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APR 29 1986

OFFICE OF  
EXTERNAL AFFAIRS

Honorable Robert K. Dawson  
Assistant Secretary of the  
Army (Civil Works)  
Department of the Army  
Washington, D.C. 20310

SUBJECT: 404(q) Elevation of a Proposed Permit for the Expansion  
of the Oakland Airport (Public Notice No. 14003E48B).

Dear Mr. Dawson:

Under the November 6, 1986 Memorandum of Agreement (MOA), pursuant to Section 404(q) of the Clean Water Act, I hereby request that you review the decision of the District Engineer, San Francisco District, to issue a Section 404 permit for the proposed expansion of the Oakland International Airport. Our recommendation for review is based upon our finding that the project, as proposed, does not comply with EPA's 404(b)(1) Guidelines and that the project raises environmental issues of national importance which require policy level review. We find that the proposed action subject to Section 10 and 404 permitting is a major Federal action which will significantly affect the environment and for which an Environmental Impact Statement (EIS) should be prepared pursuant to the requirements of the National Environmental Policy Act. The specific justifications for our recommendations follow.

The Port of Oakland has applied for a permit to fill 456 acres at the Oakland airport site for air cargo facilities, terminals, corporate aircraft facilities, a telecommunications center, rental car parking, and ancillary facilities. Approximately 435 acres of this proposed expansion are diked wetlands subject to the requirements of Section 404 of the Clean Water Act (CWA) and Section 10 of the River and Harbor Act.

Based on our evaluation, I believe that a permit should not be issued for the project, as proposed. The attached assessment contains our evaluation and conclusion that the project does not comply with EPA's 404(b)(1) guidelines in a number of substantive ways. We have directly addressed our concerns with the District and Division Engineers, as provided in Sections 6(c) and 6(d) of the November 6, 1985 Memorandum of Agreement (MOA) between EPA and the Army. Specifically, we found that:

- 1) the expansion could be accomplished practicably with less fill in wetlands,
- 2) the proposed permit has not included conditions specified by the California Regional Water Quality Control Board for certification under Section 401 of the Clean Water Act,

-2-

- 3) the project, as proposed, causes and contributes to a significant degradation of waters of the United States, and
- 4) the project does not mitigate the loss of 435 acres of wetlands at the proposed site.

Based on our evaluation we find that the proposed actions subject to Federal permitting constitute a major Federal action that would significantly affect the environment. Therefore, we recommend that an EIS be prepared as a basis for the Corps decision. As proposed, the project would result in a net loss of as much as 336 acres of wetlands in San Francisco Bay. The cumulative impacts of this loss were not evaluated by the Corps. The Corps failed to adequately consider secondary impacts such as air quality, noise, traffic and congestion, water quality, and seismic safety. Although the Corps did recognize adverse impacts on wetland habitat they concluded, without explanation, that these impacts are not significant.

There has been significant public controversy over this project. In reaching its conclusion, the Corps ignored comments received from almost all of the responding agencies and individuals that: 1) the impacts on wetland habitat would be significant; and/or that 2) an EIS was necessary in order to fully evaluate those impacts. It appears that the District Engineer determined that such environmental impacts were outweighed by public interest considerations. Such a balancing can only be made in the context of an EIS; it cannot be used to justify a decision not to prepare an EIS.

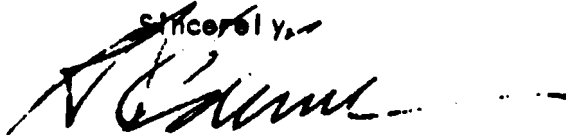
Finally, we believe that the proposed airport expansion raises environmental issues of national importance which require policy-level review. It appears that the decision of the District Engineer not to prepare an EIS and not to require adequate mitigation for this project was based upon the District Engineer perception of public interest. Such a decision would be precedent setting. In this case, the only sectors of the public that provided written letters of support for this project are the applicant and the Corps; all others have expressed varying degrees of opposition to the project, as proposed. We believe that the District Engineer's perception of the public interest in this case may serve to encourage other permit applicants to attempt to circumvent the requirements of the National Environmental Policy Act and the 404(b)(1) Guidelines by claiming that the public benefits of their proposals 1) free them from the need to fully evaluate and disclose the specific direct and secondary impacts of their projects to the public, and 2) free them from requirements to restore or maintain the physical, chemical, and biological integrity of waters of the United States.

Accordingly, I recommend that you review this matter and suspend processing of the subject permit until an EIS has been prepared. Unless such a full-disclosure document is circulated, and unless the project is substantially reduced to fully-mitigable levels EPA considers this project a candidate for referral to the President's Council on Environmental Quality. Finally, we believe that if the project is not ultimately modified to reduce losses of wetlands to acceptable levels EPA will consider initiating action under our 404(c) authority.

The attached assessment includes additional data and analyses which were compiled and developed recently by Region IX. We believe that much of this constitutes new information which was not previously available to the Corps. We have forwarded them for your consideration in your review of the District Engineer's proposed decision.

Thank you for your attention to this matter. If you have further questions regarding the specifics of this case, please call me or Allan Hirsch of my staff at 382-5053.

Sincerely,



R. A. Edwards  
Acting Assistant Administrator  
for External Affairs

Enclosure

cc: Hirsch, OFA (w/o attachment)  
Ayes, Region 9 (w/o attachment)  
Perkins, San Francisco District  
Palladino, South Pacific Division  
Hill, Allan Chairman, CEQ

PORT OF OAKLAND AIRPORT EXPANSION (PUBLIC NOTICE NO. 14003E48B)

An Analysis Pursuant to Section 404(q) of the Clean Water Act

by

The Environmental Protection Agency  
Region IX  
San Francisco, California

JUDITH E. AYRES  
Regional Administrator

Report Prepared by the Federal Activities Branch  
and Office of Regional Counsel

April 14, 1986

CONTENTS:	Page
Executive Summary .....	i
I. Description of the Project .....	1
II. Chronology of the Present Expansion Proposal .....	4
III. Bay Area Wetlands and their Rates of Decline .....	6
IV. Biological Resources at the Airport and Mitigation Parcels .....	9
V. Evaluations of the Adequacy of Mitigation .....	18
VI. Compliance with NEPA and the need for an EIS .....	21
VII. Compliance with the 404(b)(1) Guidelines .....	25
VIII. Conclusions and Recommendations .....	27
Literature Cited .....	28

Executive Summary

The District Engineer of the San Francisco District of the Corps of Engineers has notified EPA that he intends to issue a permit for a 456-acre expansion of the Oakland International Airport in Alameda County, California over EPA's objection. EPA had reviewed the project proposal in the form of a Corps Public Notice for a permit under Section 10 of the River and Harbor Act and Section 404 of the Clean Water Act and had recommended that no permit be issued until 1) an Environmental Impact Statement (EIS) was prepared, 2) additional less-damaging alternatives were evaluated, and 3) appropriate and adequate mitigation had been identified for the wetland losses associated with the project. EPA informed the Corps that the mitigation that was proposed would offset as much as 171 acres of the 435 acres of high quality seasonal wetlands that would be destroyed by the project. Furthermore, EPA stated that the project, as proposed, violated EPA's 404(b)(1) Guidelines and NEPA.

Although EPA coordinated with the District Engineer and met with the Division Engineer, the Corps was not persuaded to prepare an EIS or to modify its proposed permit action in any way. Accordingly, the Corps notified EPA on April 3, 1986, under its Memorandum of Agreement with the EPA, that it would issue its permit within 20 working days unless EPA's Assistant Administrator for External Affairs elevated the proposed permit action to the Assistant Secretary of the Army for Civil Works. This document was prepared to accompany that elevation.

EPA has evaluated additional data and legal statutes regarding the Corps' proposed action. This analysis has served to strengthen EPA's earlier positions that:

1. The project can be constructed with less-fill;
2. The project, as proposed, causes or contributes to a significant degradation of waters of the United States, and therefore is prohibited;
3. The proposed mitigation is inadequate and may result in a net loss of from 264 to 336 acres of wetland habitat in San Francisco Bay and a 21% reduction in Alameda County salt marshes; and
4. Preparation of an EIS is clearly required by NEPA.

EPA believes that information developed in this document supports these conclusions. In addition, EPA believes that issuance of a permit by the Corps is premature because the airport expansion lacks authorization from the California Regional Water Quality Control Board; the Board has withheld water quality certification pending development of an acceptable wetland mitigation proposal and submittal of a report of waste discharge.

EPA recommends that the Corps suspend processing of this permit until an EIS has been prepared, additional alternatives have been evaluated, and appropriate mitigation has been identified for any truly unavoidable losses of wetland habitat values. Issuance of a permit for the project, as proposed, may result in unacceptable adverse impacts to wildlife resources, most notably migratory waterfowl and shorebirds.

I. Port of Oakland Airport Expansion: Description of the Project

According to Public Notice 14003E48B (July 16, 1985) issued by the San Francisco District of the Corps of Engineers, the Port of Oakland applied for authorization for a major fill project at the Oakland International Airport, adjacent to San Francisco Bay in Oakland, Alameda County, California. Authorization was sought under Section 10 of the River and Harbor Act and under Section 404 of the Clean Water Act. The work proposed under this application included:

- a. The discharge of approximately 5.2 million cubic yards of fill over a 456-acre area, of which approximately 435 acres are classified as wetlands subject to Section 404 and Section 10 (Figure 1).
- b. Dredging of 4.2 million cubic yards of the fill material from San Francisco Bay, but under a separate future permit. Subsequently, the applicant altered the proposal and now will obtain the fill from unidentified upland sources.
- c. As mitigation for the loss of approximately 456 acres of habitat at the airport, the applicant proposed to acquire and dedicate the entire 461-acre parcel of land adjacent to American Canyon in Napa County, known as the Zunino Property, to the California Department of Fish and Game (CDFG). In addition, the applicant would implement enhancement measures currently being developed by CDFG for the purpose of converting the Zunino Property into prime salt marsh habitat. The Zunino Property includes existing seasonal wetlands as well as upland pasture lands in an unknown ratio (Figure 2).

Subsequent to this July 16 Public Notice, the applicant also agreed to purchase and dedicate to CDFG, a 62-acre marsh in San Mateo County, known as the Moseley Property (Figure 2).

The applicant stated that the purpose of the proposed work is the development of regional aviation needs and demands, including access roads, taxiways, air cargo facilities, aircraft maintenance hangars, satellite communications facilities, new terminals, and ancillary facilities (including rental car parking areas).

### ACREAGES

AREA A	395 Ac
AREA B	32
AREA C	7
AREA D	22
TOTAL	<hr/> 456 Ac

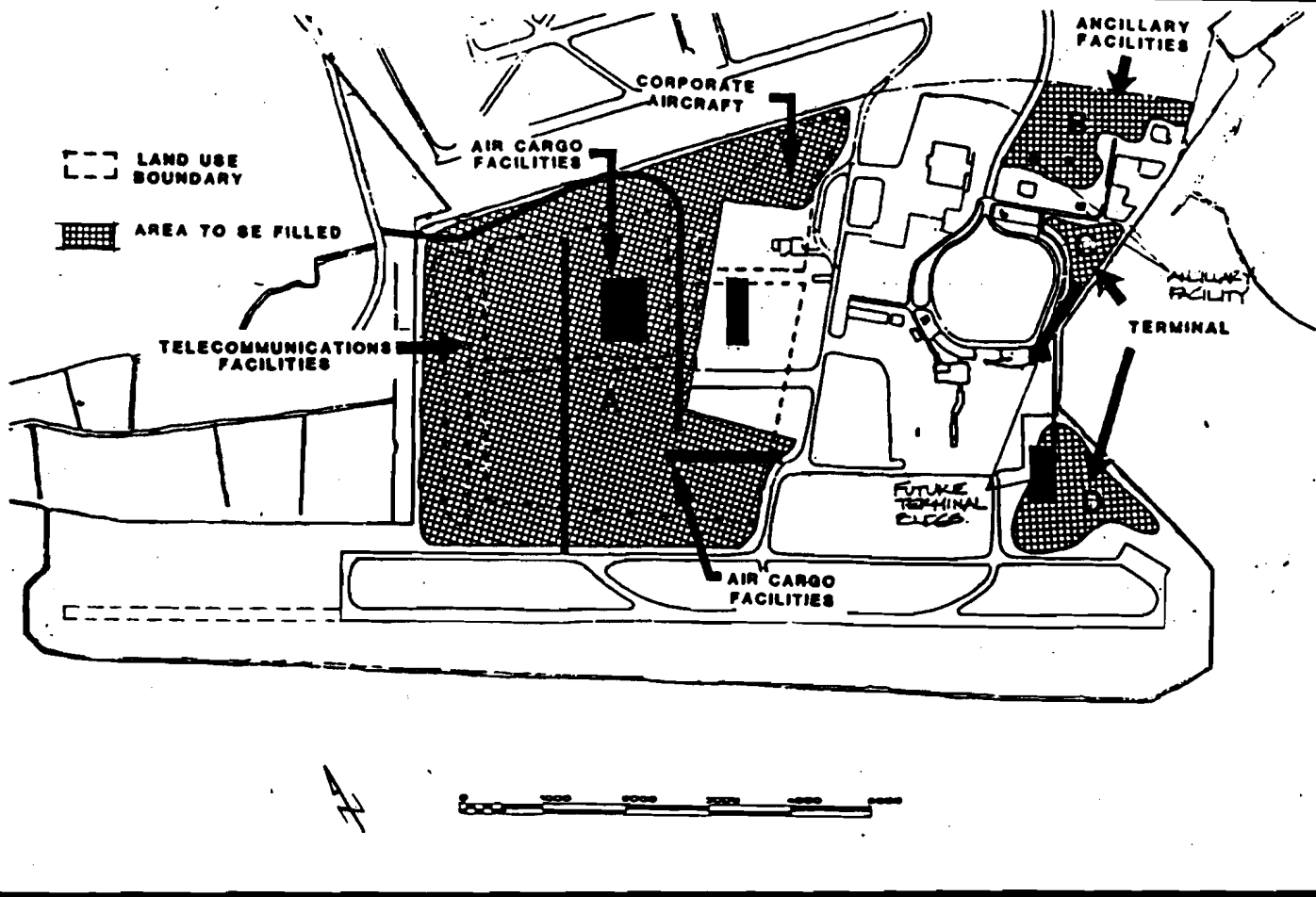
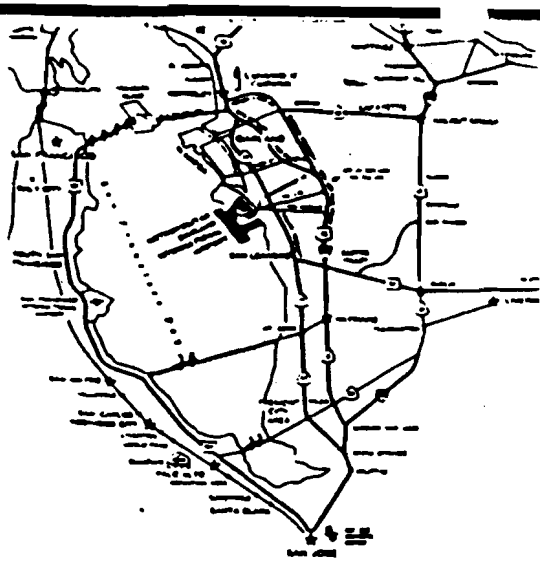
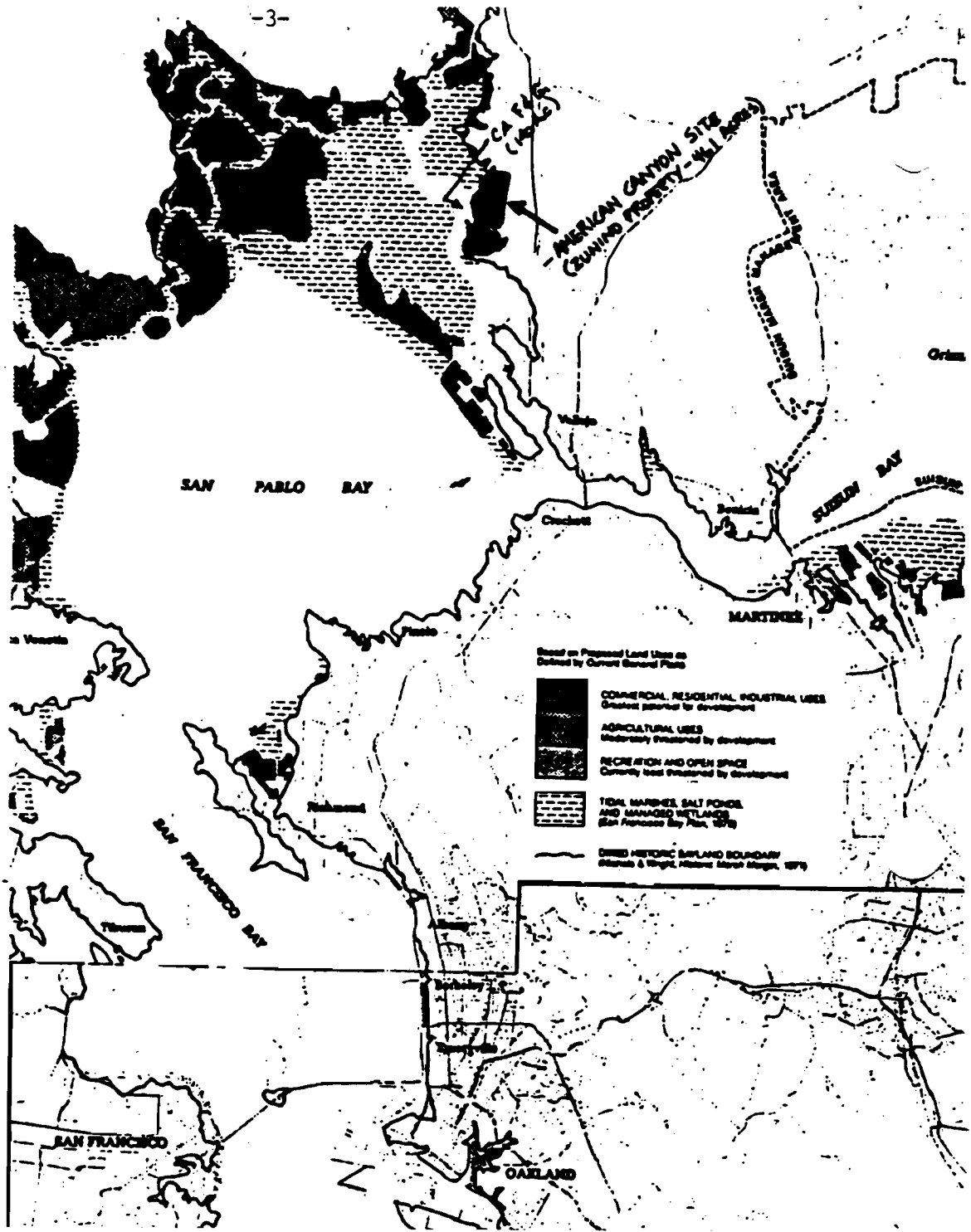


FIGURE 1. Port of Oakland Airport Expansion. Areas proposed for fill. Area A would be filled for the purposes of air cargo facilities, corporate aircraft, and satellite telecommunications facilities. Area B is proposed for rental car parking. Areas C and D are proposed for future terminal buildings.





## II. Chronology of the Present Expansion Proposal.

In 1955, the Port was issued a Corps Section 10 permit (Public Notice 55-50) to construct an airport in the waters of San Francisco Bay. Much of the site was mudflats historically. Under their Section 10 permit, the Port was authorized to construct a dike and to fill in behind that dike to create land for airport purposes. In 1972, the Corps asserted jurisdiction under Section 10 over areas that had been diked but which remained below mean higher high water (later restricted to mean high water by the 9th Circuit Court of Appeals in Froelke v. Leslie Salt). In 1979, after enactment of the Clean Water Act, the Port of Oakland entered into a Memorandum of Understanding with the Corps regarding Corps jurisdiction over future airport permits. This MOU expired in early 1985. In 1977, an EIR was certified for the Oakland Airport Expansion Plan; this general planning document covered expansions expected to occur between 1976 and 1986.

In October, 1981, the Port applied to the Corps for a permit to fill 66 acres of the airport property for air cargo, aircraft maintenance, corporate jet facilities, a vehicular access road, and a taxiway. No mitigation was proposed and no permit was issued. Instead, a revised public notice was circulated in November 1984 for a larger expansion involving the fill of 352 acres of wetlands. Mitigation, in the form of acquisition of existing wetlands (including the Moseley property) was included. In February 1985, the District Engineer determined the proposed transfer of ownership would not offset any of the losses of wetland values, concluding that the project would result in a net loss of 352 acres. Further, he determined that such an impact would require preparation of an EIS. No permit was issued. Rather, the permit application was again revised to its present form, proposing to fill approximately 435 acres of wetlands. The proposed mitigation (primarily acquisition of existing wetlands and transfer of title to the California Department of Fish and Game) would result in a net loss of as much as 336 acres, yet the District Engineer determined, in this case, that 1) no EIS was necessary and 2) the mitigation was adequate.

Every agency and public interest group that commented on the latter public notice wrote that the mitigation proposed was inadequate to offset the losses of wetland habitat (Table 1). Many asked that additional alternatives be evaluated and most requested that an EIS be prepared. Some requested that the Corps conduct a public hearing. No such hearing was held. Subsequently, the District Engineer notified the U.S. Fish and Wildlife Service and EPA that he was preparing to go forward toward issuance of a permit without an EIS and without further mitigation. Under their respective MOA's, both agencies initiated informal consultation with the District Engineer, and subsequently with the Division Engineer in efforts to resolve their concerns. These efforts were unsuccessful. On April 3, the District Engineer issued his notice of intent to issue a permit for the project and EPA has 20 working days to decide whether or not to elevate the matter to the Assistant Secretary of the Army for Civil Works. On April 7, the Fish and Wildlife Service asked EPA to consider initiating a 404(c) action.

TABLE 1. CONCERNS OF EPA AND OTHER PARTIES

In response to the Port of Oakland airport expansion, the Corps received letters from the following parties expressing concern about the project. None supported the project as proposed. Concerns were expressed regarding 1) the need to consider less-damaging alternatives, 2) the amount, type, and location of mitigation, and 3) the need for an EIS and/or a public hearing. The table below summarizes these public responses.

Party	Concerns		
	Alternatives	Mitigation	EIS
Environmental Protection Agency	X	X	X
U.S. Fish and Wildlife Service	X	X	X
National Marine Fisheries Service		X	X
California Department of Fish and Game		X	
San Francisco Regional Water Quality Control Board		X	
Association of Bay Area Governments		X	
Bay Conservation and Development Commission		X	
Save San Francisco Bay Association	X	X	X
Sierra Club, San Francisco Bay Chapter		X	X
California Waterfowl Association		X	
Santa Clara Valley Audubon Society		X	X
Ohlone Audubon Society (Alameda Co.)	X	X	
Golden Gate Audubon Society		X	X
North Bay Wetland Coalition		X	X
Individual citizens (2 letters)	X	X	X

### III. Bay Area Wetlands and Their Rates of Decline

#### Historical Conditions

Atwater, et al (1979) and Josselyn (1983) have estimated that 2,200 km<sup>2</sup> of tidal marshes existed in San Francisco Bay and Delta in 1850.

#### Present Day Conditions

According to Josselyn (1983) and Atwater, et al (1979), 95% of the historical wetlands in San Francisco Bay and Delta have been destroyed; only 125 km<sup>2</sup> of that total remains today. The majority of this tidal marsh acreage is part of Suisun Marsh in the Sacramento-San Joaquin River Delta. Atwater, et al (1979) further estimates that 95% of the 400 km<sup>2</sup> of tidal marshes in San Francisco, San Pablo, and Suisun Bays have been filled since 1850. Diking and filling of Bay marshes was so extensive that only 18,588 acres of wetlands behind dikes remain today (BCDC, 1982).

Diked salt ponds total approximately 35,000 acres in South San Francisco Bay, and some 10,000 acres in the North Bay (Kockelman, et al 1982). Of this 35,000 acres, 6,159 acres of diked salt marsh exhibits habitat characteristics similar to existing tidal salt marshes. Table 2 shows remaining acres of diked lands in San Francisco Bay by county which have retained some marsh characteristics.

The estimate given in Table 2 for diked salt marsh for Alameda County (2,049 acres) is for private and public wetlands. CDFG estimates that privately-owned diked wetlands for all of South San Francisco Bay (Alameda, Santa Clara, and San Mateo counties) total 2,379 acres. The BCDC (1982) estimate for the same area for all lands, public and private, totals 4,151 acres (salt marsh only).

Major tidal salt marshes of South San Francisco Bay total 5,189 acres (Josselyn, 1983). This figure is probably low because of the omission of some small wetlands areas and some channel habitats that have become overgrown with salt marsh vegetation over time (Michael Josselyn, personal communication, April 9, 1986).

#### Future Conditions

The proposed Port of Oakland airport expansion would result in the loss of 435 acres of wetlands. Based on information in Table 2, and assuming that the fill is affecting primarily salt marsh habitat, the airport expansion will result in the loss of 21% of the remaining diked salt marsh habitat in Alameda County. The project would result in a 5% loss of remaining diked and tidal salt marsh wetlands in South San Francisco Bay (4,151 diked salt + 5,189 tidal salt, see Table 2). This loss is significant.

According to BCDC (1982), of the remaining diked baylands in the South Bay, 45% of the acreage is designated for commercial,

TABLE 2. STATUS OF WETLANDS AROUND SAN FRANCISCO BAY

Habitat classification (in acres) of remaining diked wetlands in San Francisco Bay are listed below by county and by type (i.e. those that exhibit particular characteristics [data modified from BCDC, 1982]).\*

County	Wetland Type				County Total
	Salt Marsh	Brackish Marsh	Pond Lagoon	Freshwater Marsh	
<u>South Bay</u>					
Alameda	2,049	-	2,427	463	4,939
Santa Clara	1,882	167	814	-	2,863
San Mateo	220	25	2,143	-	2,388
<u>North and Central Bay</u>					
Contra Costa	444	423	937	103	1,907
Marin	945	627	336	29	1,937
Napa	-	169	554	-	723
Solano	320	33	731	-	1,084
Sonoma	299	-	286	-	585
Total	<u>6,159</u>	<u>1,444</u>	<u>8,228</u>	<u>595</u>	<u>16,426</u>

\* These estimates do not include acreages for diked salt ponds or all diked seasonal wetlands (e.g. wet meadows, pastures, etc), that may not fit the above categories.

residential, and industrial uses (based on County General Plan designations through 1980). Furthermore, the Corps of Engineers (1986) has estimated that over 7,500 acres of land below tidal flood elevations (presumably subject to Section 404 and Section 10) in Alameda, Santa Clara, and San Mateo counties will be developed for commercial/ industrial development before 2025. Much of this development is proposed for wetlands bordering South San Francisco Bay.

Considering the number of additional "fills" projected for South Bay wetlands, the loss of 435 acres of wetlands proposed by this project will contribute to significant cumulative impacts on San Francisco Bay. The proposed off-site mitigation at American Canyon does nothing to offset these wetlands losses in the South Bay.

#### IV. Biological Resources of the Port of Oakland Airport Site and the Proposed Mitigation Areas (Zunino and Moseley Properties)

##### Oakland Airport

The four sites proposed for fill are non-tidal seasonal wetland habitat composed of pickleweed marsh, mudflats and shallow open ponded water. These sites are extremely important as foraging and resting habitat for migrating shorebirds and waterfowl. During periods of high tide, they also provide important sites for bird species, such as the dunlin, which move between high and low tidal areas to feed. The federally-listed endangered Peregrine falcon has been observed to capture shorebirds in the vicinity of these sites (Collins and Feeney 1983). Other raptors have been observed in the area (i.e., Golden eagles, American kestrel, red-tailed hawks, black-shouldered kites, and northern harrier) and most likely utilize the area for foraging on small mammals. The site also provides nesting areas for resident birds, including the American avocet and black-necked stilt. Mallards, Canada geese, and the federally-listed endangered California least tern (Collins and Feeney 1983, Collins and Feeney 1984) are also known to nest in the project area. The proposed project, representing a significant loss of this habitat type, could have significant adverse impacts on migratory shorebirds and waterfowl. Loss of this site would also adversely affect resident species by reducing nesting sites and foraging areas.

Few detailed studies have been made of the biological resources found at these proposed sites. This lack of quantitative data has resulted partially from the restricted access to the airport property. Currently, the foraging habits of the California least tern are being studied. This species nests at the airport and forages on the proposed project site. Other species have been recorded during bird counts conducted by the U.S. Fish and Wildlife Service (USFWS) at Site B for approximately two years (see map, page 2). A study was also conducted on burrowing owls at the airport. This species is a California state-listed species of special concern. Details of this study have not yet been reviewed by EPA, but it may contain lists of other species occurring in the area. Additional data has been collected from field observations by Audubon Society members, USFWS, California Department of Fish and Game (CDFG), and EPA staff (Table 3). In addition to the list of species reported from these sources, Table 3 lists estimated numbers of birds sighted during a one-hour EPA field trip to the airport site on April 10, 1986. The list is undoubtedly incomplete. However, it is apparent from this abbreviated list that a large number of species utilize the proposed fill sites.

Mammals are known and/or believed to occur within the airport boundaries (Table 4). There are few documented observations for the proposed fill sites. However, listed species are likely to be found within the proposed expansion area due to their mobility. A trapping study was conducted by Harvey and Stanley Associates (Duke 1985) within the proposed fill site for the endangered

TABLE 3: PARTIAL LIST OF BIRD SPECIES OF THE OAKLAND AIRPORT

Species	Number Observed on April 10, 1986		
	Site A	Site B	Site D
* Snowy egret			
* Great egret			
Black-crowned night heron			
Great blue heron			
* Long-billed curlew		5	
* American avocet	260	11	45
* Marbled godwit		60	
* Dunlin			
* Black-necked stilt	42	2	60
* Black-bellied plover	250		
* Least sandpiper			
* Sandpiper sp.	810		
* Sanderlings			
* Willet		50	1
* Killdeer			
* Dowitcher sp.	360	50	
Gulls			
@ California Least tern			
* Caspian tern	6		
* Forster's tern		10	
Cormorant			
@* Brown pelican			
* Canada goose	2		
* Snow goose			
* American widgeon	400	1800	
* Gadwall	90	30	
* Ruddy duck	340	90	
* Mallard	60	4	24
* Canvasback			
* Northern shoveler		400	
* Bufflehead	6	50	
* Pintail	110		
* Eared grebe		4	
* Cinnamon teal		50	2
* American coot	180	240	10
* Greater scaup			
* Dabbling ducks	280		
\$ Golden eagle			
* Red-tailed hawk			
@ Peregrine falcon			
* Northern harrier	4		
* Black-shouldered kite	1		
American kestrel			
\$ Burrowing owl			
* Turkey vulture			
* Ring-necked pheasant			
Crow			
* Salt marsh yellowthroat			
* Western meadowlark			
* House finch			
* Bushtit			
* Lesser goldfinch			
* American goldfinch			

TABLE 3 (Continued): PARTIAL LIST OF BIRD SPECIES OF THE OAKLAND AIRPORT

Species	Number Observed on April 10, 1986		
	Site A	Site B	Site D
* Anna's hummingbird			
* Brown towhee			
* Red-winged blackbird			
* Starling			
* Barn swallow			
* Rough-winged swallow			
* Song sparrow			
* White-crowned sparrow			
* Mockingbird			
* Black phoebe			
* Mourning dove			

- \* Observed at the proposed fill sites
- # Candidate for federally-listed endangered species
- @ Federally-listed endangered species
- \$ California state-listed species of special concern



TABLE 4: PARTIAL LIST OF MAMMAL SPECIES OF OAKLAND AIRPORT

Blacktailed jackrabbit  
Meadow mouse  
House mouse  
Roof rat  
California ground squirrel  
Mule deer (tracks)  
Striped skunk  
Opossum  
Muskrat

salt marsh harvest mouse. Although no harvest mice were collected, the USFWS and CDFG do not believe these studies are conclusive. The salt marsh harvest mouse has been found to occur in similar habitat types in other localities and further studies may confirm its presence at the proposed fill site.

The impacts of the airport expansion to these mammals are less severe than the impacts on birds because the mammals are primarily upland species that do not utilize shallow water bodies. Loss of the food source for predaceous species (i.e., rats, skunks, opossums) would adversely affect those species.

#### Moseley Property

The Moseley property, a proposed mitigation parcel located in San Mateo County, is a pickleweed marsh. There have been no known biological studies conducted at the site. Observations made by the USFWS and CDFG are contained in Table 5. The property is managed as a duck club and presently provides good habitat for waterfowl. The site may also support the salt marsh harvest mouse as the habitat type is identical to areas it inhabits in the vicinity. No trapping efforts have been conducted, however.

No enhancement is planned for this site. Therefore, its usefulness to birds and wildlife species will not increase.

#### American Canyon Site (Zunino Property)

The American Canyon site, a proposed mitigation site 28 miles north of the Oakland Airport in Napa County, is composed of uplands, pickleweed marsh, and freshwater marsh. Proposed enhancement of this property seeks to provide additional wetland habitat for migratory shorebirds. Presently, however, the site supports large numbers of shorebirds and waterfowl (Table 6). Thus proposed enhancement measures may not result in significant increases in the overall use of the area. Although periodic inundation could be increased as a result of some proposed enhancement measures, intensive management of the site may be required. Under this plan, diversion of freshwater from the Napa River would be required, an alteration of present hydraulic regimes that could change the plant community structure at the site. Such changes could reduce habitat diversity, adversely affecting those species dependent on the existing conditions. Furthermore, according to CDFG, such measures risk the possibility that bullrush may flourish at the site, thus reducing the site's usefulness to bird species. Intensive management may be required to keep this plant under control. CDFG has indicated that it does not have the resources to provide such intensive management should it be needed.

The USFWS has been conducting aerial bird counts at this site and surrounding properties since 1981 and ground counts since 1984. (Table 6). Except where noted, species and counts listed are for

TABLE 5. PARTIAL LIST OF BIRD SPECIES OF MOSELEY PROPERTY

Pintail  
Gadwall  
American widgeon  
Cinnamon teal  
Northern shoveler  
Scaup  
Ruddy duck  
Bufflehead  
Mallard  
American avocet  
Willet  
Snowy egret  
Great egret  
Black-crowned night heron  
Northern harrier  
Black-shouldered kite  
American kestrel  
Song sparrow  
Black-necked stilts  
Western sandpiper  
Wilson's phalarope  
Killdeer  
American coot

TABLE 6. PARTIAL LIST OF BIRD SPECIES OF AMERICAN CANYON SITE (ZUNINO PROPERTY)

	12/17/82	1/21/83	2/1/83	2/22/83	3/14/83	3/29/83
* Snowy egret				2		
* Great blue heron			1	3		4
* Great egret	2	1		1		1
* Egret sps.	3	3				
Caspian tern						
* Forster's tern						
Dowitcher						
Killdeer						
Yellow legs						
Black-bellied plover				6		
Marbled godwit	22	40	20			
Willet		1		60	130	310
Sandpiper sps.						
American avocet						
* Black-necked stilts						
* Long-billed curlew						
Large shorebird sps.						65
Medium shorebird sps.						
Small shorebird sps.			20			
White pelican						
Double-crested cormorant	4					1
Snow goose		5				
* American coot	135	1060	1700	1382	2910	1186
* Canvasback				220	529	
Mallard	4		8	15	180	5
Gadwall			25	150	10	2
Green-winged teal						
Cinnamon teal				5		
Teal sps.						
* Ruddy duck	3		806		905	915
* Pied bill grebe						
Northern shoveler			105		329	
Pintail			50	110	85	18
American widgeon			20	20	176	
Redhead					75	
Scaup sps.			1700	397	2660	1180
Diving duck sps.		100		115	220	455
Dabbling duck sps.	10			500	150	74
Duck sps.				1	350	
Bufflehead				2		
* Northern harrier						
Golden eagle						
Turkey vulture						
Swallow						
Brewer's blackbird						
Rock dove						
Bonaparte's gull		2				250
* Gulls						
Large gull sps.	238	164	1681	537	5270	3530

\* Observed at the Zunino Property

the entire survey area, of which the Zunino property is a large part. We assume that most of these species occur on the Zunino property.

### Conclusions

Information on the proposed fill sites and mitigation sites is limited. An EIS would provide better data in order to make sound decisions on the proposed airport expansion. Based on available information the proposed mitigation is unlikely to provide significant new habitat. Thus, there could be a substantial net loss of habitat for migratory waterfowl and shorebirds.

V. Evaluations of the Adequacy of Mitigation for Wetlands Losses Associated with the Port of Oakland Airport Expansion.

Habitat Evaluation Procedure (HEP)

In their analysis of the mitigation for wetland losses at the airport, the U.S. Fish and Wildlife Service and the California Department of Fish and Game conducted an abbreviated Habitat Evaluation Procedure (HEP). In its complete form, this methodology is commonly used nationwide to evaluate the habitat losses and gains for proposed projects and mitigation features. On the basis of the abbreviated HEP conducted for the Port of Oakland airport expansion, these fish and wildlife agencies determined that the Port could fully mitigate the loss of 99 to 171 acres by implementing the Zunino & Mosley mitigation plans.

Their HEP was based on habitat values for shorebirds and dabbling ducks. Other species guilds which are known to use the airport site (e.g., raptors and wading birds) were not included. Such omission would tend to underestimate the losses of habitat value at the airport. Furthermore, it appears that the HEP overestimated the amount of upland at the Zunino property because enhancement estimates were made using aerial photographs of the site taken during the 1976-1977 drought. Thus, the actual enhancement opportunities from converting upland to wetland are substantially less than the acreage that the HEP would credit to the Zunino site. The HEP also did not take into account the time required to establish a viable marsh after lowering the Zunino upland acreage to establish the required wetland hydrologic conditions. This inevitable delay in establishment of replacement habitat would reduce the mitigation credits still further.

Based on the above considerations, it appears that the HEP was generous in counting mitigation credits for the Oakland Airport expansion. A rigorous application of the procedure would probably show that the proposed mitigation will offset far less than 171 acres.

Adamus Method for Evaluating Wetland Functional Values.

Another method of evaluating project impacts and mitigation values is using the Adamus Method (Adamus and Stockwell 1983). Although this procedure does not produce a quantitative comparison of acreage losses or gains, it can be useful to compare qualitative losses and gains. We have prepared an example of how the Adamus Method might be applied to the airport expansion project with preliminary estimates of the values that might be expected to be lost or gained (Table 7). Should EPA decide to proceed further with this matter, a formal evaluation using this methodology could be prepared.

This shortened analysis indicates that a number of wetland functions which the Oakland Airport site may be performing will not be adequately replaced by the proposed mitigation sites. Of particular concern are the areas of ground water recharge, flood

TABLE 7. MODIFIED ADAMUS TECHNIQUE APPLIED TO OAKLAND AIRPORT EXPANSION

Certain portions of the Adamus methodology for determining wetlands values and functions can be employed without leaving the office, if sufficient information is available about the site. However, our maps are insufficient for answering many of the questions concerning water flow patterns. In order to get a rough idea of how the wetlands in question might be rated by a formal application of Adamus, estimates have been prepared for the 11 major wetland functions. These estimates are based on limited knowledge of the sites, and an understanding of the wetland characteristics which the Adamus technique considers in evaluating whether a wetland is likely to perform a given function.

	Airport		Zunino		Mosley	
	Before	After	Before	After	Before	After
Ground Water Recharge	+	0	+	+	-	-
Ground Water Discharge	-	-	-	-	+	+
Flood Storage	+	-	+	+	+	+
Shoreline Anchoring	0	0	0	0	+	+
Sediment Trapping	+	-	+	+	+	+
Nutrient Retention	++	-	+	+	+	+
Food Chain Support	++	0	++	+++	++	++
Fishery Habitat	0	0	0	0(+)	0	0
Wildlife Habitat	++	-	++	+++	+++	+++
Active Recreation	0	0	+	+	+	+
Passive Recreation	+	0	+	++	+	+
Net Change		-9		+3 (4)		0

storage, sediment trapping, nutrient trapping, food chain support, and wildlife habitat.

Ground Water - Because of their large size, and the relatively impervious surrounding landscape, the Oakland Airport wetlands may play an important role in ground water recharge. Filling of the entire wetland complex could result in a loss of ground water recharge capacity, thus allowing salt water intrusion into the aquifer, and a loss of usable water from any nearby water wells. The absence of a proposal for local mitigation sites means that any recharge function which the wetlands may be performing will be permanently lost.

Flood Storage - Because of the extensive surrounding concrete and asphalt areas which drain into the wetlands, it seems highly likely that the proposed fill sites are serving as flood storage capacity at the present time. Expanding the wetland acreage on the Zunino mitigation site will probably add some flood desynchronization capacity to that area, but the amount added will be considerably less than the 435 acres lost in Alameda County.

Sediment and Nutrient Trapping - Port staff indicates that the surface elevation of the Oakland Airport wetlands has risen over one foot since the area was diked. This leads to the conclusion that the wetlands are effectively trapping sediment from the surrounding area. In addition, the same process that brings flood waters to the wetlands should carry nutrients and pollutants from the adjacent runways, maintenance areas, golf courses, and numerous aircraft support businesses. These constituents will move directly from the airport property to a previously constructed mitigation site for least tern nesting and foraging, and thence into the Bay once the project is completed.

Food Chain Support and Wildlife Habitat - The Oakland Airport wetlands and the proposed mitigation sites all play important roles in food chain support and wildlife habitat. The significant point where these functions are concerned is that the loss of 400+ acres of Airport wetlands will not be compensated for by creation of less than 150 acres at a site far removed from the project area.

#### California Department of Fish and Game Mitigation Policy.

Because of the magnitude of past wetland losses in California and because of the poor record of success in attempts to restore or create wetland habitat, the California Department of Fish and Game has adopted a policy of opposing any project that results in a net loss of wetland surface acreage. Evaluating the loss in these terms, the proposed airport expansion results in a net loss of approximately 300 acres.



## VI. Compliance with NEPA and the Need for an EIS

EPA has communicated to the Corps that we believe that an EIS is required for the entire airport expansion proposed at the Oakland International Airport by the Port of Oakland (see March 12, 1986 letter from Judith E. Ayres to Colonel Andrew W. Perkins, Jr.). Although we have concerns about the proper scope of such an EIS, our immediate concerns focus on the Corps' determination not to prepare an EIS for the project as proposed in the July 1985 Public Notice.

EPA is not alone in this concern. In a draft Statement of Findings prepared by the Corps, a summary of responses from governmental agencies, citizens' groups, and concerned citizens showed that a substantial majority of commenters believes that an EIS must be prepared.

### 1. NEPA Requirements.

The National Environmental Policy Act of 1969 (NEPA) requires that an environmental review be conducted for "major federal actions" (42 U.S.C. 4332). Regulations adopted by the Council on Environmental Quality (CEQ) allow lead federal agencies responsible for such review to conduct a preliminary Environmental Assessment (EA) to determine whether or not a full EIS must be prepared (40 CFR 1508.9). An EIS must be prepared unless the EA supports a Finding of No Significant Impact (FONSI) (40 CFR 1508.13). The term "significantly," for purposes of NEPA, is extensively defined by CEQ regulations (40 CFR 1508.27). It includes consideration of, among other things, unique areas such as wetlands, and the degree of controversy of the effect in question.

CEQ regulations and specific NEPA-implementing regulations adopted by the Corps require, among other things, that the EA include a discussion of "reasonable alternatives" (40 CFR 1508.9; 33 CFR Part 230, Appendix B). The Corps' regulations excuse this discussion of alternatives only if:

"the EA confirms that the impact of the applicant's proposal is not significant, there are no 'unresolved conflicts concerning alternative uses of available resource ...'(Section 102[2][E] of NEPA), and the proposed activity is a water-dependent activity ..." (33 CFR Part 230, Appendix B, paragraph 8.a).

### 2. The Port of Oakland EA/FONSI.

The Corps issued an EA for the airport expansion on February 14, 1986. This is, in effect, the final EA for the project (a preliminary EA was included in the July 16, 1985 Public Notice),

although some revisions may appear in the final Findings of Fact (FOF). (The FOF is required for issuance of the permit under 33 CFR Part 325, Part 230, Appendix B, paragraph 9.) The EA states that there are no significant impacts on the human environment and concludes that an EIS is not required for the Port of Oakland permit. A proposed FONSI is attached to the EA for the District Engineer's (DE) signature.

It is significant that in a letter dated February 27, 1985, to Mr. Charles Roberts of the Port of Oakland, the DE concluded that an EIS would be required for the proposed project. At that time, the net loss of wetland habitat was estimated to be 352 acres of wetland, none of which would have been offset by creation or restoration of wetland habitat elsewhere (the DE found that a proposal to donate the Moseley property and substantial wetland acreage in Napa County to the State as mitigation would not mitigate any wetland losses). The DE found this net loss to be "substantial," concluding that the project therefore would have a "significant adverse impact on the human environment." Now that the revised proposal (as described in the EA) includes 249 acres of mitigation (a figure strongly disputed by EPA, USFWS, NMFS and CDFG - see pg. 18) for 435 acres of wetland loss at the airport, the DE has inexplicably concluded that the impact is no longer significant, in spite of the fact that the net loss of wetland habitat is still substantial (at least 186 acres). On another project near the Oakland airport, the Corps is preparing an EIS on a project whose principal impact would be the loss of 90 acres of seasonal wetlands, not including adjacent wetland enhancement proposed by the applicant as mitigation.

The EA does not explain how the Corps determined that unmitigated wetland losses would have no significant impact on the human environment or even discuss the magnitude of those unmitigated losses. The EA does not discuss any alternatives to the project as described in the July 1985 Public Notice. Finally, the EA does not address the controversy surrounding a) the adequacy of wetland mitigation and b) the proposed FONSI. This controversy is well known to the Corps, as evidenced by the extensive summary of comments in the draft FOF (comments which the Corps received in response to the Public Notice, several months prior to the February 14 EA).

It appears that the Corps weighed the impacts of lost wetland habitat against the public benefits of the project (see letter of April 3, 1986 from Colonel Andrew W. Perkins, Jr. to Judith E. Ayres). This consideration, as discussed below, is highly improper in the context of an EA.

### 3. Grounds for Objecting to the EA/FONSI.

The primary reason for objecting to the EA and proposed FONSI is that the impacts of a net loss of at least 186 acres of wetlands in the San Francisco Bay Estuary are indeed significant.\*

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\* The U.S. Fish and Wildlife Service estimates that the net loss is more likely 264 to 336 acres of habitat. See pages 17-19.

More locally, the net loss of 435 acres of wetlands in South San Francisco Bay would destroy nearly 5% of the total remaining wetlands in a single permit action. In spite of the fact that EPA and all other commenters believe these losses to be significant, the Corps has provided no explanation why it has adopted the contrary view.

Simple conclusory statements of no significant impact in the EA are not adequate (Foundation on Economic Trends v. Heckler, 756 F.2d 143, 151 [D.C. Cir.1985]). Moreover, mitigation measures do not necessarily offset this deficiency. It is appropriate to consider mitigation proposals as part of the EA; however it is clear that when such mitigation falls short of complete compensation, it must not fall substantially short, as in this case (see Friends of Endangered Species v. Jantzen, 706 F.2d 976, 987 [9th Cir. 1985]).

One consideration as to the significance of an impact is the degree of controversy surrounding it (40 CFR 1508.27). It is likely to be considered significant by a court in this federal circuit if there is a great deal of controversy (Friends of Endangered Species, supra, at 986). Given the number of commenters who objected to a FONSI in this case because of wetland habitat loss, it is reasonable to conclude that this loss is indeed significant.

The EA also ignores other serious impacts. In 1977, an Environmental Impact Report (EIR), a state-mandated environmental document, was prepared for the airport master plan. The scope of the airport expansion, which at that time was proposed for implementation between 1976 and 1986, was similar to the proposed expansion, although much less specific. This document identified unavoidable adverse impacts on 1) wildlife, 2) air quality, 3) resource consumption, 4) traffic and congestion, and 5) noise levels. Other potential issues include seismic safety and compliance with FAA requirements. Of these, the Corps EA mentions only wildlife and air quality, finding (without supportive evidence) no adverse impact associated with either. At the very least, the EA should have addressed all five impacts cited in the EIR and reconciled its conclusions with those in the EIR.

Another serious deficiency in this EA is its failure to consider alternatives (33 CFR Part 230, Appendix B, paragraph 8.a; Friends of Endangered Species, supra, at 988). The Corps has not demonstrated that there are "no unresolved conflicts concerning alternative uses of available resource" nor that this is a water-dependent project. Therefore, the EA is not exempt from consideration of alternatives by the criteria set forth in the Corps' own regulations, quoted above (33 CFR Part 230, Appendix B, paragraph 8.a).

Finally, it is grounds for objection that the EA was based upon a weighing of environmental harm against public benefits. The EA itself does not refer to this weighing process, but in

his letter of April 3 to Judith Ayres, Colonel Perkins states that the mitigation plan "is considered adequate mitigation for the proposed fill project when it is weighed against other public interest factors." This is improper in the context of the EA:

"An EA aims simply to identify (and assess the 'significance' of) potential impacts on the environment; it does not balance different kinds of positive and negative environmental effects, one against the other; nor does it weigh negative environmental impacts against a projects' other objectives, such as, for example, economic development. This latter balancing job belongs to the officials who decide whether to approve the project; and (where there are 'significant effects') those officials should make the decision in light of an EIS. ... the purpose of an EA is simply to help the agencies decide if an EIS is needed." (Sierra Club v. Marsh, 769 F.2d 868, 875 [1st Cir. 1985]. see also, State of Louisiana v. Lee, 758 F.2d 1081, 1084 [5th Cir. 1985]).

The fact that the EA does not set forth the criteria which the Corps relied upon in determining that wetland habitat losses are not significant makes it difficult to critique this EA. We believe, however, that the deficiencies, outlined above, all contribute to the improper conclusion that no EIS is needed for the Port of Oakland airport expansion.

## VII. Compliance with the 404(b)(1) Guidelines

EPA reviewed the proposed airport expansion for compliance with EPA's 404(b)(1) Guidelines promulgated at 40 CFR 230. We have determined that the project fails to comply with the Guidelines in the following ways and that no permit should be granted for the project, as proposed:

- A. Failure to demonstrate that there are no less-damaging practicable alternatives to the project, as proposed.

The Guidelines prohibit the discharge of dredged or fill material into waters of the United States if there is a less-damaging practicable alternative (40 CFR 230.10[a]). Furthermore, if the project is not water dependent and it is proposed in a special aquatic site (in this case a wetland), the Guidelines presume that such alternatives exist unless clearly demonstrated otherwise.

In the case of the proposed airport expansion, EPA believe that certain proposed ancillary facilities could be practicably relocated to upland sites resulting in less filling of wetlands at the airport site. EPA has specifically noted the relocation of the proposed rental car parking lot and portions of the telecommunications facilities. Additional fill reduction appears possible through redesign of proposed access roads. The applicant nor the Corps have demonstrated that such alternatives are not available, or practicable. In fact, no formal analysis of practicable alternatives was prepared.

- B. Water Quality Certification.

The Guidelines prohibit the discharge of dredged or fill material into waters of the United States if the discharge would violate any state water quality standards. The San Francisco Regional Water Quality Control Board has withheld certification of the airport expansion until 1) wetlands are protected by a mitigation plan acceptable to the California Department of Fish and Game (CDFG) and 2) the applicant has submitted a report of waste discharge. The CDFG maintains its position that the present mitigation plan is unacceptable to mitigate for the losses of the airport expansion, as proposed. No report of waste discharge has been submitted. EPA considers the present position of the State to be a conditional denial of water quality certification. Accordingly, no permit should be issued at this time under the Guidelines (40 CFR 230.10[b]).

- C. Significant Degradation of Waters of the United States.

The Guidelines prohibit the discharge of dredged or fill material into waters of the United States if the discharge would cause or contribute to a significant degradation of waters of the United States. The loss of 435 acres of wetland in South San Francisco Bay constitutes roughly 5% of the

total remaining wetlands in this water body and approximately 21% of the remaining diked seasonal wetlands in Alameda County. Given the fact that 95% of the historical wetlands of the San Francisco Bay Estuary have been lost, it is inconceivable that this project would not cause or contribute to a significant degradation of what has become an extremely rare and valuable resource. Even with the limited enhancement proposed 28 miles north on the Napa River, the net loss of wetland resources substantially exceeds that of projects which the San Francisco Corps District has denied permits or required preparation of Environmental Impact Statements.

D. Mitigation.

The Guidelines prohibit the discharge of dredged or fill material unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem (40 CFR 230.10[d]). Although we have identified losses in a number of wetland functional values that may occur as a result of the airport expansion (see discussion of Adamus method, Pg. 17), our evaluation here is directed toward impacts of the project on plant and animal populations. The Guidelines offer a number of means to mitigate these types of impacts. Those appropriate to the airport expansion include:

1. Avoiding sites having unique habitat or other value, including habitat of threatened or endangered species,
2. Instituting habitat development and restoration to produce a new or modified environmental state of higher (emphasis added) ecological value by displacement of some or all of the existing environmental characteristics,

- and -

3. Avoiding the destruction of remnant natural sites within areas already affected by development (40 CFR 230.75).

In the case of endangered species, we understand that least tern foraging areas will be avoided, although we believe that the surrounding fill and runoff will substantially degrade this habitat. With regard to providing mitigation of higher ecological value, the project clearly fails, and this failure is recognized by all parties including the Corps (see letter from Colonel Perkins to Judith Ayres, April 3, 1986). Finally, the project will obviously not avoid the destruction of the wetlands at the site which are clearly high quality remnants of former vast wetland and mudflat systems surrounding the Bay.

### VIII. Conclusions and Recommendations

As proposed, the expansion of the Oakland International Airport will significantly affect the human environment and will violate EPA's 404(b)(1) Guidelines. The project will have significant adverse impacts on wildlife resources through the unmitigated loss of from 264 to 336 acres of very high quality seasonal and permanently inundated salt marsh wetlands. Furthermore, there appear to be viable alternatives which would be less environmentally damaging and EPA believes that such alternatives should be pursued. Additional mitigation for unavoidable wetland losses should be identified, as well.

It appears that the project, as proposed, may have other significant impacts which were not fully evaluated by the Corps during the public comment period. These include air quality, noise, traffic and congestion, and possibly seismic safety. When combined with the significant wetlands impacts and the consensus of public opposition to the project, as proposed, EPA believes that preparation of an EIS is required.

Accordingly, EPA would reconsider its opposition to this project if:

1. The Corps prepares an Environmental Impact Statement to fully evaluate the overall impacts of the project (the Corps should consider preparing a joint document with the Federal Aviation Administration),
2. The Corps evaluates alternatives which require less fill in wetlands through a) redesign of proposed airport features and b) relocation of certain facilities to upland locations, and
3. The applicant identifies additional wetland mitigation sites in South San Francisco Bay that more fully offset unavoidable losses of wetlands with in-kind habitat restoration or creation.

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