposed Landmark designation, the designation will be approved only if the City Council determines either that (i) the objection is without substantial merit or (ii) the proposed Landmark is of exceptional significance. Property owner objections to Preservation District designations will be handled on a case by case basis.

Description Text of Objective, Policy

Landmark and Preservation District Regulations.

- (a) Demolitions and removals involving Landmarks or Preservation Districts will generally not be permitted or be subject to postponement unless certain findings are made. Demolition or removal of more important Landmarks and of most Preservation District properties will normally not be permitted without the required findings, while demolition or removal of less important Landmarks will be subject only to postponement.

- (b) Alterations or New Construction involving Landmarks or Preservation Districts will normally be approved if they are found to meet the Secretary of the Interior's Standards for the Treatment of Historic Properties or if certain other findings are made. ✓

Policy 2.4

- (c) Findings for approval of demolitions, removals, alterations or New Construction involving Landmarks or Preservation Districts will seek to balance preservation of these properties with other concerns.

- (d) Specific regulatory provisions are set forth in the tables entitled "Demolition and Removal Regulations for Landmarks and Preservation Districts" and "Alteration and New Construction Regulations for Landmarks and Preservation Districts."

Preservation Incentives. Landmarks and all properties contributing or potentially contributing to a Preservation District will be eligible for the following preservation incentives:

- (a) Mills Act contracts for reducing property tax assessments; ✓
- (b) State Historical Building Code and other related alternative codes for older buildings such as the Uniform Code for Building Conservation (UCBC), to provide more flexible construction standards;

Policy 2.6

Description Text of Objective, Policy

- (c) conservation easements to reduce property tax assessments and, for National Register properties, to obtain income tax deductions;
- (d) broader range of permitted or conditionally-permitted uses;
- (e) transferable development rights;
- (f) priority for economic development and community development project assistance and eligibility for possible historic preservation grants for low-income housing;
- (g) eligibility for acquisition, rehabilitation, and other development assistance from a possible historic preservation revolving fund or possible Marks historical rehabilitation bond program; and
- (h) fee waivers or reductions for City permits for demolition, new construction, or alterations. Compatible new development on vacant noncontributing Preservation District parcels will be eligible for Incentives (iv), (v), (vi) and (vii). Heritage Properties will be eligible for incentives (ii), (vi) and (vii).

Avoid or Minimize Adverse Preservation Impacts Related to Discretionary City

Policy 3.1 **Actions.** The City will make all reasonable efforts to avoid or minimize adverse effects on the Character-Defining Elements of existing or Potential Designated Historic Properties which could result from private or public projects requiring discretionary City actions. ✓

Designated Historic Property Status for Certain City-Assisted Properties. To the

extent consistent with other General Plan Goals, Policies and Objectives, as a condition for providing financial assistance to projects involving existing or Potential Designated Historic Properties, the City will require that complete application be made for such properties to receive the highest local designation for which they are eligible prior to issuance of a building permit for the project or transfer of title (for City-owned or controlled properties), whichever comes first. ✓

Policy 3.3

Description Text of Objective, Policy

However, Landmark or Preservation District applications will not be required for projects which are small-scale or do not change exterior appearance.

City Acquisition for Historic Preservation Where Necessary. Where all other means of preservation have been exhausted, the City will consider acquiring, by eminent domain if necessary, existing or Potential Designated Historic Properties, or portions thereof, in order to preserve them. Such acquisition may be in fee, as conservation easements, or a combination thereof. ✓

Historic Preservation and Discretionary Permit Approvals. For additions or alteration to Heritage Properties or Potential Designated Historic Properties requiring discretionary City permits, the City will make a finding that:

1. the design matches or is compatible with, but not necessarily identical to, the property's existing or historical design; or
2. the proposed design comprehensively modifies and is at least equal in quality to the existing design and is compatible with the character of the neighborhood; or
3. the existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.

Policy 3.5

For any project involving complete demolition of Heritage Properties or Potential Designated Historic Properties requiring discretionary City permits, the City will make a finding that:

1. the design quality of the proposed project is at least equal to that of the original structure and is compatible with the character of the neighborhood; or
2. the public benefits of the proposed project outweigh the benefits of the proposed project outweigh the benefit of retaining the original structure; or
3. the existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.

Description Text of Objective, Policy

Policy 3.7 **Property Relocation Rather than Demolition as Part of Discretionary Projects.** As a condition of approval for all discretionary projects involving demolition of existing or Potential Designated Historic Properties, the City will normally require that reasonable efforts be made to relocate the properties to an acceptable site. ✓

Definition of “Local Register of Historical Resources” and Historic Preservation “Significant Effects” for Environmental Review Purposes. For purposes of environmental review under the California Environmental Quality Act, the following properties will constitute the City of Oakland’s Local Register of Historical Resources:

1. All Designated Historic Properties, and
2. Those Potential Designated Historic Properties that have an existing rating of “A” or “B” or are located within an Area of Primary Importance.

Until complete implementation of Action 2.1.2 (Redesignation), the Local Register of Historical Resources will also include the following designated properties: Oakland Landmarks, S-7 Preservation Combining Zone properties, and Preservation Study List properties. ✓

Policy 3.8

Complete demolition of a Historical Resource will normally be considered a significant effect that cannot be mitigated to a level less than significant and will, in most cases, require preparation of an Environmental Impact Report ✓

A proposed addition or alteration to a Historical Resource that has the potential to disqualify a property from Landmark or Preservation District eligibility or may have substantial adverse effects on the property’s Character-Defining Elements will normally, unless adequately mitigated, be considered to have a significant effect. Possible mitigation ✓

¹ This footnote is part of the text and reads: “Per the provisions of the California Environmental Quality Act, determination of whether mitigations are adequate to reduce a significant effect to a Historical Resource to a level less than significant will be determined by the lead agency on a case by case basis.”

Description Text of Objective, Policy

measures are suggested in Action 3.8.1.

Amend the Regulations to include specific measures that may be considered to mitigate significant effects to a Historical Resource. Measures appropriate to mitigate significant effects to a Historical Resource may include one or more of the following measures depending on the extent of the addition or alteration.¹

1. Modifications of the project design to avoid adversely affecting the character defining elements of the property.
2. Relocation of the affected Historical Resource to a location consistent with its historical or architectural character.

If the measures are not feasible, then other measures may be considered including, but not limited to the following:

1. Modification of the project design to include restoration of the remaining historic character of the property.
2. Modification of the project design to incorporate or replicate elements of the building's original architectural design.
3. Salvage and preservation of significant features and materials of the structure in a local museum or within the new project.
4. Measures to protect the Historical Resource from effects of on-site or other construction activities.
5. Documentation in a Historic American Buildings Survey report or other appropriate format: photographs, oral history, video, etc.
6. Placement of a plaque, commemorative marker, or artistic or interpretive display on the site providing information on the historical significance of the resource.
7. Contribution to a Facade Improvement Fund, the Historic Preservation Revolving Loan Fund, the Oakland Cultural Heritage Survey, or other program appropriate to the

Description Text of Objective, Policy

character of the resource.

Consistency of Zoning With Existing or Eligible Preservation Districts.

(a) Unless necessary to achieve some other Oakland General Plan goal or policy which is greater significance, the base zone of existing or eligible Preservation Districts shall not encourage demolition or removal of a district's contributing or potentially contributing properties nor encourage new construction that is incompatible with these properties.

Policy 3.9



(b) The City will always consider including a historic preservation component in area wide or specific plans. As part of any amendment to the Zoning Regulations, the impact on historic properties will be evaluated.

Historic Preservation and Seismic Retrofit and Other Building Safety Programs.

(a) The City's building safety programs, including seismic retrofit programs, will seek to preserve existing or Potential Designated Historic Properties and their Character-Defining Elements. Where changes to such elements are unavoidable to achieve code compliance or other City-mandated modifications, the City will encourage owners to design the changes in a manner which minimizes visual impacts.

Policy 3.11



(b) Prevailing codes for the City's building safety programs when applied to existing or Potential Designated Historic Properties will be the Oakland Building Code; the Uniform Code for Building Conservation where permitted under state law; and, for qualified historical buildings, the State Historical Building Code.

Historic Preservation and Substandard or Public Nuisance Properties. Before

requiring vacation or demolition, the City will take all reasonable actions to repair or rehabilitate existing or Potential Designated Historic Properties which have been determined to be substandard or public nuisances under the Oakland Dangerous Buildings Code, the Oakland Housing Code, the Blight Ordinance, the Earthquake Repair Ordinance,

Policy 3.12



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or any other City code or ordinance. In cases where such properties are already vacant or an immediate hazard, such repair or rehabilitation will occur expeditiously to prevent further deterioration or to abate the immediate hazard.

**4.1I Oakland General Plan Objectives and Policies
Housing Element**

**Oakland General Plan Objectives and Policies Relevant to the OARB Redevelopment District
Housing Element**

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16th/Wood
Substandard Housing	The City recognizes that housing is a valuable resource that should be carefully conserved and maintained and will take all necessary steps to prevent damage to the City's occupied or vacant residential property.			✓
Overcrowded Conditions	The City encourages developers to construct a range of housing types, sizes, and prices proportionate to the household size and income characteristics of Oakland's present and projected population Recognizing that there may be an impact on Oakland's housing needs generated by new local and regional commercial development, the City shall gather relevant data and make it available to all interested parties, and, acting on that data, facilitate the production of new housing to meet identified needs whenever possible The City encourages market-rate housing development and will facilitate such development by providing assistance to developers and by expediting the review and application processing for desirable projects		✓	✓
	To promote the development of below-market rate and other types of housing meeting special identified needs, the City will consider the use of regulatory concessions These concessions might include density bonuses, parking adjustments, waiver of certain development fees, and other similar measures The City will cooperate with private housing producers wherever justifiable to reduce the overall cost of housing units			✓
	The City encourages well-designed mixed-use housing and nonresidential projects within the City's commercial zones, particularly in the Central District and on many of the City's major arterials			✓
Low- /Moderate- Income Households	Oakland will take maximum advantage of the full variety of available federal and state housing subsidy programs and will seek out and develop new financial resources for below market-rate housing development	✓	✓	✓

Applies to Sub-district

Description	Text of Objective, Policy	OARB	Maritime	16 th /Wood
	<p>The City will work with private developers to include a reasonable percentage of housing units affordable by low- to moderate-income households within all future developments</p> <p>The City will also use its influence to procure subsidies for these housing units, including the waiver of certain development fees</p>	✓	✓	✓
	<p>Whenever feasible, housing for low- and moderate-income households should be included in all publicly-sponsored redevelopment projects</p>	✓	✓	✓
	<p>At least 20 percent of tax increment funds generated by all City of Oakland redevelopment projects will be appropriated for low- and moderate-income housing</p>	✓	✓	✓
Eliminating	<p>All housing in the City should be available equally to all persons without restrictions based on race, color, ethnicity, religion, sex, age, source of income, arbitrary income criteria, physical disability, national origin, marital status, sexual preference, family size, presence of children, Acquired Immune Deficiency (ADIS), or AIDS-related conditions (ARC)</p>			✓
Discrimination	<p>The City will take all necessary and appropriate steps to achieve a completely open housing market; the City calls upon all citizens and upon private industry to build, finance, sell, and rent properties without regard to race, color, ethnicity, religion, sex, age, source of income, physical disability, national origin, marital status, arbitrary income criteria, sexual preference, family-size, presence of children, Acquired Immune Deficiency (AIDS), or AIDS-related conditions (ARC)</p>			✓
	<p>Whenever feasible, the City of Oakland, through its regulatory powers, will require that potential residential developers and sponsors prepare affirmative action marketing and management programs to implement federal, state, and local policy regarding open housing</p>			✓
	<p>The City supports State and local laws prohibiting housing discrimination against households with children and will provide support for the enforcement of these laws</p>			✓
	<p>The City supports programs for the removal of architectural barriers in order to make more housing suitable for the disabled</p>			✓

**4.1J Oakland General Plan Objectives and Policies
Hazards Element**

**Oakland General Plan Objectives and Policies Relevant to the OARB Redevelopment District
Hazards Element**

Description	Text of Objective, Policy	Applies to Sub-district		
		OARB	Maritime	16th/Wood
Geologic Hazards	Except where adequate corrective measures can feasibly be taken, construction should not occur over known faults or on land subject to landslide, erosion, or flooding. The City will continue to make efforts to obtain more information about such hazardous areas, and will consider the imposition of additional controls on development there.	✓	✓	✓
Seismic Hazards	The City will employ the most current seismic design criteria in the construction of new public buildings. Buildings to accommodate activities and equipment related to public safety, especially police, fire and communication services, should be constructed to ensure continued operation and availability of service after an earthquake.	✓	✓	✓
Fire Hazards	Continue the Fire Department's fire prevention program, including the inspection of existing buildings and the review of proposed development to ensure maximum safety from potential fire hazards.	✓	✓	✓
Flooding Hazards	The City fully supports the Alameda Flood Control and Water Conservation District's program for eliminating flood hazards in the City of Oakland, endorsing the District's policy of balancing the costs of new projects against the potential damage that might result from flooding.	✓	✓	✓
Safety During Emergencies	The City will participate in the Federal Insurance Program to enable property owners who desire and/or need flood insurance to acquire it at reasonable rates. The City Council assigns high priority to the maintenance and continual updating of the Emergency Operations Plan to insure that the City will be able to respond effectively in the face of disaster.	✓	✓	✓

Appendix 4.2
Land Use

Relevant City of Oakland General Plan Land Use Classifications

RELEVANT CITY OF OAKLAND LAND USE CLASSIFICATIONS

1. CLASSIFICATIONS THAT APPLY WITHIN THE STUDY AREA

Business Mix

Intent: The Business Mix classification is intended to create, preserve and enhance areas of the City that are appropriate for a wide variety of business and related commercial and industrial establishments. High impact industrial uses including those that have hazardous materials on-site may be allowed provided they are adequately buffered from residential areas. High impact or large scale commercial retail uses should be limited to sites with direct access to the regional transportation system.

Desired Character and Uses: These areas may accommodate a mix of businesses such as light industrial, manufacturing, food processing, commercial, bioscience and biotechnology, research and development, environmental technology, business and health services, air, truck and rail-related transportation services, warehouse and distribution facilities, office, and other uses of similar business character.

Intensity/Density: The maximum FAR for this classification is 4.0. In some business mix locations, zoning should establish lower intensities to establish or maintain campus-Re business settings. In others, uses and development standards should offer maximum flexibility. In areas where higher impact uses are located, buffering strategies will need to be developed.

Policy Framework Basis for the Classification: Industry and Commerce Goals; Industry and Commerce Objectives I/C 1, I/C 2, I/C 3, I/C 4, I/C 5. Waterfront Objectives W6, W7.

General Industry/Transportation

Intent: The General Industry and Transportation classification is intended to recognize, preserve, and enhance areas of the City for a wide variety of businesses and related establishments that may have the potential to create off-site impacts such as noise, light/glare, truck traffic, and odor. These areas are characterized by sites with good freeway, rail, seaport, and/or airport access.

Desired Character and Uses: A wide variety of uses are included, such as heavy industrial and manufacturing uses, transportation, rail yards, maritime terminals, distribution and warehousing, food processing, heavy impact research and development facilities, and other uses of similar or supporting character.

Density/intensity: The maximum overall FAR for this classification is 2.0.

Policy Framework Basis for the Classification: Waterfront Objectives W5, W6, W7; Industry and Commerce Goals; Industry and Commerce Objectives I/C 1, I/C 2, I/C 4, I/C 5. Neighborhood Objective N5; Transportation Objective T1.

Parks and Urban Open Space

Intent: The Urban Park and Open Space classification is intended to identify, enhance and maintain land for parks and open space. Its purpose is to maintain an urban park, schoolyard, and garden system which provides open space for outdoor recreation, psychological and physical well-being, and relief from the urban environment.

Desired Character and Uses: Urban parks, schoolyards, cemeteries, and other active outdoor recreation spaces.

Intensity/Density: The OSCAR generally describes facilities that may be included in urban parks and open spaces, which may include one caretakers dwelling unit per site, if needed. Otherwise, policies call for "no net loss" of open space. Standards for lot coverage will be included in the development of open space zoning.

Policy Framework Basis for the Classification: OSCAR Objective OS 2.

2. CLASSIFICATIONS THAT APPLY WITHIN THE REGION, BUT NOT WITHIN THE STUDY AREA

Mixed Housing Residential

Intent: The Mixed Housing Type Residential classification is intended to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate.

Desired Character and Uses: Future development within this classification should be primarily residential in character, with live-work types of development, small commercial enterprises, schools, and other small scale, compatible civic uses possible in appropriate locations.

Intensity/Density: Development of single family homes, townhouses, and small multi-unit buildings is allowed in this classification. Maximum allowable density in these areas is 30 principal units per gross acre. Within these mixed housing type neighborhoods, there exist areas and pockets of lower density housing which should be preserved through appropriate zoning designations.

Policy Framework Basis for the Classification: Neighborhood Goals; Neighborhood Objectives N2, N3, N6, N7, N8, N10, N11 and related policies. Waterfront Objectives W8, W12, and related policies. Downtown Objectives D1, D10, and related policies.

Urban Residential

Intent: The urban Residential classification is intended to create, maintain, and enhance areas of the City that are appropriate for multi-unit, mid-rise or high-rise residential structures in locations with good access to transportation and other services.

Desired Character and Uses: The Primary future use in this classification is residential. Ed use buildings that house ground floor commercial uses and public facilities of compatible character are also encouraged. If possible, where detached density housing adjoins urban residential the zoning should be structured to create a transition area between the two.

Intensity/ Density: Maximum allowable density in these areas is 125 units per gross acre.

Policy Framework Basis for the Classification: Neighborhood Goals; Neighborhood Objectives NI, N2, N3, N5, N6, N8, N9, N10, N11 and related policies. Waterfront Objectives W8, W12, and related policies. Downtown Objectives D1, D2, D3, D6, D10, D11 and related policies.

Neighborhood Center Mixed Use

Intent: The Neighborhood Center Mixed Use classification is intended to identify, create, maintain and enhance mixed use neighborhood commercial centers. These centers are typically characterized by smaller scale pedestrian-oriented, continuous street frontage with a mix of retail, housing, office, active open space, eating and drinking places, personal and business services, and smaller scale educational, cultural, or entertainment uses.

Desired Character and Uses: Future development within this classification should be commercial or mixed uses that are pedestrian-oriented and serve nearby neighborhoods, or urban residential with ground floor commercial.

Intensity/Density: The maximum FAR for this classification is 4.0. The maximum residential density is 125 units per gross acre. Vertical integration of uses, including, residential units above street-level commercial space, is encouraged.

Policy Framework Basis for the Classification: Neighborhood Goals; Neighborhood Objectives N1, N2, N3, N6, N8, N9, N10, N11, and related policies. Industry and Commerce Goals; Industry and Commerce Objectives I/C1, I/C2, and I/C3. Transportation Objectives T2, T6.

Community Commercial

Intent: The Community Commercial classification is intended to identify, create, maintain, and enhance areas suitable for a wide variety of commercial and institutional operations along the City's major corridors and in shopping districts or centers.

Desired Character and Uses: Community Commercial areas may include neighborhood center uses and larger scale retail and commercial uses, such as auto related businesses, business and personal services, health services and medical uses, educational facilities, and entertainment uses. Community Commercial areas can be complemented by the addition of urban residential development and compatible mixed use development.

Intensity/Density: The maximum FAR for this classification is 5.0. Maximum residential density is 125 units per gross acre.

Policy Framework Basis for the Classification: Neighborhood Goals; Neighborhood Objectives N1, N2, N3, N6, N8, N9, N10, N11, and related policies. Industry and Commerce Goals; Industry and Commerce Objectives I/C 1, I/C 2, and I/C 3, I/C 5. Transportation Objective T2.

Housing and Business Mix

Intent: The classification recognizes the equal importance of both housing and business. This classification is intended to guide a transition from heavy industry to low impact light industrial and other businesses that can co-exist compatibly with residential development. Respect for environmental quality, coupled with opportunities for additional housing and neighborhood-friendly businesses is desired, as well as the transition from industry that generates impacts detrimental to residences.

Desired Character and Uses: Future business development within this classification should be compatible with housing, and development should recognize the mixed business nature of the area. Development of site specific buffers are essential as are specific conditions under which business and housing will coexist. This classification allows mixed housing type destiny housing, "live-work", low impact light industrial, commercial, and service businesses, and compatible community facilities.

Intensity/Density: The maximum residential density is 30 principal units per gross acre. The maximum non-residential FAR is 3.0.

Policy Framework Basis for the Classification: Neighborhood Goals; Neighborhood Objectives N1, N2, N3, N5, N6, N9, N10 and related policies; Industry and Commerce Objectives I/C 1, I/C 2, I/C 4 and related policies.

Regional Commercial

Intent: The Regional Commercial classification is intended to maintain, support and create areas of the City that serve as region-drawing centers of activity.

Desired Character and Uses: A mix of commercial, office, entertainment, arts, recreation, sports, and visitor serving activities, residential, mixed use development and other uses of similar character or supportive of regional drawing power.

Intensity/Density: The maximum FAR for this classification is 4.0. Maximum residential density is 125 units per gross acre, in a mixed use project.

Policy Framework Basis for the Classification: Industry and Commerce Goals; Industry and Commerce Objectives I/C 1, I/C 2, I/C 3. Neighborhood Objective N1.

Institutional

Intent: The Institutional classification is intended to create, maintain, and enhance areas appropriate for educational facilities, cultural and institutional uses, health services and medical uses as well as other uses of similar character.

Desired Character of the Area: Future uses include educational and cultural facilities, institutions, health services, and medical facilities. Under certain conditions, mixed use housing and commercial development that supports these institutional areas may be allowed.

Intensity/Density: The maximum FAR for this classification is 8.0. Appropriate development standards that reflect the nature of the institutional facility and contain appropriate standards to address edge conditions adjacent to residential areas, and the need for expansion space, are all important factors that will be addressed by zoning.

Policy Framework Basis for the Classification: Neighborhood Objective N2, N5, N11, Industry and Commerce Objective I/C1.

Resource Conservation

Intent: The Resource Conservation classification is intended to identify, enhance and maintain publicly-owned lands for the purpose of conserving and appropriately managing undeveloped areas which have high natural resource value, scenic value, or natural hazards which preclude safe development.

Desired Character and Uses: Future development within this classification is extremely limited, and must relate to the conservation and management of natural resources, public open space, and natural hazards.

Intensity/ Density: Buildings are not permitted in Resource Conservation areas except as required to facilitate the maintenance of conservation areas.

Policy Framework Basis for the Classification: OSCAR Objective OS 1.

Appendix 4.3
Transportation and Traffic

- 4.3A Traffic Level of Service Definitions
- 4.3B Assumptions for the Port of Oakland
- 4.3C Freeway Levels of Service
- 4.3D CMP Analysis

4.3A Traffic Level of Service Definitions

Traffic Level of Service Definitions			
		Average Delay (Seconds per Vehicle)	
LOS	Description	Signalized Intersections	Unsignalized Intersections
A	Operations with very low delay. This level of service occurs at signalized intersections when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all.	10	10
B	At signalized intersections, this level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	>10 and ≤20	>10 and ≤15
C	At signalized intersections, higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is considerable at this level, though many still pass through the intersection without stopping.	>20 and ≤35	>15 and ≤25
D	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 volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	>35 and ≤55	>25 and ≤35
E	This level is considered by many agencies 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.	>55 and ≤80	>35 and ≤50
F	This level, considered to be unacceptable to most drivers, often occurs with over-saturation; that is, when arrival flow rates exceed the capacity of the intersection.	>80	>50

Source: Transportation Research Board 1998

4.3B Assumptions for the Port of Oakland

Oakland Army Base EIR

Marine Terminal Acres

Zone / Terminal	Existing	Approved New	Total Approved	Planned	Total Proposed
1 & 2 Berths 57-58	0	248	248	67	315
3 Middle Harbor	79	0	79	42	121
4 7th St. Harbor	162	43	205	15	220
5 Outer Harbor	205	12	217	9	226
6 Berth 21	0	0	0	69	69
Subtotal	446	303	749	202	951
Inner Harbor Area	49	0	49	0	49
Total	495	303	798	202	1000

Oakland Army Base EIR

Rail Terminal Track Feet (Intermodal Only)

Zone / Terminal	Existing	Approved New	Total Approved	Planned	Total Proposed
9 Approved J.I.T.	0	31,700	31,700	-31,700	0
7 Proposed J.I.T.	0	0	0	28,700	28,700
J.I.T.	0	31,700	31,700	-3,000	28,700
8 W. Oakland Yard	22,250	0	22,250	0	22,250
Total	22,250	31,700	53,950	-3,000	50,950

**Oakland Army Base EIR
Marine / Rail Traffic Assumptions**

Marine / Rail Factors

Parameter	Assumptions		Comment
	Marine	Rail	
Weeks of operation per year	52	52	Rail peak factor accounts for slow weekends.
Days of operation per week	5	7	
Peak Week / Average Week	1.25	1.19	
Peak Weekday/Avg. Day of Week	1	1.33	
Gate Moves / Lift	1.33	1.52	
Truck Trips / Gate Move - Total	Varies	1.6	
Over-the-Road	1.65		
Intermodal	1.9		

**Oakland Army Base EIR
Rail Background Data**

Peak / Average Activity Factor (1)

	<u>Total</u>
Peak	32 27
Average Factor	1.19

**Peak Day / Average Day Factor Calculation
Based On Rail Terminal Gate Transactions (2)**

<u>Day</u>	<u>Railroad</u>		<u>Total</u>
	<u>SP</u>	<u>UP</u>	
Mon	950	800	1,750
Tue	950	970	1,920
Wed	950	900	1,850
Thu	950	800	1,750
Fri	950	500	1,450
Sat	250	700	950
Sun	<u>200</u>	<u>250</u>	<u>450</u>
	5,200	4,920	10,120
Total	743	703	1,446
Average	<u>950</u>	<u>970</u>	<u>1,920</u>
Maximum Factor	1.28	1.38	1.33

(1) Provided by Nolte and Associates.

(2) Joint Intermodal Terminal Operating Plan, Summit/Lynch consulting Engineers, et. al., Feb. 1995.

**Oakland Army Base EIR
Marine Traffic - 2020 Unconstrained**

Annual Lifts (Containers)

Zone / Terminal	Project Scenario	
	Total Approved	Total Proposed
1 & 2 Berths 57-58	635,245	723,975
3 Middle Harbor	202,356	278,098
4 7th St. Harbor	525,102	505,633
5 Outer Harbor	555,840	519,423
6 Berth 21	0	158,585
Total	1,918,543	2,185,714

Intermodal Percentage of Total Containers

Zone / Terminal	Project Scenario	
	Total Approved	Total Proposed
All Marine Terminals	49.0%	49.0%

Weekday Truck Trips - Over-the-Road

Zone / Terminal	Project Scenario	
	Total Approved	Total Proposed
1 & 2 Berths 57-58	3,418	3,896
3 Middle Harbor	1,089	1,496
4 7th St. Harbor	2,825	2,721
5 Outer Harbor	2,991	2,795
6 Berth 21	0	853
Total	10,323	11,761

Weekday Truck Trips - Intermodal

Zone / Terminal	Project Scenario	
	Total Approved	Total Proposed
1 & 2 Berths 57-58	3,782	4,310
3 Middle Harbor	1,205	1,656
4 7th St. Harbor	3,126	3,010
5 Outer Harbor	3,309	3,092
6 Berth 21	0	944
Total	11,421	13,012

Weekday Truck Trips - Total

Zone / Terminal	Project Scenario	
	Total Approved	Total Proposed
1 & 2 Berths 57-58	7,200	8,205
3 Middle Harbor	2,293	3,152
4 7th St. Harbor	5,951	5,731
5 Outer Harbor	6,300	5,887
6 Berth 21	0	1,797
Total	21,744	24,772

**Oakland Army Base EIR
Rail Traffic Capacity**

Annual Lifts - Sustainable

Zone / Terminal	Project Scenario	
	Total Approved	Total Proposed
J.I.T.	865,000	780,000
8 W. Oakland Yard	395,000	395,000
Total	1,260,000	1,175,000

Annual Lifts - Constrained

Zone / Terminal	Project Scenario	
	Total Approved	Total Proposed
J.I.T.	1,038,000	936,000
8 W. Oakland Yard	474,000	474,000
Total	1,512,000	1,410,000

Annual Lifts - Gridlocked

Zone / Terminal	Project Scenario	
	Total Approved	Total Proposed
J.I.T.	1,245,600	1,123,200
8 W. Oakland Yard	568,800	568,800
Total	1,814,400	1,692,000

**Oakland Army Base EIR
Traffic at the Port of Oakland**

Annual Lifts - Marine Terminals

Scenario	Marine Terminal Container Throughput										Containers Diverted To Other Ports (3)
	Total Demand	Unconstrained		Intermodal		Other (over-the-road)	Total Constrained Throughput	Excess Container Demand	W.O. Yard Additional Absorption (2)	Richmond Additional Absorption	
		Percent	Number	Percent	Number						
Total Approved	1,918,543	49.0%	940,086	47.3%	879,000	978,457	1,857,457	61,086	61,086	0	0
Total Proposed	2,185,714	49.0%	1,071,000	44.1%	879,000	1,114,714	1,993,714	192,000	192,000	0	0

Annual Lifts - Railyards (Constrained (1))

Scenario	Capacity	Operating Efficiency	Rail Intermodal Throughput				Total	Surplus Capacity (5)	W.O. Yard Potential Additional Capacity (2)	Richmond Potential Additional Capacity (2)
			Intermodal (Constrained)		Other (domestic & trailers)					
			Number	Percent	Number (4)	Percent				
Total Approved	1,410,000	Constrained	879,000	62%	531,000	38%	1,410,000	0	302,241	62,700
Total Proposed	1,410,000	Constrained	879,000	62%	531,000	38%	1,410,000	0	302,241	62,700

Weekday Truck Trips (Constrained (1))

Scenario	Marine Terminals				Rail Intermodal Terminals				
	Total	Intermodal (1)		Other (over-the-road)	Total	Intermodal		Other (domestic & trailers)	
		Number	Percent			Number	Percent		
									Number
Total Approved	21,744	11,421	53%	10,323	14,828	11,421	77%	5,239	35%
Total Proposed	24,772	13,012	53%	11,761	18,251	13,012	71%	5,239	29%

- (1) Intermodal traffic would be constrained by limited rail lift capacity at the Port of Oakland.
- (2) Assumes West Oakland Yard would be able to operate at the same efficiency as the JIT.
- (3) Assumes the excess container demand that could not be absorbed into local railyards would be diverted to other Ports.
- (4) Domestic and trailer demand at the railyards would be 531,000 (Summit Lynch 1995).
- (5) The surplus capacity for each alternative shows the number of additional lifts that could be accommodated at the indicated operating efficiency level.

**Oakland Army Base EIR
Marine Employees**

2020

Zone / Terminal	Project Scenario			
	Existing	Total Approved	Total Proposed	New Employees
1 & 2 Berths 57-58	0	678	861	183
3 Middle Harbor	216	216	331	115
4 7th St. Harbor	442	560	601	41
5 Outer Harbor	560	593	618	25
6 Berth 21	0	0	189	189
Total	1,218	2,047	2,599	552

Note: 1996 employees per acre = 2.73
 2020 employees per acre = 2.73

**Oakland Army Base EIR
Rail Employees**

2020

Zone / Terminal	Project Scenario			
	Existing	Total Approved	Total Proposed	New Employees
7 J.I.T.	0	208	188	-20
8 W. Oakland Yard	120	146	146	0
Total	120	354	334	-20

Note: 1996 employees per thousand track feet = 5.37
 2020 employees per thousand track feet = 6.56

Source: Existing and future employment from Rail Terminal Traffic Analysis, Appendix J.3
 (U.S. Navy and Port of Oakland 1997)

Oakland Army Base EIR
Hourly Traffic Proportion of Daily Traffic

Period	Cars		Trucks to Rail Terminals		Trucks to Marine Terminals			
	Enter	Exit	Enter	Exit	Enter	Exit		
0:00	0.2%	0.5%	0.3%	0.1%				
1:00	0.3%	0.2%	0.3%	0.1%				
2:00	0.4%	0.3%	0.3%	0.1%				
3:00	0.2%	0.3%	0.1%	0.1%				
4:00	0.4%	0.2%	0.4%	0.1%				
5:00	2.8%	0.5%	0.9%	0.4%				
6:00	7.8%	1.0%	2.9%	0.5%				
7:00	7.9%	1.8%	4.5%	1.2%	3.1%	0.0%	161	0
8:00	3.7%	1.7%	4.6%	3.1%	4.8%	5.1%	252	268
9:00	2.8%	1.9%	4.9%	4.6%	7.1%	8.7%	370	453
10:00	2.5%	2.5%	5.0%	3.9%	5.8%	6.4%	303	337
11:00	2.5%	4.8%	5.0%	5.1%	7.3%	6.6%	382	343
12:00	4.7%	3.7%	4.6%	2.1%	3.0%	5.2%	158	270
13:00	3.2%	2.6%	4.7%	4.3%	7.2%	5.1%	376	267
14:00	2.7%	3.6%	4.6%	4.5%	5.5%	6.4%	288	332
15:00	2.2%	5.9%	3.7%	3.7%	3.9%	4.7%	206	247
16:00	1.6%	5.9%	2.8%	4.9%	1.1%	2.5%	55	130
17:00	1.4%	4.7%	1.2%	2.3%	0.0%	0.5%	0	27
18:00	0.9%	2.0%	0.9%	0.8%				
19:00	0.5%	1.3%	1.1%	1.0%				
20:00	0.6%	1.1%	0.7%	0.7%				
21:00	0.6%	0.7%	0.7%	0.8%				
22:00	0.9%	0.9%	0.5%	0.3%				
23:00	0.6%	0.8%	0.3%	0.4%				
TOTAL	51.2%	48.8%	54.7%	45.3%	48.8%	51.2%		

Sources: Auto/rail truck percentages from traffic counts taken on Middle Harbor Road south of 3rd Street (Wiltec 1996)
Truck percentages from Marine Terminal Traffic Analysis, Appendix J.2 (U.S. Navy and Port of Oakland 1997)

Oakland Army Base EIR

Truck Trip Generation

(in passenger car equivalents: 1 truck = 2 cars)

Approved Port Development - 2020

AM Peak Hour

Zone / Description	Intermodal				Distribu- tion	Over-the-Road			Total Trips
	Number of Trips			Number of Trips		Number of Trips			
	Inbound	Outbound	Total			Inbound	Outbound	Total	
Marine									
1 & 2 Berths 57-58	365	388	753	33.1%	330	351	680	1433	
3 Middle Harbor	116	124	240	10.5%	105	112	217	456	
4 7th St. Harbor	302	321	622	27.4%	273	290	562	1185	
5 Outer Harbor	319	339	659	29.0%	288	307	595	1254	
6 Berth 21	0	0	0	0.0%	0	0	0	0	
Subtotal	1,102	1,172	2,273	100.0%	996	1,059	2,055	4,328	
Rail									
9 Approved J.I.T.	804	756	1,561	68.7%	331	223	554	2115	
8 W. Oakland Yard	367	345	713	31.3%	151	102	253	966	
Subtotal	1,172	1,102	2,273	100.0%	482	325	807	3,080	
Total	2,273	2,273	4,547		1,478	1,384	2,862	7,408	

PM Peak Hour

Zone / Description	Intermodal				Distribu- tion	Over-the-Road			Total Trips
	Number of Trips			Number of Trips		Number of Trips			
	Inbound	Outbound	Total			Inbound	Outbound	Total	
Marine									
1 & 2 Berths 57-58	80	188	268	11.8%	72	170	242	510	
3 Middle Harbor	25	60	85	3.8%	23	54	77	162	
4 7th St. Harbor	66	156	221	9.7%	59	141	200	421	
5 Outer Harbor	70	165	234	10.3%	63	149	212	446	
6 Berth 21	0	0	0	0.0%	0	0	0	0	
Subtotal	240	568	809	35.6%	217	514	731	1,540	
Rail									
9 Approved J.I.T.	804	756	1,561	68.7%	201	352	554	2115	
8 W. Oakland Yard	367	345	713	31.3%	92	161	253	966	
Subtotal	1,172	1,102	2,273	100.0%	293	513	807	3,080	
Total	1,412	1,670	3,082		511	1,027	1,538	4,620	

Oakland Army Base EIR

Truck Trip Generation

(in passenger car equivalents: 1 truck = 2 cars)

Proposed Port Development - 2020

AM Peak Hour

Zone / Description	Intermodal				Distribu- tion	Over-the-Road			Total Trips
	Number of Trips			Inbound		Outbound	Total		
	Inbound	Outbound	Total						
Marine									
1 & 2 Berths 57-58	416	442	858	33.1%	376	400	775	1633	
3 Middle Harbor	160	170	330	12.7%	144	154	298	627	
4 7th St. Harbor	290	309	599	23.1%	262	279	542	1141	
5 Outer Harbor	298	317	615	23.8%	270	287	556	1172	
6 Berth 21	91	97	188	7.3%	82	88	170	358	
Subtotal	1,255	1,335	2,590	100.0%	1,134	1,206	2,341	4,931	
Rail									
7 Proposed J.I.T.	886	833	1,719	66.4%	320	216	536	2255	
8 W. Oakland Yard	449	422	871	33.6%	162	109	271	1142	
Subtotal	1,335	1,255	2,590	100.0%	482	325	807	3,397	
Total	2,590	2,590	5,180		1,616	1,531	3,148	8,327	

PM Peak Hour

Zone / Description	Intermodal				Distribu- tion	Over-the-Road			Total Trips
	Number of Trips			Inbound		Outbound	Total		
	Inbound	Outbound	Total						
Marine									
1 & 2 Berths 57-58	91	214	305	33.1%	82	194	276	581	
3 Middle Harbor	35	82	117	12.7%	32	74	106	223	
4 7th St. Harbor	63	150	213	23.1%	57	135	193	406	
5 Outer Harbor	65	154	219	23.8%	59	139	198	417	
6 Berth 21	20	47	67	7.3%	18	42	60	127	
Subtotal	274	647	921	100.0%	248	585	833	1,754	
Rail									
7 Proposed J.I.T.	430	182	612	66.4%	195	341	536	1147	
8 W. Oakland Yard	218	92	310	33.6%	99	173	271	581	
Subtotal	647	274	921	100.0%	293	513	807	1,728	
Total	921	921	1,843		541	1,099	1,640	3,482	

**Oakland Army Base EIR
Train Traffic at the Port of Oakland**

Number of Trains Served At the Port of Oakland

Scenario	Annual Railyard Lifts	Number of Daily Trains Served ⁽¹⁾
Total Approved	1,471,086	23.4
Total Proposed	1,602,000	25.4

- (1) One 6,000-foot train per day would be required to serve 63,000 annual lifts.
- (2) The number of trains that could be served would be constrained by limited lift capacity at the West Oakland Rail Yard.

4.3C Freeway Levels of Service

**Oakland Army Base Area Redevelopment Plan EIR
Existing Level of Service Summary for Freeway Segments**

Freeway Segment	1995 Baseline			Existing Plus Project Conditions			Lanes	1995 Baseline Traffic Volume			Project Traffic (in PCEs)			Significant? AM PM
	AM Peak Hour LOS	PM Peak Hour LOS	V/C	AM Peak Hour LOS	PM Peak Hour LOS	V/C		AM	PM	V/C	AM	PM	AM	
I-80 at the Bay Bridge	C	F	1.236	C	F	0.687	5	5,813	11,252	436	103			
	F	D	0.818	F	D	1.213	5	10,929	7,448	105	421			
I-80 between I-880 and I-580	B	D	0.833	B	D	0.446	5	3,917	7,581	144	785			
	D	C	0.551	D	C	0.900	5	7,364	5,019	823	174			
I-80 East of I-80/I-580 Split	C	F	1.223	C	F	0.655	5	5,751	11,131	213	830		Yes	
	F	D	0.810	F	D	1.282	5	10,813	7,369	855	204		Yes	
I-880 Connector to I-80 East	D	D	0.860	D	F	0.838	2	2,837	3,131	213	831		Yes	
	C	C	0.571	D	C	0.903	2	2,433	2,080	855	204			
I-880 Connector to I-80 West	B	B	0.480	B	D	0.536	2	1,700	1,746	5	6			
	A	B	0.495	C	C	0.641	2	1,074	1,801	9	4			
I-880 North of 7th St.	B	C	0.704	B	C	0.525	3	2,849	3,844	16	18			
	B	C	0.743	B	C	0.465	3	2,513	4,056	25	7			
I-880 South of 7th St.	D	C	0.770	F	D	1.021	3	4,679	4,203	898	231		Yes	
	B	D	0.879	C	F	0.548	3	2,715	4,797	277	860		Yes	
I-880 North of I-980	D	C	0.697	F	C	1.049	3	4,846	3,805	882	213		Yes	
	B	D	0.805	B	E	0.445	3	2,208	4,395	224	694			
I-880 South of I-980	F	F	1.000	F	F	1.169	4	7,680	7,282	830	209		Yes	
	C	D	0.909	C	F	0.723	4	4,967	6,618	293	784		Yes	
I-880 North of I-238	F	F	1.115	F	F	1.087	4	7,295	8,120	620	157		Yes	
	F	F	1.014	F	F	1.111	4	7,856	7,380	232	582		Yes	
I-880 South of I-238	E	F	1.124	F	F	1.020	4	6,842	8,185	580	145		Yes	
	F	F	1.074	F	F	1.252	4	8,940	7,815	178	556		Yes	
I-238	B	D	0.877	B	D	0.517	3	2,771	4,788	54	26			
	D	B	0.366	D	B	0.855	3	4,629	2,001	40	12			

Existing Level of Service Summary for Freeway Segments

Freeway Segment	1995 Baseline			Existing Plus Project Conditions			1995 Baseline			Project Traffic			Significant?		
	AM Peak Hour LOS	V/C	PM Peak Hour LOS	AM Peak Hour LOS	V/C	PM Peak Hour LOS	AM Peak Hour LOS	V/C	PM Peak Hour LOS	Lanes	AM	PM	AM	PM	
I-580 East of I-238 Eastbound Westbound	C D	0.551 0.921	E B	C D	0.557 0.926	E B	C D	0.956 0.399	E B	5 5	5,017 8,383	8,670 3,623	54 40	26 12	
I-580 West of I-238 Eastbound Westbound	C C	0.688 0.750	D C	C D	0.694 0.785	D C	C D	0.869 0.753	D C	4 4	5,008 5,458	6,078 5,422	44 256	249 56	
I-580 East of I-980/SH-24 Eastbound Westbound	D F	0.837 1.016	F D	D F	0.854 1.112	F E	D F	1.257 0.930	F E	4 4	6,091 7,399	8,482 6,618	124 693	671 153	Yes Yes
I-580 West of I-980/SH-24 Eastbound Westbound	D F	0.844 1.140	F E	D F	0.860 1.230	F F	D F	1.281 1.011	F F	5 5	7,682 10,373	10,873 9,027	144 822	785 174	Yes Yes
I-980 Eastbound Westbound	B D	0.384 0.796	D B	B D	0.386 0.800	D B	B D	0.809 0.391	D B	4 4	2,792 5,792	5,866 2,834	15 30	26 11	
SH 24 East of I-580 Eastbound Westbound	B F	0.379 1.022	E B	B F	0.395 1.094	F B	B F	1.058 0.459	F B	4 4	2,758 7,437	7,184 3,216	118 528	515 127	Yes Yes

Note: PCEs are passenger car equivalents (1 truck = 2 passenger car equivalents).

Source: Dowling Associates, Inc.

Freeway Capacity Source: 1985 Highway Capacity Manual

Ideal Freeway Capacity = 2000 (p. 3-8)

Percent Trucks = 10.0%

Actual Capacity / Ideal Capacity = 91%

Adjusted Freeway Capacity = 1820

V/C LOS
0.350 A
0.540 B
0.770 C
0.930 D
1.000 E

**Oakland Army Base Area Redevelopment Plan EIR
2025 Level of Service Summary for Freeway Segments**

Freeway Segment	No Action Alternative				Cumulative Conditions				Lanes	Cumulative Traffic Volume		Project Traffic (in PCEs)		Significant?	
	AM Peak Hour LOS	V/C	PM Peak Hour LOS	V/C	AM Peak Hour LOS	V/C	PM Peak Hour LOS	V/C		AM	PM	AM	PM	AM	PM
I-80 at the Bay Bridge Eastbound Westbound	D	0.864	F	1.353	D	0.912	F	1.365	5	8,295	12,419	436	103		
	F	1.321	F	1.227	F	1.333	F	1.274	5	12,127	11,589	105	421	Yes	Yes
I-80 between I-880 and I-580 Eastbound Westbound	C	0.630	E	0.947	C	0.646	F	1.033	5	5,880	9,403	144	785		Yes
	F	1.016	D	0.873	F	1.107	D	0.892	5	10,070	8,116	823	174	Yes	
I-80 East of I-80/I-580 Split Eastbound Westbound	E	0.966	F	1.118	E	0.989	F	1.209	5	9,004	11,000	213	830	Yes	Yes
	F	1.025	E	0.994	F	1.119	F	1.016	5	10,187	9,249	855	204	Yes	Yes
I-880 Connector to I-80 East Northbound Southbound	D	0.827	C	0.716	D	0.885	E	0.944	2	3,222	3,437	213	831		
	C	0.541	C	0.561	D	0.776	C	0.617	2	2,823	2,246	855	204		
I-880 Connector to I-80 West Northbound Southbound	B	0.454	A	0.193	B	0.523	B	0.524	2	1,902	1,907	5	6		
	A	0.003	B	0.448	A	0.348	B	0.524	2	1,268	1,906	9	4		
I-880 North of 7th St. Northbound Southbound	C	0.547	C	0.734	C	0.550	C	0.737	3	3,004	4,023	16	18		
	B	0.485	C	0.769	B	0.489	D	0.771	3	2,672	4,207	25	7		
I-880 South of 7th St. Northbound Southbound	D	0.778	C	0.757	E	0.943	D	0.799	3	5,147	4,362	898	231		
	B	0.536	D	0.773	C	0.586	E	0.931	3	3,202	5,081	277	860		
I-880 North of I-980 Northbound Southbound	E	0.954	C	0.768	F	1.116	D	0.807	3	6,092	4,405	882	213	Yes	
	B	0.537	D	0.847	C	0.578	E	0.974	3	3,156	5,319	224	694		
I-880 South of I-980 Northbound Southbound	F	1.162	F	1.111	F	1.276	F	1.139	4	9,289	8,294	830	209	Yes	Yes
	D	0.820	E	0.971	D	0.860	F	1.079	4	6,261	7,852	293	784		
I-880 North of I-238 Northbound Southbound	F	1.175	F	1.103	F	1.260	F	1.125	4	9,175	8,189	620	157	Yes	Yes
	F	1.145	F	1.306	F	1.177	F	1.386	4	8,567	10,090	232	582	Yes	Yes
I-880 South of I-238 Northbound Southbound	F	1.038	F	1.271	F	1.117	F	1.291	4	8,135	9,399	580	145	Yes	Yes
	F	1.417	F	1.176	F	1.441	F	1.252	4	10,491	9,114	178	556		
I-238 Eastbound Westbound	C	0.601	E	0.976	C	0.611	E	0.981	3	3,336	5,356	54	26		
	F	1.077	C	0.696	F	1.084	C	0.698	3	5,918	3,810	40	12		

2025 Level of Service Summary for Freeway Segments

Freeway Segment	No Action Alternative				Cumulative Conditions				Lanes	Cumulative Traffic Volume		Project Traffic (in PCEs)		Significant?	
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			AM	PM	AM	PM	AM	PM
	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C							
I-580 East of I-238 Eastbound Westbound	C	0.706	F	1.004	C	0.712	F	1.007	5	6,478	9,161	54	26		
	F	1.029	C	0.733	F	1.033	C	0.734	5	9,404	6,682	40	12		
I-580 West of I-238 Eastbound Westbound	E	0.957	F	1.043	E	0.963	F	1.077	4	7,010	7,844	44	249		Yes
	D	0.848	D	0.909	D	0.883	D	0.917	4	6,427	6,677	256	56		
I-580 East of I-980/SH-24 Eastbound Westbound	C	0.588	F	1.168	C	0.605	F	1.260	4	4,407	9,171	124	671		Yes
	F	1.063	D	0.774	F	1.159	D	0.795	4	8,435	5,787	693	153		Yes
I-580 West of I-980/SH-24 Eastbound Westbound	C	0.742	E	0.985	C	0.758	F	1.071	5	6,896	9,749	144	785		Yes
	E	0.932	D	0.870	F	1.023	D	0.889	5	9,307	8,090	822	174		Yes
I-980 Eastbound Westbound	B	0.419	D	0.878	B	0.421	D	0.881	4	3,065	6,415	15	26		
	D	0.867	B	0.424	D	0.871	B	0.426	4	6,340	3,099	30	11		
SH 24 East of I-580 Eastbound Westbound	C	0.546	F	1.001	C	0.562	F	1.072	4	4,094	7,803	118	515		Yes
	F	1.005	C	0.596	F	1.077	C	0.614	4	7,843	4,467	528	127		Yes

Note: PCEs are passenger car equivalents (1 truck = 2 passenger car equivalents).

Source: Dowling Associates, Inc.

Freeway Capacity Source: 1985 Highway Capacity Manual

Ideal Freeway Capacity = 2000 (p. 3-8)

Percent Trucks = 10.0%

Actual Capacity / Ideal Capacity = 91%

Adjusted Freeway Capacity = 1820

V/C LOS
0.350 A
0.540 B
0.770 C
0.930 D
1.000 E

4.3D CMP Analysis

CMP Analysis for Oakland Army Base Redevelopment EIR

Alameda County Congestion Management Agency Analysis Significance Criteria

The project roadway impacts were considered significant if the addition of Oakland Army Base (OARB) Project traffic would result in a level of service (LOS) value worse than LOS E, except where the roadway link was already at LOS F under no project conditions. For those locations where this Baseline condition is LOS F, the project impacts were considered significant if the contribution of project traffic is at least three percent (3%) of the total traffic. This criterion has been included to address impacts along roadway segments currently operating under unacceptable levels and was developed based on professional judgment using a “reasonableness test” of daily fluctuations of traffic. Also a change of “volume to capacity” (V/C) ratio of 3% has been found to be the threshold for which a perceived change in congestion is observed (the V/C ratio is calculated by comparing the peak hour link volume to the peak hour capacity of the road link). This change is equivalent to about one-half of the change from one level of service to the next.

Level of service (LOS) is a measure of the traffic characteristics of a road segment under different traffic conditions, and is assigned a letter from “A” to “F”, with LOS A representing uncongested, high speed and minimum delay, conditions, while LOS F represents highly unstable congested conditions with low speeds and high delay.

This CMP analysis focuses on roadway links on MTS and CMP highway segments and transit corridors, and does not extend to intersections. This is consistent with the guidelines of the 2001 Congestion Management Program.

Congestion Management Program Land Use Analysis

Since the proposed project for the OARB would generate more than 100 peak hour trips, the impacts of the proposed project on the regional transportation system were assessed using the Alameda County Congestion Management Agency (ACCMA) Countywide Travel Demand Model. The impact analysis for roadways includes all MTS roadways and CMP-designated roadways, plus several local MTS roadways in the project vicinity.

The traffic forecasts were based on the most recent version (during the period when the comments on the NOP were issued) of the Countywide Model, which uses Association of Bay Area Government’s (ABAG) *Projections 2000* (P’00) socio-economic forecasts. The socio-economic data for the project alternative was added into the model for the 2005 and 2025 forecasts for all OARB traffic analysis zones (model TAZ’s 67,475,476,477,482). The table below summarizes the added land use for the OARB project in 2005 and 2025.

TAZ	2005		2025	
	Households	Jobs	Households	Jobs
67	0	0	0	3035
475	0	0	0	1063
476	252	0	0	2395
477	124	0	0	1617
482	0	0	0	0

For the CMP analysis, traffic estimates were calculated for the proposed project using the model and then compared against 2005 and 2025 baseline volumes. The model was used to calculate trip generation, trip distribution, mode choice and trip assignment of project trips from/to the OARB. The results were summarized for both highway and transit impacts. Highway impacts were summarized at the designated link locations identified based on discussions with ACCMA staff (these link locations are generally similar to those identified in the Notice of Preparation letter). Transit impacts were addressed for AC Transit and BART.

CMP and MTS Highway Segments

The levels of service (LOS) for the designated links were analyzed in a spreadsheet using the Florida Department of Transportation LOS methodology,¹ which provides a planning level analysis based on *Highway Capacity Manual* methods. As planning level analysis, the level of service is based on forecasts of traffic and assumptions for roadway and signalization control conditions, such as facility type (freeway, expressway, and arterial classification), speeds, capacity and number of lanes. The assumption for the number of lanes at each link location was extracted from the model and confirmed through some field observations.

The traffic baseline forecasts for 2005 & 2025 were extracted at the required CMP and MTS highway segments from the ACCMA Countywide Travel Model, for both the AM and PM peak hours. The tables compare the Baseline results to the With-Project results for each model horizon year. The AM and PM peak hour volumes, V/C ratios and the LOS for Baseline and With Project conditions represent both directions of flow. Detailed tables (A1 to A8) are provided at the end of the analysis and include all data for 2005 and 2025 forecast years.

Impact A.1: The proposed project would contribute to the 2005 cumulative impacts on the regional and local roadways. This results in a less than significant impact.

The addition of project traffic to the regional and local roadways **would result in a change in LOS** when compared to the 2005 Baseline condition (see tables 1 & 2).

Under 2005 conditions with the proposed project, selected links do change level of service (i.e.: change from A to B or C to D), but all analysis roadways would continue to operate at LOS “E” or better (i.e.: no roadway reaches LOS F with the project).

¹ Florida Department of Transportation. Level of Service Standards and Guidelines Manual for Planning, 1995.

There are two roadways that exhibit LOS F conditions with project conditions. These are I-80, at the Bay Bridge, at LOS F during both AM and PM Peak hours, and SR 260 at Posey/Webster Street tubes during both AM and PM peak hours. However, at both these locations the baseline conditions also exhibit LOS F conditions. Based on the significance criteria of 3% for new project traffic described previously, this is not considered significant. The project trips do not contribute many new significant trips at these locations primarily due to the small increase in project size in 2005.

Mitigation Measure A.1: None required.

Impact A.2: The proposed project would contribute to the 2025 cumulative impacts on the regional and local roadways. This results in a less than significant impact.

The addition of project traffic to the regional and local roadways **would result in a change in LOS** when compared to the 2025 Baseline condition (see tables 3 & 4).

Under 2025 conditions with the proposed project, selected links do change level of service (i.e.: changes from A to B or C to D), but all analysis roadways would continue to operate at LOS "E" or better (i.e.: no roadway reaches LOS F with the project).

There are three roadways that exhibit LOS F conditions with project conditions. These are I-80, at Bay Bridge at LOS F during both AM and PM Peak hours, SR 260 at Posey/Webster Street tubes during both AM and PM peak hours, and San Pablo Avenue, north of Macarthur Boulevard during the PM Peak hour. However, at all these locations the baseline conditions also exhibit LOS F conditions. Based on the significance criteria of 3% for new project traffic described previously, this is not considered significant since project trips at these locations do not increase beyond 2.5% of the total traffic. The project trips do not contribute more than 3% of new trips at these locations primarily due to trip-redistributions that occur with the introduction of new jobs at OARB. Also when compared to normal daily fluctuations in traffic volumes (and model assignment fluctuations), the project impacts at these locations would not be considered significant.

Mitigation Measure A.2: None required.

MTS Transit Corridors

The impact of the proposed OARB project to the transit system was assessed using the ACCMA Countywide Model. Daily transit trips are composed of home-based work trips and non-work trips (shop, social/recreation and non-home based). However it is difficult to estimate daily transit levels of service, since daily transit has both peak and off-peak service. Off-peak service is approximately 18 hours of the day and is generally a difficult period to calculate level of service, so this particular analysis focuses primarily on home-based work travel, most of which generally occurs during peak times. The transit trips generated by the proposed project have been estimated using the production-attraction tables for home-based work trips that are forecast by

the ACCMA Countywide Model. These home-based work trips are assumed to represent one-way trips occurring during a two- to three-hour PM peak period. To estimate the number of transit trips occurring during the peak hour, and since the model does not produce PM Peak hour transit estimates, it was conservatively assumed that all the home-based work trips occur during the PM peak hour. The ACCMA Countywide model predicts transit ridership for AC Transit buses (local and express) and BART trains (walk/bus to BART and drive to BART).

For the purposes of the CMP analysis, the proposed project is located within the service area of AC Transit and BART. The frequency of transit service in the project vicinity meets or exceeds the performance measures proposed in Table 8 of the 2001 *Congestion Management Program*. The proposed project is located within an average of 1 mile from existing AC Transit services and within a few miles from existing BART service at the West Oakland BART station.

Impact A.3: The proposed project would increase ridership on AC Transit buses. This would be a less than significant impact.

The impacts of the proposed project on the existing AC Transit bus system were assessed. Based on the modal split assumptions derived from the Countywide Model, and conservatively assuming all project home-based work trips occur during the peak two-hour period (in reality home-based work trips are spread over three to four hours) the proposed project has the potential to generate between **47 to 447 new AC Transit bus trips** in 2005 and 2025 respectively, during the PM peak hour (See Tables 5, 6 & 7). These trips are for both inbound and outbound directions (i.e.: departing the zone and entering the zone). There are 5 AC Transit bus lines with frequencies of 15 minutes during the peak hour, plus one AC Transit bus with frequency of 30 minutes during the peak hour, that serve the study area. So this equates to 42 buses in two hours, which averages to 1 passengers/bus for 2005 and 10 passengers/bus for 2025. Based on the recent survey conducted by AC Transit, one or two buses on some lines are approaching or exceed the maximum load factor of 1.25 (this mainly applies to downtown Oakland), but most existing buses during the peak hour have sufficient capacity to accommodate this increase in bus trips. So the project is not expected to require an increase in bus frequencies.

Mitigation Measure A.3: None required.

Impact A.4: The proposed project would increase ridership on BART. This would be a less than significant impact.

Based on the modal split assumptions derived from the Countywide Model, the proposed project would generate an estimated **160 to 819 new BART trips** in 2005 and 2025 respectively, during the PM peak two-hour. Most of these trips access the nearby West Oakland BART station (a few may use adjacent stations) via walk, bus or drive (park-and-ride or kiss-and-ride). The trips are for both directions of travel (boarding and alighting). BART has three rail lines that service the West Oakland Station (from Dublin/Pleasanton/Fremont to SF, Baypoint to SF and Richmond to SF). The Baypoint to SF line has an average frequency of 7.5 minutes, while the other two lines have a 15 minute frequency during the peak hour. This represents a total of 64 trains in each direction in two hours. Based on the model estimates for new project trips, and assuming all

project trips occur during the peak-two hour period, this averages to 2.5 passengers per train and 13 passengers per train, for 2005 and 2025 respectively. Based on the total seating and standing capacity of a BART train, this equates to less than 1.0% and 1.7% of the total capacity, respectively. So based on this analysis, the increase in passengers for the project alternative in both 2005 and 2025 would not cause significant impacts on BART parking, fare gates, platform or trains, and can be accommodated with the planned BART service.

Mitigation Measure A.5: None required.

Table 1: 2005 - AM Peak Hour Volumes

Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis

Link Location	Northbound/Eastbound								Southbound/Westbound							
	Comparison of No-Project vs Project				Comparison of No-Project vs Project				Comparison of No-Project vs Project				Comparison of No-Project vs Project			
	No-Project 2005 AM Volume	Project 2005 AM Volume	% Vol Diff	Vol Diff	No-Project 2005 AM LOS	Project 2005 AM LOS	Change in V/C	Change in LOS	No-Project 2005 AM Volume	Project 2005 AM Volume	% Vol Diff	Vol Diff	No-Project 2005 AM LOS	Project 2005 AM LOS	Change in V/C	Change in LOS
Interstate/State Highways																
I-80 - at Bay Bridge	8,583	8,639	0.0%	56	D	D	no	no change	11,262	11,293	0.3%	31	F	F	no	no change
I-80 - west of I-80A-580	7,693	7,751	1.0%	78	D	D	no	no change	9,117	9,155	0.4%	38	E	E	no	no change
I-880 - connector to I-80 east	2,017	2,095	3.7%	78	C	C	no	no change	2,700	2,726	1.0%	26	D	D	no	no change
I-880 - connector to I-80 west	1,495	1,495	0.0%	0	B	B	no	no change	1,375	1,379	0.3%	4	B	B	no	no change
I-880 - north of 7th St	3,390	3,394	0.1%	4	C	C	no	no change	3,800	3,800	0.0%	0	C	C	no	no change
I-880 - south of 7th St	3,783	3,821	1.0%	38	C	C	no	no change	3,825	3,853	0.7%	28	C	C	no	no change
I-880 - south of I-980	7,536	7,652	1.5%	117	E	E	no	no change	6,416	6,477	0.9%	61	D	D	no	no change
I-880 - north of I-238	7,967	8,004	0.5%	37	E	E	no	no change	7,845	7,865	0.3%	20	E	E	no	no change
I-238 - east of I-880	2,616	2,619	0.1%	3	B	B	no	no change	5,466	5,470	0.1%	4	E	E	no	no change
I-580 - east of I-980	4,827	4,879	1.1%	52	C	C	no	no change	7,861	7,958	1.2%	97	E	E	no	no change
I-580 - west of I-980	7,518	7,575	0.8%	57	D	D	no	no change	8,764	8,795	0.2%	21	D	D	no	no change
I-980 - north of I-2th St	2,472	2,472	0.0%	0	B	B	no	no change	4,798	4,799	0.0%	1	D	D	no	no change
SR 24 - east of I-580	3,674	3,700	0.7%	26	B	B	no	no change	7,502	7,581	1.0%	79	E	E	no	no change
SR 260 - at Posey/McArthur Tubes	2,584	2,612	1.1%	28	F	F	no	no change	2,222	2,236	0.7%	16	F	F	no	no change
Arterials																
5th St - east of Market	181	183	1.1%	2	B	B	no	no change	0	0	0.0%	0	A	A	no	no change
7th St - east of I-880	175	221	20.8%	46	B	B	no	no change	183	203	9.0%	20	B	B	no	no change
8th St - east of Castro	0	0	0.0%	0	A	A	no	no change	265	291	8.0%	26	B	B	no	no change
14th St - east of Mendocino Parkway	109	127	14.2%	18	B	B	no	no change	232	367	40.1%	135	B	C	yes	change
Broadway - north of 7th St	136	139	0.7%	3	B	B	no	no change	99	99	0.0%	0	B	B	no	no change
Harrison St - north of 7th St	1,448	1,473	1.7%	25	C	C	no	no change	0	0	0.0%	0	A	A	no	no change
Castro St - south of I-2th St	248	248	0.0%	0	B	B	no	no change	0	0	0.0%	0	A	A	no	no change
Brush St - south of I-2th St	0	0	0.0%	0	A	A	no	no change	1,720	1,720	0.0%	0	C	C	no	no change
Embarcadero - west of Broadway	116	126	7.9%	10	B	B	no	no change	105	109	3.7%	4	B	B	no	no change
Middle Harbor Rd - south of 3rd St	21	21	0.0%	0	B	B	no	no change	234	234	0.0%	0	B	B	no	no change
W. Grand Av - east of I-880	515	595	13.4%	80	C	C	yes	no change	251	313	19.8%	62	C	C	yes	no change
Marine St - South of W. Grand Av	129	277	53.4%	148	B	C	yes	change	244	321	24.0%	77	B	C	yes	change
MacArthur Bl - east of Adeline St	1,669	1,606	2.9%	47	C	C	no	no change	336	354	5.1%	18	B	C	no	change
Adeline St - north of MacArthur Bl	159	163	2.9%	4	B	B	no	no change	501	517	3.1%	16	C	C	no	no change
M.L. King Jr. Way - north of W. Grand Av	102	102	0.0%	0	B	B	no	no change	148	149	0.7%	1	B	B	no	no change
Powell St - east of I-880	475	476	0.2%	1	C	C	no	no change	266	267	0.6%	1	B	B	no	no change
San Pablo Av - north of MacArthur Bl	1,669	1,551	0.1%	21	D	D	no	no change	1,177	1,178	0.1%	1	C	C	no	no change
Ashby Av - east of I-80	1,139	1,157	1.6%	18	C	C	no	no change	968	973	0.5%	5	C	C	no	no change
	74,217	75,193	1.3%	976					88,622	90,436	0.9%	814				

Table 2: 2005 - PM Peak Hour Volumes

Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis

Link Location	Northbound/Eastbound								Southbound/Westbound							
	Comparison of No-Project vs Project				Comparison of No-Project vs Project				Comparison of No-Project vs Project				Comparison of No-Project vs Project			
	No-Project 2005 PM Volume	Project 2005 PM Volume	% Vol Diff	Vol Diff	No-Project 2005 PM LOS	Project 2005 PM LOS	Change in V/C	Change in LOS	No-Project 2005 PM Volume	Project 2005 PM Volume	% Vol Diff	Vol Diff	No-Project 2005 PM LOS	Project 2005 PM LOS	Change in V/C	Change in LOS
Interstate/State Highways																
I-80 - at Bay Bridge	11,849	11,887	0.3%	38	F	F	no	no change	11,568	11,646	0.7%	78	F	F	no	no change
I-80 - west of I-80A-580	8,909	9,006	1.1%	97	D	D	no	no change	8,907	8,961	0.6%	54	D	D	no	no change
I-880 - connector to I-80 east	2,761	2,858	3.4%	97	D	D	no	no change	2,797	2,827	1.1%	30	D	D	no	no change
I-880 - connector to I-80 west	1,956	1,958	0.0%	0	C	C	no	no change	1,994	1,994	0.0%	0	C	C	no	no change
I-880 - north of 7th St	4,296	4,296	0.0%	0	D	D	no	no change	4,520	4,520	0.0%	0	D	D	no	no change
I-880 - south of 7th St	4,356	4,389	0.8%	33	D	D	no	no change	4,598	4,609	0.2%	11	D	D	no	no change
I-880 - south of I-980	6,704	6,762	0.9%	58	D	D	no	no change	6,226	6,331	1.3%	105	E	E	no	no change
I-880 - north of I-238	7,735	7,754	0.2%	19	E	E	no	no change	8,732	8,767	0.4%	35	E	E	no	no change
I-238 - east of I-880	4,893	4,910	0.3%	17	D	D	no	no change	3,326	3,326	0.0%	0	C	C	no	no change
I-580 - east of I-980	9,778	9,854	1.0%	86	E	E	no	no change	5,526	5,589	0.8%	43	C	C	no	no change
I-580 - west of I-980	9,384	9,416	0.2%	22	E	E	no	no change	8,395	8,414	0.3%	29	D	D	no	no change
I-980 - north of I-2th St	5,163	5,163	0.0%	0	D	D	no	no change	2,620	2,620	0.0%	0	B	B	no	no change
SR 24 - east of I-580	7,452	7,531	1.0%	79	E	E	no	no change	4,558	4,586	0.6%	28	C	C	no	no change
SR 260 - at Posey/McArthur Tubes	2,293	2,307	0.6%	14	F	F	no	no change	2,977	3,005	0.9%	28	F	F	no	no change
Arterials																
5th St - east of Market	361	374	3.5%	13	C	C	no	no change	0	0	0.0%	0	A	A	no	no change
7th St - east of I-880	236	254	7.1%	18	B	C	no	change	114	142	19.7%	28	B	B	no	no change
8th St - east of Castro	0	0	0.0%	0	A	A	no	no change	296	316	5.7%	18	B	B	no	no change
14th St - east of Mendocino Parkway	175	198	11.8%	23	B	B	no	no change	120	204	41.2%	84	B	B	yes	change
Broadway - north of 7th St	140	141	0.7%	1	B	B	no	no change	336	336	0.0%	0	B	B	no	no change
Harrison St - north of 7th St	1,194	1,204	0.9%	10	C	C	no	no change	0	0	0.0%	0	A	A	no	no change
Castro St - south of I-2th St	663	663	0.0%	0	C	C	no	no change	0	0	0.0%	0	A	A	no	no change
Brush St - south of I-2th St	0	0	0.0%	0	A	A	no	no change	1,193	1,193	0.0%	0	C	C	no	no change
Embarcadero - west of Broadway	280	290	3.4%	10	C	C	no	no change	663	673	1.5%	10	C	C	no	no change
Middle Harbor Rd - south of 3rd St	312	312	0.0%	0	C	C	no	no change	35	35	0.0%	0	B	B	no	no change
W. Grand Av - east of I-880	472	526	10.6%	56	C	C	yes	no change	952	1,102	13.6%	150	C	C	yes	change
Marine St - South of W. Grand Av	332	405	18.0%	73	C	C	yes	no change	113	226	50.0%	113	B	B	yes	change
MacArthur Bl - east of Adeline St	1,119	1,136	1.4%	16	C	C	no	no change	425	456	5.8%	31	C	C	no	no change
Adeline St - north of MacArthur Bl	241	245	1.6%	4	B	B	no	no change	1,094	1,104	0.9%	10	C	C	no	no change
M.L. King Jr. Way - north of W. Grand Av	118	118	0.0%	0	B	B	no	no change	159	159	0.0%	0	B	B	no	no change
Powell St - east of I-880	495	495	0.0%	0	C	C	no	no change	583	589	1.0%	6	C	C	no	no change
San Pablo Av - north of MacArthur Bl	1,576	1,576	0.0%	0	D	D	no	no change	1,776	1,780	0.2%	4	E	E	no	no change
Ashby Av - east of I-80	1,315	1,323	0.6%	8	D	D	no	no change	1,297	1,305	0.9%	12	D	D	no	no change
	95,472	96,254	0.8%	782					87,884	88,983	1.0%	909				

Table 3: 2025 - PM Peak Hour Volumes
Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis
2025 AM Peak Hour

Link Location	Northbound/Eastbound								Southbound/Westbound							
	No-Project 2025 AM Volume	Project 2025 AM Volume	% Vol Diff	Vol Diff	No-Project 2025 AM LOS	Project 2025 AM LOS	Change in V/C > 3%	Change in LOS	No-Project 2025 AM Volume	Project 2025 AM Volume	% Vol Diff	Vol Diff	No-Project 2025 AM LOS	Project 2025 AM LOS	Change in V/C > 3%	Change in LOS
Interstate/State Highways																
I-80 - at Bay Bridge	8,671	8,753	0.0%	82	D	D	no	no change	11,672	11,603	-0.6%	-69	F	F	no	no change
I-80 - east of I-804-580	8,191	8,136	-0.7%	-55	D	D	no	no change	8,537	8,723	2.1%	186	D	D	no	no change
I-880 - connector to I-80 east	2,446	2,415	-1.2%	-31	C	C	no	no change	2,355	2,449	3.8%	94	C	C	no	no change
I-880 - north of 7th St	1,550	1,555	0.3%	5	B	B	no	no change	1,463	1,421	-3.0%	-42	B	B	no	no change
I-880 - south of 7th St	3,893	3,792	-2.7%	-101	C	C	no	no change	3,585	3,633	1.3%	48	C	C	no	no change
I-880 - north of 12th St	4,263	4,354	2.1%	91	D	D	no	no change	3,610	3,661	1.4%	51	C	C	no	no change
I-880 - south of 12th St	7,809	7,930	1.6%	121	E	E	no	no change	6,298	6,271	-0.4%	-27	D	D	no	no change
I-880 - north of I-238	8,075	8,154	1.1%	79	E	E	no	no change	8,107	8,046	-0.8%	-61	E	E	no	no change
I-238 - east of I-880	3,005	2,974	-1.0%	-31	C	C	no	no change	5,598	5,562	-0.6%	-36	E	E	no	no change
I-580 - east of I-880	4,533	4,533	0.0%	0	C	C	no	no change	8,130	8,240	1.3%	110	E	E	no	no change
I-580 - west of I-880	7,416	7,364	-0.7%	-52	D	D	no	no change	9,124	9,167	0.5%	43	E	E	no	no change
I-980 - north of 12th St	2,653	2,644	-0.3%	-9	B	B	no	no change	5,177	5,146	-0.6%	-31	D	D	no	no change
SR 24 - east of I-580	4,104	4,065	-1.0%	-39	C	C	no	no change	7,652	7,733	1.0%	81	E	E	no	no change
SR 260 - at Posey/Webster Tubes	3,225	3,268	1.0%	43	F	F	yes	no change	3,668	3,666	-0.1%	-2	F	F	no	no change
Arterials																
5th St - east of Merced	80	80	0.0%	0	B	B	no	no change	0	0	0.0%	0	A	A	no	no change
7th St - east of I-880	142	127	-11.3%	-15	B	B	no	no change	195	225	13.9%	30	B	C	yes	change
8th St - east of Castro	0	0	0.0%	0	A	A	no	no change	381	452	15.7%	71	B	C	yes	change
14th St - east of Mendota Parkway	113	117	3.4%	4	B	B	no	no change	275	380	27.6%	105	C	C	yes	no change
Broadway - north of 7th St	143	143	0.0%	0	B	B	no	no change	107	106	-0.9%	-1	B	B	no	no change
Harrison St - north of 7th St	1,803	1,886	4.4%	83	C	D	yes	change	0	0	0.0%	0	A	A	no	no change
Castro St - south of 12th St	296	296	0.0%	0	B	B	no	no change	0	0	0.0%	0	A	A	no	no change
Brush St - south of 12th St	0	0	0.0%	0	A	A	no	no change	1,913	1,893	-1.1%	-20	D	D	no	no change
Embarcadero - west of Broadway	139	141	1.4%	2	B	B	no	no change	204	238	14.3%	34	B	B	no	no change
Middle Harbor Rd - south of 3rd St	25	54	53.7%	29	B	B	no	no change	321	506	36.6%	185	C	C	yes	no change
W. Grand Av - east of I-880	438	521	15.9%	83	C	C	yes	no change	317	335	5.4%	18	C	C	no	no change
Marine St - South of W. Grand Av	139	193	28.0%	54	B	B	no	no change	295	661	56.4%	366	C	C	yes	no change
MacArthur Bl - east of Adeline St	1,775	1,840	3.5%	65	C	C	no	no change	339	342	0.9%	3	B	B	no	no change
Adeline St - north of MacArthur Bl	245	259	5.4%	14	B	C	no	no change	616	681	9.5%	65	C	C	yes	no change
M.L. King Jr Way - north of W. Grand Av	99	98	-1.0%	-1	B	B	no	no change	201	195	-3.1%	-6	B	B	no	no change
Powell St - east of I-880	597	607	1.6%	10	C	C	no	no change	378	387	2.3%	9	C	C	no	no change
San Pablo Av - north of MacArthur Bl	1,818	1,786	-1.8%	-32	F	E	no	no change	1,399	1,377	-1.6%	-22	D	D	no	no change
Ashey Av - east of I-880	610	624	1.7%	14	C	C	no	no change	637	633	-0.6%	-4	C	C	no	no change
	78,478	78,817	0.5%	493					82,454	83,642	1.3%	1,188				

Table 4: 2025 - PM Peak Hour Volumes
Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis
2025 PM Peak Hour

Link Location	Northbound/Eastbound								Southbound/Westbound							
	No-Project 2025 PM Volume	Project 2025 PM Volume	% Vol Diff	Vol Diff	No-Project 2025 PM LOS	Project 2025 PM LOS	Change in V/C > 3%	Change in LOS	No-Project 2025 PM Volume	Project 2025 PM Volume	% Vol Diff	Vol Diff	No-Project 2025 PM LOS	Project 2025 PM LOS	Change in V/C > 3%	Change in LOS
Interstate/State Highways																
I-80 - at Bay Bridge	12,078	11,997	-0.7%	-81	F	F	no	no change	11,756	11,839	0.7%	83	F	F	no	no change
I-80 - east of I-804-580	8,967	9,393	3.5%	326	D	E	no	change	8,836	8,809	-0.3%	-26	D	D	no	no change
I-880 - connector to I-80 east	2,915	3,251	10.3%	336	D	D	yes	no change	2,638	2,626	-0.5%	-12	C	C	no	no change
I-880 - connector to I-80 west	2,069	2,064	-0.2%	-5	C	C	no	no change	2,110	2,105	-0.2%	-5	C	C	no	no change
I-880 - north of 7th St	4,496	4,594	2.4%	98	D	D	no	no change	4,472	4,448	-0.5%	-24	D	D	no	no change
I-880 - south of 7th St	4,548	4,711	3.5%	163	D	D	no	no change	4,550	4,583	0.7%	33	D	D	no	no change
I-880 - south of 12th St	6,973	6,964	-0.1%	-9	D	D	no	no change	8,175	8,280	1.3%	105	E	E	no	no change
I-880 - north of I-238	8,014	7,988	-0.3%	-26	E	E	no	no change	8,804	8,863	0.7%	59	E	E	no	no change
I-238 - east of I-880	5,090	5,106	0.3%	16	D	D	no	no change	3,616	3,497	-3.3%	-119	C	C	no	no change
I-580 - east of I-880	8,868	8,940	0.8%	72	E	E	no	no change	5,770	5,780	0.2%	10	D	D	no	no change
I-580 - west of I-880	9,490	9,526	0.4%	36	E	E	no	no change	6,411	6,468	0.9%	57	D	D	no	no change
I-980 - north of 12th St	5,530	5,372	-2.9%	-158	E	E	no	no change	2,587	2,570	-0.7%	-17	B	B	no	no change
SR 24 - east of I-580	7,860	7,728	-1.6%	-132	E	E	no	no change	4,342	4,319	-0.5%	-23	C	C	no	no change
SR 260 - at Posey/Webster Tubes	3,843	3,844	0.0%	1	F	F	no	no change	3,511	3,564	1.5%	53	F	F	no	no change
Arterials																
5th St - east of Merced	90	70	-28.9%	-20	B	B	no	no change	0	0	0.0%	0	A	A	no	no change
7th St - east of I-880	234	336	30.4%	102	B	C	yes	change	124	167	25.7%	43	B	B	no	no change
8th St - east of Castro	0	0	0.0%	0	A	A	no	no change	418	445	6.1%	27	B	B	no	no change
14th St - east of Mendota Parkway	201	262	23.9%	61	B	C	yes	change	145	179	19.0%	34	B	B	no	no change
Broadway - north of 7th St	164	166	1.2%	2	B	B	no	no change	362	353	-2.5%	-9	C	C	no	no change
Harrison St - north of 7th St	2,224	2,241	0.9%	17	D	D	no	no change	0	0	0.0%	0	A	A	no	no change
Castro St - south of 12th St	713	781	8.7%	68	C	C	no	no change	0	0	0.0%	0	A	A	no	no change
Brush St - south of 12th St	0	0	0.0%	0	A	A	no	no change	1,262	1,247	-1.2%	-15	C	C	no	no change
Embarcadero - west of Broadway	321	412	22.1%	91	C	C	yes	no change	817	620	-23.1%	-197	C	C	no	no change
Middle Harbor Rd - south of 3rd St	373	705	47.1%	332	C	C	yes	no change	47	95	50.5%	48	B	B	no	no change
W. Grand Av - east of I-880	487	521	6.5%	34	C	C	no	no change	1,019	1,142	10.8%	123	C	C	yes	no change
Marine St - South of W. Grand Av	433	893	51.5%	460	C	C	yes	no change	120	213	43.7%	93	B	B	yes	no change
MacArthur Bl - east of Adeline St	1,233	1,240	0.6%	7	C	C	no	no change	432	495	12.9%	63	C	C	no	no change
Adeline St - north of MacArthur Bl	273	320	14.7%	47	C	C	no	no change	1,147	1,124	-2.0%	-23	C	C	no	no change
M.L. King Jr Way - north of W. Grand Av	127	126	-0.8%	-1	B	B	no	no change	177	173	-2.3%	-4	B	B	no	no change
Powell St - east of I-880	696	618	-11.2%	-78	C	C	no	no change	706	721	2.1%	15	C	C	no	no change
San Pablo Av - north of MacArthur Bl	1,784	1,760	-1.4%	-24	E	E	no	no change	1,902	1,951	2.6%	49	F	F	no	no change
Ashey Av - east of I-880	899	927	3.0%	28	C	C	no	no change	641	663	3.3%	22	C	C	no	no change
	100,673	102,756	2.0%	2,083					88,796	89,548	0.8%	744				

Table 5: Home-Based-Work Trip Mode Choice for OARB

Home-Based Work Trips

differences between no-project & project are attributed to the project

Mode	NO-PROJECT		PROJECT		Increase between No-project and Project		Percent Growth between No-project and Project	
	2005	2020	2005	2020	2005	2020	2005	2020
Transit	774	1,115	967	2,379	193	1,264	24.9%	113.4%
Auto	8,397	9,619	8,982	17,914	585	8,295	7.0%	86.2%
Total	9,171	10,734	9,949	20,293	778	9,559	8.5%	89.1%

Table 6: AC Transit Ridership

Home-Based Work Trips

differences between no-project & project are attributed to the project

Operator	NO-PROJECT		PROJECT		Increase between No-project and Project		Percent Growth between No-project and Project	
	2005	2020	2005	2020	2005	2020	2005	2020
AC Transit	72,164	86,914	72,211	87,361	47	447	0.1%	0.5%

Table 7: BART Boardings & Alightings

Home-Based Work Trips

differences between no-project & project are attributed to the project

BART Station	NO-PROJECT		PROJECT		Increase between No-project and Project		Percent Growth between No-project and Project	
	2005	2020	2005	2020	2005	2020	2005	2020
West Oakland	4,301	6,072	4,461	6,891	160	819	3.7%	13.5%

Table A1:
 Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis
 2005 AM Peak Hour
 No-Project

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-80 - at Bay Bridge	8,583	11225	0.76	5	D	11,262	11225	1.00	5	F	FWY
I-80 - east of I-80/I-580	7,683	11225	0.68	5	D	9,117	11225	0.81	5	E	FWY
I-880 - connector to I-80 east	2,017	4295	0.47	2	C	2,700	4295	0.63	2	D	FWY
I-880 - connector to I-80 west	1,495	4295	0.35	2	B	1,375	4295	0.32	2	B	FWY
I-880 - north of 7th St	3,390	6584	0.51	3	C	3,800	6584	0.58	3	C	FWY
I-880 - south of 7th St	3,783	6584	0.57	3	C	3,825	6584	0.58	3	C	FWY
I-880 - south of I-980	7,535	8978	0.84	4	E	6,416	8978	0.71	4	D	FWY
I-880 - north of I-238	7,967	8978	0.89	4	E	7,845	8978	0.87	4	E	FWY
I-238 - east of I-880	2,616	6584	0.40	3	B	5,466	6584	0.83	3	E	FWY
I-580 - east of I-980	4,827	8978	0.54	4	C	7,861	8978	0.88	4	E	FWY
I-580 - west of I-980	7,518	11225	0.67	5	D	8,764	11225	0.78	5	D	FWY
I-980 - north of 12th St	2,472	6584	0.38	3	B	4,798	6584	0.73	3	D	FWY
SR 24 - east of I-580	3,674	8978	0.41	4	B	7,502	8978	0.84	4	E	Class 1A
SR 260 - at Posey/Webster Tubes	2,584	1890	1.37	2	F	2,222	1890	1.18	2	F	Class 1A
Arterials											
5th St - east of Market	181	1810	0.10	2	B	0	#N/A	#N/A	0	A	Class 2
7th St - east of I-880	175	1810	0.10	2	B	183	1810	0.10	2	B	Class 2
8th St - east of Castro	0	#N/A	#N/A	0	A	265	3350	0.08	4	B	Class 2
14th St - east of Mandela Parkway	109	1810	0.06	2	B	232	1810	0.13	2	B	Class 2
Broadway - north of 7th St	138	2730	0.05	3	B	99	2730	0.04	3	B	Class 2
Harrison St - north of 7th St	1,448	2730	0.53	3	C	0	#N/A	#N/A	0	A	Class 2
Castro St - south of 12th St	248	2730	0.09	3	B	0	#N/A	#N/A	0	A	Class 2
Brush St - south of 12th St	0	#N/A	#N/A	0	A	1,720	2730	0.63	3	C	Class 2
Embarcadero - west of Broadway	116	1810	0.06	2	B	105	1810	0.06	2	B	Class 2
Middle Harbor Rd - south of 3rd St	21	1810	0.01	2	B	234	1810	0.13	2	B	Class 2
W. Grand Av - east of I-880	515	1810	0.28	2	C	251	1810	0.14	2	C	Class 2
Maritime St - South of W. Grand Av	129	1810	0.07	2	B	244	1810	0.13	2	B	Class 2
MacArthur Bl - east of Adeline St	1,559	2730	0.57	3	C	336	2730	0.12	3	B	Class 2
Adeline St - north of MacArthur Bl	159	1810	0.09	2	B	501	1810	0.28	2	C	Class 2
M L King Jr Way - north of W. Grand Av	102	1810	0.06	2	B	148	1810	0.08	2	B	Class 2
Powell St - east of I-80	475	1810	0.26	2	C	206	1810	0.11	2	B	Class 2
San Pablo Av - north of MacArthur Bl	1,559	1810	0.86	2	D	1,177	1810	0.65	2	C	Class 2
Ashby Av - east of I-80	1,139	1810	0.63	2	C	968	1810	0.53	2	C	Class 2
Sum		74,217									89,622

Table A2:
 Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis
 2005 PM Peak Hour
 No-Project

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-80 - at Bay Bridge	11,849	11225	1.06	5	F	11,588	11225	1.03	5	F	FWY
I-80 - east of I-80/I-580	8,909	11225	0.79	5	D	8,907	11225	0.79	5	D	FWY
I-880 - connector to I-80 east	2,781	4295	0.64	2	D	2,797	4295	0.65	2	D	FWY
I-880 - connector to I-80 west	1,958	4295	0.46	2	C	1,994	4295	0.46	2	C	FWY
I-880 - north of 7th St	4,285	6584	0.65	3	D	4,520	6584	0.69	3	D	FWY
I-880 - south of 7th St	4,356	6584	0.66	3	D	4,598	6584	0.70	3	D	FWY
I-880 - south of I-980	6,704	8978	0.75	4	D	8,226	8978	0.92	4	E	FWY
I-880 - north of I-238	7,735	8978	0.86	4	E	8,732	8978	0.97	4	E	FWY
I-238 - east of I-880	4,803	6584	0.73	3	D	3,326	6584	0.51	3	C	FWY
I-580 - east of I-980	8,778	8978	0.98	4	E	5,626	8978	0.62	4	C	FWY
I-580 - west of I-980	9,394	11225	0.84	5	E	8,385	11225	0.75	5	D	FWY
I-980 - north of 12th St	5,163	6584	0.78	3	D	2,620	6584	0.40	3	B	FWY
SR 24 - east of I-580	7,452	8978	0.83	4	E	4,558	8978	0.51	4	C	Class 1A
SR 260 - at Posey/Webster Tubes	2,293	1890	1.21	2	F	2,977	1890	1.58	2	F	Class 1A
Arterials											
5th St - east of Market	361	1810	0.20	2	C	0	#N/A	#N/A	0	A	Class 2
7th St - east of I-880	236	1810	0.13	2	B	114	1810	0.06	2	B	Class 2
8th St - east of Castro	0	#N/A	#N/A	0	A	298	3350	0.09	4	B	Class 2
14th St - east of Mandela Parkway	175	1810	0.10	2	B	120	1810	0.07	2	B	Class 2
Broadway - north of 7th St	140	2730	0.05	3	B	338	2730	0.12	3	B	Class 2
Harrison St - north of 7th St	1,194	2730	0.44	3	C	0	#N/A	#N/A	0	A	Class 2
Castro St - south of 12th St	663	2730	0.24	3	C	0	#N/A	#N/A	0	A	Class 2
Brush St - south of 12th St	0	#N/A	#N/A	0	A	1,193	2730	0.44	3	C	Class 2
Embarcadero - west of Broadway	280	1810	0.15	2	C	663	1810	0.37	2	C	Class 2
Middle Harbor Rd - south of 3rd St	312	1810	0.17	2	C	35	1810	0.02	2	B	Class 2
W. Grand Av - east of I-880	472	1810	0.26	2	C	952	1810	0.53	2	C	Class 2
Maritime St - South of W. Grand Av	332	1810	0.18	2	C	113	1810	0.06	2	B	Class 2
MacArthur Bl - east of Adeline St	1,119	2730	0.41	3	C	425	2730	0.16	3	C	Class 2
Adeline St - north of MacArthur Bl	241	1810	0.13	2	B	1,094	1810	0.60	2	C	Class 2
M L King Jr Way - north of W. Grand Av	118	1810	0.07	2	B	159	1810	0.09	2	B	Class 2
Powell St - east of I-80	495	1810	0.27	2	C	583	1810	0.32	2	C	Class 2
San Pablo Av - north of MacArthur Bl	1,578	1810	0.87	2	D	1,776	1810	0.98	2	E	Class 2
Ashby Av - east of I-80	1,315	1810	0.73	2	D	1,297	1810	0.72	2	D	Class 2
Sum	95,472					87,894					

Table A3:
 Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis
 2005 AM Peak Hour

Project											
Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
<i>Interstate/State Highways</i>											
I-80 - at Bay Bridge	8,639	11225	0.77	5	D	11,293	11225	1.01	5	F	FWY
I-80 - east of I-80/I-580	7,761	11225	0.69	5	D	9,155	11225	0.82	5	E	FWY
I-880 - connector to I-80 east	2,095	4295	0.49	2	C	2,728	4295	0.64	2	D	FWY
I-880 - connector to I-80 west	1,495	4295	0.35	2	B	1,379	4295	0.32	2	B	FWY
I-880 - north of 7th St	3,394	6584	0.52	3	C	3,800	6584	0.58	3	C	FWY
I-880 - south of 7th St	3,821	6584	0.58	3	C	3,653	6584	0.59	3	C	FWY
I-880 - south of I-980	7,652	8978	0.85	4	E	6,477	8978	0.72	4	D	FWY
I-880 - north of I-238	6,094	8978	0.89	4	E	7,885	8978	0.88	4	E	FWY
I-238 - east of I-880	2,619	6584	0.40	3	B	5,470	6584	0.83	3	E	FWY
I-580 - east of I-980	4,879	8978	0.54	4	C	7,958	8978	0.89	4	E	FWY
I-580 - west of I-980	7,575	11225	0.67	5	D	6,785	11225	0.78	5	D	FWY
I-980 - north of 12th St	2,472	6584	0.38	3	B	4,799	6584	0.73	3	D	FWY
SR 24 - east of I-580	3,700	8978	0.41	4	B	7,581	8978	0.84	4	E	Class 1A
SR 260 - at Posey/Webster Tubes	2,612	1890	1.38	2	F	2,238	1890	1.18	2	F	Class 1A
<i>Arterials</i>											
5th St - east of Market	183	1810	0.10	2	B	0	#N/A	#N/A	0	A	Class 2
7th St - east of I-880	221	1810	0.12	2	B	203	1810	0.11	2	B	Class 2
8th St - east of Castro	0	#N/A	#N/A	0	A	291	3350	0.09	4	B	Class 2
14th St - east of Mandela Parkway	127	1810	0.07	2	B	387	1810	0.21	2	C	Class 2
Broadway - north of 7th St	139	2730	0.05	3	B	99	2730	0.04	3	B	Class 2
Harrison St - north of 7th St	1,473	2730	0.54	3	C	0	#N/A	#N/A	0	A	Class 2
Castro St - south of 12th St	248	2730	0.09	3	B	0	#N/A	#N/A	0	A	Class 2
Brush St - south of 12th St	0	#N/A	#N/A	0	A	1,720	2730	0.63	3	C	Class 2
Embarcadero - west of Broadway	126	1810	0.07	2	B	109	1810	0.06	2	B	Class 2
Middle Harbor Rd - south of 3rd St	21	1810	0.01	2	B	234	1810	0.13	2	B	Class 2
W Grand Av - east of I-880	595	1810	0.33	2	C	313	1810	0.17	2	C	Class 2
Maritime St - South of W Grand Av	277	1810	0.15	2	C	321	1810	0.18	2	C	Class 2
MacArthur Bl - east of Adeline St	1,606	2730	0.59	3	C	354	2730	0.13	3	C	Class 2
Adeline St - north of MacArthur Bl	163	1810	0.09	2	B	517	1810	0.29	2	C	Class 2
M L King Jr Way - north of W Grand Av	102	1810	0.06	2	B	149	1810	0.08	2	B	Class 2
Powell St - east of I-80	476	1810	0.26	2	C	207	1810	0.11	2	B	Class 2
San Pablo Av - north of MacArthur Bl	1,561	1810	0.86	2	D	1,178	1810	0.65	2	C	Class 2
Ashby Av - east of I-80	1,157	1810	0.64	2	C	973	1810	0.54	2	C	Class 2
Sum		75,193					90,436				

Table A4:
 Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis
 2005 PM Peak Hour
 Project

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-80 - at Bay Bridge	11,887	11225	1.06	5	F	11,846	11225	1.04	5	F	FWY
I-80 - east of I-80/1-580	9,006	11225	0.80	5	D	8,961	11225	0.80	5	D	FWY
I-880 - connector to I-80 east	2,858	4295	0.67	2	D	2,827	4295	0.66	2	D	FWY
I-880 - connector to I-80 west	1,958	4295	0.46	2	C	1,994	4295	0.46	2	C	FWY
I-880 - north of 7th St	4,286	6584	0.65	3	D	4,520	6584	0.69	3	D	FWY
I-880 - south of 7th St	4,389	6584	0.67	3	D	4,609	6584	0.70	3	D	FWY
I-880 - south of I-980	6,762	8978	0.75	4	D	6,331	8978	0.93	4	E	FWY
I-880 - north of I-238	7,754	8978	0.86	4	E	8,787	8978	0.98	4	E	FWY
I-238 - east of I-880	4,810	6584	0.73	3	D	3,328	6584	0.51	3	C	FWY
I-580 - east of I-980	8,864	8978	0.99	4	E	5,569	8978	0.62	4	C	FWY
I-580 - west of I-980	9,416	11225	0.84	5	E	8,414	11225	0.75	5	D	FWY
I-980 - north of 12th St	5,163	6584	0.78	3	D	2,620	6584	0.40	3	B	FWY
SR 24 - east of I-580	7,531	8978	0.84	4	E	4,586	8978	0.51	4	C	Class 1A
SR 260 - at Posey/Webster Tubes	2,307	1890	1.22	2	F	3,005	1890	1.59	2	F	Class 1A
Arterials											
5th St - east of Market	374	1810	0.21	2	C	0	#N/A	#N/A	0	A	Class 2
7th St - east of I-880	254	1810	0.14	2	C	142	1810	0.08	2	B	Class 2
8th St - east of Castro	0	#N/A	#N/A	0	A	316	3350	0.09	4	B	Class 2
14th St - east of Mandela Parkway	198	1810	0.11	2	B	204	1810	0.11	2	B	Class 2
Broadway - north of 7th St	141	2730	0.05	3	B	338	2730	0.12	3	B	Class 2
Harrison St - north of 7th St	1,204	2730	0.44	3	C	0	#N/A	#N/A	0	A	Class 2
Castro St - south of 12th St	663	2730	0.24	3	C	0	#N/A	#N/A	0	A	Class 2
Brush St - south of 12th St	0	#N/A	#N/A	0	A	1,193	2730	0.44	3	C	Class 2
Embarcadero - west of Broadway	290	1810	0.16	2	C	673	1810	0.37	2	C	Class 2
Middle Harbor Rd - south of 3rd St	312	1810	0.17	2	C	35	1810	0.02	2	B	Class 2
W. Grand Av - east of I-880	528	1810	0.29	2	C	1,102	1810	0.61	2	C	Class 2
Maritime St - South of W. Grand Av	405	1810	0.22	2	C	226	1810	0.12	2	B	Class 2
MacArthur Bl - east of Adeline St	1,135	2730	0.42	3	C	456	2730	0.17	3	C	Class 2
Adeline St - north of MacArthur Bl	245	1810	0.14	2	B	1,104	1810	0.61	2	C	Class 2
M L King Jr Way - north of W. Grand Av	118	1810	0.07	2	B	159	1810	0.09	2	B	Class 2
Powell St - east of I-80	495	1810	0.27	2	C	589	1810	0.33	2	C	Class 2
San Pablo Av - north of MacArthur Bl	1,578	1810	0.87	2	D	1,780	1810	0.98	2	F	Class 2
Ashby Av - east of I-80	1,323	1810	0.73	2	D	1,309	1810	0.72	2	D	Class 2
Sum	96,254					88,803					

Table A5:
 Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis
 2025 AM Peak Hour
 No-Project

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-80 - at Bay Bridge	6,671	11225	0.77	5	D	11,672	11225	1.04	5	F	FWY
I-80 - east of I-80/I-580	8,191	11225	0.73	5	D	8,537	11225	0.76	5	D	FWY
I-880 - connector to I-80 east	2,448	4295	0.57	2	C	2,355	4295	0.55	2	C	FWY
I-880 - connector to I-80 west	1,550	4295	0.36	2	B	1,463	4295	0.34	2	B	FWY
I-880 - north of 7th St	3,883	6584	0.59	3	C	3,585	6584	0.54	3	C	FWY
I-880 - south of 7th St	4,263	6584	0.65	3	D	3,610	6584	0.55	3	C	FWY
I-880 - south of I-980	7,809	8978	0.87	4	E	6,296	8978	0.70	4	D	FWY
I-880 - north of I-238	8,075	8978	0.90	4	E	8,107	8978	0.90	4	E	FWY
I-238 - east of I-880	3,005	6584	0.46	3	C	5,598	6584	0.85	3	F	FWY
I-580 - east of I-980	4,533	8978	0.50	4	C	8,130	8978	0.91	4	F	FWY
I-580 - west of I-980	7,416	11225	0.66	5	D	9,124	11225	0.81	5	E	FWY
I-980 - north of 12th St	2,853	6584	0.40	3	B	5,177	6584	0.79	3	D	FWY
SR 24 - east of I-580	4,104	8978	0.46	4	C	7,652	8978	0.85	4	F	Class 1A
SR 260 - at Posey/Webster Tubes	3,225	1890	1.71	2	F	3,668	1890	1.94	2	F	Class 1A
Arterials											
5th St - east of Market	80	1810	0.04	2	B	0	#N/A	#N/A	0	A	Class 2
7th St - east of I-880	142	1810	0.08	2	B	195	1810	0.11	2	B	Class 2
8th St - east of Castro	0	#N/A	#N/A	0	A	381	3350	0.11	4	B	Class 2
14th St - east of Mandela Parkway	113	1810	0.06	2	B	275	1810	0.15	2	C	Class 2
Broadway - north of 7th St	143	2730	0.05	3	B	107	2730	0.04	3	B	Class 2
Harrison St - north of 7th St	1,803	2730	0.66	3	C	0	#N/A	#N/A	0	A	Class 2
Castro St - south of 12th St	286	2730	0.10	3	B	0	#N/A	#N/A	0	A	Class 2
Brush St - south of 12th St	0	#N/A	#N/A	0	A	1,913	2730	0.70	3	D	Class 2
Embarcadero - west of Broadway	138	1810	0.08	2	B	204	1810	0.11	2	B	Class 2
Middle Harbor Rd - south of 3rd St	25	1810	0.01	2	B	321	1810	0.18	2	C	Class 2
W. Grand Av - east of I-880	438	1810	0.24	2	C	317	1810	0.18	2	C	Class 2
Maritime St - South of W. Grand Av	139	1810	0.08	2	B	295	1810	0.16	2	C	Class 2
MacArthur Bl - east of Adeline St	1,775	2730	0.65	3	C	339	2730	0.12	3	B	Class 2
Adeline St - north of MacArthur Bl	245	1810	0.14	2	B	616	1810	0.34	2	C	Class 2
M L King Jr Way - north of W. Grand Av	99	1810	0.05	2	B	201	1810	0.11	2	B	Class 2
Powell St - east of I-80	597	1810	0.33	2	C	378	1810	0.21	2	C	Class 2
San Pablo Av - north of MacArthur Bl	1,818	1810	1.00	2	F	1,399	1810	0.77	2	D	Class 2
Ashby Av - east of I-80	810	1810	0.45	2	C	537	1810	0.30	2	C	Class 2
Sum		78,478					92,454				

Table A6:
 Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis
 2025 PM Peak Hour
 No-Project

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-80 - at Bay Bridge	12,078	11225	1.08	5	F	11,756	11225	1.05	5	F	FWY
I-80 - east of I-80/I-580	8,967	11225	0.80	5	D	8,835	11225	0.79	5	D	FWY
I-880 - connector to I-80 east	2,915	4295	0.68	2	D	2,638	4295	0.61	2	C	FWY
I-880 - connector to I-80 west	2,069	4295	0.48	2	C	2,110	4295	0.49	2	C	FWY
I-880 - north of 7th St	4,486	6584	0.68	3	D	4,472	6584	0.68	3	D	FWY
I-880 - south of 7th St	4,548	6584	0.69	3	D	4,550	6584	0.69	3	D	FWY
I-880 - south of I-980	6,973	8978	0.78	4	D	8,175	8978	0.91	4	E	FWY
I-880 - north of I-238	8,014	8978	0.89	4	E	8,804	8978	0.98	4	E	FWY
I-238 - east of I-880	5,090	6584	0.77	3	D	3,516	6584	0.53	3	C	FWY
I-580 - east of I-980	8,858	8978	0.99	4	E	5,770	8978	0.64	4	D	FWY
I-580 - west of I-980	9,490	11225	0.85	5	E	8,411	11225	0.75	5	D	FWY
I-980 - north of 12th St	5,530	6584	0.84	3	E	2,587	6584	0.39	3	B	FWY
SR 24 - east of I-580	7,660	8978	0.85	4	E	4,342	8978	0.48	4	C	Class 1A
SR 260 - at Posey/Webster Tubes	3,843	1890	2.03	2	F	3,511	1890	1.86	2	F	Class 1A
Arterials											
5th St - east of Market	90	1810	0.05	2	B	0	#N/A	#N/A	0	A	Class 2
7th St - east of I-880	234	1810	0.13	2	B	124	1810	0.07	2	B	Class 2
8th St - east of Castro	0	#N/A	#N/A	0	A	418	3350	0.12	4	B	Class 2
14th St - east of Mandela Parkway	201	1810	0.11	2	B	145	1810	0.08	2	B	Class 2
Broadway - north of 7th St	164	2730	0.06	3	B	362	2730	0.13	3	C	Class 2
Harrison St - north of 7th St	2,224	2730	0.81	3	D	0	#N/A	#N/A	0	A	Class 2
Castro St - south of 12th St	713	2730	0.26	3	C	0	#N/A	#N/A	0	A	Class 2
Brush St - south of 12th St	0	#N/A	#N/A	0	A	1,262	2730	0.46	3	C	Class 2
Embarcadero - west of Broadway	321	1810	0.18	2	C	817	1810	0.45	2	C	Class 2
Middle Harbor Rd - south of 3rd St	373	1810	0.21	2	C	47	1810	0.03	2	B	Class 2
W. Grand Av - east of I-880	487	1810	0.27	2	C	1,019	1810	0.56	2	C	Class 2
Maritime St - South of W. Grand Av	433	1810	0.24	2	C	120	1810	0.07	2	B	Class 2
MacArthur Bl - east of Adeline St	1,233	2730	0.45	3	C	432	2730	0.16	3	C	Class 2
Adeline St - north of MacArthur Bl	273	1810	0.15	2	C	1,147	1810	0.63	2	C	Class 2
M L King Jr Way - north of W. Grand Av	127	1810	0.07	2	B	177	1810	0.10	2	B	Class 2
Powell St - east of I-80	596	1810	0.33	2	C	706	1810	0.39	2	C	Class 2
San Pablo Av - north of MacArthur Bl	1,784	1810	0.99	2	E	1,902	1810	1.05	2	F	Class 2
Ashby Av - east of I-80	699	1810	0.50	2	C	641	1810	0.35	2	C	Class 2
Sum	100,673					88,796					

Table A7:
 Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis
 2025 AM Peak Hour
 Project

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-80 - at Bay Bridge	8,753	11225	0.78	5	D	11,583	11225	1.03	5	F	FWY
I-80 - east of I-80/I-580	8,138	11225	0.73	5	D	8,723	11225	0.78	5	D	FWY
I-880 - connector to I-80 east	2,415	4295	0.56	2	C	2,449	4295	0.57	2	C	FWY
I-880 - connector to I-80 west	1,555	4295	0.36	2	B	1,421	4295	0.33	2	B	FWY
I-880 - north of 7th St	3,782	6584	0.57	3	C	3,633	6584	0.55	3	C	FWY
I-880 - south of 7th St	4,354	6584	0.66	3	D	3,661	6584	0.56	3	C	FWY
I-880 - south of I-980	7,920	8978	0.88	4	E	8,271	8978	0.70	4	D	FWY
I-880 - north of I-238	8,164	8978	0.91	4	E	8,046	8978	0.90	4	E	FWY
I-238 - east of I-880	2,974	6584	0.45	3	C	5,562	6584	0.84	3	E	FWY
I-580 - east of I-980	4,533	8978	0.50	4	C	8,240	8978	0.92	4	E	FWY
I-580 - west of I-980	7,364	11225	0.66	5	D	9,167	11225	0.82	5	E	FWY
I-980 - north of 12th St	2,844	6584	0.40	3	B	5,146	6584	0.78	3	D	FWY
SR 24 - east of I-580	4,065	8978	0.45	4	C	7,733	8978	0.86	4	E	Class 1A
SR 260 - at Posey/Webster Tubes	3,288	1890	1.74	2	F	3,666	1890	1.94	2	F	Class 1A
Arterials											
5th St - east of Market	50	1810	0.03	2	B	0	#N/A	#N/A	0	A	Class 2
7th St - east of I-880	127	1810	0.07	2	B	255	1810	0.14	2	C	Class 2
8th St - east of Castro	0	#N/A	#N/A	0	A	452	3350	0.13	4	C	Class 2
14th St - east of Mandela Parkway	117	1810	0.06	2	B	380	1810	0.21	2	C	Class 2
Broadway - north of 7th St	143	2730	0.05	3	B	106	2730	0.04	3	B	Class 2
Harrison St - north of 7th St	1,886	2730	0.69	3	D	0	#N/A	#N/A	0	A	Class 2
Castro St - south of 12th St	286	2730	0.10	3	B	0	#N/A	#N/A	0	A	Class 2
Brush St - south of 12th St	0	#N/A	#N/A	0	A	1,893	2730	0.69	3	D	Class 2
Embarcadero - west of Broadway	141	1810	0.08	2	B	238	1810	0.13	2	B	Class 2
Middle Harbor Rd - south of 3rd St	54	1810	0.03	2	B	508	1810	0.28	2	C	Class 2
W. Grand Av - east of I-880	521	1810	0.29	2	C	335	1810	0.19	2	C	Class 2
Maritime St - South of W. Grand Av	193	1810	0.11	2	B	661	1810	0.37	2	C	Class 2
MacArthur Bl - east of Adeline St	1,840	2730	0.67	3	C	342	2730	0.13	3	B	Class 2
Adeline St - north of MacArthur Bl	259	1810	0.14	2	C	681	1810	0.38	2	C	Class 2
M L King Jr Way - north of W. Grand Av	98	1810	0.05	2	B	195	1810	0.11	2	B	Class 2
Powell St - east of I-80	607	1810	0.34	2	C	387	1810	0.21	2	C	Class 2
San Pablo Av - north of MacArthur Bl	1,786	1810	0.99	2	E	1,377	1810	0.76	2	D	Class 2
Ashby Av - east of I-80	824	1810	0.46	2	C	533	1810	0.29	2	C	Class 2
Sum	78,881					93,642					

Table A8:
 Project: Oakland Army Base - MTS Segment Evaluation for CMP Analysis
 2025 PM Peak Hour
 Project

Link Location	NB/EB Volume	Capacity	V/C	Lanes	LOS	SB/WB Volume	Capacity	V/C	Lanes	LOS	Facility Type
Interstate/State Highways											
I-80 - at Bay Bridge	11,897	11225	1.07	5	F	11,839	11225	1.05	5	F	FWY
I-80 - east of I-80/I-580	8,293	11225	0.83	5	E	8,809	11225	0.78	5	D	FWY
I-880 - connector to I-80 east	3,251	4295	0.76	2	D	2,828	4295	0.61	2	C	FWY
I-880 - connector to I-80 west	2,064	4295	0.48	2	C	2,105	4295	0.49	2	C	FWY
I-880 - north of 7th St	4,584	6584	0.70	3	D	4,448	6584	0.68	3	D	FWY
I-880 - south of 7th St	4,711	6584	0.72	3	D	4,583	6584	0.70	3	D	FWY
I-880 - south of I-980	6,964	8978	0.78	4	D	8,290	8978	0.92	4	E	FWY
I-880 - north of I-238	7,988	8978	0.89	4	E	8,863	8978	0.99	4	E	FWY
I-238 - east of I-880	5,106	6584	0.78	3	D	3,497	6584	0.53	3	C	FWY
I-580 - east of I-980	8,940	8978	1.00	4	E	5,780	8978	0.64	4	D	FWY
I-580 - west of I-980	8,526	11225	0.85	5	E	8,468	11225	0.75	5	D	FWY
I-980 - north of 12th St	5,372	6584	0.82	3	E	2,570	6584	0.39	3	B	FWY
SR 24 - east of I-580	7,728	8978	0.86	4	E	4,319	8978	0.48	4	C	Class 1A
SR 260 - at Posey/Webster Tubes	3,844	1890	2.03	2	F	3,564	1890	1.89	2	F	Class 1A
Arterials											
5th St - east of Market	70	1810	0.04	2	B	0	#N/A	#N/A	0	A	Class 2
7th St - east of I-880	336	1810	0.19	2	C	167	1810	0.09	2	B	Class 2
8th St - east of Castro	0	#N/A	#N/A	0	A	445	3350	0.13	4	B	Class 2
14th St - east of Mandela Parkway	262	1810	0.14	2	C	178	1810	0.10	2	B	Class 2
Broadway - north of 7th St	166	2730	0.06	3	B	353	2730	0.13	3	C	Class 2
Harrison St - north of 7th St	2,241	2730	0.82	3	D	0	#N/A	#N/A	0	A	Class 2
Castro St - south of 12th St	781	2730	0.29	3	C	0	#N/A	#N/A	0	A	Class 2
Brush St - south of 12th St	0	#N/A	#N/A	0	A	1,247	2730	0.46	3	C	Class 2
Embarcadero - west of Broadway	412	1810	0.23	2	C	820	1810	0.45	2	C	Class 2
Middle Harbor Rd - south of 3rd St	705	1810	0.39	2	C	95	1810	0.05	2	B	Class 2
W. Grand Av - east of I-880	821	1810	0.29	2	C	1,142	1810	0.63	2	C	Class 2
Maritime St - South of W. Grand Av	893	1810	0.49	2	C	213	1810	0.12	2	B	Class 2
MacArthur Bl - east of Adeline St	1,240	2730	0.45	3	C	496	2730	0.18	3	C	Class 2
Adeline St - north of MacArthur Bl	320	1810	0.18	2	C	1,124	1810	0.62	2	C	Class 2
M L King Jr Way - north of W. Grand Av	126	1810	0.07	2	B	173	1810	0.10	2	B	Class 2
Powell St - east of I-80	618	1810	0.34	2	C	721	1810	0.40	2	C	Class 2
San Pablo Av - north of MacArthur Bl	1,780	1810	0.97	2	E	1,951	1810	1.08	2	F	Class 2
Ashby Av - east of I-80	827	1810	0.51	2	C	663	1810	0.37	2	C	Class 2
Sum	102,756					88,540					

Appendix 4.4
Air Quality

- 4.4A Emissions Calculations Spreadsheets
- 4.4B Ship and Tugboat Emissions Calculation Methodology
- 4.4C Proposed Mitigation Measures from the Berths 55-58 EIR

4.4A Emissions Calculations Spreadsheets

TRUCK AND PASSENGER CAR EMISSIONS - OARB PROJECT

Distance traveled within the SF Air Basin 80 miles one-way to Gilroy
 by Over-the-Road Trucks: 45 miles one-way to Tracy

PROJECT

PROJECT	Daily One-Way Trips	One-Way Trip Distance (mi)	Emission Factors (g/mi)					Emissions (lb/day)					Emissions (tons/year)					
			ROG	CO	NO _x	PM ₁₀	PM _{2.5}	ROG	CO	NO _x	PM ₁₀	PM _{2.5}	ROG	CO	NO _x	PM ₁₀	PM _{2.5}	
Pod Area																		
Intermodal Trucks	3180	0.5	1.27	11.91	7.66	0.37	8.9	83.5	53.7	2.6	1	11	7	0				
Over-the-Road Trucks	1438	62.5	1.27	11.91	7.66	0.37	503.3	4719.6	3035.5	146.6	65	614	395	19				
Passenger Light Duty Autos	2662	18	0.37	2.24	0.22	0.04	78.2	473.2	46.5	8.5	10	62	6	1				
Passenger Light Duty Trucks	887	18	0.68	3.51	0.33	0.04	47.9	247.2	23.2	2.8	6	32	3	0				
Gateway Development Area																		
Passenger Light Duty Autos	14874	18	0.37	2.24	0.22	0.04	436.8	2644.3	259.7	47.2	57	344	34	6				
Passenger Light Duty Trucks	4958	18	0.68	3.51	0.33	0.04	267.6	1381.2	129.9	15.7	35	180	17	2				
16th and Wood Area																		
Passenger Light Duty Autos	10916	18	0.37	2.24	0.22	0.04	320.5	1940.5	190.6	34.7	42	252	25	5				
Passenger Light Duty Trucks	3639	18	0.68	3.51	0.33	0.04	196.4	1013.6	95.3	11.6	26	132	12	2				
TOTAL TRUCKS:							512.2	4803.1	3089.2	149.2	67	624	402	19				
TOTAL CARS:							1347.3	7699.9	745.2	120.4	175	1001	97	16				

1. assumption for vehicle mix for passenger cars: 75% Light Duty Auto, 25% Light Duty Truck

CARGO HANDLING EQUIPMENT EMISSIONS ESTIMATES

Container Throughput in 2010 (metric tons per year): **21.8**
 Container Throughput in 2020 (metric tons per year): **25.5**

Year 2010 Emissions (lbs/day) from Berths 55-58 EIR					
	CO	ROG	NO _x	SO ₂	PM
Top-Picks	197	70	484	21	29
Side-Picks	30	11	73	3	4
Hostling Tractor	187	58	599	16	37
Rubber-Tired Gantry	22	5	36	5	2.0
Fork Lifts	10	2	15	1	2.0
TOTAL:	446	146	1207	46	74

Year 2010 Emissions (tons/year) from Berths 55-58 EIR					
	CO	ROG	NO _x	SO ₂	PM
	36	13	88	4	5
	5	2	13	1	1
	34	11	109	3	7
	4	1	6	1	0
	2	0	3	0	0
TOTAL:	81	27	219	9	13

Year 2020 Emissions (lbs/day)*					
	CO	ROG	NO _x	SO ₂	PM
Top-Picks	230	82	566	25	34
Side-Picks	35	13	85	4	5
Hostling Tractor	219	68	701	19	43
Rubber-Tired Gantry	26	6	42	6	2.3
Fork Lifts	12	2	18	1	2.3
TOTAL:	522	171	1412	54	87

Year 2020 Emissions (tons/year)*					
	CO	ROG	NO _x	SO ₂	PM
	42	15	103	5	6
	6	2	15	1	1
	40	13	128	4	8
	5	1	7	1	0
	2	0	4	0	0
TOTAL:	95	32	256	11	15

* Berths 55-58 EIR emissions x yr 2020/yr 2010 container throughput ratio

Year 2020 Project Emissions (Year 2020 - Berths 55-58 yr 2010) - lbs/day					
	CO	ROG	NO _x	SO ₂	PM
Top-Picks	33	12	82	4	5
Side-Picks	5	2	12	1	1
Hostling Tractor	32	10	102	3	6
Rubber-Tired Gantry	4	1	6	1	0
Fork Lifts	2	0	3	0	0
TOTAL:	76	25	205	8	13

Year 2020 Project Emissions (Year 2020 - Berths 55-58 yr.)					
	CO	ROG	NO _x	SO ₂	PM
	6	2	15	1	1
	1	0	2	0	0
	6	2	19	1	1
	1	0	1	0	0
	0	0	1	0	0
TOTAL:	14	5	37	2	2

Notes:

1. Year 2020 emissions based on year 2010 emissions multiplied by the ratio of year 2020 to year 2010 container throughput.
2. Source of year 2010 emissions: Berths 55-58 EIR, URS Greiner Woodward-Clyde 1998.
3. Source of year 2020 container throughput: SFB CDC 2000.
4. Source of year 2010 container throughput: URS Greiner Woodward-Clyde 1998.

JIT Line Haul and Switch Engine Emissions Associated with the OARB Project

PROJECT

Number of Trains per Day: ^a 2
 Daily fuel use per train (gal): ^b 347.1
 Annual fuel use per train (gal): ^b 126692

Line-Haul	Emission Factors (g/gal) ^c			
	ROG	CO	NO _x	SO ₂ ^d
	5.4	26.6	103	16.33
				PM ₁₀
				3.6

Line-Haul	Emissions (lb/day)			
	ROG	CO	NO _x	SO ₂ ^d
	8	41	158	25
				PM ₁₀
				6

Line-Haul	Emissions (tons/year)			
	ROG	CO	NO _x	SO ₂ ^d
	2	7	29	5
				PM ₁₀
				1

^a Source: Traffic analysis for the OARB EIR (Dowling Associates 2002).

^b Source: JIT EIR (GAIA Consulting 1999).

^c EPA 1997: Emission Factors for Locomotives (EPA420-F-97-051) - for engines manufactured after 2004 (Tier 2).

^d From Berths 55-58 EIR (URS Greiner Woodward-Clyde 1998).

Railyard Equipment Emissions Estimates

Container Throughput in 2010 (metric tons per year): **21.8**
 Container Throughput in 2020 (metric tons per year): **25.5**

	Year 2010 Emissions (lbs/day) from the JIT EIR				
	CO	ROG	NO _x	SO ₂	PM
Rubber-Tired Gantry Crane	24.2	8.3	104.1	2.6	5
Side-Lift Piggy Packer	1.9	0.6	7.9	0.2	0.4
Hostling Tractor	25.2	7.9	80.8	2.2	5
IBC Tractor Lift	3.6	0.7	5.3	0.4	0.6
Mobile Car-Repair Crane	2.2	0.7	5.4	0.5	0.8
Mobile Car-Repair Truck	1	0	0	0	0.0
Supervisor Vehicle	0.8	0	0.1	0	0
Yard Van	1.7	0.1	0.2	0.1	0
Security Vehicle	2	0.1	0.1	0	0
Switch Engines	5	10	54	4	1.5
TOTAL:	68	28	258	10	13

	Year 2010 Emissions (tons/year) from the JIT EIR				
	CO	ROG	NO _x	SO ₂	PM
Rubber-Tired Gantry Crane	4	2	19	0	1
Side-Lift Piggy Packer	0	0	1	0	0
Hostling Tractor	5	1	15	0	1
IBC Tractor Lift	1	0	1	0	0
Mobile Car-Repair Crane	0	0	1	0	0
Mobile Car-Repair Truck	0	0	0	0	0.00
Supervisor Vehicle	0.14	0	0.01	0	0
Yard Van	0.3	0.01	0.03	0.01	0
Security Vehicle	0.36	0.01	0.02	0	0
Switch Engines	1	2	10	1	0.27
TOTAL:	12	5	47	2	2

	Year 2020 Emissions (lbs/day)*				
	CO	ROG	NO _x	SO ₂	PM
Rubber-Tired Gantry Crane	28	10	122	3	6
Side-Lift Piggy Packer	2	1	9	0	0
Hostling Tractor	29	9	95	3	6
IBC Tractor Lift	4	1	6	0	0.7
Mobile Car-Repair Crane	3	1	6	1	0.9
Mobile Car-Repair Truck	1	0	0	0	0.0
Supervisor Vehicle	1	0	0	0	0.0
Yard Van	2	0	0	0	0.0
Security Vehicle	2	0	0	0	0.0
Switch Engines	6	11	63	5	1.8
TOTAL:	80	33	301	12	16

	Year 2020 Emissions (tons/year)*				
	CO	ROG	NO _x	SO ₂	PM
Rubber-Tired Gantry Crane	5	2	22	1	1
Side-Lift Piggy Packer	0	0	2	0	0
Hostling Tractor	5	2	17	0	1
IBC Tractor Lift	1	0	1	0	0
Mobile Car-Repair Crane	0	0	1	0	0
Mobile Car-Repair Truck	0	0	0	0	0.00
Supervisor Vehicle	0	0	0	0	0.00
Yard Van	0	0	0	0	0.00
Security Vehicle	0	0	0	0	0.00
Switch Engines	1	2	11	1	0.32
TOTAL:	15	6	55	2	3

* JIT EIR emissions x yr 2020/yr 2010 container throughput ratio

	Year 2020 Project Emissions (Year 2020 - JIT yr 2010) - lbs/day				
	CO	ROG	NO _x	SO ₂	PM
Rubber-Tired Gantry Crane	4	1	18	0	1
Side-Lift Piggy Packer	0	0	1	0	0
Hostling Tractor	4	1	14	0	1
IBC Tractor Lift	1	0	1	0	0
Mobile Car-Repair Crane	0	0	1	0	0
Mobile Car-Repair Truck	0	0	0	0	0
Supervisor Vehicle	0	0	0	0	0
Yard Van	0	0	0	0	0
Security Vehicle	0	0	0	0	0
Switch Engines	1	2	9	1	0
TOTAL:	12	5	44	2	2

	Year 2020 Project Emissions (Year 2020 - JIT yr 2010)				
	CO	ROG	NO _x	SO ₂	PM
Rubber-Tired Gantry Crane	1	0	3	0	0
Side-Lift Piggy Packer	0	0	0	0	0
Hostling Tractor	1	0	3	0	0
IBC Tractor Lift	0	0	0	0	0
Mobile Car-Repair Crane	0	0	0	0	0
Mobile Car-Repair Truck	0	0	0	0	0
Supervisor Vehicle	0	0	0	0	0
Yard Van	0	0	0	0	0
Security Vehicle	0	0	0	0	0
Switch Engines	0	0	2	0	0
TOTAL:	2	1	8	0	0

OARB Area Redevelopment EIR
Calculation of Ship Emissions

Emission Unit	Mode	Emissions (tons / yr)				
		CO	ROG	NOx	SOx	PM
Container Ships	Cruising	55	17	648	366	55
Container Ships	Manuevering	15	5	170	96	14
Container Ships	Hoteling	31	43	247	118	9
Tugs	Assist	5	1	33	6	1
Totals		106	67	1099	586	79

**OARB Area Redevelopment EIR
Calculation of Ship Emmissions**

Year	Ship Visits / Year	Tug Emissions (tons / yr)					Tug Emissions (lbs. / day)				
		CO	ROG	NOx	SOx	PM	CO	ROG	NOx	SOx	PM
2020	645	4.5	1.4	33.1	5.9	0.7	24.7	7.9	181.5	32.5	3.8

Notes:

- 1 Fuel usage calculations for tugboats based on 0.05 gallons / hp-hr.
- 2 Tugboat maneuvering fuel usage based on 0.8 hours at 0.3 load factor for half speed assistance and 1.2 hours at 0.75 load factor for slow speed maneuvering assistance.
- 3 Tugboats are assumed to be 4,300 hp ocean going tugs operating during the maneuvering phase of container ship operation. On tugboat is assumed to assist each container ship arriving at and leaving from the Port.

OARB Area Redevelopment EIR
Calculation of Ship Emissions: Totals

Emission Unit	Mode	Emissions (tons / yr)				
		CO	ROG	NOx	SOx	PM
Container Ships	Cruising	55	17	648	366	55
Container Ships	Maneuvering	15	5	170	96	14
Container Ships	Hoteling	31	43	247	118	9
Tugs	Assist	5	1	33	6	1
Totals		106	67	1099	586	79

**OARB Area Redevelopment EIR
Calculation of Ship Emissions: Totals**

Emission Unit	Mode	Emissions (tons / yr)				
		CO	ROG	NOx	SOx	PM
Container Ships	Cruising	55.4	17.4	648.1	365.9	55.1
Container Ships	Manuevering	15.1	4.8	170.1	96.0	14.5
Container Ships	Hoteling	30.5	43.0	247.2	118.3	8.9
Tugs	Assist	4.5	1.4	33.1	5.9	0.7
Totals		105.6	66.7	1,098.5	586.2	79.2

OARB Area Redevelopment EIR
Calculation of Ship Emmissions: Tugs

Year	Ship Visits / Year	Tug Emissions (tons / yr)					Tug Emissions (lbs. / day)				
		CO	ROG	NOx	SOx	PM	CO	ROG	NOx	SOx	PM
2020	645	4.5	1.4	33.1	5.9	0.7	24.7	7.9	181.5	32.5	3.8

Notes:

- 1 Fuel usage calculations for tugboats based on 0.05 gallons / hp-hr.
- 2 Tugboat maneuvering fuel usage based on 0.8 hours at 0.3 load factor for half speed assistance and 1.2 hours at 0.75 load factor for slow speed maneuvering assistance.
- 3 Tugboats are assumed to be 4,300 hp ocean going tugs operating during the maneuvering phase of container ship operation. On tugboat is assumed to assist each container ship arriving at and leaving from the Port.

OARB Area Redevelopment EIR
Calculation of Ship Emissions: Container Vessels

Year	Ship Visits / Year	Ship type	Ship Size (DWT)	HP	Cruise		Maneuvering		Hoteling		Hoteling Emissions (Tons / Year)					Hoteling Emissions (lbs. / day)				
					Fuel Usage (gallons / ship visit)	CO	ROG	NOx	SOx	PM10	CO	ROG	NOx	SOx	PM10					
2020	290	Motorship	66220	42533	3403	893	1609	13.0	18.3	105.4	50.4	3.8	71.3	100.5	577.3	276.3	20.8			
2020	145	Motorship	63750	38739	3099	814	1542	6.2	8.8	50.5	24.2	1.8	34.2	48.2	276.6	132.4	10.0			
2020	116	Motorship	51920	30116	2409	632	1475	4.8	6.7	38.6	18.5	1.4	26.2	36.8	211.7	101.3	7.6			
2020	29	Motorship	39060	26117	2089	548	1341	1.1	1.5	8.8	4.2	0.3	5.9	8.4	48.1	23.0	1.7			
2020	0	Motorship	26280	25499	2040	535	1207	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
2020	65	Steamship	37342	32000	3686	968	2995	5.4	7.7	44.0	21.0	1.6	29.8	41.9	240.8	115.3	8.7			
2020	645	Total All Ships					Totals	30.5	43.0	247.2	118.3	8.9	167.4	235.8	1354.5	646.3	48.9			

Notes:

- Fuel usage calculations for motorships based on 0.05 gallons / hp-hr. (ARB 1984).
- Fuel usage calculations for steamships based on 0.072 gallons / hp-hr (ARB 1984)
- Cruising fuel usage based on a load factor of 0.8 and a 2 hour round trip cruise duration in a 3 mile zone.
- Motorship maneuvering fuel usage based on 0.8 hours round trip and a 0.3 load factor for half speed and 1.2 hours round trip and a 0.15 load factor for slow speed maneuvering.
- Steamship maneuvering fuel usage based on 0.8 hours round trip and a 0.3 load factor for half speed and 1.2 hours round trip and a 0.15 load factor for slow speed maneuvering.
- Hoteling fuel usage based on 1000 kW of electricity (1341 hp) and ship durations for motorships based on ship size as follows:

Ship size	Duration (Hrs)
66220	24
63750	23
51920	22
39060	20
26280	18
- Steamship hoteling fuel usage based on a load factor of 0.1 and a duration of 13.0 hrs.

OARB Area Red /pment EIR
Calculation of Ship Emissions: Container Vessels

Year	Ship Visits / Year	Ship type	Ship Size (DWT)	HP	Cruise		Maneuvering		Hoteling		Cruising Emissions (Tons / Year)					Cruising Emissions (lbs. / day)				
					Fuel Usage (gallons / ship visit)	CO	ROG	NOx	SOx	PM10	CO	ROG	NOx	SOx	PM10					
2020	290	Motorship	66220	42533	3403	893	1609	27.1	8.5	317.2	179.1	27.0	148.7	46.8	1738.3	981.4	147.9			
2020	145	Motorship	63750	38739	3099	814	1542	12.4	3.9	144.5	81.6	12.3	67.7	21.3	791.6	446.9	67.3			
2020	116	Motorship	51920	30116	2409	632	1475	7.7	2.4	89.9	50.7	7.6	42.1	13.2	492.3	277.9	41.9			
2020	29	Motorship	39060	26117	2089	548	1341	1.7	0.5	19.5	11.0	1.7	9.1	2.9	106.7	60.3	9.1			
2020	0	Motorship	26280	25499	2040	535	1207	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
2020	65	Steamship	37342	32000	3686	968	2995	6.6	2.1	77.0	43.5	6.6	36.1	11.4	422.1	238.3	35.9			
2020	645	Total All Ships					Totals	55.4	17.4	648.1	365.9	55.1	303.8	95.5	3551.2	2004.8	302.1			

Notes:

- 1 Fuel usage calculations for motorships based on 0.05 gallons / hp-hr. (ARB 1984).
- 2 Fuel usage calculations for steamships based on 0.072 gallons / hp-hr (ARB 1984)
- 3 Cruising fuel usage based on a load factor of 0.8 and a 2 hour round trip cruise duration in a 3 mile zone.
- 4 Motorship maneuvering fuel usage based on 0.8 hours round trip and a 0.3 load factor for half speed and 1.2 hours round trip and a 0.15 load factor for slow speed maneuvering.
- 5 Steamship maneuvering fuel usage based on 0.8 hours round trip and a 0.3 load factor for half speed and 1.2 hours round trip and a 0.15 load factor for slow speed maneuvering.
- 6 Hoteling fuel usage based on 1000 kW of electricity (1341 hp) and ship durations for motorships based on ship size as follows:

Ship size	Duration (Hrs)
66220	24
63750	23
51920	22
39060	20
26280	18
- 7 Steamship hoteling fuel usage based on a load factor of 0.1 and a duration of 13.0 hrs.

OARB Area Redevelopment EIR
 Calculation of Ship Emissions: Container Vessels

Year	Ship Visits / Year	Ship type	Ship Size (DWT)	HP	Cruise		Maneuvering		Hotelling		Maneuvering Emissions (Tons / Year)					Maneuvering Emissions (lbs. / day)				
					Fuel Usage (gallons / ship visit)	Fuel Usage (gallons / ship visit)	CO	ROG	NOx	SOx	PM10	CO	ROG	NOx	SOx	PM10	CO	ROG	NOx	SOx
2020	290	Motorship	66220	42533	3403	893	1609	7.4	2.4	83.3	47.0	7.1	40.5	12.9	456.3	257.6	38.8			
2020	145	Motorship	63750	38739	3099	814	1542	3.4	1.1	37.9	21.4	3.2	18.4	5.9	207.8	117.3	17.7			
2020	116	Motorship	51920	30116	2409	632	1475	2.1	0.7	23.6	13.3	2.0	11.5	3.7	129.2	73.0	11.0			
2020	29	Motorship	39060	26117	2089	548	1341	0.5	0.1	5.1	2.9	0.4	2.5	0.8	28.0	15.8	2.4			
2020	0	Motorship	26280	25499	2040	535	1207	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
2020	65	Steamship	37342	32000	3686	968	2995	1.8	0.6	20.2	11.4	1.7	9.8	3.1	110.8	62.6	9.4			
2020	645	Total All Ships					Totals	15.1	4.8	170.1	96.0	14.5	82.6	26.4	932.2	526.3	79.3			

Notes:

- 1 Fuel usage calculations for motorships based on 0.05 gallons / hp-hr. (ARB 1984).
- 2 Fuel usage calculations for steamships based on 0.072 gallons / hp-hr (ARB 1984)
- 3 Cruising fuel usage based on a load factor of 0.8 and a 2 hour round trip cruise duration in a 3 mile zone.
- 4 Motorship maneuvering fuel usage based on 0.8 hours round trip and a 0.3 load factor for half speed and 1.2 hours round trip and a 0.15 load factor for slow speed maneuvering.
- 5 Steamship maneuvering fuel usage based on 0.8 hours round trip and a 0.3 load factor for half speed and 1.2 hours round trip and a 0.15 load factor for slow speed maneuvering.
- 6 Hotelling fuel usage based on 1000 kW of electricity (1341 hp) and ship durations for motorships based on ship size as follows:

Ship size	Duration (Hrs)
66220	24
63750	23
51920	22
39060	20
26280	18
- 7 Steamship hotelling fuel usage based on a load factor of 0.1 and a duration of 13.0 hrs.

4.4B Ship and Tugboat Emissions Calculation Methodology

Marine Operations Calculation Methodology

Ships produce air emissions when burning fuel for propulsion or for electrical or steam generation. Three modes of ship operations occur in the Bay Area air basin: cruising, maneuvering, and hoteling. The first mode of operation is the “straight line” movement of the ships toward the Port in the ocean-shipping lane. The second mode is the maneuvering of the ship once it is in the San Francisco Bay. The last mode is the operation of auxiliary boilers or generators to supply power, etc., to the ship while it is berthed. Tugboat emissions from burning fuel while assisting ships to Port facilities are also considered here.

Emissions from ships transiting the Port will change as a result of the implementation of the OARB redevelopment plan. Specifically, development of the maritime and OARB sub-areas will result in changes to the number of ships entering the Port. The PORT performed an analysis of the effect of the OARB redevelopment plan on ship transit data. Ship visit data is based on ship sizes entering the Port and is dependent on the size and availability of berths, container demand, and channel depth. The information on ship visits was provided to URS for this EIR by the Port and is described below.

Ship Visit Analysis

The Port provided the estimate of ships visiting Port facilities in the year 2020. The Port estimated the number of ships visiting the Port in 2020 that would be associated with redevelopment at 645 ships. The size profile of ships visiting the Port in 2020 was assumed similar to the profile of ships used in the Berths 55-58 EIR and includes the assumption that the channel deepening project occurs prior to the time of analysis.

Emission Factors for Marine Operations

Justification of Emission Factors Used. The emission factors used for Marine Vessel emissions are the same as those used in previous Vision 2000 documents including the “-50-Foot Channel Deepening Project EIS” and the “Berths 55-58 EIS”. These emission factors were determined to be the most representative for the type of ships using the Port and provide a measure of consistency between the various Port environmental reports. Only the tug emission factors have changed since the EIS work done previously. The new tug emission factors are based on emission factors used by the Port as provided by CARB. The emission factors were used by the Port for baseline emission level estimates as part of air emission mitigation measures enacted by the Port and included in CARB’s Carl Moyer Program

Ship and Tug Emission Factors Used in this Study

Ship Type	Operating Mode	Emission Factors (lbs/1,000 gal)						
		TOGs	ROGs	CO	NO _x	SO ₂	PM	PM ₁₀
Motor	Cruise	18.0	17.3	55.0	643.0	363.0	57.0	54.7
	Maneuvering	19.0	18.2	57.0	643.0	363.0	57.0	54.7
	Hoteling	81.9	78.6	55.8	451.5	216.1	17.0	16.3
Steam	Cruise	2.0	1.9	7.0	64.0	363.0	57.0	54.7
	Maneuvering	0.7	0.7	3.5	56.0	363.0	20.0	19.2
	Hoteling	3.0	2.9	4.0	22.2	71.0	15.0	14.4
Tugs	Maneuvering	19.0	18.2	57.0	419.0	75.0	9.0	8.8

The cruise and maneuvering emission factors for motor and steam ships were taken from a study done by Acurex Environmental (1996) for SCAQMD's. The motor ship hoteling emission factors for CO, NO_x, and SO₂ are from a study done by TRC (1989), and the remaining emission factors are from AP-42, Volume II (EPA, 1995). The steam ship hoteling factors are from a study done by Booz-Allen & Hamilton (1991) for emissions from steam ships in the California area.

Operational Data for Ship Transit

The operational data used for the analysis of emissions from marine vessels is based on previous Vision 2000 EIR data. Fuel use for all ships are based on average transit times from a location 25 miles from the entrance to the San Francisco Bay as used in the Berths 55-58 EIR. Transit times are divided into the transit modes as described above. The time attributed to ship transit includes 2 hours of roundtrip travel per ship for cruise operations. Maneuvering operations include 0.8 hours of half speed maneuvering, and 1.2 hours of slow speed maneuvering roundtrip per ship. Hoteling times are based on ship size as provided in the Berths 55-58 EIR. Conversion of hours of operation to gallons of fuel use is based on ship horsepower data and 0.05 gallons of fuel per horsepower-hour of operation. (ARB report to the CA State Legislature, 1984).

Load factors for cruising and maneuvering modes are recommended by the EPA in their report "Analysis of Commercial Marine Vessels Emissions and Fuel Consumption Data (EPA420R-R-00-002)" (EPA, 2000). The load factors used are 80 % for cruising, 30 % for half speed maneuvering, and 15 % for slow speed maneuvering. Hoteling loads are based on an average auxiliary load of 1,000 kilowatts (1,341 hp).

Horsepower information for ships transiting the Port is based on the information on transit data provided by the Port and general horsepower classification used in the Berths 55-58 EIR.

Emissions Calculations

Emissions were calculated using the following equation:

$$E = Activity * FuelUse * LoadFactor * hp * hr * EF / 1000 / 2000$$

- Where
- E = Pollutant Specific Emissions (tons/year)
 - Activity = # ships visiting the Port (Ships / year)
 - FuelUse = An engine specific conversion constant (gallons/hp-hr)
 - Loadfactor = Average percentage of bulk power used by vessel under certain conditions (%)
 - Hp = Engine horsepower rating (hp)
 - Hr = Hours of activity (hours)
 - EF = Pollutant Specific Emission Factors (lbs. / 1,000 gallons)

Marine vessel emissions were calculated using this equation and the data presented in the paragraphs above. The marine vessel data used to calculate emissions is summarized for each category of ship in the table below:

Year	Ship Visits / Year	Ship type	Ship Size (DWT)	HP	Cruise	Maneuvering	Hoteling
					Fuel Usage (gallons / ship visit)	Fuel Usage (gallons / ship visit)	Fuel Usage (gallons / ship visit)
2020	290	Motorship	66220	42533	3403	893	1609
2020	145	Motorship	63750	38739	3099	814	1542
2020	116	Motorship	51920	30116	2409	632	1475
2020	29	Motorship	39060	26117	2089	548	1341
2020	0	Motorship	26280	25499	2040	535	1207
2020	65	Steamship	37342	32000	3686	968	2995
2020	645	Total Number of Ships					

Notes:

- 1 Fuel usage calculations for motorships based on 0.05 gallons / hp-hr. (ARB 1984).
- 2 Fuel usage calculations for steamships based on 0.072 gallons / hp-hr (ARB 1984)
- 3 Cruising fuel usage based on a load factor of 0.8 and a 2-hour round trip cruise duration in a 3 mile zone.
- 4 Motorship maneuvering fuel usage based on 0.8 hours round trip and a 0.3 load factor for half speed and 1.2 hour's round trip and a 0.15 load factor for slow speed maneuvering.
- 5 Steamship maneuvering fuel usage based on 0.8 hours round trip and a 0.3 load factor for half speed and 1.2 hour's round trip and a 0.15 load factor for slow speed maneuvering.

- 6 Hoteling fuel usage based on 1000 kW of electricity (1341 hp) and ship duration for motorships based on ship size as follows:

Ship size Duration (Hrs)

66220 24

63750 23

51920 22

39060 20

26280 18

- 7 Steamship Hoteling fuel usage based on a load factor of 0.1 and a duration of 13.0 hrs.

Using this data and the data for tugboats, the emissions for marine vessels and tugboats were calculated. The results of these calculations are shown in the table below:

Vessel Type	Operating Mode	Emissions (tons / yr)				
		CO	ROG	NOx	SOx	PM10
Container Ships	Cruising	55.4	17.4	648.1	365.9	55.1
Container Ships	Maneuvering	15.1	4.8	170.1	96.0	14.5
Container Ships	Hoteling	30.5	43.0	247.2	118.3	8.9
Tugs	Assist	4.5	1.4	33.1	5.9	0.7
	Totals	105.6	66.7	1,098.5	586.2	79.2

Marine Operations Calculation Methodology

Ships produce air emissions when burning fuel for propulsion or for electrical or steam generation. Three modes of ship operations occur in the Bay Area air basin: cruising, maneuvering, and hoteling. The first mode of operation is the “straight line” movement of the ships toward the Port in the ocean-shipping lane. The second mode is the maneuvering of the ship once it is in the San Francisco Bay. The last mode is the operation of auxiliary boilers or generators to supply power, etc., to the ship while it is berthed. Tugboat emissions from burning fuel while assisting ships to Port facilities are also considered here.

Emissions from ships transiting the Port will change as a result of the implementation of the OARB redevelopment plan. Specifically, development of the maritime and OARB sub-areas will result in changes to the number of ships entering the Port. The PORT performed an analysis of the effect of the OARB redevelopment plan on ship transit data. Ship visit data is based on ship sizes entering the Port and is dependent on the size and availability of berths, container demand, and channel depth. The information on ship visits was provided to URS for this EIR by the Port and is described below.

Ship Visit Analysis

The Port provided the estimate of ships visiting Port facilities in the year 2020. The Port estimated the number of ships visiting the Port in 2020 that would be associated with redevelopment at 645 ships. The size profile of ships visiting the Port in 2020 was assumed similar to the profile of ships used in the Berths 55-58 EIR and includes the assumption that the channel deepening project occurs prior to the time of analysis.

Emission Factors for Marine Operations

Justification of Emission Factors Used. The emission factors used for Marine Vessel emissions are the same as those used in previous Vision 2000 documents including the “-50-Foot Channel Deepening Project EIS” and the “Berths 55-58 EIS”. These emission factors were determined to be the most representative for the type of ships using the Port and provide a measure of consistency between the various Port environmental reports. Only the tug emission factors have changed since the EIS work done previously. The new tug emission factors are based on emission factors used by the Port as provided by CARB. The emission factors were used by the Port for baseline emission level estimates as part of air emission mitigation measures enacted by the Port and included in CARB’s Carl Moyer Program

Ship and Tug Emission Factors Used in this Study

Ship Type	Operating Mode	Emission Factors (lbs/1,000 gal)						
		TOGs	ROGs	CO	NO _x	SO ₂	PM	PM ₁₀
Motor	Cruise	18.0	17.3	55.0	643.0	363.0	57.0	54.7
	Maneuvering	19.0	18.2	57.0	643.0	363.0	57.0	54.7
	Hoteling	81.9	78.6	55.8	451.5	216.1	17.0	16.3
Steam	Cruise	2.0	1.9	7.0	64.0	363.0	57.0	54.7
	Maneuvering	0.7	0.7	3.5	56.0	363.0	20.0	19.2
	Hoteling	3.0	2.9	4.0	22.2	71.0	15.0	14.4
Tugs	Maneuvering	19.0	18.2	57.0	419.0	75.0	9.0	8.8

The cruise and maneuvering emission factors for motor and steam ships were taken from a study done by Acurex Environmental (1996) for SCAQMD's. The motor ship hoteling emission factors for CO, NO_x, and SO₂ are from a study done by TRC (1989), and the remaining emission factors are from AP-42, Volume II (EPA, 1995). The steam ship hoteling factors are from a study done by Booz-Allen & Hamilton (1991) for emissions from steam ships in the California area.

Operational Data for Ship Transit

The operational data used for the analysis of emissions from marine vessels is based on previous Vision 2000 EIR data. Fuel use for all ships are based on average transit times from a location 25 miles from the entrance to the San Francisco Bay as used in the Berths 55-58 EIR. Transit times are divided into the transit modes as described above. The time attributed to ship transit includes 2 hours of roundtrip travel per ship for cruise operations. Maneuvering operations include 0.8 hours of half speed maneuvering, and 1.2 hours of slow speed maneuvering roundtrip per ship. Hoteling times are based on ship size as provided in the Berths 55-58 EIR. Conversion of hours of operation to gallons of fuel use is based on ship horsepower data and 0.05 gallons of fuel per horsepower-hour of operation. (ARB report to the CA State Legislature, 1984).

Load factors for cruising and maneuvering modes are recommended by the EPA in their report "Analysis of Commercial Marine Vessels Emissions and Fuel Consumption Data (EPA420R-R-00-002)" (EPA, 2000). The load factors used are 80 % for cruising, 30 % for half speed maneuvering, and 15 % for slow speed maneuvering. Hoteling loads are based on an average auxiliary load of 1,000 kilowatts (1,341 hp).

Horsepower information for ships transiting the Port is based on the information on transit data provided by the Port and general horsepower classification used in the Berths 55-58 EIR.

Emissions Calculations

Emissions were calculated using the following equation:

$$E = Activity * FuelUse * LoadFactor * hp * hr * EF / 1000 / 2000$$

- Where
- E = Pollutant Specific Emissions (tons/year)
 - Activity = # ships visiting the Port (Ships / year)
 - FuelUse = An engine specific conversion constant (gallons/hp-hr)
 - Loadfactor = Average percentage of bulk power used by vessel under certain conditions (%)
 - Hp = Engine horsepower rating (hp)
 - Hr = Hours of activity (hours)
 - EF = Pollutant Specific Emission Factors (lbs. / 1,000 gallons)

Marine vessel emissions were calculated using this equation and the data presented in the paragraphs above. The marine vessel data used to calculate emissions is summarized for each category of ship in the table below:

Year	Ship Visits / Year	Ship type	Ship Size (DWT)	HP	Cruise	Maneuvering	Hoteling
					Fuel Usage (gallons / ship visit)	Fuel Usage (gallons / ship visit)	Fuel Usage (gallons / ship visit)
2020	290	Motorship	66220	42533	3403	893	1609
2020	145	Motorship	63750	38739	3099	814	1542
2020	116	Motorship	51920	30116	2409	632	1475
2020	29	Motorship	39060	26117	2089	548	1341
2020	0	Motorship	26280	25499	2040	535	1207
2020	65	Steamship	37342	32000	3686	968	2995
2020	645	Total Number of Ships					

Notes:

- 1 Fuel usage calculations for motorships based on 0.05 gallons / hp-hr. (ARB 1984).
- 2 Fuel usage calculations for steamships based on 0.072 gallons / hp-hr (ARB 1984)
- 3 Cruising fuel usage based on a load factor of 0.8 and a 2-hour round trip cruise duration in a 3 mile zone.
- 4 Motorship maneuvering fuel usage based on 0.8 hours round trip and a 0.3 load factor for half speed and 1.2 hour's round trip and a 0.15 load factor for slow speed maneuvering.
- 5 Steamship maneuvering fuel usage based on 0.8 hours round trip and a 0.3 load factor for half speed and 1.2 hour's round trip and a 0.15 load factor for slow speed maneuvering.

- 6 Hoteling fuel usage based on 1000 kW of electricity (1341 hp) and ship duration for motorships based on ship size as follows:

Ship size Duration (Hrs)

66220 24

63750 23

51920 22

39060 20

26280 18

- 7 Steamship Hoteling fuel usage based on a load factor of 0.1 and a duration of 13.0 hrs.

Using this data and the data for tugboats, the emissions for marine vessels and tugboats were calculated. The results of these calculations are shown in the table below:

Vessel Type	Operating Mode	Emissions (tons / yr)				
		CO	ROG	NOx	SOx	PM10
Container Ships	Cruising	55.4	17.4	648.1	365.9	55.1
Container Ships	Maneuvering	15.1	4.8	170.1	96.0	14.5
Container Ships	Hoteling	30.5	43.0	247.2	118.3	8.9
Tugs	Assist	4.5	1.4	33.1	5.9	0.7
Totals		105.6	66.7	1,098.5	586.2	79.2

**4.4C Proposed Mitigation Measures from
the Berths 55-58 EIR**

Proposed Mitigation Measures from the Berths 55-58 EIR

The following mitigation measures were proposed in the Berths 55-58 EIR to mitigate the air quality impacts of Vision 2000 Program.

Proposed Mitigation Package

ID Measure	Capital Cost		Other Funding Sources	Emission Reduction Potential (tons/year)		
	% Budget	\$1,000		ROG	PM ₁₀	NO _x
M1-Subsidize retrofit/repower diesel truck engines	20%	1,485	Yes	11	6	28
M2-Subsidize retrofit/repower cargo handling equipment	65%	4,900	Yes	49	31	397
M3-Subsidize retrofit or repower one diesel tug as pilot program (a)	6.7%	500	Yes	6	3	0
M4-Subsidize repower AC Transit buses	7.1%	535	Yes	<1	<1	4.6
M5-Encourage retrofit of switch engines	<1%	10	Yes	<1	<1	12.4
M6-Design/operational measures (e)	<1%	10(b)	Yes (c)	(d)	(d)	(d)
M7-Study Red Star Yeast ROG control	<1%	25	No	(f)	(d)	(d)
M8- Study and implement ROG control at Precision Cast	<1%	30	No	(f)	(d)	(d)
M9-Study heavy duty truck test station	<1%	5	Yes	(d)	(d)	(d)
Totals	100%	7,500		66	40	442

(a) The estimate of benefits is for retrofitting a tug with exhaust after-treatment; repowering with new diesel engines would reduce ROG by 0.5 tons, NO_x by 4.5 tons, PM₁₀ by 0.3 tons

(b) Operating costs will be in the range of \$45-50,000 per year.

(c) Not all components are eligible for alternative funding

(d) Benefits not quantified due to insufficient information

(e) Measures are described under description of M6

(f) Firm estimates of benefits not available but generally expected to be up to 45 tons/yr for Red Star Yeast and about 6 tons/yr for Precision Cast Products

The nine proposed mitigation measures listed above reflect the Port's emphasis on a balanced but cost-effective approach. Approximately 65 percent of the \$7.5 million air quality mitigation budget is proposed to be allocated to subsidize the retrofit and repowering of diesel-powered cargo-handling equipment (M2). Available information indicates that M2 is the most cost-effective measure, produces greater emissions reduction benefit than other measures and, geographically, will produce substantial mitigation in the Near-Port/West Oakland area. Proposed measure M1, which is allocated 20 percent of the budget, will be directed to retrofit and repower cargo trucks that serve the Port extensively and operate primarily in the San Francisco Bay Area. In combination, proposed measures M1 and M2 are expected to yield at least 90 percent of the ROG, PM₁₀ and NO_x reductions of the full mitigation package. The remaining 15 percent of the budget is allocated to a series of smaller measures that address sources and operations that are highly visible and of concern to Port neighbors. Reductions cannot be estimated for proposed measures M6 to M9. In the case of M6, benefits will depend primarily on voluntary action by truckers, employees, and tenants. Measures M7 and M9 are studies. Potential benefits depend on the outcome of each study. Whenever feasible, the Port will supplement its mitigation budget with other sources of funding and thereby further increase mitigation benefits.

Proposed Mitigation Measure 1: Emission Reductions from Transport Trucks

The Port proposes to implement actions to reduce the impact of diesel-powered truck emissions on the surrounding area.

Measure: Subsidize the cost of repowering diesel trucks with new engines meeting California emission standards for new diesel engines, or add-on exhaust treatment devices such as soot traps and catalytic converters. This subsidy would be prioritized for those pieces of equipment that have the largest remaining period of useful life.

Available to: Port-owned trucks and owners of trucks primarily using Port facilities and fleet owners in the West Oakland neighborhood. Preference will be given to fleet owners in West Oakland that serve the Port, and operate primarily in the Bay Area, eg., Lodi Truck Service and Roadway Express identified through the field analysis.

Other elements of measure: This measure will be supplemented by other funding sources described in Table C2-1 (e.g., the "Carl Moyer Program," and research and development projects).

Funding: Approximately \$1,485,000 This amount will subsidize retrofit of approximately 110 trucks with new, cleaner engines. If truck owners use these funds to add exhaust treatment to existing engines, a larger number of trucks can be retrofitted.

Potential emission reductions:¹

¹ Potential emission reductions assume that the Port subsidizes 75 percent of the cost of repowering/retrofitting the stated number of engines.

Emission Reduction (tons/year)		
NO _x	PM ₁₀	ROGs
28	6	11

Proposed Mitigation Measure 2: Emission Reductions from Cargo-Handling Equipment

The Port proposes to implement actions to reduce the impact of diesel-powered cargo-handling equipment emissions on air quality.

Measure: Subsidize the cost of repowering diesel cargo-handling equipment engines at the marine terminals with new engines meeting California emission standards for new diesel engines or add-on exhaust treatment devices including soot traps and catalytic converters. This measure would apply to cargo-handling equipment at existing container yards (the assumption is that the new container yards would be equipped with newer, clean burning equipment).

Available to: Tenants and equipment operators at Port facilities.

Other elements of measure: This subsidy will be supplemented to the extent possible by other funding sources described in Table C2-1.

Funding: Approximately \$4,900,000. This funding would allow repowering/retrofit of about 350 pieces of cargo-handling equipment.

Potential emission reductions:

Emission Reduction (tons/year)		
NO _x	PM ₁₀	ROGs
397	31	49

Proposed Mitigation Measure 3: Emission Reductions from Tugboats

The Port proposes to implement actions to reduce the impact of tugboat emissions on the surrounding area.

Measure: 1) Subsidize the retrofit of one diesel tugboat as a demonstration project with new engines meeting California emission standards for new diesel engines, or add-on exhaust treatment devices including soot traps and catalytic converters, or with a new diesel engine.

Available to: Owners of tugboats operating from Port-based facilities.

Other elements of measure: This subsidy will be supplemented to the extent possible by other funding sources described in Table C2-1.

Funding: Approximately \$500,000

Potential emission reductions:

Emission Reduction (tons/year)			
NO _x	PM ₁₀	ROGs	
4.5	0.3	0.5	(for new diesel engines)
0	3	6	(for add-on exhaust treatment)

Proposed Mitigation Measure 4: Emission Reductions from AC Transit Buses

The Port proposes to implement actions to reduce the impact of diesel-powered bus emissions on the West Oakland area.

Measure: Subsidize the repowering of diesel bus engines with new engines meeting California emission standards for new diesel engines, or with alternative fuel engines. This measure is targeted to those buses that operate in the West Oakland, Emeryville, and Alameda area.

Available to: AC Transit

Funding: Approximately \$535,000 (funding for approximately 27 buses)

Emission reductions:

Emission Reduction (tons/year)		
NO _x	PM ₁₀	ROGs
4.6	<1	<1

Proposed Mitigation Measure 5: Emission Reductions from Train Switching Operations

The Port proposes to implement actions to reduce the impact of diesel-powered locomotive emissions on West Oakland area.

Measure: When the new JIT is built, the Port intends to request the operator of switch engines operating at the terminal to use engines that meet the requirements of the recently promulgated federal regulation limiting locomotive emissions.

Other elements of measure: Implementation of this measure will encourage that the allocation of switching locomotives with new or rebuilt engines take into account the desire of the Port to minimize emissions related to switching activities.

Funding: Approximately \$10,000 for the Port. This will be used to assist the operator to seek supplemental funding.

Emission reductions:

Emission Reduction (tons/year)		
NO _x	PM ₁₀	ROGs
12.4	<1	<1

Proposed Mitigation Measure 6: Emission Reductions from Operational Features of Port Facilities

The Port proposes to include features in the design and operation of new facilities that will tend to minimize emissions.

Measure: The following features will be a part of the design of new Port facilities:

- 6.1 Provisions for cold ironing tugboats while berthed (This is included in the Berths 55-58 Project. The new tugboat berth will be fitted to provide shoreside power to moored tugs.)
- 6.2 Port-subsidized 24-hour truck parking facilities in the maritime area to minimize truck idling on neighborhood streets (This is included in the Berths 55-58 Project. Subsidized parking will be provided at Berth 59 and other locations nearby.)
- 6.3 Configure parking to minimize traffic. The Port will design parking at future facilities so that traffic is minimized.
- 6.4 Synchronize traffic signals. The Port will work with the City of Oakland to synchronize traffic signal timing in West Oakland on routes leading to the Port so that as traffic volumes increase with the implementation of Vision 2000 projects, traffic signal timing is adjusted to handle the increase in volumes. The Port will allocate approximately \$10,000 to this effort.

The following practices will be a part of future operations at the Port (and in some cases, these are already in place):

- 6.5 Participate in "Spare the Air Days." The Port will also work with its tenants through newsletters and other communications to encourage tenant employees to use carpool or alternate modes of transport on Spare the Air days. The Port will contribute approximately \$5,000 annually to this program.
- 6.6 Work trip reduction program for maritime employees. The Port will set aside \$25,000 each year to provide mass transit subsidies. These will be offered to Port employees first, and any remaining money would be offered to employees of Port tenants.

- 6.7 Establishment of an employee cashout policy at the marine terminals. The Port will contribute approximately \$2,500 annually to implement this program.
- 6.8 Restrictions on the supply of parking for tenant vehicles.
- 6.9 Engine maintenance of Port and tenant vehicles. The Port will inform its maintenance staff and its tenants of the importance of regular maintenance on vehicles in order to reduce emissions, through regular workshop and training sessions. The Port plans to contribute approximately \$10,000 annually to this training program.
- 6.10 Truck driver training program. The Port will develop its truck driver training program and use it to inform truckers of the need to reduce emissions from truck idling. Approximately \$5,000 will be contributed annually to this program.

Other elements of measure: Implementation of this group of measures will require that design of planned Port facilities incorporate the specific mitigation provisions listed. In addition, it will be necessary to develop operational plans to ensure that future operations properly use the constructed facilities. The operational measures that are listed above will require ongoing commitment of Port resources. The measures will require communications with and cooperation of Port tenants to make this measure most effective. The measure will also rely on continued operation of government sponsored transportation programs.

Funding: The constructed portions of this measure can be completed through the design of new Port facilities. Operational components of this measure will require Port personnel resources on an ongoing basis to coordinate program elements. It is likely that a person year of additional effort will be required.

Emission reductions: This measure will reduce Port-related emissions; however, the magnitude of emissions reduction is not quantifiable.

Proposed Mitigation Measure 7: Engineering Study

The Port proposes to examine the potential to reduce emissions from a stationary source in West Oakland.

Measure: Conduct an engineering study to determine whether cost-effective measures exist to reduce ROG emissions from Red Star Yeast facility in West Oakland.

Other elements of measure: It is unknown at this time whether the facility owner would be amenable to this study or controls.

Funding: \$25,000

Potential emission reductions: Up to 45 tons/year of ROG.

Proposed Mitigation Measure 8: Engineering Study/Controls

The Port proposes to assist a West Oakland business with implementing emission controls.

Measure: Conduct an engineering study and subsidize implementation of controls (such as ducting and venting) to control emissions of ROG.

Other elements of measure: It is unknown at this time whether the facility owner would be amenable to this study or controls.

Funding: \$30,000

Potential emission reduction: Up to 6.3 tons/year of ROG

Proposed Mitigation Measure 9: Testing Station

The Port proposes to further reduce diesel truck emissions in the Port area.

Measure: The Port will contact CARB and work with that agency to determine the feasibility and potential benefits of establishing a heavy-duty diesel truck emission testing station in the Port area.

Other elements of measure: None

Funding: \$5,000

Potential emission reductions: Unknown

Mitigation Package - Port-Related Operational Emissions

The nine mitigation measures identified above will form an effective program to mitigate the impact of potential emissions increases associated with implementation of the Vision 2000 Program. The measures will:

- Significantly decrease emissions
 - decrease NO_x emissions by up to 442 tons per year
 - decrease PM₁₀ emissions by up to 40 tons per year
 - decrease ROG emissions by up to 66 tons per year
- Cost \$7,500,000 in capital costs
- Provide direct benefits to the West Oakland, Emeryville, and Alameda communities by targeting local emission reductions

- Provide regional air quality benefits by reducing overall emissions
- Form the basis for a continuing program at the Port to minimize emissions

The Port's overriding policy goal is a mitigation package that is both balanced and highly cost-effective. The Port intends to invest its air quality mitigation resources in a way that yields the maximum reduction in pollutants of concern in the Bay Area. At this stage in the decision process, the goal of cost-effectiveness can best be served by retaining an appropriate level of flexibility. The following considerations underscore the desirability of retaining flexibility:

- Control technology is evolving rapidly. A number of emission reduction options that are not commercially available today, and may be more cost-effective than those measures that are available, are expected to come on line in the next 1-3 years. The Port is, for example, funding a study of the future viability of using alternative fuel cargo handling equipment. At present, this technology is not commercially available, but the situation could change in the next 2-3 years.
- Additional funding sources of mitigation measures will become available in the near future. The CARB, for example, is developing governing regulations and eligibility criteria for the "Carl Moyer Program," which will provide \$25,000,000 statewide to subsidize the early introduction of clean technology engines and retrofit hardware for many of the sources that operate at the Port. The Port intends to make extensive use of this program to supplement its \$7,500,000, but until program awards are announced in the spring of 1999, the Port will not know how to coordinate its funding choices and mitigation implementation strategy with the state program.
- Both of the above factors will affect the ultimate cost of mitigation measures as well as their emission reduction benefits.

Appendix 4.5
Noise Data

4.5A Long-Term Measurement Data Summary

4.5B Short-Term Measurement Data Summary

**Appendix 4.5A
Long-Term Measurement Data Summary**

Date 2001	Time	One-Hour L_{eq} (dBA) at Site	
		LT-1	LT-2
April 17	1:00 p.m.	64	61
	2:00 p.m.	65	61
	3:00 p.m.	67	61
	4:00 p.m.	65	60
	5:00 p.m.	67	64
	6:00 p.m.	67	68
	7:00 p.m.	66	64
	8:00 p.m.	64	57
	9:00 p.m.	62	58
	10:00 p.m.	60	56
	11:00 p.m.	60	54
	April 18	12:00 a.m.	58
1:00 a.m.		54	51
2:00 a.m.		54	50
3:00 a.m.		55	49
4:00 a.m.		56	53
5:00 a.m.		61	55
6:00 a.m.		64	57
7:00 a.m.		65	61
8:00 a.m.		63	59
9:00 a.m.		65	61
10:00 a.m.		64	60
11:00 a.m.		67	61
12:00 p.m.	67	62	
Daytime L_{eq} (dBA)			
	MAX	67	68
	MIN	63	59
Evening L_{eq} (dBA)			
	MAX	66	64
	MIN	62	57
Nighttime L_{eq} (dBA)			
	MAX	64	57
	MIN	54	49
CNEL (dBA)			
	LT-1	68	64
	LT-2		64

Appendix 4.5B
Short-Term Noise Measurement Data Summary

Measurement Site		Measurement Period			Measurement Results, dBA						
ID	Brief Description	Date 2001	Start time	Duration (mins)	Predominant Noise Sources	L _{eq}	L _{max}	L _{min}	L ₉₀	L ₅₀	L ₁₀
ST-1	Pine/Goss Streets by WEAP car park (Near LT-1)	17-Apr	14:08	6.5	Traffic, BART, distant aircraft	61	71	56	58	60	63
ST-1b			14:15	15		63	74	56	58	61	66
ST-2	Pine Street, adjacent to backyard of 1798 8 th Street		14:48	15	Traffic, birds, BART, one distant freight train	63	69	49	61	62	66
ST-3	9 th Street, adjacent to backyard of 903 Pine Street		15:12	15	Traffic, BART, distant aircraft	61	69	56	58	60	63
ST-4	Between 1208 and 1220 Wood Street		15:38	30	Traffic (including buses and trucks on Wood Street), industrial, aircraft	65	88	51	53	56	66
ST-5	West side of Raimondi Park		16:18	15	Traffic, aircraft	63	74	59	61	63	65
ST-6	Playground at Raimondi Park, 18 th Street		16:40	15	Traffic, truck movement at property opposite park	60	73	56	57	58	61
ST-7	1416 17 th Street		17:11	15	Traffic, birds, aircraft	56	73	49	51	54	59
ST-8	407 Martin Luther King Jr. Way	18-Apr	10:07	15	Traffic, BART, birds	71	88	60	66	68	75
ST-9	402 Brush Street		10:48	15	Traffic, BART, distant aircraft	67	78	59	62	64	70
ST-10	1018 Pine Street		11:19	15	Traffic, aircraft, industrial	62	78	51	53	56	64
ST-11a	1741 14th Street		11:58	15	Traffic, birds, distant aircraft, distant sawing	61	76	52	54	57	64
ST-12 ^b	Entrance to 220 Burma Road		12:31	12	Distant traffic, distant aircraft	59	74	54	56	58	61

Notes:

- a. Winds increased from 0 to 4 mph to 4 to 8 mph with gusts to 11 mph.
However, based on field observations, there was no effect on the measurement accuracy.
- b. Winds increased further, to 8 to 12 mph with gusts to 17 mph.
However, based on field observations, the effect on the measurement was minor.

Appendix 4.6
Cultural Resources

Memorandum of Agreement Between the U.S. Army and State Historic Preservation
Officer (SHPO) Regarding the OARB

**MEMORANDUM OF AGREEMENT
BETWEEN THE DEPARTMENT OF THE ARMY
AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE CLOSURE AND REUSE OF THE FORMER OAKLAND
ARMY BASE, CALIFORNIA**

WHEREAS, the United States Army (Army) is responsible for implementation of applicable provisions of the Defense Base Closure and Realignment Act of 1990 (P.L. 101-510) as amended and is proceeding with the closure of the Oakland Army Base (OARB), California and subsequent disposal of excess property in a manner consistent with the requirements of the applicable Defense Base Closure and Realignment (BRAC) Commission recommendation; and

WHEREAS, the Army has determined that leasing, licensing and/or disposal of lands at the Oakland Army Base, California (undertaking) may have an adverse effect on properties that are eligible for inclusion in the National Register of Historic Places, and has consulted with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (Council) pursuant to 36 C.F.R. Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. Section 470(f), Section 110(f) of the same Act (16 U.S.C. Section 470-2(f)); and

WHEREAS, the Federal Highways Administration in consultation with SHPO and the Army conducted a historic buildings survey in 1990 in preparation for the I-880/Cypress Street Viaduct Replacement project and determined that Buildings 1, 4, 60, 85, 88, 90, 99, 151, 152, 153, 802, 803, 804, 805, 806, 807, 808, 812, 821, 822, 823, 991, and Knight Rail Yard were eligible for listing the National Register of Historic Places (NRHP) as contributing elements of a historic district (Figure 1) known as the Oakland Army Base Historic District and not individually eligible; and

WHEREAS, the Army in consultation with SHPO conducted a re-evaluation of the National Register eligibility of the OARB Historic District to support a BRAC disposal of OARB lands and determined in 2000 that Buildings 1, 4, 60, 85, 88, 90, 99, 151, 152, 153, 802, 803, 804, 805, 806, 807, 808, 812, 821, 822, 823, 991 were still eligible for the National Register, but that the Knight Rail Yard had been severely altered and is no longer a contributing element to the OARB Historic District; and

WHEREAS, the Army in consultation with SHPO completed an inventory and evaluation of Cold War-era buildings and structures to support disposal of OARB lands and have concluded that no other buildings or structures outside the OARB Historic District qualify for listing in the National Register of Historic Places and in addition, has produced a documentary video recounting the history of the Oakland Army Base; and

WHEREAS, the 1995 Memorandum of Agreement among the Military Traffic Management Command, the Council, and SHPO implemented prior to BRAC, determined that future development plans for OARB may have an effect upon properties included in OARB Historic District, and allowed for alterations and demolition of all historic properties at OARB upon completion of a Historic American Building Survey/Historic American Engineering Record (HABS/HAER) and the HABS/HAER recordation was completed according to guidance issued by the National Park Service (NPS) and subsequently, submitted to and accepted by NPS as a completed recordation of the OARB Historic District; and

WHEREAS, the Army in consultation with SHPO determined that Buildings 4, 85, 90, 802, 803, 804, 805, 806, 807, 808, 821, 822, 823, and 991 were constructed as World War II temporary structures and are in compliance with recordation measures set forth in the 1986 Programmatic Agreement between the Department of Defense, Council, and the National Conference of State Historic Preservation Officers regarding the demolition of World War II-era temporary wooden buildings, and as such, has removed these buildings from further consideration in the Section 106 process; and

WHEREAS, interested members of the public, including the Oakland Landmarks Advisory Board, and the Oakland Heritage Alliance, have been provided opportunities to comment on this Memorandum of Agreement (MOA) and the effects this base closure may have on historic properties at the Oakland Army Base Historic District; and

WHEREAS, the Oakland Base Reuse Authority (OBRA) as the Local Reuse Authority responsible for the reuse planning of closing military facilities at OARB is to receive surplus historic properties within the OARB Historic District from the Army and after completion of the transfer of surplus historic properties by the Army to OBRA, a portion of the historic properties will be transferred by OBRA to the Port of Oakland (Port); and

WHEREAS, among the options contemplated by the reuse plan for OARB, OBRA and the Port may implement the alternative of removing OARB historic properties, following compliance with California Public Resources Code Division 13 Environmental Quality, and with all provisions of Section 15094 of the California Code of Regulations, Title 14, Chapter 3 (CEQA), in order to support economic development plans for the City of Oakland, employment, employment training for local residents, improved public access and transit service and to satisfy the San Francisco Bay Conservation and Development Commission's (BCDC) requirements and legislative mandates to achieve cargo throughput capacity requirements through the year 2020 while minimizing fill in the San Francisco Bay; and

WHEREAS OBRA and the Port participated in the consultation and have been invited to concur in this MOA; and

WHEREAS, the Advisory Council on Historic Preservation was notified of the undertaking in accordance with 36 CFR Part 800.6(a)(1), and determined that it would not participate in the consultation; and

WHEREAS this MOA supercedes the 1995 Memorandum of Agreement among the Army, Council, and SHPO, concerning the disposition of the OARB Historic District;

NOW THEREFORE, the Army and SHPO agree that the undertaking shall be implemented in accordance with the following stipulations to take into account the effect of the undertaking on historic properties.

Stipulations

The Army, with the cooperation of OBRA, will ensure that the following stipulations are carried out:

I. Disposal of OARB Historic Properties

A. In order for OBRA and the Port to redevelop OARB lands most efficiently and to their fullest extent, OBRA and the Port may implement the alternative of removing OARB historic properties as part of their long range redevelopment plan following compliance with CEQA

B. The Army has completed mitigation measures for the removal of all OARB historic properties as part of the 1995 Memorandum of Agreement. These mitigation measures were accepted by the National Park Service and the SHPO. Following execution of this MOA and its submittal to the Council by the Army pursuant to 36 CFR § 800.6(b)(1)(iv), the Army may transfer OARB historic properties to OBRA without preservation covenants in order to allow the local community the greatest flexibility to utilize and develop the OARB property for the economic benefit of the community and state. Until such time as the OARB Historic District properties have been transferred out of Army ownership, the Army will ensure to the greatest reasonable extent that OARB historic properties are not adversely affected by the actions of any party to this MOA. 36 CFR § 800.5(a)(1-2) shall be used by the Army to determine whether an action may be adverse.

II. Anti-Deficiency Act

The stipulations of this MOA are subject to the provisions of the Anti-Deficiency Act. If compliance with the Anti-Deficiency Act alters or impairs the Army's ability to implement these stipulations of this MOA, the Army will consult in accordance with the amendment and termination procedures found at Sections IV and V of this agreement.

III. Dispute Resolution

A. Should any party object at any time to the manner in which the terms of this MOA are implemented the Army shall immediately notify all other parties of the objection, request their comments on the objection within 14 days following receipt of the Army's notification, and then proceed to consult with the objecting party for no more than 30 days to resolve the objection. If the objection is not resolved within this consultation period, the Army shall forward all documentation relevant to the objection to the Council pursuant to 36 CFR § 800.2(b)(2). Any comment provided by the Council, and all comments from the parties to this MOA, will be taken into account by the Army in reaching a final decision regarding the objection. The Army will promptly notify the Council and the other parties to this MOA in writing of its final decision regarding the objection.

B. The Army's responsibility to carry out all actions under this MOA that are not the subject of the objection will remain unchanged.

C. At any time during the implementation of the measures stipulated in this MOA, should an objection to such implementation be raised by a member of the public, the Army shall take the objection into account and consult with the objecting party and the parties to this MOA for no more than 14 days to resolve the objection. If the objection is resolved within this time frame, the Army shall notify all parties to the consultation in writing of the resolution and proceed in accordance with the terms of such resolution. If the objection is not resolved within this time frame, the Army shall render a final decision regarding the objection and shall promptly notify all parties to the consultation in writing of its final decision regarding the objection.

IV. Amendments

Any party to this MOA may propose that the MOA be amended, whereupon the parties will consult in accordance with 36 CFR Part 800.6(c)(7) to consider such amendment. This MOA may be amended only upon consent of the Army and SHPO. If the MOA is not amended, the Army or the SHPO may terminate this MOA in accordance with Stipulation V., below.

V. Termination of Agreement

The Army or the SHPO may terminate this MOA by providing thirty (30) days notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that will avoid termination. In the event of termination, the Army will proceed in accordance with 36 CFR §800.6(c)(8).

The stipulations of this MOA will remain in effect for five years from the date of ratification or a lesser period if the Oakland Army Base historic properties have been transferred to OBRA before the five year period has expired.

Execution of the Memorandum of Agreement, its transmittal to the Council and subsequent implementation of its terms evidence that the Army has afforded the Advisory Council on Historic Preservation an opportunity to comment on the disposal of Oakland Army Base lands and on the effects such disposal will have on historic properties, and that the Army has taken into account the effects of the disposal of Oakland Army Base lands on historic properties.

SIGNATORY PARTIES:

By: William R. Lucas Date: 4 DEC '01
William R. Lucas, Deputy Commander, Headquarters, Military Traffic Management Command

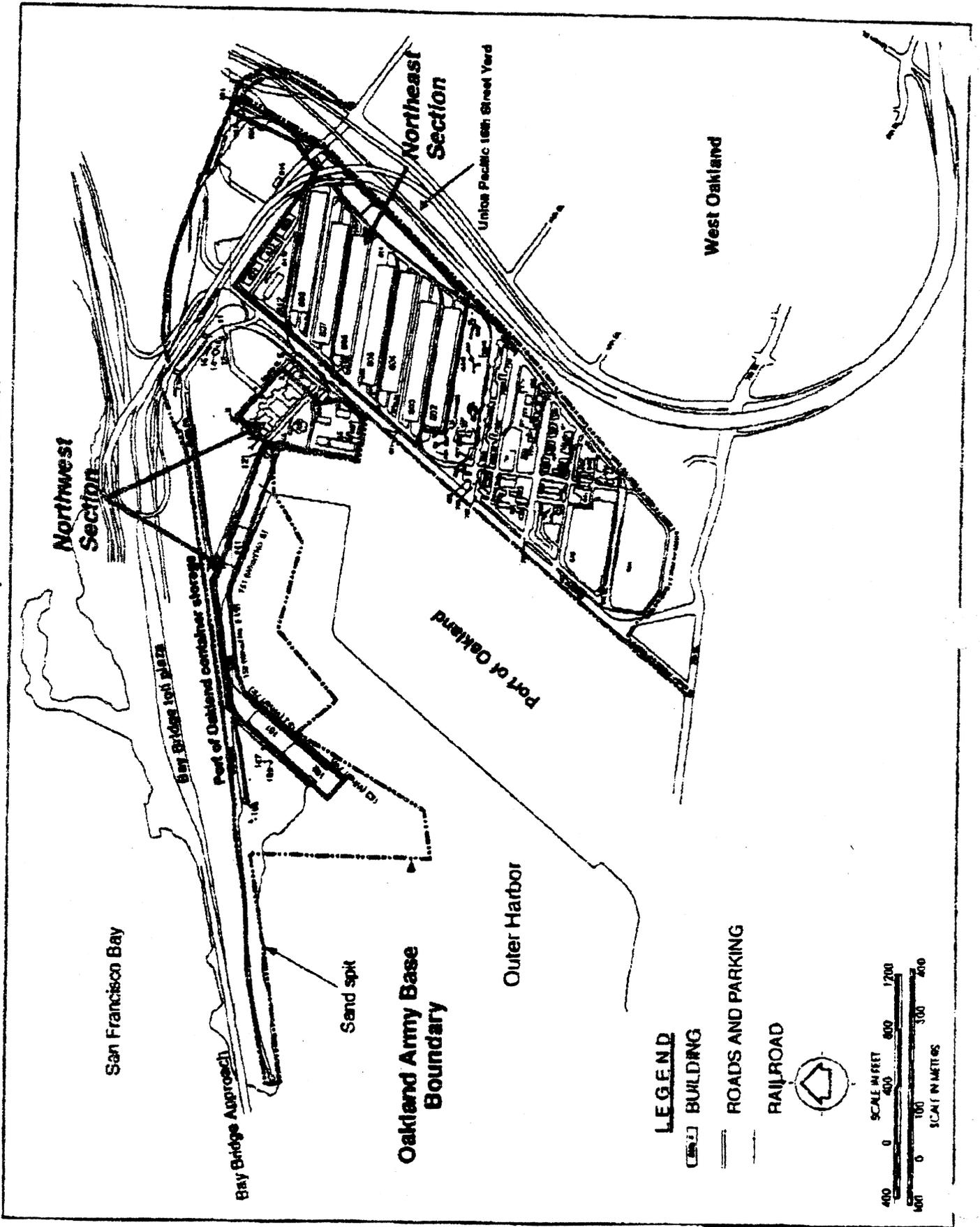
By: Karin Ellen Date: 12/11/01
Dr. Knox Mellon, California State Historic Preservation Officer

CONCURRING PARTIES:

By: Aliza Gallo Date: 12/5/01
Ms. Aliza Gallo, Executive Director, Oakland Base Reuse Authority

By: T. Y. Yehitani Date: 12/5/01
Mr. Tav Yehitani, Executive Director, Port of Oakland

Figure 1. Oakland Army Base Historic District



Appendix 4.7
Hazardous Materials

- 4.7A Comparative Analysis of Remedial Alternatives, RAP Sites
- 4.7B Comparative Analysis of Remedial Alternatives, RMP Implementation Areas
- 4.7C Summary of Previous Investigations, Studies, and Activities Regarding Remediation at the OARB

**4.7A Comparative Analysis of Remedial Alternatives,
RAP Sites**

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RAP SITE 1: FORMER ORP/BUILDING 1 AREA**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate, Immobilize Soil, and Dispose of Soil Off-Site and Monitor Groundwater	
		2a. Reuse Some Overburden On-site	2b. Disposal All Soil Off-Site
Threshold Criteria <ul style="list-style-type: none"> Overall Protection of Human Health and the Environment Compliance with ARARs 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs, provided a Land Disposal Restrictions ("LDRs") variance is received from regulatory agencies if waste is subject to LDRs.	Alternative is anticipated to comply with ARARs, provided a LDRs variance is received from regulatory agencies if waste is subject to LDRs.
Balancing Criteria <ul style="list-style-type: none"> Long-term Effectiveness and Permanence Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not offer long-term protection against exposure of humans receptors to chemicals of concern ("COCs") in soil or groundwater.	Alternative is anticipated to offer long-term effectiveness as impacted soil will be removed. Groundwater monitoring will verify long-term effectiveness.	Alternative is anticipated to offer long-term effectiveness as impacted soil will be removed. Groundwater monitoring will verify long-term effectiveness.
	Alternative will not reduce toxicity, mobility, or volume of soil or waste.	Alternative may reduce toxicity of COCs in soil by treatment, but will increase volume of waste by the addition of chemicals. Alternative will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.	Alternative will reduce toxicity of COCs in soil by stabilization, but will increase volume of waste by the addition of chemicals. Alternative will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
Balancing Criteria <ul style="list-style-type: none"> Short-term Effectiveness Implementability Cost <ul style="list-style-type: none"> Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative involves excavation and treatment of impacted soil. Normal construction health and safety practices and OSHA standards would be employed to protect remedial construction workers and the general public. Dust, vapor, and odor control would also be implemented to protect the public.	Alternative involves excavation and treatment of impacted soil. Normal construction health and safety practices and OSHA standards would be employed to protect remedial construction workers and the general public. Dust, vapor, and odor control would also be implemented to protect the public.
	Alternative is easily implemented.	Alternative requires a LDR variance; segregation and testing of overburden may be difficult to implement.	Alternative requires a LDR variance, but earthwork is easily implemented.
	Alternative has negligible costs associated with implementation.	\$8,700,000 \$39,000 \$8,900,000	\$10,000,000 \$39,000 \$10,000,000
Modifying Criteria <ul style="list-style-type: none"> State Acceptance Community Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and the environment, and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and the environment, and complies with ARARs.
	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") or the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. COC concentrations in soil are greater than applicable site-specific remedial goals and pose unacceptable risks to human health and the environment. Alternative does not meet ARARs for unrestricted use.	Alternative is Not Selected. Soil and waste with COC concentrations greater than applicable site-specific remedial goals will be removed. However, stockpile and reuse of existing site soils is not anticipated to be feasible due to potential chemical impacts, difficulties segregating soil during excavation activities, and geotechnical requirements for backfill.	Selected Alternative. Soil and waste with COC concentrations greater than applicable site-specific remedial goals will be removed, treated, and disposed off-site in a permitted facility. Groundwater monitoring will be implemented to verify remedial action effectiveness.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RAP SITE 2: VOCs IN GROUNDWATER AT THE EASTERN END OF BUILDING 807**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Monitor Groundwater	Alternative 3 Perform In-situ Chemical Oxidation/ Reduction and Monitor Groundwater	
Threshold Criteria	<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	
	<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative may comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria	<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil or groundwater.	Alternative does not offer long-term effectiveness as chemical concentrations may continue to remain elevated or increase over time. Alternative assumes 15 years of groundwater monitoring.	Alternative is anticipated to offer long-term effectiveness as COCs will be chemically oxidized in the subsurface. Five years of groundwater monitoring will verify long-term effectiveness.
	<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of impacted groundwater.	Alternative will not reduce toxicity, mobility, or volume of impacted groundwater.	Alternative will likely reduce toxicity, mobility, and volume of impacted groundwater through treatment.
	<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community.
Balancing Criteria	<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative can be implemented, as it involves standard well installation and monitoring procedures.	Alternative can be implemented, as it involves standard well installation and chemical injection procedures.
	<ul style="list-style-type: none"> Cost <p>Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth:</p>	Alternative has negligible costs associated with implementation.	\$82,000 \$46,000 \$620,000	\$220,000 \$46,000 \$430,000
Modifying Criteria	<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC may accept remedial action because alternative is protective of human health and the environment, may comply with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and the environment, and complies with ARARs.
	<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative may comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. COC concentrations in groundwater are greater than screening levels for unrestricted use; no institutional controls are included in this alternative.	Alternative is Not Selected. Ongoing monitoring for groundwater with elevated concentrations of COCs that may continue to rise does not provide a long-term solution.	Selected Alternative. Elevated COCs in groundwater will be treated. Groundwater monitoring will demonstrate effectiveness.	

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RAP SITE 3: VOCs IN GROUNDWATER NEAR BUILDINGS 808 AND 823**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Monitor Groundwater	Alternative 3 Perform In-situ Biodegradation and Monitor Groundwater
Threshold Criteria <ul style="list-style-type: none"> Overall Protection of Human Health and the Environment Compliance with ARARs 	Alternative is not anticipated to be protective of human health or the environment.	Alternative may be protective of human health and environment.	Alternative is anticipated to be protective of human health and environment.
	Alternative is not anticipated to comply with ARARs.	Alternative is expected to comply with ARARs.	Alternative is expected to comply with ARARs.
Balancing Criteria <ul style="list-style-type: none"> Long-term Effectiveness and Permanence Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not offer long-term protection against exposure of humans and ecological receptors to chemicals of concern ("COCs") in groundwater.	Alternative does not offer long-term effectiveness as chemical concentrations may continue to remain elevated or increase over time. Alternative assumes 15 years of groundwater monitoring.	Alternative is anticipated to offer long-term effectiveness as COCs will be biologically degraded in the subsurface. Five years of groundwater monitoring will verify long-term effectiveness.
	Alternative will not reduce toxicity, mobility, or volume of COCs.	Alternative will not reduce toxicity, mobility, or volume of COCs.	Alternative could reduce toxicity, mobility, and volume of COCs by treatment that degrades COCs in groundwater.
Balancing Criteria <ul style="list-style-type: none"> Short-term Effectiveness Implementability Cost <ul style="list-style-type: none"> Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community.
	Alternative can be easily implemented.	Alternative can be implemented, as it involves standard groundwater monitoring procedures.	Alternative can be implemented, as it involves standard chemical injection procedures and monitoring.
	Alternative has negligible costs associated with implementation.	\$83,000 \$39,000 \$540,000	\$340,000 \$39,000 \$520,000
Modifying Criteria <ul style="list-style-type: none"> State Acceptance Community Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC may not accept remedial action if exposure to volatile COCs could potentially occur in future land use scenarios.	It is expected that DTSC will consider this alternative to be acceptable.
	Alternative is not anticipated to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	RAB and community may not accept remedial action if exposure to volatile COCs could potentially occur in future land use scenarios.	Alternative is likely to be an acceptable alternative to the RAB and community.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. Alternative does not limit potential exposure to volatile COCs in potential future land use.	Selected Alternative. COCs in groundwater are actively remediated. Groundwater treatment could effectively reduce potential human health impacts. Remedial action is anticipated to be complete in 5 years.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES:
RAP SITE 3: VOCs IN GROUNDWATER NEAR BUILDINGS 808 AND 823**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 4 Install Vapor Barrier Beneath Building and Monitor Groundwater	Alternative 5 Install Vapor Barrier with Sub-slab Depressurization System, Monitor Groundwater
Threshold Criteria <ul style="list-style-type: none"> Overall Protection of Human Health and the Environment Compliance with ARARs 	Alternative is anticipated to be protective of human health and environment.	Alternative is anticipated to be protective of human health and environment.
	Alternative is expected to comply with ARARs.	Alternative is expected to comply with ARARs.
Balancing Criteria <ul style="list-style-type: none"> Long-term Effectiveness and Permanence Reduction of Toxicity, Mobility, or Volume through Treatment 	Long-term effectiveness is a function of the effectiveness of the barrier beneath the building. Impacted groundwater remains in the subsurface and could potentially migrate. Fifteen years of groundwater monitoring will verify long-term effectiveness.	Long-term effectiveness is a function of the effectiveness of the barrier beneath the building and the ability of the depressurization system to limit migration into buildings. Impacted groundwater remains in the subsurface and could potentially migrate. Fifteen years of groundwater monitoring will verify long-term effectiveness.
	Alternative will not reduce toxicity or volume of COCs in groundwater, but it may decrease mobility by volatilization pathways by providing subsurface containment.	Alternative will not reduce toxicity or volume of COCs in groundwater. Mobility of COCs is increased by transferring COCs from groundwater to air. Exhaust air treatment system is not anticipated to be required.
Balancing Criteria <ul style="list-style-type: none"> Short-term Effectiveness Implementability Cost <ul style="list-style-type: none"> Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community. Vapor barrier would be installed during building construction.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community. Sub-slab depressurization system would be installed during building construction.
	This alternative can be easily implemented during building construction. Implementation post construction is difficult.	This alternative can be easily implemented during building construction. Implementation post construction is difficult.
	\$240,000 \$39,000 \$700,000	\$540,000 \$56,000 \$1,200,000
Modifying Criteria <ul style="list-style-type: none"> State Acceptance Community Acceptance 	It is expected that DTSC will consider this alternative to be acceptable.	It is expected that DTSC will consider this alternative to be acceptable.
	Alternative is likely to be an acceptable alternative to the RAB and community.	Alternative is likely to be an acceptable alternative to the RAB and community.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Although alternative is likely to be protective of human health and the environment and may be acceptable to DTSC and the community, it is not the most cost-effective alternative. The COCs remain in place, and ongoing monitoring to verify protection of human health is estimated to extend 15 years.	Alternative is Not Selected. Although alternative is likely to be protective of human health and the environment and may be acceptable to DTSC and the community, it is not the most cost-effective alternative. The COCs remain in place, and ongoing monitoring to verify protection of human health is estimated to extend 15 years.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RAP SITE 4: VOCs IN GROUNDWATER NEAR BUILDING 99**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Monitor Groundwater	Alternative 3 Perform In-situ Biodegradation and Monitor Groundwater	
Threshold Criteria	<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health or the environment.	Alternative is anticipated to be protective of human health and environment.	
	<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is expected to comply with ARARs.	
Balancing Criteria	<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans and ecological receptors to chemicals of concern ("COCs") in groundwater.	Alternative is anticipated to offer long-term effectiveness as COCs will be biologically degraded in the subsurface. Five years of groundwater monitoring will verify long-term effectiveness.	
	<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of COCs.	Alternative will not reduce toxicity, mobility, or volume of COCs.	Alternative could reduce toxicity, mobility, and volume of COCs by treatment that degrades COCs in groundwater.
Balancing Criteria	<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community.	
	<ul style="list-style-type: none"> Implementability 	Alternative can be easily implemented.	Alternative can be implemented, as it involves standard groundwater monitoring procedures.	Alternative can be implemented, as it involves standard chemical injection procedures and monitoring.
	<ul style="list-style-type: none"> Cost <p>Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth:</p>	Alternative has negligible costs associated with implementation.	<p>\$82,000 \$39,000 \$540,000</p>	<p>\$320,000 \$39,000 \$500,000</p>
Modifying Criteria	<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC may not accept remedial action if exposure to volatile COCs could potentially occur in future land use scenarios.	It is expected that DTSC will consider this alternative to be acceptable.
	<ul style="list-style-type: none"> Community Acceptance 	Alternative is not anticipated to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	RAB and community may not accept remedial action if exposure to volatile COCs could potentially occur in future land use scenarios.	Alternative is likely to be an acceptable alternative to the RAB and community.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. Alternative does not limit potential exposure to volatile COCs in potential future land use.	Selected Alternative. COCs in groundwater are actively remediated. Groundwater treatment could effectively reduce potential human health impacts. Remedial action is anticipated to be complete in 5 years.	

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RAP SITE 4: VOCs IN GROUNDWATER NEAR BUILDING 99**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 4 Install Vapor Barrier Beneath Building and Monitor Groundwater	Alternative 5 Install Vapor Barrier with Sub-slab Depressurization System, Monitor Groundwater
Threshold Criteria <ul style="list-style-type: none"> Overall Protection of Human Health and the Environment Compliance with ARARs 	Alternative is anticipated to be protective of human health and environment.	Alternative is anticipated to be protective of human health and environment.
	Alternative is expected to comply with ARARs.	Alternative is expected to comply with ARARs.
Balancing Criteria <ul style="list-style-type: none"> Long-term Effectiveness and Permanence Reduction of Toxicity, Mobility, or Volume through Treatment 	Long-term effectiveness is a function of the effectiveness of the barrier beneath the building. Impacted groundwater remains in the subsurface and could potentially migrate. Fifteen years of groundwater monitoring will verify long-term effectiveness.	Long-term effectiveness is a function of the effectiveness of the barrier beneath the building and the ability of the depressurization system to limit migration into buildings. Impacted groundwater remains in the subsurface and could potentially migrate. Fifteen years of groundwater monitoring will verify long-term effectiveness.
	Alternative will not reduce toxicity or volume of COCs in groundwater, but it may decrease mobility by volatilization pathways by providing subsurface containment.	Alternative will not reduce toxicity or volume of COCs in groundwater. Mobility of COCs is increased by transferring COCs from groundwater to air. Exhaust air treatment system is not anticipated to be required.
Balancing Criteria <ul style="list-style-type: none"> Short-term Effectiveness Implementability Cost 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community. Vapor barrier would be installed during building construction.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community. Sub-slab depressurization system would be installed during building construction.
	This alternative can be easily implemented during building construction. Implementation post construction is difficult.	This alternative can be easily implemented during building construction. Implementation post construction is difficult.
	Estimated Capital Cost: \$230,000 Estimated Annual Cost: \$39,000 Estimated Present Worth: \$690,000	\$480,000 \$43,000 \$1,000,000
Modifying Criteria <ul style="list-style-type: none"> State Acceptance Community Acceptance 	It is expected that DTSC will consider this alternative to be acceptable.	It is expected that DTSC will consider this alternative to be acceptable.
	Alternative is likely to be an acceptable alternative to the RAB and community.	Alternative is likely to be an acceptable alternative to the RAB and community.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Although alternative is likely to be protective of human health and the environment and is acceptable to DTSC and the community, it is not the most cost-effective alternative. The COCs remain in place, and ongoing monitoring to verify protection of human health is estimated to extend 15 years.	Alternative is Not Selected. Although alternative is likely to be protective of human health and the environment and is acceptable to DTSC and the community, it is not the most cost-effective alternative. The COCs remain in place, and ongoing monitoring to verify protection of human health is estimated to extend 15 years.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RAP SITE 5: BENZENE AND MTBE IN GROUNDWATER NEAR FORMER USTs 11A/12A/13A**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater	Alternative 3 Excavate and Dispose Soil Off-site, In-situ Groundwater Treatment, and Monitor Groundwater
Threshold Criteria	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil or groundwater.	Alternative offers long-term effectiveness as soil with elevated concentrations of COCs will be disposed off-site. Alternative assumes 5 years of groundwater monitoring.	Alternative offers long-term effectiveness as soil with elevated concentrations of COCs will be removed, and residual COCs will be biologically degraded. subsurface. Alternative assumes 5 years of groundwater monitoring.
<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil or groundwater.	Alternative offers long-term effectiveness as soil with elevated concentrations of COCs will be disposed off-site. Alternative assumes 5 years of groundwater monitoring.	Alternative offers long-term effectiveness as soil with elevated concentrations of COCs will be removed, and residual COCs will be biologically degraded. subsurface. Alternative assumes 5 years of groundwater monitoring.
<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of impacted soil or groundwater.	Alternative will not reduce toxicity of COCs in subsurface, but will reduce volume and mobility by removal to off-site permitted disposal facility.	Alternative will likely reduce toxicity, mobility, and volume of impacted soil and groundwater through removal and in-situ treatment.
<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria	Alternative is easily implemented.	Alternative can be implemented, as it involves standard soil excavation procedures.	Alternative can be implemented, as it involves standard soil excavation and chemical injection procedures.
<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative can be implemented, as it involves standard soil excavation procedures.	Alternative can be implemented, as it involves standard soil excavation and chemical injection procedures.
<ul style="list-style-type: none"> Cost <p>Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth:</p>	Alternative has negligible costs associated with implementation.	\$220,000 \$42,000 \$410,000	\$270,000 \$42,000 \$460,000
<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
Modifying Criteria	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. Although excavation will remove COCs in removed, COCs would likely remain in groundwater.	Selected Alternative. COCs in soil and groundwater greater than applicable site-specific remedial goals will be removed or treated.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RAP SITE 6: BUILDING 991 AREA**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater	Alternative 3 Excavate and Dispose Soil Off-site, In-situ Groundwater Treatment, and Monitor Groundwater
Threshold Criteria			
<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria			
<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil or groundwater.	Alternative offers long-term effectiveness as soil with elevated concentrations of COCs will be disposed off-site. Alternative assumes 5 years of groundwater monitoring.	Alternative offers long-term effectiveness as soil with elevated concentrations of COCs will be removed, and residual COCs will be biologically degraded. subsurface. Alternative assumes 5 years of groundwater monitoring.
<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of impacted soil or groundwater.	Alternative will not reduce toxicity of COCs in subsurface, but will reduce volume and mobility by removal to off-site permitted disposal facility.	Alternative will likely reduce toxicity, mobility, and volume of impacted soil and groundwater through removal and in-situ treatment.
<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria			
<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative can be implemented, as it involves standard soil excavation procedures.	Alternative can be implemented, as it involves standard soil excavation and chemical injection procedures.
<ul style="list-style-type: none"> Cost Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative has negligible costs associated with implementation.	\$270,000 \$38,000 \$440,000	\$470,000 \$47,000 \$680,000
Modifying Criteria			
<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. Although excavation will remove COCs in removed, COCs would likely remain in groundwater.	Selected Alternative. COCs in soil and groundwater greater than applicable site-specific remedial goals will be removed or treated.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RAP SITE 7: BUILDING 99**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed	
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site
Threshold Criteria <ul style="list-style-type: none"> Overall Protection of Human Health and the Environment Compliance with ARARs 	Alternative is not protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria <ul style="list-style-type: none"> Long-term Effectiveness and Permanence Reduction of Toxicity, Mobility, or Volume through Treatment Short-term Effectiveness 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site. Removal also reduces potential for future groundwater impact.
	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of COCs in soil, if present, but will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria <ul style="list-style-type: none"> Implementability Cost <ul style="list-style-type: none"> Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative is easily implemented.	Alternative is easily implemented.	Alternative can be implemented, as it involves standard soil excavation procedures.
	Alternative has negligible costs associated with implementation.	\$70,000 \$0 \$70,000	\$230,000 \$0 \$230,000
Modifying Criteria <ul style="list-style-type: none"> State Acceptance Community Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 Summary of Evaluation Criteria 	Alternative does not comply with State of California Health and Safety Code Criteria. Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is believed to comply with State of California Health and Safety Code Criteria. Alternative is Not Selected. If no COCs are detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate.	Alternative is believed to comply with State of California Health and Safety Code Criteria. Selected Alternative. COCs identified above site-specific remedial goals soil would be removed.

**4.7B Comparative Analysis of Remedial Alternatives,
RMP Implementation Areas**

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 1: WASHRACKS, SUMPS, OIL/WATER SEPARATORS, AND MISCELLANEOUS SITES**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed	
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site
Threshold Criteria <ul style="list-style-type: none"> Overall Protection of Human Health and the Environment Compliance with ARARs 	Alternative is not protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria <ul style="list-style-type: none"> Long-term Effectiveness and Permanence Reduction of Toxicity, Mobility, or Volume through Treatment Short-term Effectiveness 	Alternative may not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil, if present.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site. Removal also reduces potential for future groundwater impact.
	Alternative will not reduce toxicity, mobility, or volume of impacted soil, if present.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of COCs in soil, if present, but will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria <ul style="list-style-type: none"> Implementability Cost (a) Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative is easily implemented.	Alternative is easily implemented.	Alternative is easily implemented with standard excavation procedures.
	Alternative has negligible costs associated with implementation.	\$720,000 \$0 \$720,000	\$1,800,000 \$0 \$1,800,000
Modifying Criteria <ul style="list-style-type: none"> State Acceptance Community Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no COCs are detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate.	Selected Alternative. COCs identified above site-specific remedial goals soil would be removed.

Notes:

- (a) Costs listed are cumulative expenditures to address approximately 81 washracks, sumps, oil/water separators, and miscellaneous items at approximately 53 locations on the OARB.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 2: TANKS**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Monitor Groundwater	Alternative 3 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed
Threshold Criteria ● Overall Protection of Human Health and the Environment	Alternative is not protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
● Compliance with ARARs	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria ● Long-term Effectiveness and Permanence	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site. Removal also reduces potential for future groundwater impact. Alternative assumes 5 years of groundwater monitoring for some sites.
● Reduction of Toxicity, Mobility, or Volume through Treatment	Alternative will not reduce toxicity, mobility, or volume of impacted soil, if present.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of COCs in soil, if present, but will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
● Short-term Effectiveness	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria ● Implementability	Alternative is easily implemented.	Alternative is easily implemented.	Alternative can be implemented, as it involves standard soil excavation procedures.
● Cost (a) Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth:	Alternative has negligible costs associated with implementation.	\$1,200,000 included with capital cost \$1,200,000	\$1,900,000 included with capital cost \$1,900,000
Modifying Criteria ● State Acceptance	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
● Community Acceptance	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
● Six Factors from State of California Health and Safety Code Section 25356.1	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
● Summary of Evaluation Criteria	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no COCs are detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate at some locations.	Selected Alternative. COCs identified above site-specific remedial goals soil would be removed. Groundwater monitoring will be conducted at some sites to verify remedial objectives attained.

Notes:

(a) Costs listed are cumulative expenditures to address approximately 77 underground storage tanks and aboveground storage tanks at approximately 57 locations on the OARB.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 3: HISTORIC SPILLS AND STAINS**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed		
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site	
Threshold Criteria	<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria	<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site.
	<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of COCs in soil, if present, but will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
	<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria	<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative is easily implemented.	Alternative is easily implemented with standard excavation procedures.
	<ul style="list-style-type: none"> Cost <p>Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth:</p>	Alternative has negligible costs associated with implementation.	\$140,000 \$0 \$140,000	\$560,000 \$0 \$560,000
Modifying Criteria	<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no COCs are detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate.	Selected Alternative. COCs identified above site-specific remedial goals soil would be removed.	

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 4: LEAD IN SOIL AROUND BUILDINGS**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed		
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site	
Threshold Criteria	<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria	<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to lead in soil.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site.
	<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no lead greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of lead in soil, if present, but will decrease on-site volume and mobility of lead in soil by removal to a permitted off-site disposal facility.
	<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria	<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative is easily implemented.	Alternative is easily implemented with standard excavation procedures.
	<ul style="list-style-type: none"> Cost <p>Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth:</p>	Alternative has negligible costs associated with implementation.	\$47,000 \$0 \$47,000	\$460,000 \$0 \$460,000
Modifying Criteria	<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If lead is not detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate.	Selected Alternative. Lead identified above site-specific remedial goals soil would be removed.	

COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 5: FORMER PCB-CONTAINING EQUIPMENT SITES

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Equipment, Soil, or Groundwater	Alternative 2 Remove and Dispose of Waste Off-site, and Monitor Groundwater As Needed	
Threshold Criteria	<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria	<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to polychlorinated biphenyls ("PCBs") in equipment, soil, or groundwater.	Alternative offers long-term effectiveness as PCB-containing equipment will be removed and properly disposed. No groundwater monitoring is anticipated.
	<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of PCBs in equipment, soil, or groundwater.	Alternative will not reduce toxicity of PCBs in electrical components or soil, if present, but will decrease on-site volume and mobility of PCBs by removal and disposal at a permitted off-site disposal facility.
	<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor equipment removal activities.
Balancing Criteria	<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative can be implemented, as it involves standard equipment replacement procedures.
	<ul style="list-style-type: none"> Cost <ul style="list-style-type: none"> Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative has negligible costs associated with implementation.	\$260,000 \$0 \$260,000
Modifying Criteria	<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Selected Alternative. PCBs identified in electrical equipment and other materials would be removed and disposed of at a permitted off-site disposal facility.	

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 6: BOILER DEBRIS NEAR BUILDING 99**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed	
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site
Threshold Criteria			
<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria			
<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site.
<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of COCs in soil, if present, but will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria			
<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative is easily implemented.	Alternative is easily implemented with standard excavation procedures.
<ul style="list-style-type: none"> Cost Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative has negligible costs associated with implementation.	\$56,000 \$0 \$56,000	\$170,000 \$0 \$170,000
Modifying Criteria			
<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no COCs are detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate.	Selected Alternative. COCs identified above site-specific remedial goals soil would be removed.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION GROUP 6: BUILDING 85**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed		
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site	
Threshold Criteria	<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
	<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site.
Balancing Criteria	<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of COCs in soil, if present, but will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
	<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria	<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative is easily implemented.	Alternative is easily implemented with standard excavation procedures.
	<ul style="list-style-type: none"> Cost Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative has negligible costs associated with implementation.	\$56,000 \$0 \$56,000	\$140,000 \$0 \$140,000
Modifying Criteria	<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no COCs are detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate.	Selected Alternative. COCs identified above site-specific remedial goals soil would be removed.	

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 6: BUILDING 812**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed	
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site
Threshold Criteria <ul style="list-style-type: none"> Overall Protection of Human Health and the Environment Compliance with ARARs 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria <ul style="list-style-type: none"> Long-term Effectiveness and Permanence Reduction of Toxicity, Mobility, or Volume through Treatment Short-term Effectiveness 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site.
	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of COCs in soil, if present, but will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria <ul style="list-style-type: none"> Implementability Cost <ul style="list-style-type: none"> Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative is easily implemented.	Alternative is easily implemented.	Alternative is easily implemented with standard excavation procedures.
	Alternative has negligible costs associated with implementation.	\$60,000 \$0 \$60,000	\$150,000 \$0 \$150,000
Modifying Criteria <ul style="list-style-type: none"> State Acceptance Community Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no COCs are detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate.	Selected Alternative. COCs identified above site-specific remedial goals soil would be removed.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 6: BUILDING 823**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed	
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site
Threshold Criteria <ul style="list-style-type: none"> Overall Protection of Human Health and the Environment Compliance with ARARs 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria <ul style="list-style-type: none"> Long-term Effectiveness and Permanence Reduction of Toxicity, Mobility, or Volume through Treatment Short-term Effectiveness 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site.
	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of COCs in soil, if present, but will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria <ul style="list-style-type: none"> Implementability Cost Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative is easily implemented.	Alternative is easily implemented.	Alternative is easily implemented with standard excavation procedures.
	Alternative has negligible costs associated with implementation.	\$60,000 \$0 \$60,000	\$170,000 \$0 \$170,000
Modifying Criteria <ul style="list-style-type: none"> State Acceptance Community Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no COCs are detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate.	Selected Alternative. COCs identified above site-specific remedial goals soil would be removed.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 6: POTENTIAL DRUM DRAINAGE AREA EAST OF BUILDINGS 805 AND 806**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, In-Situ Groundwater Treatment, and Monitor Groundwater As Needed		
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site, Groundwater Treatment	
Threshold Criteria ²	<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria	<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil or groundwater.	Alternative offers long-term effectiveness as no impacted soil is identified.	Alternative offers long-term effectiveness as soil with elevated concentrations of COCs will be removed, and residual COCs will be treated in-situ. Alternative assumes 5 years of groundwater monitoring.
	<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will likely reduce toxicity, mobility, and volume of impacted soil and groundwater through removal and in-situ treatment.
	<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria	<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative is easily implemented.	Alternative can be implemented, as it involves standard soil excavation and chemical injection procedures.
	<ul style="list-style-type: none"> Cost Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative has negligible costs associated with implementation.	\$69,000 \$0 \$69,000	\$300,000 \$17,000 \$380,000
Modifying Criteria	<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no COCs are detected at concentrations above remedial goals, this alternative may be appropriate.	Selected Alternative. COCs in soil and groundwater greater than applicable site-specific remedial goals will be removed or treated.	

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 6: FORMER MOTOR POOL AND SALVAGE OPERATIONS AT BUILDING 640**

Oakland Army Base, Oakland, California

	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed	Alternative 3 Excavate and Dispose Soil Off-site, In-situ Groundwater Treatment, and Monitor Groundwater
Threshold Criteria	<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria	<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil or groundwater.	Alternative offers long-term effectiveness as soil with elevated concentrations of COCs will be removed, and residual COCs will be treated in-situ. Alternative assumes 5 years of groundwater monitoring.
	<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative will likely reduce toxicity, mobility, and volume of impacted soil and groundwater through removal and in-situ treatment.
	<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria	<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative is easily implemented.
	<ul style="list-style-type: none"> Cost <p style="margin-left: 20px;">Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth:</p>	Alternative has negligible costs associated with implementation.	<p style="margin-left: 20px;">\$180,000 \$0 \$180,000</p> <p style="margin-left: 20px;">\$440,000 \$16,000 \$510,000</p>
Modifying Criteria	<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
	<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
	<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Selected Alternative. COCs in soil and groundwater greater than applicable site-specific remedial goals will be removed or treated.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 6: BENZIDINE AT FORMER USED OIL TANK 21**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed	
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site
Threshold Criteria <ul style="list-style-type: none"> Overall Protection of Human Health and the Environment Compliance with ARARs 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria <ul style="list-style-type: none"> Long-term Effectiveness and Permanence Reduction of Toxicity, Mobility, or Volume through Treatment Short-term Effectiveness 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site.
	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of COCs in soil, if present, but will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in significant short-term disruptions or risks to workers and the community, other than minor soil excavation activities.
Balancing Criteria <ul style="list-style-type: none"> Implementability Cost <ul style="list-style-type: none"> Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth: 	Alternative is easily implemented.	Alternative is easily implemented.	Alternative is easily implemented with standard excavation procedures.
	Alternative has negligible costs associated with implementation.	\$40,000 \$0 \$40,000	\$130,000 \$0 \$130,000
Modifying Criteria <ul style="list-style-type: none"> State Acceptance Community Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no COCs are detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate.	Selected Alternative. COCs identified above site-specific remedial goals soil would be removed.

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 7: STORM DRAINS AND SANITARY SEWERS**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed		
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site	
Threshold Criteria	<ul style="list-style-type: none"> Overall Protection of Human Health and the Environment 	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	<ul style="list-style-type: none"> Compliance with ARARs 	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria	<ul style="list-style-type: none"> Long-term Effectiveness and Permanence 	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil.	Alternative may offer long-term effectiveness.	Alternative offers long-term effectiveness as impacted soil will be excavated and disposed off-site.
	<ul style="list-style-type: none"> Reduction of Toxicity, Mobility, or Volume through Treatment 	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.	Alternative will not reduce toxicity of COCs in soil, if present, but will decrease on-site volume and mobility of COCs in soil by removal to a permitted off-site disposal facility.
	<ul style="list-style-type: none"> Short-term Effectiveness 	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative will have minor disruptions to the community as the flushing and inspection activities will likely be in public rights of way.	Alternative will have minor disruptions to the community as the flushing, inspection, investigation, and source removal activities will likely be in public rights of way.
Balancing Criteria	<ul style="list-style-type: none"> Implementability 	Alternative is easily implemented.	Alternative can be implemented using standard drain inspection procedures.	Alternative can be implemented, as it involves standard drain inspection and soil excavation procedures.
	<ul style="list-style-type: none"> Cost <p>Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth:</p>	Alternative has negligible costs associated with implementation.	\$990,000 \$0 \$990,000	\$3,600,000 \$0 \$3,600,000
Modifying Criteria	<ul style="list-style-type: none"> State Acceptance 	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	<ul style="list-style-type: none"> Community Acceptance 	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
<ul style="list-style-type: none"> Six Factors from State of California Health and Safety Code Section 25356.1 	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	
<ul style="list-style-type: none"> Summary of Evaluation Criteria 	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no structural defects are identified in the pipes which could transport COCs in the subsurface, this alternative may be appropriate.	Selected Alternative. COCs identified above site-specific remedial goals soil would be removed.	

**COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES
RMP IMPLEMENTATION AREA GROUP 8: RAILROAD TRACKS**

Oakland Army Base, Oakland, California

Evaluation Criteria	Alternative 1 No Action for Soil and Groundwater	Alternative 2 Excavate and Dispose Soil Off-site, and Monitor Groundwater As Needed	
		2a. No Impacted Soil or Groundwater Identified	2b. Excavate and Dispose Impacted Soil Off-site
Threshold Criteria	● Overall Protection of Human Health and the Environment	Alternative is not anticipated to be protective of human health and the environment.	Alternative is anticipated to be protective of human health and the environment.
	● Compliance with ARARs	Alternative is not anticipated to comply with ARARs.	Alternative is anticipated to comply with ARARs.
Balancing Criteria	● Long-term Effectiveness and Permanence	Alternative will not offer long-term protection against exposure of humans to chemicals of concern ("COCs") in soil.	Alternative offers long-term effectiveness as impacted subballast will be excavated and disposed off-site.
	● Reduction of Toxicity, Mobility, or Volume through Treatment	Alternative will not reduce toxicity, mobility, or volume of impacted soil.	Alternative assumes no COCs greater than applicable remedial goals remain in the subsurface.
	● Short-term Effectiveness	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.	Alternative is not anticipated to result in any short-term disruptions or risks to workers and the community.
Balancing Criteria	● Implementability	Alternative is easily implemented.	Alternative is easily implemented.
	● Cost Estimated Capital Cost: Estimated Annual Cost: Estimated Present Worth:	Alternative has negligible costs associated with implementation.	\$430,000 \$0 \$430,000
Modifying Criteria	● State Acceptance	State of California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC") is not anticipated to accept alternative.	DTSC is anticipated to accept remedial action because alternative is protective of human health and complies with ARARs.
	● Community Acceptance	Alternative is not likely to be accepted by community members of the Restoration Advisory Board ("RAB") and the community at large.	Alternative is anticipated to be accepted by the RAB and the community at large.
● Six Factors from State of California Health and Safety Code Section 25356.1	Alternative does not comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.	Alternative is believed to comply with State of California Health and Safety Code Criteria.
● Summary of Evaluation Criteria	Alternative is Not Selected. Alternative is not protective of human health and the environment, and does not comply with ARARs.	Alternative is Not Selected. If no COCs are detected at concentrations greater than site-specific remedial goals, this alternative may be appropriate.	Selected Alternative. COCs identified above site-specific remedial goals soil would be removed.

**4.7C Summary of Previous Investigations, Studies, and
Activities Regarding Remediation at the OARB**

Appendix 4.8
Population, Employment, and Housing

Employment Model

**OARB Area Redevelopment EIR
Employment Model**

I. Employment Density by Land Use

Use Category	Job Density (1)	Comment
Warehouse and Distribution	0.8	(1)
Light Industrial/Manufacturing	2.5	(1)
R&D	2.5	(1)
Flex Industrial/Office (reuse)	2.4	(1)
Flex Industrial/Office (new)	2.6	(1)
General Office	3.75	(1)
Recreation	N/A	
Ancillary Retail	2.8	(1)
Commercial/Retail	2.5	(1)
Maritime	N/A	(2)
Wastewater Treatment	N/A	(3)
Job Training	2.0	(1)
Live/Work	1	(4)

- (1) Per 1000 SF gross building space, adapted from U.S. Bureau of Labor statistics. Note that Labor Bureau multipliers are intended to conservatively (under) estimate jobs benefits, and their use will result in fewer jobs than traffic multipliers, which are intended to conservatively (over) estimate traffic impacts.
 (2) Per Port of Oakland model, based on a combination of container throughput and rail operations
 (3) Estimate of total employment based on EBMUD WWTF operation and maintenance experience
 (4) Per live/work unit

II. Use Category: Occupation

Percent Occupation Type by Use Category (1)

Occupational Category	Warehouse and Distribution	Light Industrial/Manufacturing	R&D	Flex Industrial/Office	General Office	Recreation	Ancillary Retail	Commercial/Retail	Hotel, Job Training, Community Services	Maritime	Wastewater Treatment
Executive, administrative, management	0	5	10	10	16	N/A	14	5	5	3	4
Professional, paraprofessional, technical	5	20	65	50	19	N/A	14	1	1	11	75
Sales and related	0	0	0	0	14	N/A	46	75	4	0	0
Clerical, administrative support	10	5	10	10	50	N/A	7	10	15	3	11
Public and private services	10	10	5	5	1	N/A	3	0	70	16	10
Production construction, materials handling	75	60	10	25	0	N/A	16	9	5	67	0
Total:	100	100	100	100	100	0	100	100	100	100	100

(1) Adapted from California Employment Development Department and U.S. Bureau of Labor statistics

III. Indirect Job Multipliers for Alameda County

Use Category	Industry Sector	Indirect Multiplier (1)
Warehouse and Distribution	Trucking/Warehousing	1.3
Light Industrial/Manufacturing	Misc Manufacturing	1.28
R&D	Pharmaceutical	1.82
Flex Industrial/Office (reuse)	Professional Services	1.26
Flex Industrial/Office (new)	Professional Services	1.26
General Office (new)	FIRE & Manufacturing	1.85
Recreation	N/A	N/A
Ancillary Retail	Retail Trade	0.56
Hotel	Services	1.18
Marine Terminal Ops	Water Transportation	2.53
Wastewater Treatment	N/A	N/A
Other: Job Training	Education Services	1.16
Community Services	Social Services	1.11

(1) Adapted from U.S. Department of Commerce, Bureau of Economic Analysis statistics

OARB Area Redevelopment EIR
Employment Model

Floor Area Account	Square Feet, Each Sub-district				Total	% of Total SF	Jobs Generation Potential (Direct)		
	OARB	Maritime	16th/Wood	0			Use Category	Jobs Generated	Total Jobs
Warehouse and Distribution	300000	0	0	0	300000	7.3	Warehouse and Distribution	240	1.5
Light Industrial/Manufacturing	444000	0	305000	0	749000	18.3	Light Industrial/Manufacturing	1873	11.4
R&D	464000	0	0	0	464000	11.3	R&D	1160	7.1
Flex Industrial/Office	464000	0	1437000	0	1901000	46.5	Flex Industrial/Office	4943	30.1
General Office	600000	0	0	0	600000	14.7	General Office	2250	13.7
Recreation	N/A	0	N/A	0	N/A	N/A	Recreation	N/A	N/A
Ancillary Retail	25000	0	1300	0	26300	0.6	Ancillary Retail	74	0.4
Commercial/Retail	0	0	0	0	0	0.0	Commercial/Retail	0	0.0
Maritime	0	N/A	0	0	0	0.0	Maritime	5400	32.9
Other: Job Training	50000	0	0	0	50000	1.2	Other: Job Training	100	0.6
Live/Work (375 units)	0	0	N/A	0	0	0.0	Live/Work (375 units)	375	2.3
Total:	2347000	0	1743300	0	4090300	100.0	Total:	16414	100.0

Source: Maritime jobs from Port of Oakland 2002: spreadsheet dated March 15, 2002.

OARB Area Redevelopment EIR
Employment Model

Occupational Characteristics of Direct Employment				Jobs Generation Potential (Indirect)				Jobs Generation Potential (Direct + Indirect)			
Occupational Category	Jobs Generated	% of Total Jobs		Use Category	Jobs Generated	% of Total Jobs		Use Category	Jobs Generated	% of Total Jobs	
Executive, administrative, management	1241	7.6		Warehouse and Distribution	312	1.0		Warehouse and Distribution	552	1.2	
Professional, paraprofessional, technical	5020	30.6		Light Industrial/Manufacturing	2397	8.1		Light Industrial/Manufacturing	4269	9.3	
Sales and related	353	2.1		R&D	2111	7.1		R&D	3271	7.1	
Clerical, administrative support	2035	12.4		Flex Industrial/Office	6228	21.0		Flex Industrial/Office	11170	24.2	
Public and private services	1475	9.0		General Office	4163	14.0		General Office	6413	13.9	
Production construction, materials handling	6290	38.3		Recreation	N/A	N/A		Recreation	N/A	N/A	
				Ancillary Retail	41	0.1		Ancillary Retail	115	0.2	
Percent of jobs that are:				Commercial/Retail	0	0.0		Commercial/Retail	0	0.0	
Professional:	38.1			Maritime	13662	46.0		Maritime	19062	41.3	
Non-professional:	61.9			Other: Job Training	116	0.4		Other: Job Training	216	0.5	
				Live/Work	694			Live/Work	1069	2.3	
Total:	16414	100.0		Total:	29723	97.7		Total:	46137	100.0	

**OARB Area Redevelopment EIR
Employment Model**

Jobs Generation Potential (Direct)

Use Category	Jobs Generated, Each Sub-district			Total
	OARB	Maritime	16th/Wood	
Warehouse and Distribution	240	0	0	240
Light Industrial/Manufacturing	1110	0	763	1873
R&D	1160	0	0	1160
Flex Industrial/Office	1206	0	3736	4943
General Office	2250	0	0	2250
Recreation	N/A	0	N/A	0
Ancillary Retail	70	0	4	74
Commercial/Retail	0	0	0	0
Maritime	1330	4070	0	5400
Other: Job Training	100	0	0	100
Live/Work (375 units)	0	0	375	375
Total:	7466	4070	4877	16414

Jobs Generation Potential (Indirect)

Use Category	Jobs Generated, Each Sub-district			Total
	OARB	Maritime	16th/Wood	
Warehouse and Distribution	312	0	0	312
Light Industrial/Manufacturing	1421	0	976	2397
R&D	2111	0	0	2111
Flex Industrial/Office	1520	0	4708	6228
General Office	4163	0	0	4163
Recreation	N/A	N/A	N/A	0
Ancillary Retail	39	0	2	41
Commercial/Retail	0	0	0	0
Maritime	3365	10297	0	13662
Other: Job Training	116	0	0	116
Live/Work	0	0	694	694
Total:	13047	10297	6379	29723

Jobs Generation Potential (Direct + Indirect)

Use Category	Jobs Generated, Each Sub-district			Total
	OARB	Maritime	16th/Wood	
Warehouse and Distribution	552	0	0	552
Light Industrial/Manufacturing	2531	0	1739	4269
R&D	3271	0	0	3271
Flex Industrial/Office	2726	0	8444	11170
General Office	6413	0	0	6413
Recreation	N/A	N/A	N/A	N/A
Ancillary Retail	109	0	6	115
Commercial/Retail	0	0	0	0
Maritime	4695	14367	0	19062
Other: Job Training	216	0	0	216
Live/Work	0	0	1069	1069
Total:	20513	14367	11257	46137

**OARB Area Redevelopment EIR
Employment Model**

Local Jobs

	OARB Development Areas				
	Gateway	Port	Maritime	16th/Wood	Total
2000	890	440	1850	100	3280
2020	6150	188	2760	4820	13918
Difference	5260	-252	910	4720	10638

Source: HEG 2001.

Note: Local jobs are those jobs actually located within each redevelopment district.

Appendix 4.9 Public Services and Utilities

4.9A Water Demand and Supply

- Letter dated February 19, 2002 from the East Bay Municipal Utility District (EBMUD)
- Actual OARB Water Consumption, 1995 and 2001
- Baseline and Estimated 2020 Water Demand in the Redevelopment Project Area
- Current and Estimated 2020 Water Demand in the Redevelopment Project Area

4.9B Wastewater Demand

- Letter dated January 31, 2002 from the City of Oakland Public Works Agency
- Oakland Redevelopment Project Area Sewer Flows

4.9C Solid Waste Generation

4.9A Water Demand and Supply



February 19, 2002

Post-It® Fax Note	7671	Date	2.25.02	# of pages	4
To	GAYLE BOLLHARD	From	CARLTON CHAN		
Co./Dept.		Co.	EBMUD		
Phone #	655-1854	Phone #	287-1164		
Fax #	655-5031	Fax #	277-0790		

Ms. Aliza Gallo, Executive Director
Oakland Base Reuse Authority
700 Murmansk Street, Suite 300
Oakland, CA 94607-5009

Dear Ms. Gallo:

Re: Water Supply Assessment – Oakland Army Base Redevelopment Plan
Environmental Impact Report

This letter replies to your request of December 19, 2001 for water agency consultation concerning the Oakland Army Base (OARB) Redevelopment Plan (see enclosed). The East Bay Municipal Utility District (EBMUD) appreciates the opportunity to provide this response.

Pursuant to Chapter 643, Section 10910 of the California Water Code and Section 15083.5, California Environmental Quality Act Guidelines, the project meets the threshold requirement for an assessment of water supply availability based on the potential size of the development and the following criteria: the project includes more than four million square feet of light industry, office, research and development, retail, and warehouse/distribution; as part of project approval, an amendment to the City of Oakland's (City) General Plan will be prepared by the City which would result in a net increase in the stated population density; and the City is preparing an environmental impact report for the project.

Project Area and Service History

This project area is bordered on the north by the San Francisco Bay, on the west by the Oakland Outer Harbor and Middle Harbor, on the south by the Oakland Inner Harbor. The western boundary runs along the Cypress Freeway. The project is within the City and the County of Alameda. The City's redevelopment district, which is now under the charge of the Oakland Base Reuse Authority (OBRA) encompasses approximately 1,731 acres consisting of three sub-districts:

- 1) OARB - approximately 385 acres.
- 2) The Port of Oakland maritime and rail facilities - approximately 1,300 acres.
- 3) A portion of West Oakland immediately east of Interstate 880 (16th/Wood) - approximately 46 acres.

EBMUD has provided water service to the project site since 1941 and continues to provide water service to the project area. Water service to the OARB is currently provided through two master meter accounts via a local distribution system owned and

Ms. Aliza Gallo, Executive Director
February 19, 2002
Page 3

County and District-wide level for existing and projected water demand. A summary of EBMUD's demand and supply projections in five-year increments is provided in the table (Enclosure 3) from the UWMP. The data reflects the latest actual and forecast values.

EBMUD's evaluation of water supply availability accounts for the diversions of both upstream and downstream water right holders and fishery releases. Fishery releases are based on the requirements of a 1998 Joint Settlement Agreement (JSA) between EBMUD, US Fish and Wildlife Service, and the California Department of Fish and Game. The Federal Energy Regulatory Commission incorporated the JSA into the EBMUD hydropower license in 1989, and the California State Water Resources Control Board incorporated the flow provisions of the JSA into EBMUD's Mokelumne River water rights in 1999 through Decision 1641.

The available supply shown in the table (Enclosure 3) in years 1, 2 and 3 of a multiple year drought was determined by EBMUD's hydrologic model with the following assumptions:

EBMUD's Drought Planning Sequence is used for 1976, 1977, and 1978.

Total system storage is depleted by the end of the third year of the drought.

The diversions by Amador and Calaveras Counties upstream of Pardee Reservoir increase over time.

Releases are made to meet the requirements of senior downstream water right holders and fishery releases are made according to the JSA.

In the table, "Single Dry" year (or Year 1 of "Multiple Dry Years") is determined as a year that EBMUD would implement Drought Management Program elements at the "moderate" stage with the goal of achieving between 0 to 15 percent reduction in customer demand. Year 2 of Multiple Dry Years is determined as a year that EBMUD would implement Drought Management Program elements at the "severe" stage with the goal of achieving between 15 to 25 percent reduction in customer demand. In Year 3 of the multiple year drought, deficiencies from about 48 percent in year 2005 to about 67 percent in year 2020 are forecast to occur. Therefore, a supplemental supply is needed, which is defined by EBMUD as the additional amount of water necessary to limit customer deficiency to 25 percent in a multiple-year drought while continuing to meet the requirements of senior downstream water right holders and the provisions of the 1998 JSA.

Project Demand

Demand projections for the subject project area are included in the 2000 UWMP analysis (and were in the 1985, 1992, 1996 UWMP versions). The District projects the 2020 water demand to be approximately 1.8 mgd, which includes an estimated 0.15 mgd that can be satisfied by recycled water. The District's further refinement of OBRA's 1.5 mgd calculation includes the application of an infill development adjustment factor. The following paragraph outlines the plans that EBMUD has for acquiring additional water supply.

Ms. Aliza Gallo, Executive Director
February 19, 2002
Page 2

operated by the Army. In August 2001, the Army's two water accounts were transferred to OBRA. Since this area has a long history of being provided water service by EBMUD, it does not constitute a potential new area to be served.

Because the project is located entirely within the EBMUD service area, EBMUD is the service provider to the proposed development in accordance with state law (the Municipal Utility District Act) and EBMUD's regulations.

District-wide Water Demand Projections

The water consumption of EBMUD customers has remained relatively level in recent years in spite of population and account growth. Between 1987 and the present, consumption has ranged from a high of approximately 220 million gallons per day (mgd) in 1987 to a low of 170 mgd in 1989. Based on extensive forecasting in EBMUD's Water Supply Management Plan (WSMP) and recent land use based demand forecasting, the WSMP forecast 2020 water demand of 277 mgd can be reduced to 229 mgd with successful water recycling and conservation programs that are in place. The OARB project is not expected to change the District-wide demand 2020 projection.

EBMUD Water Supply and Water Rights

EBMUD has water rights and facilities to divert up to a maximum of 325 mgd from the Mokelumne River, subject to the availability of Mokelumne River runoff and the prior water rights of other users. EBMUD's position in the hierarchy of Mokelumne water users is determined by a variety of agreements between Mokelumne water rights holders, the appropriative water rights permits and licenses which have been issued by the State, pre-1914 rights, and riparian rights. Conditions which restrict EBMUD's ability to use its 325 mgd entitlement include:

- Upstream water use by prior right holders.
- Downstream water use by riparian and senior appropriators and other downstream obligations, including protection of public trust resources.
- Drought, or less than normal rainfall for more than a year.
- Emergency outage.

During periods of drought, runoff from the Mokelumne River is insufficient to supply the 325 mgd entitlement. EBMUD studies indicate that with our current water supply and the water demands expected in 2020, deficiencies in supply of up to 67 percent could occur during droughts.

EBMUD Urban Water Management Plan

The enclosed EBMUD's 2000 Urban Water Management Plan (UWMP), adopted by the Board of Directors in Resolution No. 33242-01, includes planning level analyses at the

Ms. Aliza Gallo, Executive Director
February 19, 2002
Page 4

Supplemental Water Supply and Demand Management

In EBMUD's 1993 WSMP, three main options to meet projected water needs and to increase water reliability were identified: development of the conveyance facilities necessary to take delivery of the EBMUD-Central Valley Project contract for delivery of an American River supplemental supply, groundwater conjunctive use, and/or additional surface water storage. More recently, EBMUD signed a Memorandum of Agreement with the City of Sacramento, the County of Sacramento, and the U.S. Bureau of Reclamation to study a joint regional water project on the Sacramento River near Freeport replacing an American River diversion. A Freeport project would allow for a future groundwater conjunctive use component and, along with planned water recycling and conservation efforts, would ensure a reliable water supply to meet projected demands for current and future EBMUD customers within the current service area. Without a supplemental water supply source, deficiencies in supply are projected as noted above.

EBMUD requests that OBRA continue to discuss options with EBMUD to reduce new water demand impacts through both conservation practices and the use of recycled water. Please contact Marie A. Valmores, Senior Civil Engineer at (510) 287-1084 for further information.

Sincerely,



WILLIAM R. KIRKPATRICK
Manager of Water Distribution Planning Division

WRK:CDC:sb
sb02_035.doc

- Enclosures: 1. Letter dated December 19, 2001
2. EBMUD 2000 Urban Water Management Plan
3. EBMUD Projected Demand and Available Supply Table

cc: Board of Directors w/o Enclosure 2

Oakland Base Reuse Authority
700 Murmansk Street, Suite 3
Oakland, CA 94607
(510) 238-7256 Facsimile (510) 238-2936

December 19, 2001

Mr. William R. Kirkpatrick, Manager, Water Distribution Planning
East Bay Municipal Utility District, M/S 701
P.O. Box 24055
Oakland, California 94623-1055

Re: **Oakland Army Base (OARB) Redevelopment Plan EIR**
Request for Water Consultation and a Water Supply Assessment

Dear Mr. Kirkpatrick:

This letter serves as a request from the Oakland Base Reuse Authority (OBRA), acting as Local Reuse Agency on behalf of the City of Oakland, to EBMUD for an assessment of water demand for the subject redevelopment plan, and of the supply of EBMUD water available to serve the proposed redevelopment district. The City is preparing a redevelopment environmental impact report (EIR) in accordance with requirements of the California Environmental Quality Act (CEQA, Public Resources Code [PRC] §21000 et seq) and the CEQA Guidelines (California Code of Regulations [CCR] § 15000 et seq). This request to EBMUD is made pursuant to CCR §15083.5, which requires consultation with the relevant water agency for actions of a certain magnitude.

The City of Oakland recognizes that economic and physical blight exists in West Oakland, and that such blight could worsen due to the closure of OARB by the U.S. Government (final decision enacted into law September 1995). Therefore, in July 2000, the City established a redevelopment district with OARB at its center. At the same time, the City adopted a redevelopment plan that defines a framework of agency powers, duties, and obligations to enable redevelopment within the district.

The redevelopment district encompasses approximately 1,731 acres, and three redevelopment sub-districts, as shown on Attachments A and B to this letter:

- OARB: approximately 385 acres, the land are of the base
- Maritime: approximately 1,300 acres of Port of Oakland maritime and rail facilities, as well as roadway rights-of-way and miscellaneous parcels; and
- 16th/Wood: approximately 46 acres of West Oakland, immediately east of I-880.

Mr. William R. Kirkpatrick
December 19, 2001
Page 2

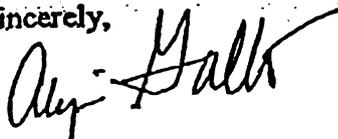
Currently, the developed portion of the district is overwhelmingly transportation-oriented industry. Redevelopment is envisioned to result in a more complex and rich land use. It should be understood, however, that plans for ultimate reuse are conceptual, and redevelopment information is limited to proposed land use classifications and development intensities that will be reflected in an amendment to the Oakland General Plan. Only a few specific component projects have been generally identified, and details regarding building locations, operational characteristics, etc. do not currently exist. Buildout is expected to occur by 2020, and is expected to result in the land uses and development intensities identified in Attachment C to this letter.

It is the City's understanding the current EBMUD water demand protocol is based on land use types and development intensities. Because this is the type of information that exists regarding the proposed plan for redevelopment, we are confident EBMUD can assess water demand and supply in accordance with the requirements of CEQA. Attachment D is an analysis of existing and future water demand (at buildout) for the redevelopment district. We hope this information may assist EBMUD.

OBRA and the City of Oakland appreciate EBMUD's attention to this request. Should you have questions, or require additional information, please do not hesitate to contact our EIR consultant, Gayle Borchard: 510/655-1854.

Thank you.

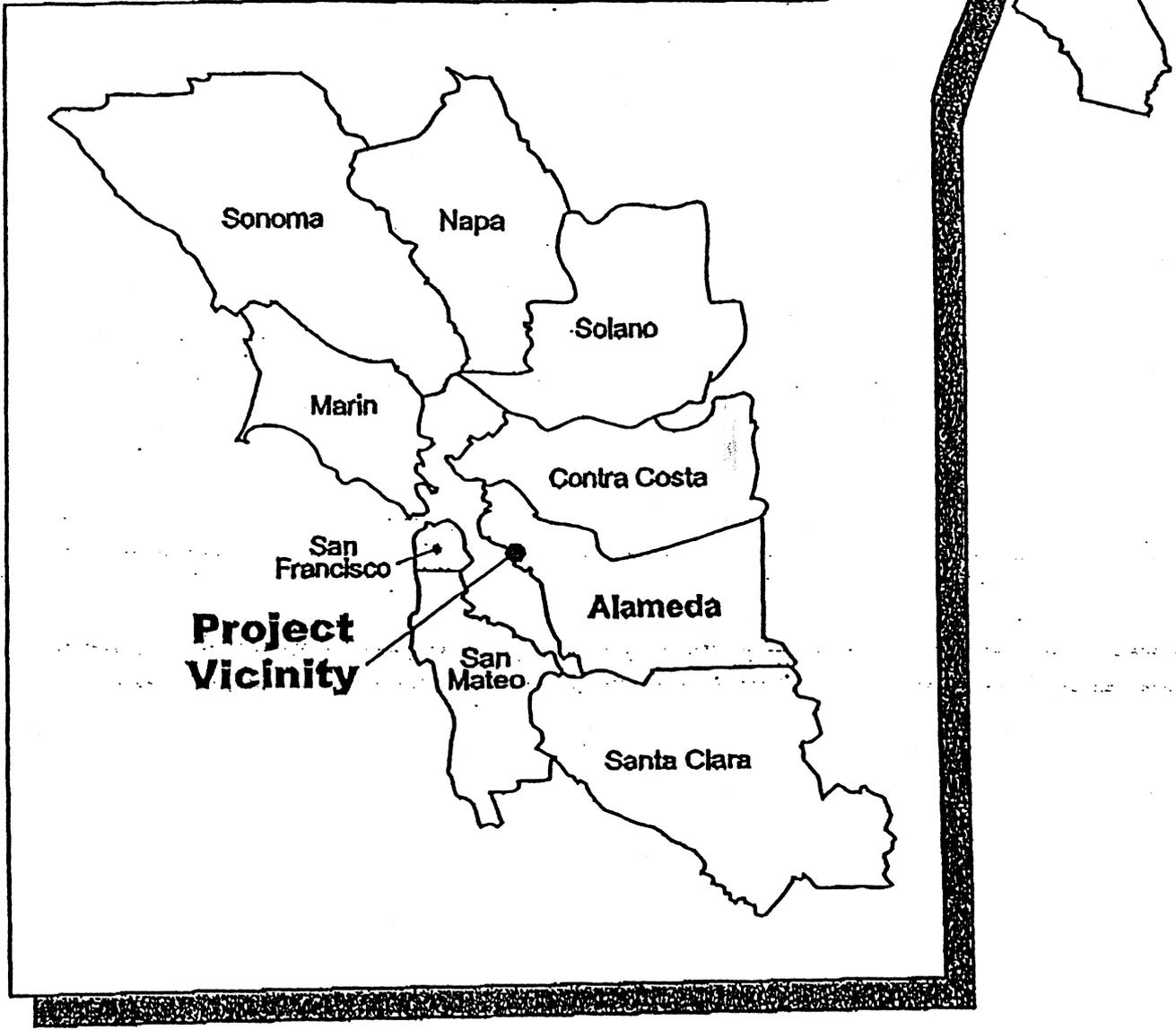
Sincerely,



Aliza Gallo
Executive Director

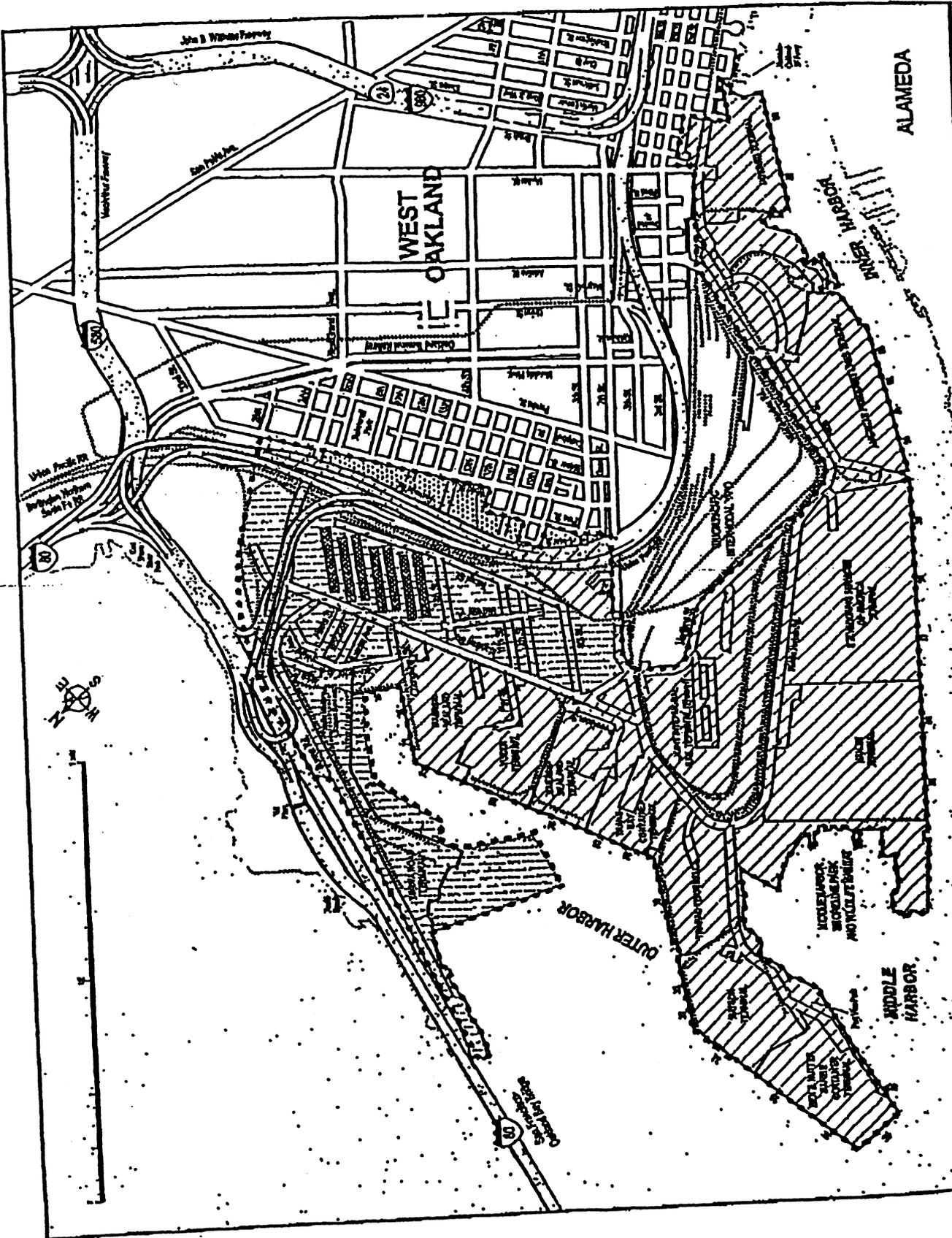
Attachments: A: Graphic: Regional Location
B: Graphic: OARB Redevelopment District and Sub-districts
C: Table: Proposed Land Uses and Development Intensities
D: Spreadsheet: Current and 2020 Demand in the Redevelopment District

cc: E. Thornton, OBRA Project Manager
M. Wald, City Attorney
S. Gregory, Lamphier-Gregory, Consulting CEQA Manager
G. Borchard, Gayle Borchard & Associates, CEQA Consultant



Not to Scale

**Attachment A, Water Supply Assessment Request
OARB Redevelopment District: Regional Location
November 2001**



Attachment B, Water Supply Assessment Request

Attachment C, Water Supply Assessment Request
 OARB Redevelopment District Build-out through 2020
 Proposed Land Uses and Development Intensities

Potential Land Uses	Units	Redevelopment Sub-district			Total
		OARB	Maritime	16 th /Wood	
Light Industry	sq. ft.	444,000	0	300,000	1,044,000
Office, R&D	sq. ft.	1,528,000	0	1,000,000	2,528,000
Retail	sq. ft.	25,000	0	500,000	525,000
Warehouse/distribution	sq. ft.	300,000	0	0	300,000
Total square feet		2,297,000	0	1,800,000	4,397,000
From uses listed above	ac.	162	0	44	202
Community/civic	ac.	3	0	1	4
Park, Public Access	ac.	25	0	1	26
Maritime	ac.	52	166	0	1226
Maritime Support	ac.	15	90	0	105
Rail	ac.	128	0	0	120
Total acres to be redeveloped		385	256	46	687 (of 1,731)
Residential	Total units	d.u.		400	400
Notes:	sq. ft. = square feet				
	ac. = acres				
	d.u. = dwelling units				

Attachment D, Water Supply Assessment Request
 OARB Redevelopment District: Current and 2020 Demand in the Redevelopment District

Redevelopment Sub-District	Current Water Demand, Gallons per Day (gpd) (1), (2)			Estimated 2020 Water Demand, Gallons per Day			
	Land Use (3)	Acres	gpd/ac Demand	Land Use	Acres (4)	gpd/ac Demand	
OARB	EH	215	240,000	EO	33	1,748	57,684
	EIL	150	N/A (actual used)	EOH	107	3,888	416,123
	EV	20	N/A (actual used)	EC	5	1,695	8,475
		385	240,000	EIL	215	563	121,045
				EPI	25	426	10,650
					388	613,977	
Maritime	EIL	1,275	717,825	EIL	1,326	563	746,538
	EC	25	42,375				
		1,300	760,200				
16th/Wood	EIL	46	25,898	ER4	8	8,330	66,640
				EOH	10	3,889	38,890
				EC	3	1,695	5,085
				EP	2	1,343	2,686
				EIL	23	563	12,949
				46		126,250	
Total District		1,731	1,026,098		1,757		1,486,765

INCREASED DISTRICT-WIDE DEMAND DUE TO REDEVELOPMENT

Notes

- Except for OARB, current demand is calculated from EBMUD "Average Land Use Demands by Location"
- OARB current demand is actual demand in baseline year 1995, from EBMUD records for OARB
- Land use codes are from "EBMUD Update to District-Wide Water Demands: Existing Land Use Categories"
 - EH Specific high water users
 - EIL Industrial low water use
 - EV Vacant land
 - EO Office/Light Industrial
 - EOH High density office
 - EC General commercial/Industrial
 - EPI Irrigated recreation
 - ER4 Very high density residential
 - EP Public/quasi-public lands
- Increase in acreage due to construction of approximately 26 net acres of new land by Bay fill in Maritime sub-district

PROJECTED DEMAND AND AVAILABLE SUPPLY
EAST BAY MUNICIPAL UTILITY DISTRICT
(million gallons per day- mgd)

	2000	2005	2010	2015	2020
Customer Demand ¹	230	242	257	267	277
Adjusted for Conservation ²	(8)	(14)	(20)	(27)	(34)
Adjusted for Recycled Water ³	(6)	(9)	(11)	(12)	(14)
Planning Level of Demand	216	219	226	228	229
Available Supply & Need for Supplemental Supply					
Normal Year	>216	>219	>226	>228	>229
<i>Supplemental Supply Need</i>	0	0	0	0	0
Single Dry Year (Multiple Dry Years - Year 1) Moderate Stage (-7% deficiency) ⁴	200	203	210	212	213
<i>Supplemental Supply Need</i>	0	0	0	0	0
Multiple Dry Years - Year 2 Severe Stage (25% deficiency) ⁴	162	164	169	171	172
<i>Supplemental Supply Need</i>	0	0	0	0	0
Multiple Dry Years - Year 3					
Available Supply	125	114	95	84	77
Deficiency	42%	48%	58%	63%	67%
<i>Supplemental Supply Need⁵ (to limit deficiency to 25%)</i>	87	102	128	142	154

1. Demand taken from the 2000 Demand Study.

2. Conservation water savings goals from the WCMP 1999 Annual Report, 2 mgd in 1999 and 34 mgd for year 2020, linearly interpolated into five-year increments.

3. Chapter 5 of UWMP.

Note: Conservation and Reclamation savings reported are those attributed to programs which are a part of the 1993 WSMP. Reference Chapter 6 of UWMP.

4. Drought conditions per Table 3-1, UWMP.

5. The supplemental supply need is calculated from modeling studies and is the amount of water needed to limit customer deficiency to 25 percent and to implement all provisions of the 1998 JSA.

OARB Redevelopment Project Area: Baseline and Estimated 2020 Water Demand in the Redevelopment Project Area
Analysis of Demand: 1995 v. 2020

Redevelopment Sub-District	1995 Water Demand, Gallons per Day (gpd) (1), (2)			Estimated 2020 Water Demand, Gallons per Day				
	Land Use (3)	Acres	gpd/ac Demand	Land Use	Acres (4)	gpd/ac Demand		
OARB	EH	215	184,120	EO	33	1,748		
	EIL	150	N/A (actual used)	EOH	107	3,889		
	EV	20	N/A (actual used)	EC	5	1,695		
		385	184,120	EIL	215	563		
				EPI	25	426		
				385		613,977		
Maritime	EIL	1,275	563	717,825	EIL	1,326	563	746,538
	EC	25	1,695	42,375				
		1,300		760,200				
16th/Wood	EIL	46	563	25,898	ER4	8	8,330	66,640
					EOH	10	3,889	38,890
					EC	3	1,695	5,085
					EP	2	1,343	2,686
					EIL	23	563	12,949
					46			126,250
Total District		1,731		970,218		1,757		1,486,765
INCREASED DISTRICT-WIDE DEMAND DUE TO REDEVELOPMENT								516,547

Notes

1. Except for OARB, current demand is calculated from EBMUD "Average Land Use Demands by Location"
2. OARB current demand is actual demand in 2001 from EBMUD records for OARB
3. Land use codes are from "EBMUD Update to District-Wide Water Demands: Existing Land Use Categories"
 - EH Specific high water users
 - EIL Industrial low water use
 - EV Vacant land
 - EO Office/Light Industrial
 - EOH High density office
 - EC General commercial/Industrial
 - EPI Irrigated recreation
 - ER4 Very high density residential
 - EP Public/quasi-public lands
4. Increase in acreage due to construction of approximately 26 net acres of new land by Bay fill in Maritime sub-district.

**OARB Redevelopment Project Area: Current and Estimated 2020 Water Demand in the
Redevelopment Project Area
Analysis of Demand, 2001 v. 2020**

Redevelopment Sub-District	2001 Water Demand, Gallons per Day (gpd) (1), (2)			Estimated 2020 Water Demand, Gallons per Day				
	Land Use (3)	Acres	gpd/ac Demand	Land Use	Acres (4)	gpd/ac Demand		
OARB	EH	215	205,359	EO	33	1,748		
	EIL	150	N/A (actual used)	EOH	107	3,889		
	EV	20	N/A (actual used)	EC	5	1,695		
		385	205,359	EIL	215	563		
				EPI	25	426		
				385	613,977			
Maritime	EIL	1,275	563	717,825	EIL	1,326	563	746,538
	EC	25	1,695	42,375				
		1,300		760,200				
16th/Wood	EIL	46	563	25,898	ER4	8	8,330	66,640
					EOH	10	3,889	38,890
					EC	3	1,695	5,085
					EP	2	1,343	2,686
					EIL	23	563	12,949
				46	126,250			
Total District		1,731		991,457		1,757		1,486,765
				INCREASED DISTRICT-WIDE DEMAND DUE TO REDEVELOPMENT				
								495,308

Notes

1. Except for OARB, current demand is calculated from EBMUD "Average Land Use Demands by Location"
 2. OARB current demand is actual demand in 2001 from EBMUD records for OARB
 3. Land use codes are from "EBMUD Update to District-Wide Water Demands: Existing Land Use Categories"
- | | | | |
|-----|---------------------------|-----|-------------------------------|
| EH | Specific high water users | EC | General commercial/Industrial |
| EIL | Industrial low water use | EPI | Irrigated recreation |
| EV | Vacant land | ER4 | Very high density residential |
| EO | Office/Light Industrial | EP | Public/quasi-public lands |
| EOH | High density office | | |
4. Increase in acreage due to construction of approxi- y 26 net acres of new land by Bay fill in Maritime sub-district.

RECEIVED
NOV 02 2001

**TABLE 3-1
AVERAGE LAND USE DEMANDS by LOCATION**

Land Use Symbol	Land Use Category	East of Hills Average LUD (gpd/acre)	West of Hills Average LUD (gpd/acre)	Comments
Residential Uses				
FR1	Low Density Residential	682	480	
FR2	Medium Density Residential	1,413	1,423	
FR3	High Density Residential	2,932	3,834	
FR4	Very High Density Residential	5,721	8,330	
FR5	Special/High Density Residential	11,441	16,659	Average LUD is 2 times FR4 LUD.
Commercial Uses				
FC	General Commercial/Industrial	1,641	1,695	
FIL	Industrial Low Water Use	264	563	
FMU	Mixed Use	2,199	2,875	Average LUD is 75% of Average LUD for FR3.
FO	Office/Industrial	1,463	1,748	
FOH	High Density Office	2,909	3,889	
FR	Petroleum Refineries	-	4,248	No refineries East of Hills
Public Uses				
FP	Public/Quasi Public	794	1,343	
FPI	Irrigated Parks	648	426	
FS	Schools	872	1,032	
Miscellaneous Uses				
FOS	Open Space	-	-	
FV	Vacant Lands	-	-	

4.9B Wastewater Demand

CITY OF OAKLAND



DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA, 4TH FLOOR • OAKLAND, CALIFORNIA 94612
Public Works Agency

(510) 238-3437
FAX (510) 238-7227
TTY (510) 238-7644

Jan. 31, 2002

Gayle Borchard
6026 Colby St.
Oakland, CA 94618

RE: OARB Redevelopment Program - Sewer Capacity Verifications

Dear Ms. Borchard:

Per our telephone conversations and your letter of request for sewer capacity of the proposed redevelopment program, a mitigation charge will not be required based on the amount of discharge per the calculations that you have provided the City. As noted, the new-engineered backbone sanitary sewer system will need to be reviewed by the respective agency. The current sewer system at the proposed connection points will be able to accommodate the anticipated flow.

If site conditions should differ, please advise us so we may prepare future analysis
If you have any questions, please call me at (510) 238-6939.

Sincerely,

Allen Law, P.E.

ALLEN LAW, PE
Civil Engineer

OARB REDEVELOPMENT PROJECT AREA
Sewer Flows

Sub-basin	Sub-district	Source	Unit Type	No. of Units	Gross Acres	Net Acres	Unit for ADW Calculation	ADWF Generation Rate gpd/unit	Flow gpd	Peaking Factor percent	Total Flow gpd	PWPF mgd
64-5	Maritime	Maritime	ac	26	26		Gross acres	600	15,900	3.0	46,800	
64-5	Maritime	Maritime Support	ac	75	75		Gross acres	600	45,000	3.0	135,000	
64-5	PDA	Maritime	ac	47.5	47.5		Gross acres	600	28,500	3.0	85,500	
64-5	PDA	Rail	ac	124	124		Gross acres	600	74,400	3.0	223,200	
											490,500	0.5003
											500,310	
64-12	16th/Wood	Light Industrial	SF	125,000	6.5	2.9	Net acres	5,000	14,500	2.5	36,250	
												0.0370
64-13	16th/Wood	Light Industrial	SF	125,000	6.5	2.9	Net acres	5,000	14,500	2.5	36,250	
64-13	16th/Wood	Live-work	DU	200			DUs	180	36,000	2.0	72,000	
64-13	16th/Wood	Office, R&D	SF	500,000			SF	0.2	100,000	3.0	300,000	
64-13	16th/Wood	Park	ac	0.5	0.5		Gross acres	50	25	2.0	50	
64-13	16th/Wood	Retail	SF	250,000	5.0		Gross acres	2,000	10,000	2.5	25,000	
											433,300	0.4420
											441,966	
64-14	16th/Wood	Light Industrial	SF	50,000	3.5	1.2	Net acres	5,000	6,000	2.5	15,000	
64-14	16th/Wood	Live-work	DU	200			DUs	180	36,000	2.0	72,000	
64-14	16th/Wood	Office, R&D	SF	500,000			SF	0.2	100,000	3.0	300,000	
64-14	16th/Wood	Park	ac	0.5	0.5		Gross acres	50	25	2.0	50	
64-14	16th/Wood	Retail	SF	250,000	5.0		Gross acres	2,000	10,000	2.5	25,000	
											412,050	0.4203
											420,291	
64-15/64-X	GDA	Civic	ac	3	3.0	3.0	Net acres	1,000	3,000	2.5	7,500	
64-15/64-X	GDA	Light Industrial	SF	444,000	40.0	10.2	Net acres	5,000	51,000	2.5	127,500	
64-15/64-X	GDA	Office, R&D	SF	1,528,000	93.0		SF	0.2	305,600	3.0	916,800	
64-15/64-X	GDA	Open Space	ac	10	10.0		Gross acres	0	0	0.0	0	
64-15/64-X	GDA	Retail	SF	25,000	5.0	0.6	Net acres	2,000	1,200	2.5	3,000	
											1,054,800	1.0756
											1,075,896	
64-X	GDA	Maritime Support	ac	15	15.0		Gross acres	600	9,000	3.0	27,000	
64-X	GDA	Park	ac	15	15.0		Gross acres	50	750	2.0	1,500	
64-X	GDA	Warehouse/dst	SF	300,000	25.0		Gross acres	600	15,000	3.0	45,000	
64-X	Maritime	Maritime Support	ac	15	15		Gross acres	600	9,000	3.0	27,000	
64-X	Maritime	Rail	ac	21.5	21.5		Gross acres	600	12,900	3.0	38,700	
											139,200	0.1420
											141,984	
												2.6174

Notes: Generation rates from Land Development Handbook, Planning Engineering, and Surveying (Dewberry & Davis 1996), Table 11.2
 Maritime and rail uses assumed as general warehouse generation rate
 Light Industrial generation rate assumed at 50 percent of heavy manufacturing industrial
 Live-work assumes 1.5 persons per unit, 1 worker per unit
 Civic is JATC, assumes generation consistent with construction work
 If calculated as 2 percent of total gpd consistent with EBMUD input and new systems

4.9C Solid Waste Generation

OARB Area Redevelopment EIR
Solid Waste Generation

Proposed Land Use	Square Feet, by Sub-District		Direct Jobs (employees), by Sub-District		Solid Waste Generation, tons per year	
	OARB	Maritime	OARB	Maritime	OARB	Maritime
Warehouse and Distribution	300000		240	0	431.18	0.00
Light Industrial/Manufacturing	444000	305000	1110	0	6008.65	0.00
R&D	464000	0	1160	0	603.20	0.00
Flex Industrial/Office	464000	1437000	1206	0	603.20	0.00
General Office	600000	0	2250	0	6552.00	0.00
Recreation	N/A	N/A	N/A	N/A	6.50	0.00
Ancillary Retail	25000	0	70	4	149.50	0.00
Commercial/Retail	0	1300	0	0	0.00	0.00
Maritime	0	0	1330	0	1590.68	4867.72
Job Training (JATC)	50000	0	100	0	541.32	0.00
Live/work	0	0	0	0	0.00	0.00
		375 d.u.		375		268.13
Existing Land Use to be Replaced						
Warehouse and Distribution	2757900		500		16486.24	4867.72
Office/Administrative	762000		1300		898.30	
Light Industrial	156500		250		8321.04	
			2050		1353.30	
					10572.64	
						6274.27
						Total generated: 27628.23

Notes:
Rates from Estimated Solid Waste Generation Rates: Industrial, Commercial, Residential (IWMB 2001).
Warehouse/Distribution as IWMB "Warehouse"
Light Industrial/Manufacturing and JATC as IWMB "Light industrial"
R&D and Flex Industrial/Office as IWMB "Office"
General Office as IWMB "Professional office"
Ancillary Retail and Commercial/Retail as IWMB "Commercial retail"
Maritime as IWMB "Transportation/communication/utilities"
Live/work is a composite of IWMB "Multi-family" (4 lb./d.u./day) and 1 employee of Office at 1.5lb./emp/day

Less existing: 10572.64
Net total generated: 17055.59
Less Oakland's 50% diversion rate: 8527.79
Total net increase in disposal due to redevelopment (TPY): 8527.79

Appendix 4.12 Biology

- 4.12A Plant Species Observed on the OARB
- 4.12B Plant Species Observed at the Gateway Peninsula
- 4.12C Wildlife Species Observed at the OARB
- 4.12D Summary of Wildlife Observations at the Gateway Peninsula
- 4.12E Bird Species Observed at the New Berth 21 Fill Area
- 4.12F Aquatic (Non-Mammal) Species Observed in the Outer Harbor
- 4.12G Information from U.S. Fish and Wildlife Service
- 4.12H Special-Status Wildlife Species Potentially Occurring within the OARB Redevelopment Project Area
- 4.12I Special-Status Plant Species Potentially Occurring within the OARB Redevelopment Project Area
- 4.12J Correspondence Between the U.S. Army and the USFWS, and Between the Army and the NMFS Regarding Federally-Protected Species
 - October 11, 2000 letter of concurrence from USFWS to Army
 - August 3, 2000 letter from Army to USFWS requesting concurrence with Army determination of no likely adverse effect
 - January 11, 1996 letter of concurrence from USFWS to Army regarding suitability of OARB for fish and wildlife management
 - September 30, 1999 letter from Army to USFWS requesting concurrence with Army determination of no likely adverse effect
 - April 10, 2000 letter of concurrence from NMFS to Army of conditional concurrence
 - September 30, 1999 letter from Army to NMFS requesting concurrence with Army determination of no likely adverse effect

4.12A Plant Species Observed on the OARB

Appendix 4.12A
Plant Species Observed on the OARB

Common Name	Scientific Name	Origin; Life History; Status
DICOTS		
FIG-MARIGOLD FAMILY AIZOACEAE		
New Zealand spinach	<i>Tetragonia tetragonioides</i>	Introduced; annual
sea fig	<i>Carpobrotus edulis</i>	Introduced; perennial
CARROT FAMILY APIACEAE		
fennel	<i>Foeniculum vulgare</i>	Introduced; perennial; FACU
SUNFLOWER FAMILY ASTERACEAE		
Australian brass-buttons	<i>Cotula australis</i>	Introduced; annual
beach bur	<i>Ambrosia chamissonis</i>	Native; perennial
brass-buttons	<i>Cotula coronopifolia</i>	Introduced; perennial; FACW
bristly ox-tongue	<i>Picris echinoides</i>	Introduced; biennial; FAC
bristly tail-seed	<i>Urospermum picroides</i>	Introduced; annual, perennial
Canada horseweed	<i>Conyza canadensis</i>	Native; annual; FAC
cocklebur	<i>Xanthium strumarium</i>	Native; annual; FAC
common sow thistle	<i>Sonchus oleraceus</i>	Introduced; annual
common cudweed	<i>Gnaphalium luteo-album</i>	Introduced; annual; FACW
coyote brush	<i>Baccharis pilularis</i>	Native; shrub
fleshy jaumea	<i>Jaumea carnosa</i>	Native; perennial; OBL
	<i>Argyranthemum</i>	
Island marguerite	<i>foeniculaceum</i> Canary	Introduced; subshrub
Italian thistle	<i>Carduus pycnocephalus</i>	Introduced; annual
	<i>Grindella stricta</i> var.	Native; subshrub; OBL; CNPS
	<i>angustifolia</i>	List 4
marsh gum-plant		
narrow-leaved wild-lettuce	<i>Lactuca saligna</i>	Introduced; annual
prickly lettuce	<i>Lactuca serriola</i>	Introduced; annual; FAC
poison wild-lettuce	<i>Lactuca virosa</i>	Introduced biennial
rough cat's ear	<i>Hypochaeris radicata</i>	Introduced; perennial
South American horseweed	<i>Conyza bonariensis</i>	Introduced; annual
telegraph weed	<i>Heterotheca grandiflora</i>	Native; annual, perennial
totalote	<i>Centaurea melitensis</i>	Introduced; annual
	<i>Crepis vesicaria</i> ssp.	
weedy hawksbeard	<i>taraxacifolia</i>	Introduced; annual, biennial
yellow star-thistle	<i>Centaurea solstitialis</i>	Introduced; annual
MUSTARD FAMILY BRASSICACEAE		
black mustard	<i>Brassica nigra</i>	Introduced; annual
broad-leaved pepper-grass	<i>Lepidium latifolium</i>	Introduced; perennial; FACW
European sea rocket	<i>Cakile maritima</i>	Introduced; annual; FACW
lesser swine cress	<i>Coronopus didymus</i>	Introduced; annual, biennial
shortpod mustard	<i>Hirschfeldia incana</i>	Introduced; biennial, perennial
wild radish	<i>Raphanus sativus</i>	Introduced; annual, biennial

Appendix 4.12A
Plant Species Observed on the OARB

Common Name	Scientific Name	Origin; Life History; Status
PINK FAMILY	CARYOPHYLLACEAE	
four-leaved allseed	<i>Polycaxpon tetraphyllum</i>	Introduced; annual
salt sand-spurry	<i>Spergularia marina</i>	Native; annual; OBL
GOOSEFOOT FAMILY	CHENOPODIACEAE	
alkali Russian thistle	<i>Salsola soda</i>	Introduced; annual
Australian saltbush	<i>Atriplex semibaccata</i>	Introduced; perennial, subshrub; FAC
five-horn bassia	<i>Bassia hyssopifolia</i>	Introduced; annual; FAC
pickleweed	<i>Salicornia virginica</i>	Native; perennial; OBL
saltbush	<i>Atriplex sp. (prob. subspicata)</i>	Native; annual
tumbleweed	<i>Salsola tragus</i>	Introduced; annual; FACU
MORNING GLORY FAMILY	CONVOLVULACEAE	
field bindweed	<i>Convolvulus arvensis</i>	Introduced; perennial;
DODDER FAMILY	CUSCUTACEAE	
saltmarsh dodder	<i>Cuscuta salina</i>	Native; annual
SPURGE FAMILY	EUPHORBIACEAE	
prostrate spurge	<i>Chamaesyce prostrata</i>	Introduced; annual
PEA FAMILY	FABACEAE	
arroyo lupine	<i>Lupinus succulentus</i>	Native; annual
bird's-foot trefoil	<i>Lotus corniculatus</i>	Introduced; perennial; FAC
California burclover	<i>Medicago polymorpha</i>	Introduced; annual
golden wattle	<i>Acacia longifolia</i>	Introduced shrub
sourclover	<i>Melilotus indicus</i>	Introduced; annual; FACI
white clover	<i>Trifolium repens</i>	Introduced; perennial; FACU
white sweetclover	<i>Melilotus albus</i>	Introduced; annual, biennial; FACU
GERANIUM FAMILY	GERANIACEAE	
dove's-foot geranium	<i>Geranium molle</i>	Introduced; annual, biennial
red-stemmed filaree	<i>Erodium cicutarium</i>	Introduced; annual
MALLOW FAMILY	MALVACEAE	
bull mallow	<i>Malva nicaeensis</i>	Introduced; annual, biennial
MYOPORUM FAMILY	MYOPORACEAE	
ngaio tree	<i>Myoporum laetum</i>	Introduced shrub, tree
EVENING PRIMROSE FAMILY	ONAGRACEAE	
autumn willowweed	<i>Epilobium brachycarpum</i>	Native; annual; UPL
POPPY FAMILY	PAPAVERACEAE	
California poppy	<i>Eschscholzia californica</i>	Native; annual, perennial
PLANTAIN FAMILY	PLANTAGINACEAE	
cut-leaf plantain	<i>Plantago coronopus</i>	Introduced biennial; FAC
English plantain	<i>Plantago lanceolata</i>	Introduced; perennial; FAC

Appendix 4.12A
Plant Species Observed on the OARB

Common Name	Scientific Name	Origin; Life History; Status
BUCKWHEAT FAMILY	POLYGONACEAE	
common knotweed	<i>Polygonum arenastrum</i>	Introduced; annual, perennial; FAC
curly dock	<i>Rumex crispus</i>	Introduced; perennial; FACW
willow dock	<i>Rumex salicifolius</i> var. <i>transitorius</i>	Native; perennial
PRIMROSE FAMILY	PRIMULACEAE	
scarlet pimpernel	<i>Anagallis arvensis</i>	Introduced; annual; FAC
WILLOW FAMILY	SALICACEAE	
arroyo willow	<i>Salix lasiolepis</i>	Native; shrub; FACW
sandbar willow	<i>Salix exigua</i>	Native; shrub; OBL
NETTLE FAMILY	URTICACEAE	
spreading pellitory	<i>Parietaria judaica</i>	Introduced; perennial
VALERIAN FAMILY	VALERIANACEAE	
red valerian	<i>Centranthus ruber</i>	Introduced; perennial
MONOCOTS		
SEDGE FAMILY	CYPERACEAE	
prairie rush	<i>Scirpus maritimus</i>	Native; perennial; OBL
tall flatsedge	<i>Cyperus eragrostis</i>	Native; perennial; FACW
GRASS FAMILY	POACEAE	
beard grass	<i>Polypogon monspeliensis</i>	Introduced; annual; FACW
Bermuda grass	<i>Cynodon dactylon</i>	Ka, Introduced; perennial; FAC
broom-corn millet	<i>Panicum miliaceum</i>	Introduced; annual
Italian rye-grass	<i>Lolium multiflorum</i>	Introduced; annual
pacific bentgrass	<i>Agrostis avenacea</i>	Introduced; perennial; FACW
pampas grass	<i>Cortaderia</i> sp.	Introduced; perennial
purple needlegrass	<i>Nassella pulchra</i>	Native; perennial
rattail fescue	<i>Vulpia myuros</i>	Introduced; annual; FACU*
red brome	<i>Bromus madritensis</i> ssp. <i>rubens</i>	Introduced; annual
ripgut brome	<i>Bromus diandrus</i>	Introduced; annual
saltgrass	<i>Distichlis spicata</i>	Native; perennial; FACW
slender wild oats	<i>Avena barbata</i>	Introduced; annual
smilo grass	<i>Piptathexum miliaceum</i>	Introduced; perennial
upright veldt grass	<i>Ehrharta erecta</i>	Introduced; perennial
CATTAIL FAMILY	TYPHACEAE	
narrow-leaf cattail	<i>Typha angustifolia</i>	Native; perennial; OBL

Source: Corps 1999

Notes:

CNPS = California Native Plant Society List 4: Plants of Limited Distribution

FAC = facultative plants with an estimated probability of 34-66% to occur in wetlands

FACU = facultative upland plants with an estimated probability of 1-33% to occur in wetlands

FAWC = facultative wetland plants with an estimated probability of 67-99% to occur in wetlands

OBL = obligate wetland plants with an estimated probability >99% to occur in wetlands

**4.12B Plant Species Observed at the
Gateway Peninsula**

Appendix 4.12B

Plant Species Observed at the Gateway Peninsula

Common name	Scientific name <i>Genus species</i>	Plant Community ^a
DICOTS		
CARROT FAMILY	APIACEAE	CS, UR
Fennel	<i>Foeniculum vulgare</i> *	
SUNFLOWER FAMILY	ASTERACEAE	
beachbur	<i>Ambrosia chamissonis</i>	CS
coyote brush	<i>Baccharis pilularis</i>	CS, UR
cultivated chrysanthemum	<i>Chrysanthemum frutescens</i> *	CS, UR
little horseweed	<i>Conyza bonariensis</i> *	UR
brass buttons	<i>Cotula coronopifolia</i> *	SD
cardo, artichoke thistle	<i>Cynara cardunculus</i> *	UR
cudweed	<i>Gnaphalium luteo-album</i> *	TR, UR
marsh gumplant	<i>Grindelia stricta angustifolia</i> ^b	CS
telegraph weed	<i>Heterotheca grandiflora</i>	TR
fleshy jaumea	<i>Jaumea carnosa</i>	IT
common sow thistle	<i>Sonchus oleraceus</i> *	TR, UR
MUSTARD FAMILY	BRASSICACEAE	
wild radish	<i>Raphanus sativus</i> *	UR
shiny pepper-grass	<i>Lepidium nitidum</i>	IT, SD
PINK FAMILY	CARYOPHYLLACEAE	
red sand spurry	<i>Spergularia rubra</i> *	SD
four-leaved allseed	<i>Polycarpon tetraphyllum</i> *	SD
GOOSEFOOT FAMILY	CHENOPODIACEAE	
spear oracle	<i>Atriplex p. patula</i>	IT, SD
Australian saltbush	<i>Atriplex semibaccata</i> *	SD
common pickleweed	<i>Salicornia virginica</i>	IT
MORNING GLORY FAMILY	CONVOLVULACEAE	
cultivated bindweed	<i>Convolvulus sp.</i> *	UR
PEA FAMILY	FABACEAE	
birdfoot trefoil	<i>Lotus corniculatus</i> *	UR
California bur-clover	<i>Medicago polymorpha</i> *	UR
yellow sweet clover	<i>Melilotus indica</i> *	UR
white clover	<i>Trifolium repens</i> *	UR
common vetch	<i>Vicia sativa nigra</i> *	UR
GERANIUM FAMILY	GERANIACEAE	
red-stemmed storksbill	<i>Erodium cicutarium</i> *	UR
LOOSESTRIFE FAMILY	LYTHRACEAE	
hyssop-leaved lythrum	<i>Lythrum hyssopifolium</i> *	TR, UR

Appendix 4.12B

Plant Species Observed at the Gateway Peninsula

Common name	Scientific name <i>Genus species</i>	Plant Community ^a
MALLOW FAMILY	MALVACEAE	
cheese weed	<i>Malva</i> sp.*	UR
EVENING PRIMROSE FAMILY	ONAGRACEAE	
willow herb	<i>Epilobium</i> sp.*	UR
OXALIS FAMILY	OXALIDACEAE	
Bermuda buttercup	<i>Oxalis pes-caprae</i> *	UR
POPPY FAMILY	PAPAVERACEAE	
California poppy	<i>Eschscholzia californica</i>	UR
PLANTAIN FAMILY	PLANTAGINACEAE	
split-leaf plantain	<i>Plantago coronopus</i> *	UR, SD
English plantain	<i>Plantago lanceolata</i> *	TR, UR
BUCKWHEAT FAMILY	POLYGONACEAE	
curly dock	<i>Rumex crispus</i> *	TR
PRIMROSE FAMILY	PRIMULACEAE	
scarlet pimpernel	<i>Anagallis arvensis</i> *	UR
VALERIAN FAMILY	VALERIANACEAE	
red valerian	<i>Centranthus ruber</i> *	UR
MONOCOTS		
RUSH FAMILY	JUNCACEAE	
toadrush	<i>Juncus bufonius</i>	FD
GRASS FAMILY	POACEAE	
wild oat	<i>Avena fatua</i> *	UR
rip-gut brome	<i>Bromus diandrus</i> *	UR
red brome	<i>Bromus madritensis rubens</i> *	UR
swamp grass	<i>Crypsis scheenoides</i> *	SD
Mediterranean barley	<i>Hordeum marinum gussoneanum</i> *	SD
foxtail barley	<i>Hordeum marinum leporinum</i> *	UR
kikuyu grass	<i>Pennisetum clandestinum</i> *	UR
annual bluegrass	<i>Poa annua</i> *	UR, PD
sheep fescue	<i>Vulpia myuros myuros</i> *	UR

Appendix 4.12B

Plant Species Observed at the Gateway Peninsula

Source: Harding Lawson Associates 2001

Notes:

Observations from site survey conducted on April 16, 1998.

*Non-native

^a Community:

CS coastal scrub

IT intertidal

PD paved/developed

SD seasonal depression

TR transitional ruderal

UR upland ruderal

^b CNPS-4 Plant considered by the California Native Plant Society (CNPS) to have limited distribution – a watch list.

4.12C Wildlife Species Observed at the OARB

Appendix 4.12C

Wildlife Species Observed at the OARB

Common Name	Scientific Name	Habitat*
BIRDS		
American coot	<i>Fulica americana</i>	OW
American crow	<i>Corvus brachyrhynchos</i>	F
American goldfinch (flock)	<i>Carduelis tristis</i>	L
American kestrel	<i>Falco sparverius</i>	S
American robin	<i>Turdus migratorius</i>	L
Anna's hummingbird	<i>Calypte anna</i>	L
barn swallow	<i>Hirundo rustica</i>	F
belted kingfisher	<i>Ceryle alcyon</i>	S
black oystercatcher	<i>Haematopus bachmani</i>	SH
black phoebe	<i>Sayornis nigricanus</i>	S
black-bellied plover	<i>Pluvialis squatarola</i>	S
bufflehead	<i>Bucephala albeola</i>	OW
bush tit	<i>Psaltriparus minimus</i>	S
California brown pelican	<i>Pelecanus occidentalis californicus</i>	SH
California least tern	<i>Sterna antillarum browni</i>	OW
California towhee	<i>Pipilo crissalis</i>	L
Canada goose	<i>Branta canadensis</i>	S
Clark's grebe	<i>Aechmophorus occidentalis</i>	OW
cliff swallow	<i>Hirundo pyrrhonota</i>	L
common goldeneye	<i>Bucephala clangula</i>	OW
common loon	<i>Gavia immer</i>	OW
common raven	<i>Corvus corax</i>	F
double-crested cormorant	<i>Phalacrocorax auritus</i>	OW
dunlin	<i>Calidris alpina</i>	SH, S
eared grebe	<i>Podiceps nigricollis</i>	OW
European starling	<i>Sturnus vulgaris</i>	L
Forster's tern	<i>Sterna forsteri</i>	OW
great blue heron	<i>Ardea herodias</i>	SH
greater scaup	<i>Aythya marila</i>	OW
herring gull	<i>Larus argentatus</i>	OW
horned grebe	<i>Podiceps auritus</i>	OW
house finch	<i>Carpodacus mexicanus</i>	L
house sparrow	<i>Passer domesticus</i>	L
killdeer	<i>Charadrius vociferus</i>	S, L
least sandpiper	<i>Calidris minutilla</i>	S
lesser scaup	<i>Aythya affinis</i>	OW
mallard	<i>Anas platyrhynchos</i>	F
mourning dove	<i>Zenaida macroura</i>	L, W, S
northern mockingbird	<i>Mimus polyglottos</i>	L
oldsquaw	<i>Clangula hyemalis</i>	OW
Pacific-slope flycatcher	<i>Empidonax difficilis</i>	S
pie-billed grebe	<i>Podilymbus podiceps</i>	OW
red-tailed hawk	<i>Buteo jamaicensis</i>	F
red-winged blackbird	<i>Agelaius phoeniceus</i>	W
ruddy duck	<i>Oxyura jamaicensis</i>	OW
sanderling	<i>Calidris alba</i>	S
semipalmated plover	<i>Charadrius semipalmatus</i>	S
spotted sandpiper	<i>Actitis macularia</i>	SH
surf scoter	<i>Melanitta perspicillata</i>	OW

Appendix 4.12C

Wildlife Species Observed at the OARB

Common Name	Scientific Name	Habitat*
wandering tattler	<i>Heteroscelus incanus</i>	S
western grebe	<i>Aechmophorus clarkii</i>	OW
western gull	<i>Larus occidentalis</i>	OW
western meadowlark	<i>Sturnella neglecta</i>	L
western sandpiper	<i>Calidris mauri</i>	S
western scrub jay	<i>Aphelocoma coerulescens</i>	L
whimbrel	<i>Numenius phaeopus</i>	SH
white-crowned sparrow	<i>Zonotrichia leucophrys</i>	L
white-winged scoter	<i>Melanitta fusca</i>	OW
willet	<i>Catoptrophorus semipalmatus</i>	SH
yellow-rumped warbler	<i>Dendroica coronata</i>	S
REPTILES		
western fence lizard	<i>Sceloporus occidentalis</i>	SH, S
MAMMALS		
Botta's pocket gopher (mounds)	<i>Thomomys bottae</i>	
California sea lion	<i>Zalophys californicus</i>	OW
Source: Corps 1999		
Notes:		
F	Flying over	
L	Landscape	
OW	Open water	
*S	Land spit	
SH	Shoreline	
W	Wetland outside NE Boundary	

**4.12D Summary of Wildlife Observations at the
Gateway Peninsula**

Appendix 4.12D

Summary of Wildlife Observations at the Gateway Peninsula

Common name	Scientific Name	Status^a	Habitat^b
BIRDS			
American coot	<i>Fulica americana</i>		OW, S
black scoter	<i>Melanitta nigra</i>		OW
Canada goose	<i>Branita canadensis</i>		S, OW
Clark's grebe	<i>Aechmophorus clarkii</i>		OW
common goldeneye	<i>Bucephala clangula</i>		OW
double crested cormorant	<i>Phalacrocorax auritus</i>	CSC	OW
Forster's tern	<i>Sterna forsteri</i>		OW
greater scaup	<i>Aythya marila</i>		OW
horned grebe	<i>Podiceps curitus</i>		OW
mallard	<i>Anas sp.</i>		S, OW
peregrine falcon	<i>Falco peregrinus</i>	DE, SE	S
semi-palmated plover	<i>Charadrius semipalmatus</i>		S
surf scoter	<i>Melanitta perspicillata</i>		OW
unidentified scaup	<i>Aythya sp.</i>		OW
western grebe	<i>Aechmophorus occidentalis</i>		OW
western gull	<i>Larus occidentalis</i>		OW
western sandpiper	<i>Calidris mauri</i>		S
willet	<i>Catoptrophorus semipalmatus</i>		S
MAMMALS			
harbor seal	<i>Phoca vitulina</i>	MM	OW
INVERTEBRATES			
mussel	<i>Mytilus sp.</i>		S

Source: Harding Lawson Associates 2001

Notes:

Observations from site surveys conducted on January 22 and April 16, 1998.

^a Federal listed status / State (California) listed status / Other designations:

- DE Delisted by the federal government
- FE Listed as endangered by the federal government
- SE Listed as endangered by the State of California
- FSC U.S. Fish and Wildlife Services designated "Species of Concern" (former Category 2 Candidate for listing)
- CSC California Department of Fish and Game designated "Species of Special Concern"
- MM Protected under the Marine Mammal Protection Act

^b Wildlife Habitats:

S = shoreline, including sandy/rocky beach and intertidal riprap

OW = open water of Oakland Outer Harbor

**4.12E Bird Species Observed at the
New Berth 21 Fill Area**

Appendix 4.12E**Bird Species Observed at the New Berth 21 Fill Area**

Common Name	Scientific Name
American coot	<i>Fulica americana</i>
American crow	<i>Corvus brachyrhynchos</i>
American robin	<i>Turdus migratorius</i>
belted kingfisher	<i>Ceryle alcyon</i>
California gull	<i>Larus californicus</i>
Caspian tern	<i>Sterna caspia</i>
Clark's grebe	<i>Aechmophorus clarkii</i>
common loon	<i>Gavia immer</i>
double-crested cormorant	<i>Phalacrocorax auritus</i>
eared grebe	<i>Podiceps nigricollis</i>
Forster's tern	<i>Sterna forsteri</i>
glaucous-winged gull	<i>Larus glaucescens</i>
greater scaup	<i>Aythya marila</i>
horned grebe	<i>Podiceps auritus</i>
mallard	<i>Anas platyrhynchos</i>
mew gull	<i>Larus canus</i>
rock dove	<i>Columba livia</i>
ruddy duck	<i>Oxyura jamaicensis</i>
snowy egret	<i>Egretta thula</i>
surf scoter	<i>Melanitta perspicillata</i>
ring-billed gull	<i>Larus delawarensis</i>
western grebe	<i>Aechmophorus occidentalis</i>
western gull	<i>Larus occidentalis</i>
white-winged scoter	<i>Melanitta fusca deglandi</i>

Source: del Nevo and Malamma 1997

**4.12F Aquatic (Non-Mammal) Species Observed
in the Outer Harbor**

Appendix 4.12F**Aquatic (Non-Mammal) Species Observed in the Outer Harbor**

Common Name	Scientific Name
bat ray	<i>Myliobatis californica</i>
bay goby	<i>Lepidogobius lepidus</i>
bay pipefish	<i>Syngnathus leptorhynchus</i>
black shrimp	<i>Crangon franciscorum</i>
blue-spotted shrimp	<i>Crangon nigromaculata</i>
California halibut	<i>Paralichthys californicus</i>
chameleon goby	<i>Tridentiger trigonocephalus</i>
Dungeness crab	<i>Cancer magister</i>
English sole	<i>Parophrys vetulus</i>
leopard shark	<i>Triakis semifasciata</i>
lingcod	<i>Ophiodon elongatus</i>
longfin smelt	<i>Spirinchus thaleichthys</i>
northern anchovy	<i>Engraulis mordax</i>
Pacific herring	<i>Clupea harengus</i>
Pacific tomcod	<i>Microgadus proximus</i>
plainfin midshipman	<i>Porichthys notatus</i>
shiner perch	<i>Cymatogaster aggregata</i>
speckled sanddab	<i>Citharichthys stigmaeus</i>
staghorn sculpin	<i>Leptocottus armatus</i>
starry flounder	<i>Platichthys stellatus</i>
walleye surfperch	<i>Hyperprosopon argenteum</i>
white croaker	<i>Genyonemus lineatus</i>
yellowfin goby	<i>Acanthogobius flavimanus</i>

Source: del Nevo and Malamma 1997

4.12G Information from U.S. Fish and Wildlife Service



IN REPLY REFER TO
1-1-02-SP-246

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

November 16, 2001

Ms. Corinna Lu
Biologist
URS Corporation
500 12th Street, Suite 200
Oakland, California 94607

Subject: Species List for Oakland Army Base Redevelopment Project, Contra Costa
and San Francisco Counties, California

Dear Ms. Lu:

We are sending the enclosed list in response to your November 14, 2001, request for information about endangered and threatened species (Enclosure A). The list covers the following U.S. Geological Survey 7½ minute quad or quads: San Leandro, Hunters Point, Richmond, San Quentin, San Francisco North and Oakland West Quads.

Please read *Important Information About Your Species List* (enclosed). It explains how we made the list and describes your responsibilities under the Endangered Species Act. Please contact Harry Mossman, Biological Technician, at (916) 414-6674, if you have any questions about the attached list or your responsibilities under the Endangered Species Act. For the fastest response to species list requests, address them to the attention of Mr. Mossman at this address. You may fax requests to him at 414-6712 or 6713.

Sincerely,

for Jan C. Knight
Chief, Endangered Species Division

Enclosures

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute *quads*. The United States is divided into these quads, which are about the size of San Francisco. If you requested your list by quad name or number, that is what we used. Otherwise, we used the information you sent us to determine which quad or quads to use.

Animals

The animals on your species list are ones that occur within, *or may be affected by projects within*, the quads covered by the list. Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.

Plants

Any plants on your list are ones *that have actually been observed* in the quad or quads covered by the list. We have also included either a county species list or a list of species in nearby quads. We recommend that you check your project area for these plants. Plants may exist in an area without ever having been detected there.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. For plant surveys, we recommend using the enclosed *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Species*. The results of your surveys should be published in any environmental documents prepared for your project.

State-Listed Species

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. *However you should contact the California Department of Fish and Game for official information about these species.* Call (916) 322-2493 or write Marketing Manager, California Department of Fish and Game, Natural Diversity Data Base, 1416 Ninth Street, Sacramento, California 95814.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as *listed* on Enclosure A are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the *take* of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal. Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a *formal consultation* with the Service. Such consultation would result in a *biological opinion* addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an *incidental take permit*. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project. Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that mitigates for the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the mitigation plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as *critical habitat*. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Maps and boundary descriptions of the critical habitat may be found in the *Federal Register*. The information is also reprinted in the *Code of Federal Regulations* (50 CFR 17.95).

Candidate Species

We recommend that you address impacts to *candidate* species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Your list may contain a section called *Species of Concern*. This term includes former *category 2 candidate species* and other plants and animals of concern to the Service and other Federal, State and private conservation agencies and organizations. Some of these species may become candidate species in the future.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. We also continually strive to make our information as accurate as possible. Sometimes we learn that a particular species has a different range than we thought. This should not be a problem if you consider the species on the county or surrounding-quad lists that we have enclosed. If you have a long-term project or if your project is delayed, please feel free to contact us about getting a current list. You can also find out the current status of a species by going to the Service's Internet page: www.fws.gov

GUIDELINES FOR CONDUCTING AND REPORTING BOTANICAL INVENTORIES
FOR FEDERALLY LISTED, PROPOSED AND CANDIDATE PLANTS
(September 23, 1996)

These guidelines describe protocols for conducting botanical inventories for federally listed, proposed and candidate plants, and describe minimum standards for reporting results. The Service will use, in part, the information outlined below in determining whether the project under consideration may affect any listed, proposed or candidate plants, and in determining the direct, indirect, and cumulative effects.

Field inventories should be conducted in a manner that will locate listed, proposed, or candidate species (target species) that may be present. The entire project area requires a botanical inventory, except developed agricultural lands. The field investigator(s) should:

1. Conduct inventories at the appropriate times of year when target species are present and identifiable. Inventories will include all potential habitats. Multiple site visits during a field season may be necessary to make observations during the appropriate phenological stage of all target species.
2. If available, use a regional or local reference population to obtain a visual image of the target species and associated habitat(s). If access to reference populations is not available, investigators should study specimens from local herbaria.
3. List every species observed and compile a comprehensive list of vascular plants for the entire project site. Vascular plants need to be identified to a taxonomic level which allows rarity to be determined.
4. Report results of botanical field inventories that include:
 - a. a description of the biological setting, including plant community, topography, soils, potential habitat of target species, and an evaluation of environmental conditions, such as timing or quantity of rainfall, which may influence the performance and expression of target species.
 - b. a map of project location showing scale, orientation, project boundaries, parcel size, and map quadrangle name.
 - c. survey dates and survey methodology(ies).
 - d. if a reference population is available, provide a written narrative describing the target species reference population(s) used, and date(s) when observations were made.
 - e. a comprehensive list of all vascular plants occurring on the project site for each habitat type.
 - f. current and historic land uses of the habitat(s) and degree of site alteration.

- g. presence of target species off-site on adjacent parcels, if known.
 - h. an assessment of the biological significance or ecological quality of the project site in a local and regional context.
5. If target species is(are) found, report results that additionally include:
- a. a map showing federally listed, proposed and candidate species distribution as they relate to the proposed project.
 - b. if target species is (are) associated with wetlands, a description of the direction and integrity of flow of surface hydrology. If target species is (are) affected by adjacent off-site hydrological influences, describe these factors.
 - c. the target species phenology and microhabitat, an estimate of the number of individuals of each target species per unit area; identify areas of high, medium and low density of target species over the project site, and provide acres of occupied habitat of target species. Investigators could provide color slides, photos or color copies of photos of target species or representative habitats to support information or descriptions contained in reports.
 - d. the degree of impact(s), if any, of the proposed project as it relates to the potential unoccupied habitat of target habitat.
6. Document findings of target species by completing California Native Species Field Survey Form(s) and submit form(s) to the Natural Diversity Data Base. Documentation of determinations and/or voucher specimens may be useful in cases of taxonomic ambiguities, habitat or range extensions.
7. Report as an addendum to the original survey, any change in abundance and distribution of target plants in subsequent years. Project sites with inventories older than three years from the current date of project proposal submission will likely need additional survey. Investigators need to assess whether an additional survey(s) is (are) needed.
8. Adverse conditions may prevent investigator(s) from determining presence or identifying some target species in potential habitat(s) of target species. Disease, drought, predation, or herbivory may preclude the presence or identification of target species in any year. An additional botanical inventory(ies) in a subsequent year(s) may be required if adverse conditions occur in a potential habitat(s). Investigator(s) may need to discuss such conditions.
9. Guidance from California Department of Fish and Game (CDFG) regarding plant and plant community surveys can be found in Guidelines for Assessing the Effects of Proposed Developments on Rare and Endangered Plants and Plant Communities, 1984. Please contact the CDFG Regional Office for questions regarding the CDFG guidelines and for assistance in determining any applicable State regulatory requirements.

ENCLOSURE A

Endangered and Threatened Species that May Occur in or be Affected by
Projects in the Area of the Following California Counties

Reference File No. 1-1-02-SP-246

November 16, 2001

CONTRA COSTA COUNTY

Listed Species

Mammals

- salt marsh harvest mouse, *Reithrodontomys raviventris* (E)
- San Joaquin kit fox, *Vulpes macrotis mutica* (E)
- riparian (San Joaquin Valley) woodrat, *Neotoma fuscipes riparia* (E) *
- riparian brush rabbit, *Sylvilagus bachmani riparius* (E) *

Birds

- California brown pelican, *Pelecanus occidentalis californicus* (E)
- California clapper rail, *Rallus longirostris obsoletus* (E)
- California least tern, *Sterna antillarum (=albifrons) browni* (E)
- western snowy plover, *Charadrius alexandrinus nivosus* (T)
- bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

- Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)
- Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)
- giant garter snake, *Thamnophis gigas* (T)

Amphibians

- California red-legged frog, *Rana aurora draytonii* (T)

Fish

- tidewater goby, *Eucyclogobius newberryi* (E)
- Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
- winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
- Critical habitat, delta smelt, *Hypomesus transpacificus* (T)
- delta smelt, *Hypomesus transpacificus* (T)
- coho salmon - central CA coast, *Oncorhynchus kisutch* (T)
- Central California Coastal steelhead, *Oncorhynchus mykiss* (T)
- Critical habitat, Central California coastal steelhead, *Oncorhynchus mykiss* (T)
- Critical habitat, Central Valley steelhead, *Oncorhynchus mykiss* (T)
- Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)
- Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)
- Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

- Lange's metalmark butterfly, *Apodemia mormo langei* (E)
- Conservancy fairy shrimp, *Branchinecta conservatio* (E)

longhorn fairy shrimp, *Branchinecta longiantenna* (E)
 vernal pool tadpole shrimp, *Lepidurus packardi* (E)
 callippe silverspot butterfly, *Speyeria callippe callippe* (E)
 vernal pool fairy shrimp, *Branchinecta lynchi* (T)
 valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

Plants

large-flowered fiddleneck, *Amsinckia grandiflora* (E)
 soft bird's-beak, *Cordylanthus mollis ssp. mollis* (E)
 Contra Costa wallflower, *Erysimum capitatum ssp. angustatum* (E)
 Critical Habitat, Contra Costa wallflower, *Erysimum capitatum ssp. angustatum* (E)
 Antioch Dunes evening-primrose, *Oenothera deltoides ssp. howellii* (E)
 Critical habitat, Antioch Dunes evening-primrose, *Oenothera deltoides ssp. howellii* (E)
 pallid manzanita (Alameda manzanita), *Arctostaphylos pallida* (T)
 Santa Cruz tarplant, *Holocarpha macradenia* (T)
 Contra Costa goldfields, *Lasthenia conjugens* (E) *

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)

San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Suisun ornate shrew, *Sorex ornatus sinuosus* (SC)

salt marsh vagrant shrew, *Sorex vagrans halicoetes* (SC)

Berkeley kangaroo rat, *Dipodomys heermanni berkeleyensis* (SC) *

Birds

Swainson's hawk, *Buteo Swainsoni* (CA)
 little willow flycatcher, *Empidonax traillii brewsteri* (CA)
 black rail, *Laterallus jamaicensis coturniculus* (CA)
 bank swallow, *Riparia riparia* (CA)
 Aleutian Canada goose, *Branta canadensis leucopareia* (D)
 American peregrine falcon, *Falco peregrinus anatum* (D)
 Snowy Egret, *Egretta thula* (MB)
 tricolored blackbird, *Agelaius tricolor* (SC)
 grasshopper sparrow, *Ammodramus savannarum* (SC)
 Bell's sage sparrow, *Amphispiza belli belli* (SC)
 short-eared owl, *Asio flammeus* (SC)
 western burrowing owl, *Athene cunicularia hypugaea* (SC)
 American bittern, *Botaurus lentiginosus* (SC)
 ferruginous hawk, *Buteo regalis* (SC)
 Costa's hummingbird, *Calypte costae* (SC)
 Lawrence's goldfinch, *Carduelis lawrencei* (SC)
 Vaux's swift, *Chaetura vauxi* (SC)
 olive-sided flycatcher, *Contopus cooperi* (SC)
 hermit warbler, *Dendroica occidentalis* (SC)
 white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
 common loon, *Gavia immer* (SC)
 saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
 loggerhead shrike, *Lanius ludovicianus* (SC)
 Lewis' woodpecker, *Melanerpes lewis* (SC)
 Suisun song sparrow, *Melospiza melodia maxillaris* (SC)
 Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)
 San Pablo song sparrow, *Melospiza melodia samuelis* (SC)
 long-billed curlew, *Numenius americanus* (SC)
 white-faced ibis, *Plegadis chihi* (SC)
 rufous hummingbird, *Selasphorus rufus* (SC)
 Allen's hummingbird, *Selasphorus sasin* (SC)
 California thrasher, *Toxostoma redivivum* (SC)

Reptiles

silvery legless lizard, *Anniella pulchra pulchra* (SC)
 northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
 southwestern pond turtle, *Clemmys marmorata pallida* (SC)
 San Joaquin coachwhip (=whipsnake), *Masticophis flagellum ruddocki* (SC)
 California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

- foothill yellow-legged frog, *Rana boylei* (SC)
- western spadefoot toad, *Scaphiopus hammondi* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- river lamprey, *Lampetra ayresi* (SC)
- Pacific lamprey, *Lampetra tridentata* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Ciervo aegialian scarab beetle, *Aegialia concinna* (SC)
- Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
- Sacramento anthicid beetle, *Anthicus sacramento* (SC)
- Midvalley fairy shrimp, *Branchinecta mesovallensis* (SC)
- San Joaquin dune beetle, *Coelus gracilis* (SC)
- Antioch cophuran robberfly, *Cophura hurdi* (SC)
- Antioch efferian robberfly, *Efferia antiochi* (SC)
- Bridges' Coast Range shoulderband snail, *Helminthoglypta nickliniana bridgesi* (SC)
- Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
- curved-foot hygrotus diving beetle, *Hygrotus curvipes* (SC)
- Middlekauf's shieldback katydid, *Idiostatus middlekaufi* (SC)
- Marin elfin butterfly, *Incisalia mossii* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)
- molestan blister beetle, *Lytta molesta* (SC)
- Hurd's metapogon robberfly, *Metapogon hurdi* (SC)
- Antioch mutillid wasp, *Myrmosula pacifica* (SC)
- San Francisco lacewing, *Nothochrysa californica* (SC)
- yellow-banded andrenid bee, *Perdita hirticeps luteocincta* (SC)
- Antioch andrenid bee, *Perdita scitula antiochensis* (SC)
- Antioch sphecid wasp, *Philanthus nasilis* (SC)

Plants

- delta coyote-thistle (=button-celery), *Eryngium racemosum* (CA)
- Suisun Marsh aster, *Aster lentus* (SC)
- brittlescale, *Atriplex depressa* (SC)
- valley spearscale, *Atriplex joaquiniana* (SC)
- Big plant, *Blepharizonia plumosa* ssp. *plumosa* (SC)
- salt marsh owl's clover (=johnny-nip), *Castilleja ambigua* ssp. *ambigua* (SC)
- Mt. Diablo bird's-beak, *Cordylanthus nidularius* (SC)
- interior California larkspur, *Delphinium californicum* ssp. *interius* (SC)
- recurved larkspur, *Delphinium recurvatum* (SC)

Ben Lomond buckwheat (= naked buckwheat), *Eriogonum nudum var. decurrens* (SC)
 fragrant fritillary, *Fritillaria liliacea* (SC)
 Diablo helianthella (=rock-rose), *Helianthella castanea* (SC)
 Brewer's dwarf-flax, *Hesperolinon breweri* (SC)
 Carquinez goldenbush, *Isocoma arguta* (SC)
 Northern California black walnut, *Juglans californica var. hindsii* (SC)
 delta tule-pea, *Lathyrus jepsonii var. jepsonii* (SC)
 Mason's lilaeopsis, *Lilaeopsis masonii* (SC)
 little mousetail, *Myosurus minimus ssp. apus* (SC)
 Mt. Diablo phacelia, *Phacelia phacelioides* (SC)
 rock sanicle, *Sanicula saxatilis* (SC)
 Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)
 most beautiful (uncommon) jewelflower, *Streptanthus albidus ssp. peramoenus* (SC)
 Mt. Diablo jewelflower, *Streptanthus hispidus* (SC)
 alkali milk-vetch, *Astragalus tener var. tener* (SC) *
 heartscale, *Atriplex cordulata* (SC) *
 diamond-petaled poppy, *Eschscholzia rhombipetala* (SC) *
 pappose spikeweed [=Congdon's tarplant], *Hemizonia parryi ssp. congdonii* (SC) *
 caper-fruited tropidocarpum, *Tropidocarpum capparideum* (SC) **
 Livermore tarplant, *Deinandra bacigalupii* (SC)

SAN FRANCISCO COUNTY

Listed Species

Mammals

sei whale, *Balaenoptera borealis* (E)
 blue whale, *Balaenoptera musculus* (E)
 finback (=fin) whale, *Balaenoptera physalus* (E)
 right whale, *Eubalaena glacialis* (E)
 humpback whale, *Megaptera novaeangliae* (E)
 sperm whale, *Physeter catodon (=macrocephalus)* (E)
 salt marsh harvest mouse, *Reithrodontomys raviventris* (E)
 Guadalupe fur seal, *Arctocephalus townsendi* (T)
 Critical Habitat, Steller (=northern) sea-lion, *Eumetopias jubatus* (T)
 Steller (=northern) sea-lion, *Eumetopias jubatus* (T)

Birds

California brown pelican, *Pelecanus occidentalis californicus* (E)
 California clapper rail, *Rallus longirostris obsoletus* (E)
 western snowy plover, *Charadrius alexandrinus nivosus* (T)
 bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

- leatherback turtle, *Dermochelys coriacea* (E)
- loggerhead turtle, *Caretta caretta* (T)
- green turtle, *Chelonia mydas (incl. agassizi)* (T)
- olive (=Pacific) ridley sea turtle, *Lepidochelys olivacea* (T)

Amphibians

- California red-legged frog, *Rana aurora draytonii* (T)

Fish

- tidewater goby, *Eucyclogobius newberryi* (E)
- Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
- winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
- coho salmon - central CA coast, *Oncorhynchus kisutch* (T)
- Central California Coastal steelhead, *Oncorhynchus mykiss* (T)
- Critical habitat, Central California coastal steelhead, *Oncorhynchus mykiss* (T)
- Critical habitat, Central Valley steelhead, *Oncorhynchus mykiss* (T)
- Sacramento splittail, *Pogonichthys macrolepidotus* (T)
- delta smelt, *Hypomesus transpacificus* (T) *

Invertebrates

- white abalone, *Haliotes sorenseni* (E)
- mission blue butterfly, *Icaricia icarioides missionensis* (E)
- San Bruno elfin butterfly, *Incisalia mossii bayensis* (E)

Plants

- Presidio (=Raven's) manzanita, *Arctostaphylos hookeri ssp. ravenii* (E)
- Presidio clarkia, *Clarkia franciscana* (E)
- San Francisco lessingia, *Lessingia germanorum* (E)
- Marin dwarf-flax, *Hesperolinon congestum* (T)
- marsh sandwort, *Arenaria paludicola* (E) *
- beach layia, *Layia carnosa* (E) *

Proposed Species

Birds

- short-tailed albatross, *Diomedea albatrus* (E)

Candidate Species

Invertebrates

- black abalone, *Haliotes cracherodii* (C)

Species of Concern

Mammals

- gray whale, *Eschrichtius robustus* (D)
- Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)
 long-eared myotis bat, *Myotis evotis* (SC)
 fringed myotis bat, *Myotis thysanodes* (SC)
 long-legged myotis bat, *Myotis volans* (SC)
 Yuma myotis bat, *Myotis yumanensis* (SC)
 San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)
 salt marsh vagrant shrew, *Sorex vagrans halicoetes* (SC)

Birds

little willow flycatcher, *Empidonax traillii brewsteri* (CA)
 black rail, *Laterallus jamaicensis coturniculus* (CA)
 bank swallow, *Riparia riparia* (CA)
 American peregrine falcon, *Falco peregrinus anatum* (D)
 Snowy Egret, *Egretta thula* (MB)
 tricolored blackbird, *Agelaius tricolor* (SC)
 grasshopper sparrow, *Ammodramus savannarum* (SC)
 Bell's sage sparrow, *Amphispiza belli belli* (SC)
 American bittern, *Botaurus lentiginosus* (SC)
 ferruginous hawk, *Buteo regalis* (SC)
 Vaux's swift, *Chaetura vauxi* (SC)
 olive-sided flycatcher, *Contopus cooperi* (SC)
 hermit warbler, *Dendroica occidentalis* (SC)
 white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
 common loon, *Gavia immer* (SC)
 saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
 Harlequin duck, *Histrionicus histrionicus* (SC)
 loggerhead shrike, *Lanius ludovicianus* (SC)
 Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)
 long-billed curlew, *Numenius americanus* (SC)
 ashy storm-petrel, *Oceanodroma homochroa* (SC)
 rufous hummingbird, *Selasphorus rufus* (SC)
 Allen's hummingbird, *Selasphorus sasin* (SC)
 elegant tern, *Sterna elegans* (SC)
 Xantus' murrelet, *Synthliboramphus hypoleucus* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
 southwestern pond turtle, *Clemmys marmorata pallida* (SC)
 California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- river lamprey, *Lampetra ayresi* (SC)
- Pacific lamprey, *Lampetra tridentata* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Opler's longhorn moth, *Adela oplerella* (SC)
- sandy beach tiger beetle, *Cicindela hirticollis gravida* (SC)
- globose dune beetle, *Coelus globosus* (SC)
- Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
- bumblebee scarab beetle, *Lichnanthe ursina* (SC)

Plants

- salt marsh owl's clover (=johnny-nip), *Castilleja ambigua ssp. ambigua* (SC)
- San Francisco Bay spineflower, *Chorizanthe cuspidata var. cuspidata* (SC)
- San Francisco wallflower, *Erysimum franciscanum* (SC)
- fragrant fritillary, *Fritillaria liliacea* (SC)
- San Francisco gumplant, *Grindelia hirsutula var. maritima* (SC)
- Marin checkermallow, *Sidalcea hickmanii ssp. viridis* (SC)
- Mission Delores campion, *Silene verecunda ssp. verecunda* (SC)
- Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)
- San Francisco owl's-clover, *Triphysaria floribunda* (SC)
- San Francisco popcornflower, *Plagiobothrys diffusus* (CA) *
- alkali milk-vetch, *Astragalus tener var. tener* (SC) *
- compact cobweb thistle, *Cirsium occidentale var. compactum* (SC) *
- Diablo helianthella (=rock-rose), *Helianthella castanea* (SC) *
- Kellogg's (wedge-leaved) horkelia, *Horkelia cuneata ssp. sericea* (SC) *
- adobe sanicle, *Sanicula maritima* (SC) *
- San Francisco manzanita, *Arctostaphylos hookeri ssp. franciscana* (SC) **
- coast lily, *Lilium maritimum* (SC) ?*

KEY:

- (E) *Endangered* Listed (in the Federal Register) as being in danger of extinction.
- (T) *Threatened* Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* Officially proposed (in the Federal Register) for listing as endangered or threatened.
- (PX) *Proposed Critical Habitat* Proposed as an area essential to the conservation of the species.
- (C) *Candidate* Candidate to become a *proposed* species.
- (SC) *Species of Concern* Other species of concern to the Service.
- (D) *Delisted* Delisted. Status to be monitored for 5 years.
- (CA) *State-Listed* Listed as threatened or endangered by the State of California.
- * *Extirpated* Possibly extirpated from the area.
- ** *Extinct* Possibly extinct
- Critical Habitat* Area essential to the conservation of a species.

ENCLOSURE A

Endangered and Threatened Species that May Occur in
or be Affected by Projects in the Selected Quads Listed Below

Reference File No. 1-1-02-SP-246

November 16, 2001

QUAD : 447B SAN LEANDRO

Listed Species

Mammals

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Birds

western snowy plover, *Charadrius alexandrinus nivosus* (T)

bald eagle, *Haliaeetus leucocephalus* (T)

California brown pelican, *Pelecanus occidentalis californicus* (E)

California clapper rail, *Rallus longirostris obsoletus* (E)

California least tern, *Sterna antillarum (=albifrons) browni* (E)

Reptiles

Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

tidewater goby, *Eucyclogobius newberryi* (E)

delta smelt, *Hypomesus transpacificus* (T)

coho salmon - central CA coast, *Oncorhynchus kisutch* (T)

Central California Coastal steelhead, *Oncorhynchus mykiss* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

Plants

California sea blite, *Suaeda californica* (E) *

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)

salt marsh vagrant shrew, *Sorex vagrans halicoetes* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)

grasshopper sparrow, *Ammodramus savannarum* (SC)

Bell's sage sparrow, *Amphispiza belli belli* (SC)

short-eared owl, *Asio flammeus* (SC)

western burrowing owl, *Athene cunicularia hypugaea* (SC)

ferruginous hawk, *Buteo regalis* (SC)

Costa's hummingbird, *Calypte costae* (SC)

Lawrence's goldfinch, *Carduelis lawrencei* (SC)

Vaux's swift, *Chaetura vauxi* (SC)

black tern, *Chlidonias niger* (SC)

black swift, *Cypseloides niger* (SC)

hermit warbler, *Dendroica occidentalis* (SC)

white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)

little willow flycatcher, *Empidonax traillii brewsteri* (CA)

American peregrine falcon, *Falco peregrinus anatum* (D)

saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)

loggerhead shrike, *Lanius ludovicianus* (SC)

black rail, *Laterallus jamaicensis coturniculus* (CA)

Lewis' woodpecker, *Melanerpes lewis* (SC)
Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)
long-billed curlew, *Numenius americanus* (SC)
bank swallow, *Riparia riparia* (CA)
rufous hummingbird, *Selasphorus rufus* (SC)
Allen's hummingbird, *Selasphorus sasin* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

Plants

alkali milk-vetch, *Astragalus tener* var. *tener* (SC) *
northcoast bird's-beak, *Cordylanthus maritimus* ssp. *palustris* (SC) *
pappose spikeweed [=Congdon's tarplant], *Hemizonia parryi* ssp. *congdonii* (SC) *
Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)

QUAD : 448A HUNTERS POINT

Listed Species

Mammals

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Birds

western snowy plover, *Charadrius alexandrinus nivosus* (T)
bald eagle, *Haliaeetus leucocephalus* (T)
California brown pelican, *Pelecanus occidentalis californicus* (E)
California clapper rail, *Rallus longirostris obsoletus* (E)
California least tern, *Sterna antillarum* (=albifrons) *browni* (E)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

- delta smelt, *Hypomesus transpacificus* (T)
- coho salmon - central CA coast, *Oncorhynchus kisutch* (T)
- Central California Coastal steelhead, *Oncorhynchus mykiss* (T)
- Central Valley steelhead, *Oncorhynchus mykiss* (T)
- winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
- Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)
- Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)
- Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

- mission blue butterfly, *Icaricia icarioides missionensis* (E)
- San Bruno elfin butterfly, *Incisalia mossii bayensis* (E)

Plants

- California sea blite, *Suaeda californica* (E)

Candidate Species

Fish

- Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)
- Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

- Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
- greater western mastiff-bat, *Eumops perotis californicus* (SC)
- long-eared myotis bat, *Myotis evotis* (SC)
- fringed myotis bat, *Myotis thysanodes* (SC)
- long-legged myotis bat, *Myotis volans* (SC)
- Yuma myotis bat, *Myotis yumanensis* (SC)
- San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)

Birds

- tricolored blackbird, *Agelaius tricolor* (SC)
- grasshopper sparrow, *Ammodramus savannarum* (SC)
- Bell's sage sparrow, *Amphispiza belli belli* (SC)
- short-eared owl, *Asio flammeus* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- ferruginous hawk, *Buteo regalis* (SC)
- Costa's hummingbird, *Calypte costae* (SC)

Lawrence's goldfinch, *Carduelis lawrencei* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
black tern, *Chlidonias niger* (SC)
black swift, *Cypseloides niger* (SC)
hermit warbler, *Dendroica occidentalis* (SC)
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
little willow flycatcher, *Empidonax traillii brewsteri* (CA)
American peregrine falcon, *Falco peregrinus anatum* (D)
saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
loggerhead shrike, *Lanius ludovicianus* (SC)
black rail, *Laterallus jamaicensis coturniculus* (CA)
Lewis' woodpecker, *Melanerpes lewis* (SC)
Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)
long-billed curlew, *Numenius americanus* (SC)
bank swallow, *Riparia riparia* (CA)
rufous hummingbird, *Selasphorus rufus* (SC)
Allen's hummingbird, *Selasphorus sasin* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

sandy beach tiger beetle, *Cicindela hirticollis gravida* (SC)
Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)

Plants

alkali milk-vetch, *Astragalus tener var. tener* (SC) *
Diablo helianthella (=rock-rose), *Helianthella castanea* (SC)
Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)
San Francisco owl's-clover, *Triphysaria floribunda* (SC)

QUAD : 466A RICHMOND

Listed Species

Mammals

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Birds

western snowy plover, *Charadrius alexandrinus nivosus* (T)

bald eagle, *Haliaeetus leucocephalus* (T)

California brown pelican, *Pelecanus occidentalis californicus* (E)

California clapper rail, *Rallus longirostris obsoletus* (E)

California least tern, *Sterna antillarum (=albifrons) browni* (E)

Reptiles

Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

tidewater goby, *Eucyclogobius newberryi* (E)

Critical habitat, delta smelt, *Hypomesus transpacificus* (T)

delta smelt, *Hypomesus transpacificus* (T)

coho salmon - central CA coast, *Oncorhynchus kisutch* (T)

Central California Coastal steelhead, *Oncorhynchus mykiss* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Plants

pallid manzanita (Alameda manzanita), *Arctostaphylos pallida* (T)

Santa Cruz tarplant, *Holocarpha macradenia* (T)

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

- Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
- greater western mastiff-bat, *Eumops perotis californicus* (SC)
- small-footed myotis bat, *Myotis ciliolabrum* (SC)
- long-eared myotis bat, *Myotis evotis* (SC)
- fringed myotis bat, *Myotis thysanodes* (SC)
- long-legged myotis bat, *Myotis volans* (SC)
- Yuma myotis bat, *Myotis yumanensis* (SC)
- San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)
- salt marsh vagrant shrew, *Sorex vagrans halicoetes* (SC)

Birds

- tricolored blackbird, *Agelaius tricolor* (SC)
- grasshopper sparrow, *Ammodramus savannarum* (SC)
- Bell's sage sparrow, *Amphispiza belli belli* (SC)
- short-eared owl, *Asio flammeus* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- Aleutian Canada goose, *Branta canadensis leucopareia* (D)
- ferruginous hawk, *Buteo regalis* (SC)
- Costa's hummingbird, *Calypte costae* (SC)
- Vaux's swift, *Chaetura vauxi* (SC)
- black tern, *Chlidonias niger* (SC)
- black swift, *Cypseloides niger* (SC)
- hermit warbler, *Dendroica occidentalis* (SC)
- white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
- little willow flycatcher, *Empidonax traillii brewsteri* (CA)
- American peregrine falcon, *Falco peregrinus anatum* (D)
- saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
- loggerhead shrike, *Lanius ludovicianus* (SC)
- black rail, *Laterallus jamaicensis coturniculus* (CA)
- Lewis' woodpecker, *Melanerpes lewis* (SC)
- Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)
- San Pablo song sparrow, *Melospiza melodia samuelis* (SC)
- long-billed curlew, *Numenius americanus* (SC)

bank swallow, *Riparia riparia* (CA)
rufous hummingbird, *Selasphorus rufus* (SC)
Allen's hummingbird, *Selasphorus sasin* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)

Fish

green sturgeon, *Acipenser medirostris* (SC)
longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Bridges' Coast Range shoulderband snail, *Helminthoglypta nickliniana bridgesi* (SC)
Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
San Francisco lacewing, *Nothochrysa californica* (SC)

Plants

alkali milk-vetch, *Astragalus tener* var. *tener* (SC) *
fragrant fritillary, *Fritillaria liliacea* (SC) *
Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)
most beautiful (uncommon) jewelflower, *Streptanthus albidus* ssp. *peramoenus* (SC)

QUAD : 466B SAN QUENTIN

Listed Species

Mammals

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Birds

western snowy plover, *Charadrius alexandrinus nivosus* (T)
bald eagle, *Haliaeetus leucocephalus* (T)
California brown pelican, *Pelecanus occidentalis californicus* (E)
California clapper rail, *Rallus longirostris obsoletus* (E)
California least tern, *Sterna antillarum* (=albifrons) *browni* (E)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

tidewater goby, *Eucyclogobius newberryi* (E)
 delta smelt, *Hypomesus transpacificus* (T)
 Critical habitat, coho salmon - central CA coast, *Oncorhynchus kisutch* (T)
 coho salmon - central CA coast, *Oncorhynchus kisutch* (T)
 Central California Coastal steelhead, *Oncorhynchus mykiss* (T)
 Central Valley steelhead, *Oncorhynchus mykiss* (T)
 Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
 winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
 Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)
 Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)
 Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Plants

Tiburon mariposa lily, *Calochortus tiburonensis* (T)
 Tiburon paintbrush, *Castilleja affinis* ssp. *neglecta* (E)
 Marin dwarf-flax, *Hesperolinon congestum* (T)
 white-rayed pentachaeta, *Pentachaeta bellidiflora* (E) *
 Tiburon jewelflower, *Streptanthus niger* (E)
 showy Indian clover, *Trifolium amoenum* (E) *

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)
 Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
 greater western mastiff-bat, *Eumops perotis californicus* (SC)
 long-eared myotis bat, *Myotis evotis* (SC)
 fringed myotis bat, *Myotis thysanodes* (SC)
 long-legged myotis bat, *Myotis volans* (SC)
 Yuma myotis bat, *Myotis yumanensis* (SC)
 San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)
 salt marsh vagrant shrew, *Sorex vagrans halicoetes* (SC)
 Point Reyes jumping mouse, *Zapus trinotatus orarius* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)
grasshopper sparrow, *Ammodramus savannarum* (SC)
Bell's sage sparrow, *Amphispiza belli belli* (SC)
short-eared owl, *Asio flammeus* (SC)
western burrowing owl, *Athene cunicularia hypugaea* (SC)
ferruginous hawk, *Buteo regalis* (SC)
Costa's hummingbird, *Calypte costae* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
black tern, *Chlidonias niger* (SC)
black swift, *Cypseloides niger* (SC)
hermit warbler, *Dendroica occidentalis* (SC)
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
little willow flycatcher, *Empidonax traillii brewsteri* (CA)
American peregrine falcon, *Falco peregrinus anatum* (D)
saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
Harlequin duck, *Histrionicus histrionicus* (SC)
loggerhead shrike, *Lanius ludovicianus* (SC)
black rail, *Laterallus jamaicensis coturniculus* (CA)
Lewis' woodpecker, *Melanerpes lewis* (SC)
San Pablo song sparrow, *Melospiza melodia samuelis* (SC)
long-billed curlew, *Numerius americanus* (SC)
bank swallow, *Riparia riparia* (CA)
rufous hummingbird, *Selasphorus rufus* (SC)
Allen's hummingbird, *Selasphorus sasin* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

Northern red-legged frog, *Rana aurora aurora* (SC)
foothill yellow-legged frog, *Rana boylei* (SC)

Fish

green sturgeon, *Acipenser medirostris* (SC)
longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Opler's longhorn moth, *Adela oplerella* (SC)
- Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
- Marin elfin butterfly, *Incisalia mossii* (SC)
- Tiburon microblind harvestman, *Microcina tiburona* (SC)

Plants

- northcoast bird's-beak, *Cordylanthus maritimus ssp. palustris* (SC) *
- Tiburon tarplant, *Hemizonia multicaulis ssp. vernalis* (SC)
- Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)

QUAD : 466C SAN FRANCISCO NORTH

Listed Species

Mammals

- Guadalupe fur seal, *Arctocephalus townsendi* (T)
- sei whale, *Balaenoptera borealis* (E)
- blue whale, *Balaenoptera musculus* (E)
- finback (=fin) whale, *Balaenoptera physalus* (E)
- right whale, *Eubalaena glacialis* (E)
- Critical Habitat, Steller (=northern) sea-lion, *Eumetopias jubatus* (T)
- Steller (=northern) sea-lion, *Eumetopias jubatus* (T)
- sperm whale, *Physeter catodon (=macrocephalus)* (E)
- salt marsh harvest mouse, *Reithrodontomys raviventris* (E) *

Birds

- western snowy plover, *Charadrius alexandrinus nivosus* (T)
- bald eagle, *Haliaeetus leucocephalus* (T)
- California brown pelican, *Pelecanus occidentalis californicus* (E)
- California clapper rail, *Rallus longirostris obsoletus* (E) *
- California least tern, *Sterna antillarum (=albifrons) browni* (E)

Amphibians

- California red-legged frog, *Rana aurora draytonii* (T)

Fish

- tidewater goby, *Eucyclogobius newberryi* (E)
- delta smelt, *Hypomesus transpacificus* (T)
- Critical habitat, coho salmon - central CA coast, *Oncorhynchus kisutch* (T)
- coho salmon - central CA coast, *Oncorhynchus kisutch* (T)

Central California Coastal steelhead, *Oncorhynchus mykiss* (T)
 Central Valley steelhead, *Oncorhynchus mykiss* (T)
 Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
 winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
 Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)
 Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)
 Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

white abalone, *Haliotes sorenseni* (E)
 mission blue butterfly, *Icaricia icarioides missionensis* (E)
 San Bruno elfin butterfly, *Incisalia mossii bayensis* (E)

Plants

Presidio (=Raven's) manzanita, *Arctostaphylos hookeri* ssp. *ravenii* (E)
 marsh sandwort, *Arenaria paludicola* (E) *
 Presidio clarkia, *Clarkia franciscana* (E)
 Marin dwarf-flax, *Hesperolinon congestum* (T)
 beach layia, *Layia carnososa* (E) *
 San Francisco lessingia, *Lessingia germanorum* (E)

Proposed Species

Birds

short-tailed albatross, *Diomedea albatrus* (E)

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)
 Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Invertebrates

black abalone, *Haliotes cracherodii* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus* (=Plecotus) *townsendii townsendii* (SC)
 gray whale, *Eschrichtius robustus* (D)
 greater western mastiff-bat, *Eumops perotis californicus* (SC)
 long-eared myotis bat, *Myotis evotis* (SC)
 fringed myotis bat, *Myotis thysanodes* (SC)
 long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)

Point Reyes jumping mouse, *Zapus trinotatus orarius* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)

grasshopper sparrow, *Ammodramus savannarum* (SC)

Bell's sage sparrow, *Amphispiza belli belli* (SC)

short-eared owl, *Asio flammeus* (SC)

western burrowing owl, *Athene cunicularia hypugaea* (SC)

ferruginous hawk, *Buteo regalis* (SC)

Vaux's swift, *Chaetura vauxi* (SC)

black tern, *Chlidonias niger* (SC)

black swift, *Cypseloides niger* (SC)

hermit warbler, *Dendroica occidentalis* (SC)

white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)

little willow flycatcher, *Empidonax traillii brewsteri* (CA)

American peregrine falcon, *Falco peregrinus anatum* (D)

saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)

Harlequin duck, *Histrionicus histrionicus* (SC)

loggerhead shrike, *Lanius ludovicianus* (SC)

black rail, *Laterallus jamaicensis coturniculus* (CA)

Lewis' woodpecker, *Melanerpes lewis* (SC)

long-billed curlew, *Numenius americanus* (SC)

ashy storm-petrel, *Oceanodroma homochroa* (SC)

bank swallow, *Riparia riparia* (CA)

rufous hummingbird, *Selasphorus rufus* (SC)

Allen's hummingbird, *Selasphorus sasin* (SC)

elegant tern, *Sterna elegans* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)

southwestern pond turtle, *Clemmys marmorata pallida* (SC)

California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Opler's longhorn moth, *Adela oplerella* (SC)

sandy beach tiger beetle, *Cicindela hirticollis gravida* (SC)

globose dune beetle, *Coelus globosus* (SC)

Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)

bumblebee scarab beetle, *Lichnanthe ursina* (SC)

Plants

San Francisco manzanita, *Arctostaphylos hookeri ssp. franciscana* (SC) **

alkali milk-vetch, *Astragalus tener var. tener* (SC) *

San Francisco Bay spineflower, *Chorizanthe cuspidata var. cuspidata* (SC)

San Francisco gumplant, *Grindelia hirsutula var. maritima* (SC)

Kellogg's (wedge-leaved) horkelia, *Horkelia cuneata ssp. sericea* (SC) *

San Francisco popcornflower, *Plagiobothrys diffusus* (CA) *

adobe sanicle, *Sanicula maritima* (SC) *

Marin checkermallow, *Sidalcea hickmanii ssp. viridis* (SC)

Mission Delores campion, *Silene verecunda ssp. verecunda* (SC)

Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)

San Francisco owl's-clover, *Triphysaria floribunda* (SC)

QUAD : 466D OAKLAND WEST

Listed Species

Mammals

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Birds

western snowy plover, *Charadrius alexandrinus nivosus* (T)

bald eagle, *Haliaeetus leucocephalus* (T)

California brown pelican, *Pelecanus occidentalis californicus* (E)

California clapper rail, *Rallus longirostris obsoletus* (E)

California least tern, *Sterna antillarum (=albifrons) browni* (E)

Reptiles

Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

tidewater goby, *Eucyclogobius newberryi* (E)

delta smelt, *Hypomesus transpacificus* (T)

coho salmon - central CA coast, *Oncorhynchus kisutch* (T)

Central California Coastal steelhead, *Oncorhynchus mykiss* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Plants

Santa Cruz tarplant, *Holocarpha macradenia* (T) *

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

Berkeley kangaroo rat, *Dipodomys heermanni berkeleyensis* (SC) *

greater western mastiff-bat, *Eumops perotis californicus* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)

Alameda Island mole, *Scapanus latimanus parvus* (SC)

salt marsh vagrant shrew, *Sorex vagrans halicoetes* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)

grasshopper sparrow, *Ammodramus savannarum* (SC)

Bell's sage sparrow, *Amphispiza belli belli* (SC)

short-eared owl, *Asio flammeus* (SC)
western burrowing owl, *Athene cunicularia hypugaea* (SC)
ferruginous hawk, *Buteo regalis* (SC)
Costa's hummingbird, *Calypte costae* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
black tern, *Chlidonias niger* (SC)
black swift, *Cypseloides niger* (SC)
hermit warbler, *Dendroica occidentalis* (SC)
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
little willow flycatcher, *Empidonax traillii brewsteri* (CA)
American peregrine falcon, *Falco peregrinus anatum* (D)
saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
loggerhead shrike, *Lanius ludovicianus* (SC)
black rail, *Laterallus jamaicensis coturniculus* (CA)
Lewis' woodpecker, *Melanerpes lewis* (SC)
Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)
long-billed curlew, *Numenius americanus* (SC)
bank swallow, *Riparia riparia* (CA)
rufous hummingbird, *Selasphorus rufus* (SC)
Allen's hummingbird, *Selasphorus sasin* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Bridges' Coast Range shoulderband snail, *Helminthoglypta nickliniana bridgesi* (SC)
Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
San Francisco lacewing, *Nothochrysa californica* (SC)

Plants

alkali milk-vetch, *Astragalus tener var. tener* (SC) *

San Francisco Bay spineflower, *Chorizanthe cuspidata* var. *cuspidata* (SC) *

northcoast bird's-beak, *Cordylanthus maritimus* ssp. *palustris* (SC) *

Kellogg's (wedge-leaved) horkelia, *Horkelia cuneata* ssp. *sericea* (SC) *

adobe sanicle, *Sanicula maritima* (SC) *

Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)

KEY:

(E) <i>Endangered</i>	Listed (in the Federal Register) as being in danger of extinction.
(T) <i>Threatened</i>	Listed as likely to become endangered within the foreseeable future.
(P) <i>Proposed</i>	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX) <i>Proposed</i>	Proposed as an area essential to the conservation of the species.
<i>Critical Habitat</i>	
(C) <i>Candidate</i>	Candidate to become a <i>proposed</i> species.
(SC) <i>Species of Concern</i>	May be endangered or threatened. Not enough biological information has been gathered to support listing at this time.
(MB) <i>Migratory Bird</i>	Migratory bird
(D) <i>Delisted</i>	Delisted. Status to be monitored for 5 years.
(CA) <i>State-Listed</i>	Listed as threatened or endangered by the State of California.
(*) <i>Extirpated</i>	Possibly extirpated from this quad.
(**) <i>Extinct</i>	Possibly extinct.
<i>Critical Habitat</i>	Area essential to the conservation of a species.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

IN REPLY REFER TO
1-1-02-SP-263

November 20, 2001

Ms. Corinna Lu
Biologist
URS Corporation
500 12th Street, Suite 200
Oakland, California 94607

Subject: Species List for Oakland Army Base Redevelopment Project, Alameda
County, California

Dear Ms. Lu:

We are sending the enclosed list in response to your November 16, 2001, request for information about endangered and threatened species (Enclosure A). The list covers the following U.S. Geological Survey 7½ minute quad or quads: San Francisco South, Briones Valley and Oakland East Quads.

Please read *Important Information About Your Species List* (enclosed). It explains how we made the list and describes your responsibilities under the Endangered Species Act. Please contact Harry Mossman, Biological Technician, at (916) 414-6674, if you have any questions about the attached list or your responsibilities under the Endangered Species Act. For the fastest response to species list requests, address them to the attention of Mr. Mossman at this address. You may fax requests to him at 414-6712 or 6713.

Sincerely,

for Jan C. Knight
Chief, Endangered Species Division

Enclosures

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute *quads*. The United States is divided into these quads, which are about the size of San Francisco. If you requested your list by quad name or number, that is what we used. Otherwise, we used the information you sent us to determine which quad or quads to use.

Animals

The animals on your species list are ones that occur within, *or may be affected by projects within*, the quads covered by the list. Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.

Plants

Any plants on your list are ones *that have actually been observed* in the quad or quads covered by the list. We have also included either a county species list or a list of species in nearby quads. We recommend that you check your project area for these plants. Plants may exist in an area without ever having been detected there.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. For plant surveys, we recommend using the enclosed *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Species*. The results of your surveys should be published in any environmental documents prepared for your project.

State-Listed Species

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. *However you should contact the California Department of Fish and Game for official information about these species.* Call (916) 322-2493 or write Marketing Manager, California Department of Fish and Game, Natural Diversity Data Base, 1416 Ninth Street, Sacramento, California 95814.

Your Responsibilities Under the Endangered Species Act

All plants and animals identified as *listed* on Enclosure A are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the *take* of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal. Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a *formal consultation* with the Service. Such consultation would result in a *biological opinion* addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an *incidental take permit*. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project. Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that mitigates for the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the mitigation plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as *critical habitat*. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Maps and boundary descriptions of the critical habitat may be found in the *Federal Register*. The information is also reprinted in the *Code of Federal Regulations* (50 CFR 17.95).

Candidate Species

We recommend that you address impacts to *candidate* species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Your list may contain a section called *Species of Concern*. This term includes former *category 2 candidate species* and other plants and animals of concern to the Service and other Federal, State and private conservation agencies and organizations. Some of these species may become candidate species in the future.

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. We also continually strive to make our information as accurate as possible. Sometimes we learn that a particular species has a different range than we thought. This should not be a problem if you consider the species on the county or surrounding-quad lists that we have enclosed. If you have a long-term project or if your project is delayed, please feel free to contact us about getting a current list. You can also find out the current status of a species by going to the Service's Internet page: www.fws.gov

GUIDELINES FOR CONDUCTING AND REPORTING BOTANICAL INVENTORIES
FOR FEDERALLY LISTED, PROPOSED AND CANDIDATE PLANTS
(September 23, 1996)

These guidelines describe protocols for conducting botanical inventories for federally listed, proposed and candidate plants, and describe minimum standards for reporting results. The Service will use, in part, the information outlined below in determining whether the project under consideration may affect any listed, proposed or candidate plants, and in determining the direct, indirect, and cumulative effects.

Field inventories should be conducted in a manner that will locate listed, proposed, or candidate species (target species) that may be present. The entire project area requires a botanical inventory, except developed agricultural lands. The field investigator(s) should:

1. Conduct inventories at the appropriate times of year when target species are present and identifiable. Inventories will include all potential habitats. Multiple site visits during a field season may be necessary to make observations during the appropriate phenological stage of all target species.
2. If available, use a regional or local reference population to obtain a visual image of the target species and associated habitat(s). If access to reference populations is not available, investigators should study specimens from local herbaria.
3. List every species observed and compile a comprehensive list of vascular plants for the entire project site. Vascular plants need to be identified to a taxonomic level which allows rarity to be determined.
4. Report results of botanical field inventories that include:
 - a. a description of the biological setting, including plant community, topography, soils, potential habitat of target species, and an evaluation of environmental conditions, such as timing or quantity of rainfall, which may influence the performance and expression of target species.
 - b. a map of project location showing scale, orientation, project boundaries, parcel size, and map quadrangle name.
 - c. survey dates and survey methodology(ies).
 - d. if a reference population is available, provide a written narrative describing the target species reference population(s) used, and date(s) when observations were made.
 - e. a comprehensive list of all vascular plants occurring on the project site for each habitat type.
 - f. current and historic land uses of the habitat(s) and degree of site alteration.

- g. presence of target species off-site on adjacent parcels, if known.
 - h. an assessment of the biological significance or ecological quality of the project site in a local and regional context.
5. If target species is(are) found, report results that additionally include:
- a. a map showing federally listed, proposed and candidate species distribution as they relate to the proposed project.
 - b. if target species is (are) associated with wetlands, a description of the direction and integrity of flow of surface hydrology. If target species is (are) affected by adjacent off-site hydrological influences, describe these factors.
 - c. the target species phenology and microhabitat, an estimate of the number of individuals of each target species per unit area; identify areas of high, medium and low density of target species over the project site, and provide acres of occupied habitat of target species. Investigators could provide color slides, photos or color copies of photos of target species or representative habitats to support information or descriptions contained in reports.
 - d. the degree of impact(s), if any, of the proposed project as it relates to the potential unoccupied habitat of target habitat.
6. Document findings of target species by completing California Native Species Field Survey Form(s) and submit form(s) to the Natural Diversity Data Base. Documentation of determinations and/or voucher specimens may be useful in cases of taxonomic ambiguities, habitat or range extensions.
7. Report as an addendum to the original survey, any change in abundance and distribution of target plants in subsequent years. Project sites with inventories older than three years from the current date of project proposal submission will likely need additional survey. Investigators need to assess whether an additional survey(s) is (are) needed.
8. Adverse conditions may prevent investigator(s) from determining presence or identifying some target species in potential habitat(s) of target species. Disease, drought, predation, or herbivory may preclude the presence or identification of target species in any year. An additional botanical inventory(ies) in a subsequent year(s) may be required if adverse conditions occur in a potential habitat(s). Investigator(s) may need to discuss such conditions.
9. Guidance from California Department of Fish and Game (CDFG) regarding plant and plant community surveys can be found in Guidelines for Assessing the Effects of Proposed Developments on Rare and Endangered Plants and Plant Communities, 1984. Please contact the CDFG Regional Office for questions regarding the CDFG guidelines and for assistance in determining any applicable State regulatory requirements.

ENCLOSURE A

Endangered and Threatened Species that May Occur in or be Affected by

PROJECTS IN ALAMEDA COUNTY

Reference File No. 1-1-02-SP-263

November 20, 2001

Listed Species

Mammals

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

San Joaquin kit fox, *Vulpes macrotis mutica* (E)

riparian (San Joaquin Valley) woodrat, *Neotoma fuscipes riparia* (E) *

riparian brush rabbit, *Sylvilagus bachmani riparius* (E) *

Birds

California brown pelican, *Pelecanus occidentalis californicus* (E)

California clapper rail, *Rallus longirostris obsoletus* (E)

California least tern, *Sterna antillarum (=albifrons) browni* (E)

bald eagle, *Haliaeetus leucocephalus* (T)

Reptiles

Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

tidewater goby, *Eucyclogobius newberryi* (E)

Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

coho salmon - central CA coast, *Oncorhynchus kisutch* (T)

Central California Coastal steelhead, *Oncorhynchus mykiss* (T)

Critical habitat, Central California coastal steelhead, *Oncorhynchus mykiss* (T)

Critical habitat, Central Valley steelhead, *Oncorhynchus mykiss* (T)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

delta smelt, *Hypomesus transpacificus* (T) *

Invertebrates

longhorn fairy shrimp, *Branchinecta longiantenna* (E)

vernal pool tadpole shrimp, *Lepidurus packardii* (E)

callippe silverspot butterfly, *Speyeria callippe callippe* (E)

vernal pool fairy shrimp, *Branchinecta lynchi* (T)
 bay checkerspot butterfly, *Euphydryas editha bayensis* (T)

Plants

large-flowered fiddleneck, *Amsinckia grandiflora* (E)
 Presidio clarkia, *Clarkia franciscana* (E)
 palmate-bracted bird's-beak, *Cordylanthus palmatus* (E)
 pallid manzanita (Alameda manzanita), *Arctostaphylos pallida* (T)
 robust spineflower, *Chorizanthe robusta* var. *robusta* (E) *
 Contra Costa goldfields, *Lasthenia conjugens* (E) *
 California sea blite, *Suaeda californica* (E) *
 showy Indian clover, *Trifolium amoenum* (E) *
 Santa Cruz tarplant, *Holocarpha macradenia* (T) *

Proposed Species

Birds

mountain plover, *Charadrius montanus* (PT)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)
 Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
 greater western mastiff-bat, *Eumops perotis californicus* (SC)
 small-footed myotis bat, *Myotis ciliolabrum* (SC)
 long-eared myotis bat, *Myotis evotis* (SC)
 fringed myotis bat, *Myotis thysanodes* (SC)
 long-legged myotis bat, *Myotis volans* (SC)
 Yuma myotis bat, *Myotis yumanensis* (SC)
 San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)
 San Joaquin pocket mouse, *Perognathus inornatus* (SC)
 Alameda Island mole, *Scapanus latimanus parvus* (SC)
 salt marsh vagrant shrew, *Sorex vagrans halicoetes* (SC)
 Berkeley kangaroo rat, *Dipodomys heermanni berkeleyensis* (SC) *

Birds

little willow flycatcher, *Empidonax traillii brewsteri* (CA)
black rail, *Laterallus jamaicensis coturniculus* (CA)
bank swallow, *Riparia riparia* (CA)
Aleutian Canada goose, *Branta canadensis leucopareia* (D)
American peregrine falcon, *Falco peregrinus anatum* (D)
Snowy Egret, *Egretta thula* (MB)
tricolored blackbird, *Agelaius tricolor* (SC)
grasshopper sparrow, *Ammodramus savannarum* (SC)
Bell's sage sparrow, *Amphispiza belli belli* (SC)
short-eared owl, *Asio flammeus* (SC)
western burrowing owl, *Athene cunicularia hypugaea* (SC)
American bittern, *Botaurus lentiginosus* (SC)
ferruginous hawk, *Buteo regalis* (SC)
Costa's hummingbird, *Calypte costae* (SC)
Lawrence's goldfinch, *Carduelis lawrencei* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
olive-sided flycatcher, *Contopus cooperi* (SC)
hermit warbler, *Dendroica occidentalis* (SC)
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
common loon, *Gavia immer* (SC)
saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
loggerhead shrike, *Lanius ludovicianus* (SC)
Lewis' woodpecker, *Melanerpes lewis* (SC)
Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)
long-billed curlew, *Numenius americanus* (SC)
white-faced ibis, *Plegadis chihi* (SC)
rufous hummingbird, *Selasphorus rufus* (SC)
Allen's hummingbird, *Selasphorus sasin* (SC)
California thrasher, *Toxostoma redivivum* (SC)

Reptiles

silvery legless lizard, *Anniella pulchra pulchra* (SC)
northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)
San Joaquin coachwhip (=whipsnake), *Masticophis flagellum ruddocki* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

- foothill yellow-legged frog, *Rana boylei* (SC)
- western spadefoot toad, *Scaphiopus hammondii* (SC)

Fish

- green sturgeon, *Acipenser medirostris* (SC)
- river lamprey, *Lampetra ayresi* (SC)
- Pacific lamprey, *Lampetra tridentata* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- Opler's longhorn moth, *Adela oplerella* (SC)
- Bridges' Coast Range shoulderband snail, *Helminthoglypta nickliniana bridgesi* (SC)
- Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
- curved-foot hygrotus diving beetle, *Hygrotus curvipes* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)
- Fairmont (=Lum's) microblind harvestman, *Microcina lumi* (SC)
- San Francisco lacewing, *Nothochrysa californica* (SC)

Plants

- Sharsmith's onion, *Allium sharsmithae* (SC)
- heartscale, *Atriplex cordulata* (SC)
- brittlescale, *Atriplex depressa* (SC)
- valley spearscale, *Atriplex joaquiniana* (SC)
- Big plant, *Blepharizonia plumosa* ssp. *plumosa* (SC)
- salt marsh owl's clover (=johnny-nip), *Castilleja ambigua* ssp. *ambigua* (SC)
- Mt. Hamilton thistle, *Cirsium fontinale* var. *campylon* (SC)
- South Bay clarkia, *Clarkia concinna* ssp. *automixa* (SC)
- hispid bird's-beak, *Cordylanthus mollis* ssp. *hispidus* (SC)
- Livermore tarplant, *Deinandra bacigalupii* (SC)
- interior California larkspur, *Delphinium californicum* ssp. *interius* (SC)
- recurved larkspur, *Delphinium recurvatum* (SC)
- Ben Lomond buckwheat (= naked buckwheat), *Eriogonum nudum* var. *decurrrens* (SC)
- diamond-petaled poppy, *Eschscholzia rhombipetala* (SC)
- talus fritillary, *Fritillaria falcata* (SC)
- fragrant fritillary, *Fritillaria liliacea* (SC)
- Diablo helianthella (=rock-rose), *Helianthella castanea* (SC)
- pappose spikeweed [=Congdon's tarplant], *Hemizonia parryi* ssp. *congdonii* (SC)
- delta tule-pea, *Lathyrus jepsonii* var. *jepsonii* (SC)
- Mason's lilaeopsis, *Lilaeopsis masonii* (SC)

little mouseltail, *Myosurus minimus ssp. apus* (SC)
 Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)
 most beautiful (uncommon) jewelflower, *Streptanthus albidus ssp. peramoenus* (SC)
 alkali milk-vetch, *Astragalus tener var. tener* (SC) *
 San Francisco Bay spineflower, *Chorizanthe cuspidata var. cuspidata* (SC) *
 northcoast bird's-beak, *Cordylanthus maritimus ssp. palustris* (SC) *
 Kellogg's (wedge-leaved) horkelia, *Horkelia cuneata ssp. sericea* (SC) *
 adobe sanicle, *Sanicula maritima* (SC) *
 caper-fruited tropidocarpum, *Tropidocarpum capparideum* (SC) **
 Mt. Diablo phacelia, *Phacelia phacelioides* (SC)

KEY:

(E) <i>Endangered</i>	Listed (in the Federal Register) as being in danger of extinction.
(T) <i>Threatened</i>	Listed as likely to become endangered within the foreseeable future.
(P) <i>Proposed</i>	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX) <i>Proposed Critical Habitat</i>	Proposed as an area essential to the conservation of the species.
(C) <i>Candidate</i>	Candidate to become a <i>proposed</i> species.
(SC) <i>Species of Concern</i>	Other species of concern to the Service.
(D) <i>Delisted</i>	Delisted. Status to be monitored for 5 years.
(CA) <i>State-Listed</i>	Listed as threatened or endangered by the State of California.
* <i>Extirpated</i>	Possibly extirpated from the area.
** <i>Extinct</i>	Possibly extinct
<i>Critical Habitat</i>	Area essential to the conservation of a species.

ENCLOSURE A

Endangered and Threatened Species that May Occur in
or be Affected by Projects in the Selected Quads Listed Below

November 20, 2001

QUAD : 448B SAN FRANCISCO SOUTH

Listed Species

Mammals

- Guadalupe fur seal, *Arctocephalus townsendi* (T)
- sei whale, *Balaenoptera borealis* (E)
- blue whale, *Balaenoptera musculus* (E)
- finback (=fin) whale, *Balaenoptera physalus* (E)
- right whale, *Eubalaena glacialis* (E)
- Steller (=northern) sea-lion, *Eumetopias jubatus* (T)
- sperm whale, *Physeter catodon* (=macrocephalus) (E)
- salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Birds

- marbled murrelet, *Brachyramphus marmoratus* (T)
- western snowy plover, *Charadrius alexandrinus nivosus* (T)
- bald eagle, *Haliaeetus leucocephalus* (T)
- California brown pelican, *Pelecanus occidentalis californicus* (E)
- California clapper rail, *Rallus longirostris obsoletus* (E)
- California least tern, *Sterna antillarum* (=albifrons) browni (E)

Reptiles

- loggerhead turtle, *Caretta caretta* (T)
- green turtle, *Chelonia mydas* (incl. agassizi) (T)
- leatherback turtle, *Dermochelys coriacea* (E)
- olive (=Pacific) ridley sea turtle, *Lepidochelys olivacea* (T)

Amphibians

- California red-legged frog, *Rana aurora draytonii* (T)

Fish

- tidewater goby, *Eucyclogobius newberryi* (E)
- delta smelt, *Hypomesus transpacificus* (T)
- coho salmon - central CA coast, *Oncorhynchus kisutch* (T)
- Central California Coastal steelhead, *Oncorhynchus mykiss* (T)
- Central Valley steelhead, *Oncorhynchus mykiss* (T)
- winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

Critical habitat, bay checkerspot butterfly, *Euphydryas editha bayensis* (T)

white abalone, *Haliotes sorenseni* (E)

mission blue butterfly, *Icaricia icarioides missionensis* (E)

San Bruno elfin butterfly, *Incisalia mossii bayensis* (E)

callippe silverspot butterfly, *Speyeria callippe callippe* (E)

Plants

Presidio (=Raven's) manzanita, *Arctostaphylos hookeri ssp. ravenii* (E) *

robust spineflower, *Chorizanthe robusta var. robusta* (E) *

San Francisco lessingia, *Lessingia germanorum* (E)

white-rayed pentachaeta, *Pentachaeta bellidiflora* (E) *

Proposed Species

Birds

short-tailed albatross, *Diomedea albatrus* (E)

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Invertebrates

black abalone, *Haliotes cracherodii* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

gray whale, *Eschrichtius robustus* (D)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)

grasshopper sparrow, *Ammodramus savannarum* (SC)
Bell's sage sparrow, *Amphispiza belli belli* (SC)
short-eared owl, *Asio flammeus* (SC)
western burrowing owl, *Athene cunicularia hypugaea* (SC)
ferruginous hawk, *Buteo regalis* (SC)
Costa's hummingbird, *Calypte costae* (SC)
Lawrence's goldfinch, *Carduelis lawrencei* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
black tern, *Chlidonias niger* (SC)
black swift, *Cypseloides niger* (SC)
hermit warbler, *Dendroica occidentalis* (SC)
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
little willow flycatcher, *Empidonax traillii brewsteri* (CA)
American peregrine falcon, *Falco peregrinus anatum* (D)
saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
Harlequin duck, *Histrionicus histrionicus* (SC)
loggerhead shrike, *Lanius ludovicianus* (SC)
black rail, *Laterallus jamaicensis coturniculus* (CA)
Lewis' woodpecker, *Melanerpes lewis* (SC)
Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)
long-billed curlew, *Numenius americanus* (SC)
ashy storm-petrel, *Oceanodroma homochroa* (SC)
bank swallow, *Riparia riparia* (CA)
rufous hummingbird, *Selasphorus rufus* (SC)
Allen's hummingbird, *Selasphorus sasin* (SC)
elegant tern, *Sterna elegans* (SC)

Reptiles

southwestern pond turtle, *Clemmys marmorata pallida* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)

Fish

Pacific lamprey, *Lampetra tridentata* (SC)
longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

- globose dune beetle, *Coelus globosus* (SC)
- Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
- Leech's skyline diving beetle, *Hydroporus leechi* (SC)
- bumblebee scarab beetle, *Lichnanthe ursina* (SC)

Plants

- San Francisco manzanita, *Arctostaphylos hookeri* ssp. *franciscana* (SC) **
- San Bruno Mountain manzanita, *Arctostaphylos imbricata* (CA)
- Montara manzanita, *Arctostaphylos montaraensis* (SC)
- San Francisco Bay spineflower, *Chorizanthe cuspidata* var. *cuspidata* (SC)
- compact cobweb thistle, *Cirsium occidentale* var. *compactum* (SC) *
- San Francisco gumplant, *Grindelia hirsutula* var. *maritima* (SC)
- Diablo helianthella (=rock-rose), *Helianthella castanea* (SC)
- Kellogg's (wedge-leaved) horkelia, *Horkelia cuneata* ssp. *sericea* (SC)
- Mission Delores campion, *Silene verecunda* ssp. *verecunda* (SC)
- Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)
- San Francisco owl's-clover, *Triphysaria floribunda* (SC)

QUAD : 465B BRIONES VALLEY

Listed Species

Mammals

- riparian (San Joaquin Valley) woodrat, *Neotoma fuscipes riparia* (E) *

Birds

- bald eagle, *Haliaeetus leucocephalus* (T)
- California clapper rail, *Rallus longirostris obsoletus* (E)
- California least tern, *Sterna antillarum* (=albifrons) *browni* (E)

Reptiles

- Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)
- Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Amphibians

- California red-legged frog, *Rana aurora draytonii* (T)

Fish

- Critical habitat, delta smelt, *Hypomesus transpacificus* (T)
- delta smelt, *Hypomesus transpacificus* (T)
- Central California Coastal steelhead, *Oncorhynchus mykiss* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)
winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)
Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)
Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)
Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

Plants

pallid manzanita (Alameda manzanita), *Arctostaphylos pallida* (T)
Santa Cruz tarplant, *Holocarpha macradenia* (T)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma californiense* (C)

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)
Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
greater western mastiff-bat, *Eumops perotis californicus* (SC)
small-footed myotis bat, *Myotis ciliolabrum* (SC)
long-eared myotis bat, *Myotis evotis* (SC)
fringed myotis bat, *Myotis thysanodes* (SC)
long-legged myotis bat, *Myotis volans* (SC)
Yuma myotis bat, *Myotis yumanensis* (SC)
San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)
San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)
grasshopper sparrow, *Ammodramus savannarum* (SC)
Bell's sage sparrow, *Amphispiza belli belli* (SC)
short-eared owl, *Asio flammeus* (SC)
western burrowing owl, *Athene cunicularia hypugaea* (SC)
Aleutian Canada goose, *Branta canadensis leucopareia* (D)
ferruginous hawk, *Buteo regalis* (SC)

Costa's hummingbird, *Calypte costae* (SC)
 Lawrence's goldfinch, *Carduelis lawrencei* (SC)
 Vaux's swift, *Chaetura vauxi* (SC)
 black tern, *Chlidonias niger* (SC)
 black swift, *Cypseloides niger* (SC)
 hermit warbler, *Dendroica occidentalis* (SC)
 white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
 little willow flycatcher, *Empidonax traillii brewsteri* (CA)
 American peregrine falcon, *Falco peregrinus anatum* (D)
 saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)
 loggerhead shrike, *Lanius ludovicianus* (SC)
 black rail, *Laterallus jamaicensis coturniculus* (CA)
 Lewis' woodpecker, *Melanerpes lewis* (SC)
 Suisun song sparrow, *Melospiza melodia maxillaris* (SC)
 long-billed curlew, *Numenius americanus* (SC)
 bank swallow, *Riparia riparia* (CA)
 rufous hummingbird, *Selasphorus rufus* (SC)
 Allen's hummingbird, *Selasphorus sasin* (SC)

Reptiles

silvery legless lizard, *Anniella pulchra pulchra* (SC)
 northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
 southwestern pond turtle, *Clemmys marmorata pallida* (SC)
 California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)
 western spadefoot toad, *Scaphiopus hammondii* (SC)

Fish

green sturgeon, *Acipenser medirostris* (SC)
 longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Bridges' Coast Range shoulderband snail, *Helminthoglypta nickliniana bridgesi* (SC)
 Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
 California linderiella fairy shrimp, *Linderiella occidentalis* (SC)
 San Francisco lacewing, *Nothochrysa californica* (SC)

Plants

Diablo helianthella (=rock-rose), *Helianthella castanea* (SC)

delta tule-pea, *Lathyrus jepsonii* var. *jepsonii* (SC) *

most beautiful (uncommon) jewelflower, *Streptanthus albidus* ssp. *peramoenus* (SC)

QUAD : 465C OAKLAND EAST

Listed Species

Mammals

riparian (San Joaquin Valley) woodrat, *Neotoma fuscipes riparia* (E) *

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Birds

bald eagle, *Haliaeetus leucocephalus* (T)

California brown pelican, *Pelecanus occidentalis californicus* (E)

California clapper rail, *Rallus longirostris obsoletus* (E)

California least tern, *Sterna antillarum* (=albifrons) *browni* (E)

Reptiles

Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

tidewater goby, *Eucyclogobius newberryi* (E)

delta smelt, *Hypomesus transpacificus* (T)

Central California Coastal steelhead, *Oncorhynchus mykiss* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

callippe silverspot butterfly, *Speyeria callippe callippe* (E)

Plants

pallid manzanita (Alameda manzanita), *Arctostaphylos pallida* (T)

robust spineflower, *Chorizanthe robusta* var. *robusta* (E) *

Presidio clarkia, *Clarkia franciscana* (E)

Candidate Species

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)

San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Alameda Island mole, *Scapanus latimanus parvus* (SC)

Birds

tricolored blackbird, *Agelaius tricolor* (SC)

grasshopper sparrow, *Ammodramus savannarum* (SC)

Bell's sage sparrow, *Amphispiza belli belli* (SC)

short-eared owl, *Asio flammeus* (SC)

western burrowing owl, *Athene cunicularia hypugaea* (SC)

ferruginous hawk, *Buteo regalis* (SC)

Costa's hummingbird, *Calypte costae* (SC)

Lawrence's goldfinch, *Carduelis lawrencei* (SC)

Vaux's swift, *Chaetura vauxi* (SC)

black tern, *Chlidonias niger* (SC)

black swift, *Cypseloides niger* (SC)

hermit warbler, *Dendroica occidentalis* (SC)

white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)

little willow flycatcher, *Empidonax traillii brewsteri* (CA)

American peregrine falcon, *Falco peregrinus anatum* (D)

saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)

loggerhead shrike, *Lanius ludovicianus* (SC)

black rail, *Laterallus jamaicensis coturniculus* (CA)

Lewis' woodpecker, *Melanerpes lewis* (SC)
Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)
long-billed curlew, *Numenius americanus* (SC)
bank swallow, *Riparia riparia* (CA)
rufous hummingbird, *Selasphorus rufus* (SC)
Allen's hummingbird, *Selasphorus sasin* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
southwestern pond turtle, *Clemmys marmorata pallida* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)
western spadefoot toad, *Scaphiopus hammondi* (SC)

Fish

longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
California linderiella fairy shrimp, *Linderiella occidentalis* (SC)
San Francisco lacewing, *Nothochrysa californica* (SC)

Plants

alkali milk-vetch, *Astragalus tener* var. *tener* (SC) *
fragrant fritillary, *Fritillaria liliacea* (SC)
Diablo helianthella (=rock-rose), *Helianthella castanea* (SC) *
Kellogg's (wedge-leaved) horkelia, *Horkelia cuneata* ssp. *sericea* (SC) *
Pacific cordgrass (=California cordgrass), *Sparina foliosa* (SC)
most beautiful (uncommon) jewelflower, *Streptanthus albidus* ssp. *peramoenus* (SC)

KEY:

(E) <i>Endangered</i>	Listed (in the Federal Register) as being in danger of extinction.
(T) <i>Threatened</i>	Listed as likely to become endangered within the foreseeable future.
(P) <i>Proposed</i>	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX) <i>Proposed Critical Habitat</i>	Proposed as an area essential to the conservation of the species.
(C) <i>Candidate</i>	Candidate to become a <i>proposed</i> species.
(SC) <i>Species of Concern</i>	May be endangered or threatened. Not enough biological information has been gathered to support listing at this time.
(MB) <i>Migratory Bird</i>	Migratory bird
(D) <i>Delisted</i>	Delisted. Status to be monitored for 5 years.
(CA) <i>State-Listed</i>	Listed as threatened or endangered by the State of California.
(*) <i>Extirpated</i>	Possibly extirpated from this quad.
(**) <i>Extinct</i>	Possibly extinct.
<i>Critical Habitat</i>	Area essential to the conservation of a species.

**4.12H Special-Status Wildlife Species
Potentially Occurring within the
OARB Redevelopment Project Area**

Appendix 4.12H

Special-Status Wildlife Species Potentially Occurring within the OARB Redevelopment Project Area

Common Name	Scientific Name	Status			Supporting Habitat	Potential Occurrence in the Study Area
		Federal	State	CNPS		
Guadalupe fur seal	<i>Arciocephalus townsendi</i>	T	T	NA	Coastal waters, islands, isolated, rocky haul-outs.	Not likely to occur; no suitable habitat.
sei whale	<i>Balaenoptera borealis</i>	E	None	NA	Temperate open seas, nearshore and offshore, from Gulf of Alaska to Baja California	Not likely to occur; no suitable habitat.
blue whale	<i>Balaenoptera musculus</i>	E	None	NA	Open waters, occasional inshore waters	Not likely to occur; no suitable habitat.
finback whale	<i>Balaenoptera physalus</i>	E	None	NA	Open waters, occasional inshore waters	Not likely to occur; no suitable habitat.
Pacific western big-eared bat	<i>Corynorhinus townsendii townsendii</i>	SC	SC	NA	Humid coastal regions; roosts include caves, mines, and buildings	Not likely to occur; no suitable habitat.
Berkeley kangaroo rat	<i>Dipodomys heermanni berkeleyensis</i>	SC	None	NA	Annual grassland, coastal scrub, chaparral, hardwood-conifer habitats (not specific to subspecies)	Not likely to occur; no suitable habitat.
gray whale	<i>Eschrichtius robustus</i>	D		NA	Open waters, occasional inshore waters	Potential to occur.
right whale	<i>Eubalaena glacialis</i>	E	None	NA	Near shore in shallow waters, large bays	Not likely to occur; no suitable habitat.
Steller sea lion	<i>Eumetopias jubatus</i>	T	None	NA	Isolated shoreline and rocky islands from San Mateo County north	Not likely to occur; no suitable habitat.
greater western mastiff bat	<i>Eumops perotis californicus</i>	SC	SC	NA	Chaparral-type areas with rock walls and low-growing vegetation, or trees	Not likely to occur; no suitable habitat.
Pacific harbor seal	<i>Phoca vitulina</i>	MMPA	None	NA	Shallow water; in and near mouths of rivers; sand bars	Known to occur.
sperm whale	<i>Physeter catodon</i>	E	None	NA	Temperate and tropical oceans, near continental shelf, from Bering Sea to equator	Not likely to occur; no suitable habitat.
long-eared myotis bat	<i>Myotis evotis</i>	SC	None	NA	Brush, woodland, and forest habitats	Not likely to occur; no suitable habitat.
fringed myotis bat	<i>Myotis thysanodes</i>	SC	None	NA	Piñon-juniper forest, valley and foothill hardwood woodlands, and hardwood-conifer forest	Not likely to occur; no suitable habitat.

Mammals

Appendix 4.12H

Special-Status Wildlife Species Potentially Occurring within the OARB Redevelopment Project Area

Common Name	Scientific Name	Status			Supporting Habitat	Potential Occurrence in the Study Area
		Federal	State	CNPS		
long-legged myotis bat	<i>Myotis volans</i>	SC	None	NA	Woodlands, forests, chaparral, coastal scrub	Not likely to occur; no suitable habitat.
Yuma myotis bat	<i>Myotis yumanensis</i>	SC	SC	NA	Open forests and woodlands near water	Not likely to occur; no suitable habitat.
San Francisco dusky-footed woodrat	<i>Neotoma fuscipes annectens</i>	SC	SC	NA	Riparian woodland, hardwood forest, chaparral (not specific to subspecies)	Not likely to occur; no suitable habitat.
riparian woodrat	<i>Neotoma fuscipes riparia</i>	E	SC	NA	Brushy habitats with scattered trees	Not likely to occur; no suitable habitat.
salt marsh harvest mouse	<i>Reithrodontomys raviventris</i>	E	E	NA	Coastal salt marsh, dense stands of pickleweed	Not likely to occur; no suitable habitat.
Alameda Island mole	<i>Scapanus latimanus parvus</i>	SC	None	NA	Grassland, pasture, montane and valley foothill riparian, cropland, wet meadow, open forest (not specific to subspecies)	Not likely to occur; no suitable habitat.
salt-marsh wandering shrew	<i>Sorex vagrans halicoetes</i>	SC	SC	NA	Salt marshes 6-8 feet above sea level where abundant driftwood is scattered throughout pickleweed	Not likely to occur; no suitable habitat.
California sea lion	<i>Zalophus californicus californianus</i>	MMPA	None	NA	Shallow water; on offshore rocks, sand bars, bays	Known to occur.
Point Reyes jumping mouse	<i>Zapus trinotatus orarius</i>	SC	SC	NA	Riparian, grassland, and wet meadow habitats, also prefers habitat near coniferous forest (not specific to subspecies)	Not likely to occur; no suitable habitat.
Birds						
tricolored blackbird	<i>Agelaius tricolor</i>	SC	SC	NA	Open valleys and foothills in streamside timber, alfalfa and rice fields, blackberry thickets, tules and cattails on and around marshes and reservoirs	Not likely to occur; no suitable habitat.
grasshopper sparrow	<i>Ammadramus savannarum</i>	SC	None	NA	Grasslands, meadows, fields, pastures	Not likely to occur; no suitable habitat.
Bell's sage sparrow	<i>Amphispiza belli belli</i>	SC	SC	NA	Chaparral, coastal scrub	Not likely to occur; no suitable habitat.

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Special-Status Wildlife Species Potentially Occurring within the OARB Redevelopment Project Area

Common Name	Scientific Name	Status			Supporting Habitat	Potential Occurrence in the Study Area
		Federal	State	CNPS		
golden eagle	<i>Aquila chrysaetos</i>	None	SC	NA	Mountainous areas, canyons, shrub-land and grasslands	Potential to occur; known to occur at Alameda NAS.
short-eared owl	<i>Asio flammeus</i>	SC	SC	NA	Meadows, grasslands, wetlands, irrigated land	Not likely to occur; no suitable habitat
burrowing owl	<i>Athene cunicularia</i>	None	SC	NA	Short-grass prairie and open space; associated with burrowing mammals such as ground squirrels	Not likely to occur; no suitable habitat.
marbled murrelet	<i>Brachyramphus marmoratus</i>	T	E	NA	Mature Douglas fir and redwood forest within 56 km (35 mi) of the coast	Not likely to occur; no suitable habitat.
aleutian canada goose	<i>Branta canadensis leucopareia</i>	D	None	NA	Streams, marshes, lagoons, and sea cliffs are used for breeding; winter habitat includes agricultural croplands and pastures.	Not likely to occur; no suitable habitat.
ferruginous hawk	<i>Buteo regalis</i>	SC	SC	NA	Undisturbed grassland and agricultural areas (winter)	Not likely to occur; no suitable habitat.
Costa's hummingbird	<i>Calypte costae</i>	SC	None	NA	Desert scrub	Not likely to occur; no suitable habitat.
Lawrence's goldfinch	<i>Carduelis lawrencei</i>	SC	None	NA	Valley foothill hardwood, valley foothill hardwood-conifer	Not likely to occur; no suitable habitat.
Vaux's swift	<i>Chaetura vauxi</i>	SC	SC	NA	Redwood and Douglas fir forests with hollow trees and snags	Not likely to occur; no suitable habitat.
western snowy plover	<i>Charadrius alexandrinus nivosus</i>	T	None	NA	Sandy coastal beaches, salt pans, coastal dredges spoils sites, dry salt ponds, salt pond levees	Potential to occur.
northern harrier	<i>Circus cyaneus</i>	None	SC	NA	Nests and forages in salt marsh, freshwater marsh, and grassland habitats	Potential to occur; known to occur at Alameda NAS.
black swift	<i>Cypseloides niger</i>	SC	SC	NA	Mountains and coastal cliffs	Not likely to occur; no suitable habitat.
hermit warbler	<i>Dendroica occidentalis</i>	SC	None	NA	Mature pine and coniferous forests	Not likely to occur; no suitable habitat.
short-tailed albatross	<i>Diomedea albatrus</i>	C	None	NA	Open ocean; majority of the species is found off the coast of Japan	Not likely to occur; no suitable habitat.

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Special-Status Wildlife Species Potentially Occurring within the OARB Redevelopment Project Area

Common Name	Scientific Name	Status			Supporting Habitat	Potential Occurrence in the Study Area
		Federal	State	CNPS		
white-tailed kite	<i>Elanus leucurus</i>	SC	FP	NA	Nests among dense-topped trees; forages in open grasslands, meadows or marshes	Not likely to occur; no suitable habitat.
little willow flycatcher	<i>Empidonax trailii brewsteri</i>	None	E	NA	Riparian habitat, dense willow thickets edging wet meadows or ponds (not specific to subspecies)	Not likely to occur; no suitable habitat.
American peregrine falcon	<i>Falco peregrinus anatum</i>	D	E	NA	Cliff ledges, particularly near shores and marshes	Known to occur.
saltmarsh common yellowthroat	<i>Geothlypis trichas sinuosa</i>	None	SC	NA	San Francisco Bay region in fresh and saltwater marshes with thick continuous cover to water surface, tall grasses, tule patches and willows for nesting	Unlikely to occur due to lack of quality habitat
bald eagle	<i>Haliaeetus leucocephalus</i>	PD	E	NA	Seacoast, islands, sea cliffs, large lakes, large rivers, coastal lagoons	Unlikely to occur due to lack of quality habitat.
harlequin duck	<i>Histrionicus histrionicus</i>	SC	SC	NA	coastal marine environments; breeds near fast-flowing rivers	Not likely to occur; no suitable habitat.
loggerhead shrike	<i>Lanius ludovicianus</i>	SC	SC	NA	Open canopied valley and foothill hardwood, riparian; urban areas	Potential to occur.
California black rail	<i>Laterallus jamaicensis coturniculus</i>	SC	SC	NA	Tidal salt marshes, freshwater and brackish marshes	Unlikely to occur due to lack of quality habitat.
Lewis' woodpecker	<i>Melanerpes lewis</i>	SC	None	NA	Open pine-oak woodlands, coniferous forests, and riparian woodlands. Prefers burned and logged woodlands.	Not likely to occur; no suitable habitat.
Suisun song sparrow	<i>Melospiza melodia maxillaris</i>	SC		NA	Intermixed stands of bulrush (<i>Scirpus</i> spp.), cattail (<i>Typha</i> spp.), and other emergent vegetation	Not likely to occur; no suitable habitat.
San Pablo song sparrow	<i>Melospiza melodia samuelis</i>	SC		NA	Intermixed stands of bulrush (<i>Scirpus</i> spp.), cattail (<i>Typha</i> spp.), and other emergent vegetation	Not likely to occur; no suitable habitat.
Alameda song sparrow	<i>Melospiza melodia pusillula</i>	SC	SC	NA	Salient emergent wetland	Not likely to occur; no suitable habitat.
long-billed curlew	<i>Numenius americanus</i>	SC	SC	NA	Intertidal mudflats of large estuaries, upland herbaceous areas, and cropland (winter)	Potential to occur.
ashy storm-petrel	<i>Oceanodroma homochroa</i>	SC	SC	NA	Isolated coast and island nester	Not likely to occur; no suitable habitat.

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Special-Status Wildlife Species Potentially Occurring within the OARB Redevelopment Project Area

Common Name	Scientific Name	Status			Supporting Habitat	Potential Occurrence in the Study Area
		Federal	State	CNPS		
brown pelican	<i>Pelecanus occidentalis</i>	E	E	NA	Nests on coastal islands, lacking ground predators; roosts on piers, buoys, and other structures	Known to occur.
double-crested cormorant (rookery)	<i>Phalacrocorax auritus</i>	None	SC	NA	Coastal cliffs, offshore islands, and inland along lake margins; nests on ground or in tall trees	Known to occur.
California clapper rail	<i>Rallus longirostris obsoletus</i>	E	E	NA	Salt marshes dominated by pickleweed and cord grass	Unlikely to occur due to lack of quality habitat.
bank swallow	<i>Riparia riparia</i>	SC	T	NA	Riparian vegetation, vertical banks or cliffs near streams, rivers, lakes, and oceans	Not likely to occur; no suitable habitat.
rufous hummingbird	<i>Selasphorus rufus</i>	SC	None	NA	Valley and foothill woodland, hardwood-conifer forest, riparian woodland, and chaparral during migration	Not likely to occur; no suitable habitat.
Allen's hummingbird	<i>Selasphorus sasin</i>	SC	None	NA	Brushy slopes, chaparral, thickets and open coniferous forests	Not likely to occur; no suitable habitat.
California least tern	<i>Sterna antillarum</i>	E	E	NA	Flat, open areas along the coast near inshore estuaries, river mouths, or shallows, sandy ground with little or no vegetation, bays, freshwater ponds, channels, lakes	Known to occur; foraging habitat present.
elegant tern	<i>Sterna elegans</i>	SC	SC	NA	Inland coastal waters, bays, estuaries, and harbors	Potential to occur.

Fish

green sturgeon	<i>Acipenser medirostris</i>	SC	SC	NA	Rivers and estuaries	Potential to occur.
tidewater goby	<i>Eucyclogobius newberryi</i>	E	SC	NA	Upper end of lagoons in salinities less than 10 parts per thousand.	Unlikely to occur; waters adjacent to the study area are most likely too saline.
Delta smelt	<i>Hypomesus transpacificus</i>	T	T	NA	Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, river channels and sloughs	Not likely to occur; no suitable habitat.
Pacific lamprey	<i>Lampetra tridentata</i>	SC	None	NA	Estuaries, rivers and creeks with fine gravel substrates	Potential to occur.
Central California Coast coho salmon	<i>Oncorhynchus mykiss</i>	T	E	NA	Between Punta Gordo and San Lorenzo River	Not likely to occur; out of range of species.

Appendix 4.12H

Special-Status Wildlife Species Potentially Occurring within the OARB Redevelopment Project Area

Common Name	Scientific Name	Status			Supporting Habitat	Potential Occurrence in the Study Area
		Federal	State	CNPS		
Central California steelhead	<i>Oncorhynchus mykiss</i>	T	None	NA	Delta, Suisun Bay and associated marshes, San Francisco Bay west to the Golden Gate Bridge is designated as suitable habitat	Potential to occur; study area not normally in the migration route.
Sacramento Valley winter-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	E	E	NA	Sacramento River from Keswick Dam (near Redding) south to Chipps Island, then west through Carquinez Strait, San Pablo Bay, and San Francisco Bay	Potential to occur; study area not normally in the migration route.
Central Valley spring-run Chinook salmon	<i>Oncorhynchus tshawytscha</i>	T (PE)	T	NA	Central Valley rivers and their tributaries, west to the Pacific Ocean	Potential to occur; study area not normally in the migration route.
Central Valley fall/late-fall Chinook salmon	<i>Oncorhynchus tshawytscha</i>	C	SC	NA	Central Valley rivers and their tributaries, west to the Pacific Ocean	Potential to occur; study area not normally in the migration route.
Sacramento splittail	<i>Pogonichthys macrolepidotus</i>	T	SC	NA	Fresh water from lower Sacramento and San Joaquin rivers down to Montezuma Slough (may extend to the mouth of Napa River at San Pablo Bay)	Not likely to occur; no suitable habitat.
longfin smelt	<i>Spirinchus thaleichthys</i>	SC	SC	NA	Moderately saline estuaries and lower reaches of rivers	Potential to occur.
Invertebrates						
Opler's longhorn moth	<i>Adela oplerella</i>	SC	None	NA	Serpentine soils, open grasslands, sandy soils; host plant is cream cups (<i>Platystemon californicus</i>)	Not likely to occur; no suitable habitat.
vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	SC	None	NA	Vernal pools	Not likely to occur; no suitable habitat.
sandy beach tiger beetle	<i>Cicindela hirticollis gravida</i>	SC	None	NA	Sandy areas adjacent to non-brackish water along coast; found in dry sand of upper zone	Not likely to occur; no suitable habitat.
globose dune beetle	<i>Coelus globosus</i>	SC	None	NA	Coastal sand dunes; foredunes and sand hummocks with dune vegetation	Not likely to occur; no suitable habitat.
black abalone	<i>Haliotes cracherodii</i>	C	None	NA	Mid- to low rocky intertidal	Not likely to occur; no suitable habitat.
white abalone	<i>Haliotes sorenseni</i>	E	None	NA	Rocky pinnacles and deep reefs in southern California; especially those off the channel islands; lives at depths of at least 80 feet to over 200 feet	Not likely to occur; no suitable habitat.

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Special-Status Wildlife Species Potentially Occurring within the OARB Redevelopment Project Area

Common Name	Scientific Name	Status			Supporting Habitat	Potential Occurrence in the Study Area
		Federal	State	CNPS		
Ricksecker's water scavenger beetle	<i>Hydrochara rickseckeri</i>	SC	None	NA	Freshwater habitats, restricted to the San Francisco Bay Area	Not likely to occur; no suitable habitat.
Bridges' Coast Range shoulderband snail	<i>Helminthoglypta nicklinianan bridgesi</i>	SC	None	NA	Grasslands of Alameda and Contra Costa counties	Not likely to occur; no suitable habitat.
Mission blue butterfly	<i>Icaricia icariodoides missionensis</i>	E	None	NA	Coastal scrub, grassland; host plants are perennial lupines: <i>Lupinus albus</i> , <i>L. variicolor</i> , and <i>L. formosus</i> ; preferred nectar plants of adults are coast buckwheat (<i>Eriogonum latifolium</i>) and golden aster (<i>Heterotheca sessiliflora</i>)	Not likely to occur; no suitable habitat.
Marin elfin butterfly	<i>Incisalia mossii</i>	SC	None	NA	Coastal scrub with cliffs or rock outcrops; host plant is stonecrop (<i>Sedum spathulifolium</i>)	Not likely to occur; no suitable habitat.
San Bruno elfin butterfly	<i>Incisalia mossii bayensis</i>	E	None	NA	Coastal scrub with cliffs or rock outcrops, north facing slopes; host plant is stonecrop (<i>Sedum spathulifolium</i>)	Not likely to occur; no suitable habitat.
bumblebee scarab beetle	<i>Lichnanthe ursina</i>	SC	None	NA	Coastal sand dunes from Sonoma County to San Mateo County	Not likely to occur due to lack of quality habitat
California linderiella fairy shrimp	<i>Linderiella occidentalis</i>	SC	None	NA	Vernal pools	Not likely to occur; no suitable habitat.
Tiburon microblind harvestman	<i>Microcina tiburona</i>	SC	None	NA	Serpentine soils	Not likely to occur; no suitable habitat.
San Francisco lacewing	<i>Nothochrysa californica</i>	SC	None	NA	Freshwater streams	Not likely to occur; no suitable habitat.
callippe silverspot butterfly	<i>Speyeria callippe callippe</i>	E	None	NA	Grassy hillsides, chaparral, and oak woodland with native forbs; host plant a native violet (<i>Viola pedunculata</i>)	Not likely to occur; no suitable habitat.
mimic tryonia (California brackishwater snail)	<i>Tryonia imitator</i>	SC	None	NA	Coastal lagoons, estuaries, and salt marshes.	Believed by the CDFG (CNDDDB) to be extirpated in the area.

Appendix 4.12H

Special-Status Wildlife Species Potentially Occurring within the OARB Redevelopment Project Area

Common Name	Scientific Name	Status			Supporting Habitat Reptiles and Amphibians	Potential Occurrence in the Study Area
		Federal	State	CNPS		
California tiger salamander	<i>Ambystoma californiense</i>	C	SC	NA	Annual grassland and valley-foothill hardwood habitats, vernal pools and other seasonal water sources adjacent to underground refuges	Not likely to occur; no suitable habitat.
silvery legless lizard	<i>Anniella pulchra pulchra</i>	SC	SC	NA	Stabilized dune areas with coastal shrubs	Not likely to occur due to lack of quality habitat.
northwestern pond turtle	<i>Clemmys marmorata marmorata</i>	SC	SC	NA	Permanent or nearly permanent water with basking sites and upland for nest sites; can tolerate seawater for short periods of time, but prefers freshwater	Not likely to occur; no suitable habitat.
southwestern pond turtle	<i>Clemmys marmorata pallida</i>	SC	SC	NA	Permanent or nearly permanent water with basking sites and upland for nest sites; can tolerate seawater for short periods of time, but prefers freshwater	Not likely to occur; no suitable habitat.
Alameda whipsnake	<i>Masticophis lateralis euryzanthus</i>	T	T	NA	Chaparral and other scrubland habitats	Not likely to occur; no suitable habitat.
California horned lizard	<i>Phrynosoma coronatum frontale</i>	SC	SC	NA	Lowlands along sandy washes with scattered low bushes and open areas for sunning	Not likely to occur; no suitable habitat.
California red-legged frog	<i>Rana aurora draytonii</i>	E	SC	NA	Lowlands and foothills with deep water remaining for at least 11 weeks; water source is usually associated with abundant emergent and/or shoreline vegetation	Not likely to occur; no suitable habitat.
foothill yellow-legged frog	<i>Rana boylei</i>	SC	SC	NA	Partly shaded, shallow streams and riffles with cobble size or larger rocky substrate	Not likely to occur; no suitable habitat.
western spadefoot toad	<i>Scaphiopus hammondi</i>	SC	SC	NA	Quiet streams and temporary pools in grassland, open chaparral, and pine-oak woodlands	Not likely to occur; no suitable habitat.

Sources: CDFG 1999; USFWS (Appendix 4.12G)

**4.12I Special-Status Plant Species
Potentially Occurring within the
OARB Redevelopment Project Area**

**Appendix 4.121
Special-Status Plant Species Potentially Occurring Within the OARB Redevelopment Project Area**

Common Name	Scientific Name	Status			Supporting Habitat	Flowering Period	Potential Occurrence in the Study area
		Federal	State	CNPS			
San Francisco manzanita	<i>Arctostaphylos hookeri</i> ssp. <i>franciscana</i>	SC	None	1B	Coastal scrub, chaparral, coastal prairie, coastal scrub, grassland; sandy	Mar-Aug	Not likely to occur; no suitable habitat.
Presidio manzanita	<i>Arctostaphylos hookeri</i> ssp. <i>ravenii</i>	E	E	1B	Chaparral, coastal prairie, coastal scrub; serpentine outcrop	Feb-Mar	Not likely to occur; no suitable habitat.
Montara manzanita	<i>Arctostaphylos montaraensis</i>	SC	None	1B	Chaparral, coastal scrub	Jan-Mar	Not likely to occur; no suitable habitat.
pallid manzanita	<i>Arctostaphylos pallida</i>	T	E	1B	Chaparral, Foothill Woodland, Mixed Evergreen Forest	Dec-Mar	Not likely to occur; no suitable habitat.
marsh sandwort	<i>Arenaria paludicola</i>	E	E	1B	Freshwater and saltwater marsh	May-Aug	Not likely to occur; no suitable habitat.
adobe milk-vetch	<i>Astragalus tener</i> var. <i>tener</i>	None	None	1B	Playas, adobe clay grasslands, vernal pools	Mar-Jun	Believed by the CNPS to be extirpated in the area.
Tiburon mariposa lily	<i>Calochortus tiburonensis</i>	T	T	1B	Serpentine soils	Mar-Jun	Not likely to occur; no suitable habitat.
Tiburon paintbrush	<i>Castillejoa affinis</i> ssp. <i>neglecta</i>	E	T	1B	Serpentine soils	Apr-Jun	Not likely to occur; no suitable habitat.
San Francisco Bay spineflower	<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	SC	None	1B	Coastal bluff scrub, coastal dunes, coastal prairies, coastal scrub	Apr-Aug	Not likely to occur; no suitable habitat.
robust spineflower	<i>Chorizanthe robusta</i> var. <i>robusta</i>	E	None	1B	Cismontaine woodland, coastal dunes, coastal scrub	Apr-Sep	Not likely to occur; no suitable habitat.
Presidio clarkia	<i>Clarkia franciscana</i>	E	E	1B	Coastal scrub, grassland; serpentine	May-Jul	Not likely to occur; no suitable habitat.
Point Reyes bird's-beak	<i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	SC	None	1B	Coastal salt marshes	Jun-Oct	Not likely to occur; no suitable habitat.
fragrant fritillary	<i>Fritillaria liliacea</i>	SC	None	1B	Coastal prairie, coastal scrub, grassland; often serpentine	Feb-Apr	Not likely to occur; no suitable habitat.
dune gilia	<i>Gilia capitata</i> ssp. <i>chamissonis</i>	None	None	1B	Coastal dunes, coastal scrub	Apr-Jul	Believed by the CNPS to be extirpated in the area.

Appendix 4.121
Special-Status Plant Species Potentially Occurring Within the OARB Redevelopment Project Area

Common Name	Scientific Name	Status			Supporting Habitat	Flowering Period	Potential Occurrence in the Study area
		Federal	State	CNPS			
San Francisco gumplant	<i>Grindelia stricta</i> var. <i>maritima</i>	SC	None	1B	Coastal bluff scrub, coastal scrub, grassland; sandy, serpentine	Aug-Sept	Not likely to occur; no suitable habitat.
marsh gumplant	<i>Grindelia stricta</i> var. <i>angustifolia</i>	None	None	4	Coastal salt marsh, northern coastal scrub	Aug-Sept	Known to occur.
Diablo helianthella	<i>Helianthella castanea</i>	SC	None	1B	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, grassland	Apr-Jun	Not likely to occur; no suitable habitat.
Tiburon tarplant	<i>Hemizonia multicaulis</i> ssp. <i>vernalis</i>	SC	None		Annual grassland		Not likely to occur due to lack of quality habitat.
Marin dwarf flax	<i>Hesperolinon congestum</i>	T	T	1B	Chaparral, grassland; serpentine	Apr-Jul	Not likely to occur; no suitable habitat.
Santa Cruz tarplant	<i>Holocarpa macradenia</i>	T	E	1B	Coastal prairie, grasslands; often clay	Jun-Oct	Not likely to occur; no suitable habitat.
Keillogg's (wedge-leaved) horkelia	<i>Horkelia cuneata</i> ssp. <i>sericea</i>	SC	None	1B	Coniferous forest, chaparral, coastal scrub;	Apr-Sep	Not likely to occur; no suitable habitat.
Delta tulle pea	<i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	SC	None	1B	Freshwater and brackish water marshes	May-Jun	Not likely to occur; no suitable habitat.
beach layia	<i>Layia carnosa</i>	E	E	1B	Coastal dunes, coastal scrub	Mar-Jul	Not likely to occur; no suitable habitat.
San Francisco lessingia	<i>Lessingia germanorum</i>	E	E	1B	Coastal scrub, remnant dunes	Jun-Nov	Not likely to occur; no suitable habitat.
white-rayed pentachaeta	<i>Pentachaeta belliciflora</i>	E	E	1B	Valley and foothill grassland; often serpentine	Mar-May	Not likely to occur; no suitable habitat.
San Francisco popcornflower	<i>Plagiobothrys diffusus</i>	None	E	1B	Coastal prairie, valley and foothill grasslands	Apr-Jun	Not likely to occur; no suitable habitat.
adobe sanicle	<i>Sanicula maritima</i>	None	None	1B	Chaparral, coastal prairie, meadows, grassland; serpentine soils	Feb-May	Believed by the CNPS to be extirpated in the area.
Marin checkermallow	<i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	SC	None	1B	Chaparral; serpentine	May-Jun	Not likely to occur; no suitable habitat.
Mission Dolores campion	<i>Silene verecunda</i> ssp. <i>verecunda</i>	SC	None	1B	open, grassy areas in sandy or rocky soils	Mar-Aug	Not likely to occur due to lack of quality habitat.

/a/	Project	Old TAZ	New TAZ	Planning District /e/	Subarea	Units	Households /b/	Location	Comments/Time Period	Project Area	
	PROJECTS TO BE COMPLETED 2006 - 2020										
x	Romax Iron Works Site/Lofts-LW	474		WO		100	95	Near Peralta & Hollis			
x	West Oakland Transit Village	480		WO		275	261	7th St./Mandela to Union	Oppt. Sites 1, 2, 3 or others		
x	West Oakland Transit Village	61		WO		42	40	7th St./Chester to Peralta	Oppt. Sites 6 & 7 or others		
x	West Oakland Transit Village	480		WO		145	138	Mandela/5th or elsewhere	BoFA/Alliance or other site		
	TOTAL: PROJECTS TO BE COMPLETED FROM 2000 CENSUS THROUGH 2020										
x	San Pablo Affordable Senior Housing	58		WO		65	62	3255 San Pablo bet 32nd & 34th	Approved 2/01		
x	Chase & Wood	60		WO		22	21	Chase & Wood	Approved 2001		
x	Mandela Gateway/OHA	61		WO		156	156	Mandela & 7th	Replaces Westwood Gardens		
	Adeline Street Lofts	63		WO		38	36	Adeline/24th St.	Predevel. 5/2000		
x	Acorn 1, 2, 3 /c/	65/66		WO		148	148	148 8th/10th/Fibert/Union	After 3/2000		
x	Bayporte Village /c/	68		WO		64	64	8th/10th/Market	After 3/2000		
	West Clawson Lofts/school reuse	473		WO		50	48	3240 Peralta	School reuse plus additional units		
x	Precision Dye/Live-Work	474		WO		37	35	Hanna & 32nd	Approved 2001		
x	Romax Iron Works Site	474		WO		100	95	Near Peralta & Hollis			
x	Peralta Studios/live-work	476	791	WO		41	39	2121 Peralta at W. Grand	Converted PG&E facility		
x	Central Station Project/former Amtrak s	476/477	476/792	HB	16&W	376	358	16th & Wood	Live/work units	x	
x	Bridge/Linden Court	478		WO		79	79	1089 26th St. near McClymonds	Approved; low-income		
x	Bridge/Chestnut Court	478		WO		78	78	2240 Chestnut St. at W. Grand	Approved; Hope IV project		
x	West Oakland Transit Village	480		WO		275	261	7th St./Mandela to Union	Oppt. Sites 1, 2, 3 or others		
x	West Oakland Transit Village	61		WO		42	40	7th St./Chester to Peralta	Oppt. Sites 6 & 7 or others		
x	West Oakland Transit Village	480		WO		145	138	Mandela/5th or elsewhere	BoFA/Alliance or other site		
	Phoenix Lofts	481		WO		31	29	2nd near Brush	2000		

Notes:

/a/ 'X' in first column indicates updated assumptions compared to 11/21/00 Cumulative Scenario.

/b/ Assumes average vacancy factor of five percent.

/c/ The total units completed during 2000 were 293 for Acorn Parcels 1, 2, and 3, and 71 for Bayporte Village, replacing 480 and 196 original units, respectively, that were removed by 2000.

/d/ Excludes 14 units of scattered site affordable housing in West Oakland.

/e/ HB = Harbor Area; WO = West Oakland

Source: City of Oakland; Hausrahn Economics Group.

Table 8a

OAKLAND CUMULATIVE GROWTH SCENARIO
 ASSUMPTIONS FOR HOUSING PROJECTS
 11/21/00 SCENARIO AS UPDATED FOR METROPOLITAN LEONA QUARRY, AND OARB REDEVELOPMENT EIRS

Project	TAZ	Planning District	Subarea	Units	House Holds /lb/	Location	Comments/Time Period
PROJECTS COMPLETED BY 2000							
Downtown							
Adcock/Joiner Apartments	487	OC	CC	50	48	532 16th St.	
San Pablo Hotel	488	OC	CC	144	137	1955 San Pablo Ave.	
Frank G. Mar	498	OC	CC	119	113	1220 Harrison	
Madison Park Apartments	519	OC	CM	98	93	100 9th St.	
4th Street Lofts/Tower Lofts	87	OC	JLD	61	58	4th St.	
Keating/Old Town Square	491	OC	OO	98	93	918 Clay St.	
Rosa Parks House	483	OC	UT	11	10	521 W. Grand Ave.	
Subtotal				581			
Rest of City							
Howie Harp Plaza	56	OC	VSA	20	19	420 28th St.	
Providence House	469	OC	VSA	41	39	540 23rd St.	
Marlon Riggs Apartments	505	OC	LGA	13	12	269 Vernon St.	
San Pablo Gateway	47	NO		17	16	5200 San Pablo	
Sister Thea Bowman Manor	440	NO		56	53	6400 San Pablo	
M.L.K. Jr. University High (M.L.K. Plaza)	42	NO		13	12	Aileen, Dover, & 58th	
Peter Babcock House	433	NO		5	5	2350 Woodsey St.	
Piedmont Apartments	631	NO		250	238	215 W. MacArthur Blvd.	1997
Bayside Apartments	58	WO		31	29	958 28th St.	1991
Slim Jenkins Court	60	WO		32	30	700 Willow St.	Renovated former Ind'l - early 2000
Union Street Studios LW	62	WO		19	18	1920 Union off W. Grand	1994-1996
Victoria Court	64	WO		16	15		
x Acorn 1, 2, 3 /c/	65/66	WO		-231	-231	8th/10th/Filbert/Union	Before 3/2000 Census
x Acorn 1, 2, 3 /c/	65	WO		70	70	8th/10th/Filbert/Union	Before 3/2000 Census
x Acorn 1, 2, 3 /c/	66	WO		-249	-249	8th/10th/Filbert/Union	Before 3/2000 Census
x Acorn 1, 2, 3 /c/	66	WO		75	75	8th/10th/Filbert/Union	Before 3/2000 Census
x Bayporte Village /c/	68	WO		-196	-196	8th/10th/Market	Before 3/2000 Census
x Bayporte Village /c/	68	WO		7	7	8th/10th/Market	Before 3/2000 Census
James Lee Court	69	WO		26	25	690 15th St.	1992
Victorian Village	69	WO		56	53		1991-1996
Marcus Garvey Commons	477	WO		22	21	1761-1770 Goss St.	1992
Drasnin Manor	104	SA		26	25	2530 International	
Effie's House	540	SA		21	20	829 E. 19th St.	
San Antonio Terrace	543	SA		23	22	1485 E. 22nd St.	
Santana Apartments	764	SA		30	29	2220 10th Ave.	
Mark Twain Senior Center	569	FV		109	104	2426-38 35th Ave.	
Hismen Hin-nu Terrace	105	FV		92	87	2555 International	
Jingletown Housing	105	FV		53	50	29th/E. 10th St.	
Las Bougainvilleas	109	FV		68	65	1231-7 37th Ave.	
Coolidge Court	571	LH		19	18	3800 Coolidge Ave.	
Kaufman Broad	575	SH		40	38	Skyline/Keller	
Kenneth Henry Court	124	CE		51	48	6455 Foothill Blvd.	
Eastmont Town Center	625	CE		58	55	73rd & Bancroft	
E.C. Reems	135	EH		123	117	2600-2795 Alvingroom Ct.	

/a/ Project	TAZ	Planning District	Subarea	Units	House Holds /b/	Location	Comments/Time Period
E.E. Cleveland Manor	135	EH		54	51	2611 Alvingroom Ct.	
Habitat Village	617	EH		40	38	300 block 105th Ave.	
United Together Manor	136/761	EH		18	17	9410 MacArthur Blvd.	
Subtotal /d/				1594	1521		
PROJECTS COMPLETED BY 2000 TOTAL				2175	2073		
PROJECTS TO BE COMPLETED 2000 - 2005							
Downtown							
Preservation Park III	68	OC	CC	92	87	11th/12th & MLK	
14th & Harrison Residential	498	OC	CC	90	86	14th & Harrison	
17th & Harrison	499	OC	CC	60	57	17th & Harrison	
1640 Broadway Mixed Use (17th & Broadway)	500	OC	CC	150	143	1640 Broadway	
YWCA	500	OC	CC	50	48	1515 Webster St.	
14th & Madison Mixed Use	518	OC	CM	90	86	14th & Madison	
11th & Oak senior housing	519	OC	CM	52	49	1109 Oak St.	
Hotel Site/Chinatown (Arioso)	496	OC	CT	88	84	9th & Franklin	
Wheelink	72	OC	JLD	92	87	4th & Alice	
The Landing - Legacy Partners	87	OC	JLD	282	268	Waterfront & Webster	Completed
Allegro	87	OC	JLD	312	296	3rd & Jackson	Under construction
311 Oak Street (COD Builders Residential) (Dreyers)	87	OC	JLD	220	209	311 Oak St.	Under construction
Safeway Building	87	OC	JLD	46	44	4th & Jackson	Under construction
Monahan Paper	87	OC	JLD	80	76	2nd bet. Jackson + Madison	Completed 2000
Phoenix Lofts	481	(WO) OC	JLD	31	29	2nd near Brush	
2nd & Broadway Mixed Use (Roscoe's site)	768	OC	JLD	119	113	2nd & Broadway	
Lake Point Tower (The Essex)	517	OC	KC	270	257	208 17th St.	Lake Merritt Apartments; under construction
8th & Castro Lofts	68	OC	OO	18	17	8th & Castro	
Germ Building Condos (Eighth Street)	68	OC	OO	16	15	485 8th St.	Completed
Swan's Market	71	OC	OO	42	40	9th & Washington	Completed
11th & Clay Mixed Use	491	OC	OO	40	38	11th & Clay	
Housewives Market	491	OC	OO	200	190	8th/9th/Clay/Jefferson	
Forest City Residential West (Uptown)	70	OC	UT	1024	973	San Pablo/Telegraph/21st/19th	
Forest City Residential West (Uptown)	483	OC	UT	261	248	San Pablo/Telegraph/21st/19th	
Hahn One	484	OC	UT	256	243	21st & Telegraph	
Subtotal				3981	3783		
Rest of City							
Former Sears	469	OC	VSA	53	50	27th & Telegraph	Under construction
Butner Property	469	OC	VSA	30	29	23rd & Northgate	
Black Sheep	469	OC	VSA	48	46	24th & Telegraph	
CURA North	469	OC	VSA	19	18	531 24th St.	
Cox Cadillac Mixed Use	505	OC	LGA	180	171	Harrison/27th/Bay Place	
Perkins Street Residential Care	516	OC	LGA	56	53	Perkins & Bellevue	Under construction
Downs Memorial	44	NO		21	20	1027 60th St.	
North Oakland Infill Housing I	48	NO		3	3	865 43rd/3881 MLK	
Green City Loft Project	454	NO		28	27	41st & Adeline	Land area in both Oakland & Emeryville
Flecto Project	454	NO		45	43	47th & Adeline	1/2 units in Oak - land area in both Oakland & Emeryville
West Street Rehab	456	NO		3	3	3927 West St.	
MacArthur BART Transit Village	456	NO		100	95	Near 40th & Telegraph	
40th and Broadway	631	NO		19	18	40th & Broadway	
San Pablo Affordable Senior Housing	58	WO		65	62	3255 San Pablo bet 32nd & 34th	Approved 2/01
Chase & Wood	60	WO		22	21	Chase & Wood	Approved 2001

/a/ Project	TAZ	Planning District	Subarea	Units	House Holds /b/	Location	Comments/Time Period
x Mandela Gateway/OHA	61	WO		49	49	Mandela & 7th	Replaces Westwood Gardens
x Mandela Gateway/OHA	61	WO		205	205		
Adeline Street Lofts	63	WO		38	36	Adeline/24th St.	Pre-development 5/2000
x Acorn 1, 2, 3 /c/	65	WO		71	71	8th/10th/Fibert/Union	After 3/2000
x Acorn 1, 2, 3 /c/	66	WO		77	77	8th/10th/Fibert/Union	After 3/2000
x Bayporte Village /c/	68	WO		64	64	8th/10th/Market	After 3/2000
x Clawson Lofts School Reuse	473	WO		50	48	3240 Peralta	School reuse plus additional units
x Precision Dye/Live-Work	474	WO		37	35	Hanna & 32nd	Approved 2001
x Peralta Studios/live-work	476	WO		41	39	2121 Peralta at W. Grand	Converted PG&E facility
x Bridge/Linden Court	478	WO		79	79	1089 26th St. near McClymonds	Approved; low-income
x Bridge/Chestnut Court	478	WO		78	78	2240 Chestnut St. at W. Grand	Approved; Hope IV project
x Central Station Project/former Amtrak site	476	HB		252	240	16th & Wood	Live/work units
x Central Station Project/former Amtrak site	477	HB		124	118	16th & Wood	Live/work units
Evergreen Annex	537	SA		39	37	1230 2nd Ave.	
Fruitvale BART - mixed use	556	FV		47	45	3400 E. 12th St.	
x Leona Quarry	574	SH		150	144	Mountain/Campus/580/Edwards	
Bancroft Senior Homes	581	CE		61	58	2320 & 2320B 55th Ave.	
International Boulevard (RCD - 2 sites)	587	CE		30	29	6600 Intl./1406 Seminary	Under construction
International Boulevard Phase II	587	CE		24	23	6006 International	
Foothill Boulevard Housing	626	CE		66	63	72nd & Foothill	Under construction
Armistice Powell	130	EH		25	24	9507 Edes Ave.	
Durant Square	139	EH		251	238	International & Durant/105th	In addition, 20 existing LW units; under construction
Allen Temple Arms IV	600	EH		24	23	7607 International	Under construction
Allen Temple Arms III	615	EH		50	48	10121 International	Under construction
Palm Villas (MacArthur Park)	137/758	EH		78	74	MacArthur (90th - 94th)	Under construction
Subtotal				2653	2555		
PROJECTS TO BE COMPLETED 2000 - 2005 TOTAL				6634	6338		
PROJECTS TO BE COMPLETED 2006 - 2020							
Downtown							
16TH & MLK Mixed Use (Downtown Gateway)	488	OC	CC	150	143	16th/MLK/Jefferson	
Shorenstein T10	489	OC	CC	200	190	13th/14th/MLK/Jefferson	
12th & Harrison	498	OC	CC	30	29	12th & Harrison	
15th & Harrison	499	OC	CC	90	86	15th & Harrison	
Jack London Area	87	OC	JLD	150	143	2nd St. bet. Alice + Jackson	
Jack London Area	87	OC	JLD	30	29	4th St. bet. Madison + Oak	
Jack London Area Lofts	768	OC	JLD	60	57	2nd/3rd bet. Webster + Harrison	
Old Oakland/Rattos Residential	71	OC	OO	150	143	8th/9th/Washington/Clay	
8th & Washington	71	OC	OO	40	38	8th & Washington	
Lafayette Square	491	OC	OO	100	95	Jefferson/9th/10th	
Flower Warehouse	491	OC	OO	60	57	8th & Jefferson	
St. Mary's	492	OC	OO	100	95	MLK/7th/8th	
Channel Area	87	OC	JLD	100	95	Oak/5th Ave/Embarcadero/12th St.	
Channel Area	519	OC	CM	200	190	Oak/5th Ave/Embarcadero/12th St.	
Channel Area	521	OC	CM	450	428	Oak/5th Ave/Embarcadero/12th St.	
Channel Area	537	SA	UT	250	238	Oak/5th Ave/Embarcadero/12th St.	
Forest City Residential West (Uptown)	69	OC	UT	350	333	San Pablo/Telegraph/21st/19th	
Forest City Residential West (Uptown)	70	OC	UT	232	220	San Pablo/Telegraph/21st/19th	
Forest City Residential West (Uptown)	483	OC	UT	157	149	San Pablo/Telegraph/21st/19th	
Subtotal				2899	2758		

/a/ Project	TAZ	Planning District	Subarea	Units	House Holds /b/	Location	Comments/Time Period
Rest of City							
Former Sears - Phase II	469	OC	VSA	200	190	27th & Telegraph	
Valdez Area	504	OC	VSA	400	380	Broadway/W. Grand/27th	
Westmark Labor Temple	504	OC	VSA	200	190	Valdez & 23rd St. & Webster	
MacArthur BART Transit Village	456	NO		30	29		
MacArthur BART Transit Village	457	NO		100	95		
Romax Iron Works Site/Lofts-L/W	474	WO		100	95	Near Peralta & Hollis	
x West Oakland Transit Village	480	WO		275	261	7th St./Mandela to Union	Oppt. Sites 1, 2, 3 or others
x West Oakland Transit Village	61	WO		42	40	7th St./Chester to Peralta	Oppt. Sites 6 & 7 or others
x West Oakland Transit Village	480	WO		145	138	Mandela/5th or elsewhere	BofA/Alliance or other site
Fruitvale BART Transit Village	556	FV		100	95		
Leona Quarry	574	SH		414	397		
Oak Knoll	630	SH		577	548		
Coliseum BART Station	125	CE		400	380		
x HOPE IV - Coliseum Gardens	125	CE		-43	-41		
International: 73rd - 82nd area	600	CE		48	48		
Eastmont Area	625	CE		60	57		
MacArthur : 73rd to city border	607	CE		40	38		
MacArthur : 73rd to city border	137/759	CE		30	29		
Golf Links Road Scattered Site Affordable Hsg	135	EH		90	86		
International + 98th	614	EH		50	48		
Subtotal				3260	3103		
PROJECTS TO BE 2006-2020 TOTAL				6159	5861		
CITYWIDE TOTAL 2000 - 2020				12793	12199		
CITYWIDE TOTAL 1990 - 2020				14968	14272		
DOWNTOWN 2000 - 2020				6880	6541		
DOWNTOWN 1990 - 2020				7461	7093		

Notes:
/a/ 'X' in first column indicates updated assumptions compared to 11/21/00 Cumulative Scenario.
/b/ Assumes average vacancy factor of five percent.
/c/ The total units completed during 2000 were 293 for Acorn Parcels 1, 2, and 3, and 71 for Baypointe Village, replacing 480 and 196 original units, respectively, that were removed by 2000.
/d/ Excludes 14 units of scattered site affordable housing in West Oakland.

CEDA projects it will fund 600 new affordable units over the next five years. Some of those projects may already be included in projects on the list.

Source: City of Oakland; Port of Oakland; Hausrath Economics Group

Table 8b

OAKLAND CUMULATIVE GROWTH SCENARIO

ASSUMPTIONS FOR COMMERCIAL/INDUSTRIAL PROJECTS OUTSIDE DOWNTOWN

11/21/00 SCENARIO AS UPDATED FOR METROPOLITAN, LEONA QUARRY, AND OARB REDEVELOPMENT EIRs

TAZ	Planning District	Sq. Ft.	Empls	SF/Emp	Location	Comments
PROJECTS COMPLETED BY 2000						
M.L.K. Campus	NO	127,000	254	500		
K-Mart	WO	117,000	155	755	1555 40th St./near Hubbard St.	
Base Closure - FISCO	HB		-500			
Base Closure - Oakland Army Base	HB		-2,047			
Base Closure - Oakland Army Base - Interim Leasing (City and Port areas)	HB		1,277			
Port Maritime Growth (exclusive of OARB interim leasing) /c	HB		279			
K-Mart (42nd + High)	FV	130,000	173	750		
Fruitvale Station Retail (I-880)	FV	120,000	200	600		
Webvan Distribution	CE	330,000	200	1650	Coliseum Way	
Eastmont Town Center (med/lib/govt)	CE	146,000	292	500		Decline in retail employment as well
Catellus Airport Business Park	EH	275,000	368	750	Edes & Jones	
Federal Express - distrib. center	EH	250,000	333	750	Edes & 85th	Some shift in jobs from West Oakland
US Postal Service - Internal Mail Sorting Warehouse	EH	150,000	350	430	85th Avenue	
Holiday Inn Express	EH	70 rms	35	0.5 emp/rm	Airport Drive	Net change in employment
Loss of "the Castle" / Coliseum parking expansion	SH		-30			
Base Closure - Oak Knoll	SH		-2,281			
Airport Expansion	AP		671			
PROJECTS TO BE COMPLETED 2000 - 2005						
Chabot Observatory (new)	NH		80			
MacArthur BART - office, medical, retail	NO	50,000	143	350		
Flecto Project Mixed Use	NO	3,000	8	400	47th & Adeline	Mixed use/commercial
Retail/Comm Dev/LakePark	LH	60,000	133	450		
Cox Cadillac Mixed Use	OC	11,500	29	400	Harrison & Bay Place	
Grand Ave. Office	OC	25,000	83	300		
Mandela Gateway/OHA	WO			400	Mandela & 7th	Resid'l with comer retail
Community Space	WO	10,000	25			
Jack London Gateway/Com Shopping Center	WO	4,000	0			
IKEA Parking Deck	WO		50		900 Market at 8th/7th	Revitalization/New stores
OTR site hotel	WO			0.65/rm	Shellmound & I-80	Completed
Expo Design Center - replaces K-Mart	WO	149 rms	97		Verba Buena & Mandela Parkway	Extended Stay America hotel completed
OTR site - Best Buy	WO	117,000	200		1555 40th St./near Hubbard St.	Replaced K-Mart; +45 employees assumed
Gambiolini Property	WO	45,000	60	750	Verba Buena & Mandela	Proposed completion: 2002
Plywood & Lumber Sales	WO	65,000	108	600	Bet. Ettie & Hannah	New const./Lt. Ind'l with local retail
32nd-34th & Mandela (office/flex space with local retail)	WO	34,000	25		28th & Ettie	New const./Lt. Ind'l, warehouse
Bridge/Chestnut Court - retail	WO	100,000	222	450	West of Mandela	Reuse of existing and new space
Amtrak Maintenance Facility	WO	4,000	11	350	2240 Chestnut St.	Resid'l with grd. fl. retail
Telecommunications Access Facility/Mortenson	WO	163,400	350		Near 3rd & Kirckham	Approved; moving from nearby & expanding
Port Maritime Expansion (exclusive of OARB interim leasing) /c	WO	120,000	50		3rd, Brush to Castro	
Oakland Army Base - Interim Leasing (City and Port areas)	HB		194			
Montgomery Wards - school	FV		653			Employment growth reflects 60% operation of new terminal in Vision 2000 by 2005 and shifts in operations among existing facilities
Fruitvale BART - mixed use (clinic, office, retail)	FV	105	50			
Additional de	CE	75,000	188	400		
			200			

TAZ	Project	Planning District	Sq. Ft.	Emps	SF/Emp	Location	Comments
625	Eastmont Town Center - new police fac.; rebuild. of retail	CE	100 rms	400	0.5 emp/rm	Near Coliseum & BART connector	Some shift w/ TAZ; decline in employment also
131	Extended Stay America	EH	48,000	50	450	International & Durant	1.7-acre site
139	Durant Square - grocery and other retail	EH	76 rms	107	0.53 emp/rm	170 Hegenberger Loop	45,000 mktpl to remain/Under construction
596	Best Western	EH	156 rms	40	0.65 emp/rm	350 Hegenberger	Completed
596	Courtyard by Marriott	EH	132 rms	92	0.7 emp/rm	Hegenberger Loop	Completed
596	Spring Hill Hotel	EH	200,000	267	750		25-acre site; about 17 acres Phase 1
599	Home Base Site - Phase 1 - retail	EH	64,525	145	450	550 85th Avenue	Nearly completed
599	Just Desserts	EH		845			
127/633	Airport expansion	AP	4,000 pkg spaces	20		End of Pardee Road	Use for interim airport parking
128	Arrowhead Marsh (Site D)	AP	48,000	160	300	Hegenberger & Pardee (NW)	2.4-acre site; Port selling property
128	Hegenberger Annex (Site F) - office	AP	235,000	588	400	Hegenberger & Pardee (NE)	1.4-acre site; Port selling property
128	Hegenberger/Pardee (Site E) - R&D/office	AP	9,000	20	450	7711 Oakport	1.3-acre site
597	7711 Oakport Road (Site A) - Key Source International	AP	406,700	339 /b/	1,200	7200 Edgewater	Property sold to AMB/former Grand Auto
597	Edgewater Distribution Center - warehouse/industrial	AP	30,000	67	450	Edgewater & Pardee Lane	Port sale of vacant site
597	Edgewater/Pardee (Site C) - R&D	AP	360,000	1,200	300	Hegenberger & Hassler	22-acre site; Port selling property
597	Metropark Project (Site B) - Phase 1 - office	AP	25,000	42	600	Oakport & Hassler	4-acre site
597	Auto Dealership	AP	149 rms	75	0.5 emp/rm	Near Oakport & Hassler	3.42-acre site
597	Extended Stay America	AP	5,000	20	250	Near Oakport & Hassler	1-acre site; part of Extended Stay development
597	Restaurant	AP	200,000	267	750	Edgewater & Hassler	7.8-acre site; under construction
597	Rainin Instrument Company	AP	300,000	750	400	66th & Oakport	Partially completed
597	Zhone Technologies	AP					
PROJECTS TO BE COMPLETED 2006 - 2020							
23	Claremont Hotel Expansion	NH	160-165 rms	115	0.70/rm	Tunnel Road & Domingo	75 unit timeshares/85-90 rms/structured parking
457/735	MacArthur BART area	NO	20,000	57	350		
62	Carnation Factory Site (Lt. Ind/Office/Local Retail)	WO	150,000	333	450	Mandela & 14th/16th/Poplar	Adaptive reuse; possible new construction
62	Kirkham/16th & 18th	WO	150,000	333	450	Kirkham/16th & 18th	Site transitions from trucking to lt.ind/1R&D/ofc
474	Romax Iron Works Site - ground-floor retail	WO	7,500	21	350	Near Peralta & Hollis	
474	Conversions and infill	WO		280			New uses net of declines
475	34th & Wood/Lt. Ind'l	WO	13,000	22	600	East of Mandela	
475	Conversions and Infill	WO		130			New uses net of declines
480	West Oakland Transit Village - retail/com'l	WO	5,000	14	350		
61	- retail/com'l	WO	5,000	14	350		
480	Amtrak Maintenance Facilities - expanded operations	WO	60,000	200			Expansion as train service increases
481	Conversions - W. Amendment Area - C.D. Redev.	WO		171			
67/475/476	Oakland Army Base Reuse: Gateway (Non-Maritime)	HB					
67	Office	HB	600,000	2,250	267		
67	R&D/Lt. Industrial	HB	996,000	2,490	400		
67	Retail	HB	25,000	70	357		
475	Warehouse/Distribution	HB	300,000	240	1,250		
476	R&D/Lt. Industrial	HB	200,000	500	400		
476	R&D/Lt. Industrial	HB	176,000	440	400		
476	Job Training	HB	50,000	100	500		
475	EBMUD - Wastewater Treatment Expansion	HB		40			
67/482	Port Maritime Expansion and OARB Reuse (Maritime) /c/	HB		881			Employment growth reflects full development of 1,000 acres for terminals, incorporating Vision 2000, JIT development, and increased maritime areas from OARB.
67/475/476/477	Oakland Army Base - End of Interim Leasing	HB		-1,930			Permanent reuse replaces interim leasing
476/477	Central Station Project/former Amtrak site	HB	981,235	2,804	350	16th & Wood Sts.	Project description as of 3/19/01
476	Office/R&D	HB	70,279	150			
476	Train Station/Comm'l-Retail-Community Uses	HB					

/a/ Project	TAZ	Planning District	Sq. Ft.	Empls	SF/Emp	Location	Comments
x Office/R&D	477	HB	386,065	1,103	350		
x 16th & Wood sites/Lt. Industrial	477	HB	185,000	463	400		Phoenix Iron Works & other sites
x 16th & Wood sites/Lt. Industrial	476	HB	120,000	300	400		Sites north of Central Station project
5th Avenue/Clinton Cove/9th Ave. Terminal Area							Development program per Estuary Policy Plan
Restaurant/Café	95	SA	5,500	18	300		
Public use/museum/recreation	95	SA	70,000	23	3,000		
Restaurant/Retail	95	SA	30,000	75	400		
Hotel	95	SA	400 rm	340	0.85/rm		
Hotel	95	SA	250 rm	150	0.60/rm		
Conference	95	SA	50,000	20	2,500		
x Leona Quarry - retail	574	SH	10,000	29	350		
Oak Knoll - housing/retail	630	SH	25,000	55	450		
Additional dev/infill	108	CE		250			
Intercity Rail Platform	125	CE		10		73rd & San Leandro	Amtrak
x Loss of industrial uses for BART parking	125	CE		-40		Vicinity of 66th & Hegenberger	
x East Oakland Sports Center	130	EH	140,000	56	2,500		At Brookfield Park
x Federal Express - expansion	130	EH	100,000	133	750		
Additional dev/infill	140	EH		200		Edes & 85th	
Additional dev/infill	599	EH		250			
x Home Base Site - Phase 2 - retail	599	EH	100,000	133	750		25-acre site; about 8 acres Phase 2
x Airport expansion	127/633	AP		2,611			
x Arrowhead Marsh (Site D) - R&D/distribution	128	AP	500,000	890	560	End of Pardee Road	34.4-acre site; eventual development
x 7711 Oakport Road (Site A) - Key Source International	597	AP	2,000	5	450	7711 Oakport	Addition to existing building
x Metroport Project (Site B) - Phases 2, 3, 4	597	AP				Hegenberger & I-880	22-acre site; Port selling property
x Office	597	AP	990,444	3,301	300		
x Hotel	597	AP	336 rm	336	1 emp/rm		
x Retail	597	AP	50,000	125	400		
x Zhong Technologies	597	AP		107			More intensive use of facilities

Notes:
/a/ 'x' in first column indicates updated assumptions compared to 11/21/00 Cumulative Scenario.

Source: City of Oakland; Port of Oakland; Hausrath Economics Group

Table 8c
OAKLAND CUMULATIVE GROWTH SCENARIO
ASSUMPTIONS FOR COMMERCIAL/INDUSTRIAL PROJECTS IN DOWNTOWN
11/2/1000 SCENARIO AS ASSUMED FOR METROPOLITAN, LEONA QUARRY, AND OARB REDEVELOPMENT EIRS

Project	TAZ	Planning District	Subarea	Sq. Ft.	Emps	SF/Emp	Location	Comments
PROJECTS COMPLETED BY 2000 (1990 - 1999)								
City Administration - Wilson Building (office only)	486	OC	CC	165,430	414	400		
City Administration - Dalziel Building (office only)	487	OC	CC	225,710	564	400		
City Hall	487	OC	CC	80,000	200	400		
State Building	488	OC	CC	600,000	1500	400		
Federal Building	489	OC	CC	1,000,000	2500	400		
1111 Broadway	490	OC	CC	535,000	1783	300		
UC Office of the President	497	OC	CC	232,500	1000	300		
Tribune Tower	497	OC	CC	89,000	297	300		
New County Building	519	OC	CM		334			
Caltrans Building	503	OC	KC		1180			
Warriors Practice Facility	71	OC	OO	60,000	20		530 10th Street	
Oakland Icerink	70	OC	UT		35			
PROJECTS TO BE COMPLETED 2000 - 2005								
Rotunda Building	486	OC	CC				16th & Broadway	
Office	486	OC	CC	187,000	534	350		
Retail	486	OC	CC	50,000	111	450		
17th Street Parking Garage (retail - 500 spaces)	486	OC	CC	23,000	51	450	16th/17th/San Pablo	
City Administration - Wilson Building (retail)	486	OC	CC	16,800	42	400		Assumes +/- 40%
Latham Square Building (renovation)	486	OC	CC	107,000	122			
City Administration - Dalziel Building (retail)	487	OC	CC	20,000	44	455		
Plaza Building	487	OC	CC	13,000	43	300		
518 17th Street (renovation)	488	OC	CC	32,000	98	325		
Old PG&E Building (renovation)	488	OC	CC	37,685	116	325		
16th & MLK Office (Downtown Gateway)	488	OC	CC	100,000	333	300	16th/MLK/Jefferson	
Shorenstein T9	489	OC	CC					
Office	489	OC	CC	472,500	1575	300		
Retail	489	OC	CC	7,500	25	300		
Shorenstein T5/T6	490	OC	CC				11th/12th/Clay	
Office	490	OC	CC	580,000	1933	300		
Retail	490	OC	CC	7,500	25	300		
Keystone Hotel/Hilton Gardens	497	OC	CC	214 rooms	140	0.65/rm	11th/12th/Broadway	
13th and Broadway/Utility Building (renovation)	497	OC	CC	60,000	200	300		
14th & Harrison Project	498	OC	CC	9,000	23	400		Ground floor commercial
1404 Franklin (renovation)	500	OC	CC	50,000	43			
1640 Broadway Mixed Use	500	OC	CC					
Office	500	OC	CC	177,680	592	300		
Retail	500	OC	CC	5,400	18	300		
1111 Jackson (former State Building)	519	OC	CM	150,000	500	300		Under construction
Courtyard Marriott Hotel	496	OC	CT	150 rooms	75	0.5/rm	9th & Broadway	Under construction
Arioso Mixed Use	496	OC	CT	5,800	25		900 Broadway/9th	Commercial/88 units
Embarcadero & Broadway (Site D)	72	OC	JLD					
Office	72	OC	JLD	45,000	138	325		
Retail/entertainment	72	OC	JLD	24,000	48	500		
Meadow Commercial (Site C)	72	OC	JLD	20,000	67	300		Restaurant
Waterfront Plaza Hotel Expansion (incl. 3,100 sf confer)	72	OC	JLD	63 rooms	47	0.75/rm		

Project	TAZ	Planning District	Subarea	Sq. Ft.	Empls	SF/Emp	Location	Comments
Allegro Housing	87	OC	JLD	12,569	33	375	3rd and Jackson	Under construction
311 Oak Street (COD Builders Residential)	87	OC	JLD	30,000	80	375		
Monahan Paper Office	87	OC	JLD	190,000	585	325		
Safeway Building Housing	87	OC	JLD	7,400				
Office	87	OC	JLD	6,500	19	325	4th and Jackson	Ground floor commercial
Retail	87	OC	JLD	4,500	15	300	4th and Jackson	Ground floor commercial
Water Street Intensification (Site E)	736	OC	JLD	5,000	20	250		
Phase 2/Jack London Village (Site F)	736	OC	JLD					
Hotel	736	OC	JLD	400 rooms	340	0.85/rm		
Retail/entertainment	736	OC	JLD	99,000	248	400		
Office - partial absorption	736	OC	JLD	100,000	333	300		
115 Broadway Office	767	OC	JLD	10,000	29	350		
Cinema Expansion	767	OC	JLD	700 seats	25		Washi/2nd to 3rd	
Washington Street Garage Addition	767	OC	JLD		20			
Terranomics - office (Clay - 3rd to 4th)	767	OC	JLD	31,000	95	325	Clay/3rd to 4th	
Terranomics - retail expansion: Bed, Bath	767	OC	JLD	15,000	38	400	3rd/Jefferson	Bed, Bath & Beyond
Terranomics - lg. Amer. Conversions - addtl office	767	OC	JLD	30,595	96		4th/Jefferson/3rd/MLK	
Terranomics - lg. Amer. Conversions - reduced retail	767	OC	JLD	-13,660	-13		4th/Jefferson/3rd/MLK	
Union Machine Works	767	OC	JLD				2nd/Clay	
Office	767	OC	JLD	30,000	86	350		
Entertainment	767	OC	JLD	6,000	15	400		
Kimball's Salsa Club	767	OC	JLD	10,000	29	350	mid-Blk 2nd/3rd near Wash	
300 Harrison Office (former City Lofts)	768	OC	JLD	100,000	308	325	3rd & Harrison	
Embarcadero & Webster Office	768	OC	JLD	40,000	123	325	100 Webster	
Oak Tree Commercial	768	OC	JLD	60,000	185	325		
2nd & Broadway Mixed Use (Roscoe's site)	768	OC	JLD					
Office	768	OC	JLD	90,000	277	325		
Retail	768	OC	JLD	8,000	29	275		
Upper Floor Entertainment & Addtl Retail/Rest (infill)	768	OC	JLD	12,000	32	376		
Amtrak Station (Site G - parking garage and commercial)	768	OC	JLD	20,000	80			
Wakefield Rehab (renovation)	74	OC	KC	68,000	58			
415 20th Street (LBL Supercomputer)	74	OC	KC	70,000	140			
20th & Broadway	502	OC	KC				+ renovation of ex bank bldg	
Office	502	OC	KC	325,000	1083	300		
Ground floor retail	502	OC	KC	11,500	29	400		
Bermuda Building	502	OC	KC	160,000	356	450	21st & Franklin	
Lake Merritt Tower II	503	OC	KC	700,000	2333	300		
Washington & 8th Street (renovation)	71	OC	OO	68,000	60			
Swan's Market	71	OC	OO					
Office	71	OC	OO	17,000	49	350		
Retail	71	OC	OO	25,000	55	450		
Rattos + others in area (renovations)	491	OC	OO		80			
Housewives Market	491	OC	OO	27,500	78	350	8th/9th/Clay/Jefferson	ground floor commercial
11th & Clay Mixed Use (office)	491	OC	OO	30,000	92	325		
Uptown Project (retail/comm - Blk 2)	70	OC	UT	35,700	89	400		
Fox Side Buildings (renovation & new)	70	OC	UT					
Office	70	OC	UT	30,100	93	325		
Retail	70	OC	UT	18,000	51	350		
New space - perf. & comml.	70	OC	UT	22,000	55	400		
Uptown Project	483	OC	UT		46	400		
Retail/comm - Blk 5	483	OC	UT	18,500				
Parking garage - Blk 4	483	OC	UT	1394 spaces	20			
I. Magnin Building (renovation)	484	OC	UT	63,000	210	300		
Hahn One - Phase I (retail/office)	484	OC	UT	16,800	46	400		
Sears Building (upper floor office renovation)	485	OC	UT	180,000	514	350		
Floral Depot Blk (rehab to office)	485	OC	UT	~40,000	123	325		

Project	TAZ	Planning District	Subarea	Sq. Ft.	Empls	SF/Emp	Location	Comments
Sweets Ballroom - Super Club	485	OC	UT	12,000	15	800		
Floral Depot Blk - rehabs to retail/E&D/perf.	485	OC	UT	~20,000	33	600		Includes Millennium Village
Rehabs/infill for office 17th-19th Blk	485	OC	UT		154			
PROJECTS TO BE COMPLETED 2005 - 2020								
Shorenstein T10	489	OC	CC					
Office	489	OC	CC	550,000	1833	300		
Retail	489	OC	CC	8,000	27	300		
Shorenstein T12	489	OC	CC	584,000	1947	300		
Additional Tribune Building and others (infill)	497	OC	CC		457			
Intensification of Existing - Water Street extension	72	OC	JLD		30			
Phase 2/Jack London Village (Site F)(ofc-absorp of rest)	736	OC	JLD	157,500	525	300		
Lower Broadway	767	OC	JLD					
Office	767	OC	JLD	120,000	369	325		
Retail/entertainment/restaurant	767	OC	JLD	25,000	63	400		
Terranomics - Additional construction	767	OC	JLD					
Retail	767	OC	JLD	15,000	38	400		
Office	767	OC	JLD	20,000	62	325		
Cost Plus (Site A)	767	OC	JLD					
Replacement retail: net additional space	767	OC	JLD	10,000	25	400		
750-space garage	767	OC	JLD		30			
Rehab and/or new constr (space is net add'l)	767	OC	JLD					
Retail	767	OC	JLD	5,000	13	400		
Office	767	OC	JLD	5,000	15	323		
Office conversion - Meyers plumbing	768	OC	JLD	25,578	79	350		Replaces lt. Ind.
Conversion - Produce District Bldgs - office-retail-rest	768	OC	JLD	145,000	414	350		Replaces lt. Ind. - adds pkg
Millers Meat Site	768	OC	JLD					Removes lt. Ind.
Office	768	OC	JLD					
Retail/commercial	768	OC	JLD	115,000	354	325		
Old Oakland (infill)	768	OC	JLD	10,000	25	400		
Uptown Project (retail/comm1 - Blk 8)	71	OC	OO		200			
Fox Theater (~2,400 seats)	69	OC	UT	8,000	20	400		
Uptown Project (retail/comm1 - Blk 7)	70	OC	UT	2400 seats	40			
Uptown Project (retail/comm1 - Blk 3 + addtl Blk 2)	483	OC	UT	11,000	34	325		
Uptown Project (retail/comm1 - Blk 4)	483	OC	UT	10,000	35			
Uptown Project (retail/comm1 - Blk 6)	483	OC	UT	14,800	40	375		
Additional infill	483	OC	UT	9,000	26	350		
Hahn One - Phase 2 (retail)	484	OC	UT		70			
Additional infill/rehab	484	OC	UT	25,000	68			
Additional infill/rehab	485	OC	UT		100			
					285			

Source: City of Oakland; Port of Oakland; Hausrath Economics Group

**4.12J Correspondence Between the U.S. Army and the
USFWS, and Between the Army and the NMFS
Regarding Federally-Protected Species**



United States Department of the Interior
Fish and Wildlife Service

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

IN REPLY REFER TO:
I-1-00-I-869

October 11, 2000

Mr. Roger Caswell
BRAC Environmental Coordinator
U.S. Army Corps of Engineers
Oakland Army Base BRAC Transition Office
2475D W. 12th Street
Oakland, California 94607

Subject: Concurrence of Not Likely to Adversely Affect, Disposal and Reuse of
Oakland Army Base, Alameda, California

Dear Mr. Caswell:

This regards your letter dated August 3, 2000, requesting concurrence that the disposal and reuse of the Oakland Army Base in Alameda, California is not likely to adversely affect the federally endangered California least tern (*Sterna antillarum brownii*) (least tern). The least tern is protected under the Endangered Species Act of 1973, as amended (Act).

The U.S. Fish and Wildlife Service has reviewed the provided documents regarding the disposal and reuse of the Oakland Army Base, and concurs that the action(s) are not likely to adversely affect least terns.

If you have further questions, please contact Don Hankins or Ken Sanchez at (916) 414-6625.

Sincerely,

Karen J. Miller
Chief, Endangered Species Division



DEPARTMENT OF THE ARMY
MILITARY TRAFFIC MANAGEMENT COMMAND
OAKLAND ARMY BASE TRANSITION OFFICE
2475-D WEST 12TH STREET
OAKLAND, CALIFORNIA 94607



REPLY TO
ATTENTION OF

3 August, 2000

Ser 216A6

From: Oakland Army Base BRAC Transition Office
2475D W. 12th Street
Oakland, Ca 94607

To: Mr. Wayne White, Field Supervisor
U.S. Fish and Wildlife Service
Sacramento Field Office
2800 Cottage Way, Room W2605
Sacramento, California 95825-1846

Subj: BIOLOGICAL ASSESSMENT FOR USFWS, DISPOSAL AND REUSE OF OAKLAND
ARMY BASE, ALAMEDA COUNTY, CALIFORNIA

Dear Mr. White:

This letter is intended to supplement the *Biological Assessment for the Disposal and Reuse of Oakland Army Base (OARB)*, dated September 30, 1999. In that Biological Assessment, we asked for USFWS concurrence with our conclusion that the Army's proposed action is not likely to adversely affect any threatened or endangered species or critical habitat. In subsequent discussions, Don Hankins of your staff expressed some concerns regarding potential impacts to the endangered California least tern from lighting and landscaping associated with development of the spit area at OARB. The least tern forages in the waters offshore from the western-most parcel of the base known as the "Spit" and may occasionally use this area for resting.

Under the reuse plan, the "Spit" area is proposed to become a public access waterfront park managed by the East Bay Regional Park District (EBRPD). The project is at a very early conceptual stage with no design yet proposed and may be affected by the eventual decision on the Bay Bridge alignment question.

Don proposed several specific restrictions that he felt could possibly be included in the property transfer documents to address his concerns. We discussed this proposal with both the Oakland Base Reuse Authority (OBRA) and the EBRPD. While we agree that consideration of the least tern is proper and necessary, the Army, OBRA, and the EBRPD believe that it would not be appropriate for the Army to set specific restrictions on reuse. We believe that it would be more effective for the new owner to negotiate restrictions with your staff when specific design and use intentions for the parcel are available to be reviewed. Therefore, we propose to include the following more general restriction within the transfer document:

Subj: BIOLOGICAL ASSESSMENT FOR USFWS, DISPOSAL AND REUSE OF OAKLAND ARMY BASE, ALAMEDA COUNTY, CALIFORNIA

"Prior to site development or other opening of the property parcel known as the 'Spit' area (a parcel consisting of approximately 15 acres at the far west end of the installation, south of and adjacent to the east end of the Oakland Bay Bridge) to public access or other reuse, the new owners will coordinate with and obtain approval of their specific development plan for the property from the USFWS Endangered Species Office."

With the Army's commitment to impose this restriction in the property transfer document, potential impacts to the least tern will be avoided. Therefore, we request your concurrence with our determination that the disposal and reuse of OARB are not likely to adversely affect any listed species or critical habitat.

We will continue to provide your office with any assistance or additional information that may expedite your concurrence with our findings. If you have any questions, please contact Dr. Robert Koenigs at (916) 557-6712.

Sincerely,



Roger Caswell
BRAC Environmental Coordinator

cc:
Dr. Robert Koenigs, USACE-SPK
Mr. Chuck Hubbard, USACE-SPK
Ms. Loretta Graves, MTMC-HQ
Ms. Elois Thornton, Oakland Redevelopment Agency
Ms. Theresa Persick-Arnold, DAIM-BO



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Sacramento Field Office
2800 Cottage Way, Room E-1803
Sacramento, California 95825-1846

IN REPLY REFER TO:

In Reply Refer To:
PPN 1833

January 11, 1996

Anne Cavazos
SCS Engineers
6761 Sierra Court, Suite D
Dublin, California 94568

Subject: Request for Concurrence of Oakland Army Base Suitability
Classification for Fish and Wildlife Management, Oakland
Army Base, Alameda County, Oakland, California

Dear Ms. Cavazos:

The United States Fish and Wildlife Service (Service), Sacramento Field Office, has reviewed Environmental Assessment No. 24-1405-77 (Oakland Army Base, 1977) and other pertinent documentation describing fish and wildlife resources at the Oakland Army Base (OARB). Upon review of this documentation, the Service has determined that the OARB does not have land or water areas that are suitable for a program of conservation and management of fish and wildlife. Therefore, the Service recommends that the OARB should be classified as Category III as described in Army Regulation 420-74.

If you have any questions regarding these comments, please contact Mark Littlefield (Wetlands Branch) at (916) 979-2113.

Sincerely yours,

Joel A. Medlin
Field Supervisor
U.S. Department of the
Interior Coordinator

cc: AES-Portland, OR



DEPARTMENT OF THE ARMY
MILITARY TRAFFIC MANAGEMENT COMMAND
HQ, WESTERN AREA
UNITED STATES ARMY GARRISON
OAKLAND ARMY BASE
OAKLAND, CALIFORNIA 94626-5000

SEP 30 1999

Mr. Wayne White, Field Supervisor
United States Fish and Wildlife Service
Sacramento Field Office
2800 Cottage Way, Room W2605
Sacramento, California 95825-1846

SUBJECT: BIOLOGICAL ASSESSMENT FOR USFWS, DISPOSAL AND REUSE OF OAKLAND ARMY BASE, ALAMEDA COUNTY, CALIFORNIA

Dear Mr. White:

This letter documents the United States Army's formal coordination under Section 7 of the Endangered Species Act (ESA) regarding the disposal and reuse of the Oakland Army Base (OARB), Alameda County, California. The Army plans to dispose of the OARB as excess property, by transfer to a Local Reuse Agency, the Oakland Base Reuse Authority (OBRA). The OBRA has developed a plan for redevelopment and reuse of the installation (Reuse Plan). The Army has prepared an Environmental Impact Statement (EIS) to assess the potential effects of the disposal and reuse of OARB. As described in the EIS, the disposal (transfer) of OARB property is the Army's primary action. Reuse is a secondary action to be undertaken by the OBRA after disposal. As part of the EIS's analysis of the potential effects on the environment of the Army's action, the Army has prepared a Biological Assessment (BA). A copy of this BA is attached for your review. A separate BA has been prepared to assess potential effects on anadromous fish species, and has been submitted to the National Marine Fisheries Service. The attached BA describes field surveys done to inventory plant and wildlife species at OARB and in the immediate vicinity, both by the Army for the EIS and by others for various state and federal agency actions in the OARB area. It assesses the potential for OARB lands to contain suitable habitat for species listed as endangered or threatened under the Endangered Species Act of 1973, as amended, and the potential effects of disposal and reuse on listed species.

Previous Coordination—Previous coordination between the Army and the Fish and Wildlife Service (USFWS) included correspondence regarding fish and wildlife management suitability classification, requests by the Army for species lists, and a field visit by USFWS staff from the Endangered Species Division. On January 14, 1996, Mr. Joel A. Medlin, Field Supervisor for the USFWS, wrote a letter of concurrence stating that "the OARB does not have land or water

Mr. Wayne White

Page 2

areas that are suitable for a program of conservation or management of fish and wildlife" in conjunction with an Installation Natural Resources Management Plan for OARB (Reference PPN 833, letter to Anne Cavazos of SCS Engineers). In May of 1997, Foster Wheeler Environmental Corporation requested a list of endangered and threatened species that might occur in the OARB vicinity, in connection with environmental baseline studies leading to the EIS for disposal and reuse of OARB. In September of 1997, project staff provided Mr. Dan Buford of your office a description of the installation and color aerial photographs of the OARB sand spit area (see below). On December 17, 1998, Mr. Buford accompanied biologists of the US Army Corps of Engineers and Foster Wheeler Environmental Corporation on a field visit to OARB. On September 10, 1999, Mr. Harry Mossman of your office provided an updated species list.

Potential Habitat—Oakland Army Base consists of 422 acres on Oakland's Outer Harbor, 54 acres of which are submerged lands near OARB's three wharves, currently leased to the Port of Oakland. All but approximately 17 acres of the OARB is intensively developed and is covered in large buildings, parking lots, pavement, and landscaping. The only open land suitable for wildlife use on the installation is the undeveloped sand spit area at the western isthmus of the installation. This area was created of artificial fill to be part of the eastern terminus and toll plaza area for the San Francisco-Oakland Bay Bridge. Studies of listed species at OARB and the potential effects of disposal and reuse on such species have focused on this sand spit area and the submerged lands.

Listed Species—Initial surveys and screening for the project determined that the sand spit and open water areas adjacent to OARB could provide suitable areas for use by four listed species: 1) California least tern, 2) brown pelican, 3) western snowy plover, and 4) peregrine falcon. Suitable habitat is lacking for all of the other listed species of plants and animals, which prefer either undeveloped upland habitat or wetlands and tidal marshes, neither of which are present at OARB. The listed non-anadromous fish species are tidewater and estuarine species for which habitat is not present in the OARB submerged lands. Botanical surveys for the EIS as well as for the California Department of Transportation did not result in the identification of listed plant species on the sand spit.

Of these four listed species that may use OARB, the peregrine falcon was recently (August 25, 1999) delisted. Of the three remaining species, field surveys as well as a review of the extensive studies conducted for the Port of Oakland's Vision 2000 and Harbor Improvement programs, and the San Francisco-Oakland Bay Bridge East Span Seismic Safety project indicated that least terns and brown pelicans occasionally use the waters of the Outer Harbor south of the sand spit for foraging. Least terns were observed resting in the waters of the Outer Harbor during field surveys for the project. There is little suitable habitat for the western snowy plover.

Mr. Wayne White

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California least terns are central-based foragers. They nest in large colonies and then forage in areas surrounding the nesting colony. There is a large least tern nesting colony located about two miles south of OARB at the former Alameda Naval Air Station. Extensive bird survey conducted by the Port of Oakland for the Vision 2000 and Harbor Improvement programs have shown that least terns use the Outer, Middle, and Inner Oakland harbor areas for foraging, as well as San Francisco Bay waters to the south and west of the Alameda colony. The areas south and west of the colony, however, are proven to be much more popular for least tern foraging than the Oakland Outer Harbor area near OARB. Only a small percentage of the tern sightings and diving attempts were observed in the Outer Harbor.

Brown pelicans frequent a large roosting area located along a breakwater south of Alameda but do not breed in San Francisco Bay. They use the Oakland harbor areas for foraging, but use the Outer Harbor area less intensively than areas nearer to the Alameda roost, according to intensive surveys done on behalf of the Port of Oakland programs. The Port studies did not observe the brown pelican in the portion of the Outer Harbor occupied by the OARB submerged lands. Brown pelicans may use areas such as the sand spit and its shoreline for resting, but have not been observed there during studies for the EIS, and these are clearly not important rest areas for them.

The sand spit does not provide suitable habitat for **western snowy plover**. This bird feeds on amphipods, insects, and sand crabs that live along beaches, and nests in foredunes or other sandy or unvegetated areas. The OARB sand spit contains only two very small (30-40 meter-wide) beaches and is covered in a dense growth of weeds. Western snowy plovers have not been observed there during field studies for the EIS and are not likely to use the area very frequently.

Summary—Based on the field studies conducted for the EIS, for the Port, and for other projects in the area, and a review of the literature, the Army finds that two listed species, the California least tern and brown pelican, are present near OARB. These species occasionally use the waters around OARB to forage for fish. They may occasionally use the sand spit land area for resting, though they have not been observed doing this. OARB lands, however, do not provide nesting or roosting habitat for either species, or for the western snowy plover.

OBRA's Reuse Plan—The OBRA's Reuse Plan for OARB includes development of the sand spit area into a shoreline access park, with trails, lawn areas, and trees. Though the park would increase human activity in the sand spit area, it would not significantly alter the characteristics of this area that attract the relatively low level of current use by the least tern and brown pelican. The Reuse Plan includes a description of the Port of Oakland's Berth 21 project, a proposed fill of 25 acres of the Oakland Outer Harbor, one-third of which consists of OARB submerged lands.

Mr. Wayne White

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This fill is currently part of the Port of Oakland's Capital Improvement Plan but is not yet funded. If approved and funded, it would not be implemented until approximately 2004. This fill could have an indirect effect on the brown pelican and least tern, since it could temporarily disrupt their feeding behavior by causing some disturbance to sediments in the Outer Harbor and would remove a small amount of potential, marginal foraging area. The siltation disturbance could be controlled or prevented, however, by use of construction methods selected to minimize the movement of silt within the water. Furthermore, the disruption of feeding behavior and the loss of foraging area would not be consequential, given the relatively low level of foraging use in this area by these species.

If the Port of Oakland goes forward with the Berth 21 fill project, the Port will be required at the time of implementation to obtain a permit from the US Army Corps of Engineers under Section 404 of the Clean Water Act. The Corps will coordinate with the USFWS regarding the ESA and the potential effects of this project on endangered and threatened species. If conditions at that time warrant it, they will enter into formal consultation and develop the necessary mitigation measures. The Berth 21 project is not likely, therefore, to cause a significant unmitigated adverse effect if it occurs. More specific conclusions about this aspect of Reuse Plan implementation and its potential effects on special status species are not possible without a more concrete project proposal from the Port.

As described in the BA, the reuse of the wharf areas of OARB is a small part of the expansion plans for the Port of Oakland. These expansion plans have been addressed in Biological Opinions issued by the USFWS. Therefore, it would be redundant to formally repeat a consultation for indirect impacts when those impacts had already been addressed as direct impacts of another project. We have summarized the impacts in our BA but do not propose to consider them in determining whether formal consultation is necessary.

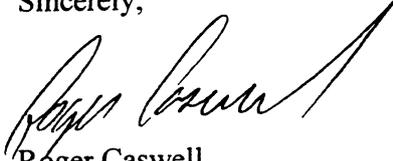
Conclusions—The Army finds that the disposal and reuse of OARB would likely not involve significant modification or degradation of listed species' habitat, would not significantly impair the essential behavior patterns of listed species (including breeding, feeding, or shelter), and would not result in the take of listed species (50CFR 17.3). Therefore, we conclude that the disposal and reuse of OARB is not likely to adversely affect any listed species or critical habitat under the jurisdiction of the USFWS. Formal consultation under the ESA will therefore not be necessary. We reach this conclusion recognizing that the reuse activities of the Port, which have some potential for impact, have already been covered by BO's from the USFWS.

Mr. Wayne White

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We request that you concur with our determination that the disposal and reuse of OARB are not likely to adversely affect any listed species or critical habitat. Thank you very much for your assistance in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger Caswell", written in a cursive style.

Roger Caswell

BRAC Environmental Coordinator

Attachment

cc: R. Koenigs (ACOE)
D. Davy (FW)



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

APR 10 2000 F/SWO3:GRS

Roger Caswell
Base Environmental Coordinator
Department of Army
Military Traffic Management Command
Oakland Army Base
Oakland, California 94626-5000

Dear Mr. Caswell,

Thank you for your letter of September 30, 1999, requesting National Marine Fisheries Service (NMFS) concurrence with your determination that the United States Army's (Army) proposed disposal and reuse of Oakland Army Base (OARB) is not likely to adversely affect listed species or designated critical habitat. The Army plans to dispose of the OARB as excess property, by transfer to a Local Reuse Agency, the Oakland Base Reuse Authority.

Available information indicates the following species listed under the Endangered Species Act (ESA) within the jurisdiction of the NMFS may occur within the project area:

- Sacramento River winter-run chinook salmon (*Oncorhynchus tshawytscha*) - endangered
- Central Valley ESU spring-run chinook salmon (*Oncorhynchus tshawytscha*) - threatened
- Central California Coast ESU steelhead (*Oncorhynchus mykiss*) - threatened
- Central Valley ESU steelhead (*Oncorhynchus mykiss*) - threatened

The site is also located within the designated critical habitat for Central California Coast steelhead (65 FR 7764).

As outlined in your letter, several projects directly related to the OARB Reuse Plan have been previously addressed by NMFS in section 7 consultations with the Army Corps of Engineers (Corps). Specifically, section 7 consultation for the Oakland Harbor Navigation Improvement (-50') Program was completed informally between NMFS and the Corps by letter dated August 9, 1999, and formal consultation was completed for the Oakland Harbor Berths 55-58 Project with the issuance of a biological opinion to the Corps on November 26, 1999.



1514225WR005R233

Regarding the Berth 21 fill project, your letter indicates project planning has not been completed by the Port of Oakland and the project is not certain to occur. However, the Army's biological assessment for the disposal and reuse of the OARB concludes the proposed Berth 21 fill of 25 acres of the Oakland Outer Harbor, one-third of which consists of OARB submerged lands, will have a minimal effect on listed salmon and steelhead (Biological Assessment prepared by Foster Wheeler Environmental Corporation, September 1999). The NMFS does not concur with this finding of minimal effect, but recognizes additional project specific information is unavailable at this time to determine the full extent of potential impacts and possible mitigation measures. Due to the lack of sufficient information at this time on the Berth 21 project, I concur with the Army that section 7 consultation for this project should be subsequently addressed with the Corps during the Section 404 Clean Water Act permitting process.

Based on the best available information, the actions associated with the Army's proposed disposal and reuse of OARB have either been previously addressed by NMFS in section consultations with the Corps, will be addressed in a future section 7 consultation with the Corps as specific project information becomes available, or are not likely to adversely affect Central Valley steelhead, Central California Coast steelhead, Central Valley spring-run chinook salmon, winter-run chinook salmon, or designated critical habitat. However, further consultation may be required if new information becomes available indicating that federally listed species or critical habitat may be adversely affected, or project plans change in a manner that affects listed species or critical habitat.

If you have any questions concerning these comments, please contact Mr. Gary Stern at (707) 575-6060.

Sincerely,



Rodney R. McInnis
Acting Regional Administrator

cc: Peter LaCivita, ACOE-San Francisco, Ca.
Jim Lecky, NMFS PRD-Long Beach, Ca.



DEPARTMENT OF THE ARMY
MILITARY TRAFFIC MANAGEMENT COMMAND
HQ, WESTERN AREA
UNITED STATES ARMY GARRISON
OAKLAND ARMY BASE
OAKLAND, CALIFORNIA 94626-5000

SEP 30 1999

William T. Hogarth, Ph.D., Regional Administrator
National Marine Fisheries Service
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, CA 90802-4213

SUBJECT: BIOLOGICAL ASSESSMENT FOR NMFS, DISPOSAL AND REUSE OF
OAKLAND ARMY BASE, ALAMEDA COUNTY, CALIFORNIA

Dear Dr. Hogarth:

This letter documents the United States Army's formal coordination under Section 7 of the Endangered Species Act regarding the disposal and reuse of the Oakland Army Base (OARB), Alameda County, California. The Army plans to dispose of the OARB as excess property, by transfer to a Local Reuse Agency, the Oakland Base Reuse Authority (OBRA). The OBRA has developed a plan for redevelopment and reuse of the installation (Reuse Plan). The Army has prepared an Environmental Impact Statement (EIS) to assess the potential effects of the disposal and reuse of OARB. As described in the EIS, the disposal (transfer) of OARB property is the Army's primary action. Reuse is a secondary action to be undertaken by the OBRA after disposal. As part of the EIS's analysis of the potential effects on the environment of the Army's action, the Army has prepared a Biological Assessment (BA) for anadromous fish species. A copy of this BA is attached for your review. A separate BA has been prepared to assess potential effects on other listed species, and has been submitted to the US Fish and Wildlife Service. The attached BA assesses the potential for OARB lands to contain suitable habitat for species listed as endangered or threatened under the Endangered Species Act (ESA) of 1973, as amended, and the potential effects of disposal and reuse on listed species.

Potential Listed Species Habitat—Oakland Army Base consists of 422 acres on Oakland's Outer Harbor, 54 acres of which are submerged lands near OARB's wharves, currently leased to the Port of Oakland. The OARB submerged area is contiguous with the wharves and a shoreline that runs along the southern edge of a 17-acre sand spit that forms the southern margin of the San Francisco-Oakland Bay Bridge approach and toll plaza area. The sand spit area contains two small (30-40 meter-long) beaches, but otherwise consists entirely of large rock (rip rap). Water depth in the wharf area is approximately 40 feet, though the Port of Oakland currently plans to deepen the Outer Harbor channel to 50 feet to accommodate larger container ships.

Listed Species—A list of endangered and threatened species obtained from the US Fish and Wildlife Service and dated September 10, 1999, indicates that the following anadromous fish species are included on lists of species that might occur in the vicinity of OARB:

- Winter-run chinook salmon (endangered) (*Onchorhynchus tshawytscha*)
- Winter-run chinook salmon critical habitat (endangered)
- Coho salmon (threatened) (*Onchorhynchus kisutch*)
- Central California steelhead (threatened) (*Onchorhynchus mykiss*)
- Central Valley spring-run chinook salmon (proposed) (*Onchorhynchus tshawytscha*)
- Central Valley spring-run chinook salmon critical habitat (proposed)

The fall/late fall-run chinook salmon and their critical habitat are included on the September 10 list as species proposed for listing. Since that date, however, they have been reclassified as candidate species.

The chinook and coho salmon and the Central California steelhead are species that pass through San Francisco Bay (Bay) on their way to and from spawning grounds in the Sacramento and San Joaquin river basins. Coho salmon seldom pause in the Bay on their way to the ocean and are not expected at or near OARB. Steelhead may be present in the project area on their way to spawn in the small streams entering the southern San Francisco Bay.

Chinook salmon of any race are relatively rare in the specific project area (Oakland Outer Harbor). Only two chinook salmon were captured during extensive surveys of the Oakland Inner, Middle, and Outer harbors for the Port of Oakland Vision 2000 and Harbor Improvement Programs. A possible third adult salmon (probably fall-run chinook) was observed in July for this same study, when a seal was seen feeding on a salmon near the Alameda Naval Air Station. Chinook salmon smolts spend an average of 4 to 10 days in the Bay on their migration from the Sacramento-San Joaquin Delta to the sea and do not often find their way to the Outer Harbor.

Chinook presmolts may spend portions of the winter, spring, or summer in the Bay. These fish prefer shallow water adjacent to tidal marshes, however, such as is found in the Crescent Marsh area on the north side of the San Francisco-Oakland Bay Bridge, opposite OARB. The latter area is within the critical habitat zone for chinook salmon, which includes waters of the Bay north of the Bay Bridge. The OARB, however, contains no critical habitat or suitable habitat for more than occasional or incidental use by these species.

OBRA's Reuse Plan—The OBRA's Reuse Plan for OARB includes development of the sand spit area along the western isthmus of the installation into a shoreline access park with trails,

lawn areas, and trees. This may have a minor beneficial effect on chinook salmon and steelhead by protecting shallow water habitat offshore from further development.

Also under the Reuse Plan, the Port of Oakland would obtain the OARB wharf area and continue to develop the port for international shipping. The OARB wharf area, however, is only a small part of the Port's expansion plans. Increased ship traffic that would result from the combination of all of the Port's improvement projects has the potential to affect steelhead and chinook salmon food sources by introducing alien organisms in ship ballast. This effect would be partially mitigated by improved ballasting in newer model, larger container ships, which would become more common in the Port once the channels are deepened. In addition, the Port, as part of their project, has proposed to implement rules requiring ballast exchange outside of San Francisco Bay to control this potential effect. The NMFS will address the ballast issue in their Biological Opinion for the Vision 2000 and Harbor Improvement programs and may formalize a requirement for the Port to implement such measures, particularly for the Port's project to add new berths to the Inner Harbor (Berths 55-58), which will increase shipping volume directly. With such mitigation in place, more and larger ships entering the harbor would not pose a significant danger to chinook salmon or steelhead as a result of Reuse Plan implementation.

The Reuse Plan includes a description of the Port of Oakland's Berth 21 Project, a proposed fill of 25 acres of the Oakland Outer Harbor, one-third of which consists of OARB submerged lands. This fill is currently part of the Port of Oakland's Capital Improvement Plan but is not yet funded. If approved and funded, it would not be implemented until approximately 2004. This fill could have an indirect effect on chinook salmon and steelhead, since it could temporarily disrupt their feeding behavior by disturbing sediments in the Outer Harbor. This disturbance would be minimal given the marginal nature of the habitat. The siltation disturbance could be controlled or prevented, however, by use of construction methods selected to minimize the movement of silt within the water. The fill would also remove some salmon and steelhead habitat, but again, this impact would be minimal since 40-foot-deep water is marginal habitat, at best.

If the Port of Oakland goes forward with the Berth 21 fill project, the Port will be required at the time of implementation to obtain a permit from the US Army Corps of Engineers under Section 404 of the Clean Water Act. The Corps will coordinate with the NMFS regarding the ESA and the potential effects of this project on endangered and threatened marine species. If conditions at that time warrant it, they will enter into formal consultation and develop the necessary mitigation measures. This action is not likely, therefore, to cause a significant unmitigated adverse effect if it occurs. More specific conclusions about this aspect of Reuse Plan implementation and its

William T. Hogarth, Ph.D.

Page 4

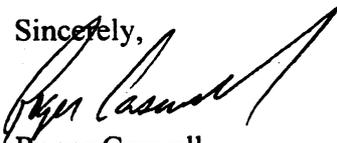
potential effects on special status marine species are not possible without a more concrete project proposal from the Port.

As described in the BA, the reuse of the wharf areas of OARB is a small part of the expansion plans for the Port of Oakland. These expansion plans are being addressed in a Biological Opinion under preparation by the NMFS. Therefore, it would be redundant to formally repeat a consultation for indirect impacts when those impacts had already been addressed as direct impacts of another project. We have summarized the impacts in our BA but do not propose to consider them in determining whether formal consultation is necessary.

Conclusions— In developing our conclusions regarding impacts to listed species due to the disposal and reuse of OARB, several factors have been considered. First, the Outer Harbor at the Port of Oakland provides only marginal habitat for listed species. Second, a BO is currently being prepared by NMFS that addresses the primary impacts to listed species from the reuse of OARB as direct impacts, rather than indirect impacts. The same impacts do not need to be addressed as indirect impacts associated with property disposal at OARB. Finally, if the Port of Oakland elects to pursue the Berth 21 project at some time in the future, the need for a Section 7 consultation in conjunction with a 404 permit will have to be evaluated at that time and under the prevailing conditions. Based on the preceding considerations, the Army finds that the disposal and reuse of OARB would likely not involve modification or degradation of listed anadromous fish species' habitat or impairment of the essential behavior patterns of listed species. Therefore, we conclude that the disposal and reuse of OARB is not likely to adversely affect any listed species or critical habitat under the jurisdiction of the NMFS. Formal consultation under the ESA will therefore not be necessary.

We request that you concur with our determination that the disposal and reuse of OARB are not likely to adversely affect any listed species or critical habitat. Thank you very much for your assistance in this matter.

Sincerely,



Roger Caswell

Base Environmental Coordinator

Attachment

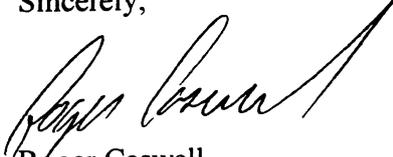
cc: R. Koenigs (ACOE)
D. Davy (FW)

Mr. Wayne White

Page 5

We request that you concur with our determination that the disposal and reuse of OARB are not likely to adversely affect any listed species or critical habitat. Thank you very much for your assistance in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger Caswell". The signature is fluid and cursive, with a long, sweeping tail that extends to the right.

Roger Caswell

BRAC Environmental Coordinator

Attachment

cc: R. Koenigs (ACOE)
D. Davy (FW)

Appendix 5
Updated Cumulative Growth Scenario

UPDATED CUMULATIVE GROWTH SCENARIO FOR THE OAKLAND ARMY BASE REDEVELOPMENT PROJECT EIR

This appendix describes the cumulative growth scenario used for environmental impact analysis purposes in Oakland. The scenario provides the future cumulative development context for Oakland, identified in terms of future employment, households, and population. Use of the scenario for analyzing the redevelopment project's environmental impacts ensures that those impacts are appropriately considered as part of the cumulative context of future citywide and regional growth and development.

The need for developing the cumulative growth scenario is explained below, followed by a description of the approach and the chronology of scenario development and updates. Then, the updated cumulative scenario prepared for this EIR is summarized, followed by comparisons with projections from the Association of Bay Area Governments (ABAG). The specifics of the scenario for the OARB Redevelopment Project Area and the harbor and West Oakland areas surrounding the project area are summarized next, followed by the assumptions for growth in the rest of Alameda County and Bay Area region.

NEED FOR THE CUMULATIVE GROWTH SCENARIO

The cumulative growth scenario for Oakland was developed primarily for use in the cumulative transportation analysis in this and other Oakland EIRs. The growth scenario was prepared after analyses indicated that the growth projections assumed in the Alameda County Congestion Management Agency (CMA) travel demand model did not reflect the level of growth and development occurring in Oakland. Those projections also did not reflect the locations of growth for future development projects under construction, approved, proposed, and reasonably foreseeable for Oakland. The growth projections in the CMA travel model are from the ABAG Projections for Oakland.

FORECAST-BASED APPROACH THAT INCORPORATES FORESEEABLE FUTURE DEVELOPMENT PROJECTS

The cumulative growth scenario for Oakland was developed using a forecast-based approach, *i.e.*, an approach based on regional forecasts of economic activity and demographic trends. The cumulative growth scenario also considered recent and anticipated future development projects in Oakland as well as other changes in employment and population. Development projects and other changes were identified based on input from City of Oakland and Port of Oakland staffs and on analysis of economic and real estate market data and trends. Anticipated future development projects were identified to include approved, proposed, and potential development projects reasonably foreseeable by the year 2020.

The growth that could be accommodated by recent and expected future development projects and other changes in employment and population, was evaluated within the context of regional economic and demographic trends and projections. The ABAG projections provided the reference for citywide and county totals for the years 2005 and 2020, consistent with the analysis years in the Alameda County CMA travel model. The list of development projects and other changes provided the ability to relate individual projects to the citywide context. The location of specific projects and sites allowed for refinements in the allocation of growth to traffic analysis zones (TAZs) within the City. The CMA's travel model requires inputs at the TAZ level.

The results of this evaluation indicated that the ABAG projections for Oakland did not anticipate all of the growth and development that was occurring in the city and that would be represented by the development projects identified by the City and the Port as likely to occur by 2020. Thus, either the projects would not all be built and occupied as currently anticipated by 2020, or growth in Oakland would be higher than was anticipated by ABAG.

The cumulative growth scenario for Oakland that was developed for use in environmental impact analyses is the scenario that could accommodate development and occupancy of all recent and anticipated future development projects identified by the City and the Port. This approach ensures that the cumulative effects of all anticipated development projects can be evaluated

within the EIR-analysis period. This approach can be considered conservative in that citywide growth to the year 2020 is assumed to exceed the ABAG projections for Oakland. This approach for cumulative analysis in Oakland EIRs was discussed with and accepted by the Alameda County CMA.

CHRONOLOGY OF SCENARIO DEVELOPMENT

The cumulative growth scenario for Oakland was originally prepared and continues to be updated by Hausrath Economics Group (HEG) working closely with City of Oakland staff. The scenario was first completed in November 2000. Since that time, the scenario has been updated and refined for different parts of the City as needed for EIR analyses and planning efforts. In June 2001, the scenario was updated in the Oakland Airport/Coliseum area for use in cumulative impact analyses for the *Metroport Project EIR*. The scenario was further updated in August 2001, focusing on the area surrounding the Leona Quarry Project for use in the cumulative analyses for the *Leona Quarry Project EIR*. Subsequently, the scenario was again updated as of January 2002 for use in the cumulative impact analyses for this EIR. The January 2002 Updated Scenario was refined and updated in the Oakland Army Base (OARB) Redevelopment Project Area and in the harbor and West Oakland areas surrounding the redevelopment project area. The updated cumulative growth scenario as of January 2002 builds on the original November 2000 scenario and incorporates the updates from the June 2001 and August 2001 scenarios.

UPDATED GROWTH SCENARIO FOR OAKLAND

Updated Growth Scenario for Oakland Army Base Redevelopment Project EIR

The cumulative growth scenario for Oakland identifies households, population, and employment. Employment is disaggregated into four types: service, retail, manufacturing, and other, as required for use in the Alameda County CMA travel model. The projections are allocated to the

large number of traffic analysis zones identified throughout the city.¹ Building on the 1990 base year, future scenarios are developed for the years 2005 and 2020, consistent with the analysis years in the CMA travel model.

The Updated Cumulative Growth Scenario for Oakland prepared for the *OARB Redevelopment Project EIR*, is summarized in Table 1. The scenario includes the OARB Redevelopment Project Area as well as the rest of the city.

TABLE 1 UPDATED CUMULATIVE GROWTH SCENARIO FOR OAKLAND, AS OF JANUARY 2002				
	1990 /a/	2005	2020	Growth, 1990-2020
Households	144,520	152,260	158,120	+13,600
Household Population /b/	364,360	435,140	448,500	+84,140
Total Population /b/	371,440	443,250	457,260	+85,820
Employed Residents /b/	163,520	185,950	225,840	+62,320
Total Employment	170,230	204,990	240,220	+69,990
Manufacturing	18,890	18,020	19,740	+850
Other /c/	67,380	76,730	86,410	+19,030
Retail	23,180	23,630	26,460	+3,280
Service	60,780	86,610	107,610	+46,830
/a/ From Alameda County CMA Travel Demand Model. /b/ Projections for 2005 and 2020 incorporate changes in demographic characteristics of the population in the existing housing stock in Oakland as evidenced in the persons per household and employed persons per household factors from ABAG <i>Projections 2000</i> . The demographic characteristics of residents of new housing to be built in Oakland by 2005 and 2020 were separately estimated by Hausrath Economics Group. /c/ Includes employment in finance, insurance, real estate (FIRE); government; construction; transportation, communications, and utilities (TCU); wholesale; and agriculture and mining.				
Source: Hausrath Economics Group based on approach and methodology described in this appendix.				

¹ The traffic analysis zones (TAZs) are subdivisions of Census Tracts identified for transportation analysis and used in the CMA travel demand model.

Following the approach described earlier, the analysis evaluated how the amount and type of growth represented by future development projects identified by the City and Port “fit” within the ABAG projections for Oakland. *ABAG Projections 2000* were used as they were the most current at the time of the analysis. Other changes in population and employment also were accounted for. Other additions to population and employment included those resulting from increased occupancies of existing buildings, the re-leasing of space vacated by existing businesses/government activities relocating to newly developed projects, the renovation of space that had previously sat vacant, and the conversion of space in existing buildings to more intensive uses. Reductions in population and employment included changes as a result of base closures, displacements by new development projects, and the movement of some types of businesses out of the area due to increasing rents and land values as well as other factors.

The results of the analysis indicated that citywide totals for employment, households, and population in Oakland had to be higher than the ABAG totals to accommodate all the identified projects for Oakland as well as other changes anticipated by 2020. Further, the distribution of growth to TAZs within the city also had to be modified to reflect the locations of recent growth and identified projects likely to be developed during the projection period.

Comparison with ABAG Projections

The Updated Growth Scenario for Oakland is compared in Table 2 (on next page) with the ABAG projections for Oakland as incorporated into the Alameda County CMA Travel Demand Model. The *ABAG Projections 2000* series is currently used in the CMA model, and was also the series that provided the basis for the updated growth scenario for Oakland. The *ABAG Projections '98* series also is shown in the table, as the '98 projections provided the land use/growth assumptions in the travel model through March 2001, at the time that the growth scenario for Oakland was originally prepared in November 2000 (and at the time that it was determined that another growth scenario besides ABAG was needed for EIR analysis purposes in Oakland).

**TABLE 2
UPDATED CUMULATIVE GROWTH SCENARIO FOR
OARB REDEVELOPMENT PROJECT EIR AND
ABAG/CMA PROJECTIONS FOR OAKLAND**

	1990 /a/	2005	2020	Growth 1990-2020
<u>Employment</u>				
Updated Growth Scenario /b/	170,230	204,990	240,220	+69,990
ABAG Projections 2000 /c/	170,230	204,760	220,570	+50,340
ABAG Projections '98 /d/	170,230	180,950	195,370	+25,140
<u>Households</u>				
Updated Growth Scenario /b/	144,520	152,260	158,120	+13,600
ABAG Projections 2000 /c/	144,520	149,080	152,050	+7,530
ABAG Projections '98 /d/	144,520	144,440	147,580	+3,060
<u>Household Population</u>				
Updated Growth Scenario /b/	364,360	435,140	448,500	+84,140
ABAG Projections 2000 /c/	364,360	429,090	436,060	+71,700
ABAG Projections '98 /d/	364,360	388,140 /e/	389,940 /e/	+25,580

/a/ From Alameda County Congestion Management Agency Travel Demand Model.

/b/ Updated Cumulative Growth Scenario for use in *OARB Redevelopment Project EIR*, prepared for the City of Oakland in January 2002 by Hausrath Economics Group.

/c/ ABAG Projections 2000, as included in the Alameda County CMA travel demand model, as of the preparation of this EIR and from March 2001 through at least mid-2002.

/d/ ABAG Projections '98, as included in the Alameda County CMA travel demand model, as of the preparation of the original November 2000 Cumulative Growth Scenario for Oakland.

/e/ Estimated based on data for total population in the CMA model, by subtracting population in group quarters.

Source: Hausrath Economics Group based on sources identified above.

The updated growth scenario compares to the ABAG projections (*Projections 2000*) as follows:

- ◆ **Employment:** The economic activity represented by recent growth and near-term growth and development projects in Oakland is consistent with the ABAG Projections 2000 for Oakland for the year 2005. However,

employment growth accommodated by identified major development projects and other anticipated changes, over the longer term, would exceed the growth for Oakland reflected in the ABAG projections for 2020. Accounting for the higher long-term growth, the Updated Cumulative Growth Scenario reflects higher total employment in Oakland in 2020 than anticipated by ABAG, about nine percent higher.

- ◆ **Households and Population:** Housing built in Oakland from 1990 to 2000, housing currently under development in Oakland, and housing anticipated to be developed in the future would accommodate more household growth than reflected by *ABAG Projections 2000* in both the shorter term (2005) and longer term (2020) horizons. In 2020, the Updated Cumulative Growth Scenario includes about four percent more households and about three percent higher population in Oakland than anticipated by ABAG.

The differences in employment and households in Oakland in 2020 between the updated growth scenario and *ABAG Projections 2000* are not large (about four percent more households, three percent more population, and nine percent more jobs in 2020). These differences could indicate that growth, now allocated by ABAG to other communities in the region, would instead occur in Oakland (particularly the difference in employment growth). It also could mean that growth in the region would be higher than anticipated by ABAG (particularly the difference in household and population growth due to more housing development). Higher growth in Oakland, however, (as represented by the updated growth scenario) would represent only a very small difference for the region overall.

List of Foreseeable Future Development Projects

Tables 8a, 8b, and 8c, at the end of this appendix, provide background on the projects identified by the City of Oakland, the Port of Oakland, and Hausrath Economics Group for consideration in the growth scenario. The tables include major projects completed since the 1990 base year,

projects under construction, approved and proposed projects, as well as major potential projects under consideration and anticipated to be developed by 2020. There are three tables dividing the list of projects into three parts, including housing projects (Table 8a), commercial/industrial projects outside downtown (Table 8b), and commercial/industrial projects in downtown Oakland (Table 8c). The tables are organized according to the time period by which projects are assumed to be built and occupied by employment or population. In most cases, the project assumptions identified on the lists describe the new development; they do not identify existing uses and activities on the development site that would be removed for development, although the latter are accounted for in the growth scenario.

The projects on the lists all “fit” within the updated cumulative growth scenario prepared for this EIR. As explained above, the scenario also includes other changes in land use and in employment and population besides those due to the development of projects on the lists. Thus, the lists alone do not equate to the changes over time reflected by the growth scenario.

The amounts of household, population, and employment growth reflected by the updated growth scenario and those represented by projects on the lists, are more important than the specific projects identified. It is to be expected that the projects on the lists will change over time, and some will be added while others will be deleted. The lists reflect the best information at the time of the analysis. The growth scenario itself can remain valid as changes occur over time in the specifics of the development projects anticipated for the city.

THE PROJECT AREA AND SURROUNDING AREAS

Detailed analysis was undertaken to refine and update the employment, household, and population estimates and projections for the OARB Redevelopment Project Area and for surrounding harbor areas and West Oakland, in line with current business and maritime operations, recently released 2000 Census data, and current projects and plans for future development. Estimates and projections were developed for 1990 (based on data in the CMA travel demand model), 2000, 2005, and 2020.

Substantial effort was given to refining and updating the estimates and projections for the OARB Redevelopment Project Area. Both the interim leasing and eventual reuse/redevelopment of the former Army Base were quantified. The traffic analysis zones (TAZs) from the Alameda County CMA travel model were split into many, smaller TAZs requiring more detailed analysis for smaller areas. (The new, split TAZs allowed for improved transportation analysis in the maritime areas and on the former Army Base, and were needed to reflect the new Cypress/I-880 freeway.) The following summarizes the sources for key inputs and assumptions for the refined/updated estimates and projections for the OARB Redevelopment Project Area:

- ◆ **Army Base:** Assumptions for interim leasing (2000 and 2005) and eventual reuse/redevelopment (2020) of the former Army Base were provided by City of Oakland, OBRA, and Port of Oakland staffs and consultants.

- ◆ **Port Maritime:** Estimates and projections of Port maritime operations and employment within the project area (by TAZ) were developed by Hausrath Economics Group based on inputs from Port of Oakland staff, including maritime cargo data and projections, maritime employment estimates from the Port's economic impact model, Port facility development plans set forth in Port and *Bay Area Seaport Plan* documents, and inputs regarding likely maritime activity/operations during the interim year 2005. Inputs to define rail/intermodal uses and employment were provided by Dowling Associates.

- ◆ **16th and Wood:** Future development assumptions were provided by City of Oakland staff and consultants.

Analysis also was done to refine and update the estimates and projections for the surrounding harbor areas and West Oakland (as bounded by the project area on the west and south, the Oakland/Emeryville border and I-580 on the north, I-980 and MLK Jr. Blvd. on the east). The data for households, population, and employment in the surrounding areas as included in the November 2000 Growth Scenario and the ABAG/CMA data were evaluated and updated in light

of land uses and activities currently in these areas, and of development projects and other changes identified by the City of Oakland and Hausrath Economics Group.

The updated growth scenario for the project area and surrounding areas is summarized in Table 3. (The data for the project area and surrounding areas in Table 3 are included in the citywide totals for Oakland in Tables 1 and 2.)

TABLE 3 UPDATED GROWTH SCENARIO FOR OARB REDEVELOPMENT PROJECT AREA AND SURROUNDING HARBOR AREAS AND WEST OAKLAND						
	1990	2000	2005	2020	Change 1990-2020	Change 2000-2020
<u>Employment</u>						
OARB Redevelopment Project Area	4,500	3,340	4,180	13,920	+9,420	+10,570
Surrounding Harbor Areas and West Oakland /a/	16,600	16,260	17,670	19,890	+3,290	+3,630
Total Harbor Area and West Oakland	21,100	19,600	21,850	33,810	+12,710	+14,200
<u>Households</u>						
OARB Redevelopment Project Area	sm	sm	360	360	+360	+360
Surrounding Harbor Areas and West Oakland /a/	8,680	8,400	9,320	10,180	+1,500	+1,780
Total Harbor Area and West Oakland	8,680	8,400	9,680	10,540	+1,860	+2,140
<u>Household Population</u>						
OARB Redevelopment Project Area	sm	sm	860	860	+860	+860
Surrounding Harbor Areas and West Oakland /a/	23,170	23,620	28,170	29,980	+6,810	+6,360
Total Harbor Area and West Oakland	23,170	23,620	29,030	30,840	+7,670	+7,220
sm = small (less than 10).						
/a/ Surrounding harbor areas include land just north of the project area along I-80/580 and the Toll Plaza and the EBMUD facilities, as well as the UPRR tracks and yard area south of 7 th Street, between I-880 and Middle Harbor Road. The surrounding West Oakland area includes the area to the east and north of the project area and bounded by the Oakland/Emeryville border, I-580, I-980, and MLK Jr. Blvd.						
NOTE: More detailed versions of these estimates and projections, and background on assumptions are presented in the tables and maps included at the end of this appendix. See Tables 5a, 5b, 5c; Figures 1 and 2; Tables 6a-6h; and Tables 7a, 7 b, 7c.						
Sources: City of Oakland, Oakland Base Reuse Authority, and Port of Oakland staffs and consultants; Hausrath Economics Group.						

The following briefly summarizes the changes reflected in the updated growth scenario:

- ◆ **OARB Redevelopment Project Area:** Initially, employment declines in the Project Area as the Army Base is closed and access to the area is affected by the Loma Prieta earthquake and construction of the new I-880 freeway. Thereafter, employment increases as a result of interim leasing of the former Army Base facilities (by 2000 and 2005), eventual redevelopment of the former Base property (by 2020), growth and expansion of Port maritime cargos and operations, and redevelopment of properties along the new freeway in the 16th and Wood area (accommodating new households as well as employment growth).

- ◆ **Surrounding Harbor Areas and West Oakland:** Some growth of employment and of households and population is anticipated in the surrounding West Oakland area in the future. Employment growth is anticipated as a result of new development at the northern end of the area bordering Emeryville and from the intensification of uses in existing buildings as well as some new development along and around the Mandela Parkway after it is improved and connected to Hollis St. in Emeryville. Intensification of activity also is expected in the largely industrial/commercial areas south of I-880 to the east of the Jack London District. The eventual reuse/redevelopment of old, outmoded industrial facilities in the more central parts of West Oakland also is expected. Residential development will continue in West Oakland as older public housing is improved and upgraded, as a result of loft development and conversions, as additional affordable housing is built, and as housing is developed around the West Oakland BART station.

Tables presented at the end of this appendix provide more detailed versions of the estimates and projections for the redevelopment project area and surrounding areas and more background on assumptions. Tables 5a, 5b, and 5c detail the development assumptions and employment and household projections for the redevelopment project area in 2020. They assume completion of the proposed reuse/redevelopment of the former Oakland Army Base. A map is provided in

Figure 1 to identify the boundaries of the new TAZs within the redevelopment project area used for developing the space and employment/household projections. Tables 6a through 6h present the TAZ-level database of employment, households, and population that was developed for the redevelopment project area and the surrounding harbor areas and West Oakland. The map in Figure 2 identifies the boundaries of the surrounding West Oakland area and of the TAZs within that area.

Finally, the current list of development projects and other growth assumptions identified for the redevelopment project area and surrounding areas is detailed in Tables 7a and 7b, including commercial/industrial projects and housing projects. (All the items on these lists also are included on the citywide lists in Tables 8a and 8b.) The projects on the lists all “fit” within the updated cumulative growth scenario. As explained earlier, the scenario also includes other changes in land use and in employment and population besides those identified for development projects on the lists.

GROWTH IN THE REST OF ALAMEDA COUNTY AND BAY AREA REGION OUTSIDE OAKLAND

The growth scenario used for the cumulative transportation analysis for this EIR assumes growth in employment, households, and population as projected by ABAG and included in the CMA travel model for the rest of Alameda County and Bay Area region outside of Oakland. As a part of this and other Oakland EIRs, separate consultations were undertaken with the cities of Emeryville, Alameda, and San Leandro, to confirm that use of the ABAG/CMA land use/growth projections would adequately capture anticipated growth in each city, and that alternative assumptions or an alternative scenario were not needed for those cities.²

At the time the transportation analysis was conducted for this EIR, the latest CMA travel demand model extended beyond 2020 to 2025, and included horizon years 2005 and 2025 for use in

² Contacts made by Hausrath Economics Group with representatives from each of these cities included the following: contact with Matt Tomas, long-range planner with the City of San Leandro on May 8, 2001; contact with Cynthia Eliason, City of Alameda Planning Department on May 23, 2001; and contact with Diana Murrell, City of Emeryville Planning Department on May 24, 2001 and on earlier dates.

analyses for the CMA. The land use data for Oakland in the 2025 CMA model, however, showed lower employment, households, and population than reflected in the 2020 projections provided by the updated growth scenario for Oakland (summarized herein). To provide consistency with both the updated growth scenario for Oakland and the CMA model data, the Oakland data in the model for 2025 were replaced with the higher 2020 projections for Oakland from the updated growth scenario developed for this EIR. The data in Table 4 below summarize the projections for Alameda County for 2005, 2020, and 2025, assuming the updated growth scenario for Oakland and the ABAG/CMA projections for the rest of Alameda County.

TABLE 4 FUTURE CUMULATIVE CONTEXT FOR ALAMEDA COUNTY			
	2005	2020	2025
Employment	781,240	964,470	1,008,740
Households	537,980	583,450	597,510
Household Population	1,528,030	1,631,080	1,665,030
Employed Residents	747,460	871,120	904,820
<p>Note: Projections for Alameda County assume: (a) Updated Cumulative Growth Scenario for Oakland, January 2002, using the same, long-term growth scenario for 2020 and 2025, as the Oakland projections are higher than those in the CMA model for both years; and (b) ABAG/CMA projections in the Alameda County CMA Travel Demand Model as of January-March 2002, for the rest of Alameda County.</p> <p>Sources: Alameda County CMA Travel Demand Model; Dowling Associates; City of Oakland; Hausrath Economics Group.</p>			

Table 5a: OARB Redevelopment Project Area and Nearby Harbor Areas - 2020 SPACE

Subarea	NEW TAZ	Warehouse/ Distr. (sq.ft.)	Lt. Industrial (sq.ft.)	R&D/Flex Ind'l-Office (sq.ft.)	Office/R&D (sq.ft.)	Office (sq.ft.)	Retail (sq.ft.)	Other (sq.ft.)	Total Non Residential (sq.ft.)	Residential (units)	Park (acres)	Terminals (acres)	AMS (acres)	Rail Intermodal (track feet)
OARB Gateway														
North	778	300,000							300,000				15	
East	779			200,000					200,000					
East/a/	780			176,000				50,000	226,000					
Central	781		444,000	552,000		25,000			1,021,000					
West	782				600,000				600,000		15			
Subtotal		300,000	444,000	928,000	-	25,000	50,000	50,000	2,347,000	-	15	-	15	-
OARB Port Maritime /b/														
	783													
	788													
	789													
	784											295		
	785											205		
	67												75	
	786											330		
	787											121		
	482/f/											109		
	793											1,060		
Subtotal		-	-	-	-	-	-	-	-	-	-	1,060	-	-
16th and Wood														
Central Station /c,d/	476				981,235	1,320	11,614		1,051,514	252				
Central Station /c,d/	792				386,065				386,065	124				
Rest of Subarea/e/	476			120,000					120,000	-				
Rest of Subarea/e/	477			185,000					185,000					
Subtotal		-	-	305,000	1,367,300	1,320	11,614	11,614	1,742,579	376	-	-	-	-
TOTAL PROJECT AREA		300,000	444,000	1,233,000	1,367,300	26,320	61,614	61,614	4,089,579	376	15	1,060	105	28,700
EBMUD/Bridge														
	777/59													
UPRR														22,250

NOTES:
/a/ Other space in TAZ 780: Job Training/JATC, Homeless Collaborative.
/b/ Rail intermodal in TAZ 789 is JIT.
/c/ TAZ 476: Office, retail, and other space is the Train Station containing space for community room, offices for non-profits, cafe/food services, and circulation and service.
/d/ TAZs 476 and 792: Central Station project description as of 3/19/01 from ESA.
/e/ Includes Phoenix Ironworks site and other property in subarea. Development could be light industrial or R&D/flex-industrial/office space.
/f/ Includes 49 acres for Howard Terminal and 60 acres for Schnitzer Steel.

Table 5b: OARB Redevelopment Project Area and Nearby Harbor Areas - EMPLOYMENT DENSITY FACTORS									
Subarea	NEW TAZ	Warehouse/		Lt.		R&D/Flex		Retail (sq.ft.)	Other (sq.ft.)
		Distr. (sq.ft.)	Industrial (sq.ft.)	Ind'l-Office (sq.ft.)	Office/R&D (sq.ft.)	Office (sq.ft.)			
OARB Gateway (employment per 1000 SF gross building space - g. borchard associates)									
North	778	0.80							
East	779			2.50					
East	780			2.50					2.00
Central	781		2.50	2.50				2.80	
West	782						3.75		
Subtotal									
OARB Port Maritime									
	783								
	788								
	789								
Subtotal									
Port Maritime									
	784								
	785								
	67								
	786								
	787								
	482								
	793								
Subtotal									
16th and Wood (gross building space per employee - Hausrath Economics Group)									
Central Station	476						350	400	200
Central Station	792						350		
Rest of Subarea	476					400			
Rest of Subarea	477					400			
Subtotal									
TOTAL PROJECT AREA									
EBMUD/Bridge	777/59								
UPRR	790								

Table 6a		1990 REVISED HEG CUMULATIVE OAKLAND LAND USE DATA FOR THE HARBOR AREA AND WEST OAKLAND - OARB REDEVELOPMENT PROJECT EIR													
OLD TAZ	NEW TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLD RSDNPTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
475	778	401700	HB OARBGW	0	0	0	0	0	0	0	20	0	0	20	29557
476	779	401700	HB OARBGW	0	0	0	0	0	0	0	94	0	0	94	29557
476	780	401700	HB OARBGW	0	0	0	0	0	0	0	550	0	0	550	29557
67	781	401700	HB OARBGW	0	0	0	0	0	0	0	229	0	0	229	29557
67	782	401700	HB OARBGW	0	0	0	0	0	0	0	149	0	0	149	29557
			Total OARBGW	0	0	0	0	0	0	0	1042	0	0	1042	
476	783	401700	HB OARBPORT	0	0	0	0	0	0	0	47	0	0	47	29557
477	788	401700	HB OARBPORT	0	0	0	0	0	0	0	474	60	100	634	29557
477	789	401700	HB OARBPORT	0	0	0	0	0	0	0	370	0	34	404	29557
			Total OARBPORT	0	0	0	0	0	0	0	891	60	134	1085	
67	67	401900	HB PORT	2	2	5	1	6	6	130	115	0	0	245	29425
482	482	402000	HB PORT	0	0	0	0	0	0	0	459	0	0	459	63950
67	784	401700	HB PORT	0	0	0	0	0	0	0	522	0	0	522	29557
67	785	401900	HB PORT	0	0	0	0	0	0	0	450	0	0	450	29425
67	786	401900	HB PORT	0	0	0	0	0	0	0	314	0	0	314	29425
482	787	402000	HB PORT	0	0	0	0	0	0	0	30	0	0	30	63950
475	793	401700	HB PORT	0	0	0	0	0	0	130	1990	0	0	2120	29557
			Total PORT	2	2	5	1	6	6	130	1990	0	0	2120	
476	476	401700	HB 16_WOOD	0	0	0	0	0	0	0	20	0	0	20	29557
477	477	401700	HB 16_WOOD	0	0	0	0	0	0	38	44	0	10	92	29557
477	792	401700	HB 16_WOOD	0	0	0	0	0	0	40	100	0	0	140	29557
			Total 16_WOOD	0	0	0	0	0	0	78	164	0	10	252	
			Subtotal OARB Redevelopment Project Area	2	2	5	1	6	6	208	4087	60	144	4489	
67	790	401900	HB UPRR	0	0	0	0	0	0	0	80	0	0	80	29425
59	59	401700	HB EBMUD/BR	0	0	0	0	0	0	0	140	0	0	140	29557
475	777	401700	HB EBMUD/BR	0	0	0	0	0	0	0	170	0	0	170	29557
			TOTAL HARBOR AREA	2	2	5	1	6	6	208	4477	60	144	4889	
57	57	401400	WO	275	386	1106	11	1117	1117	62	143	80	267	552	22634
58	58	401500	WO	376	484	1258	0	1258	1258	126	146	31	282	585	28445
60	60	401800	WO	432	652	1853	4	1857	1857	82	182	72	103	439	24170
61	61	402200	WO	343	556	1576	0	1576	1576	4	245	0	43	292	18355
62	62	402300	WO	112	146	346	5	351	351	397	1076	61	142	1676	36957
63	63	401600	WO	64	106	227	2	229	229	326	163	0	315	804	20270
64	64	402400	WO	620	948	2062	2	2064	2064	100	1081	351	86	1618	27344
65	65	402100	WO	295	611	1744	0	1744	1744	32	194	152	44	422	18206
66	66	402500	WO	483	804	2245	6	2251	2251	0	313	1	351	665	17641
68	68	402600	WO	424	667	1301	32	1333	1333	41	65	47	89	242	20953
69	69	402700	WO	517	582	1524	23	1547	1547	91	226	67	158	542	24009
471	471	401400	WO	385	541	1432	15	1447	1447	62	143	40	267	94	22634
472	472	401400	WO	427	600	1602	17	1619	1619	62	146	3	282	557	28445
473	473	401500	WO	177	228	650	0	650	650	126	146	166	53	320	29557
474	474	401700	WO	205	211	667	9	676	676	234	166	485	8	997	29557
475	475	401700	WO	0	0	0	0	0	0	254	485	8	250	997	29557
478	478	401600	WO	301	489	1605	11	1616	1616	140	259	87	473	959	20270
479	479	401900	WO	2	2	7	1	8	8	1793	0	0	0	1793	29425
480	480	401900	WO	206	227	695	67	762	762	281	302	10	217	810	29425
481	481	402000	WO	34	11	34	0	34	34	138	254	40	330	762	63950
476	791	401700	WO	122	126	367	6	373	373	214	646	20	20	1100	29557
477	794	401700	WO	285	294	868	13	881	881	0	0	0	0	20	29557
			TOTAL WEST OAKLAND	6085	8681	23169	224	23393	23393	2741	8051	1163	4259	16214	
			TOTAL HARBOR AREA AND WEST OAKLAND	6087	8683	23174	225	23399	23399	2949	12528	1223	4403	21103	

Source: Hausrath Economics Group

Table 6b 2000 REVISED HEG CUMULATIVE OAKLAND LAND USE DATA FOR THE HARBOR AREA AND WEST OAKLAND - OARB REDEVELOPMENT PROJECT EIR															
OLD TAZ	NEW TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
475	778	401700	HB	OARBGW	0	0	0	0	0	0	25	0	0	25	30900
476	779	401700	HB	OARBGW	0	0	0	0	0	20	188	12	12	232	30900
476	780	401700	HB	OARBGW	0	0	0	0	0	0	550	0	0	550	30900
67	781	401700	HB	OARBGW	0	0	0	50	50	0	45	0	0	45	30900
67	782	401700	HB	OARBGW	0	0	0	46	46	0	41	0	0	41	30900
			Total OARBGW		0	0	0	96	96	20	849	12	12	893	
476	783	401700	HB	OARBPORT	0	0	0	0	0	0	10	0	54	64	30900
477	788	401700	HB	OARBPORT	0	0	0	0	0	10	199	0	131	340	30900
477	789	401700	HB	OARBPORT	0	0	0	0	0	0	45	0	0	45	30900
			Total OARBPORT		0	0	0	0	0	10	254	0	185	449	
67	67	401900	HB	PORT	0	0	0	0	0	0	113	0	0	113	30000
482	482	402000	HB	PORT	0	0	0	0	0	130	134	0	0	264	68000
67	784	401700	HB	PORT	0	0	0	0	0	0	500	0	0	500	30900
67	785	401900	HB	PORT	0	0	0	0	0	0	569	0	0	569	30000
67	786	401900	HB	PORT	0	0	0	0	0	0	62	0	0	62	30000
482	787	402000	HB	PORT	0	0	0	0	0	0	333	0	0	333	68000
475	793	401700	HB	PORT	0	0	0	0	0	0	10	0	0	10	30900
			Total PORT		0	0	0	0	0	130	1721	0	0	1851	
476	476	401700	HB	16_WOOD	1	1	4	0	4	0	12	0	3	15	30900
477	477	401700	HB	16_WOOD	0	0	0	0	0	4	4	0	10	24	30900
477	792	401700	HB	16_WOOD	0	0	0	0	0	36	78	0	0	114	30900
			Total 16_WOOD		1	1	4	0	4	40	100	0	13	153	
			Subtotal OARB Redevelopment Project Area		1	1	4	96	100	200	2924	12	210	3346	
67	790	401900	HB	UPRR	0	0	0	0	0	0	127	0	0	127	30000
59	59	401700	HB	EBMUD/BR	0	0	0	0	0	0	160	0	0	160	30900
475	777	401700	HB	EBMUD/BR	0	0	0	0	0	0	170	0	0	170	30900
			TOTAL HARBOR AREA		1	1	4	96	100	200	3381	12	210	3803	
57	57	401400	WO		285	385	1285	280	1565	56	147	80	282	565	26000
58	58	401500	WO		553	683	1689	0	1689	116	151	31	292	590	32400
60	60	401800	WO		448	648	1950	3	1953	77	77	72	108	439	27700
61	61	402200	WO		373	579	1834	10	1844	4	240	0	43	21800	
62	62	402300	WO		133	167	451	2	453	357	1056	61	152	1626	40700
63	63	401600	WO		74	117	314	5	319	296	163	0	355	814	21100
64	64	402400	WO		718	1054	2557	31	2588	91	1051	321	106	1569	31900
65	65	402100	WO		226	450	1153	8	1161	32	214	112	49	407	21500
66	66	402500	WO		394	630	1641	138	1779	0	313	1	371	685	20500
68	68	402600	WO		316	478	977	0	977	41	75	47	129	292	24000
69	69	402700	WO		603	652	1946	0	1946	86	226	67	168	547	27200
471	471	401400	WO		401	542	1526	0	1526	28	23	40	0	91	26000
472	472	401400	WO		416	561	1635	39	1674	56	147	40	277	520	26000
473	473	401500	WO		185	228	709	15	724	123	156	3	292	574	32400
474	474	401700	WO		257	254	742	0	742	164	140	183	320	807	30900
475	475	401700	WO		0	0	0	0	0	180	420	8	250	858	30900
478	478	401600	WO		269	427	1387	227	1614	120	259	87	493	959	21100
479	479	401900	WO		0	0	0	0	0	0	1618	0	0	1618	30000
480	480	401900	WO		211	223	758	1	759	201	202	20	197	620	30000
481	481	402000	WO		37	11	28	0	28	129	383	45	430	987	68000
476	791	401700	WO		142	140	464	0	464	190	496	20	220	926	30900
477	794	401700	WO		175	173	572	0	572	0	0	0	20	20	30900
			TOTAL WEST OAKLAND		6216	8402	23618	759	24377	2347	7662	1238	4554	15801	
			TOTAL HARBOR AREA AND WEST OAKLAND		6217	8403	2362	855	24477	2547	11043	1250	4764	19604	

Source: Hausrath Economics Group

Table 6c 2005 REVISED HEG CUMULATIVE OAKLAND LAND USE DATA FOR THE HARBOR AREA AND WEST OAKLAND - OARB REDEVELOPMENT PROJECT EIR															
OLD TAZ	NEW TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
475	778	401700	HB OARBGW	0	0	0	0	0	0	0	2	44	0	46	33000
476	779	401700	HB OARBGW	0	0	0	0	0	0	20	188	12	12	232	33000
476	780	401700	HB OARBGW	0	0	0	0	0	0	24	732	12	24	792	33000
67	781	401700	HB OARBGW	0	0	0	0	50	50	0	75	0	0	75	33000
67	782	401700	HB OARBGW	0	0	0	0	46	46	0	108	0	0	108	33000
			Total OARBGW	0	0	0	0	96	96	46	1147	24	36	1253	
476	783	401700	HB OARBPORT	0	0	0	0	0	0	0	0	71	0	71	33000
477	788	401700	HB OARBPORT	0	0	0	0	0	0	10	263	0	283	556	33000
477	789	401700	HB OARBPORT	0	0	0	0	0	0	0	30	0	0	30	33000
			Total OARBPORT	0	0	0	0	0	0	10	364	0	353	727	
67	67	401900	HB PORT	0	0	0	0	0	0	0	202	0	0	202	31500
482	482	402000	HB PORT	0	0	0	0	0	0	130	70	0	0	200	69000
67	784	401700	HB PORT	0	0	0	0	0	0	0	520	0	0	520	33000
67	785	401900	HB PORT	0	0	0	0	0	0	0	380	0	0	380	31500
67	786	401900	HB PORT	0	0	0	0	0	0	0	392	0	0	392	31500
482	787	402000	HB PORT	0	0	0	0	0	0	0	342	0	0	342	69000
475	793	401700	HB PORT	0	0	0	0	0	0	0	10	0	0	10	33000
			Total PORT	0	0	0	0	0	0	130	1916	0	0	2046	
476	476	401700	HB 16_WOOD	0	385	241	580	0	580	0	12	0	4	16	80500
477	477	401700	HB 16_WOOD	0	189	118	283	0	283	0	16	0	15	41	33000
477	792	401700	HB 16_WOOD	0	574	359	863	0	863	36	66	0	0	102	80700
			Total 16_WOOD	0	574	359	863	0	863	46	94	0	19	159	
			Subtotal OARB Redevelopment Project Area	0	574	359	863	96	959	232	3521	24	408	4185	
67	790	401900	HB UPRR	0	0	0	0	0	0	0	127	0	0	127	31500
59	59	401700	HB EBMUD/BR	0	0	0	0	0	0	0	240	0	0	240	33000
475	777	401700	HB EBMUD/BR	0	0	0	0	0	0	0	170	0	0	170	33000
			TOTAL HARBOR AREA	574	574	359	863	96	959	232	4058	24	408	4722	
57	57	401400	WO	297	385	1197	1477	280	1477	53	153	95	297	598	27600
58	58	401500	WO	587	745	2173	2173	0	2173	111	166	46	312	635	34600
60	60	401800	WO	481	669	2181	3	2184	77	182	113	444	29400	29400	
61	61	402200	WO	491	735	2390	10	2400	4	235	10	58	307	22800	
62	62	402300	WO	139	167	454	2	456	347	1026	61	172	1606	43400	
63	63	401600	WO	134	153	492	5	497	276	203	10	415	904	31000	
64	64	402400	WO	747	1054	2630	31	2661	91	1041	300	116	1548	34400	
65	65	402100	WO	273	521	1706	8	1714	32	184	112	54	382	22600	
66	66	402500	WO	460	707	2265	138	2403	0	313	1	371	685	22400	
68	68	402600	WO	516	661	1414	0	1414	41	75	97	134	347	36400	
69	69	402700	WO	627	652	1958	0	1958	82	226	67	188	563	29900	
471	471	401400	WO	418	542	1686	0	1686	26	23	40	0	89	27600	
472	472	401400	WO	432	561	1745	39	1784	53	153	50	287	543	27600	
473	473	401500	WO	269	276	816	15	831	120	195	4	380	689	39500	
474	474	401700	WO	323	289	962	0	962	174	210	288	475	1147	36600	
475	475	401700	WO	0	0	0	0	0	0	190	360	30	360	940	33000
478	478	401600	WO	382	584	2028	227	2255	98	279	107	523	1007	21300	
479	479	401900	WO	0	0	0	0	0	0	0	1618	0	0	1618	31500
480	480	401900	WO	219	223	783	1	784	201	507	20	237	965	31500	
481	481	402000	WO	85	40	109	0	109	109	129	478	50	480	64400	
476	791	401700	WO	209	179	578	0	578	190	506	20	230	946	39500	
477	794	401700	WO	182	173	598	0	598	0	598	0	0	20	33000	
			TOTAL WEST OAKLAND	7271	9316	28165	759	28924	2295	8133	1480	5222	17130	21852	
			TOTAL HARBOR AREA AND WEST OAKLAND	7845	9875	29028	855	29883	2527	12191	1504	5630	21852		

Source: Hausrath Economics Group

Table 6d 2020 REVISED HEG CUMULATIVE OAKLAND LAND USE DATA FOR THE HARBOR AREA AND WEST OAKLAND - OARB REDEVELOPMENT PROJECT EIR															
OLD TAZ	NEW TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
475	778	401700	HB	OARBGW	0	0	0	0	0	0	300	0	0	300	38400
476	779	401700	HB	OARBGW	0	0	0	0	0	75	300	0	125	500	38400
476	780	401700	HB	OARBGW	0	0	0	0	0	66	264	0	210	540	38400
67	781	401700	HB	OARBGW	0	0	0	0	0	443	942	70	1105	2560	38400
67	782	401700	HB	OARBGW	0	0	0	0	0	225	325	0	1700	2250	38400
				Total OARBGW	0	0	0	0	0	809	2131	70	3140	6150	
476	783	401700	HB	OARBPORT	0	0	0	0	0	0	0	0	0	0	38400
477	788	401700	HB	OARBPORT	0	0	0	0	0	0	0	0	0	0	38400
477	789	401700	HB	OARBPORT	0	0	0	0	0	0	188	0	0	188	38400
				Total OARBPORT	0	0	0	0	0	0	188	0	0	188	
67	67	401900	HB	PORT	0	0	0	0	0	0	300	0	0	300	37200
482	482	402000	HB	PORT	0	0	0	0	0	85	162	0	0	247	75700
67	784	401700	HB	PORT	0	0	0	0	0	0	668	0	0	668	38400
67	785	401900	HB	PORT	0	0	0	0	0	0	464	0	0	464	37200
67	786	401900	HB	PORT	0	0	0	0	0	0	747	0	0	747	37200
482	787	402000	HB	PORT	0	0	0	0	0	0	274	0	0	274	75700
475	793	401700	HB	PORT	0	0	0	0	0	0	60	0	0	60	38400
				Total PORT	0	0	0	0	0	85	2675	0	0	2760	
476	476	401700	HB	16 WOOD	385	241	580	0	580	545	704	0	2005	3254	93000
477	477	401700	HB	16 WOOD	0	0	0	0	0	63	185	0	215	463	38400
477	792	401700	HB	16 WOOD	189	118	283	0	283	199	220	0	684	1103	93200
				Total 16 WOOD	574	359	863	0	863	807	1109	0	2904	4820	
				Subtotal OARB Redevelopment Project Area	574	359	863	0	863	1701	6103	70	6044	13918	
67	790	401900	HB	UPRR	0	0	0	0	0	0	146	0	0	146	37200
59	59	401700	HB	EBMUD/BR	0	0	0	0	0	0	160	0	0	160	38400
475	777	401700	HB	EBMUD/BR	0	0	0	0	0	0	190	0	0	190	38400
				TOTAL HARBOR AREA	574	359	863	0	863	1701	6599	70	6044	14414	
57	57	401400	WO		338	385	1200	280	1480	44	163	110	317	634	31100
58	58	401500	WO		667	745	2178	0	2178	101	186	61	352	700	39100
60	60	401800	WO		545	669	2185	3	2188	77	182	72	133	464	33300
61	61	402200	WO		606	775	2482	10	2492	4	235	15	73	327	27800
62	62	402300	WO		158	167	455	2	457	407	1226	87	612	2332	49700
63	63	401600	WO		145	153	493	5	498	276	223	30	495	1024	35500
64	64	402400	WO		852	1054	2635	31	2666	81	1041	300	146	1568	37900
66	66	402500	WO		305	521	1709	8	1717	27	164	112	74	377	25400
68	68	402600	WO		517	707	2269	138	2407	0	313	1	391	705	24500
69	69	402700	WO		569	661	1417	0	1417	41	95	122	179	437	39200
471	471	401400	WO		1115	985	2528	0	2528	82	200	79	238	599	46300
472	472	401400	WO		493	561	1748	39	1787	21	23	40	0	84	31100
473	473	401500	WO		296	276	817	15	832	110	245	9	430	794	44500
474	474	401700	WO		512	384	1192	0	1192	124	250	359	660	1393	41300
475	475	401700	WO		0	0	0	0	0	140	407	50	495	1092	38400
478	478	401600	WO		421	584	2031	227	2258	98	299	127	572	1096	24800
479	479	401900	WO		0	0	0	0	0	0	1618	0	0	1618	37200
480	480	401900	WO		850	622	1663	1	1664	51	682	34	282	1049	52000
481	481	402000	WO		85	40	109	0	109	111	576	60	768	1515	71800
476	791	401700	WO		230	179	579	0	579	180	506	20	280	986	45400
477	794	401700	WO		207	173	599	0	599	0	0	0	25	25	38400
				TOTAL WEST OAKLAND	9387	10183	29978	759	30737	2019	8797	1748	6829	19393	
				TOTAL HARBOR AREA AND WEST OAKLAND	9961	10542	30841	759	31600	3720	15396	1818	12873	33807	

Source: Hausrath Economics Group

Table 6e		REVISED HEG CUMULATIVE OAKLAND LAND USE DATA FOR THE HARBOR AREA AND WEST OAKLAND - OARB REDEVELOPMENT PROJECT EIR										REDEVELOPMENT PROJECT EIR									
OLD TAZ	NEW TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME						
475	778	401700	HB OARBGW	0	0	0	0	0	0	0	5	0	0	0	5	1343					
476	779	401700	HB OARBGW	0	0	0	0	0	0	20	94	12	12	138	1343						
476	780	401700	HB OARBGW	0	0	0	0	0	0	0	0	0	0	0	1343						
67	781	401700	HB OARBGW	0	0	0	50	50	50	0	-184	0	0	-184	1343						
67	782	401700	HB OARBGW	0	0	0	46	46	46	0	-108	0	0	-108	1343						
			Total OARBGW	0	0	0	96	96	96	20	-193	12	12	-149							
476	783	401700	HB OARBPORT	0	0	0	0	0	0	0	-37	0	54	17	1343						
477	788	401700	HB OARBPORT	0	0	0	0	0	0	10	-275	-60	31	-294	1343						
477	789	401700	HB OARBPORT	0	0	0	0	0	0	0	-325	0	-34	-359	1343						
			Total OARBPORT	0	0	0	0	0	0	10	-637	-60	51	-636							
67	67	401900	HB PORT	-2	-2	-5	-1	-1	-6	0	13	0	0	13	575						
482	482	402000	HB PORT	0	0	0	0	0	0	0	19	0	0	19	4050						
67	784	401700	HB PORT	0	0	0	0	0	0	0	41	0	0	41	1343						
67	785	401900	HB PORT	0	0	0	0	0	0	0	47	0	0	47	575						
67	786	401900	HB PORT	0	0	0	0	0	0	0	-388	0	0	-388	575						
482	787	402000	HB PORT	0	0	0	0	0	0	0	19	0	0	19	4050						
475	793	401700	HB PORT	0	0	0	0	0	0	0	-20	0	0	-20	1343						
			Total PORT	-2	-2	-5	-1	-1	-6	0	-269	0	0	-269							
476	476	401700	HB 16_WOOD	1	1	4	4	4	4	4	-8	0	3	-5	1343						
477	477	401700	HB 16_WOOD	0	0	0	0	0	0	-34	-34	0	0	-68	1343						
477	792	401700	HB 16_WOOD	0	0	0	0	0	0	0	-22	0	0	-22	1343						
			Total 16_WOOD	1	1	4	4	4	4	-38	-64	0	3	-99							
			Subtotal OARB Redevelopment Project Area	-1	-1	-1	95	94	94	-8	-1163	-48	66	-1163							
67	790	401900	HB UPRR	0	0	0	0	0	0	0	47	0	0	47	575						
59	59	401700	HB EBMUD/BR	0	0	0	0	0	0	0	20	0	0	20	1343						
475	777	401700	HB EBMUD/BR	0	0	0	0	0	0	0	0	0	0	0	1343						
			TOTAL HARBOR AREA	-1	-1	-1	95	94	94	-8	-1096	-48	66	-1086							
57	57	401400	WO	10	-1	179	289	289	448	-6	4	0	15	13	3366						
58	58	401500	WO	177	199	431	0	431	431	-10	5	0	10	5	3955						
60	60	401800	WO	16	-4	97	-1	96	96	-5	0	0	5	0	3530						
61	61	402200	WO	30	23	258	10	268	268	0	-5	0	0	-5	3445						
62	62	402300	WO	21	21	105	-3	102	102	-40	-20	0	10	-50	3743						
63	63	401600	WO	10	11	87	3	90	90	-30	0	0	40	10	830						
64	64	402400	WO	98	106	495	29	524	524	-9	-30	-30	20	-49	4556						
65	65	402100	WO	-69	-161	-591	8	-583	-583	0	20	-40	5	-15	3294						
66	66	402500	WO	-89	-174	-604	132	-472	-472	0	0	0	20	20	2859						
68	68	402600	WO	-108	-189	-324	-32	-356	-356	0	10	0	40	50	3047						
69	69	402700	WO	86	70	422	-23	399	399	-5	0	0	10	5	3191						
471	471	401400	WO	16	1	94	-15	79	79	-3	0	0	0	-3	3366						
472	472	401400	WO	-11	-39	33	22	55	55	-6	4	0	10	8	3366						
473	473	401500	WO	8	0	59	15	74	74	-3	10	10	10	17	3955						
474	474	401700	WO	52	43	75	-9	66	66	-70	-26	130	0	34	1343						
475	475	401700	WO	0	0	0	0	0	0	-74	-65	0	0	-139	1343						
478	478	401600	WO	-32	-72	-218	216	-2	-2	-20	0	0	20	0	830						
479	479	401900	WO	-2	-2	-7	-1	-1	-1	-8	0	0	0	-175	575						
480	480	401900	WO	5	-4	63	-66	-3	-3	-80	-100	10	-20	-190	575						
481	481	402000	WO	3	0	-6	0	-6	-6	-9	129	5	100	225	4050						
476	791	401700	WO	20	14	97	-8	91	91	-24	-150	0	0	-174	1343						
477	794	401700	WO	-110	-121	-296	-13	-309	-309	0	0	0	0	0	1343						
			TOTAL WEST OAKLAND	131	-279	449	535	984	984	-394	-389	75	295	-413							
			TOTAL HARBOR AREA AND WEST OAKLAND	130	-280	448	630	1078	1078	-402	-1485	27	361	-1499							

Source: Hausrath Economics Group

Table 6f
2000-2005 REVISED HEG CUMULATIVE OAKLAND LAND USE DATA FOR THE HARBOR AREA AND WEST OAKLAND - OARB REDEVELOPMENT PROJECT EIR

OLD TAZ	NEW TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
475	778	401700	HB	OARBGW	0	0	0	0	0	2	19	0	0	21	2100
476	779	401700	HB	OARBGW	0	0	0	0	0	0	0	0	0	0	2100
476	780	401700	HB	OARBGW	0	0	0	0	0	24	182	12	24	242	2100
67	781	401700	HB	OARBGW	0	0	0	0	0	0	30	0	0	30	2100
67	782	401700	HB	OARBGW	0	0	0	0	0	0	67	0	0	67	2100
				Total OARBGW	0	0	0	0	0	26	298	12	24	360	
476	783	401700	HB	OARBPORT	0	0	0	0	0	0	61	0	16	77	2100
477	788	401700	HB	OARBPORT	0	0	0	0	0	0	64	0	152	216	2100
477	789	401700	HB	OARBPORT	0	0	0	0	0	0	-15	0	0	-15	2100
				Total OARBPORT	0	0	0	0	0	0	110	0	168	278	
67	67	401900	HB	PORT	0	0	0	0	0	0	89	0	0	89	1500
482	482	402000	HB	PORT	0	0	0	0	0	0	-64	0	0	-64	1000
67	784	401700	HB	PORT	0	0	0	0	0	0	20	0	0	20	2100
67	785	401900	HB	PORT	0	0	0	0	0	0	-189	0	0	-189	1500
67	786	401900	HB	PORT	0	0	0	0	0	0	330	0	0	330	1500
482	787	402000	HB	PORT	0	0	0	0	0	0	9	0	0	9	1000
475	793	401700	HB	PORT	0	0	0	0	0	0	0	0	0	0	2100
				Total PORT	0	0	0	0	0	0	195	0	0	195	
476	476	401700	HB	16_WOOD	384	240	576	0	576	0	0	0	1	1	49600
477	477	401700	HB	16_WOOD	0	0	0	0	0	6	6	0	5	17	2100
477	792	401700	HB	16_WOOD	189	118	283	0	283	0	-12	0	0	-12	49800
				Total 16 WOOD	573	358	859	0	859	6	-6	12	6	6	
				Subtotal OARB Redevelopment Project Area	573	358	859	0	859	32	597	12	198	839	
67	790	401900	HB	UPRR	0	0	0	0	0	0	0	0	0	0	1500
59	59	401700	HB	EBMUD/BR	0	0	0	0	0	0	80	0	0	80	2100
475	777	401700	HB	EBMUD/BR	0	0	0	0	0	0	0	0	0	0	2100
				TOTAL HARBOR AREA	573	358	859	0	859	32	677	12	198	919	
57	57	401400	WO		12	0	-88	0	-88	-3	6	15	15	33	1600
58	58	401500	WO		34	62	484	0	484	-5	15	15	20	45	2200
60	60	401800	WO		33	21	231	0	231	0	0	0	5	5	1700
61	61	402200	WO		118	156	556	0	556	0	-5	10	15	20	1000
62	62	402300	WO		6	0	3	0	3	-10	-30	0	0	-20	2700
63	63	401600	WO		60	36	178	0	178	-20	40	10	60	90	9900
64	64	402400	WO		29	0	73	0	73	0	-10	-21	10	-21	2500
65	65	402100	WO		47	71	553	0	553	0	-30	0	5	-25	1100
66	66	402500	WO		66	77	624	0	624	0	0	0	0	0	1900
68	68	402600	WO		200	183	437	0	437	0	0	0	5	55	12400
69	69	402700	WO		24	0	12	0	12	-4	0	0	20	16	2700
471	471	401400	WO		17	0	160	0	160	-2	0	0	0	-2	1600
472	472	401400	WO		16	0	110	0	110	-3	6	10	10	23	1600
473	473	401500	WO		84	48	107	0	107	-3	39	1	88	125	7100
474	474	401700	WO		66	35	220	0	220	10	70	105	155	340	5700
475	475	401700	WO		0	0	0	0	0	10	-60	22	110	82	2100
478	478	401600	WO		113	157	641	0	641	-22	20	20	30	48	200
479	479	401900	WO		0	0	0	0	0	0	0	0	0	0	1500
480	480	401900	WO		8	0	25	0	25	0	305	0	40	345	1500
481	481	402000	WO		48	29	81	0	81	0	95	5	50	150	-3600
476	791	401700	WO		67	39	114	0	114	0	10	0	10	20	8600
477	794	401700	WO		7	0	26	0	26	0	0	0	0	0	2100
				TOTAL WEST OAKLAND	1055	914	4547	0	4547	-52	471	242	688	1329	
				TOTAL HARBOR AREA AND WEST OAKLAND	1628	1272	5406	0	5406	-20	1148	254	866	2248	

Source: Hausraath Economics Group

Table 6g 2005-2020 REVISED HEG CUMULATIVE OAKLAND LAND USE DATA FOR THE HARBOR AREA AND WEST OAKLAND - OARB REDEVELOPMENT PROJECT EIR															
OLD TAZ	NEW TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLYD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME
475	778	401700	HB	OARBGW	0	0	0	0	0	-2	256	0	0	254	5400
476	779	401700	HB	OARBGW	0	0	0	0	0	55	112	-12	113	268	5400
476	780	401700	HB	OARBGW	0	0	0	0	0	42	-468	-12	186	-252	5400
67	781	401700	HB	OARBGW	0	0	0	-50	-50	443	867	70	1105	2485	5400
67	782	401700	HB	OARBGW	0	0	0	-46	-46	225	217	0	1700	2142	5400
			Total OARBGW		0	0	0	-96	-96	763	984	46	3104	4897	
476	783	401700	HB	OARBPORT	0	0	0	0	0	-71	-263	0	-283	-556	5400
477	788	401700	HB	OARBPORT	0	0	0	0	0	-10	158	0	0	158	5400
477	789	401700	HB	OARBPORT	0	0	0	0	0	-10	-176	0	-353	-539	5400
			Total OARBPORT		0	0	0	0	0	-91	158	0	-636	158	
67	67	401900	HB	PORT	0	0	0	0	0	0	98	0	0	98	5700
482	482	402000	HB	PORT	0	0	0	0	0	-45	92	0	0	47	6700
67	784	401700	HB	PORT	0	0	0	0	0	0	148	0	0	148	5400
67	785	401900	HB	PORT	0	0	0	0	0	0	84	0	0	84	5700
67	786	401900	HB	PORT	0	0	0	0	0	0	355	0	0	355	5700
482	787	402000	HB	PORT	0	0	0	0	0	0	-68	0	0	-68	6700
475	793	401700	HB	PORT	0	0	0	0	0	0	50	0	0	50	5400
			Total PORT		0	0	0	0	0	-45	759	0	0	714	
476	476	401700	HB	16 WOOD	0	0	0	0	0	545	692	0	2001	3238	12500
477	477	401700	HB	16 WOOD	0	0	0	0	0	53	169	0	200	422	5400
477	792	401700	HB	16 WOOD	0	0	0	0	0	163	154	0	684	1001	12500
			Total 16 WOOD		0	0	0	0	0	761	1015	0	2885	4661	
			Subtotal OARB Redevelopment Project Area		0	0	0	-96	-96	1469	2582	46	5636	9733	
67	790	401900	HB	UPRR	0	0	0	0	0	0	19	0	0	19	5700
59	59	401700	HB	EBMUD/BR	0	0	0	0	0	0	-80	0	0	-80	5400
475	777	401700	HB	EBMUD/BR	0	0	0	0	0	0	20	0	0	20	5400
			TOTAL HARBOR AREA		0	0	0	-96	-96	1469	2541	46	5636	9692	
57	57	401400	WO		41	40	3	0	3	-9	10	15	20	36	3500
58	58	401500	WO		80	0	5	5	5	-10	20	15	40	65	4500
60	60	401800	WO		64	0	4	4	4	0	0	0	20	20	3900
61	61	402200	WO		115	40	92	0	92	0	0	5	15	20	5000
62	62	402300	WO		19	0	1	0	1	60	200	26	440	726	6300
63	63	401600	WO		11	0	1	0	1	0	20	20	80	120	4500
64	64	402400	WO		105	0	5	0	5	-10	0	0	30	20	3500
65	65	402100	WO		32	0	3	0	3	-5	-20	0	20	-5	2800
66	66	402500	WO		57	0	4	0	4	0	0	0	20	20	2100
68	68	402600	WO		53	0	3	0	3	0	20	25	45	90	2800
69	69	402700	WO		488	333	570	0	570	0	-26	12	50	36	16400
471	471	401400	WO		58	0	3	0	3	-5	0	0	0	-5	3500
472	472	401400	WO		61	0	3	0	3	-9	10	10	20	31	3500
473	473	401500	WO		27	0	1	0	1	-10	50	5	50	95	5000
474	474	401700	WO		189	95	230	0	230	-50	40	71	185	246	4700
475	475	401700	WO		39	0	3	0	3	-50	47	20	135	152	5400
478	478	401600	WO		0	0	0	0	0	0	20	20	49	89	3500
479	479	401900	WO		0	0	0	0	0	0	0	0	0	0	5700
480	480	401900	WO		631	399	880	0	880	-150	175	14	45	84	20500
481	481	402000	WO		0	0	0	0	0	-18	98	10	288	378	7400
476	791	401700	WO		21	0	1	0	1	-10	0	0	50	40	5900
477	794	401700	WO		25	0	1	0	1	0	0	0	0	5	5400
			TOTAL HARBOR AREA AND WEST OAKLAND		2116	867	1813	0	1813	-276	664	268	1607	2263	
			TOTAL WEST OAKLAND		2116	867	1813	-96	1717	1193	3205	314	7243	11955	

Source: Hausrath Economics Group

Table 6h 2000-2020 REVISED HEG CUMULATIVE OAKLAND LAND USE DATA FOR THE HARBOR AREA AND WEST OAKLAND - OARB REDEVELOPMENT PROJECT EIR																
OLD TAZ	NEW TAZ	CENSUS TRACT	PLAN DIST	SUB AREA	EMPLOYD RSDNTS	HOUSE HOLDS	HH POP	GROUP POP	TOT POP	MFG JOBS	OTHER JOBS	RETAIL JOBS	SERVICE JOBS	TOTAL JOBS	MEAN HH INCOME	
475	778	401700	HB	OARBGW	0	0	0	0	0	0	275	0	0	0	275	7500
476	779	401700	HB	OARBGW	0	0	0	0	0	55	113	-12	113	268	7500	
476	780	401700	HB	OARBGW	0	0	0	0	0	66	-286	0	210	-10	7500	
67	781	401700	HB	OARBGW	0	0	0	-50	-50	443	897	70	1105	2515	7500	
67	782	401700	HB	OARBGW	0	0	0	-46	-46	225	284	0	1700	2209	7500	
			Total OARBGW		0	0	0	-96	-96	789	1282	58	3128	5257		
476	783	401700	HB	OARBPORT	0	0	0	0	0	0	-10	0	-54	-64	7500	
477	788	401700	HB	OARBPORT	0	0	0	0	0	-10	-199	0	-131	-340	7500	
477	789	401700	HB	OARBPORT	0	0	0	0	0	0	143	0	0	143	7500	
			Total OARBPORT		0	0	0	0	0	-10	-66	0	-185	-261		
67	67	401900	HB	PORT	0	0	0	0	0	0	187	0	0	187	7200	
482	482	402000	HB	PORT	0	0	0	0	0	-45	28	0	0	-17	7700	
67	784	401700	HB	PORT	0	0	0	0	0	0	168	0	0	168	7500	
67	785	401900	HB	PORT	0	0	0	0	0	0	-105	0	0	-105	7200	
67	786	401900	HB	PORT	0	0	0	0	0	0	685	0	0	685	7200	
482	787	402000	HB	PORT	0	0	0	0	0	0	-59	0	0	-59	7700	
475	793	401700	HB	PORT	0	0	0	0	0	0	50	0	0	50	7500	
			Total PORT		0	0	0	0	0	-45	954	0	0	909		
476	476	401700	HB	16_WOOD	384	240	576	0	576	545	692	0	2002	3239	62100	
477	477	401700	HB	16_WOOD	0	0	0	0	0	59	175	0	205	439	7500	
477	792	401700	HB	16_WOOD	189	118	283	0	283	163	142	0	684	989	62300	
			Total 16_WOOD		573	358	859	0	859	767	1009	0	2891	4667		
			Subtotal OARB Redevelopment Project Area		573	358	859	-96	763	1501	3179	58	5834	10572		
67	790	401900	HB	UPRR	0	0	0	0	0	0	19	0	0	19	7200	
59	59	401700	HB	EBMUD/BR	0	0	0	0	0	0	0	0	0	0	7500	
475	777	401700	HB	EBMUD/BR	0	0	0	0	0	0	20	0	0	20	7500	
			TOTAL HARBOR AREA		573	358	859	-96	763	1501	3218	58	5834	10611		
57	57	401400	WO		53	62	85	0	85	-12	16	30	35	69	5100	
58	58	401500	WO		114	21	489	0	489	-15	35	30	60	110	6700	
60	60	401800	WO		97	235	235	0	235	0	0	0	25	25	5600	
61	61	402200	WO		233	196	648	0	648	0	-5	15	30	40	6000	
62	62	402300	WO		25	0	4	0	4	50	170	26	460	706	9000	
63	63	401600	WO		71	36	179	0	179	-20	60	30	140	210	14400	
64	64	402400	WO		134	0	78	0	78	-10	-10	-21	40	-1	6000	
65	65	402100	WO		79	71	556	0	556	-5	-50	0	25	-30	3900	
66	66	402500	WO		123	77	628	0	628	0	0	0	20	20	4000	
68	68	402600	WO		253	183	440	0	440	0	20	75	50	145	15200	
69	69	402700	WO		512	333	582	0	582	-4	-26	12	70	52	19100	
471	471	401400	WO		75	0	163	0	163	-7	0	0	0	0	5100	
472	472	401400	WO		77	0	113	0	113	-12	16	20	30	54	5100	
473	473	401500	WO		111	48	108	0	108	-13	89	6	138	220	12100	
474	474	401700	WO		255	130	450	0	450	-40	110	176	340	586	10400	
475	475	401700	WO		0	0	0	0	0	-40	-13	42	245	234	7500	
478	478	401600	WO		152	157	644	0	644	-22	40	40	79	137	3700	
479	479	401900	WO		0	0	0	0	0	0	0	0	0	0	7200	
480	480	401900	WO		639	399	905	0	905	-150	480	14	85	429	22000	
481	481	402000	WO		81	29	81	0	81	-18	193	15	338	528	3800	
476	791	401700	WO		88	39	115	0	115	-10	10	0	60	60	14500	
477	794	401700	WO		32	0	27	0	27	0	0	0	5	5	7500	
			TOTAL WEST OAKLAND		3171	1781	6360	0	6360	-328	1135	510	2275	3592		
			TOTAL HARBOR AREA AND WEST OAKLAND		3744	2139	72	-86	7123	1173	4353	568	8109	14203		

Source: Hausrath Economics Group

Table 7a

CUMULATIVE SCENARIO: ASSUMPTIONS FOR MAJOR COMMERCIAL/INDUSTRIAL PROJECTS IN THE HARBOR AREA AND WEST OAKLAND
OARB REDEVELOPMENT PROJECT EIR

/a/ Project	Old TAZ	New TAZ	Planning District /b/	Subarea	Sq. Ft.	Emps	SF/Emp	Location	Comments	OARB Area
LARGER CHANGES 1990 - 2000										
Base Closure - FISCO	67	786/67	HB	PORT		-500				X
Base Closure - Oakland Army Base	67/475/476/477	778-783/788/789	HB	OARBGW; OARBPORT		-2,047				X
Oakland Army Base - Interim Leasing (City and Port areas)	67/475/476/477	778-783/788/789	HB	OARBGW; OARBPORT		1,277				X
Port Maritime Growth (exclusive of OARB Interim Leasing) /c/	67/482	67/482/784-787/790	HB	PORT		279				X
K-Mart	474		WO		117,000	155	755	1555 40th St./near Hubbard St.		X
PROJECTS TO BE COMPLETED 2001 - 2005										
Port Maritime Expansion (exclusive of OARB Interim Leasing) /c/	67/482	67/482/784-787/790	HB	PORT		194			Employment growth reflects 60% operation of new terminal in Vision 2000 by 2005 and shifts in operations among existing facilities	X
Oakland Army Base - Interim Leasing (City and Port areas)	67/475/476/477	778-783/788/789	HB	OARBGW; OARBPORT		653				X
Mandela Gateway/OHA	61		WO		10,000	25	400	Mandela & 7th	Resid'd with corner retail	
Community Space	61		WO		4,000	0			Revitalization/New stores	
Jack London Gateway/Acom Shopping Center	68		WO			50		900 Market at 8th/7th	Completed	
OTR site hotel	474		WO			97	0.65/m	Shellmound & L&O	Completed	
Expo Design Center - replaces K-Mart	474		WO		149 rms	200		Yerba Buena & Mandela Parkway	Completed	
OTR site - Best Buy	474		WO		117,000	200		1555 40th St./near Hubbard St.	Proposed completion: 2002	
Gambicini Property	474		WO		65,000	60	750	Yerba Buena & Mandela	New const./LI. Ind'l. with local retail	
Plywood & Lumber Sales	474		WO		34,000	25		Bk. Ette & Hannah	New const./LI. Ind'l. warehouse	
32nd-34th & Mandela (office/flex space with local retail)	475	475	WO		100,000	222	450	West of Mandela	Reuse of existing and new space	
Bridge/Chestnut Court - retail	478		WO		4,000	11	350	2240 Chestnut St	Resid'd with grid. II. retail	
Amtrak Maintenance Facility	480		WO		163,400	350		Near 3rd & Kirkham	Approved: moving from nearby & expanding	
Telecommunications Access Facility/Montenson	481		WO		120,000	50		3rd, Brush to Castro		
PROJECTS TO BE COMPLETED 2006 - 2020										
Oakland Army Base Reuse: Gateway (Non-Maritime)	67/475/476	778-782	HB	OARBGW						X
Office	67	782	HB	OARBGW	600,000	2,250	267			X
R&D/LI Industrial	67	781	HB	OARBGW	995,000	2,490	400			X
Retail	67	781	HB	OARBGW	25,000	70	357			X
Warehouse/Distribution	475	778	HB	OARBGW	300,000	240	1,250			X
R&D/LI Industrial	476	779	HB	OARBGW	200,000	500	400			X
R&D/LI Industrial	476	780	HB	OARBGW	176,000	440	400			X
Job Training	476	780	HB	OARBGW	50,000	100	500			X
EBMUD - Wastewater Treatment Expansion	475	477	HB	EBMUD/Bridges		40				X
Port Maritime Expansion and OARB Reuse (Maritime) /c/	67, 482	67,482,783-790	HB	PORT; OARBPORT		881			Employment growth reflects full development of 1,000 acres for terminals, incorporating Vision 2000, JIT development, and increased maritime areas from OARB.	X
Oakland Army Base - End of Interim Leasing	67/475/476/477	778-783/788/789	HB	OARBGW; OARBPORT		-1,930			Permanent reuse replaces interim leasing	X
Central Station Project/former Amtrak site	476/477	476/477/792	HB	168W	981,235	2,804	350	16th & Wood Sts.	Project description as of 3/19/01	X
Office/R&D	476	476	HB	168W	70,279	150				X
Train Station/Comm1-Retail-Community Uses	477	476	HB	168W	386,065	1,103	350			X
Office/R&D	477	792	HB	168W	185,000	463	400			X
16th & Wood sites/LI Industrial	477	477	HB	168W	120,000	300	400			X
Carrollton Factory Site (LI.Ind/Office/Local Retail)	476	476	HB	168W	150,000	333	450	Mandela & 14th/16th/Poplar	Phoenix Iron Works & other sites	X
Kirkham/16th & 18th	62		WO		150,000	333	450	Kirkham/16th & 18th	Adaptive reuse, possible new construction	X
Romex Iron Works Site - ground-floor retail	474		WO		7,500	21	350	Near Pamela & Hollis	Site transitions from trucking to LI.Ind/R&D/etc	X
Conversions and Infill	474		WO		13,000	22	600	East of Mandela	New uses net of declines	
34th & Wood/LI Ind'l	475	475	WO		5,000	14	350		New uses net of declines	
Conversions and Infill	475	475	WO		5,000	14	350			
West Oakland Transit Village - retail/comm1	61		WO		5,000	14	350			
- retail/comm1	61		WO		5,000	14	350			
Amtrak Maintenance Facilities - expanded operations	480		WO		200	200			Expansion as train service increases	
Conversions - W. Amendment Area - C. D. Redev.	481		WO		60,000	171	350			

Notes:
 /a/ 'X' in first column indicates updated assumptions compared to 11/21/00 Cumulative Scenario.
 /b/ HB = Harbor Area; WO = West Oakland. Planning District shown is as currently defined for this EIR.
 /c/ Includes growth in terminal operations, maritime support activities, and rail/intermodal operations on Port and railroad land in the Harbor area.
 Source: City of Oakland; Port of Oakland; Hausrath Economics Group.

Table 7b

ASSUMPTIONS FOR MAJOR HOUSING PROJECTS IN THE HARBOR AREA AND WEST OAKLAND
OARB REDEVELOPMENT PROJECT EIR

/a/	Project	Old TAZ	New TAZ	Planning District /e/	Subarea	Units	House-holds /b/	Location	Comments/Time Period	Project Area	
	PROJECTS COMPLETED FROM 1990 TO 2000 CENSUS (March 1990 - March 2000) /d/										
	Bayside Apartments	58		WO		31	29	958 28th St.	1997		
	Slim Jenkins Court	60		WO		32	30	700 Willow	1991		
x	Union Street Studios L/W	62		WO		19	18	1920 Union off W. Grand	Renovated former Ind'l - early 2000		
	Victoria Court	64		WO		16	15		1994-1996		
	James Lee Court	69		WO		26	25	690 15th St.	1992		
	Victorian Village	69		WO		56	53		1991-1996		
	Marcus Garvey Commons	477		WO		22	21	1761-1770 Goss St.	1992		
	PROJECTS UNDERWAY DURING 2000 CENSUS										
	Portion Before 3/2000 Census										
x	Acorn 1, 2, 3 /c/	65		WO		-231	-231	8th/10th/Filbert/Union	Before 3/2000 Census		
x	Acorn 1, 2, 3 /c/	65		WO		70	70	8th/10th/Filbert/Union	Before 3/2000 Census		
x	Acorn 1, 2, 3 /c/	66		WO		-249	-249	8th/10th/Filbert/Union	Before 3/2000 Census		
x	Acorn 1, 2, 3 /c/	66		WO		75	75	8th/10th/Filbert/Union	Before 3/2000 Census		
x	Bayporte Village /c/	68		WO		-196	-196	8th/10th/Market	Before 3/2000 Census		
x	Bayporte Village /c/	68		WO		7	7	8th/10th/Market	Before 3/2000 Census		
	Portion After 3/2000 Census										
x	Acorn 1, 2, 3 /c/	65		WO		71	71	8th/10th/Filbert/Union	After 3/2000		
x	Acorn 1, 2, 3 /c/	66		WO		77	77	8th/10th/Filbert/Union	After 3/2000		
x	Bayporte Village /c/	68		WO		64	64	8th/10th/Market	After 3/2000		
	PROJECTS TO BE COMPLETED FROM 2000 CENSUS TO 2005										
x	San Pablo Affordable Senior Housing	58		WO		65	62	3255 San Pablo bet 32nd & 34th	Approved 2/01		
x	Chase & Wood	60		WO		22	21	Chase & Wood	Approved 2001		
x	Mandela Gateway/OHA	61		WO		-49	-49	Mandela & 7th	Replaces Westwood Gardens		
x	Mandela Gateway/OHA	61		WO		205	205				
	Adeline Street Lofts	63		WO		38	36	Adeline/24th St.	Predevel. 5/2000		
	West Clawson Lofts/school reuse	473		WO		50	48	3240 Peralta	School reuse plus additional units		
	Precision Dye/Live-Work	474		WO		37	35	Hanna & 32nd	Approved 2001		
x	Peralta Studios/live-work	476	791	WO		41	39	2121 Peralta at W. Grand	Converted PG&E facility		
x	Central Station Project/former Amtrak s	476	476	HB	16&W	252	240	16th & Wood	Live/work units	x	
x	Central Station Project/former Amtrak s	477	792	HB	16&W	124	118	16th & Wood	Live/work units	x	
x	Bridge/Linden Court	478		WO		79	79	1089 26th St. near McClymonds	Approved; low-income		
x	Bridge/Chestnut Court	478		WO		78	78	2240 Chestnut St. at W. Grand	Approved; Hope IV project		
	Phoenix Lofts	481		WO		31	29	2nd near Brush	2000		

Appendix 7
Land Use Options

OARB Area Redevelopment EIR

Land Use Options

Two land use options for the Gateway development area, which may be implemented as part of the proposed program or any one of the “action” alternatives were proposed by decision-makers, or by members of the public during scoping. The purpose of this evaluation is to generally understand the implications for traffic, should one of these land use options be implemented.

One suggested land use option is a hotel, to be located in the western portion of the Gateway development area, east of the Gateway Park. This use would replace the currently-proposed office use at that location. Another suggested land use option would be High-End Retail (such as a department store) on the central portion of the Gateway development area. This would replace Flex Office/R&D or Light Industrial uses proposed for that location.

Office or Office/R&D, Light Industrial, Hotel, and High-End Retail land uses differ from one another in the number and timing of vehicle trips each generate¹:

- Office or Office/R&D land uses generate relatively greater vehicle trips during the weekday commute peak hours. Trip generation for this land use type as proposed for the western portion of the Gateway development area would be 8.76 trips per thousand square feet per weekday, and 1.25 trips per thousand square feet in the peak hour.
- Light Industrial also generates relatively greater vehicle trips during the weekday commute peak hours. Trip generation for this land use type as proposed for the central portion of the Gateway development area would be 7.24 trips per thousand square feet per weekday, and 1.06 trips per thousand square feet in the peak hour.
- Hotels generate relatively more weekend and fewer weekday peak-hour trips. Trip generation for this land use type would be 8.58 trips per hotel room per weekday, and 0.74 trips per hotel room in the peak hour for a hotel that would generate the same number of peak hour trips as the proposed office in the western portion of the Gateway development area.
- High-End Retail land uses generate relatively high weekend and non-peak weekday trips. Trip generation for this land use type would be approximately 48 trips per thousand square feet per weekday, and 4.48 trips per thousand square feet in the peak hour for retail space that would generate the same number of peak hour trips as Flex Office/R&D, or Light Industrial uses proposed for the central portion of the Gateway development area.

¹ The trip generation rates for all the land uses described are non-linear – the rates are different for different sizes of development.

Should the Hotel land use option be exercised, the facility could not exceed 1,000 rooms in place of the Office use proposed for the western portion of the Gateway development area under the redevelopment program. At 1,000 rooms, exercising this land use option would not worsen significant impacts to intersections associated with redevelopment as proposed, nor would it result in new significant impacts not associated with the redevelopment program.

Should the High-End Retail land use option be exercised, the facility could not exceed 270,000 square feet in place of the Flex Office/R&D, or Light Industrial uses proposed for the central portion of the Gateway development area under the redevelopment program. At 270,000 square feet, exercising this land use option would not worsen significant impacts to intersections associated with redevelopment as proposed, nor would it result in new significant impacts not associated with the redevelopment program.

Both land use options would be required to implement all mitigation measures recommended in this document for significant transportation impacts relative to traffic, transit, and parking.

Oakland Army Base Redevelopment Area EIR

Redevelopment District Trip Generation: Redevelopment Program Land Use Options																									
Land Use	Amount	Trip Generation Land Use Category	Source	Equivalent Amount	Distribution						Trips Generated														
					AM Peak		PM Peak		Daily	AM Peak Hour		PM Peak Hour													
					In	Out	In	Out		In	Out	In	Out	In	Out	Total									
Office or Office/R&D Rate / 1,000 Square Feet	2,979 KSF	General Office Building	ITE (710)	2,979 KSF	24,239	3,184	434	3,618	622	3,035	3,657	8.14	1.21												
Light Industrial Rate / 1,000 Square Feet	749 KSF	General Light Industrial	ITE (110)	749 KSF	5,340	631	86	717	93	679	772	7.13	0.96												
Office: Western Gateway Rate / Room	600 KSF	General Office Building	ITE (710)	600 KSF	5,255	684	93	778	128	624	752	8.76	1.30												
Hotel (Comparable Weekday Traffic) Rate / Room	628 Rooms	Rooms Hotel	ITE (310)	628 Rooms	61% 39%	53% 47%		400	224	198	422	8.36	0.64												
Hotel (Comparable Peak Hour Traffic) Rate / Room	1000 Rooms	Rooms Hotel	ITE (310)	1000 Rooms	61% 39%	53% 47%		712	393	349	742	8.58	0.71												
Light Industrial: Central Gateway Rate / 1,000 Square Feet	444 KSF	General Light Industrial	ITE (110)	444 KSF	3,214	384	52	436	57	416	473	7.24	0.98												
Office, R&D: Central Subarea Rate / 1,000 Square Feet	577 KSF	General Light Industrial	ITE (110)	577 KSF	5,099	663	90	754	123	603	726	8.84	1.31												
Central Gateway Subtotal	1,021				8,313			1,190		1,199															
High End Retail (Comp. Weekday Traf.) Rate / 1,000 Square Feet	31 KSF	Shopping Center	ITE (820)	31 KSF	3,210	48	32	79	139	151	290	103.55	2.56												
High End Retail (Comp. Peak Hr. Traf.) Rate / 1,000 Square Feet	65 KSF	Shopping Center	ITE (820)	65 KSF	5,167	74	49	124	227	246	473	79.50	1.90												
High End Retail (Comp. Peak Hr. Traf.) Rate / 1,000 Square Feet	270 KSF	Shopping Center	ITE (820)	270 KSF	12,910	173	116	289	581	629	1,209	47.82	1.07												

**Appendix 4.121
Special-Status Plant Species Potentially Occurring Within the OARB Redevelopment Project Area**

Common Name	Scientific Name	Status			Supporting Habitat	Flowering Period	Potential Occurrence in the Study area
		Federal	State	CNPS			
Pacific cordgrass	<i>Spartina foliosa</i>	SC	None	None	Coastal salt marshes		Not likely to occur; no suitable habitat.
most beautiful jewelflower	<i>Streptanthus albidus</i> <i>ssp. peramoenus</i>	SC	None	1B	Chaparral, grassland; serpentine	Apr-Jun	Not likely to occur; no suitable habitat.
Tiburon jewelflower	<i>Streptanthus niger</i>	E	E	1B	Serpentine soils	May-Jun	Not likely to occur; no suitable habitat.
California sea blite	<i>Suaeda californica</i>	E	None	1B	Coastal salt marshes and swamps	Jul-Oct	Not likely to occur; no suitable habitat.
San Francisco owl's-clover	<i>Triphysaria floribunda</i>	SC	None	1B	Coastal prairie, coastal scrub, grassland; usually serpentine	Apr-Jun	Not likely to occur; no suitable habitat.
showy Indian clover	<i>Trifolium amoenum</i>	E	None	1B	Wet swales, grasslands and grassy hillsides; occasionally found on serpentine soils	Apr-Jun	Not likely to occur; no suitable habitat.
saline clover	<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>	None	None	1B	Vernal pools, valley grassland, mixed evergreen forests	Apr-Jun	Not likely to occur; no suitable habitat.

Sources: CDFG 1999; Skinner and Pavlik 1994